

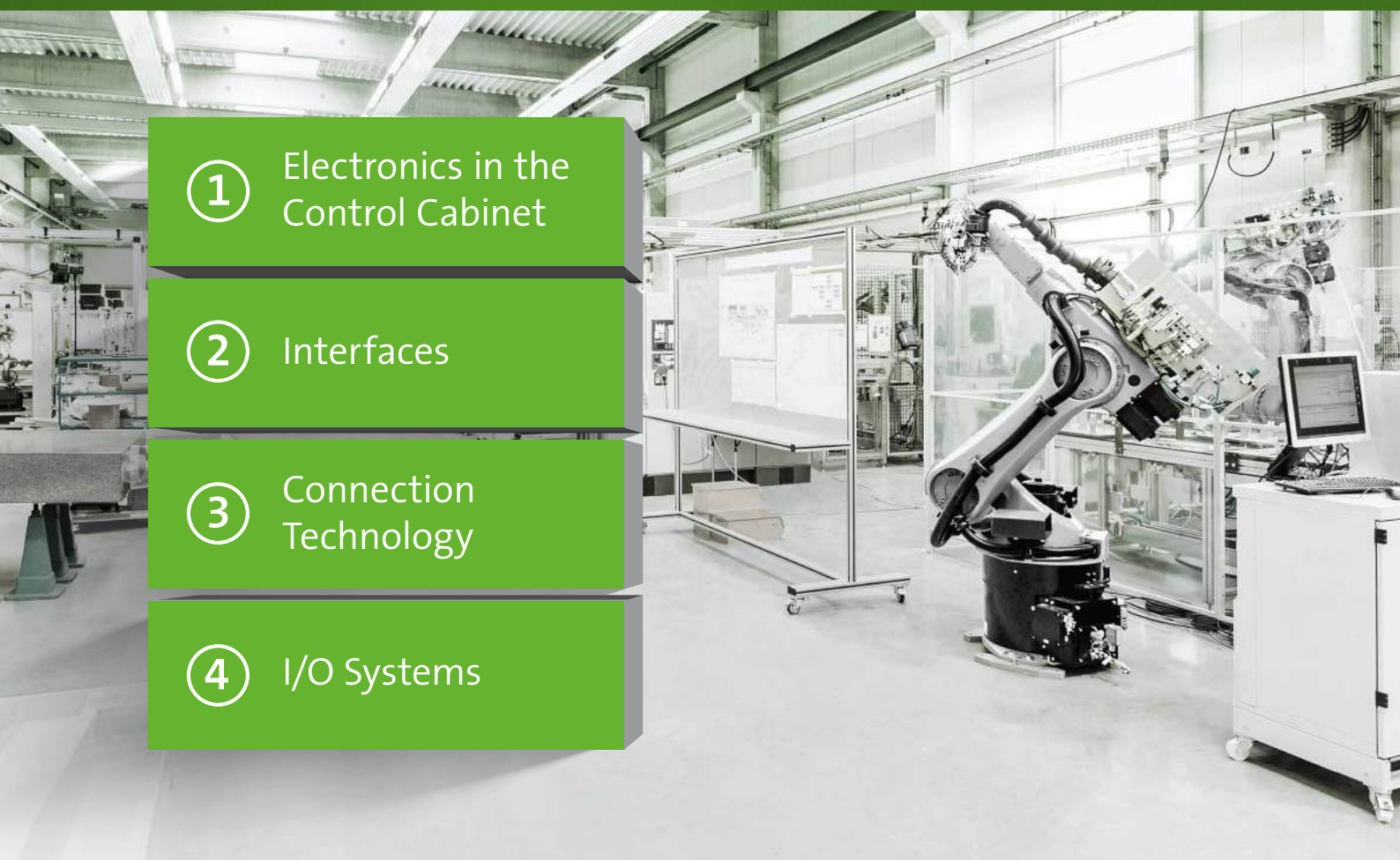
GENERAL CATALOG

① Electronics in the
Control Cabinet

② Interfaces

③ Connection
Technology

④ I/O Systems



GENERAL CATALOG

Note:

With this new main catalog, all information contained in previous brochures/catalogs expires. All drawings, diagrams, indications of weight, dimensions, ratings or other details printed in this catalog are only binding when specifically agreed upon.

Murrelektronik reserves the right to changes and modifications. The customer is responsible for using the components and units that they ordered in the way they are designed.

The information in this brochure has been compiled with the utmost care. Liability for the correctness, completeness and topicality of the information is restricted to gross negligence.

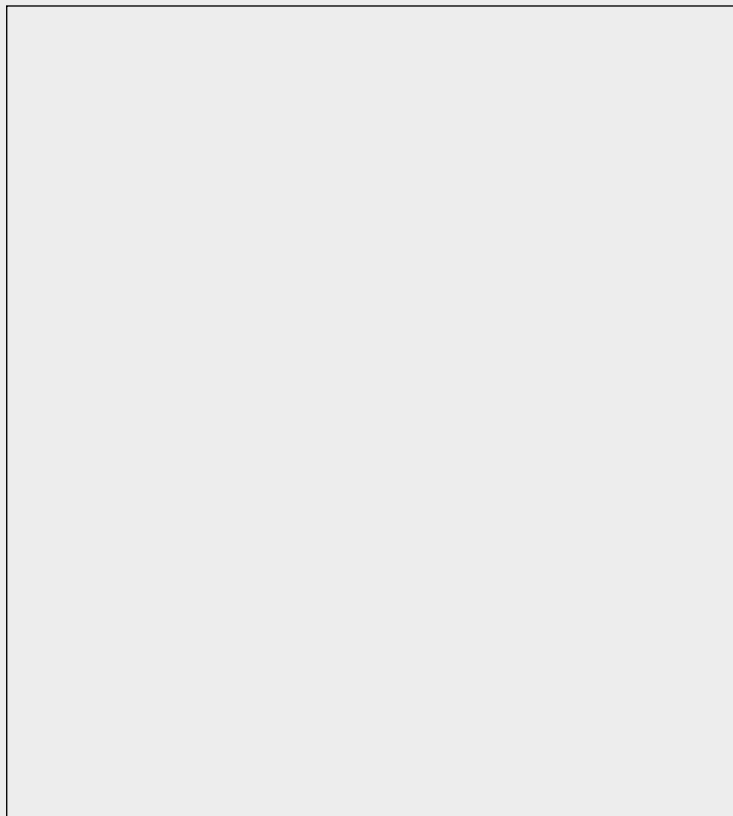
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www.murrelektronik.com

With compliments:



MURRELEKTRONIK GOES EVEN GREENER!



Being sustainable and respecting nature are part of our core values here. That's why we print our catalogs on uncoated paper which is produced without any solvents, chlorine and is environmentally friendly. Our supply chain is also an environmentally friendly production process.

We, here at Murrelektronik, are proud to say we act responsibly and protect the environment.



1

ELECTRONICS IN THE CONTROL CABINET

- 1.1 Transformers / Rectified Power Supplies
- 1.2 Power Supply Units
- 1.3 UPS-Systems / Buffer- / Redundancy Modules
- 1.4 Intelligent Power Distribution
- 1.5 Converters / Rectifiers
- 1.6 Control Cabinet Power Outlets
- 1.7 EMC Filters
- 1.8 EMC Suppressors
- 1.9 Relays / Safety Relays
- 1.10 Optocouplers / Semiconductors
- 1.11 Switches
- 1.12 Active Interface Technology
- 1.13 Passive Interface Technology
- 1.14 Eurocard Holders / Control Modules



2

INTERFACES

- 2.1 Front Panel Interfaces
- 2.2 Control Cabinet Interfaces / Cable Entry Systems
- 2.3 Hybrid Fieldbus Coupling
- 2.4 Lighting Elements
- 2.5 Control Devices
- 2.6 Modular Connection Systems (Modlink Vario)
- 2.7 Heavy Duty Connectors (Modlink Heavy)



3

CONNECTION TECHNOLOGY

- 3.1 M8 Round Plug Connectors
- 3.2 M12 Round Plug Connectors
- 3.3 T-couplers M8, M12, 7/8"
- 3.4 Flange Connectors
- 3.5 MQ12 Round Plug Connectors
- 3.6 Fieldbus Connectors
- 3.7 Plug Connectors for Food & Beverage
- 3.8 Mobile Applications
- 3.9 M23 Round Plug Connectors
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- 3.11 TPE Series – The North American standard
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4

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- 4.2 Cube20
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- 4.9 MASI Field Installation
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- 4.11 M8 Distribution Systems
- 4.12 M12 Distribution Systems (Metal)
- 4.13 M12 Distribution Systems (Plastic)





**26 BRANCH OFFICES
AND 5 PRODUCTION PLANTS**

Oppenweiler
Production Fieldbus Systems

Stollberg, Germany
Production of Connectors

Stod, Czech Republic
Production of Interface,
Switch Mode Power Supplies,
Transformers

Shanghai, China
Production for the
Asian markets



**STAY CONNECTED – REPRESENTED
ON ALL CONTINENTS WORLDWIDE**

The company was founded in
1975 by Franz Hafner

Over 2,700 employees, including
250 sales reps and customer
service center technicians

Top student training is very important
for Murrelektronik. Each year we offer
apprenticeships in technical and
commercial areas, as well as in logistics.



MURRELEKTRONIK

FIGURES & FACTS

MURRELEKTRONIK IS YOUR PARTNER...

Atlanta, USA
Production of Connectors



- Over 65,000 products available to order conveniently in our online shop
- Subdivided into four product fields:
 - **Electronics in the Control Cabinet**
 - **Interfaces**
 - **Connection Technology**
 - **I/O Systems**
- For industries and market segments as for example:
 - **Machine Tools**
 - **Machine Building and Plant Engineering**
 - **Assembly and Handling Technology**
 - **Food and Beverage**
 - **Automotive Industry**
 - **Warehousing and Logistics**
 - **Robotic**
- Founded in Oppenweiler, Germany, in 1975
- Family-owned company



**CUSTOMER
LOYALTY WITH
INDIVIDUAL
AND
COMPETENT
ON-SITE HELP**

MURRELEKTRONIK OFFER VALUABLE BENEFITS

- Over 250 sales reps
- On-site support
- 5 international warehouses
- 1 million products in stock

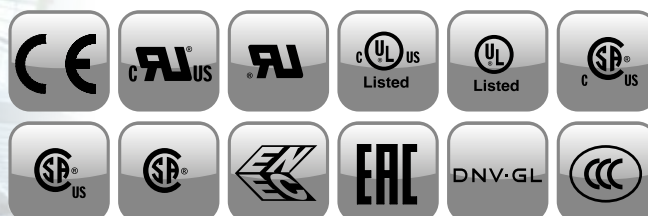
- Murrelektronik Express Service

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More service

MURRELEKTRONIK YOUR BENEFITS



International approvals for
flexible applications worldwide



MURRELEKTRONIK QUALITY



MURRELEKTRONIK STANDS FOR QUALITY

- In-house test center and EMC lab for tested and accredited products
- Individual and competent on-site advice and support
- No use of hazardous materials
- Complies with RoHS requirements
- First-class design and production quality
- Systematic and sustainable quality management according to DIN EN ISO 9001

Tested and accredited:
In-house test center
and EMC laboratory



Endurance tests
under extreme
conditions



Product testing begins
at the beginning of the
project





connect+ivity®
by Murrelektronik

THE BACK BONE OF YOUR MACHINE AND SYSTEM INSTALLATIONS

ASSESSING STATUS

- On-site analysis
- Exchanging the basic documentation
- Discussing the current status

SELECTING THE DESIGN

- Concept overview
- Analyzing advantages and disadvantages
- Bills of materials

CREATING A CONCEPT

- Customer-specific requirements
- Industry-specific requirements
- Several concept options

PROJECT SUPPORT

- E-plan and CAD data
- Electronic catalog data (BMEcat)
- Setup support



CONNECTIVITY BY MURRELEKTRONIK

CONNECTIVITY MEANS INDIVIDUAL SOLUTIONS

- Best advice increases your competitive advantage
- Decrease your budget significantly
- We optimize your machine and system installation
- Highly skilled, specially trained staff
- Individual system solutions
- Consistent from a single source

SYSTEM ADVICE WITH CONNECTIVITY CITY

Go from the industry overview
to your application ...



... to the appropriate products.



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1

ELECTRONICS IN THE CONTROL CABINET

1

ELECTRONICS IN THE CONTROL CABINET

Transformers / Rectified Power Supplies	1.1
Power Supply Units	1.2
UPS-Systems / Buffer- / Redundancy Modules	1.3
Intelligent Power Distribution	1.4
Converters / Rectifiers	1.5
Control Cabinet Power Outlets	1.6
EMC Filters	1.7
EMC Suppressors	1.8
Relays / Safety Relays	1.9
Optocouplers / Semiconductors	1.10
Switches	1.11
Active Interface Technology	1.12
Passive Interface Technology	1.13
Eurocard Holders / Control Modules	1.14

*An overview of this product range can be
found in our online shop*

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found in our online shop*

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found in our online shop*

*An overview of this product range can be
found in our online shop*

TRANSFORMERS / RECTIFIED POWER SUPPLIES

- Approvals for the global market
- Flexible and versatile
- Customized solutions

MTS, MST, MET OR MTL – THE RIGHT TRANSFORMER FOR EVERY APPLICATION

Different situations require different voltages. Transformers have to be just as flexible as the application. Murrelektronik's range provides you with the flexibility you need!

No matter if it's an isolation transformer, control transformer, or safety transformer – we have the right solution for any application. Murrelektronik's transformers are reliable, safe and their approvals and voltage ranges make them ideal for worldwide use.

BASIC FUNCTIONS

Rectified power supplies galvanically separate input and output. They convert mains voltage into Protected Extra Low Voltage. The electronic unit rectifies and smooths the voltage.

Rectified power supplies are designed for a frequency of 50/60 Hz. Their slow reaction prevents voltage spikes from being passed from the mains side to the output, which would interfere with peripheral devices.

They have fixing brackets with keyholes that ensure easy wall mounting. Models for DIN-rail mounting are available for applications up to 5 A.

Transformers



MTS – Isolation class T 40/B

- Nominal power rating: 40...250 VA
- Input voltage: 230, 400 V AC or multi voltage (± 15 V AC)
- Output voltage: 24 V AC or 230 V AC
- Ambient temperature: 40 °C

Page 1.1.1



MST – Isolation class T 40/B

- Nominal power rating: 320...1000 VA
- Input voltage: 230, 400 V AC or multi voltage
- Output voltage: 24 V AC or 230 V AC
- Ambient temperature: 40 °C

Page 1.1.4



MTL – Isolation class T 60/B

- Nominal power rating: 25...2500 VA
- Input voltage: 230/400 V AC ± 15 V AC
- Output voltage: 2 x 24 V AC or 2 x 115 V AC
- Ambient temperature: 60 °C

Page 1.1.7

Single-phase, single/two-phase, smoothed (Rectified Power Supplies)



MEN

- Input voltage: 115/230 V AC and 230/400 V AC
±15 V AC reconnectable
- Output voltage: 24 V DC SELV
- Output current: 1.0/2.5/5/7.5/10/15/20 A

Page 1.1.8



MTPS

- Input voltage: 230/400 V AC
±15 V AC reconnectable
- Output voltage: 24 V DC SELV
- Output current: 0.5/1/2/4/6/10 A

Page 1.1.12

Three-phase, smoothed (Rectified Power Supplies)



MPL

- Input voltage: 3 × 400 V AC ±5% reconnectable
3 × 208...520 V AC
- Output voltage: 24 V DC SELV
- Output current: 5...60 A

Page 1.1.13

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– INPUT: 230/400 V AC

– Isolation class T 40/B

Approvals: 

MTS

OUTPUT: 230 V AC
Screw terminals



MTS

OUTPUT: 230 V AC
Spring clamp terminals

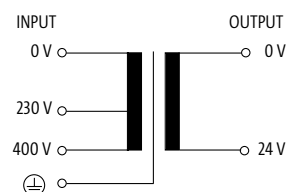
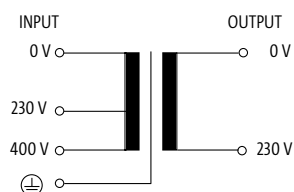
MTS

OUTPUT: 24 V AC
Screw terminals

MTS

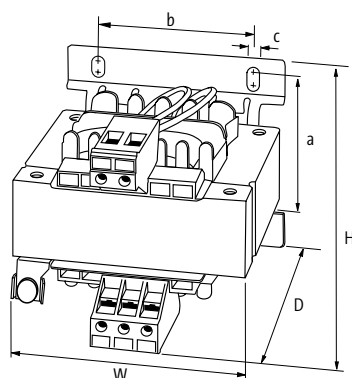
OUTPUT: 24 V AC
Spring clamp terminals

Circuit diagram



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
40 VA	79×78×93/0.8	86346	79×78×93/0.8	6686346	79×78×93/0.8	86340	79×78×93/0.8	6686340
63 VA	79×78×93/1.2	86347	79×78×93/1.2	6686347	79×78×93/1.2	86341	79×78×93/1.2	6686341
100 VA	86×84×98/2.0 – GL	86348	86×84×98/2.0	6686348	86×84×98/2.0 – GL	86342	86×84×98/2.0	6686342
160 VA	101×96×106/2.7 – GL	86349	101×96×106/2.7	6686349	101×96×106/2.7 – GL	86343	101×96×106/2.7	6686343
250 VA	102×96×108/3.5 – GL	86351	102×96×108/3.5	6686351	102×96×108/3.5 – GL	86345	102×96×108/3.5	6686345

Input	
Input voltage	230/400 V AC
Frequency	50...60 Hz
Output	
Output voltage	230 V AC 24 V AC (SELV)
Output rating	40 VA
General data	
Test isolation voltage	4 kV (prim./sec.)
Standards	EN 61558-1, EN 61558-2-4, EN 62041 category 0 EN 61558-1, EN 61558-2-6, EN 62041 category 0
Mounting method	Long-hole mounting or DIN-rail mountable TH35 (EN 60715)
Temperature range	-20...+40 °C (storage temperature -40...+80 °C)
Dimension drawing	



Notes

GL-Approval from 100 VA and with screw terminals.

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– INPUT: 230/400 ±15 V AC

– Isolation class T 40/B

Approvals: 

MTS+

OUTPUT: 230 V AC
Screw terminals



MTS+

OUTPUT: 230 V AC
Spring clamp terminals



MTS+

OUTPUT: 24 V AC
Screw terminals

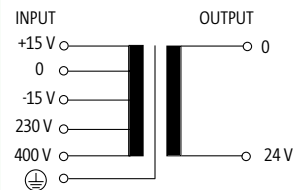
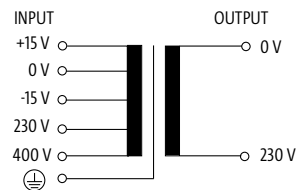


MTS+

OUTPUT: 24 V AC
Spring clamp terminals



Circuit diagram



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
40 VA	79×78×93/0.8	86366	79×78×93/0.8	6686366	79×78×93/0.8	86360	79×78×93/0.8	6686360
63 VA	79×78×93/1.2	86367	79×78×93/1.2	6686367	79×78×93/1.2	86361	79×78×93/1.2	6686361
100 VA	86×84×98/2.0 – GL	86368	86×84×98/2.0	6686368	86×84×98/2.0 – GL	86362	86×84×98/2.0	6686362
160 VA	101×96×106/2.7 – GL	86369	101×96×106/2.7	6686369	101×96×106/2.7 – GL	86363	101×96×106/2.7	6686363
250 VA	102×96×108/3.5 – GL	86371	102×96×108/3.5	6686371	102×96×108/3.5 – GL	86365	102×96×108/3.5	6686365

Input

Input voltage 230/400 ±15 V AC

Frequency 50...60 Hz

Output

Output voltage 230 V AC

24 V AC (SELV)

Output rating 40 VA

General data

Standards EN 61558-1, EN 61558-2-4, EN 62041 category 0

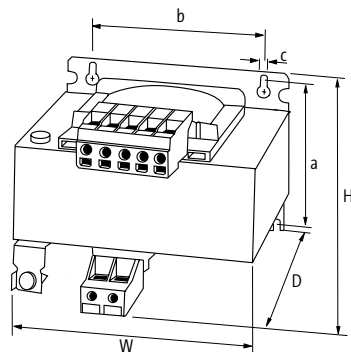
EN 61558-1, EN 61558-2-6, EN 62041 category 0

Test isolation voltage 4 kV (prim./sec.)

Mounting method Long-hole mounting or DIN-rail mountable TH35 (EN 60715)

Temperature range -20...+40 °C (storage temperature -40...+80 °C)

Dimension drawing



Notes

GL-Approval from 100 VA and with screw terminals.

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– INPUT: 208...550 V AC

– Isolation class T 40/B

Approvals: 

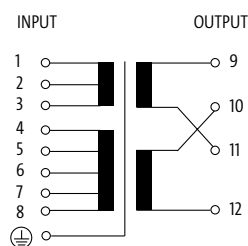
MTS Multi

OUTPUT: 1 × 230, 1 × 115, 2 × 115 V AC

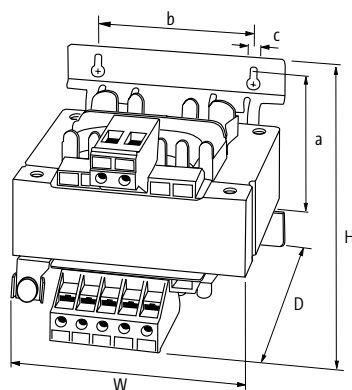
Screw terminals



Circuit diagram



Order Data	H×W×D/kg	Art-No.
25 VA	90×78×102/0.7	86140
40 VA	88×78×93/1.1	86141
63 VA	97×78×93/1.4	86142
100 VA	105×84×98/2.0 – GL	86143
160 VA	101×96×106/2.7 – GL	86144
Input		
Input voltage	208, 230, 380, 400, 420, 440, 460, 480, 500, 525, 550 V AC	
Frequency	50...60 Hz	
Output		
Output voltage	1 × 230, 1 × 115, 2 × 115 V AC	
Output rating	25 VA	
General data		
Standards	EN 61558-1, EN 61558-2-4, EN 62041 category 0	
Test isolation voltage	4 kV (prim./sec.)	
Mounting method	Long-hole mounting or DIN-rail mountable TH35 (EN 60715)	
Temperature range	-20...+40 °C (storage temperature -20...+80 °C)	
Dimension drawing		



Notes

GL-Approval from 100 VA and with screw terminals.

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– INPUT: 230/400 V AC

– Isolation class T 40/B

Approvals:  

MST

OUTPUT: 230 V AC
Screw terminals



MST

OUTPUT: 230 V AC
Spring clamp terminals

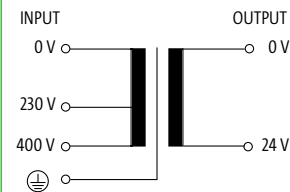
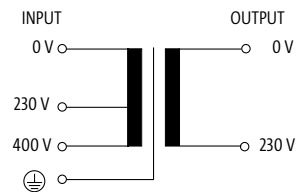
MST

OUTPUT: 24 V AC
Screw terminals

MST

OUTPUT: 24 V AC
Spring clamp terminals

Circuit diagram



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
320 VA	92×120×122/4.2 – GL	86306	92×120×122/4.2	6686306	92×120×122/4.2 – GL	86326	92×120×122/4.2	6686326
400 VA	104×120×123/5.2 – GL	86307	104×120×123/5.2	6686307	104×120×123/5.2 – GL	86327	104×120×123/5.2	6686327
500 VA	108×135×134/6.5 – GL	86308	108×135×134/6.5	6686308	108×135×134/6.5 – GL	86328		
630 VA	113×150×145/7.7 – GL	86309	113×150×145/7.7	6686309	113×150×145/7.7 – GL	86329		
800 VA	129×150×145/10.1 – GL	86310	129×150×145/10.1	6686310	136×150×149/10.1 – GL	86330		
1 000 VA	128×174×160/12.3 – GL	86311	128×174×160/12.3	6686311	133×174×165/12.3 – GL	86331		

Input

Input voltage	230/400 V AC
Frequency	50...60 Hz

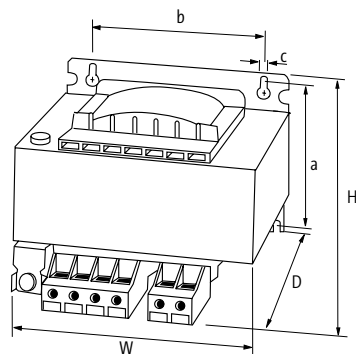
Output

Output voltage	230 V AC	24 V AC (SELV)
Output rating	320 VA	

General data

Standards	EN 61558-1, EN 61558-2-4, EN 62041 category 0	EN 61558-1, EN 61558-2-6, EN 62041 category 0
Test isolation voltage	4 kV (prim./sec.)	
Mounting method	Key-hole mounting	
Temperature range	-20...+40 °C (storage temperature -40...+80 °C)	

Dimension drawing



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– INPUT: 230/400 ±15 V AC

– Isolation class T 40/B

Approvals:  

MST+

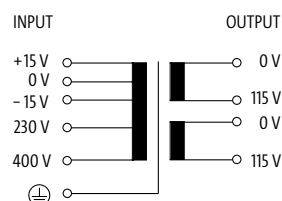
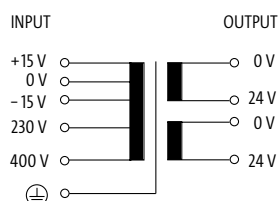
OUTPUT: 24 V AC, 48 V AC
Screw terminals



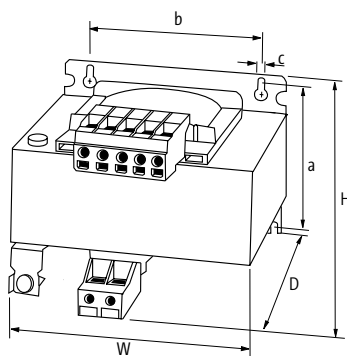
MST+

OUTPUT: 115 V AC, 230 V AC
Screw terminals

Circuit diagram



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
630 VA	121×150×165/8.0	86463	113×150×146/8.2	86483
1 000 VA	156×150×197/13.5	86464	156×150×146/13.5	86484
1 600 VA	168×174×222/19.5	86465	168×174×163/19.5	86485
2 500 VA	182×192×242/27.0	86466	182×192×196/27.0	86486
Input				
Input voltage	230/400 ±15 V AC			
Frequency	50...60 Hz			
Output				
Output voltage	1 × 24, 1 × 48, 2 × 24 V AC		1 × 230, 1 × 115, 2 × 115 V AC	
Output rating	630 VA			
General data				
Standards	EN 61558-1, EN 61558-2-4, EN 62041 category 0			
Test isolation voltage	5.8 kV (prim./sec.)			
Mounting method	Key-hole mounting			
Temperature range	-20...+40 °C, no condensation			
Dimension drawing				



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– INPUT: 208...550 V AC

– Isolation class T 40/B

Approvals:  

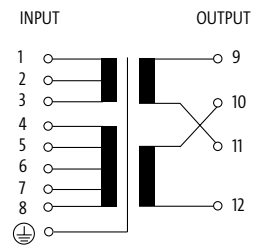
MST Multi

OUTPUT: 1 × 230, 1 × 115, 2 × 115 V AC

Screw terminals



Circuit diagram



Order Data	H×W×D/kg	Art-No.
250 VA	104×120×122/4.0	86145
320 VA	115×135×132/5.8	86146
400 VA	115×135×132/6.2	86147
500 VA	138×135×135/5.8	86148
800 VA	156×150×150/7	86150
1 000 VA	128×174×160/12.3	86151
1 600 VA	168×174×163/7	86152
2 000 VA	185×192×185/10	86153
2 500 VA	200×195×217/10	86154
3 000 VA	250×197×193/29.5	86155
5 000 VA	248×197×250/9	86157

Input

Input voltage	208, 230, 380, 400, 420, 440, 460, 480, 500, 525, 550 V AC
Frequency	50...60 Hz

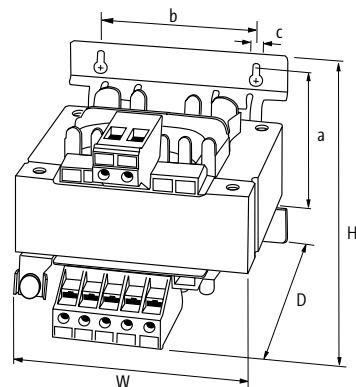
Output

Output voltage	1 × 230, 1 × 115, 2 × 115 V AC
Output rating	250 VA

General data

Standards	EN 61558-1, EN 61558-2-4, EN 62041 category 0
Test isolation voltage	4 kV (prim./sec.)
Mounting method	Key-hole mounting
Temperature range	-20...+40 °C (storage temperature -20...+80 °C)

Dimension drawing



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– INPUT: 230/400 ±15 V AC

– Isolation class T 60/B

Approvals:  

MTL

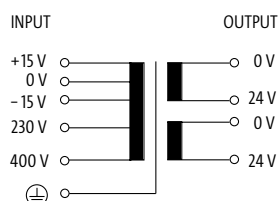
OUTPUT: 24 V AC, 48 V AC
Screw terminals



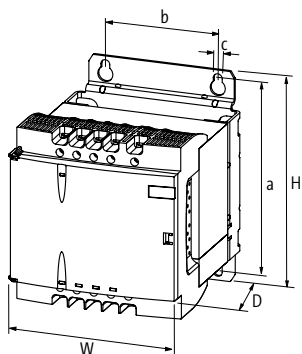
MTL

OUTPUT: 115 V AC, 230 V AC
Screw terminals

Circuit diagram



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
25 VA	108×87×98/1.1	86450	108×87×98/1.1	86470
40 VA	108×87×104/1.4	86451	108×87×104/1.4	86471
63 VA	108×87×116/2.0	86452	108×87×116/2.0	86472
100 VA	108×87×139/2.9	86453	108×87×139/2.9	86473
160 VA	153×123×128/4.4	86454	153×123×128/4.4	86474
250 VA	153×123×142/5.7	86455	153×123×142/5.7	86475
320 VA	153×123×160/7.2	86456	153×123×160/7.2	86476
Technical Data				
LED display	LED (green) for input voltage			
Input				
Input voltage	230/400 ±15 V AC			
Frequency	50...60 Hz			
Output				
Output voltage	1 × 24, 1 × 48, 2 × 24 V AC		1 × 230, 1 × 115, 2 × 115 V AC	
Output rating	25 VA			
General data				
Test isolation voltage	5.1 kV (prim./sec.)		4 kV (prim./sec.)	
Standards	EN 61558-2-4, EN 61558-2-6, EN 62041 category 0		EN 61558-1, EN 61558-2-4, EN 62041 category 0	
Mounting method	DIN-rail mountable TH35-15 (EN 60715) or for key-hole mounting			
Temperature range	-20...+60 °C, no condensation			
Dimension drawing				



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

Single-phase

– OUTPUT: 24 V DC (SELV)

Approvals: 

MEN

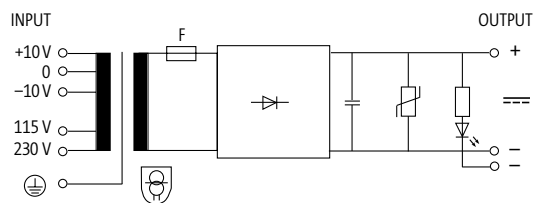
INPUT: 115/230 V AC



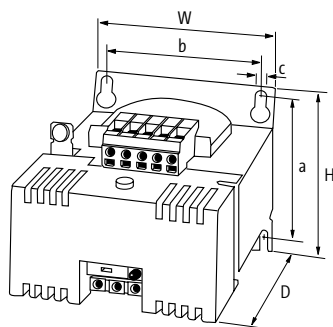
MEN

INPUT: 115/230 V AC
with MES DIN-rail adapter

Circuit diagram



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
24 V DC/1 A	64×78×120/1.3	85360	64×78×120/1.3	8985360
24 V DC/2.5 A	83×84×124/2.1	85361	83×84×124/2.1	8985361
24 V DC/5 A	95×96×136/3.0	85362	95×96×136/3.0	8985362
24 V DC/7.5 A	103×105×151/5.6	85363		
Input				
Input voltage	115/230 V AC ±10 V AC			
Frequency	50...60 Hz			
Output				
Output voltage	24 V DC (SELV)			
Ripple	max. 5 %rms			
Output filter	LED, VDR and smoothing capacitor			
General data				
Standards	EN 61558-2-6, EN 62041 category I, EN 55011 B, EN 61000-3-2			
Mounting method	Key-hole mounting		DIN-rail mountable TH35-15 (EN 60715) or for key-hole mounting	
Temperature range	-20...+60 °C, no condensation			
Dimension drawing				



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

Single-phase

– OUTPUT: 24 V DC (SELV)

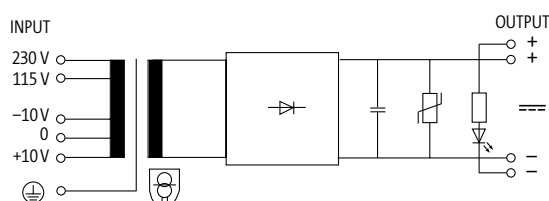
Approvals:  

MEN

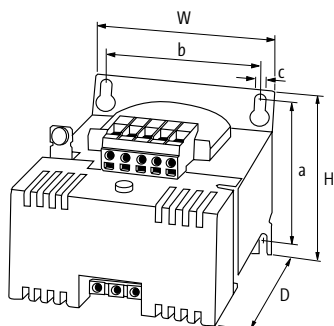
INPUT: 115/230 V AC



Circuit diagram



Order Data	H×W×D/kg	Art-No.
24 V DC/10 A	113×120×160/6.0	85364
24 V DC/15 A	139×135×182/8.2	85355
24 V DC/20 A	127×174×214/12.8	85356
Input		
Input voltage	115/230 V AC ±10 V AC	
Frequency	50...60 Hz	
Output		
Output voltage	24 V DC (SELV)	
Ripple	max. 5 %rms	
Output filter	LED, VDR and smoothing capacitor	
General data		
Standards	EN 61558-2-6, EN 62041 category I, EN 55011 B, EN 61000-3-2	
Mounting method	Key-hole mounting	
Temperature range	-20...+60 °C, no condensation	
Dimension drawing		



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– OUTPUT: 24 V DC (SELV)

Approvals: 

MEN

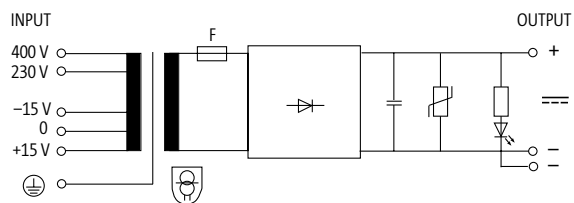
INPUT: 230/400 V AC



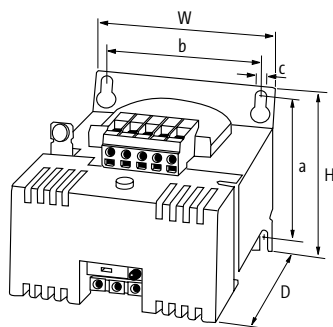
MEN

INPUT: 230/400 V AC
with MES DIN-rail adapter

Circuit diagram



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
24 V DC/1 A	64×78×120/1.3	85349	64×78×120/1.3	8985349
24 V DC/2.5 A	83×84×124/2.1	85350	83×84×124/2.1	8985350
24 V DC/5 A	95×96×136/3.0	85351	95×96×136/3.0	8985351
24 V DC/7.5 A	103×105×151/5.6	85357		
Input				
Input voltage	230/400 ±15 V AC			
Frequency	50...60 Hz			
Output				
Output voltage	24 V DC (SELV)			
Ripple	max. 5 %rms			
Output filter	LED, VDR and smoothing capacitor			
General data				
Standards	EN 61558-2-6, EN 62041 category I, EN 55011 B, EN 61000-3-2			
Mounting method	Key-hole mounting		DIN-rail mountable TH35-15 (EN 60715) or for key-hole mounting	
Temperature range	-20...+60 °C, no condensation			
Dimension drawing				



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– OUTPUT: 24 V DC (SELV)

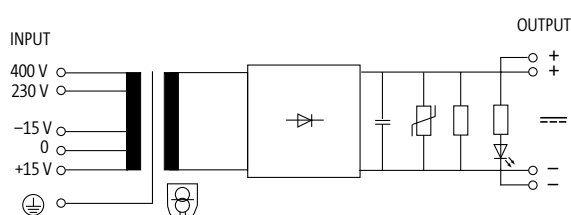
Approvals:  

MEN

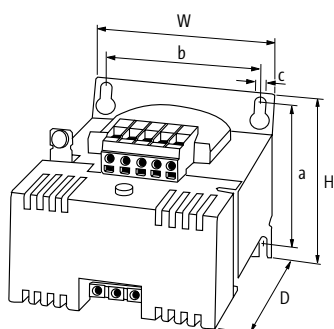
INPUT: 230/400 V AC



Circuit diagram



Order Data	H×W×D/kg	Art-No.
24 V DC/10 A	113×120×160/6.0	85352
24 V DC/15 A	139×135×182/8.2	85353
24 V DC/20 A	127×174×214/12.8	85354
Input		
Input voltage	230/400 ±15 V AC	
Frequency	50...60 Hz	
Output		
Output voltage	24 V DC (SELV)	
Ripple	max. 5 %rms	
Output filter	LED, VDR and smoothing capacitor	
General data		
Standards	EN 61558-2-6, EN 62041 category I, EN 55011 B, EN 61000-3-2	
Mounting method	Key-hole mounting	
Temperature range	-20...+60 °C, no condensation	
Dimension drawing		



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– OUTPUT: 24 V DC (SELV)

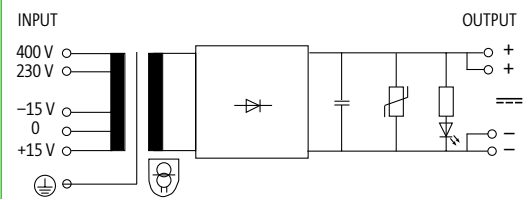
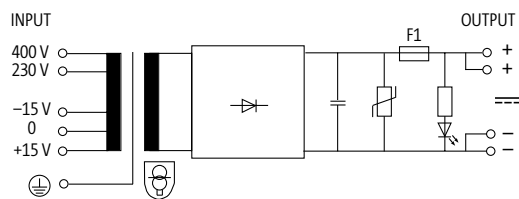
Approvals: 

MTPS

INPUT: 230/400 V AC

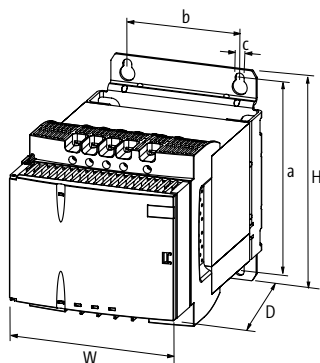


Circuit diagram



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
24 V DC/0.5 A	108×87×124/1.3	85400		
24 V DC/1 A	108×87×124/1.3	85401		
24 V DC/2 A	108×87×142/2.0	85402		
24 V DC/4 A	108×87×165/2.9	85403		
24 V DC/6 A	153×123×153/4.9	85404		
24 V DC/10 A			153×123×185/7.7	85405
Input				
Input voltage	230/400 ±15 V AC			
Frequency	50...60 Hz			
LED display	LED (green) for input voltage			
Output				
Output voltage	24 V DC (SELV)			
Ripple	max. 5 %rms			
Output filter	LED, VDR and smoothing capacitor			
General data				
Standards	EN 61558-2-6, EN 62041 category I, EN 55011 B, EN 61000-3-2			
Temperature range	-20...+60 °C, no condensation			
Mounting method	DIN-rail mountable TH35-15 (EN 60715) or for key-hole mounting		Key-hole mounting	

Dimension drawing



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

3-phase

– OUTPUT: 24 V DC (SELV)

Approvals: Listed

MPL

INPUT: 3 × 400 V AC, ±5% reconnectable

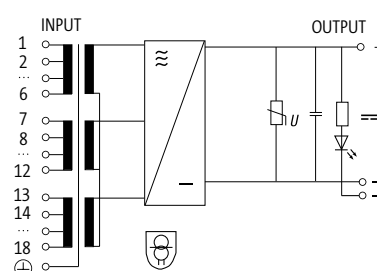
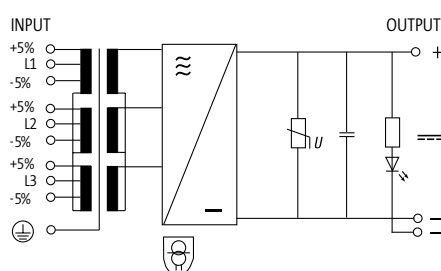


MPL Multi

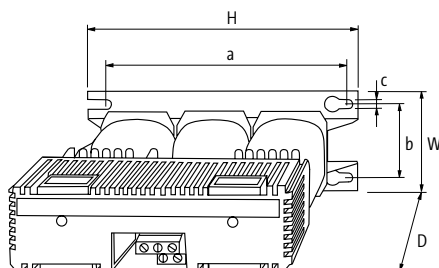
INPUT: 3 × 208...520 V AC



Circuit diagram



Order Data	HxWxD/kg	Art-No.	HxWxD/kg	Art-No.
24 V DC/5 A	125x73x153/2.9 – cURus	85921		
24 V DC/7.5 A	185x78x188/4.4 – cURus	85923		
24 V DC/10 A	185x78x188/4.5 – cURus	85925	185x93x188/6.6	85953
24 V DC/15 A	220x82x208/8.2 – cURus	85927	220x82x208/7.5	85954
24 V DC/20 A	220x103x213/10.5 – cURus	85929		
24 V DC/25 A	220x103x213/11.0 – cURus	85931	220x103x213/11.1 – cURus	85955
24 V DC/30 A	240x107x250/13.5 – cURus	85933		
24 V DC/40 A	280x124x313/17.8 – cURus	85935	280x124x313/17.9 – cURus	85956
24 V DC/50 A	280x134x313/20.9 – cURus	85937	280x134x313/20.9 – cURus	85957
24 V DC/60 A	280x154x313/26.1 – cURus	85939		
Input				
Input voltage	3 × 400 V AC ±5%		3 × 208...520 V AC	
Frequency	50...60 Hz			
Output				
Output voltage	24 V DC (SELV)			
Ripple	max. 2%rms			
Output filter	LED, VDR and smoothing capacitor			
General data				
Standards	EN 61558-2-6, EN 62041 category I, EN 55011 B, EN 61000-3-2			
Mounting method	Key-hole mounting			
Temperature range	-20...+55 °C, for any mounting position at vertical wall, no condensation			
Dimension drawing				



Notes



SWITCHING POWER SUPPLIES EMPARRO® – SIMPLY THE BEST

- Efficiency up to 96%
- 150% Power Boost for 4 seconds

EMPARRO® – THE SWITCHING POWER SUPPLY WITH MAXIMUM EFFICIENCY

- Efficiency up to 96%
- 150% Power Boost for four seconds
- Metal housing with optimum EMC characteristics
- Derating only at +60 °C
- Reduced width
- Long bridging time in case of a power failure
- More than 30 variants – the solution for many applications

Competitive comparison of Emparro®

The comparison based on the same input current shows: Emparro (on the left) releases significantly less heat than conventional switching power supplies. The devices remain cooler and protect the neighboring components. This results in a longer service life.



Switching power supplies



Emparro®

- Single-phase, two-phase, three-phase
- Spring clamp terminal
- AS-Interface

Page 1.2.1



Emparro® HD

- Single-phase
- Robust design

Page 1.2.4



Emparro®67

- Single-phase
- IP67
- IO-Link
- Preventive diagnostics



Page 1.2.8



Evolution/Evolution+

- Two-phase, three-phase
- Extended temperature range from -25...+70 °C
- Approvals for worldwide use

Page 1.2.10



ECO-Rail-2

- Single-phase
- Useful and flexible

Page 1.2.16



PICCO

- Single-phase
- 16 variants
- 12 V or 24 V outputs
- 10 W, 30 W, 60 W or 100 W

Page 1.2.18

POWER SUPPLY UNITS

Single-phase

– Short-circuit and overload protected

– Alarm contact

Approvals:  

Emparro®

OUTPUT: 24...28 V DC
Current: 5 A



Emparro®

OUTPUT: 24...28 V DC
Current: 10 A



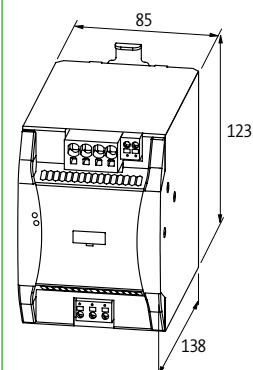
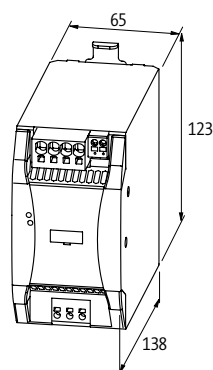
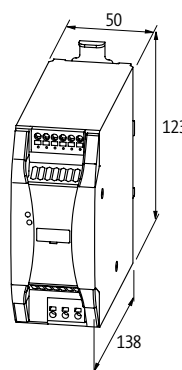
Emparro®

OUTPUT: 24...28 V DC
Current: 20 A



Order Data	Art-No.		Art-No.
24 V DC/5 A (for DIN-Rail)	85440		
24 V DC/5 A (for screwing)	85702		
24 V DC/10 A (for DIN-Rail)			85441
24 V DC/10 A (for screwing)			85703
24 V DC/20 A (for DIN-Rail)			85442
24 V DC/20 A (for screwing)			85704
Input			
Input voltage	85...265 V AC/90...250 V DC		90...265 V AC/90...250 V DC
Input current	1.3 A (100 V AC); 0.61 A (240 V AC)	2.6 A (100 V AC); 1.1 A (240 V AC)	5.2 A (100 V AC); 2.2 A (240 V AC)
Inrush current after 1 ms	max. 5.5 A (230 V AC)	max. 13 A	max. 23 A (230 V AC)
Power factor	0.87 (230 V AC)	0.95 (230 V AC)	0.96 (230 V AC)
Frequency	50...60 Hz		
Input fuse (internal)	6.3 A (T)		10 A (T)
Output			
Output voltage	24 V DC (SELV), ±1%; 24...28 V adjustable		
Power Boost	I _{out} N × 150% (min. 4 s)		
Output current	5 A	10 A	20 A
Mains failure bridging time	min. 30 ms (100 V AC); 5 A (24 V DC)	min. 30 ms (100 V AC); 10 A (24 V DC)	min. 30 ms (100 V AC); 20 A (24 V DC)
Ripple	max. 50 mVrms		
Spikes	max. 200 mV p-p		
Unit protection	Short-circuit and overload protected		
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit		
Parallel usage/serial usage	max. 5 units/max. 2 units		
General data			
Standards	EN 60950-1, EN 61204-3, EN 55011 B, EN 61000-3-2, SEMI F47		
Relative humidity	5...95%, no condensation		
Protection	IP20		
Efficiency	92.7% (110 V AC); 94.5% (230 V AC)	92.8% (110 V AC); 94.3% (230 V AC)	91.7% (110 V AC); 94.1% (230 V AC)
Connection	Push-In spring clamp terminals		
Temperature range	-40...+60 °C, ...+70 °C derating (storage temperature -40...+80 °C)		
Dimension drawing			

Dimension drawing



Notes

POWER SUPPLY UNITS

Single-phase

– Short-circuit and overload protected

– Alarm contact

Approvals:   

Emparro®

OUTPUT: 48...56 V DC
Current: 2.5 A



Emparro®

OUTPUT: 48...56 V DC
Current: 5 A

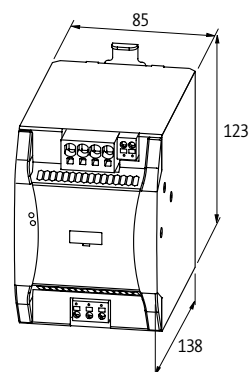
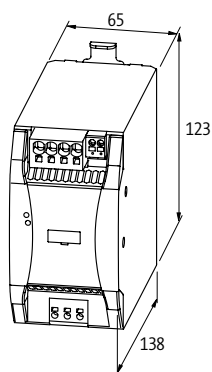
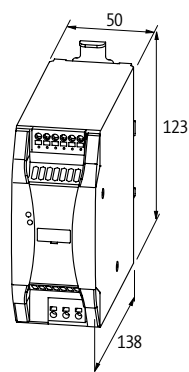


Emparro®

OUTPUT: 48...56 V DC
Current: 10 A



Order Data	Art-No.	Art-No.	Art-No.
48 V DC/2.5 A (for DIN-Rail)	85437		
48 V DC/2.5 A (for screwing)	85722		
48 V DC/5 A (for DIN-Rail)		85438	
48 V DC/5 A (for screwing)		85723	
48 V DC/10 A (for DIN-Rail)			85439
48 V DC/10 A (for screwing)			85724
Input			
Input voltage	85...265 V AC/90...250 V DC		
Input current	1.2 A (100 V AC); 0.6 A (240 V AC)	2.6 A (100 V AC); 1.1 A (240 V AC)	5.1 A (100 V AC); 2.4 A (240 V AC)
Inrush current after 1 ms	max. 3.5 A (230 V AC)	max. 5.5 A (230 V AC)	max. 11 A (230 V AC)
Power factor	0.87 (230 V AC)	0.95 (230 V AC)	0.94 (230 V AC)
Frequency	50...60 Hz		
Input fuse (internal)	6.3 A (T)		10 A (T)
Output			
Output voltage	48 V DC (SELV), ±1%; 48...56 V adjustable		
Power Boost	Iout N × 150% (min. 4 s)		
Output current	2.5 A	5 A	10 A
Mains failure bridging time	min. 30 ms (100 V AC); 2.5 A (48 V DC)	min. 30 ms (100 V AC); 5 A (48 V DC)	min. 30 ms (100 V AC); 10 A (48 V DC)
Ripple	max. 50 mVrms		
Spikes	max. 200 mV p-p		
Unit protection	Short-circuit and overload protected		
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit		
Parallel usage/serial usage	max. 5 units/max. 2 units		
General data			
Standards	EN 60950-1, EN 61204-3, EN 55011 B, EN 61000-3-2, SEMI F47		
Relative humidity	5...95%, no condensation		
Protection	IP20		
Efficiency	92.8% (110 V AC); 94.6 % (230 V AC)	93.7% (110 V AC); 95.1% (230 V AC)	95%
Connection	Push-In spring clamp terminals		
Temperature range	-40...+60 °C, ...+70 °C derating (storage temperature -40...+80 °C)		
Dimension drawing			



Notes

POWER SUPPLY UNITS

Single-phase

– Short-circuit and overload protected

– Alarm contact

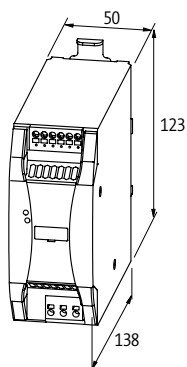
Approvals:   

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OUTPUT: 12...15 V DC
Current: 10 A



Order Data	Art-No.
12 V DC/10 A (for DIN-Rail)	85434
12 V DC/10 A (for screwing)	85712
Input	
Input voltage	85...265 V AC/90...250 V DC
Input current	1.2 A (100 V AC); 0.6 A (230 V AC)
Inrush current after 1 ms	max. 10 A (230 V AC)
Power factor	0.88 (230 V AC)
Frequency	50...60 Hz
Input fuse (internal)	6.3 A (T)
Output	
Output voltage	12 V DC (SELV), ±1%; 12...15 V adjustable
Power Boost	lout N × 150% (min. 4 s)
Output current	10 A
Mains failure bridging time	min. 30 ms (100 V AC); 10 A (12 V DC)
Ripple	max. 50 mVrms
Spikes	max. 200 mV p-p
Unit protection	Short-circuit and overload protected
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit
Parallel usage/serial usage	max. 5 units/max. 2 units
General data	
Standards	EN 60950-1, EN 61204-3, EN 55011 B, EN 61000-3-2, SEMI F47
Relative humidity	5...95%, no condensation
Protection	IP20
Efficiency	91.4% (110 V AC); 93.2% (230 V AC)
Connection	Push-In spring clamp terminals
Temperature range	-40...+60 °C, ...+70 °C derating (storage temperature -40...+80 °C)
Dimension drawing	



Notes

POWER SUPPLY UNITS

Single-phase

– Short-circuit and overload protected

– IP20

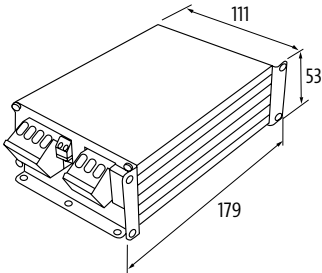
– rugged design

Emparro® HD

OUTPUT: 24...28 V DC
Current: 10 A



Order Data		Art-No.
24 V DC/10 A		85449
Input		
Input voltage	90...265 V AC/90...370 V DC	
Input current	1.1 A (240 V AC)	
Inrush current after 1 ms	max. 7 A (240 V AC)	
Power factor	0.91 (230 V AC)	
Frequency	50...60 Hz	
Input fuse (internal)	6.3 A (T)	
Output		
Output voltage	24 V DC (SELV), ±1%; 24...28 V adjustable	
Power Boost	15 A (min. 5 s)	
Output current	10 A	
Mains failure bridging time	min. 35 ms (100 V AC); 10 A (24 V DC)	
Ripple	max. 30 mVrms	
Spikes	max. 300 mV p-p	
Unit protection	Short-circuit and overload protected	
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit	
Parallel usage/serial usage	max. 3 units/max. 2 units	
General data		
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2	
Relative humidity	5...95%, no condensation	
Protection	IP20	
Efficiency	93.5% (115 V AC); 94.2% (230 V AC)	
MTBF	1 000 000 h	
Connection	Spring clamp terminals	
Mounting method	screw fixing	
Temperature range	-40...+50 °C, ...+80 °C derating (storage temperature -40...+85 °C)	
Dimension drawing		



Notes

POWER SUPPLY UNITS

2-/3-phase

– Short-circuit and overload protected

– Alarm contact

Approvals:   

Emparro®

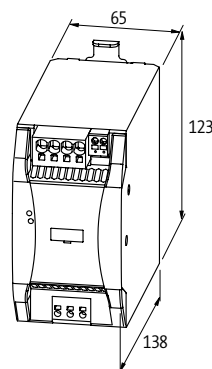
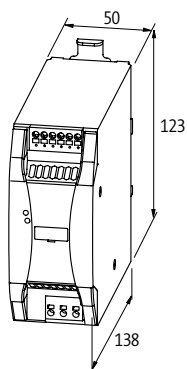
OUTPUT: 24...28 V DC
Current: 5 A


Emparro®

OUTPUT: 24...28 V DC
Current: 10 A


Order Data	Art-No.	Art-No.
24 V DC/5 A (for DIN-Rail)	85690	
24 V DC/5 A (for screwing)	85695	
24 V DC/5 A (varnished board)	87690	
24 V DC/10 A (for DIN-Rail)		85691
24 V DC/10 A (for screwing)		85696
24 V DC/10 A (varnished board)		87691

Input		
Input voltage	3 × 324...572 V AC/450...745 V DC	
Input current	0.45 A (3 × 360 V AC); 0.3 A (3 × 500 V AC)	0.75 A (3 × 360 V AC); 0.55 A (3 × 500 V AC)
Inrush current after 1 ms	max. 9.5 A (3 × 500 V AC)	max. 9.0 A (3 × 500 V AC)
Power factor	0.61 (3 × 400 V AC)	0.66 (3 × 500 V AC)
Frequency	50...60 Hz	
Input fuse (internal)	3 × 6.3 A (T)	
Output		
Output voltage	24 V DC (SELV), ±1%; 24...28 V adjustable	
Power Boost	Iout N × 150% (min. 5 s)	
Output current	3.7 A (70 °C); 5.0 A (60 °C); 6.0 A (45 °C)	12 A (45 °C); 10 A (60 °C); 7 A (70 °C)
Mains failure bridging time	min. 25 ms (3 × 360 V AC); 5 A (24 V DC)	min. 45 ms (3 × 500 V AC); 10 A (24 V DC)
Ripple	max. 20 mVrms	
Spikes	max. 50 mV p-p	
Unit protection	Short-circuit and overload protected, permanently by 20% (to 45 °C)	
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit	
Parallel usage/serial usage	max. 3 units	
General data		
Standards	EN 60950-1, EN 61204-3, EN 55011 B, EN 61000-3-2, SEMI F47	
Relative humidity	5...95%, no condensation	
Protection	IP20	
Efficiency	92.5% (3 × 400 V AC); 91.8% (3 × 480 V AC)	93.7% (3 × 400 V AC); 93.2% (3 × 480 V AC)
Connection	Push-In spring clamp terminals	
Temperature range	-40...+70 °C, ...+70 °C derating (storage temperature -40...+85 °C)	
Dimension drawing		



Notes

POWER SUPPLY UNITS

2-/3-phase

– Short-circuit and overload protected

– Alarm contact

Approvals:    

Emparro®

OUTPUT: 24...28 V DC
Current: 20 A

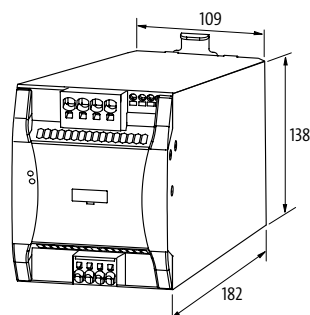
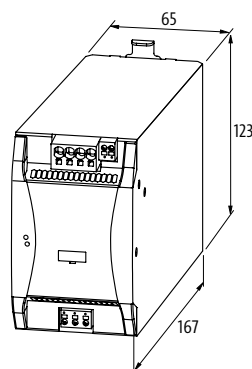


Emparro®

OUTPUT: 24...28 V DC
Current: 40 A



Order Data	Art-No.	Art-No.
24 V DC/20 A (for DIN-Rail)	85692	
24 V DC/20 A (for screwing)	85697	
24 V DC/20 A (varnished board)	87692	
24 V DC/40 A (for DIN-Rail)		85693
24 V DC/40 A (for screwing)		85698
24 V DC/40 A (varnished board)		87693
Input		
Input voltage	3 × 324...572 V AC/450...745 V DC	3 × 324...572 V AC/480...745 V DC
Input current	1.3 A (3 × 360 V AC); 1.0 A (3 × 500 V AC)	2.3 A (3 × 360 V AC); 1.6 A (3 × 500 V AC)
Inrush current after 1 ms	max. 13 A (3 × 500 V AC)	max. 14 A (3 × 500 V AC)
Power factor	0.65 (3 × 500 V AC)	0.88 (3 × 500 V AC)
Frequency	50...60 Hz	
Input fuse (internal)	3 × 6.3 A (T)	
Output		
Output voltage	24 V DC (SELV), ±1%; 24...28 V adjustable	
Power Boost	I _{out} N × 150% (min. 5 s)	
Output current	15 A (70 °C); 20 A (60 °C); 24 A (45 °C)	30 A (70 °C); 40 A (60 °C); 48 A (45 °C)
Mains failure bridging time	min. 40 ms (3 × 500 V AC)	
Ripple	max. 20 mVrms	
Spikes	max. 90 mV p-p	
Unit protection	Short-circuit and overload protected, permanently by 20% (to 45 °C)	
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit	
Parallel usage/serial usage	max. 3 units	
General data		
Standards	EN 60950-1, EN 61204-3, EN 55011 B, EN 61000-3-2, SEMI F47	
Relative humidity	5...95%, no condensation	
Protection	IP20	
Efficiency	94.8% (3 × 400 V AC); 94.5% (3 × 480 V AC)	93.7% (3 × 400 V AC); 93.5% (3 × 480 V AC)
Connection	Push-In spring clamp terminals	
Temperature range	-40...+70 °C, ...+70 °C derating (storage temperature -40...+85 °C)	
Dimension drawing		



Notes

POWER SUPPLY UNITS

2-/3-phase

– AS-Interface

– Short-circuit and overload protected

– Alarm contact

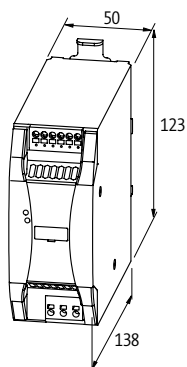
Approvals:   

Emparro®

OUTPUT: 30...32 V DC



Order Data	Art-No.
30.5 V DC/4 A	85383
Input	
Input voltage	3 × 324...572 V AC/450...745 V DC
Input current	0.45 A (3 × 360 V AC); 0.3 A (3 × 500 V AC)
Inrush current after 1 ms	max. 9.5 A (3 × 500 V AC)
Power factor	0.61 (3 × 400 V AC)
Frequency	50...60 Hz
Input fuse (internal)	3 × 6.3 A (T)
Output	
Output voltage	30.5 V DC (SELV), ±1%; 30...32 V adjustable
Power Boost	I _{out} N × 150% (min. 5 s)
Output current	4.8 A (45 °C); 4.0 A (60 °C); 2.9 A (70 °C)
Mains failure bridging time	min. 20 ms (3 × 360 V AC); 5 A (24 V DC)
Ripple	max. 20 mVrms
Spikes	max. 50 mV p-p
Unit protection	Short-circuit and overload protected, permanently by 20% (to 45 °C)
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit
Parallel usage/serial usage	max. 3 units
General data	
Standards	EN 60950-1, EN 61204-3, EN 61000-3-2, SEMI F47
Relative humidity	5...95%, no condensation
Protection	IP20
Efficiency	92.5% (3 × 400 V AC); 91.8% (3 × 480 V AC)
Connection	Push-In spring clamp terminals
Mounting method	DIN-rail mountable TH35 (EN 60715)
Temperature range	-40...+70 °C, ...+70 °C derating (storage temperature -40...+85 °C)
Dimension drawing	



Notes

POWER SUPPLY UNITS

Single-phase

– IP67

Emparro®67

OUTPUT: 24 V DC
Current: 4 A

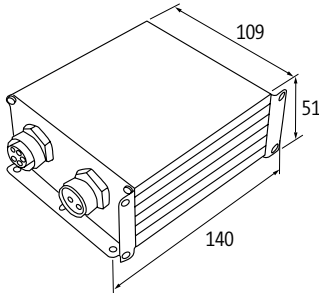
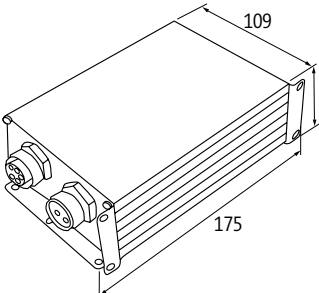


Emparro®67

OUTPUT: 24 V DC
Current: 8 A



Approvals:  US
Listed

Order Data		Art-No.	Art-No.
24 V DC/4 A	9000-11112-1962020		
24 V DC/8 A			9000-11112-2062020
Input			
Input voltage	90...265 V AC/90...265 V DC		
Input current	1.1 A (100 V AC); 0.5 A (240 V AC)	2.1 A (100 V AC); 0.9 A (240 V AC)	
Inrush current after 1 ms	max. 8.9 A (230 V AC)	max. 7 A (230 V AC)	
Power factor	0.98 (230 V AC)	0.95 (230 V AC)	
Connection	7/8" male, 3-pole		
Frequency	50...60 Hz		
Input fuse (internal)	6.3 A (T)		
Output			
Output voltage	24 V DC (SELV), ±2%		
Power Boost	I _{out} N × 150% (min. 4 s)		
Output current	4 A	8 A	
Connection	7/8" (female), 5-pole		
Mains failure bridging time	min. 45 ms (230 V AC); 4 A (24 V DC)	min. 35 ms (230 V AC); 8 A (24 V DC)	
Ripple	max. 20 mVrms	max. 30 mVrms	
Spikes	max. 100 mV p-p	max. 300 mV p-p	
Unit protection	Short-circuit, overload and temperature		
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit		
Parallel usage/serial usage	max. 3 units/max. 2 units		
General data			
Standards	EN 60950-1, EN 61204-3, EN 55011 A, EN 61000-3-2		
Relative humidity	4...100%		
Protection	IP67		
Efficiency	91.7% (115 V AC); 92.4% (230 V AC)	93.5% (115 V AC); 94.2% (230 V AC)	
Mounting method	screw fixing		
Temperature range	-40...+60 °C, ...+70 °C derating (storage temperature -40...+80 °C)		
Dimension drawing			
			
Notes			

POWER SUPPLY UNITS

Single-phase

- Over current protection device
- 2×MICO 7/8" IOL
- Preventive Diagnostic

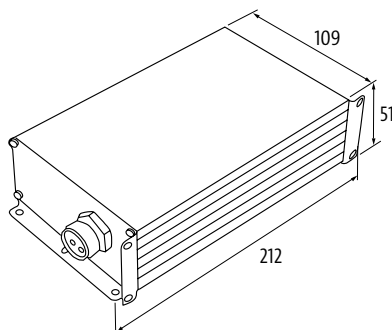
IO-Link

Emparro®67 Hybrid

OUTPUT: 24...28 V DC
Current: 10 A



Order Data		Art-No.
24 V DC/10 A		85676
Input		
Input voltage	90...265 V AC/90...265 V DC	
Input current	1.1 A (230 V AC)	
Inrush current after 1 ms	max. 7 A (230 V AC)	
Power factor	0.88 (230 V AC)	
Connection	7/8" male, 3-pole	
Frequency	50...60 Hz	
Input fuse (internal)	6.3 A (T)	
Output		
Output voltage	24 V DC (SELV), ±1%; 24...28 V adjustable	
Output current	max. 8 A (per channel), max. 10 A (total)	
No. of channels	2×MICO (Over current protection device)	
Connection	7/8" (female), 5-pole	
Mains failure bridging time	min. 20 ms (230 V AC)	
Ripple	max. 10 mVrms	
Spikes	max. 150 mV p-p	
Unit protection	Short-circuit, overload and temperature	
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit	
Parallel usage/serial usage	no	
General data		
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2	
Relative humidity	4...100%	
Protection	IP67	
Efficiency	91.6% (115 V AC); 92.8% (230 V AC)	
MTBF	430 000 h	
Mounting method	screw fixing	
Temperature range	-25...+50 °C (storage temperature -40...+85 °C)	
Dimension drawing		



Notes	
For an explanation of MICO features, see the chapter Intelligent Power Distribution	

POWER SUPPLY UNITS

2-/3-phase

- stable output voltage
- Short-circuit and overload protected

Approvals:  

Evolution

OUTPUT: 22...28 V DC
Current: 5 A

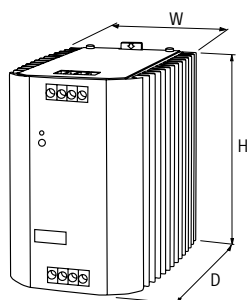


Evolution

OUTPUT: 22...28 V DC
Current: 10 A



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
24 V DC/5 A	132×83×98/1.0	85000		
24 V DC/10 A			132×93×114/1.3	85001
Input				
Input voltage	3 × 324...572 V AC/480...745 V DC			
Input current	3 × 0.45 A		3 × 0.8 A	
Inrush current after 1 ms	max. 10 A		max. 15 A	
Frequency	50...60 Hz			
Primary fusing external	max. 3 × 10 A		3 × 10 A (T)	
Output				
Output voltage	24 V DC (SELV), ±1%; 22...28 V adjustable			
Output current	5 A (+55 °C); 3 A (+70 °C)		10 A (+55 °C); 6.5 A (+70 °C)	
Power Boost	Iout N × 150% (min. 4 s)			
Mains failure bridging time	min. 30 ms (400 V AC)		min. 19 ms (400 V AC)	
Ripple	max. 50 mVrms			
Spikes	max. 100 mV p-p			
LED display	LED (green): OK; LED (red): overload			
Parallel usage/serial usage	max. 5 units/max. 2 units			
General data				
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2, SEMI F47			
Relative humidity	5...95%, no condensation			
Protection	IP20			
Efficiency	86% (3 × 360 V AC); 86% (3 × 520 V AC)		90% (3 × 400 V AC); 90% (3 × 520 V AC)	
Connection	Screw terminals			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	-25...+70 °C (storage temperature -40...+85 °C)			
Dimension drawing				



Notes

POWER SUPPLY UNITS

2-/3-phase

- stable output voltage
- Short-circuit and overload protected

Approvals:  

Evolution

OUTPUT: 22...28 V DC
Current: 20 A

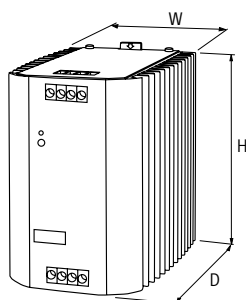


Evolution

OUTPUT: 22...28 V DC
Current: 40 A



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
24 V DC/20 A	132×113×136/2.0	85002		
24 V DC/40 A			132×164×142/3.0	85004
Input				
Input voltage	3 × 324...572 V AC/480...745 V DC			
Input current	3 × 1.3 A		3 × 2.4 A	
Inrush current after 1 ms	max. 19 A		–	
Frequency	50...60 Hz			
Primary fusing external	max. 3 × 20 A			
Output				
Output voltage	24 V DC (SELV), ±1%; 22...28 V adjustable			
Output current	20 A (+55 °C); 15.8 A (+70 °C)		40 A (+55 °C); 30 A (+70 °C)	
Power Boost	Iout N × 150% (min. 4 s)			
Mains failure bridging time	min. 19 ms (400 V AC)			
Ripple	max. 50 mVrms			
Spikes	max. 100 mV p-p			
LED display	LED (green): OK; LED (red): overload			
Parallel usage/serial usage	max. 5 units/max. 2 units			
General data				
Standards	EN 60950-1, EN 61204-3, EN 55011 A, EN 61000-3-2, SEMI F47		EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2, SEMI F47	
Relative humidity	5...95%, no condensation			
Protection	IP20			
Efficiency	90% (3 × 400 V AC); 89% (3 × 520 V AC)		91% (3 × 400 V AC); 90% (3 × 520 V AC)	
Connection	Screw terminals			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	-25...+70 °C (storage temperature -40...+85 °C)			
Dimension drawing				



Notes

POWER SUPPLY UNITS

2-/3-phase

- stable output voltage
- Short-circuit and overload protected
- Varnished board

Approvals:  

Evolution+

OUTPUT: 22...28 V DC
Current: 5 A

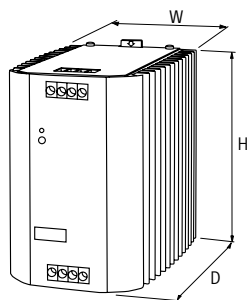


Evolution+

OUTPUT: 22...28 V DC
Current: 10 A



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
24 V DC/5 A	132×83×98/1.0	85640		
24 V DC/10 A			132×93×114/1.2	85641
Input				
Input voltage	3 × 324...572 V AC/480...745 V DC			
Input current	3 × 0.45 A		3 × 0.8 A	
Inrush current after 1 ms	max. 10 A		max. 15 A	
Frequency	50...60 Hz			
Primary fusing external	3 × 10 A (T)			
Output				
Output voltage	24 V DC (SELV), ±1%; 22...28 V adjustable			
Output current	5 A (+55 °C); 3 A (+70 °C)		10 A (+55 °C); 6.5 A (+70 °C)	
Power Boost	Iout N × 150% (min. 4 s)			
Mains failure bridging time	min. 30 ms (400 V AC)		min. 19 ms (400 V AC)	
Ripple	max. 50 mVrms			
Spikes	max. 100 mV p-p			
LED display	LED (green): OK; LED (red): overload			
Parallel usage/serial usage	max. 5 units/max. 2 units			
Alarm output	electronic relay max. 30 V DC/0.1 A, group alarm			
General data				
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2, SEMI F47			
Relative humidity	5...95%, no condensation			
Protection	Varnished board			
Protection	IP20			
Efficiency	86% (3 × 400 V AC); 86% (3 × 520 V AC)		90% (3 × 400 V AC); 90% (3 × 520 V AC)	
Connection	Screw terminals			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	-25...+70 °C (storage temperature -40...+85 °C)			
Dimension drawing				



Notes

POWER SUPPLY UNITS

2-/3-phase

- stable output voltage
- Short-circuit and overload protected
- Varnished board

Approvals:  

Evolution+

OUTPUT: 22...28 V DC
Current: 20 A

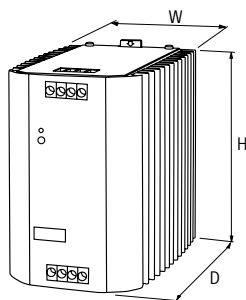


Evolution+

OUTPUT: 22...28 V DC
Current: 40 A



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
24 V DC/20 A	132×113×136/2.0	85642		
24 V DC/40 A			132×164×142/3.0	85644
Input				
Input voltage	3 × 324...572 V AC/480...745 V DC			
Input current	3 × 1.3 A		3 × 2.4 A	
Inrush current after 1 ms	max. 19 A		–	
Frequency	50...60 Hz			
Primary fusing external	max. 3 × 20 A			
Output				
Output voltage	24 V DC (SELV), ±1%; 22...28 V adjustable			
Output current	20 A (+55 °C); 15.8 A (+70 °C)		40 A (+55 °C); 30 A (+70 °C)	
Power Boost	Iout N × 150% (min. 4 s)			
Mains failure bridging time	min. 19 ms (400 V AC)			
Ripple	max. 50 mVrms			
Spikes	max. 100 mV p-p			
LED display	LED (green): OK; LED (red): overload			
Parallel usage/serial usage	max. 5 units/max. 2 units			
Alarm output	electronic relay max. 30 V DC/0.1 A, group alarm			
General data				
Standards	EN 60950-1, EN 61204-3, EN 55011 A, EN 61000-3-2, SEMI F47		EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2, SEMI F47	
Relative humidity	5...95%, no condensation			
Protection	Varnished board			
Protection	IP20			
Efficiency	90% (3 × 400 V AC); 89% (3 × 520 V AC)		91% (3 × 400 V AC); 90% (3 × 520 V AC)	
Connection	Screw terminals			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	-25...+70 °C (storage temperature -40...+85 °C)			
Dimension drawing				



Notes

POWER SUPPLY UNITS

2-/3-phase

- stable output voltage
- Short-circuit and overload protected
- Varnished board

Approvals:  Listed

Evolution+

OUTPUT: 48...56 V DC
Current: 5 A



Evolution+

OUTPUT: 48...56 V DC
Current: 10 A

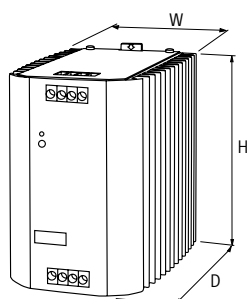


Evolution+

OUTPUT: 48...56 V DC
Current: 20 A



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
48 V DC/5 A	132×93×114/1.4	85009				
48 V DC/10 A			132×113×136/2.0	85010		
48 V DC/20 A					132×164×142/3.0	85011
Input						
Input voltage	3 × 324...572 V AC/480...745 V DC					
Input current	3 × 0.8 A		3 × 1.3 A		3 × 1.9 A	
Inrush current after 1 ms	max. 9 A		max. 23 A		–	
Frequency	50...60 Hz					
Primary fusing external	max. 3 × 20 A					
Output						
Output voltage	48 V DC (SELV), ±1%; 48...56 V adjustable					
Output current	5 A (+55 °C); 3.73 A (+70 °C)		10 A (+55 °C); 8 A (+70 °C)		20 A (+55 °C); 15 A (+70 °C)	
Power Boost	lout N × 150% (min. 4 s)					
Mains failure bridging time	min. 17 ms (400 V AC)		min. 24 ms (400 V AC)		min. 17 ms (400 V AC)	
Ripple	max. 50 mVrms					
Spikes	max. 100 mV p-p					
LED display	LED (green): OK; LED (red): overload					
Parallel usage/serial usage	max. 5 units/no					
Alarm output	electronic relay max. 30 V DC/0.1 A, group alarm					
General data						
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2					
Relative humidity	5...95%, no condensation					
Protection	Varnished board					
Protection	IP20					
Efficiency	91.3% (3 × 360 V AC); 90.5% (3 × 520 V AC)		92.3% (3 × 360 V AC); 91% (3 × 520 V AC)		92.5% (3 × 360 V AC); 90.5% (3 × 520 V AC)	
Connection	Screw terminals					
Mounting method	DIN-rail mountable TH35 (EN 60715)					
Temperature range	-25...+70 °C (storage temperature -40...+85 °C)					
Dimension drawing						



Notes

POWER SUPPLY UNITS

2-/3-phase

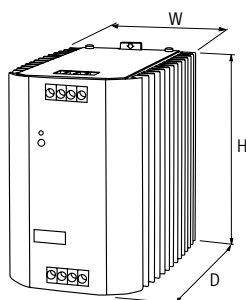
- stable output voltage
- Short-circuit and overload protected

Evolution

OUTPUT: 12...13.5 V DC
Current: 20 A



Order Data	H×W×D/kg	Art-No.
12 V DC/20 A	132×93×114/1.3	85016
Input		
Input voltage	3 × 324...572 V AC/480...745 V DC	
Input current	3 × 0.8 A	
Inrush current after 1 ms	max. 15 A	
Frequency	50...60 Hz	
Primary fusing external	3 × 10 A (T)	
Output		
Output voltage	12 V DC (SELV), ±1%; 12...13.5 V adjustable	
Output current	20 A (+55 °C); 15.8 A (+70 °C)	
Power Boost	100% (min. 4 s)	
Mains failure bridging time	min. 19 ms (400 V AC)	
Ripple	max. 50 mVrms	
Spikes	max. 100 mV p-p	
LED display	LED (green): OK; LED (red): overload	
Parallel usage/serial usage	max. 5 units/max. 4 units	
Alarm output	electronic relay max. 30 V DC/0.1 A, group alarm	
General data		
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2	
Relative humidity	5...95%, no condensation	
Protection	IP20	
Efficiency	89% (3 × 400 V AC); 88% (3 × 520 V AC)	
Connection	Spring clamp terminals	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	-25...+70 °C (storage temperature -40...+85 °C)	
Dimension drawing		



Notes

POWER SUPPLY UNITS

Single-phase

– Short-circuit and overload protected

Approvals:  UL US Listed

Eco-Rail-2

OUTPUT: 23...28 V DC
Current: 1.3 A



Eco-Rail-2

OUTPUT: 23...28 V DC
Current: 2.5 A

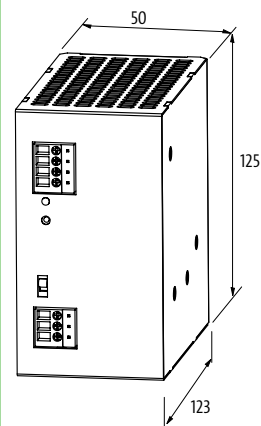
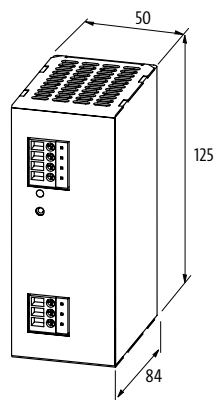
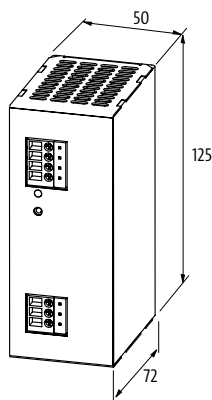


Eco-Rail-2

OUTPUT: 23...28 V DC
Current: 5 A



Order Data	Art-No.		Art-No.	Art-No.
24 V DC/1.3 A	85131			
24 V DC/2.5 A			85132	
24 V DC/5 A				85133
Input				
Input voltage	100...240 V AC			
Input current	0.7 A (100 V AC); 0.4 A (240 V AC)		1.3 A (100 V AC); 0.6 A (240 V AC)	2.4 A (100 V AC); 1.2 A (240 V AC)
Inrush current after 1 ms	max. 10 A (230 V AC)		max. 20 A (230 V AC)	
Frequency	50...60 Hz			
Input fuse (internal)	2 A (T)	4 A (T)		5 A (T)
Output				
Output voltage	24 V DC $\pm 1\%$; 23...28 V adjustable			
Output current	1.3 A (+40 °C); 1.0 A (+55 °C)		2.5 A (+40 °C); 2.0 A (+55 °C)	5 A (+40 °C); 4 A (+55 °C)
Mains failure bridging time	min. 23 ms (115 V AC); min. 130 ms (230 V AC)		min. 20 ms (115 V AC); min. 100 ms (230 V AC)	min. 45 ms (115 V AC); min. 45 ms (230 V AC)
Ripple	max. 10 mVrms			
Spikes	max. 50 mV p-p			
Unit protection	Short-circuit and overload protected			
LED display	LED (green) for output voltage			
Parallel usage/serial usage	no/yes (max. 2 units)			
General data				
Standards	EN 60950-1, EN 61204-3, EN 61000-3-2			
Relative humidity	20...90%, no condensation			
Protection	IP20			
Efficiency	83% (115 V AC); 84% (230 V AC)		84% (115 V AC); 85% (230 V AC)	87% (115 V AC); 88% (230 V AC)
Connection	Screw terminals			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	0...+40 °C, ...+55 °C derating (storage temperature -20...+85 °C)			
Dimension drawing				



Notes

POWER SUPPLY UNITS

Single-phase

– Short-circuit and overload protected

Approvals:   Listed

Eco-Rail-2

OUTPUT: 23...28 V DC
Current: 10 A

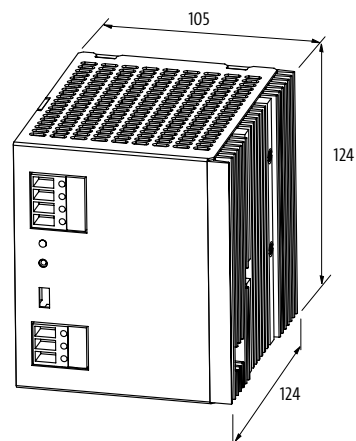
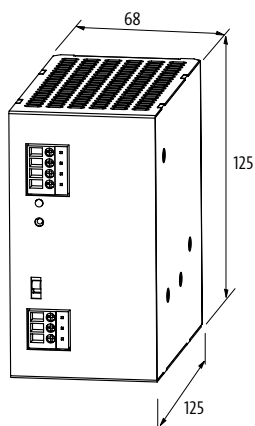


Eco-Rail-2

OUTPUT: 23...28 V DC
Current: 20 A



Order Data	Art-No.	Art-No.
24 V DC/10 A	85135	
24 V DC/20 A		85137
Input		
Input voltage	90...132 V AC/173...264 V AC	
Input current	4.3 A (100 V AC); 2.1 A (240 V AC)	7.8 A (100 V AC); 4.0 A (200 V AC)
Inrush current after 1 ms	max. 18 A (230 V AC)	max. 40 A (230 V AC)
Frequency	50...60 Hz	
Input fuse (internal)	5 A (T)	12 A (T)
Output		
Output voltage	24 V DC ±1%; 23...28 V adjustable	
Output current	10 A (+40 °C); 7.5 A (+55 °C)	20 A (+40 °C); 16 A (+55 °C)
Mains failure bridging time	min. 12 ms (115 V AC); min. 30 ms (230 V AC)	min. 15 ms (115 V AC); min. 20 ms (230 V AC)
Ripple	max. 10 mVrms	max. 50 mVrms
Spikes	max. 50 mV p-p	max. 100 mV p-p
Unit protection	Short-circuit and overload protected	
LED display	LED (green) for output voltage	
Parallel usage/serial usage	no/yes (max. 2 units)	
General data		
Standards	EN 60950-1, EN 61204-3, EN 61000-3-2	
Relative humidity	20...90%, no condensation	
Protection	IP20	
Efficiency	86% (115 V AC); 87% (230 V AC)	89% (115 V AC); 90% (230 V AC)
Connection	Screw terminals	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	0...+40 °C, ...+55 °C derating (storage temperature -20...+85 °C)	
Dimension drawing		



Notes

POWER SUPPLY UNITS

Single-phase

– Short-circuit and overload protected

Approvals:  UL US Listed

Picco

OUTPUT: 24...28 V DC
Current: 0.42 A



Picco

OUTPUT: 24...28 V DC
Current 1.25 A



Picco

OUTPUT: 24...28 V DC
Current: 2.5 A



Picco

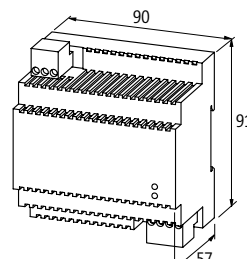
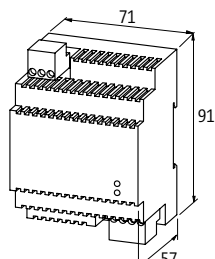
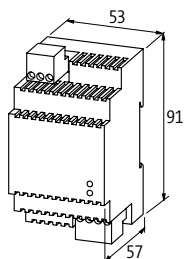
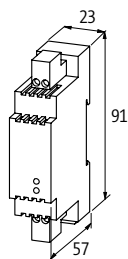
OUTPUT: 24...28 V DC
Current: 4.2 A



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
Screw terminals	87011	87013	87015	87017
Spring clamp plug-in terminals	87111	87113	87115	87117

Input				
Input voltage	100...240 V AC/120...370 V DC			
Input current	0.2 A (115 V AC); 0.12 A (230 V AC)	0.6 A (115 V AC); 0.4 A (230 V AC)	1.1 A (115 V AC); 0.6 A (230 V AC)	1.7 A (115 V AC); 1 A (230 V AC)
Inrush current after 1 ms	max. 30 A	max. 40 A	max. 60 A	
Frequency	50...60 Hz			
Primary fusing external	max. 10 A		max. 16 A	max. 10 A
Output				
Output voltage	24 V DC (SELV), ±1%; 24...28 V adjustable			
Output current	0.42 A (+50 °C); 0.042 A (+70 °C)	1.25 A (+50 °C); 0.125 A (+70 °C)	2.5 A (+50 °C); 0.25 A (+70 °C)	4.2 A (+50 °C); 0.42 A (+70 °C)
Mains failure bridging time	10...25 ms (115 V AC)			
Ripple	max. 20 mVrms			
Spikes	max. 100 mV p-p			
Unit protection	Short-circuit and overload protected			
LED display	LED (green) for output voltage			
Parallel usage/serial usage	max. 5 units/max. 2 units			
General data				
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2			
Relative humidity	20...90%, no condensation			
Protection	IP20			
Efficiency	79% (110 V AC); 80% (230 V AC)	86% (110 V AC); 88% (230 V AC)		
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	0...+50 °C, ...+60 °C derating (storage temperature -25...+85 °C)			
Dimension drawing				

Dimension drawing



Notes

POWER SUPPLY UNITS

Single-phase

– Short-circuit and overload protected

Approvals:   Listed

Picco

OUTPUT: 12...15 V DC
Current: 0.85 A



Picco

OUTPUT: 12...15 V DC
Current: 2.5 A



Picco

OUTPUT: 12...15 V DC
Current: 4.5 A

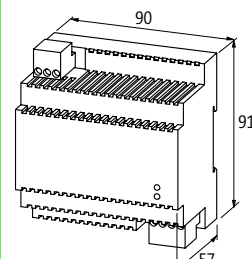
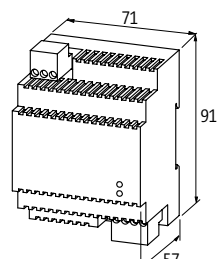
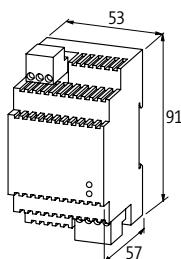
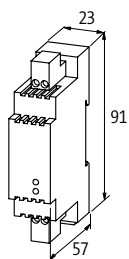


Picco

OUTPUT: 12...15 V DC
Current: 6 A



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
Screw terminals	87012	87014	87016	87018
Spring clamp plug-in terminals	87112	87114	87116	87118
Input				
Input voltage	100...240 V AC/120...370 V DC			
Input current	0.2 A (115 V AC); 0.12 A (230 V AC)	0.6 A (115 V AC); 0.4 A (230 V AC)	1 A (115 V AC); 0.58 A (230 V AC)	1.3 A (115 V AC); 0.75 A (230 V AC)
Inrush current after 1 ms	max. 30 A	max. 40 A	max. 60 A	
Frequency	50...60 Hz			
Primary fusing external	max. 10 A		max. 16 A	max. 10 A
Output				
Output voltage	12 V DC (SELV), ±1%; 12...15 V adjustable			
Output current	0.85 A (+50 °C); 0.085 A (+70 °C)	2.5 A (+50 °C); 0.25 A (+70 °C)	4.5 A (+50 °C); 0.45 A (+70 °C)	6 A (+50 °C); 0.6 A (+70 °C)
Mains failure bridging time	10...25 ms (115 V AC)			
Ripple	max. 20 mVrms			
Spikes	max. 100 mV p-p			
Unit protection	Short-circuit and overload protected			
LED display	LED (green) for output voltage			
Parallel usage/serial usage	max. 5 units/max. 2 units			
General data				
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2			
Relative humidity	20...90%, no condensation			
Protection	IP20			
Efficiency	86% (110 V AC); 88% (230 V AC)			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	0...+50 °C, ...+60 °C derating (storage temperature -25...+85 °C)			
Dimension drawing				



Notes

POWER SUPPLY UNITS

Mounting accessories

Art-No.



Label plates

KES 20 × 8 (white)

(10 pieces/2 plates)

996067



DIN-Rail Clip

DIN-rail mountable TH35 (EN 60715)

85148



UPS SYSTEMS / BUFFER / REDUNDANCY MODULES

- Stable power supply
- Protection of processes
- Increase of machine availability

UPS MODULE OR BUFFER MODULE ON THE BASIS OF CAPACITORS?

The UPS module Emparro ACCUcontrol is the right solution if a longer power failure have to be bridged without having to deal with failures and downtimes in production. Thanks to the externally connected lead battery, even a bridging time of several hours is possible.

Emparro Cap works based on ultra condensers, is maintenance-free for its entire service life and is the right solution if a certain amount of power is required to shut machines and control systems down in a structured manner.

Project matrix

Load current	Seconds		Minutes							Hours			
	1	16	1	2	5	10	15	30	1	3	5	10	
0.5 A	●	●	●	●	●	●	●	●	●	●	●	●	●
1 A	●	●	●	●	●	●	●	●	●	●	●	●	●
2 A	●	●	●	●	●	●	●	●	●	●	●	●	●
5 A	●	●	●	●	●	●	●	●	●	●	●	●	●
10 A	●	●	●	●	●	●	●	●	●	●	●	●	●
15 A	●	●	●	●	●	●	●	●	●	●	●	●	●
20 A	●	●	●	●	●	●	●	●	●	●	●	●	●
40 A	●	●	●	●	●	●	●	●	●	●	●	●	●

● MB Cap 20 A/0.2 s

● MB Cap Ultra 3 A/7 s

● MB Cap Ultra 10 A/38 s

● Emparro Cap 20 A/1.0 s

● MB Cap Ultra 20 A/16 s

● MB Cap Ultra 40 A/3.6 s

● Emparro ACCUControl 20 A

● Emparro ACCUControl 40 A

UPS systems / Buffer / Redundancy modules



UPS systems

- Predictive Maintenance
- Mini USB for connection to an industrial PC

Page 1.3.1



Buffer modules

- Maintenance-free ultra capacitors
- Buffer time more than 1 second at full load of 20 A
- Metal housing

Page 1.3.2



Buffer modules

- Maintenance-free ultra capacitors

Page 1.3.3



Redundancy modules

Page 1.3.6

UPS systems

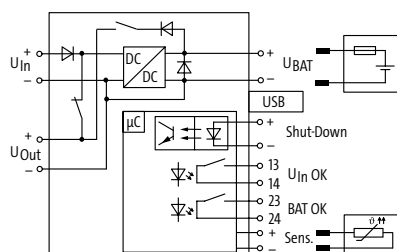
Emparro® ACCUcontrol

Emparro® ACCUcontrol

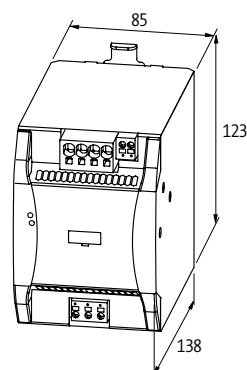
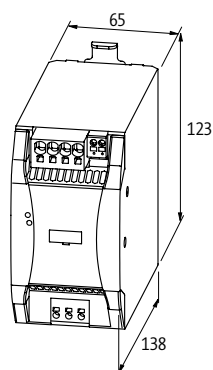
Approvals:  UL Listed



Circuit diagram



Order Data	Art-No.	Art-No.
24 V DC/20 A	85414	
24 V DC/40 A		85415
Technical Data		
Sensor type	KTY 81-210 (Art.No. 89600)	
Battery type	Lead battery (max. 40 Ah, sealed)	
Input		
Input voltage	21.6...30 V DC (buffer operation)	
Input current	max. 23 A	max. 43 A
Loading current	2 A	
Output		
Output voltage	27.7...19.2 V DC	
Output current	max. 20 A	max. 40 A
Control inputs		
Input voltage shutdown (SH)	24 V DC (6...45 V DC), potential free	
Control outputs		
Battery (BAT OK)	min. 5 V DC, 1 mA; max. 30 V DC, 100 mA	
Input voltage (Uin OK)	min. 5 V DC, 1 mA; max. 30 V DC, 100 mA	
General data		
Connection	Push-In Spring clamp terminals, Mini-USB	
Mounting method	DIN-rail mountable TH35-7.5/TH35-15 (EN 60715)	
Temperature range	-25...+45 °C	
Dimension drawing		



Notes

The required batteries can be found at the end of chapter 1.3.

UPS-SYSTEMS / BUFFER- / REDUNDANCY MODULES

Buffer modules

Emparro® Cap 20/24 1.0s

1.0 s (20 A); 40 s (1 A)



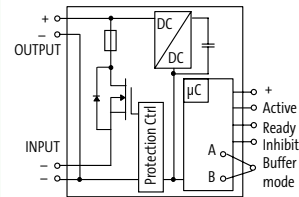
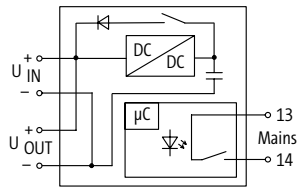
Emparro® Cap 20/48 0.1s

0.1 s (20 A); 2 s (1 A)

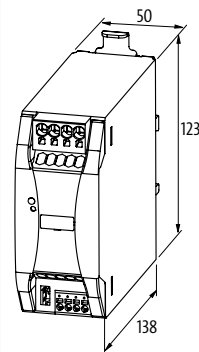
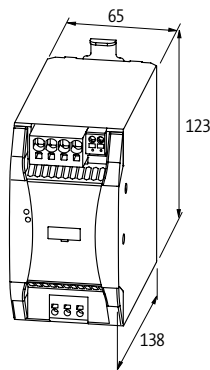


Approvals:  Listed

Circuit diagram



Order Data	Art-No.	Art-No.
24 V DC/20 A	85458	
48 V DC/20 A		85459
Input		
Input voltage	21.6...26.4 V DC	46...56 V DC (SELV/PELV)
Input current	20 A	60 mA
Inrush current	max. 25 A	—
Protection of voltage spikes	—	max. 72 V DC
Loading time	max. 75 s	20...45 s
Loading current	max. 3 A	max. 500 mA
Output		
Output voltage	25.5...19 V DC ±2%	48 V DC (46...56 V DC)
Output current	max. 20 A	
Current limit	65 A	26 A
Buffer time	1.0 s (20 A); 40 s (1 A)	0.1 s (20 A); 2 s (1 A)
Parallel circuit	possible	
Ripple	—	max. 200 mV p-p
General data		
Standards	EN 61000-6-2, EN 61000-6-4	EN 61000-6-2, EN 61000-6-3, EN 55022 B
Mounting method	DIN-rail mountable TH35-7.5/TH35-15 (EN 60715)	DIN-rail mountable TH35 (EN 60715)
Efficiency	90%	99%
Temperature range	-40...+60 °C (storage temperature -40...+60 °C)	-25...+60 °C, ...+70 °C derating (storage temperature -40...+85 °C)
Dimension drawing		



Notes

UPS-SYSTEMS / BUFFER- / REDUNDANCY MODULES

Buffer modules

MB Cap Ultra 3/24 7s

7 s (3 A); 21 s (1 A)



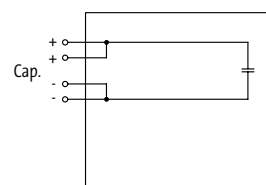
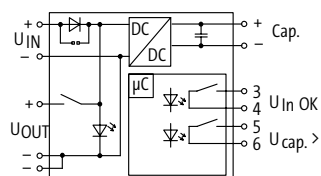
MB Cap Ultra expansion module 3/24 12s

12 s (3 A); 36 s (1 A)



Approvals: UL US
Listed

Circuit diagram



Order Data

24 V DC/3 A

Art-No.

85460

use with Art.-No. 85460

Art-No.

85462

Input

Input voltage

20.4...26.4 V DC

Input current

3 A

Loading time

min. 25 s

Output

Output voltage

23 V DC $\pm 2\%$

Output current

max. 3 A (+60 °C)

Buffer time

7 s (3 A); 21 s (1 A)

12 s (3 A); 36 s (1 A)

General data

Standards

EN 60950, EN 50178, SELV/PELV

Mounting method

DIN-rail mountable TH35 (EN 60715)

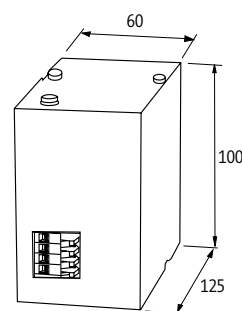
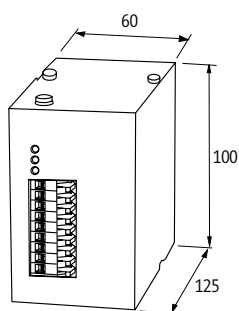
Efficiency

90%

Temperature range

-20...+60 °C (storage temperature -20...+60 °C)

Dimension drawing



Notes

UPS-SYSTEMS / BUFFER- / REDUNDANCY MODULES

Buffer modules

MB Cap Ultra 10/24 38s

38 s (10 A); 380 s (1 A)



MB Cap Ultra 20/24 16s

16 s (20 A); 320 s (1 A)



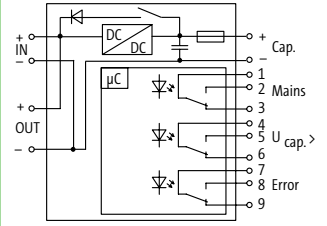
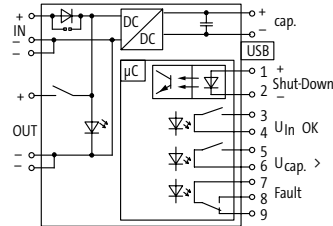
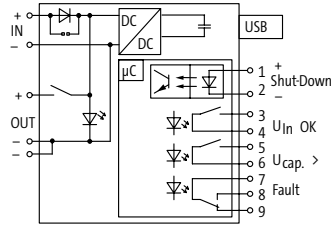
MB Cap Ultra 40/24 3.6s

3.6 s (40 A); 170 s (1 A)

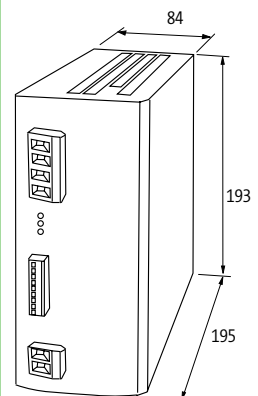
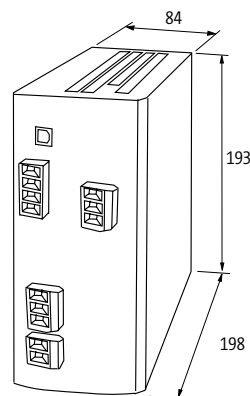
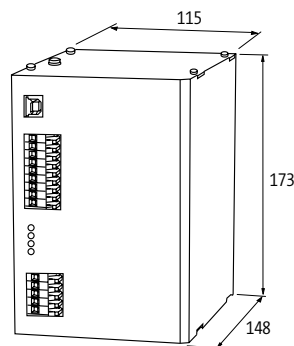


Approvals:  Listed

Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.
24 V DC/10 A	85467		
24 V DC/20 A		85468	
24 V DC/40 A			85469
Input			
Input voltage	10.5...15 V DC; 24...27 V DC	24...29 V DC	21.6...26.4 V DC
Input current	10 A	20 A	40 A
Inrush current	max. 35 A/2 ms	max. 36.5 A/2 ms	max. 36.5 A
Loading time	typ. 100 s; max. 210 s	typ. 40 s; max. 500 s	typ. 140 s; max. 300 s
Output			
Output voltage	11.3 V DC $\pm 4\%$; 23.3 V DC $\pm 2\%$	23.3 V DC $\pm 2\%$	25.5...19 V DC $\pm 2\%$
Output current	max. 10 A (+60 °C)	max. 20 A (+60 °C)	max. 40 A (+60 °C)
Buffer time	38 s (10 A); 380 s (1 A)	16 s (20 A); 320 s (1 A)	3.6 s (40 A); 170 s (1 A)
General data			
Standards	EN 60950, EN 50178, SELV/PELV	EN 60950-1, EN 61204-3, EN 55011 A	EN 61000-6-2, EN 61000-6-4
Mounting method	DIN-rail mountable TH35-7.5/TH35-15 (EN 60715)		
Efficiency	90%		
Temperature range	-20...+60 °C (storage temperature -20...+60 °C)		
Dimension drawing			



Notes

Buffer modules

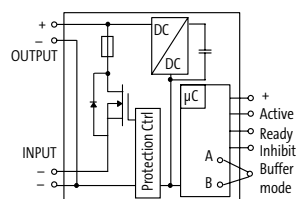
MB Cap 20/24 0.2s

0.2 s (20 A); 4 s (1 A)



Approvals: UL US
Listed

Circuit diagram



Order Data

24 V DC/20 A

Art-No.

85394

Input

Input voltage	23...30 V DC (SELV/PELV)
Input current	85 mA
Protection of voltage spikes	max. 35 V DC
Loading time	20...45 s
Loading current	max. 500 mA

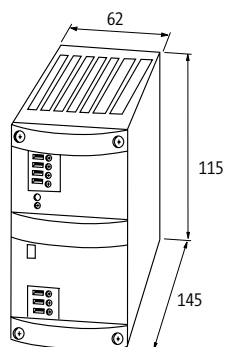
Output

Output voltage	24 V DC (22...28 V DC)
Output current	max. 20 A (+70 °C)
Current limit	26 A
Buffer time	0.2 s (20 A); 4 s (1 A)
Ripple	max. 200 mV p-p
Parallel circuit	possible

General data

Standards	EN 61000-6-2, EN 61000-6-3, EN 55022 B, EN 60950-1, SELV
Mounting method	DIN-rail mountable TH35 (EN 60715)
Efficiency	95%
Temperature range	0...+70 °C (storage temperature -25...+85 °C)

Dimension drawing



Notes

UPS-SYSTEMS / BUFFER- / REDUNDANCY MODULES

Redundancy modules

MB Redundancy Balance 2 × 20/24

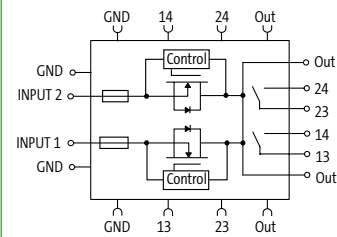
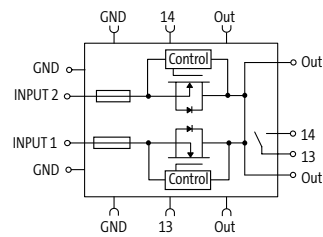
MB Redundancy Balance 2 × 20/24

Auto-Balancing (50/50)



Approvals:  

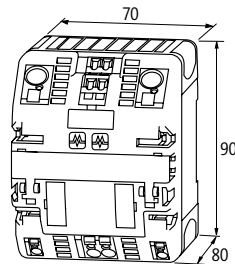
Circuit diagram



Order Data	Art-No.	Art-No.
24 V DC/2 × 20 A/1 × 40 A	85495	85496

Input		
Input voltage	24 V DC (18...30 V DC)	
Input current	2 × 20 A	
Total current	max. 40 A	
Invers-polarity protection	max. 30 V DC	
Auto-Balancing (50/50)	no	yes
Output		
Output voltage	24 V DC (18...30 V DC)	
Output current	26 A (-25...+40 °C)	
LED display	LED (red/green)	
Parallel usage/serial usage	2 units: 40 A (-25...+60 °C); 52 A (-25...+40 °C)/-	
Alarm output	potential free (relay contact) for input voltage	potential free (relay contact) for input voltage/load distribution

General data	
Standards	EN 61000-6-2, EN 61000-6-3
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)
Relative humidity	5...95%, no condensation
Efficiency	99.5%
Connection	Spring clamp terminals
Mounting method	DIN-rail mountable TH35 (EN 60715)
Temperature range	-25...+60 °C (storage temperature -40...+85 °C)
Dimension drawing	



Notes

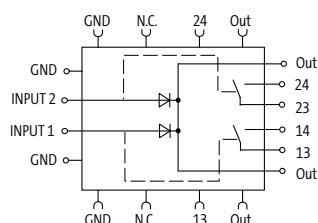
Redundancy modules

MB Diode

Approvals:  **UL** US Listed



Circuit diagram



Order Data

24 V DC/2 × 20 A/1 × 40 A

Art-No.

85396

Input

Input voltage	24 V DC (21...30 V DC)
Input current	2 × 20 A/1 × 40 A
Total current	max. 40 A
Invers-polarity protection	internal protection against reverse polarization up to 60 V DC
Auto-Balancing (50/50)	no

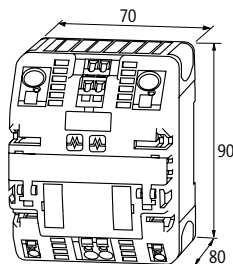
Output

Output voltage	24 V DC (21...30 V DC)
Output current	20 A (-25...+55 °C); 40 A (-25...+40 °C)
Overload	at 20 A +50% for 4 s
LED display	LED (green)
Alarm output	potential free per channel (relay contact)

General data

Standards	EN 61000-6-2, EN 61000-6-3
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)
Relative humidity	5...95%, no condensation
Power loss	$U \text{ (approx. } 0.5 \text{ V)} \times I$
Efficiency	97%
Connection	Spring clamp terminals
Mounting method	DIN-rail mountable TH35 (EN 60715)
Temperature range	-25...+55 °C (storage temperature -25...+85 °C)

Dimension drawing



Notes

UPS-SYSTEMS / BUFFER- / REDUNDANCY MODULES

Accessories			Art-No.
	Lead battery 1.2 Ah 96×69×105 mm/2 kg	for Emparro® ACCUcontrol	89550
	Lead battery 7 Ah 115×174.5×159 mm/2.32 kg	for Emparro® ACCUcontrol	89552
	Lead battery 12 Ah 115×240.5×159 mm/3.7 kg	for Emparro® ACCUcontrol	89553
	Lead battery 17 Ah 170×155×182 mm/18 kg	for Emparro® ACCUcontrol	89554
	Lead battery 24 Ah 137×335×200 mm/20 kg	for Emparro® ACCUcontrol	89555



MICO

INTELLIGENT POWER DISTRIBUTION

- Monitor
- Detect
- React

FIRST CLASS POWER DISTRIBUTION

MICO is the intelligent power distribution module from Murrelektronik for 24 VDC. It monitors currents, indicates when approaching the maximum load and make targeted circuit isolations during overload or short circuit conditions. This makes sure systems run at maximum capacity.

- Convenient handling – installation without tools
- Diagnosis on location or via the controller
- Patented tripping characteristics for optimal switch-off time

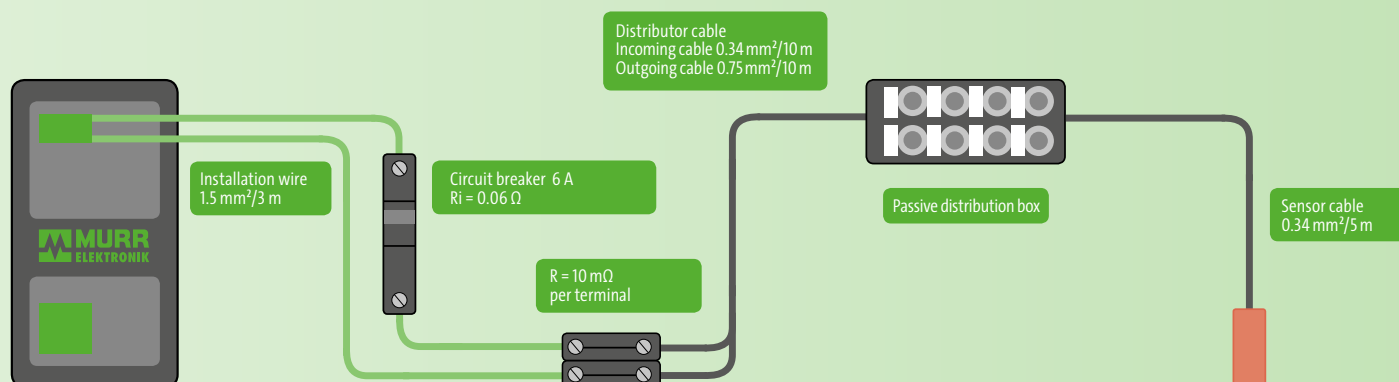
Mico Pro®

 Mico Pro® PM • Power module • Cover plate included • Cumulative signal output <i>Page 1.4.1</i>	 Mico Pro® PD • Potential distributor • Multiplication of secured channels or potentials <i>Page 1.4.1</i>
 Mico Pro® fix • Preset current ranges • Preventive diagnostics <i>Page 1.4.2</i>	 Mico Pro® flex • Adjustable current ranges • Channels with remote switch on/off function • Preventive diagnostics <i>Page 1.4.3</i>

MICO

 MICO+ • Adjustable current ranges • Channels with remote switch on/off function • Preventive diagnostics <i>Page 1.4.4</i>	 MICO • Adjustable current ranges • Channels with remote switch on function • Group alarm output <i>Page 1.4.6</i>
 MICO BASIC • Preset current ranges • Small size <i>Page 1.4.10</i>	 MICO FUSE • Socket for glass tube fuses 5 × 20 mm <i>Page 1.4.13</i>

EXAMPLE: Why don't circuit breakers trigger reliably in a 24 VDC system?



Specific resistance of copper (ρ)	$= 0.0178 \text{ } (\Omega \times \text{mm}^2 / \text{m})$		
Wire resistance:	$R = \frac{(\rho) \times l}{A}$	$= \frac{0.0178 \times (2 \times 3 \text{ m})}{1.5 \text{ mm}^2}$	$= 0.07 \text{ } \Omega$
Distributor cable resistance:	$R = \frac{(\rho) \times l}{A}$	$= \frac{0.0178 \times (2 \times 10 \text{ m})}{(0.34 + 0.75 \text{ mm}^2)/2}$	$= 0.65 \text{ } \Omega$
Sensor cable resistance:	$R = \frac{(\rho) \times l}{A}$	$= \frac{0.0178 \times (2 \times 5 \text{ m})}{0.34 \text{ mm}^2}$	$= 0.52 \text{ } \Omega$
Inner resistance of circuit breaker and connection terminals	$= 0.08 \text{ } \Omega$		
Total loop resistance	$= 1.32 \text{ } \Omega$		

Calculation of maximum possible current flow $I = \frac{U}{R} = \frac{24 \text{ V}}{1.32 \text{ } \Omega} = \underline{\underline{18.18 \text{ A}}}$
(limited by loop resistance)

Required tripping current of the 6 A circuit breaker Type C
 $14 \times I_{\text{Nenn}} = 14 \times 6 \text{ A} = \underline{84 \text{ A}}$



Tripping current Max. current flow
 84 A > 18.18 A

Over current protection device

– Power supplies

Approvals:   

Mico Pro® PM 24 V DC/40 A

Power module
Cover plate included



Mico Pro® PD 2x12

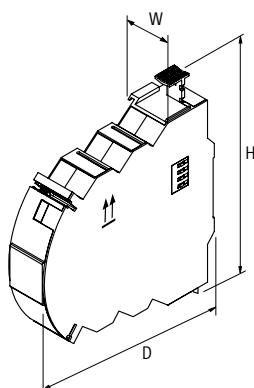
Potential distributor
1 channel (x11)



Mico Pro® PD 2x2x06

Potential distributor
2 channels per (x5)

Order Data	Art-No.	Art-No.	Art-No.
40 A	9000-41190-0000000		
20 A		9000-41000-0000212	
2 x 20 A			9000-41000-0002206
Input			
Operating voltage	12 V DC; 24 V DC (9...30 V DC)	12 V DC, 24 V DC	
Total current	max. 40 A	max. 20 A	max. 2 x 20 A
Output			
Parallel usage/serial usage	-/Selectivity in 2 levels	–	
Control inputs			
Input voltage (ON)	9...30 V DC	–	
Impulse length (ON)	"high" 120 ms	–	
Input voltage (CTRL)	9...30 V DC	–	
Impulse length (CTRL)	OFF "high" 40/400 ms, ON "high" 20/200 ms	–	
Control outputs			
Early warning (90%)	max. 30 V AC/DC	–	
Group alarm output	max. 30 V AC/DC	–	
Connections (IN)			
Connection	Bridge system		
Connections (OUT)			
Connection	Push-In spring clamp terminals		
Cross section (rigid)	0.75...16 mm ² (AWG 20...4)	0.2...2.5 mm ² (AWG 24...14)	
Cross section (flex)	0.75...16 mm ² (AWG 20...4)	0.2...2.5 mm ² (AWG 24...14)	
General data			
Protection	IP20		
Bridging concept	Bridge set (max. 40 A)		
Mounting method	DIN-rail mountable TH35 (EN 60715)		
Temperature range	-25...+55 °C (storage temperature -40...+80 °C)		
Dimensions H x W x D	130x24x114 mm		
Dimension drawing			



Notes	
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INTELLIGENT POWER DISTRIBUTION

Over current protection device

– preset current ranges

Approvals:   

Mico Pro® fix

1 channel



Mico Pro® fix

1 channel



Mico Pro® fix

2 channels

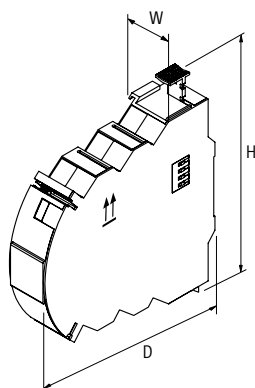


Mico Pro® fix

4 channels



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
2 A	9000-41011-0200000		9000-41012-0200000	9000-41014-0200000
4 A	9000-41011-0400000		9000-41012-0400000	9000-41014-0400000
6 A	9000-41011-0600000		9000-41012-0600000	9000-41014-0600000
8 A	9000-41011-0800000			
10 A	9000-41011-1000000			
16 A		9000-41011-1600000		
Input				
Operating voltage	12 V DC; 24 V DC (9...30 V DC)			
Total current	max. 40 A			
Output				
No. of channels	1	2	4	
Inrush capacity	max. 30 mF			
Tolerance	0...+20%			
Parallel usage/serial usage	-/Selectivity in 2 levels			
Control inputs				
Input voltage (ON)	via power module			
Impulse length (ON)	via power module			
Input voltage (CTRL)	via power module			
Impulse length (CTRL)	via power module			
Control outputs				
Group alarm output	via power module			
Early warning (90%)	via power module			
Connections (IN)				
Connection	Bridge system			
Connections (OUT)				
Connection	Push-In spring clamp terminals			
Cross section (rigid)	0.2...2.5 mm² (AWG 24...14)			
Cross section (flex)	0.2...4 mm² (AWG 24...12)			
General data				
Protection	IP20			
Bridging concept	Bridge set (max. 40 A)			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	-25...+55 °C (storage temperature -40...+80 °C)			
Dimensions H × W × D	130×8×114 mm	130×12×114 mm		130×24×114 mm
Dimension drawing				



INTELLIGENT POWER DISTRIBUTION

Over current protection device

- adjustable current ranges
- channel-specific messages

Approvals:   

Mico Pro® flex

1 channel



Mico Pro® flex

1 channel



Mico Pro® flex

2 channels

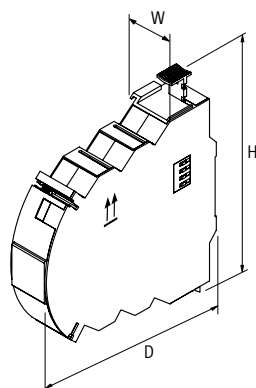


Mico Pro® flex

4 channels



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
1, 2, 3, 4, 5, 6, 7, 8, 9, 10 A	9000-41091-0101000		9000-41092-0101000	9000-41094-0101000
11, 12, 13, 14, 15, 16, 17, 18, 19, 20 A		9000-41091-1102000		
Input				
Operating voltage	12 V DC; 24 V DC (9...30 V DC)			
Total current	max. 40 A			
Output				
No. of channels	1	2	4	
Inrush capacity	max. 30 mF			
Tolerance	0...+20%	-5...+15 %	0...+20%	
Parallel usage/serial usage	-/Selectivity in 2 levels			
Control inputs				
Input voltage (ON)	9...30 V DC			
Impulse length (ON)	"high" 120 ms			
Input voltage (CTRL)	9...30 V DC			
Impulse length (CTRL)	OFF "high" 40/400 ms, ON "high" 20/200 ms			
Control outputs				
Group alarm output	via power module			
Early warning (90%)	like operating voltage - max. 20 mA, via power module			
Connections (IN)				
Connection	Bridge system			
Connections (OUT)				
Connection	Push-In spring clamp terminals			
Cross section (rigid)	0.2...2.5 mm² (AWG 24...14)			
Cross section (flex)	0.2...4 mm² (AWG 24...12)			
General data				
Protection	IP20			
Bridging concept	Bridge set (max. 40 A)			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	-25...+55 °C (storage temperature -40...+80 °C)	-25...+50 °C (storage temperature -40...+80 °C)	-25...+55 °C (storage temperature -40...+80 °C)	
Dimensions H × W × D	130×8×114 mm	130×12×114 mm		130×24×114 mm
Dimension drawing				



Notes

INTELLIGENT POWER DISTRIBUTION

Over current protection device

– adjustable current ranges

– early warning (90%)

Approvals:   

MICO+ 4.4

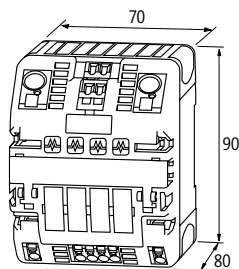
4 channels



MICO+ 4.6

4 channels

Order Data	Art-No.	Art-No.
1 A, 2 A, 3 A, 4 A	NEC Class 2	9000-41084-0100400
1 A, 2 A, 4 A, 6 A		
Input	9000-41084-0100600	
Operating voltage	24 V DC (18...30 V DC)	
Output		
Current adjustment	1 A, 2 A, 3 A, 4 A, by countersunk rotary switch, sealed	1 A, 2 A, 4 A, 6 A, by countersunk rotary switch, sealed
Inrush capacity	max. 20 mF (per channel)	
Control inputs		
Input voltage (ON)	10...30 V DC	
Remote start (OFF)	10...30 V DC	
Impulse length (ON)	min. 20 ms	
Control outputs		
Group alarm output	max. 20 mA; high: all channels ON; low: not all channels ON	
Early warning (90%)	max. 20 mA; high: one channel over 90%; low: all channels under 90%	
General data		
Connection	Spring clamp terminals	
Input terminals	2 × 16 mm²	
Output terminals	per output 2 × 1.5 mm²	
Alarm terminals	2.5 mm²	
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	0...+55 °C (storage temperature -40...+80 °C)	
Dimension drawing		



Notes

INTELLIGENT POWER DISTRIBUTION

Over current protection device

- adjustable current ranges
- early warning (90%)

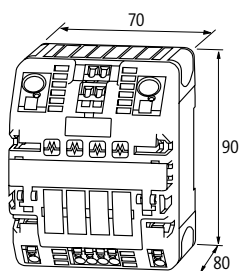
Approvals:   

MICO+ 4.10

4 channels



Order Data	Art-No.
4 A, 6 A, 8 A, 10 A	9000-41084-0401000
Input	
Operating voltage	24 V DC (18...30 V DC)
Output	
Current adjustment	4 A, 6 A, 8 A, 10 A, by countersunk rotary switch, sealed
Inrush capacity	max. 20 mF (per channel)
Control inputs	
Input voltage (ON)	10...30 V DC
Remote start (OFF)	10...30 V DC
Impulse length (ON)	min. 20 ms
Control outputs	
Group alarm output	max. 20 mA; high: all channels ON; low: not all channels ON
Early warning (90%)	max. 20 mA; high: one channel over 90%; low: all channels under 90%
General data	
Connection	Spring clamp terminals
Input terminals	2 × 16 mm ²
Output terminals	per output 2 × 1.5 mm ²
Alarm terminals	2.5 mm ²
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)
Mounting method	DIN-rail mountable TH35 (EN 60715)
Temperature range	0...+55 °C (storage temperature -40...+80 °C)
Dimension drawing	



Notes

INTELLIGENT POWER DISTRIBUTION

Over current protection device



MICO 4.4

4 channels

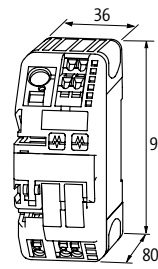
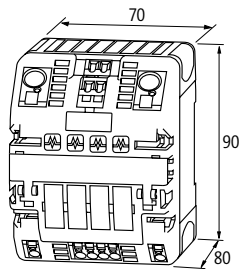


MICO 2.4

2 channels



Order Data	Art-No.		Art-No.
1 A, 2 A, 3 A, 4 A	DNV-GL	9000-41034-0100400	cURus
9000-41042-0100400			
Input			
Operating voltage	24 V DC (18...30 V DC)		
Output			
Current adjustment	1 A, 2 A, 3 A, 4 A, by countersunk rotary switch, sealed		
Inrush capacity	max. 20 mF (per channel)		
Control inputs			
Input voltage (ON)	10...30 V DC		
Impulse length (ON)	min. 20 ms		
Control outputs			
Group alarm output	potential free 30 V AC/DC, 100 mA		
General data			
Connection	Spring clamp terminals		
Input terminals	2 × 16 mm²	1 × 16 mm²	
Output terminals	per output 1 × 4 mm²		
Alarm terminals	2.5 mm²		
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)	one side, with spring clamp terminals or bridge set (max. 40 A)	
Mounting method	DIN-rail mountable TH35 (EN 60715)		
Temperature range	0...+55 °C (storage temperature -40...+80 °C)		
Dimension drawing			



Notes

INTELLIGENT POWER DISTRIBUTION

Over current protection device

Approvals:   

MICO 4.6

4 channels

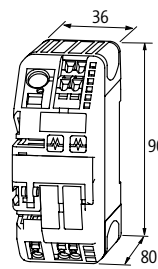
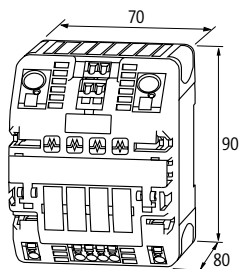


MICO 2.6

2 channels



Order Data	Art-No.		Art-No.
1 A, 2 A, 4 A, 6 A	DNV-GL	9000-41034-0100600	cURus 9000-41042-0100600
Input			
Operating voltage	24 V DC (18...30 V DC)		
Output			
Current adjustment	1 A, 2 A, 4 A, 6 A, by countersunk rotary switch, sealed		
Inrush capacity	max. 20 mF (per channel)		
Control inputs			
Input voltage (ON)	10...30 V DC		
Impulse length (ON)	min. 20 ms		
Control outputs			
Group alarm output	potential free 30 V AC/DC, 100 mA		
General data			
Connection	Spring clamp terminals		
Input terminals	2 × 16 mm ²	1 × 16 mm ²	
Output terminals	per output 1 × 4 mm ²		
Alarm terminals	2.5 mm ²		
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)	one side, with spring clamp terminals or bridge set (max. 40 A)	
Mounting method	DIN-rail mountable TH35 (EN 60715)		
Temperature range	0...+55 °C (storage temperature -40...+80 °C)		
Dimension drawing			



Notes

INTELLIGENT POWER DISTRIBUTION

Over current protection device

Approvals:   

MICO 4.10

4 channels

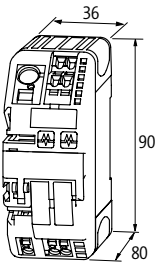
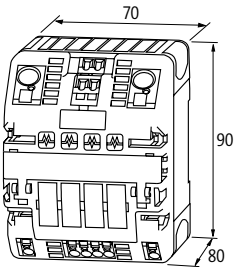


MICO 2.10

2 channels



Order Data	Art-No.		Art-No.
4 A, 6 A, 8 A, 10 A	DNV-GL	9000-41034-0401000	cURus 9000-41042-0401000
Input	24 V DC (18...30 V DC)		
Output	4 A, 6 A, 8 A, 10 A, by countersunk rotary switch, sealed		
Inrush capacity	max. 20 mF (per channel)		
Control inputs	10...30 V DC		
Input voltage (ON)	min. 20 ms		
Control outputs	potential free 30 V AC/DC, 100 mA		
Group alarm output	2.5 mm ²		
General data	Spring clamp terminals		
Connection	2 × 16 mm ²		
Input terminals	per output 1 × 4 mm ²		1 × 16 mm ²
Output terminals	two sides, with spring clamp terminals or bridge set (max. 40 A)		
Alarm terminals	one side, with spring clamp terminals or bridge set (max. 40 A)		
Bridging concept	DIN-rail mountable TH35 (EN 60715)		
Mounting method	0...+55 °C (storage temperature -40...+80 °C)		
Temperature range			
Dimension drawing			



Notes

INTELLIGENT POWER DISTRIBUTION

Over current protection device

MICO 4.4.10 ACTUATOR-SENSOR

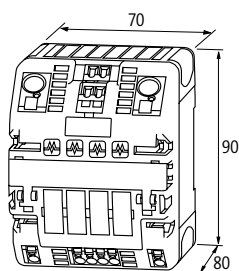
MICO 4.10 SPEED START

4 channels
optimized start-up behavior

Approvals:   



Order Data	Art-No.	Art-No.
1 A, 2 A, 3 A, 4 A; 4 A, 6 A, 8 A, 10 A	9000-41034-0101000	
4 A, 6 A, 8 A, 10 A		9000-41034-0401005
Input		
Operating voltage	24 V DC (18...30 V DC)	
Output		
Current adjustment	1 A, 2 A, 3 A, 4 A; 4 A, 6 A, 8 A, 10 A, by countersunk rotary switch, sealed	4 A, 6 A, 8 A, 10 A, by countersunk rotary switch, sealed
Inrush capacity	max. 20 mF (per channel)	max. 30 mF (per channel)
Control inputs		
Input voltage (ON)	10...30 V DC	
Impulse length (ON)	min. 20 ms	
Control outputs		
Group alarm output	potential free 30 V AC/DC, 100 mA	
General data		
Connection	Spring clamp terminals	
Input terminals	2 × 16 mm²	
Output terminals	per output 1 × 4 mm²	
Alarm terminals	2.5 mm²	
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	0...+55 °C (storage temperature -40...+80 °C)	
Dimension drawing		



Notes	
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INTELLIGENT POWER DISTRIBUTION

Over current protection device

– preset current ranges



MICO BASIC 8.2

8 channels



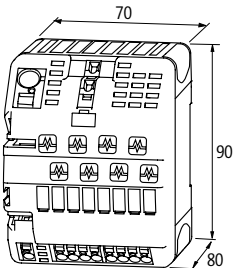
MICO BASIC 8.4

8 channels

MICO BASIC 8.6

8 channels

Order Data	Art-No.		Art-No.	Art-No.
2 A	NEC Class 2	9000-41068-0200000		
4 A			NEC Class 2	9000-41068-0400000
6 A				9000-41068-0600000
Input				
Operating voltage	24 V DC (18...30 V DC)			
Output				
Current adjustment	2 A	4 A	6 A	
Inrush capacity	max. 20 mF (per channel)			
Control inputs				
Input voltage (ON)	10...30 V DC			
Impulse length (ON)	min. 20 ms			
Control outputs				
Group alarm output	max. 20 mA; high: all channels ON; low: not all channels ON			
General data				
Input terminals	1 × 16 mm²			
Output terminals	per output 1 × 4 mm²			
Alarm terminals	2.5 mm²			
Bridging concept	one side, with spring clamp terminals or bridge set (max. 40 A)			
Connection	Spring clamp terminals			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	0...+55 °C (storage temperature -40...+80 °C)			
Dimension drawing				



Notes

INTELLIGENT POWER DISTRIBUTION

Over current protection device

– preset current ranges

Approvals:   



MICO BASIC 4.2

4 channels



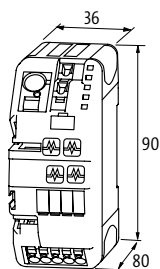
MICO BASIC 4.4

4 channels

MICO BASIC 4.6

4 channels

Order Data	Art-No.		Art-No.	
2 A	NEC Class 2	9000-41064-0200000		
4 A			NEC Class 2	9000-41064-0400000
6 A				9000-41064-0600000
Input				
Operating voltage	24 V DC (18...30 V DC)			
Output				
Current adjustment	2 A	4 A	6 A	
Inrush capacity	max. 20 mF (per channel)			
Control inputs				
Input voltage (ON)	10...30 V DC			
Impulse length (ON)	min. 20 ms			
Control outputs				
Group alarm output	max. 20 mA; high: all channels ON; low: not all channels ON			
General data				
Connection	Spring clamp terminals			
Input terminals	1 × 16 mm²			
Output terminals	per output 1 × 4 mm²			
Alarm terminals	2.5 mm²			
Bridging concept	one side, with spring clamp terminals or bridge set (max. 40 A)			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	0...+55 °C (storage temperature -40...+80 °C)			
Dimension drawing				



Notes

INTELLIGENT POWER DISTRIBUTION

Over current protection device

– preset current ranges

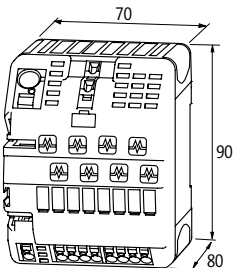
Approvals:  Class 2  

MICO BASIC 5.2/3.6

8 channels



Order Data	Art-No.
5 × 2 A; 3 × 6 A	9000-41068-0200600
Input	
Operating voltage	24 V DC (18...30 V DC)
Output	
Current adjustment	5 × 2 A; 3 × 6 A
Inrush capacity	max. 20 mF (per channel)
Control inputs	
Input voltage (ON)	10...30 V DC
Impulse length (ON)	min. 20 ms
Control outputs	
Group alarm output	max. 20 mA; high: all channels ON; low: not all channels ON
General data	
Connection	Spring clamp terminals
Input terminals	1 × 16 mm ²
Output terminals	per output 1 × 4 mm ²
Alarm terminals	2.5 mm ²
Bridging concept	one side, with spring clamp terminals or bridge set (max. 40 A)
Mounting method	DIN-rail mountable TH35 (EN 60715)
Temperature range	0...+55 °C (storage temperature -40...+80 °C)
Dimension drawing	



Notes

INTELLIGENT POWER DISTRIBUTION

Socket for glass tube fuses

MICO FUSE 24 LED

8 channels



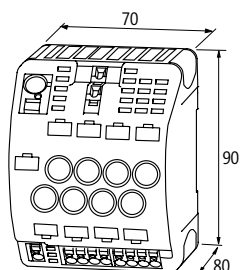
MICO FUSE 250

8 channels



Approvals: **UL** **SP**

Order Data	Art-No.	Art-No.
24 V DC	9000-41078-0600001	
max. 250 V AC/DC		9000-41078-0600002
Technical Data		
Operating voltage	24 V DC (18...30 V DC)	max. 250 V AC/DC
Operating current	max. 6 A (40 °C)	
Total current	max. 40 A	
Control outputs		
Group alarm output	max. 20 mA; high: all channels ON; low: not all channels ON	–
General data		
Connection	Spring clamp terminals	
Input terminals	1 × 16 mm ²	
Output terminals	1 × 0.5...4 mm ²	
Alarm terminals	2.5 mm ²	–
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	-25...+55 °C	
Dimension drawing		



Notes

INTELLIGENT POWER DISTRIBUTION

Accessories			Art-No.
	Bridge system		
		Quantity: 1 piece Quantity: 10 pcs.	9000-41034-0000002 9000-41034-0000001
	Shortened buttons		
		Quantity: 4 pcs.	9000-41034-0000003
	Label plates		
	KES 20 × 8 (white)	(10 pieces/2 plates)	996067
	KMR 5 × 10 (white) MICO BASIC, MICO FUSE, Mico Pro®	(64 pieces/4 plates)	996078
	Glass automotive fuse		
	2 A (T)		9000-41078-0000002
	4 A (T)		9000-41078-0000004
	Fuse cap		
		Quantity: 8 pcs.	9000-41078-0000010
Accessories Mico Pro®			Art-No.
	Plug-In-Link 2 × blue		
	Length: 500 mm		9000-41000-0000000
	Plug-In-Link 2 × red		
	Length: 500 mm		9000-41000-0000001
	Plug-In-Link 1 × blue, 1 × red		
	Length: 500 mm		9000-41000-0000002
	Cover plate		
	1 Set (left/right)		9000-41000-0000006



CONVERTERS / RECTIFIERS

- Compact design
- Galvanic separation
- Switch mode models

SMALL VOLTAGE CONVERTERS

Voltages in control systems often have to be converted. The DC/DC converters in the MDD series do this perfectly! It doesn't matter if you need 5, 10, 12 or 24 volts – Murrelektronik has the right product.

If there is only AC voltage available, the NG rectifier series can convert into DC voltage. All models can be conveniently mounted in the control cabinet on DIN rail.

AC/DC and DC/DC Converters



MDD, GLS, GSS, NG, NT

- Output current range: 0.5...4 A

Page 1.5.1

Rectifiers



NG

- Output current range: 2.6...10 A

Page 1.5.3

CONVERTERS / RECTIFIERS

Switched mode

– with galvanic isolation

MDD

OUTPUT: 24 V DC
Current: 0.3 A



MDD

OUTPUT: 12 V DC
Current: 0.7 A



MDD

OUTPUT: 5 V DC
Current: 1.5 A



MDD

OUTPUT: ± 10 V DC
Current: 2×0.25 A

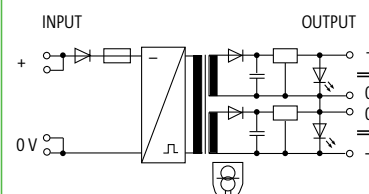
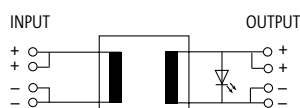


MDD

OUTPUT: ± 15 V DC
Current: 2×0.25 A



Circuit diagram



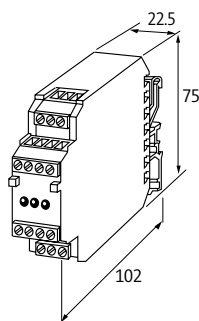
Order Data	Art-No.	Art-No.	Art-No.	Art-No.	Art-No.
24 V DC/0.3 A	85655				
12 V DC/0.7 A		85656			
5 V DC/1.5 A			85657		
± 10 V DC/2 $\times$ 250 mA				85658	
± 15 V DC/2 $\times$ 250 mA					85659

Input					
Input voltage	24 V DC				
Input current	0.6 A			0.85 A	
Input fuse (external)	2 A (T)			–	
Input fuse (internal)	1.5 A (T)				

Output					
Output fuse	short-circuit and overload protected, restart after overload by removing power supply				
Output voltage	24 V DC (SELV), ±2%	12 V DC (SELV), ±2%	5 V DC (SELV), ±2%	±10 V DC (SELV), ±5%	±15 V DC (SELV), ±5%
Output current	max. 0.3 A	max. 0.7 A	max. 1.5 A	max. 2 × 250 mA	
Ripple	max. 0.2 %rms				

General data					
Standards	EN 61204-3				
Test isolation voltage	4 kV (input/output)				
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)				
Temperature range	0...+50 °C, no condensation				

Dimension drawing



Notes

CONVERTERS / RECTIFIERS

DC/DC converters

AC/DC converters

GLS

OUTPUT regulated: 5 V DC
Current: 1.2 A



GSS

OUTPUT switched mode: 5 V DC
Current: 4 A

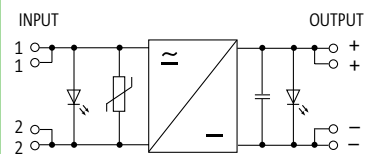
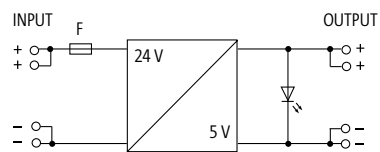


NT

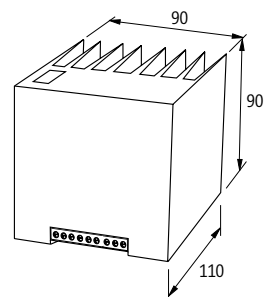
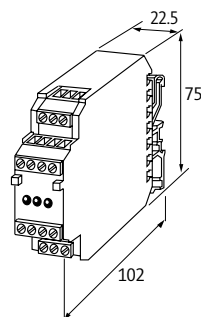
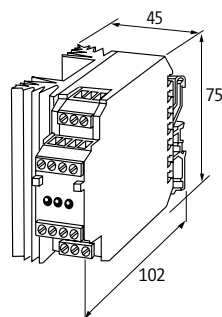
OUTPUT: 5...35 V DC
Current: 3.5 A



Circuit diagram



Order Data	Art-No.		Art-No.
5 V DC/1.2 A	85600		
5 V DC/4 A			85650
5...35 V DC/3.5 A			85660
Input			
Input voltage	24 V DC (+10 -15%)	15...40 V DC	10...32 V AC/12...42 V DC
Input current	1.2 A	1.04 A (24 V DC); max. 1.7 A	max. 3 A
Input fuse (internal)	2 A (T)		6.3 A (T)
Frequency	–		50...60 Hz
Output			
Output voltage	5 V DC (SELV), ±5%		5...35 V DC (SELV), U _{out-max.} = U _{in} - 5 V
Output current	max. 1.2 A	max. 4 A	max. 3.5 A
Ripple	max. 0.2 %rms		max. 300 mVrms
Output fuse	short-circuit protected		
General data			
Mounting method	DIN-rail mountable TH35 (EN 60715)		
Temperature range	-20...+60 °C, no condensation		
Dimension drawing			



Notes

CONVERTERS / RECTIFIERS

Rectifier modules

– Single-phase

– IP00

NG 2

INPUT: max. 41 V AC



NG 5

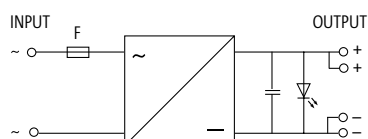
INPUT: max. 41 V AC

NG 10

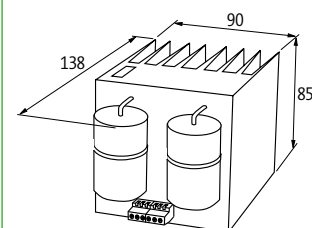
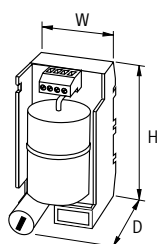
INPUT: 29 V AC



Circuit diagram



Order Data	H×W×D	Art-No.	H×W×D	Art-No.	H×W×D	Art-No.
24 V DC/2.6 A	86×45×92 mm	85700				
24 V DC/5 A			90×68×87 mm	85710		
24 V DC/10 A						85730
Input						
Input voltage	max. 5...44 V AC				29 V AC	
Input current	max. 2.6 A; 1.8 A (+60 °C)		max. 5 A; 4 A (+60 °C)		max. 10 A	
Frequency	45...65 Hz				50...60 Hz (or as additional smoothing for DC)	
Input fuse (external)	–		8 A (T), 5 × 20 mm		16 A (T), 5 × 20 mm	
Input fuse (internal)	3.15 A (T), 5 × 20 mm		–			
Output						
Output voltage	U-IN × 1.16/max. 60 V DC				U-IN × 1.16/39 V DC	
Output current	max. 2.6 A; 1.8 A (+60 °C)		max. 5 A; 4 A (+60 °C)		max. 10 A	
Ripple	max. 5 %rms					
Output filter	smoothed with smoothing capacitor and LED					
General data						
Mounting method	DIN-rail mountable TH35 (EN 60715)					
Temperature range	-20...+60 °C					
Dimension drawing						



Notes



MODLINK MSVD – CONTROL CABINET POWER OUTLETS

- Safe
- Easy to install
- Meet international standards

KEEP IT SAFE – EVEN IN THE CONTROL CABINETS

Using components temporarily in the control cabinet require right power outlets.
Murrelektronik has the right tools: a wide range of power outlets for different countries.

Control Cabinet Power Outlets



German standard (VDE)

- For DIN-rail mounting acc. to EN 60715
- With screw terminals or spring clamp terminals

An overview of this product range can be found in our online shop



French standard (UTE)

- For DIN-rail mounting acc. to EN 60715
- With screw terminals or spring clamp terminals

An overview of this product range can be found in our online shop



American standard (NEMA 5-15)

- For DIN-rail mounting acc. to EN 60715
- With screw terminals
- LED display

An overview of this product range can be found in our online shop



Different international standards

- For DIN-rail mounting acc. to EN 60715

An overview of this product range can be found in our online shop



EMC FILTERS FOR MAXIMUM SAFETY

- Meets EMC guidelines
- Increases interference protection
- Decreases interference emissions

KEEP IT SAFE – EVEN IN THE CONTROL CABINETS

Mains filters are used to reduce interference without affecting the supply. Murrelektronik's filters decrease incoming interference, which can affect sensitive equipment, and also decrease outgoing interference from the equipment they are connected to, which could damage the mains supply. Typical sources of continuous interference are switch mode power supplies, motors and phase controllers.

These sources are made up of inductive and capacitive components and work the best when their impedance is matched to the source of the interference. In regards to grounding, it's important to have a low impedance. Ideally, the filter should be as close as possible to the point where the cable enters the cabinet. If that's not possible, then shielded cables should be used between the filter and the entry point. Ground straps should be as short as possible and connection surfaces should be free from paint, etc.

Single-phase



MEF Emparro® 1/1 – one-stage

- Operating voltage: max. 265 V AC/DC
- Nominal current: 20 A

Page 1.7.1



MEF 1/2 SY and MEF 1/2 AS – two-stage

- Operating voltage: max. 250 V AC/DC, 0...60 Hz
- Nominal current: 10...16 A

Page 1.7.2

Three-phase



MEF 3/1 N – one-stage

- Operating voltage: max. 3 × 440 V AC
- Nominal current: 3...20 A

Page 1.7.5



MEF 3/1 N HD – one-stage

- Operating voltage: max. 3 × 500 V AC
- Nominal current: 10...135 A

Page 1.7.6



MEF 3/1 and MEF 3/2 – one and two-stage

- Operating voltage: max. 3 × 500 V AC / 3 × 600 V AC
- Nominal current: 8...180 A

Page 1.7.7

EMC FILTERS

1-phase, 1-stage

– DIN-rail mountable

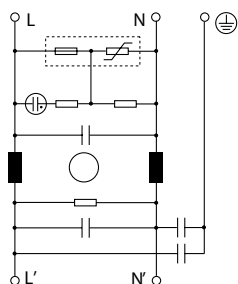
Approvals:  **us**

MEF Emparro® 1/1

wide attenuation spectrum



Circuit diagram



Order Data

20 A Art-No. 10701

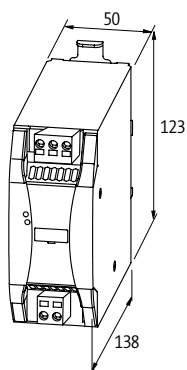
Technical Data

Operating voltage	85...265 V AC/100...230 V DC
Operating frequency	50...60 Hz
Consumption	max. 1 mA (250 V AC)
Connection cross section	1.5...10 mm ² single core (AWG 16...8); 1.5...6 mm ² multiple core (AWG 16...10)

General data

Climatic category	Environment class (EN 60721)
Connection	Push In terminals
Mounting method	DIN-rail mountable TH35 (EN 60715)

Dimension drawing



Notes

EMC FILTERS

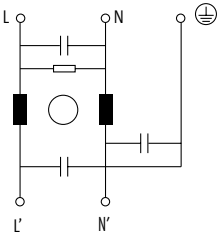
1-phase, 1-stage
– DIN-rail mountable

Approvals: 

MEF 1/1
for universal applications



Circuit diagram

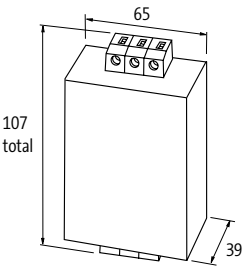


Order Data	Art-No.
10 A	10415
20 A	10416

Technical Data	
Operating voltage	max. 250 V AC/300 V DC
Operating frequency	50...60 Hz
Consumption	max. 5 mA (250 V AC)
Overload current	18 × (IN t) max. 0.5 ms; 1.5 × (IN t) max. 1 min. (1 × per hour)
Connection cross section	0.2...6 mm² single core (AWG 24...9); 0.2...4 mm² multiple core (AWG 24...11)

General data	
Climatic category	25/085/21 (EN 60068-1)
Test isolation voltage	2.7 kV (L - N), 2 s; 2.1 kV (L - L), 2 s (EN 60939-2)
Connection	Screw connection, touch protected
Mounting method	DIN-rail mountable TH35 (EN 60715)

Dimension drawing



Notes

EMC FILTERS

1-phase, 2-stage

– DIN-rail mountable

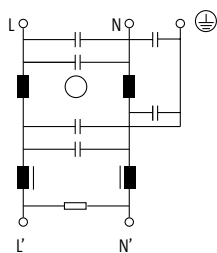
Approvals: 

MEF 1/2 SY

against symmetrical interferences



Circuit diagram



Order Data

	Art-No.
1 A	10460
2 A	10461
3 A	10462
4 A	10463
6 A	10464
16 A	10466

Technical Data

Operating voltage	max. 250 V AC/300 V DC
Operating frequency	50...60 Hz
Overload current	18 × (IN t) max. 0.5 ms; 1.5 × (IN t) max. 1 min. (1 × per hour)
Consumption	max. 5 mA (250 V AC)
Connection cross section	0.2...6 mm ² single core (AWG 24...9); 0.2...4 mm ² multiple core (AWG 24...11)

General data

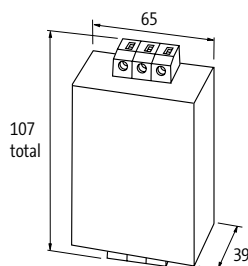
Climatic category	25/085/21 (EN 60068-1)
Test isolation voltage	2.7 kV (L - N), 2 s; 2.1 kV (L - L), 2 s (EN 60939-2)
Connection	Screw connection, touch protected
Mounting method	DIN-rail mountable TH35 (EN 60715)

Description

Functional description	The single phase 2-stage EMC filters MEF 1/2 are used in the range 0.1...30 MHz to suppress cable carried interference on mains and control cables. The best filter performance is achieved by using short connection wires (suggestion: earth connection < 10 cm) and the largest possible diameter. The EMC filters work bi-directionally (in both directions). The filters are for demanding applications. The filters are designed for use with fixed modules. One step of the filter is always for the suppression of asymmetrical interferences (magnetically compensated suppression). The second step is, dependant on application for symmetrical or asymmetrical interferences.
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Application	symmetrical interferences: units with high repetitions of the switching processes, - switch mode P.S.U.s, - phase angle controller, - supply of universal motors, - behind transformers
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Dimension drawing



Notes

EMC FILTERS

1-phase, 2-stage

– DIN-rail mountable

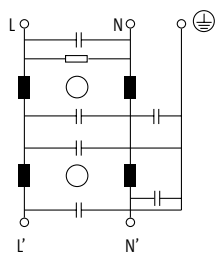
Approvals:  **us**

MEF 1/2 AS

against asymmetrical interferences



Circuit diagram



Order Data	Art-No.
3 A	10470
6 A	10471
10 A	10472

Technical Data	
Operating voltage	max. 250 V AC/300 V DC
Operating frequency	50...60 Hz
Consumption	max. 5 mA (250 V AC)
Overload current	18 × (IN t) max. 0.5 ms; 1.5 × (IN t) max. 1 min. (1 × per hour)
Connection cross section	0.2...6 mm ² single core (AWG 24...9); 0.2...4 mm ² multiple core (AWG 24...11)

General data	
Climatic category	25/085/21 (EN 60068-1)
Test isolation voltage	2.7 kV (L - N), 2 s; 2.1 kV (L - L), 2 s (EN 60939-2)
Connection	Screw connection, touch protected
Mounting method	DIN-rail mountable TH35 (EN 60715)

Description	
Functional description	The single phase 2-stage EMC filters MEF 1/2 are used in the range 0.1...30 MHz to suppress cable carried interference on mains and control cables. The best filter performance is achieved by using short connection wires (suggestion: earth connection < 10 cm) and the largest possible diameter. The EMC filters work bi-directionally (in both directions). The filters are for demanding applications. The filters are designed for use with fixed modules. One step of the filter is always for the suppression of asymmetrical interferences (magnetically compensated suppression). The second step is, dependant on application for symmetrical or asymmetrical interferences.

Application	asymmetrical interferences: - units with high switching frequency and repetition, - switch mode P.S.U.s, - in DC mains, - in front of transformers, - for frequency inverters
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Dimension drawing	

Notes	
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EMC FILTERS

3-phase, 1-stage

– DIN-rail mountable

– with neutral

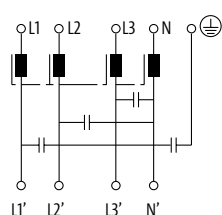
Approvals:  

MEF 3/1 N

for universal applications



Circuit diagram



Order Data

	Art-No.
3 A	10510
6 A	10511
10 A	10512
20 A	10513

Technical Data

Operating voltage	max. 4 × 440 V AC
Operating frequency	50...60 Hz
Consumption	max. 3 mA (250 V AC)
Overload current	18 × (IN t) max. 0.5 ms; 1.5 × (IN t) max. 1 min. (1 × per hour)
Connection cross section	0.2...6 mm ² single core (AWG 24...9); 0.2...4 mm ² multiple core (AWG 24...11)

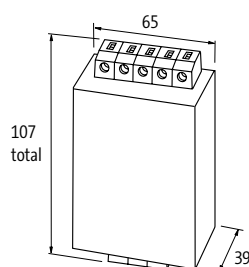
General data

Climatic category	25/085/21 (EN 60068-1)
Test isolation voltage	2.7 kV (L - N), 2 s; 2.1 kV (L - L), 2 s (EN 60939-2)
Connection	Screw connection, touch protected
Mounting method	DIN-rail mountable TH35 (EN 60715)

Description

Functional description	The 3-phase and one-stage EMC filters MEF 3/1 are used in the range 0.1...30 MHz and dampen interferences found in cables from the mains, supply units and control systems. They are suitable for TN-S, TN-CS, and TT networks. The best results are obtained with short connection cables (suggestion: earth connection < 10 cm) of the largest possible cross-section. The EMC filters are bi-directional. They reduce symmetrical and asymmetrical interferences that regularly appear with electronically controlled three phase units through mains influences.
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Dimension drawing



Notes

EMC FILTERS

3-phase, 1-stage

– with neutral

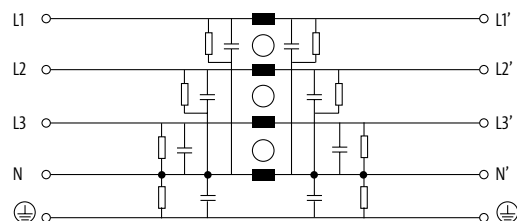
Approvals: 

MEF 3/1 N HD

with increased damping



Circuit diagram



Order Data	H×W×D/kg	Art-No.
10 A	153×130×100/1.0	10571
18 A	153×130×100/1.0	10572
36 A	153×130×100/1.1	10574
72 A	153×118×125/1.6	10575
100 A	170×180×140/3.4	10577
135 A	170×180×140/4.5	10578

Technical Data

Connection cross section	0.2...10 mm ² single core (AWG 24...7); 0.2...6 mm ² multiple core (AWG 24...9)
Operating voltage	max. 3 × 500 V AC
Operating frequency	50...60 Hz
Consumption	max. 15 mA (250 V AC)
Overload current	18 × (IN t) max. 0.5 ms; 1.5 × (IN t) max. 1 min. (1 × per hour)

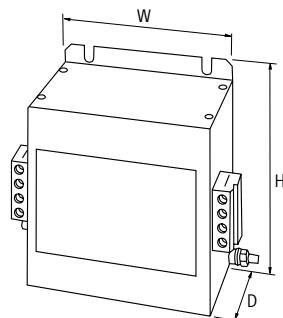
General data

Mounting method	screw fixing, M6
Climatic category	25/085/21 (EN 60068-1)
Test isolation voltage	3.3 kV (L - N), 2 s; 3.1 kV (L - L), 2 s

Description

Functional description	The 3-phase and one-stage EMC filters MEF 3/1 are used in the range 0.1...30 MHz and dampen interferences found in cables from the mains, supply units and control systems. They are suitable for TN-S, TN-CS, and TT networks. The best results are obtained with short connection cables (suggestion: earth connection < 10 cm) of the largest possible cross-section. The EMC filters are bi-directional. They reduce symmetrical and asymmetrical interferences that regularly appear with electronically controlled three phase units through mains influences.
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Dimension drawing



Notes

3-phase, 1-stage

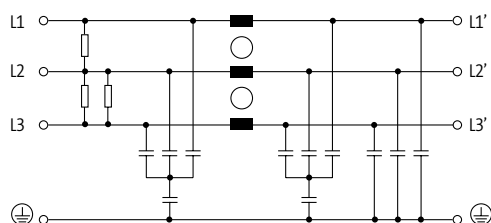
– Space saving book form

Approvals:  **us**

MEF 3/1



Circuit diagram



Order Data	H×W×D/kg	Art-No.
8 A	250×90×100/1.3	10531
16 A	250×90×100/1.3	10532
25 A	250×90×100/1.3	10533
36 A	250×90×100/1.5	10534
50 A	250×90×100/1.7	10535
80 A	270×85×135/2.2	10537
110 A	270×90×150/3.2	10538
180 A	380×120×170/5.1	10539

Technical Data

Operating voltage	max. 3 × 600 V AC
Operating frequency	50...60 Hz
Overload current	18 × (IN t) max. 0.5 ms; 1.5 × (IN t) max. 1 min. (1 × per hour)
Consumption	max. 10 mA (250 V AC)
Connection cross section	0.2...10 mm² single core (AWG 24...7); 0.2...6 mm² multiple core (AWG 24...9)

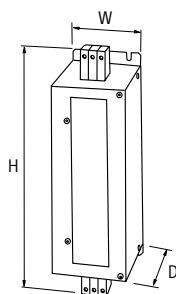
General data

Climatic category	25/085/21 (EN 60068-1)
Test isolation voltage	3.3 kV (L - N), 2 s; 3.1 kV (L - L), 2 s
Connection	Screw connection, touch protected
Mounting method	screw fixing

Description

Functional description
The 3-phase and 1-/2-stage EMC filters MEF 3/1-3/2 are used in the range 0.1...30 MHz and dampen interferences found in cables from the mains, supply units and control systems. They are suitable for TN-C-mains. The best results are obtained with short connection cables (suggestion: earth connection < 10 cm) of the largest possible cross-section. The EMC filters are bi-directional. They reduce symmetrical and asymmetrical interferences that often occur with frequency converters and switch mode power supplies.

Dimension drawing



Notes

EMC FILTERS

3-phase, 2-stage

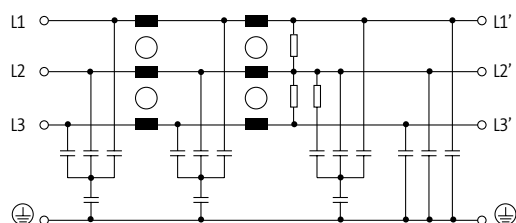
– Space saving book form

Approvals: 

MEF 3/2



Circuit diagram



Order Data	HxWxD/kg	Art-No.
8 A	226x50x140/1.7	10550
12 A	226x50x140/1.7	10551
16 A	226x50x140/1.7	10552
25 A	226x50x140/1.7	10553
36 A	226x50x140/1.7	10554
50 A	295x70x177/3.7	10555
80 A	295x70x177/5.1	10556

Technical Data

Operating voltage	max. 3 × 500 V AC
Operating frequency	50..60 Hz
Overload current	18 × (IN t) max. 0.5 ms; 1.5 × (IN t) max. 1 min. (1 × per hour)
Consumption	max. 15 mA (250 V AC)
Connection cross section	0.2...10 mm ² single core (AWG 24...7); 0.2...6 mm ² multiple core (AWG 24...9)

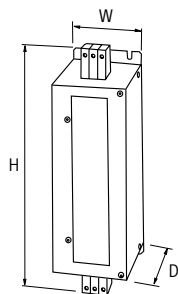
General data

Climatic category	25/085/21 (EN 60068-1)
Test isolation voltage	3.3 kV (L - N), 2 s; 3.1 kV (L - L), 2 s
Connection	Screw connection, touch protected
Mounting method	screw fixing

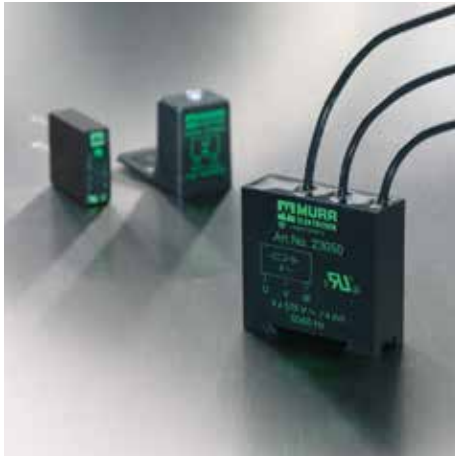
Description

Functional description	The 3-phase and 1-1/2-stage EMC filters MEF 3/1-3/2 are used in the range 0.1...30 MHz and dampen interferences found in cables from the mains, supply units and control systems. They are suitable for TN-C-mains. The best results are obtained with short connection cables (suggestion: earth connection < 10 cm) of the largest possible cross-section. The EMC filters are bi-directional. They reduce symmetrical and asymmetrical interferences that often occur with frequency converters and switch mode power supplies.
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Dimension drawing



Notes



EMC SUPPRESSORS

SMALL DEVICE, BIG IMPACT

- Meets EMC guidelines
- Reduces voltage peaks
- Prevents coil short circuits

MURRELEKTRONIK SOLVES YOUR INTERFERENCE PROBLEMS

- Optimum interference results by adjusting your inductive load
- Prefabricated modules make it easy to install – reliably mounted every time
- Prevents operative failures and outages and increases availability
- Long service life of contacts and switching elements lower maintenance costs

THE RIGHT SUPPRESSION FOR ALL STANDARD INDUCTIVE LOADS

For Contactors

- Integrated system solutions for all standard contactors
- Universal suppressors for contactors or relays that snap in or stick to the mounting surface

For Motors

- Suppression directly next to the interference source or inside the motor terminal box
- Motor connector has 10 poles and an earth connection point with integrated suppressor module and pre-wired cable
- Integrated system solutions for direct connection to the contactor
- Universal suppressors snap in next to the motor contactor

For Valves

- Suppressors are simply mounted between valve base and valve plug instead of the flat gasket

EMC Suppressors



For Contactors

ABB, General Electric, Eaton, Omron, Rockwell A. B.,
Schneider-Telemecanique, Siemens

Universal Suppressors

Page 1.8.1



For Motors – Installation on the Motor

RC 3 U, RC 3 R, RC 3 ST

Page 1.8.12



For Motors – Installation in the Cabinet

RC 3 BUR, HRC 3 AS, RC 3 RT

Page 1.8.15



For Valves

Form A, B, BI, C, CI

Page 1.8.17

EMC SUPPRESSORS

Suppressors for contactors



Approvals: **CE** **UL**

BC

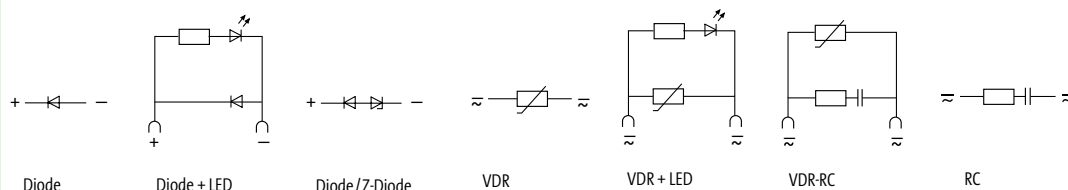


A 16



A 110

Circuit diagram



Appropriate contactors

B 6, BC 6, VB 6, KC 6

A 9...A 16

A 26...A 110

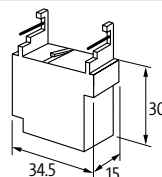
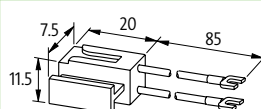
Order Data

		Art.-No.		Art.-No.	
Voltage	Suppression	Approval		Approval	
24...240 V DC	Diode				
24 V DC	Diode + LED				
	Diode/Z-Diode				
24 V AC/DC	VDR	CSA	26277		
	VDR + LED				
	RC				
48 V DC	Diode/Z-Diode				
48 V AC/DC	VDR	CSA	26278		
	RC				
110 V AC/DC	VDR				
	VDR + LED				
	VDR-RC				
	RC				
230 V AC/DC	VDR	CSA	26079	CSA	21172
	VDR + LED				
	VDR-RC				
	VDR-RC + LED				
	RC				
400 V AC/DC	VDR			CSA	21172
	RC				
415 V AC/DC	RC			CSA	21173

Technical Data

Damping factor	$\sim 1.5 \times U_N$
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Connection wires	self-securing cable forks

Dimension drawing



Notes

EMC SUPPRESSORS

Suppressors for contactors



Approvals:

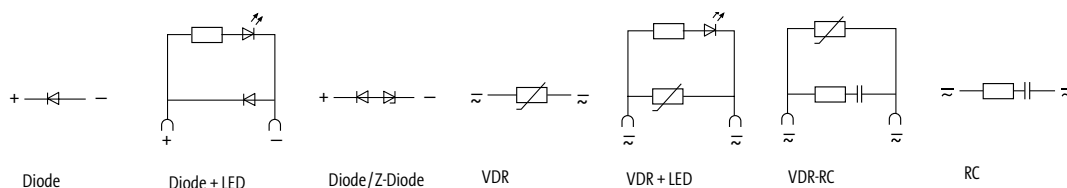
M



CL



Circuit diagram



Appropriate contactors

M CL00, 01, 02, 25 CL03, 04, 45 CL05...10

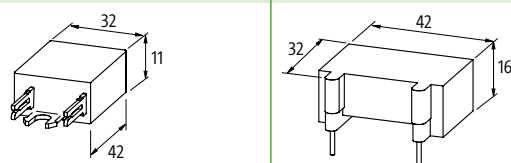
Order Data

Voltage	Suppression	Art.-No.	Art.-No.	Art.-No.	Art.-No.
24...240 V DC	Diode	2000-68300-1100000	2000-69100-1100000	2000-69200-1100000	
24 V DC	Diode + LED				
	Diode/Z-Diode				
24 V AC/DC	VDR	2000-68300-4400000	2000-69100-4400000	2000-69200-4400000	2000-69100-4400000
	VDR + LED				
	RC	2000-68300-4300000	2000-69100-4300000	2000-69200-4300000	2000-69101-4300000
48 V DC	Diode/Z-Diode				
48 V AC/DC	VDR	2000-68300-4400000	2000-69100-4400000	2000-69200-4400000	2000-69100-4400000
	RC	2000-68300-4300000	2000-69100-4300000	2000-69200-4300000	2000-69101-4300000
110 V AC/DC	VDR		2000-69100-7400000	2000-69200-7400000	2000-69100-7400000
	VDR + LED				
	VDR-RC				
	RC		2000-69100-7300000		
230 V AC/DC	VDR		2000-69100-2420000	2000-69200-2420000	
	VDR + LED				
	VDR-RC				
	VDR-RC + LED				
	RC			2000-69200-2320000	2000-69101-2320000
400 V AC/DC	VDR		2000-69100-5420000	2000-69200-5420000	2000-69100-5420000
	RC				
415 V AC/DC	RC				

Technical Data

Damping factor	$\sim 1.5 \times U_N$
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Connection wires	plug contact

Dimension drawing



Notes

Art.-No. 2000-69200-1100000 – also for CL05...10 DC-coils.

EMC SUPPRESSORS

Suppressors for contactors



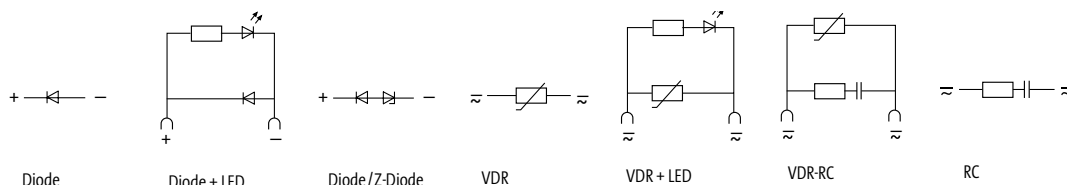
Approvals:



X-Start



Circuit diagram



Appropriate contactors

DIL M7...15
DIL MP20, DIL A

DIL M17...32

DIL M40...95

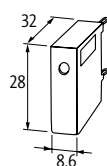
Order Data

		Art.-No.	Art.-No.	Art.-No.
Voltage	Suppression			
24...240 V DC	Diode			
24 V DC	Diode + LED			
	Diode/Z-Diode			
24 V AC/DC	VDR			
	VDR + LED	26013	26015	
	RC			
48 V DC	Diode/Z-Diode			
48 V AC	VDR + LED	26013	26015	
	RC			
110 V AC/DC	VDR			
	VDR + LED	26014		
	VDR-RC			
	RC	20007	20008	20009
230 V AC/DC	VDR			
	VDR + LED	26014		
	VDR-RC			
	VDR-RC + LED			
	RC	20007	20008	20009
400 V AC/DC	VDR			
	RC			

Technical Data

Damping factor	$\sim 1.5 \times U_N$
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Connection wires	plug contact

Dimension drawing



Notes

LED indicator for 24 V DC without suppression available on request.

EMC SUPPRESSORS

Suppressors for contactors

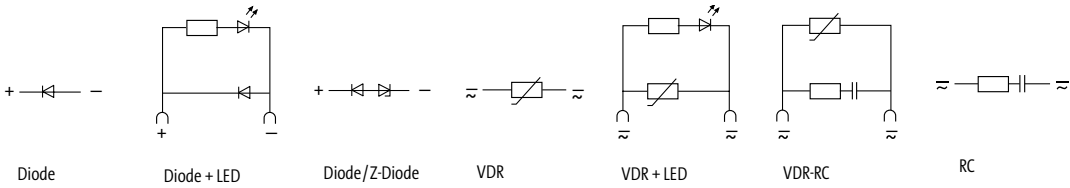


Approvals:

DIL E



Circuit diagram



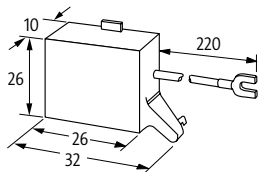
Appropriate contactors

DIL E...

Order Data		Art.-No.
Voltage	Suppression	
24...240 V DC	Diode	
24 V DC	Diode + LED	
	Diode/Z-Diode	
24 V AC/DC	VDR	
	VDR + LED	
	RC	
48 V DC	Diode/Z-Diode	
48 V AC/DC	VDR	
	RC	
110 V AC/DC	VDR	
	VDR + LED	
	VDR-RC	
	RC	21054
230 V AC/DC	VDR	26086
	VDR + LED	
	VDR-RC	
	VDR-RC + LED	
	RC	21054
400 V AC/DC	VDR	
	RC	

Technical Data	
Damping factor	~1.5 × U _N
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Connection wires	self-securing cable forks

Dimension drawing



Notes

EMC SUPPRESSORS

Suppressors for contactors

OMRON

J7KNA



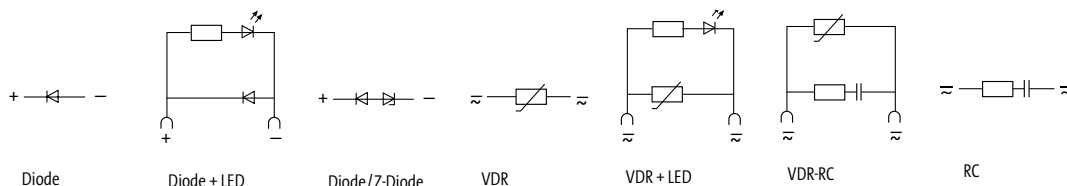
J7KN



J7KN



Circuit diagram



Appropriate contactors

J7KNA

J7KN

J7KN

Order Data

Art.-No.

Art.-No.

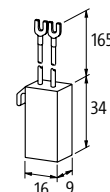
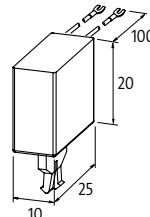
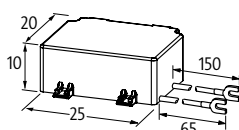
Art.-No.

Voltage	Suppression			Approval	
24...240 V DC	Diode				
24 V DC	Diode + LED				
	Diode/Z-Diode				
24 V AC/DC	VDR			cURus / CSA	26400
	VDR + LED				
	RC	2000-68800-2300000	2000-69000-2300000		
48 V DC	Diode/Z-Diode				
48 V AC	VDR			cURus / CSA	26401
	RC				
110 V AC/DC	VDR				
	VDR + LED				
	VDR-RC				
	RC	2000-68800-7300000			
230 V AC/DC	VDR			cURus / CSA	26403
	VDR + LED				
	VDR-RC				
	VDR-RC + LED				
	RC	2000-68800-2320000			
400 V AC/DC	VDR			cURus / CSA	26404
	RC				

Technical Data

Damping factor	$\sim 1.5 \times U_N$
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Connection wires	self-securing cable forks

Dimension drawing



Notes

Further types on request.

EMC SUPPRESSORS

Suppressors for contactors

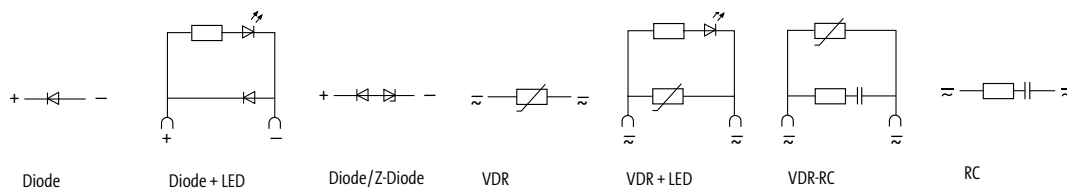


Approvals: **UL** **US**

I00-C



Circuit diagram



Appropriate contactors

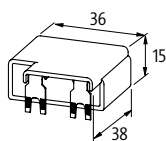
I00-C09...C85

Order Data		Art.-No.
Voltage	Suppression	
24...240 V DC	Diode	2000-68200-1100000
24 V DC	Diode + LED	
24 V AC/DC	Diode /Z-Diode	
	RC	2000-68200-4300000
	VDR	2000-68200-4400000
48 V AC/DC	RC	2000-68200-4300000
	VDR	2000-68200-4400000
110 V AC/DC	VDR	2000-68200-7400000
	VDR + LED	
	VDR-RC	
	RC	2000-68200-1320000
230 V AC/DC	VDR	2000-68200-2420000
	VDR + LED	
	VDR-RC	
	VDR-RC + LED	
	RC	2000-68200-1320000
400 V AC/DC	RC	2000-68200-5320000
	VDR	2000-68200-5420000

Technical Data

Damping factor	$\sim 1.5 \times U_N$
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Connection wires	plug contact

Dimension drawing



Notes

EMC SUPPRESSORS

Suppressors for contactors



TeSys



TeSys

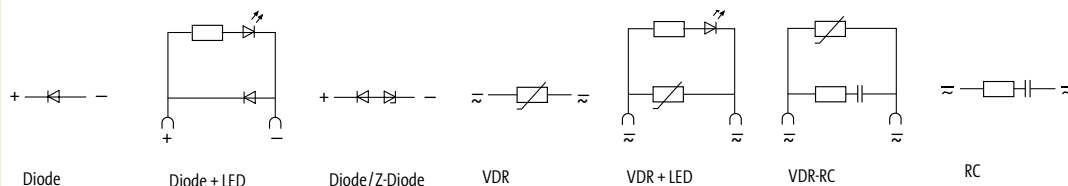


TeSys



D

Circuit diagram



Appropriate contactors

LC 1 D09...D38
LC 1 DT20, DT40, LC 2 D09...D38
AC-coil

LC 1 D09...D38
LC 1 DT20, DT40, LC 2 D09...D38
DC-coil

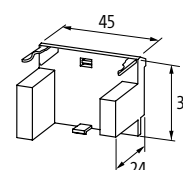
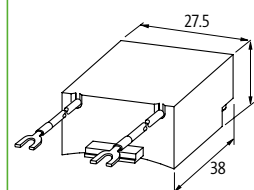
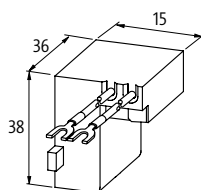
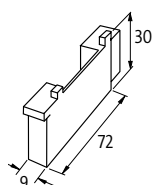
CA 2 DN, CA 3 DN serie „d“
LC 1 DT20, DT40, LC 2 D09...D38

Order Data		Art.-No.	Art.-No.	Art.-No.	Art.-No.
Voltage	Suppression		Approval	Approval	
24...240 V DC	Diode			cURus 2000-69300-1100000	26481
24 V DC	Z-Diode	26476		cURus 2000-69300-5200000	
24 V AC/DC	VDR		cURus 2000-69400-4400000	cURus 2000-69300-4400000	
	RC		cURus 2000-69400-4300000	cURus 2000-69300-4300000	21070
30...250 V DC	Z-Diode				
48 V AC/DC	VDR		cURus 2000-69400-4400000	cURus 2000-69300-4400000	
	VDR + LED				
	RC		cURus 2000-69400-4300000	cURus 2000-69300-4300000	21070
110 V AC/DC	VDR		cURus 2000-69400-7400000	cURus 2000-69300-7400000	
	VDR + LED				
	RC	21063	cURus 2000-69400-7300000	cURus 2000-69300-7300000	21071
230 V AC/DC	VDR		cURus 2000-69400-2420000	cURus 2000-69300-2420000	
	VDR + LED				
	VDR-RC + LED				
	RC	21063	cURus 2000-69400-2320000	cURus 2000-69300-2320000	21060
	RC + LED				
400 V AC/DC	VDR		cURus 2000-69400-5420000		
	RC		cURus 2000-69400-5320000		

Technical Data

Damping factor	~1.5 × U _N			
Temperature range	-20...+70 °C			
Material	plastic, flame retardant (UL 94)			
Connection wires	plug contact	self-securing cable forks	self-securing cable forks	plug contact

Dimension drawing



Notes

EMC SUPPRESSORS

Suppressors for contactors

S00

S0

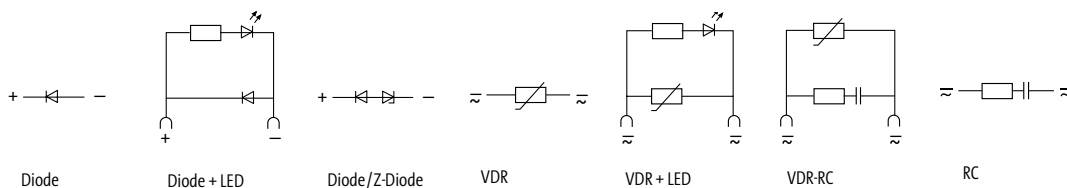
SIEMENS



Approvals:



Circuit diagram



Appropriate contactors

3 RT 20.15/16/17/18

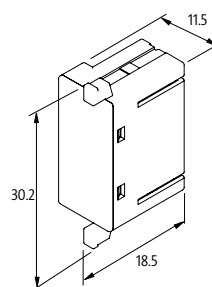
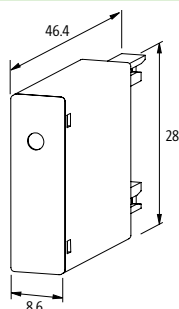
3 RT 20.25/26/27/28

Order Data		Art.-No.	Art.-No.
Voltage	Suppression		
24...240 V DC	Diode	2000-68500-1100000	
24 V DC	Diode + LED		2000-68400-2010000
	Diode/Z-Diode		
24 V AC/DC	VDR	2000-68500-4400000	2000-68400-4400000
	VDR + LED	2000-68500-4410000	2000-68400-4410000
	RC	2000-68500-4300000	2000-68400-4300000
48 V AC/DC	VDR		
	RC	2000-68500-4300000	2000-68400-4300000
110 V AC/DC	VDR	2000-68500-7400000	2000-68400-7400000
	VDR + LED	2000-68500-7410000	2000-68400-7410000
	VDR-RC		
	RC	2000-68500-7300000	2000-68400-7300000
230 V AC/DC	VDR	2000-68500-2420000	2000-68400-2420000
	VDR + LED	2000-68500-2470000	
	RC	2000-68500-2320000	2000-68400-2320000
400 V AC/DC	VDR	2000-68500-5420000	2000-68400-5420000
	RC	2000-68500-5320000	2000-68400-5320000

Technical Data

Damping factor	$\sim 1.5 \times U_N$
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Connection wires	plug contact

Dimension drawing



Notes

Suppressors for contactors

SIEMENS

S0 4



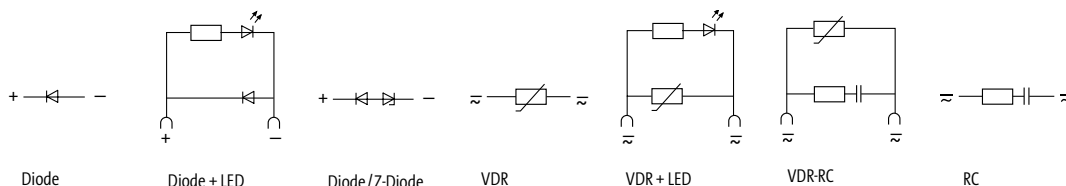
S0 1



3 TF/L-3 TF



Circuit diagram



Appropriate contactors

3 TF 30...35
3 TF 40...45

3 TF 30...45
3 TB 40...3 TB 44

3 TH 2, 3 TF 2
3 TH 20, 3 TF 20

Order Data

Art.-No.

Art.-No.

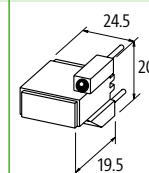
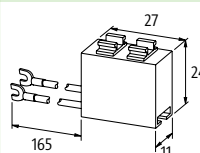
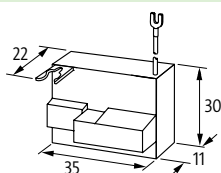
Art.-No.

Voltage	Suppression	Approval	Art.-No.	Approval	Art.-No.	Approval	Art.-No.
24...240 V DC	Diode	CSA	26588	UR / CSA	26283	cURus / CSA	26036
24 V DC	Diode + LED					cURus / CSA	26530
	Diode/Z-Diode			UR / CSA	26051	cURus / CSA	26034
24 V AC/DC	VDR	CSA	26576				
	VDR + LED						
	RC			UR / CSA	22050		
48 V DC	Diode/Z-Diode						
48 V AC/DC	VDR	CSA	26576			cURus / CSA	26038
	RC			UR / CSA	22051		
110 V AC/DC	VDR						
	VDR + LED						
	VDR-RC						
	RC			UR / CSA	22051		
230 V AC/DC	VDR	CSA	26578	UR / CSA	26317	cURus / CSA	26039
	VDR + LED						
	VDR-RC						
	RC			UR / CSA	22052		
	RC			UR / CSA	22054		
400 V AC/DC	VDR						
	RC			UR / CSA	22054		

Technical Data

Damping factor	$\sim 1.5 \times U_N$
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Connection wires	self-securing cable forks

Dimension drawing



Notes

EMC SUPPRESSORS

Suppressors

– universal

A0



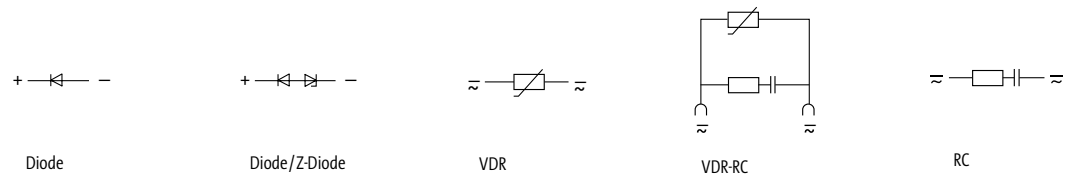
AD



CF



Circuit diagram



Appropriate contactors

universal

universal

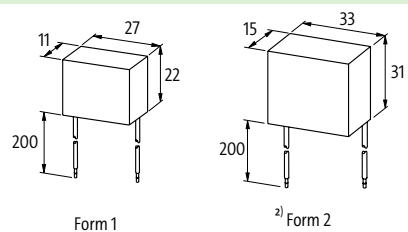
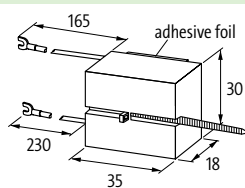
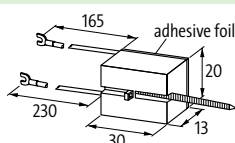
universal

Order Data		Art.-No.	Art.-No.	Art.-No.	sugg. coil valves		
Voltage	Suppression	Approval	Approval	Approval	AO	AD	CF
Max. 240 V DC	Diode	CSA 26001			15 W		
24V DC	Z-Diode	CSA 26120	CSA 26073		25 W	75 W	
24V AC/DC	VDR	cURus / CSA 26180	CSA 26720		50 VA/W	200 VA/W	
	RC			CSA 20680			20 VA
48V AC/DC	VDR	cURus / CSA 26181			70 VA/W		
	RC	cURus / CSA 20001	cURus / CSA 20013		15 VA	15 VA	
110V AC/DC	VDR	cURus / CSA 26182	CSA 26722		100 VA/W	200 VA/W	
	VDR-RC						
	RC						
230V AC/DC	VDR	cURus / CSA 26183	CSA 26723		200 VA/W	200 VA/W	
	VDR	cURus / CSA 26184			200 VA/W		
	RC		CSA 20014	CSA 20682		25 VA	20 VA
	RC	cURus / CSA 20002	cURus / CSA 20010	CSA 20683	15 VA	75 VA	20 VA
	RC		cURus / CSA 20011	CSA ²⁾ 20687		100 VA	50 VA
400V AC/DC	VDR		CSA 26724			200 VA/W	
	RC	cURus / CSA 20004	cURus / CSA 20012	CSA 20688	15 VA	100 VA	50 VA
	RC						

Technical Data

Damping factor	approx. 1.5
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Connection wires	self-securing cable forks

Dimension drawing



Notes

Art.-No. 26184 – up to 300 V AC/DC

Suppressors

– universal

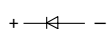
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RC-BUG 2

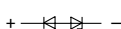
BU + UB



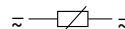
Circuit diagram



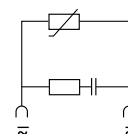
Diode



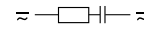
Diode/Z-Diode



VDR



VDR-RC



RC

Appropriate contactors

universal

universal

universal

Order Data

Art.-No.

Art.-No.

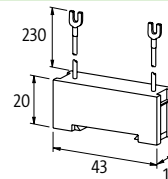
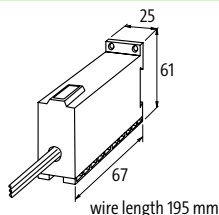
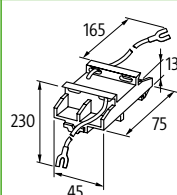
Art.-No. sugg. coil valves

Voltage	Suppression	Approval	Art.-No.	Approval	Art.-No.	Approval	Art.-No.	H	RC-BUG 2	BU + UB
24...240 V DC	Diode	CSA	26097			CSA	26020	25 W		50 W
24 V DC	Z-Diode	CSA	26095			CSA	26130	25 W		50 W
24 V AC/DC	VDR	cURus / CSA	26090			cURus / CSA	26150	50 VA/W		50 VA/W
	RC									
48 V AC/DC	VDR									
	RC	CSA	20100					15 VA		
110 V AC/DC	VDR									
	VDR-RC									
	RC			CSA	26613				146 VA	
230 V AC/DC	VDR			CSA	26619	cURus / CSA	26155		100 VA/W	200 VA/W
	VDR			CSA	26614	CSA	20031	15 VA	146 VA	25 VA
	RC	CSA	20101	CSA	26614	CSA	20033	25 VA		25 VA
	RC	CSA	20102			CSA	20033	25 VA		25 VA
	RC	CSA	20103			CSA	20034	75 VA		25 VA
400 V AC/DC	VDR									
	RC			CSA	26615	CSA	20032		146 VA	25 VA
	RC			CSA	26616				146 VA	

Technical Data

Damping factor	approx. 1.5
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Mounting method	DIN-rail mounting (EN 60715) with adapter ASA Art.-No. 20900, DIN-rail mounting (EN 60715)
Connection wires	self-securing cable forks

Dimension drawing



Notes

Art.-No. 20034 – without adapter, can be directly snapped onto DIN-rail, ASA adapter **Art.-No. 20900** included in delivery.
Art.-No. 26616 – up to 600 V AC/DC

EMC SUPPRESSORS

Suppressors for motors

Mounting methods:

- on the motor terminal box
- inside the motor terminal box
- inside the distribution box
- on 35 mm DIN-rail acc. to EN 60715

RC 3 U

M16 × 1.5



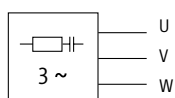
RC 3 BU



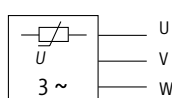
RC 3 BUG



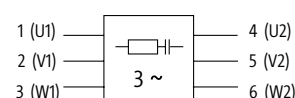
Circuit diagram



RC



VDR



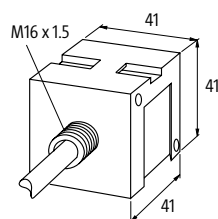
RC-(1) per phase

Order Data		Art.-No.		Art.-No.		Art.-No.	
Voltage	Motor rating	Suppression/Approval		Suppression/Approval		Suppression/Approval	
3 × 400 V AC	4 kW	RC	23022	RC / cURus	23050	RC	23104
	4 kW					VDR	23100
	4 kW			VDR / cURus	23115	RC	
	7.5 kW			VDR / cURus	23115	RC	23104
	10 kW	RC	23011	VDR / cURus	23118	RC	23106
	10 kW	RC-per phase	23043				
3 × 575 V AC	20 kW			VDR / cURus	23118		
	4 kW			RC / cURus	23050		
	7.5 kW	RC / cURus	23035			RC	23104
	20 kW					VDR	23102
3 × 690 V AC	45 kW					RC-per phase	¹⁾ 23103
	4 kW			RC / cURus	²⁾ 23056	RC	23104
	7.5 kW					RC	23104
	20 kW						

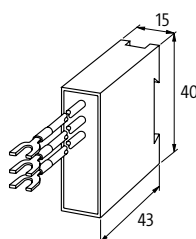
Technical Data

Frequency	for RC: 50...60 Hz; for VDR: 10...400 Hz		
Material	plastic, flame retardant (UL 94)		
Potting compound	2-component epoxy		
Temperature range	-20...+60 °C		
Connection method	approx. 500 mm PVC cable 3 × 0.75 mm ² or 7 × 0.75 mm ²	approx. 200 mm single core 0.35 mm ² ; Art.-No. 23056 0.5 mm ² with self-securing M4 cable forks M4	approx. 500 mm single core 1 mm ²

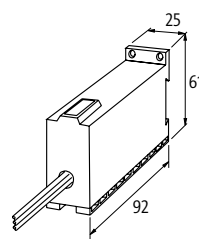
Dimension drawing



For DIN-rail mounting use
2 × **Art.- No. 20900** adapter feet



For DIN-rail mounting use
Art.- No. 20900 adapter feet



For DIN-rail mounting use
2 × **Art.- No. 20900** adapter feet

Notes

Do not use RC motor suppressors on variable frequency drives.
1 × **Art.-No. 23103, 23043** required per phase.

Suppressors for motors

Mounting methods:

- with M16 × 1.5 and M20 × 1.5
- on the motor terminal box with plug connectors

RC 3 R

M16 × 1.5 screw



RC 3 R

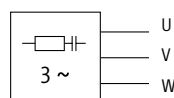
M16 × 1.5 screw

RC 3 RG

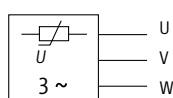
M20 × 1.5 screw



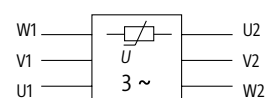
Circuit diagram



RC



VDR



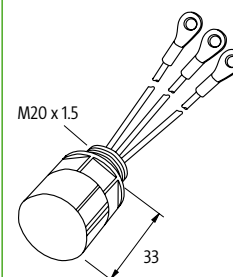
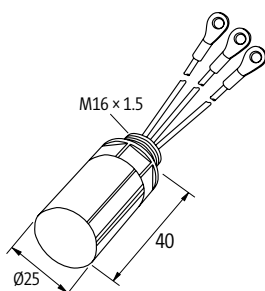
VDR(1) per phase

Order Data		Art.-No.	Art.-No.	Art.-No.
Voltage	Motor rating	Suppression/Approval	Suppression/Approval	Suppression/Approval
3 × 400 V AC	4 kW	VDR / cURus	23170	RC / cURus
	4 kW			
	4 kW			
	7.5 kW	VDR	23171	
	10 kW			VDR
	20 kW			VDR
3 × 575 V AC	4 kW	VDR / cURus	23172	RC / cURus
	7.5 kW	VDR / cURus	23173	
	10 kW			VDR / cURus
	20 kW			VDR / cURus
	20 kW			VDR-Einzel
	20 kW			
3 × 690 V AC	7.5 kW	VDR	23174	
	20 kW			VDR

Technical Data

Frequency	for RC: 50...60 Hz; for VDR: 10...400 Hz		
Material	plastic, flame retardant (UL 94)		
Potting compound	2-component epoxy		
Temperature range	-20...+60 °C		
Connection method	approx. 100 mm single core 0.5 mm ²		approx. 150 mm single core 1 mm ²
Ring terminals	isolated M6	isolated M4	isolated M6

Dimension drawing



Notes

Do not use RC motor suppressors on variable frequency drives.

Art.-No. 23174 – wire diameter 1.5 mm².

EMC SUPPRESSORS

Suppressors for motors

Mounting methods:

- on the motor terminal box with plug connectors

RC 3 ST

Connector with cable and integrated motor suppression
Cable outlet in the back

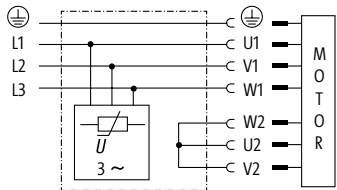


RC 3 ST

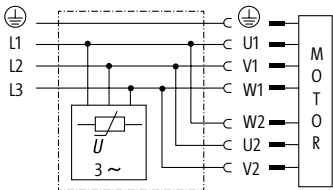
Connector with cable and integrated motor suppression
Cable outlet (right angle)



Circuit diagram



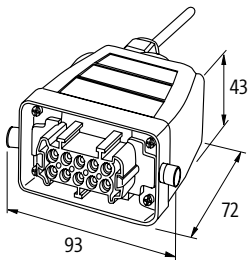
Varistor-suppression (star)



Varistor-suppression (delta)

Order Data				Art.-No.	Art.-No.
Voltage	Motor rating	Cable length	Suppression		
max.	5.5 kW	5 m	VDR/star	236139	VDR/star
3 × 575 V AC	5.5 kW	8 m	VDR/star	236141	236148
	5.5 kW	10 m	VDR/star	236142	VDR/star
					236149

Technical Data	
Frequency	10...400 Hz
Plug connector	females, 10-pol. + PE
Housing	aluminium pressure diecasting
Temperature range	-20...+60 °C
Connection method	PUR cable black, 4 × 1.5 mm² ; numbered wires, halogen free
	PUR cable black, 4 × 1.5 mm² ; numbered wires, DESINA® compliant
Dimension drawing	



(without compression gland)

Notes

EMC SUPPRESSORS

Suppressors for motors

Mounting methods:

- on 35 mm DIN-rail acc. to EN 60715
- bolted together, stacked
- DIN-rail mounting under the control gear

HRC 3



HRC 3 K



RC 3 BUR

Connects onto
Siemens SIRIUS 3 RT 20 contactors,
with screw terminal

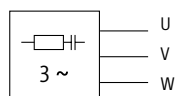


RC 3 BUC

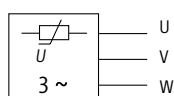
Connects onto
Siemens SIRIUS 3 RT 20 contactors,
with spring clamp terminal



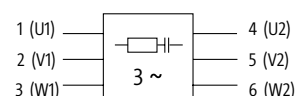
Circuit diagram



RC



VDR



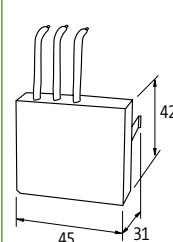
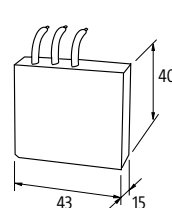
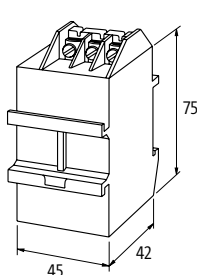
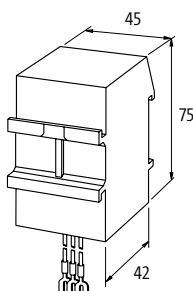
RC(1) per phase

Order Data		Art.-No.	Art.-No.	Art.-No.	Art.-No.
Voltage	Motor rating	Suppression/Approval	Suppression	Suppression/Approval	Suppression/Approval
3 × 400 V AC	4 kW	RC / cURus 23004	RC 23005		
	4 kW	RC / cURus 233463			
	5.5 kW			RC / cURus 236082	
	7.5 kW				RC / cURus 23220
	10 kW	RC / cURus 23002	RC 23003		
	20 kW	RC-per phase / cURus 23009			
	20 kW	VDR / cURus 23015			
3 × 500 V AC +10 %	4 kW	RC / cURus 23000	RC 23001		
3 × 575 V AC	5.5 kW			RC / cURus 236082	
	7.5 kW	RC / cURus 23006	RC 23007		
	7.5 kW	RC / cURus 230563			RC / cURus 23220
	10 kW	VDR / cURus 23016			
	20 kW		RC 23018		
3 × 690 V AC	10 kW	RC 23017			

Technical Data

Frequency	for RC: 50...60 Hz; for VDR: 10...400 Hz				
Material	plastic, flame retardant (UL 94)				
Potting compound	2-component epoxy				
Temperature range	-20...+60 °C				
Connection method	approx. 250 mm s. core (Art.-No. 23000: 300 mm) 0.5 mm ² (Art.-No. 23000: 1.5 mm ²) with self-securing M4 cable forks	3-pole terminal 2 × (0.75...2.5 mm ²) M4	wire (solid core) 1.5 mm ²	wire with ferrule ends 2.0 mm ²	

Dimension drawing



Notes

Do not use RC motor suppressors on variable frequency drives.
Art.-No. 233463 and **230563** – with ferrule ends.

EMC SUPPRESSORS

Suppressors for motors

Mounting methods:

- DIN-rail mounting under the control gear
- fixes onto contactors
- available with integrated coil suppression

HRC 3 AS

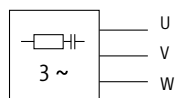


RC 3 RT

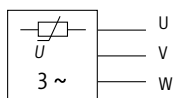
Connects onto Siemens SIRIUS 3 RT 10 contactors with screw terminal



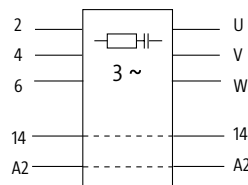
Circuit diagram



RC



VDR



Appropriate contactors

Motor contactors up to 5.5 kW from Siemens, Moeller, Sprecher + Schuh etc.

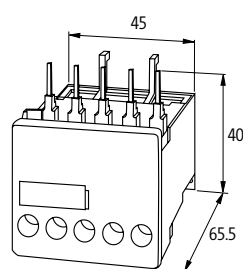
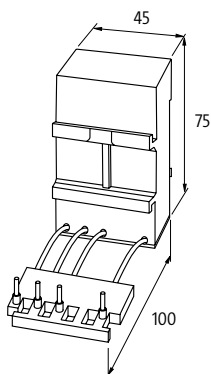
Siemens 3 RT 10

Order Data		Art.-No.	Art.-No.	Art.-No.
Voltage	Motor rating	Suppression motor + coil	Suppression motor + coil	Suppression/Approval
3 × 400 V AC	5.5 kW	RC 23160	VDR 23163	RC / cURus / CSA 23180
	5.5 kW	RC + Diode 23151		
3 × 575 V AC	5.5 kW	RC 23161	VDR 23164	RC / cURus / CSA 23181
	5.5 kW		VDR + Diode 23157	

Technical Data

Suppression Spule	for RC: 230 V AC/20 VA; for RC + Diode: 24...230 V DC/36 W
Frequency	for RC: 50...60 Hz; for VDR: 10...400 Hz
Material	plastic, flame retardant (UL 94)
Temperature range	-20...+60 °C
Connection method	ferrules, load side securely fixed

Dimension drawing



Notes

Do not use RC motor suppressors on variable frequency drives.

Suppressors for valves

- with LED
- with suppression

VBS

Form A
Pin spacing 18 mm
EN 175301-803 (ISO 4400)

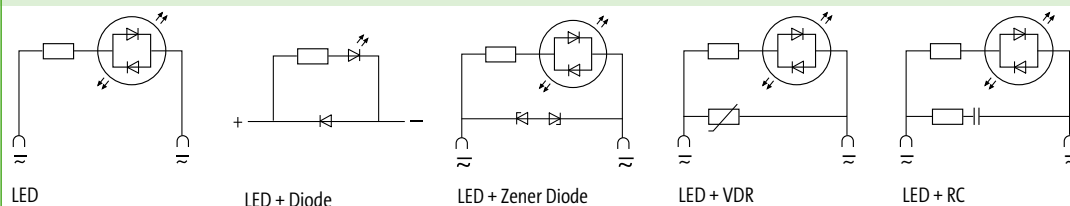


LBS

Form BI Industrial Standard
Pin spacing 11 mm



Circuit diagram

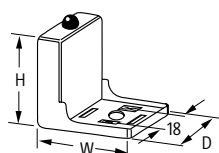


Order Data		Art.-No.	Art.-No.	Switch off delay time [ms]	Switch off voltage peak [V]	Valve hold-on rating [W/VA]
Voltage	Suppression					
24 V DC	LED + Diode	¹⁾ 3124021	3124221	200	1	50
24 V AC/DC	LED	¹⁾ 3124015	3124215	–	–	50
	LED + Z-Diode	¹⁾ 3124033	3124233	20	55	100
	LED + VDR	¹⁾ 3124048	3124248	15	45	50
	LED + RC	3124068		20	105	10
	LED + RC		3124269	20	70	20
48 V AC/DC	LED	¹⁾ 3124017		–	–	50
	LED + VDR	¹⁾ 3124052		10	75	100
	LED + RC	²⁾ 3124071		20	90	30
110 V AC/DC	LED	3124018		–	–	50
	LED + VDR	3124046		10	235	100
	LED + RC	3124070		20	250	10
	LED + RC	²⁾ 3124072		20	250	25
230 V AC/DC	LED	3124016	3124216	–	–	50
	LED + VDR	3124049	3124249	15	360	100
	LED + RC	3124063	3124263	20	300	10
	LED + RC	²⁾ 3124064		20	300	25

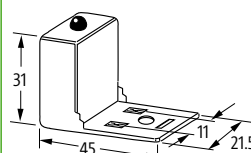
Technical Data

Supply indicator	LED yellow
Contact material	silvered bronze
Protection	IP65 when fully mounted
Material	polyamide black, flame retardant, temperature resistant up to 130 °C
Temperature range	-20...+60 °C

Dimension drawing



Housing H × W × D: 37 × 45 × 30 mm
¹⁾ Housing H × W × D: 37 × 39 × 30 mm
²⁾ Housing H × W × D: 37 × 53 × 33 mm
 0° and 180° version on request



Note PIN arrangement (PE at cable outlet of connector)
 180° version on request

Notes

Do not use plug gasket when fitting adapter. Other LED colors on request.
 For double valves the VA 2 series is suitable (please inquire). At Art.-No. 3124021 and 3124221 polarity dependent

EMC SUPPRESSORS

Suppressors for valves

- with LED
- with suppression

DAB/PBS

Form B/BI
Pin spacing 10/11 mm
EN 175301-803 (ISO 6952)

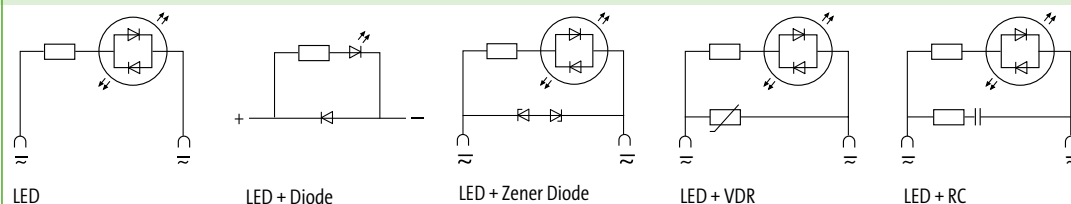


MVK/MVT

Form C/CI
Pin spacing 8/9.4 mm
EN 175301-803 (ISO 6952)



Circuit diagram

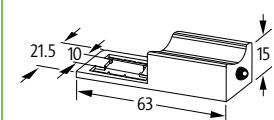


Order Data		Art.-No.	Art.-No.	Art.-No.	Art.-No.			
Voltage	Suppression	EN 175301-803 (ISO 6952)		EN 175301-803 (ISO 6952)		Switch off delay time	Switch off voltage peak	Valve- hold-on rating
		Form B	Form BI	Form C	Form CI	[ms]	[V]	[W/VA]
24 V DC	LED + Diode	3124871	3124121			200	1	50
24 V AC/DC	LED	3124875	3124115	3124811	3124815	–	–	50
	LED + Z-Diode	3124873	3124133	3124833	3124832	20	55	100
	LED + VDR		3124148			15	45	50
	LED + RC		3124169			20	70	20
110 V AC/DC	LED + RC		3124170			20	250	10
230 V AC/DC	LED		3124116			–	–	50
	LED + VDR					15	360	100
	LED + RC		3124163			20	300	10

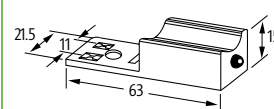
Technical Data

Supply indicator	LED yellow
Contact material	silvered bronze
Protection	IP65 when fully mounted
Material	polyamide black, flame retardant, temperature resistant up to 130 °C
Temperature range	-20...+60 °C

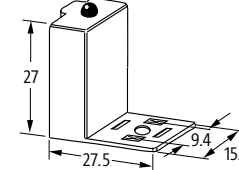
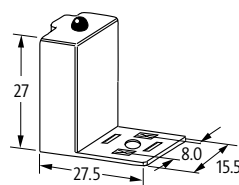
Dimension drawing



Suitable for 0° and 180° installation



Note PIN arrangement
(PE at cable outlet of connector)
180° version on request



0° and 180° version on request

Notes

Do not use plug gasket when fitting adapter. Other LED colors on request. Right-angle housing version with 10 mm pin spacing (DAR/DARU), on request. At **Art.-No. 3124871** and **3124121** polarity dependent.

RELAYS / SAFETY RELAYS INCREDIBLY VERSATILE

- Over 600 different modules ready for all applications
- Push-In technology, spring clamps or screw terminals available
- Worldwide approvals

TWICE AS SMALL, TWICE AS FAST!

Each system includes different kinds of active interface modules. Relay modules are used to separate two different potential levels. The control side is galvanically isolated from the load/contact side and should be protected from the wrong voltage. These interfaces adjust the different signal levels to work with the existing system.

With MIRO SAFE+, Murrelektronik offers safe switching devices for a wide range of safe industrial applications. They are the perfect solution to reach high safety standards – up to performance level e (PLe) according to EN 13849-1. **With MIRO SAFE+ you can design many different safety applications like: emergency stops, guard doors, two hand monitoring, light curtains, and safety magnet switch monitoring.**

Relays



Relay 6.2 mm pluggable

- Output relay
- Input relay

Page 1.9.1



Relay 6.2 mm

- Output relay
- Input relay

Page 1.9.4



Relay 12.4 mm

- Output relay
- Input relay

Page 1.9.9



Relay 22.5 mm

- Output relay
- Input relay

Page 1.9.17

Safety Relays



Safety Relay 22.5/45 mm

- MIRO SAFE+

Page 1.9.20

RELAYS / SAFETY RELAYS

Terminal relay

– pluggable

– with bridge system

Approvals: 

MIRO 6.2

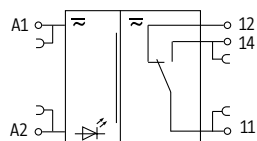
Output relay

1 NO/NC contact

Spring clamp terminals



Circuit diagram



Order Data

6 V AC/DC (5...7.2 V AC/DC) - 25 mA

Art-No.

3000-16023-3100022

12 V AC/DC (9.8...14 V AC/DC) - 14.2 mA

3000-16023-3100005

24 V AC/DC (19.2...28.8 V AC/DC) - 12 mA

3000-16013-3100020

Accessories

Removable plug-in relay 6 V AC/DC

Art-No.

3000-16023-2100000

Removable plug-in relay 12 V AC/DC

3000-16023-2100005

Removable plug-in relay 24 V AC/DC

3000-16023-2100010

Utilization category

AC-12 6 A (24/110/230 V AC)

AC-15 3 A (24/110 V AC); 1.5 A (230 V AC)

DC-13 1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)

Input

LED display

LED (green)

Output

Switching voltage

max. 250 V AC/30 V DC

Switching current per output

max. 6 A

Min. load current

100 mA

Power rating (voltage dependent)

max. 1 500 VA/180 W

Switching frequency

max. 10 Hz

Contact material

Ag Sn O2

Energize/release/contact bounce time

8/4/- ms

General data

Test isolation voltage

250 V

Mech./ elect. life

10 000 000 switching cycles (NO) 30 000; (NC) 10 000, load dependent

Protection

IP20

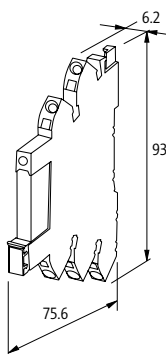
Mounting method

DIN-rail mountable (EN 60715)

Temperature range

-25...+60 °C

Dimension drawing



Notes

For inductive loads we recommend EMC suppressors connected parallel to the coil.

RELAYS / SAFETY RELAYS

Terminal relay

– pluggable

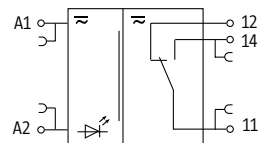
– with bridge system

MIRO 6.2

Output relay
1 NO/NC contact
Spring clamp terminals



Circuit diagram



Order Data	Art-No.
60 V AC/DC (43.5...72 V AC/DC) - 7 mA	cURus, cCSAus 3000-16513-3100022
115...125 V AC/DC (88...138 V AC/DC) - 8 mA	3000-16013-3100025
230 V AC/DC (184...264 V AC/DC) - 4 mA	3000-16013-3100030

Accessories	Art-No.
Relay 60/125/230 V AC/DC	3000-16023-2100020

Utilization category

AC-12	6 A (24/110/230 V AC)
AC-15	3 A (24/110 V AC); 1.5 A (230 V AC)
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)

Input

LED display	LED (green)
-------------	-------------

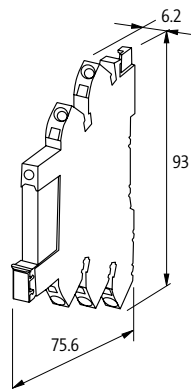
Output

Switching voltage	max. 250 V AC/30 V DC
Switching current per output	max. 6 A
Min. load current	100 mA
Power rating (voltage dependent)	max. 1 500 VA/180 W
Switching frequency	max. 10 Hz
Contact material	Ag Sn O ₂
Energize/release/contact bounce time	8/4/- ms

General data

Test isolation voltage	250 V
Mech./ elect. life	10 000 000 switching cycles (NO) 30 000; (NC) 10 000, load dependent
Protection	IP20
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-25...+60 °C

Dimension drawing



Notes

For inductive loads we recommend EMC suppressors connected parallel to the coil.

RELAYS / SAFETY RELAYS

Terminal relay

- pluggable
- with bridge system

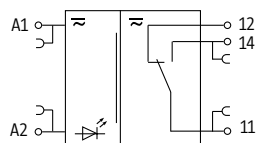
Approvals:  

MIRO 6.2

Input relay
1 NO/NC contact
Spring clamp terminals



Circuit diagram



Order Data

24 V AC/DC (19.2...26.8 V AC/DC) - 14 mA

Art-No.

3000-16013-3100040

Accessories

Removable plug-in relay 24 V AC/DC

Art-No.

3000-16023-2100030

Utilization category

AC-12	6 A (24/110/230 V AC)
AC-15	3 A (24/110 V AC); 1.5 A (230 V AC)
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)

Input

LED display LED (green)

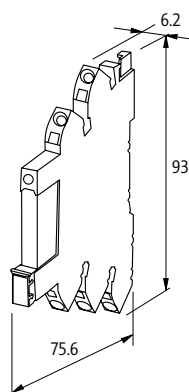
Output

Switching voltage	max. 250 V AC/30 V DC
Switching current per output	max. 6 A
Min. load current	10 mA
Power rating (voltage dependent)	max. 1 500 VA/180 W
Switching frequency	max. 10 Hz
Contact material	Ag Sn O ₂ , gold plated
Energize/release/contact bounce time	8/4/- ms

General data

Test isolation voltage	250 V
Mech./ elect. life	10 000 000 switching cycles (NO) 30 000; (NC) 10 000, load dependent
Protection	IP20
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-25...+60 °C

Dimension drawing



Notes

For inductive loads we recommend EMC suppressors connected parallel to the coil. When the max. switching voltage/current is exceeded the gold plating is destroyed. The relay will then take on the properties of an output type.

RELAYS / SAFETY RELAYS

Terminal relay

– with bridge system

Approvals:  

MIRO 6.2

Output relay
1 NO/NC contact
Screw terminals



MIRO 6.2

Output relay
1 NO/NC contact
Spring clamp terminals



MIRO 6.2

Output relay
1 NO contact
Screw terminals

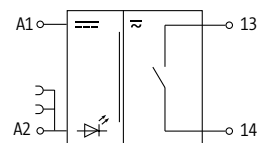
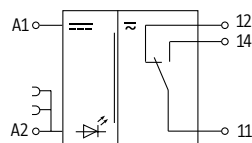


MIRO 6.2

Output relay
1 NO contact
Spring clamp terminals



Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
12 V DC (10...15 V DC) - 20 mA	52050	6652050		
24 V DC (19.2...30 V DC) - 14 mA	CCC 52000	CCC 6652000	CCC 52002	CCC 6652002
24 V DC (19.2...30 V DC) - 17 mA	CCC 52001	CCC 6652001	CCC 52015	CCC 6652015

Utilization category

AC-12	6 A (24/110/230 V AC)
AC-15	3 A (24/110/230 V AC)
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)

Input

LED display LED (green)

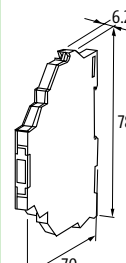
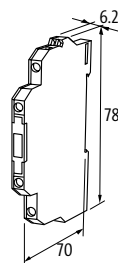
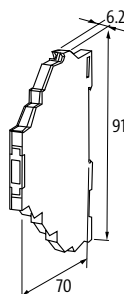
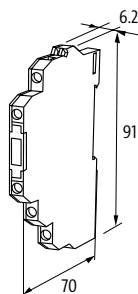
Output

Switching voltage	max. 250 V AC/DC
Switching current per output	max. 6 A
Min. load current	10 mA (12 V DC) 100 mA (12 V DC)
Power rating (voltage dependent)	max. 1 500 VA/120 W
Switching frequency	max. 10 Hz
Contact material	Ag Sn O2
Energize/release/contact bounce time	10/15/1.5 ms

General data

Mech./ elect. life	20 000 000 switching cycles/load dependent
Test isolation voltage	4 kV; safe separation (EN 60947-1)
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-20...+55 °C

Dimension drawing



Notes

For inductive loads we recommend EMC suppressors connected parallel to the coil.

RELAYS / SAFETY RELAYS

Terminal relay

– with bridge system

Approvals:  

MIRO 6.2

Output relay
1 NO/NC contact
Screw terminals

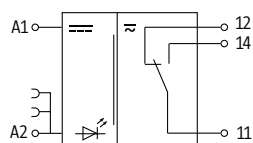


MIRO 6.2

Output relay
1 NO/NC contact
Spring clamp terminals



Circuit diagram



Order Data

110 V AC/DC (95...121 V AC/DC) - 4 mA
230 V AC/DC (195...253 V AC/DC) - 3 mA

Art-No.

52030

52040

Art-No.

6652030

6652040

Utilization category

AC-12 6 A (24/110/230 V AC)
AC-15 3 A (24/110/230 V AC)
DC-13 1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)

Input

LED display

LED (green)

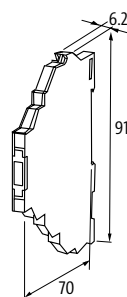
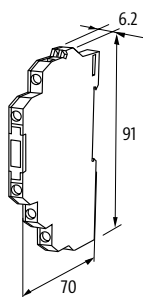
Output

Switching voltage max. 250 V AC/DC
Switching current per output max. 6 A
Min. load current 10 mA (12 V DC)
Power rating (voltage dependent) max. 1 500 VA/120 W
Switching frequency max. 10 Hz
Contact material Ag Sn O2
Energize/release/contact bounce time 10/15/1.5 ms

General data

Mech./ elect. life 20 000 000 switching cycles/load dependent
Test isolation voltage 4 kV; safe separation (EN 60947-1)
Mounting method DIN-rail mountable (EN 60715)
Temperature range -20...+55 °C

Dimension drawing



Notes

For inductive loads we recommend EMC suppressors connected parallel to the coil.

RELAYS / SAFETY RELAYS

Terminal relay

– with bridge system

Approvals:   

MIRO 6.2

Input relay
1 NO/NC contact
Screw terminals

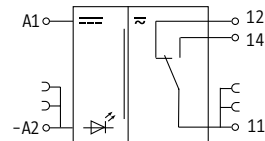


MIRO 6.2

Input relay
1 NO/NC contact
Spring clamp terminals



Circuit diagram



Order Data	Art-No.	Art-No.
24 V DC (19.2...30 V DC) - 14 mA	52005	6652005
24 V AC/DC (19.2...30 V AC/DC) - 16 mA	52003	6652003

Utilization category

AC-12	6 A (24/110/230 V AC)
AC-15	3 A (24/110/230 V AC)
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)

Input

LED display	LED (yellow)
-------------	--------------

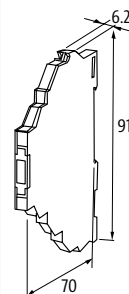
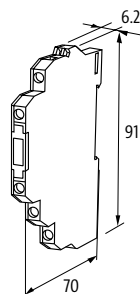
Output

Switching voltage	max. 30 V AC/36 V DC
Switching current per output	max. 6 A
Switching current per output (Signal)	max. 20 mA
Min. load current	1 mA (12 V DC)
Power rating (voltage dependent)	max. 1 500 VA/120 W
Switching frequency	max. 10 Hz
Contact material	Ag Sn O ₂ hv
Energize/release/contact bounce time	10/15/1.5 ms

General data

Mech./ elect. life	20 000 000 switching cycles/load dependent
Test isolation voltage	4 kV; safe separation (EN 60947-1)
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-20...+55 °C

Dimension drawing



Notes

For inductive loads we recommend EMC suppressors connected parallel to the coil. When the max. switching voltage/current is exceeded the gold plating is destroyed. The relay will then take on the properties of an output type.

RELAYS / SAFETY RELAYS

Terminal relay

– with bridge system

Approvals:   

MIRO 6.2

Input relay
1 NO contact
Screw terminals

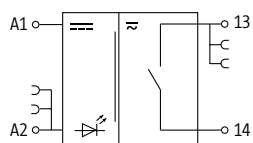


MIRO 6.2

Input relay
1 NO contact
Spring clamp terminals



Circuit diagram



Order Data

24 V DC (19.2...30 V DC) - 14 mA

Art-No.

52004

Art-No.

6652004

Utilization category

AC-12	6 A (24/110/230 V AC)	
AC-15	3 A (24/110/230 V AC)	
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)	3 A (24/110/230 V AC)

Input

LED display

LED (yellow)

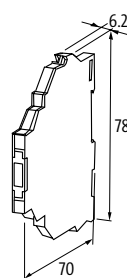
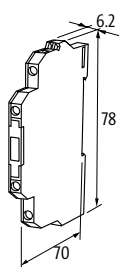
Output

Switching voltage	max. 30 V AC/36 V DC
Switching current per output	max. 50 mA
Min. load current	1 mA (12 V DC)
Power rating (voltage dependent)	max. 1 500 VA/120 W
Switching frequency	max. 10 Hz
Contact material	Ag Sn O2 hv
Energize/release/contact bounce time	10/15/1.5 ms

General data

Mech./ elect. life	20 000 000 switching cycles/load dependent
Test isolation voltage	4 kV; safe separation (EN 60947-1)
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-20...+55 °C

Dimension drawing



Notes

For inductive loads we recommend EMC suppressors connected parallel to the coil. When the max. switching voltage/current is exceeded the gold plating is destroyed. The relay will then take on the properties of an output type.

RELAYS / SAFETY RELAYS

Terminal relay

– with bridge system

Approvals:  

MIRO 6.2

Input relay
1 NO/NC contact
Screw terminals

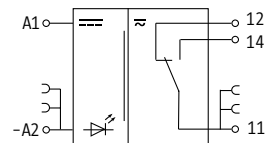


MIRO 6.2

Input relay
1 NO/NC contact
Spring clamp terminals



Circuit diagram



Order Data	Art-No.	Art-No.
110 V AC/DC (95...121 V AC/DC) - 4 mA	52031	6652031
230 V AC/DC (195...253 V AC/DC) - 3 mA	52041	6652041

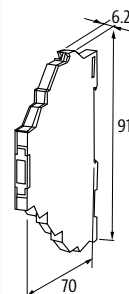
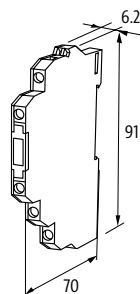
Utilization category	
AC-12	6 A (24/110/230 V AC)
AC-15	3 A (24/110/230 V AC)
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)

Input	
LED display	LED (yellow)

Output	
Switching voltage	max. 30 V AC/36 V DC
Switching current per output	max. 6 A
Switching current per output (Signal)	max. 20 mA
Min. load current	1 mA (12 V DC)
Power rating (voltage dependent)	max. 1 500 VA/120 W
Switching frequency	max. 10 Hz
Contact material	Ag Sn O ₂ hv
Energize/release/contact bounce time	10/15/1.5 ms

General data	
Mech./ elect. life	20 000 000 switching cycles/load dependent
Test isolation voltage	4 kV; safe separation (EN 60947-1)
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-20...+55 °C

Dimension drawing



Notes

For inductive loads we recommend EMC suppressors connected parallel to the coil. When the max. switching voltage/current is exceeded the gold plating is destroyed. The relay will then take on the properties of an output type.

RELAYS / SAFETY RELAYS

Terminal relay

– with bridge system

MIRO 12.4

Output relay
2 NO/NC contacts
Screw terminals



MIRO 12.4

Output relay
2 NO/NC contacts
Spring clamp terminals



MIRO 12.4

Input relay
2 NO/NC contacts
Screw terminals



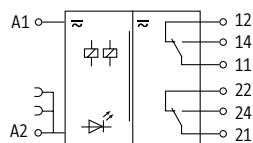
MIRO 12.4

Input relay
2 NO/NC contacts
Spring clamp terminals



Approvals: **ULus**

Circuit diagram



Order Data

	Art-No.	Art-No.	Art-No.	Art-No.
24 V DC (19.2...30 V DC) - 18 mA	cCSAus, CCC 52102	cCSAus, CCC 6652102	CCC 52110	CCC 6652110
24 V AC/DC (19.2...30 V AC/DC) - 20 mA	CCC 52103	CCC 6652103	CCC 52111	CCC 6652111
110 V AC/DC (95...121 V AC/DC) - 7 mA	CCC 52130	CCC 6652130	CCC 52136	CCC 6652136
230 V AC/DC (195...253 V AC/DC) - 5 mA	CCC 52140	CCC 6652140	CCC 52146	CCC 6652146

Utilization category

AC-12	6 A (24/110/230 V AC)
AC-15	3 A (24/110/230 V AC)
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)

Input

LED display LED (green)

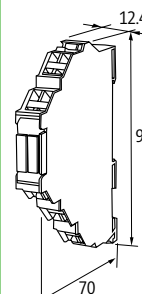
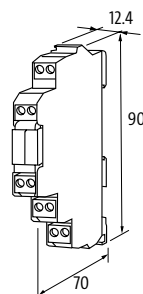
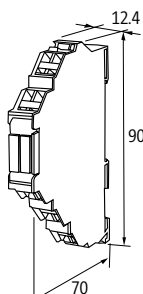
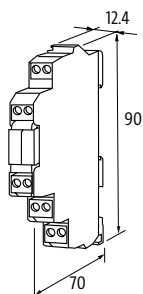
Output

Switching voltage	max. 250 V AC/DC	max. 30 V AC/36 V DC
Switching current per output	max. 6 A	
Switching current per output (Signal)	–	max. 20 mA
Min. load current	100 mA (12 V DC)	1 mA (12 V DC)
Power rating (voltage dependent)	max. 1 500 VA/120 W	
Switching frequency	max. 10 Hz	
Contact material	Ag Sn O2	Ag Sn O2 hv
Energize/release/contact bounce time	10/15/1.5 ms	

General data

Mech./ elect. life	20 000 000 switching cycles/load dependent
Test isolation voltage	4 kV; safe separation (EN 60947-1)
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-20...+55 °C

Dimension drawing



Notes

For inductive loads we recommend EMC suppressors connected parallel to the coil.

RELAYS / SAFETY RELAYS

Terminal relay

– with bridge system

Approvals: 

MIRO 12.4

Output relay
2 NO contact
Screw terminals



MIRO 12.4

Output relay
2 NO contact
Spring clamp terminals



MIRO 12.4

Output relay
2 NO contact
Screw terminals

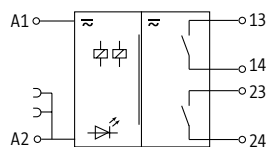


MIRO 12.4

Output relay
2 NO contact
Spring clamp terminals



Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
24 V AC/DC (19.2...30 V AC/DC) - 20 mA	52104	6652104		
24 V AC/DC (19.2...30 V AC/DC) - 16 mA			52106	6652106

Utilization category

AC-12	6 A (24/110/230 V AC)
AC-15	3 A (24/110/230 V AC)
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)

Input

LED display	LED (green)
-------------	-------------

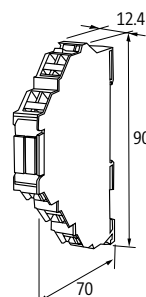
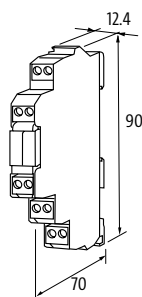
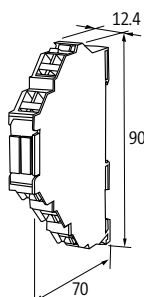
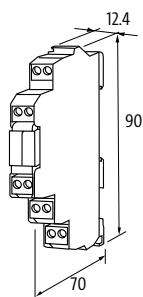
Output

Switching voltage	max. 250 V AC/DC
Switching current per output	max. 6 A
Min. load current	100 mA (12 V DC)
Power rating (voltage dependent)	max. 1 500 VA/120 W
Switching frequency	max. 10 Hz
Contact material	Ag Sn O2
Energize/release/contact bounce time	10/15/1.5 ms

General data

Mech./ elect. life	20 000 000 switching cycles/load dependent
Test isolation voltage	4 kV; safe separation (EN 60947-1)
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-20...+55 °C

Dimension drawing



Notes

For inductive loads we recommend EMC suppressors connected parallel to the coil.

RELAYS / SAFETY RELAYS

Terminal relay

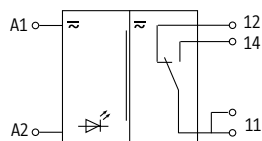
MIRO 12.4 Multi voltage

Output relay
1 NO/NC contact
Screw terminals



Approvals: 

Circuit diagram



Order Data

	Art-No.
24 V AC/DC - 6...27 mA	52160
48 V DC - 6...27 mA	52160
110 V AC/DC - 6...27 mA	52160
230 V AC/DC - 6...27 mA	52160

Utilization category

AC-12	6 A (24/110/230 V AC)
AC-15	3 A (24/110/230 V AC)
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)

Input

LED display	LED (green)
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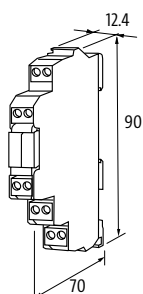
Output

Switching voltage	max. 250 V AC/DC
Switching current per output	max. 6 A
Min. load current	10 mA (12 V DC)
Power rating (voltage dependent)	max. 1 500 VA/120 W
Switching frequency	max. 10 Hz
Contact material	Ag Sn O2
Energize/release/contact bounce time	10/15/1.5 ms

General data

Mech./ elect. life	20 000 000 switching cycles/load dependent
Test isolation voltage	4 kV; safe separation (EN 60947-1)
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-20...+55 °C

Dimension drawing



Notes

For inductive loads we recommend EMC suppressors connected parallel to the coil.

RELAYS / SAFETY RELAYS

Relays

- Screw terminals
- with minus plug link

RMM

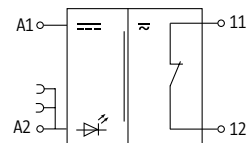
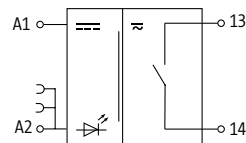
Output relay
1 relay; 1 NO contact



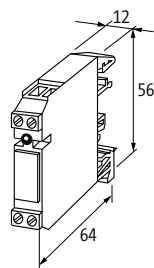
RMM

Output relay
1 relay; 1 NC contact

Circuit diagram



Order Data	Art-No.	Art-No.
24 V AC/DC (19.2...30 V AC/DC) - 15 mA	51851	51808
Utilization category		
AC-1	5 A (24/110/230 V AC)	
AC-15	3 A (24/110/230 V AC)	
DC-13	1.5 A (24 V DC); 0.3 A (110 V DC); 0.15 A (230 V DC)	1.3 A (24 V DC); 0.3 A (110 V DC); 0.15 A (230 V DC)
Input		
Plug link (supplied)	Art.-No. 90960	
LED display	LED (red)	
Output		
Switching voltage	max. 250 V AC/300 V DC	
Switching current per output	max. 5 A	
Min. load current	100 mA	
Power rating (voltage dependent)	max. 1 250 VA/240 W	
Switching frequency	max. 10 Hz	
Contact material	Ag Ni 0.15 hv	
Energize/release/contact bounce time	10/15/1.5 ms	
General data		
Mech./ elect. life	10 000 000 switching cycles/load dependent	20 000 000 switching cycles/load dependent
Test isolation voltage	4 kV	
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)	
Temperature range	-20...+60 °C	
Dimension drawing		



Notes

RELAYS / SAFETY RELAYS

Relays

– Screw terminals

RMM

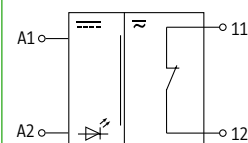
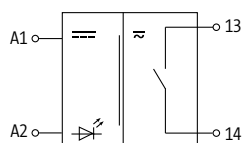
Output relay
1 relay; 1 NO contact



RMM

Output relay
1 relay; 1 NC contact

Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
24 V AC/DC (19.2...30 V AC/DC) - 15 mA	51551	512764		51508
110 V AC/DC (95...121 V AC/DC) - 3.5 mA			51552	
230 V AC/DC (195...250 V AC/DC) - 3.5 mA			51515	
230 V AC/DC (195...250 V AC/DC) - 4 mA				51562

Utilization category

AC-12	–	6 A (24/110/230 V AC)	5 A (24/110/230 V AC)
AC-1	5 A (24/110/230 V AC)	–	
AC-15	3 A (24/110/230 V AC)	4 A (24/110/230 V AC)	3 A (24/110/230 V AC)
DC-13	1.5 A (24 V DC); 0.3 A (110 V DC); 0.15 A (230 V DC)	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)	2 A (24 V DC); 0.25 A (110 V DC); 0.1 A (230 V DC)

Input

LED display	LED (red)	LED (green)	LED (red)
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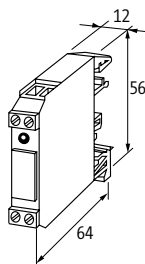
Output

Switching voltage	max. 250 V AC/300 V DC
Switching current per output	max. 5 A
Min. load current	100 mA
Power rating (voltage dependent)	max. 1 250 VA/240 W
Switching frequency	max. 10 Hz
Contact material	Ag Ni 0.15 hv; Ag hv
Energize/release/contact bounce time	10/15/1.5 ms

General data

Mech./ elect. life	20 000 000 switching cycles/load dependent
Test isolation voltage	4 kV
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)
Temperature range	-20...+50 °C

Dimension drawing



Notes

RELAYS / SAFETY RELAYS

Relays

– Screw terminals

RMME

Input relay
1 relay; 1 NO contact
with minus plug link



RMME

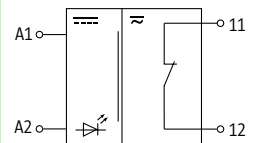
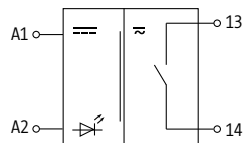
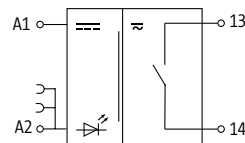
Input relay
1 relay; 1 NO contact



RMME

Input relay
1 relay; 1 NC contact

Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
24 V AC/DC (21.6...26.4 V AC/DC) - 6 mA	51860			
24 V AC/DC (19.2...30 V AC/DC) - 6 mA		51560		
110 V AC/DC (95...121 V AC/DC) - 3.5 mA		51526		
230 V AC (195...253 V AC) - 6 mA			51517	
24 V AC/DC (19.2...30 V AC/DC) - 15 mA				51571

Utilization category

AC-15	1 A (24 V AC); 0.5 A (125 V AC)	0.25 A (50 V AC)	3 A (24/110/230 V AC)
DC-13	1 A (24 V DC); 0.5 A (125 V DC)	–	1.5 A (24 V DC); 0.3 A (110 V DC); 0.15 A (230 V DC)
AC-1	–		5 A (24/110/230 V AC)
AC-12	–	0.5 A (50 V AC)	–

Input

Plug link (supplied)	Art.-No. 90960	–
LED display	LED (yellow)	

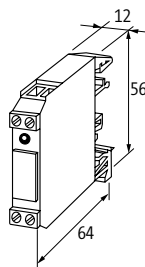
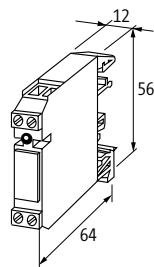
Output

Switching voltage	max. 125 V AC/DC
Switching current per output	max. 1 A
Min. load current	1 mA
Power rating (voltage dependent)	max. 60 VA/30 W
Switching frequency	max. 15 Hz
Contact material	Pd Ni-Au Rh
Energize/release/contact bounce time	10/10/1 ms

General data

Mech./ elect. life	100 000 000 switching cycles/load dependent
Test isolation voltage	1.5 kV
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)
Temperature range	-20...+60 °C

Dimension drawing



Notes

RELAYS / SAFETY RELAYS

Relays

– with minus plug link

– Screw terminals

RMMD

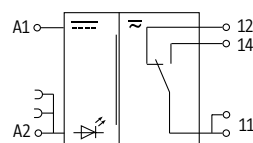
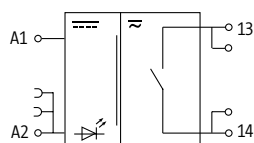
Output relay
1 relay; 1 NO contact



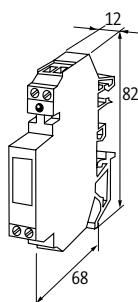
RMMD

Output relay
1 relay; 1 NO/NC contact

Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
24 V DC (21.6...26.4 V DC) - 13.5 mA	51100			
230 V AC/DC (195...253 V AC/DC) - 4.5 mA		51108		
24 V DC (21.6...26.4 V DC) - 15 mA			51120	
24 V AC/DC (19.2...30 V AC/DC) - 10 mA				51125
Utilization category				
AC-1	8 A (24/110/230 V AC)	6 A (24/110/230 V AC)	8 A (24/110/230 V AC)	
AC-15	3 A (24/110/230 V AC)	4 A (24/110/230 V AC)	3 A (24/110/230 V AC)	
DC-13	2.5 A (24 V DC); 0.4 A (110 V DC); 0.3 A (230 V DC)	2 A (24 V DC); 0.25 A (110 V DC); 0.1 A (230 V DC)	2.5 A (24 V DC); 0.4 A (110 V DC); 0.3 A (230 V DC)	
Input				
Plug link (supplied)	Art.-No. 90960	–	Art.-No. 90960	
LED display	LED (red)			
Output				
Switching voltage	max. 250 V AC/DC			
Switching current per output	max. 8 A	max. 6 A	max. 8 A	
Min. load current	100 mA			
Power rating (voltage dependent)	max. 2 000 VA/240 W			
Switching frequency	max. 10 Hz			
Contact material	Ag Ni			
Energize/release/contact bounce time	10/15/2 ms			
General data				
Mech./ elect. life	20 000 000 switching cycles/load dependent			
Test isolation voltage	5 kV; safe separation (IEC 61140/EN 61140)	4 kV	5 kV; safe separation (IEC 61140/EN 61140)	
Temperature range	-20...+50 °C			
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)			
Dimension drawing				



Notes

Art.-No. 51125 with low connection current.

RELAYS / SAFETY RELAYS

Relays

- with minus plug link
- with bridge system
- Screw terminals

RMMDE

Input relay
1 relay; 1 NO contact/1 NC contact



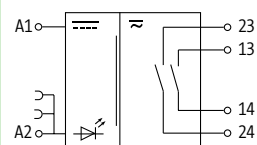
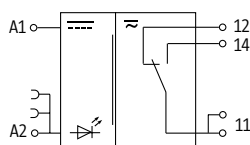
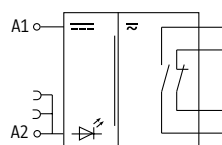
RMMDE

Input relay
1 relay; 1 NO/NC contact

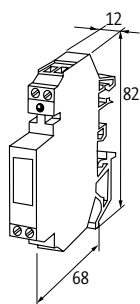
RMMDE

Input relay
1 relay; 2 NO contacts

Circuit diagram



Order Data	Art-No.		Art-No.	
24 V DC (17.5...30 V DC) - 14 mA	516014			
24 V DC (19.2...30 V DC) - 17 mA			51130	
230 V AC/DC (195...253 V AC/DC) - 4.5 mA			51138	
24 V DC (19.2...30 V DC) - 15 mA			51140	
Utilization category				
AC-1	3 A (24 V AC); 2 A (230 V AC)		2 A (24 V AC; 110 V AC; 230 V AC)	
AC-15	1 A (24 V AC); 0.1 A (230 V AC)		1 A (24 V AC); 0.1 A (230 V AC)	
DC-13	0.8 A (24 V DC); 0.01 A (230 V DC)		0.8 A (24 V DC); 0.1 A (110 V DC); 0.01 A (230 V DC)	
Input				
Plug link (supplied)	Art-No. 90960		Art-No. 90960	
LED display	LED (red)		LED (yellow)	
Output				
Switching voltage	max. 250 V AC/DC			
Switching current per output	max. 3 A	max. 20 mA	max. 5 A	max. 2 A
Min. load current	1 mA		5 mA	
Power rating (voltage dependent)	max. 500 VA/180 W		max. 250 VA/150 W	
Switching frequency	max. 10 Hz		max. 15 Hz	
Contact material	Ag Ni 0.15 hv		Ag Ni 0.15 hv; Ag hv	
Energize/release/contact bounce time	6/3/2 ms		10/10/1 ms	
General data				
Mech./ elect. life	20 000 000 switching cycles/load dependent		20 000 000 switching cycles/load dependent	
Test isolation voltage	2.5 kV		4 kV	
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)			
Temperature range	-20...+60 °C		-20...+50 °C	
Dimension drawing				



Notes

RELAYS / SAFETY RELAYS

Relays

– Screw terminals

RM

Output relay
1 relay; 2 NO/NC contacts



RM

Output relay
1 relay; 4 NO/NC contacts

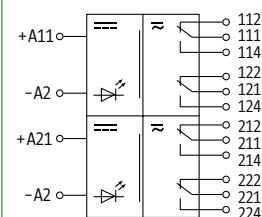
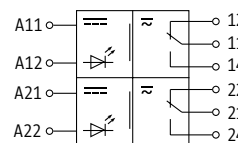
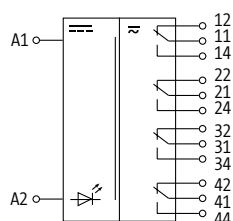
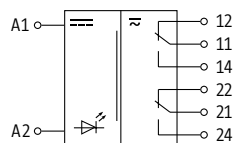
RM

Output relay
2 relays; each 1 NO/NC contact

RM

Output relay
2 relays; each 2 NO/NC contacts

Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
24 V AC/DC (20.4...26.4 V AC/DC) - 20 mA	51540	51410		
230 VAC (195...250 VAC) - 10 mA		51413	51412	
24 V AC/DC (19.2...30 V AC/DC) - 10 mA			51485	
24 V AC/DC (19.2...30 V AC/DC) - 14 mA				51465

Utilization category

AC-1	8 A (24/110/230 V AC)	–	8 A (24/110/230 V AC)	
AC-12	–	2 A (24 V AC); 0.5 A (230 V AC)	–	
AC-15	3 A (24/110/230 V AC)	1 A (24 V AC); 0.1 A (230 V AC)	3 A (24/110/230 V AC)	
DC-13	2 A (24 V DC); 0.3 A (110 V DC); 0.2 A (230 V DC)	0.8 A (24 V DC); 0.01 A (230 V DC)	1.5 A (24 V DC); 0.3 A (110 V DC); 0.15 A (230 V DC)	2 A (24 V DC); 0.3 A (110 V DC); 0.2 A (230 V DC)

Input

LED display LED (red)

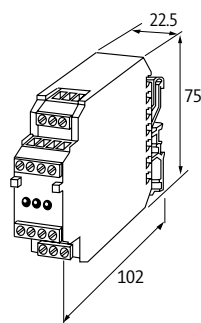
Output

Switching voltage	max. 250 V AC/DC			
Switching current per output	max. 8 A	max. 2 A	max. 8 A	
Min. load current	100 mA	0.1 mA	100 mA	
Power rating (voltage dependent)	max. 1 250 VA/240 W	max. 125 VA/60 W	max. 1 250 VA/240 W	
Switching frequency	max. 0.1 Hz (with load)			
Contact material	Ag Ni 0.15 hv	Ag Au	Ag Sn O2	Ag Ni 0.15 hv
Energize/release/contact bounce time	10/10/2 ms	10/20/2 ms	10/10/2 ms	

General data

Mech./ elect. life	50 000 000 switching cycles/load dependent		20 000 000 switching cycles/load dependent	
Test isolation voltage	4 kV	1.5 kV	4 kV	
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)			
Temperature range	-20...+50 °C			

Dimension drawing



Notes

RELAYS / SAFETY RELAYS

Relays

– Screw terminals

– with force guided contacts

RM

Output relay
1 relay; 2 NO contacts/2 NC contacts



RM

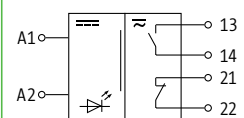
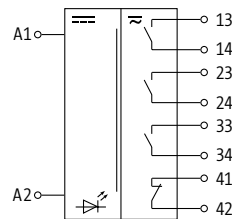
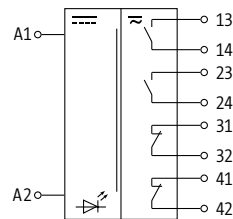
Output relay
1 relay; 3 NO contacts/1 NC contact

MKS

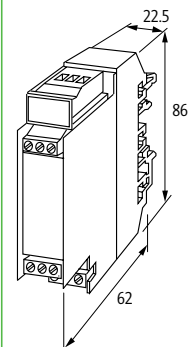
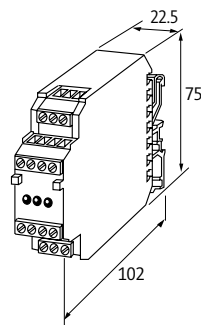
Output relay
1 relay; 1 NO contact/1 NC contact



Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.
24 V DC (21.6...28 V DC) - 29 mA	51300		
24 V DC (21.6...28 V DC) - 30 mA		51301	
24 V AC/DC (21.6...28 V AC/DC) - 38 mA			51302
Utilization category			
AC-1	5 A (24/110/230 V AC)		6 A (24/110/230 V AC)
DC-13	2 A (24 V DC); 0.4 A (110 V DC); 0.2 A (230 V DC)		3 A (24 V DC); 0.22 A (110 V DC); 0.1 A (230 V DC)
AC-15	4 A (24 V AC); 3 A (110 V AC); 2 A (230 V AC)		3 A (24/110/230 V AC)
Input			
LED display	LED (red)		LED (green)
Output			
Switching voltage	max. 250 V AC/DC		
Switching current per output	max. 5 A		max. 6 A
Min. load current	300 mA		10 mA
Power rating (voltage dependent)	max. 1 000 VA/50 W		max. 1 500 VA/100 W
Switching frequency	max. 0.1 Hz (with load)	max. 1 Hz	max. 5 Hz
Contact material	Ag Ni 10 hv	Ag hv; Ag Sn O2	Ag Ni 10 hv
Energize/release/contact bounce time	15/15/2 ms		15/15/1.5 ms
General data			
Mech./ elect. life	1 000 000 switching cycles/load dependent		10 000 000 switching cycles/load dependent
Test isolation voltage	2.5 kV		4 kV
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)		
Temperature range	-20...+50 °C		
Dimension drawing			



Notes

RELAYS / SAFETY RELAYS

Relays

– Screw terminals

RM

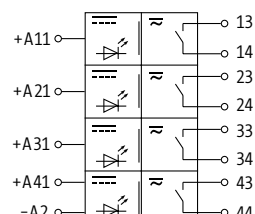
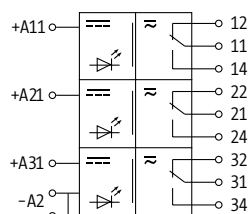
Output relay
3 relays; each 1 NO/NC contact



RM

Output relay
4 relays; each 1 NO contact

Circuit diagram



Order Data

24 V DC (19.2...30 V DC) - 16 mA

Art-No.

51403

Art-No.

512498

Utilization category

AC-1 8 A (24/110/230 V AC)
AC-15 3 A (24/110/230 V AC)
DC-13 1.5 A (24 V DC); 0.3 A (110 V DC); 0.15 A (230 V DC)

5 A (24/110/230 V AC)

Input

LED display

LED (red)

Output

Switching voltage max. 250 V AC/DC

Switching current per output max. 8 A

max. 5 A

Min. load current 100 mA

Power rating (voltage dependent) max. 1 250 VA/240 W

Switching frequency max. 0.1 Hz (with load)

Contact material Ag Sn O2

Ag hv

Energize/release/contact bounce time 10/10/2 ms

General data

Mech./ elect. life 20 000 000 switching cycles/load dependent

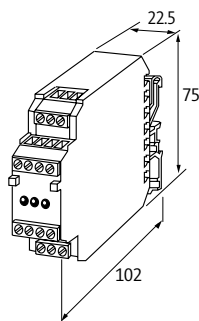
50 000 000 switching cycles/load dependent

Test isolation voltage 4 kV

Mounting method DIN-rail mountable TH35 or G32 (EN 60715)

Temperature range -20...+50 °C

Dimension drawing



Notes

RELAYS / SAFETY RELAYS

Safety relay

– Protection-door and emergency-stop control

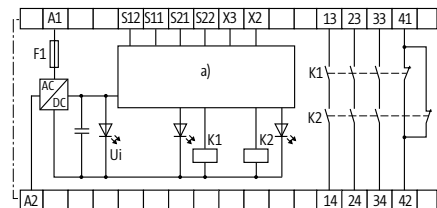
Approvals:  US
Listed

MIRO SAFE+ Switch H 48-230

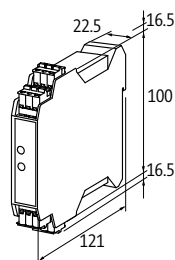
with/without start button monitoring



Circuit diagram



Order Data	Art-No.
3 safety contacts	3000-33113-1020012
Utilization category	
Safety contacts (STOP 0)	max. 250 V AC/6 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression
AC-15	6 A (230 V AC) STOP0
DC-13	6 A (24 V DC) STOP0
Safety Indicators	
PL	up to e
Category	up to 4
DC	99%
SIL	up to 3
Service life	20 years
Input	
Input voltage	48...240 V AC
Input current	max. 2.8 VA
Output	
Switching voltage	max. 250 V AC/DC
Switching current per output	max. 6 A
Number of auxiliary contacts	1 - (41-42)
Number of alarm outputs	0
Number of safety contacts	3 - (13-14); (23-24); (33-34)
Contact material	AgSnO, self cleaning, positively driven
General data	
Mech./ elect. life	10 000 000 switching cycles/load dependent
Connection	Spring clamp plug-in terminals
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-25...+45 °C (storage temperature -40...+85 °C)
Dimension drawing	



Notes

RELAYS / SAFETY RELAYS

Safety relay

- Protection-door and emergency-stop control
- Light curtain control
- Safety magnetic switch control

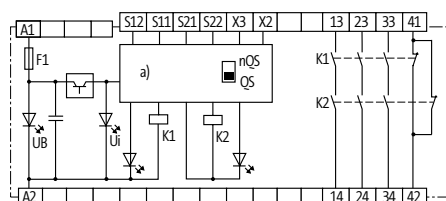
Approvals:  

MIRO SAFE+ Switch H L 24

with/without start button monitoring



Circuit diagram



Order Data

3 safety contacts

Art-No.

3000-33113-3020012

Utilization category

Safety contacts (STOP 0)

max. 250 V AC/8 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression

AC-15

6 A (230 V AC) STOP0

DC-13

6 A (24 V DC) STOP0

Safety Indicators

PL

up to e

Category

up to 4

DC

99%

SIL

up to 3

Service life

20 years

Input

Input voltage

24 V DC (-15 +20%), 24 V AC (-15 +10%)

Input current

max. 4.9 VA/2.0 W

Output

Switching voltage

max. 250 V AC/DC

Switching current per output

max. 8 A

Total current

24 A (45 °C); 18 A (55 °C); 12 A (60 °C)

Number of auxiliary contacts

1 - (41-42)

Number of alarm outputs

0

Number of safety contacts

3 - (13-14); (23-24); (33-34)

Contact material

AgSnO, self cleaning, positively driven

General data

Mech./ elect. life

10 000 000 switching cycles/load dependent

Connection

Spring clamp plug-in terminals

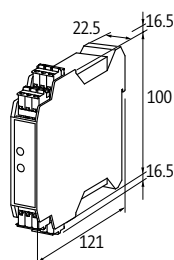
Mounting method

DIN-rail mountable (EN 60715)

Temperature range

-25...+60 °C (storage temperature -40...+85 °C)

Dimension drawing



Notes

RELAYS / SAFETY RELAYS

Safety relay

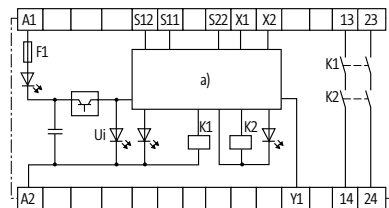
- Protection-door and emergency-stop control
- Light curtain control
- Safety magnetic switch control

MIRO SAFE+ Switch ECOA 24

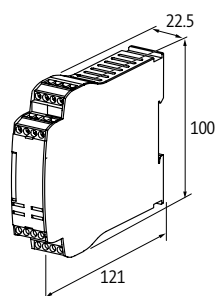
without start button monitoring



Circuit diagram



Order Data	Art-No.
2 safety contacts	3000-33113-3020005
Utilization category	
Safety contacts (STOP 0)	max. 250 V AC/4 A; min. 5 V AC/1 mA (ohm./ind.), at suitable suppression
AC-15	2 A (230 V AC) STOP0
DC-13	1 A (24 V DC) STOP0
Alarm outputs	100 mA (24 V DC)
Safety Indicators	
PL	up to 4
Category	–
DC	–
SIL	–
Service life	–
Input	
Input voltage	24 V DC (-15 +20%), 24 V AC (-15 +10%)
Input current	max. 5.2 VA/2.0 W
Output	
Switching voltage	max. 250 V AC/DC
Switching current per output	max. 4 A
Number of auxiliary contacts	0
Number of alarm outputs	1 - (Y1)
Number of safety contacts	2 - (13-14; 23-24)
Contact material	AgSnO, self cleaning, positively driven
General data	
Mech./ elect. life	10 000 000 switching cycles/load dependent
Connection	Screw terminals
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-25...+60 °C (storage temperature -40...+85 °C)
Dimension drawing	



Notes

RELAYS / SAFETY RELAYS

Safety relay

- Protection-door and emergency-stop control
- Light curtain control
- Safety magnetic switch control

Approvals:  Listed

MIRO SAFE+ Switch BA L 24

without start button monitoring

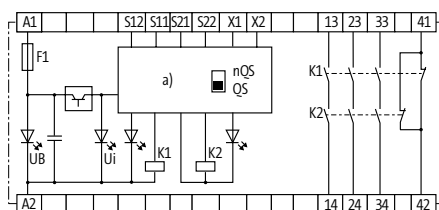


MIRO SAFE+ Switch BCS L 24

with start button monitoring



Circuit diagram



Order Data

3 safety contacts

Art-No.

3000-33113-3020025

Art-No.

3000-33113-3020020

Utilization category

Safety contacts (STOP 0)

max. 250 V AC/8 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression

AC-15

6 A (230 V AC) STOP0

DC-13

6 A (24 V DC) STOP0

Safety Indicators

PL

up to e

Category

up to 4

DC

99%

SIL

up to 3

Service life

20 years

Input

Input voltage

24 V DC (-15 +20%), 24 V AC (-15 +10%)

Input current

max. 4.9 VA/2.0 W

max. 4.4 VA/1.8 W

Output

Switching voltage

max. 250 V AC/DC

Switching current per output

max. 8 A

Total current

24 A (45 °C); 18 A (55 °C); 12 A (60 °C)

Number of auxiliary contacts

1 - (41-42)

Number of alarm outputs

0

Number of safety contacts

3 - (13-14); (23-24); (33-34)

Contact material

AgSnO, self cleaning, positively driven

General data

Mech./ elect. life

10 000 000 switching cycles/load dependent

Connection

Screw terminals

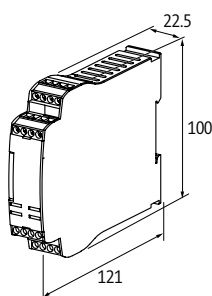
Mounting method

DIN-rail mountable (EN 60715)

Temperature range

-25...+60 °C (storage temperature -40...+85 °C)

Dimension drawing



Notes

RELAYS / SAFETY RELAYS

Safety relay

- Protection-door and emergency-stop control
- Light curtain control
- Safety magnetic switch control

Approvals:  Listed

MIRO SAFE+ T 1 24

with/without start button monitoring

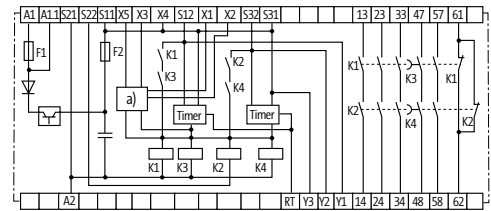
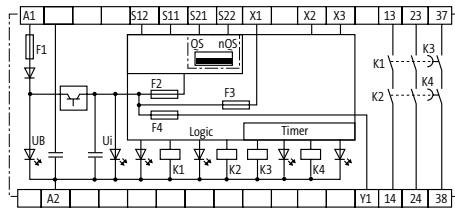


MIRO SAFE+ T 2 24

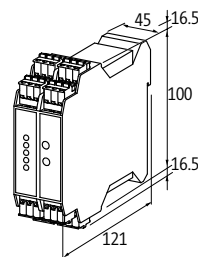
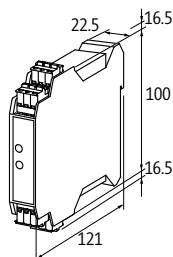
with/without start button monitoring



Circuit diagram



Order Data	Art-No.	
3 safety contacts	3000-33113-3020065	
5 safety contacts	3000-33113-3020060	
Utilization category		
Safety contacts (STOP 0)	max. 250 V AC/8 A; min. 5 V AC/5 mA (ohm./ind.), at suitable suppression	max. 250 V AC/8 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression
Safety contacts (STOP 1)	max. 250 V AC/6 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression	
AC-15	6 A (230 V AC) STOP0; 3 A (230 V AC) STOP1	
DC-13	5 A (24 V DC) STOP0; 2 A (24 V DC) STOP1	6 A (24 V DC) STOP0; 2 A (24 V DC) STOP1
Safety Indicators		
PL	up to e (STOP0); up to d (STOP1)	
Category	up to 4 (STOP0); up to 3 (STOP1)	
DC	99% (STOP0); min. 60% (STOP1)	
SIL	up to 3 (STOP0); up to 2 (STOP1)	
Service life	20 years	
Input		
Input voltage	24 V DC (-15 +20%), 24 V AC (-15 +10%)	
Input current	5.9 VA/2.4 W (with monitoring output)	max. 7.1 VA/3.2 W (with monitoring output)
Output		
Switching voltage	max. 250 V AC/DC	
Switching current per output	max. 8 A (STOP0); max. 6 A (STOP1)	max. 6 A
Number of auxiliary contacts	0	1 - (31-32)
Total current (STOP 0)	–	18 A (45 °C); 15 A (55 °C); 12 A (60 °C)
Number of alarm outputs	1 - (Y1)	3 - (13-14); (23-24); (33-34)
Total current (STOP 1)	–	12 A (45 °C); 10 A (55 °C); 8 A (60 °C)
Number of safety contacts	2 - (13-14), (23-24), STOP0; 1 - (37-38), STOP1	3 - (13-14), (23-24), (33-34), STOP0; 2 - (47-48), (57-58), STOP1
Contact material	AgSnO, self cleaning, positively driven	
General data		
Mech./ elect. life	10 000 000 switching cycles/load dependent	
Connection	Spring clamp plug-in terminals	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	-25...+60 °C (storage temperature -40...+85 °C)	
Dimension drawing		



RELAYS / SAFETY RELAYS

Safety relay

– Two hand control

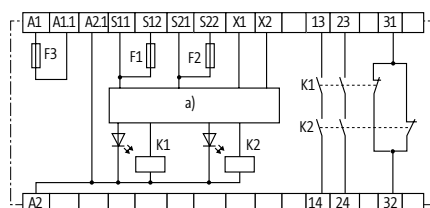
Approvals:  **UL** US
Listed

MIRO SAFE+ HAND 24

without start button monitoring



Circuit diagram



Order Data

2 safety contacts

Art-No.

3000-33113-3020030

Utilization category

Safety contacts (STOP 0)

max. 250 V AC/6 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression

AC-15

6 A (230 V AC) STOP0

DC-13

6 A (24 V DC) STOP0

Safety Indicators

PL

up to e

Category

up to 4

DC

99%

SIL

up to 3

Service life

20 years

Input

Input voltage

24 V DC $\pm 10\%$

Input current

max. 1.2 W

Output

Switching voltage

max. 250 V AC/DC

Switching current per output

max. 6 A

Number of auxiliary contacts

1 - (31-32)

Number of alarm outputs

0

Number of safety contacts

2 - (13-14); (23-24)

Contact material

AgSnO, self cleaning, positively driven

General data

Mech./ elect. life

10 000 000 switching cycles/load dependent

Connection

Spring clamp plug-in terminals

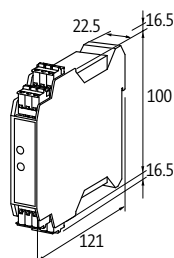
Mounting method

DIN-rail mountable (EN 60715)

Temperature range

-25...+60 °C (storage temperature -40...+85 °C)

Dimension drawing



Notes

RELAYS / SAFETY RELAYS

Safety relay

- Protection-door control
- Pressure-sensitive mat. control

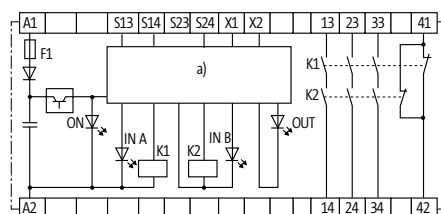
Approvals:  US
Listed

MIRO SAFE+ STEP 24

without start button monitoring



Circuit diagram



Order Data

3 safety contacts

Art-No.

3000-33113-3020050

Utilization category

Safety contacts (STOP 0)

max. 250 V AC/8 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression

AC-15

6 A (230 V AC) STOP0

DC-13

6 A (24 V DC) STOP0

Safety Indicators

PL

up to e

Category

up to 4

DC

99%

SIL

up to 3

Service life

20 years

Input

Input voltage

24 V DC (-15 +20%), 24 V AC (-15 +10%)

Input current

max. 3.7 VA/1.6 W (24 V DC)

Output

Switching voltage

max. 250 V AC/DC

Switching current per output

max. 8 A

Number of auxiliary contacts

1 - (41-42)

Number of alarm outputs

0

Number of safety contacts

3 - (13-14); (23-24); (33-34)

Contact material

AgSnO, self cleaning, positively driven

General data

Mech./ elect. life

10 000 000 switching cycles/load dependent

Connection

Spring clamp plug-in terminals

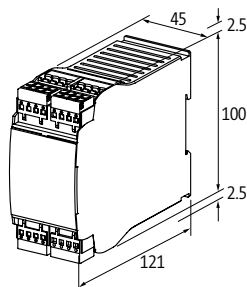
Mounting method

DIN-rail mountable (EN 60715)

Temperature range

-25...+60 °C (storage temperature -40...+85 °C)

Dimension drawing



Notes

RELAYS / SAFETY RELAYS

Expansion modules

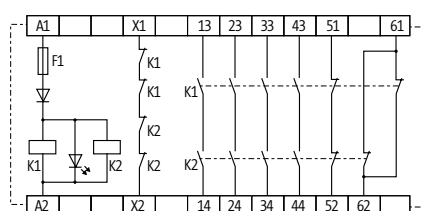
MIRO SAFE+ E 24

Expansion module



Approvals:  **UL** US
Listed

Circuit diagram



Order Data

4 NO contacts

Art-No.

3000-33113-3020075

Utilization category

Safety contacts (STOP 0)

max. 250 V AC/6 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression

AC-15

6 A (230 V AC)

DC-13

6 A (24 V DC)

Safety Indicators

PL

up to e

Category

up to 4

SIL

up to 3

Service life

20 years

Input

Input voltage

24 V DC (-15 +20%), 24 V AC (-15 +10%)

Input current

max. 1.0 VA

Output

Switching voltage

max. 250 V AC/DC

Switching current per output

max. 6 A

Number of auxiliary contacts

2 - (51-52); (61-62)

Number of alarm outputs

0

Number of contacts

4 - (13-14); (23-24); (33-34); (43-44)

Contact material

AgSnO, self cleaning, positively driven

General data

Mech./ elect. life

10 000 000 switching cycles/load dependent

Connection

Spring clamp plug-in terminals

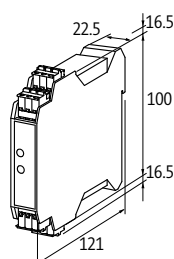
Mounting method

DIN-rail mountable (EN 60715)

Temperature range

-25...+45 °C (storage temperature -40...+85 °C)

Dimension drawing



Notes

RELAYS / SAFETY RELAYS

Labeling accessories			Art-No.
	ACS label plate (KM 5) for self marking (9 × 20 mm) 5 × 10 mm		7000-99001-0000000 90931
	Label plate (KWI 5/15) (88 pieces per plate)		90901
Wiring accessories			Art-No.
	Potential plug link max. 48 V/2 A	RMM..., RMMD...	90960
	Potential plug link max. 50 V/2 A	MIRO	90961
	Potential plug link blue	MIRO 6.2 pluggable	3000-90000-0300010
	Potential plug link black	MIRO 6.2 pluggable	3000-90000-0300020
	Potential rail blue 10-pole, spacing 6.2 mm 40-pole, spacing 12 mm	MIRO 6.2 (screw terminals) RMM..., RMMD...	90975 90970
	Potential rail red 10-pole, spacing 6.2 mm 40-pole, spacing 12 mm	MIRO 6.2 (screw terminals) RMM..., RMMD...	90976 90971
	End caps for potential rail blue	MIRO 6.2 RMM..., RMMD...	90980
	End caps for potential rail red	MIRO 6.2 RMM..., RMMD...	90982

RELAYS / SAFETY RELAYS

Wiring accessories			Art-No.
	Wire chain 16-pole Connection cable left and right approx. 50 cm; bk; 1 mm ²	MIRO (spring clamp terminals)	90977
	Double spring clamp terminal pluggable	MIRO SAFE+	3000-33010-0000000



OPTOCOUPERS / SEMICONDUCTORS SWITCHING WITHOUT WEAR

- Shortest possible switching times
- High switching frequencies
- Resistant to EMC interference

MILLIONS OF SWITCHING CYCLES – EVEN WITH HIGH FREQUENCIES

Optocouplers and semiconductors are used to combine different signal levels or to isolate one signal from another. They are similar to a relay interface because they provide an optoelectronic signal transfer between input and output.

Optocouplers and semiconductors have a long life span because they don't have any mechanical components that could wear out. They are suitable for applications with high switching frequencies, even over a long time.

Some benefits of optocouplers and semiconductors:

- Silent operation
- No contact bounce
- Galvanic separation between input and output
- High resistance to shock and vibration
- High switching currents
- Low input power

Optocouplers / Semiconductors



Optocouplers

- Pluggable
- DC applications

Page 1.10.1



Optocouplers

- DC applications

Page 1.10.2



Semiconductors

- AC applications

Page 1.10.18

Terminal optocoupler

- pluggable
- with bridge system
- Complete module

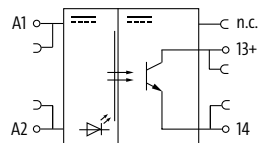
MIRO 6.2

Transistor 6 A

Spring clamp terminals



Circuit diagram



Order Data

24 V DC (18...30 V DC) - 9 mA

Art-No.

3000-32512-2100040

Accessories

Removable plug-in module

Art-No.

3000-32522-2100040

Input

Connection voltage - current

24 V DC (18...30 V DC) - 9 mA

LED display

LED (yellow)

Output

Switching time ON/OFF

15/31 µs

Switching voltage

3...30 V DC

Switching current per output

10 mA...6 A

Saturation voltage (across output)

max. 240 mV

Switching frequency

max. 500/50 Hz (ohm./ind.)

General data

Test isolation voltage

50 V

Surge voltage resistance

2.5 kV

Protection

IP20

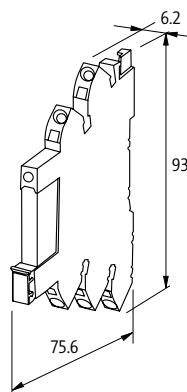
Mounting method

pluggable

Temperature range

-25...+50 °C

Dimension drawing



Notes

OPTOCOUPLEDERS / SEMICONDUCTORS

Terminal optocoupler

– with bridge system

MIRO 6.2

Transistor 1 A
Screw terminals



MIRO 6.2

Transistor 1 A
Spring clamp terminals



MIRO 6.2

Transistor 2 A
Screw terminals

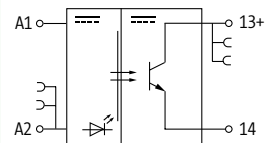
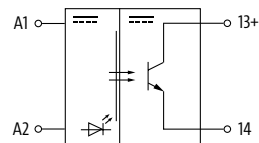


MIRO 6.2

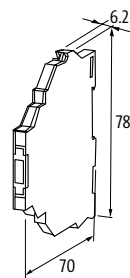
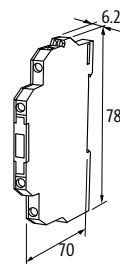
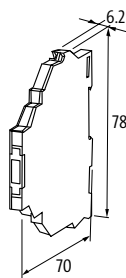
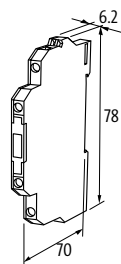
Transistor 2 A
Spring clamp terminals



Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
24 V DC/6 mA	52515	6652515		
5 V DC/6 mA			cURus, cCSAus	52502
			cURus, cCSAus	6652502
Input				
Voltage range ON	11...30 V DC		4...5.5 V DC	
Voltage range OFF	0...5 V DC		0...2 V DC	
Control current	6 mA			
LED display	LED (yellow)			
Output				
Switching voltage	3...48 V DC		5...48 V DC	
Switching current per output	500 µA...1 A		1 mA...2 A	
Saturation voltage (across output)	max. 0.12 V DC		max. 0.3 V DC	
Leakage current (output is open)	max. 25 µA		max. 10 µA	
Switching time ON/OFF	1.5/1 ms (100 mA load)		1/5 ms	
Switching frequency	max. 40/4 Hz (resist./ind.)		max. 10/1 Hz (resist./ind.)	
General data				
Test isolation voltage	500 V		2.5 kV	
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Temperature range	-20...+60 °C			
Dimension drawing				



Notes

Terminal optocoupler

– with bridge system

Approvals:  

MIRO 6.2

Transistor 2 A
Screw terminals



MIRO 6.2

Transistor 2 A
Spring clamp terminals



MIRO 6.2

Transistor 0.5 A
Screw terminals

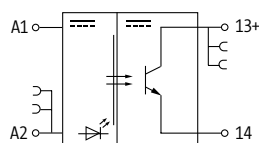


MIRO 6.2

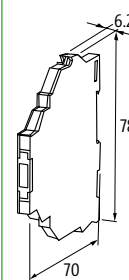
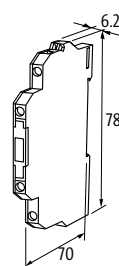
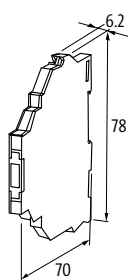
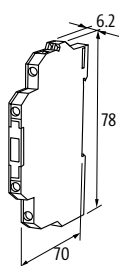
Transistor 0.5 A
Spring clamp terminals



Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
24 V DC/6 mA	52501	6652501		
48 V DC/6 mA			52505	6652505
Input				
Voltage range ON	10...48 V DC		18...56 V DC	
Voltage range OFF	0...5 V DC		0...12 V DC	
Control current	6 mA			
LED display	LED (yellow)			
Output				
Switching voltage	5...48 V DC			
Switching current per output	1 mA...2 A		0.1 mA...0.5 A	
Saturation voltage (across output)	max. 0.3 V DC		max. 1.2 V DC	
Leakage current (output is open)	max. 10 µA			
Switching time ON/OFF	1/5 ms		20/100 µs	
Switching frequency	max. 10/1 Hz (resist./ind.)		max. 1 kHz/10 Hz (resist./ind.)	
General data				
Test isolation voltage	2.5 kV		3.75 kV	
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Temperature range	-20...+60 °C			
Dimension drawing				



Notes

OPTOCOUPLEDERS / SEMICONDUCTORS

Terminal optocoupler

– with bridge system

Approvals: 

MIRO 6.2

Transistor 6 A
Screw terminals



MIRO 6.2

Transistor 6 A
Spring clamp terminals



MIRO 6.2

Transistor 10 A
Screw terminals

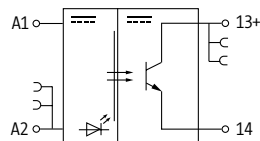


MIRO 6.2

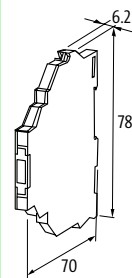
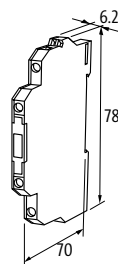
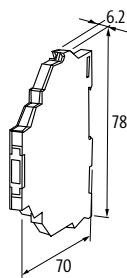
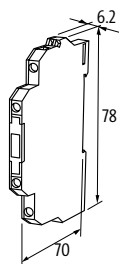
Transistor 10 A
Spring clamp terminals



Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
24 V DC/6 mA	cURus	52519	6652519	
24 V DC/10 mA			cURus	52520
Input				
Voltage range ON	10...53 V DC			
Voltage range OFF	0...5 V DC			
Control current	approx. 10 mA		10 mA	
LED display	LED (yellow)			
Output				
Switching voltage	5...48 V DC			
Switching current per output	1 mA...6 A (without derating)		1 mA...10 A	
Saturation voltage (across output)	max. 0.1 V DC		max. 0.12 V DC	
Leakage current (output is open)	max. 25 µA			
Switching time ON/OFF	2/5 ms		2/5 ms (10 A load)	
Switching frequency	max. 1/0.1 Hz (resist./ind.)			
General data				
Test isolation voltage	2.75 kV			
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Temperature range	-20...+60 °C			
Dimension drawing				



Notes

Terminal optocoupler

– with bridge system

Approvals:  

MIRO 6.2

Transistor 10 A
Screw terminals



MIRO 6.2

Transistor 10 A
Spring clamp terminals



MIRO 6.2

Transistor 0.5 A
Screw terminals

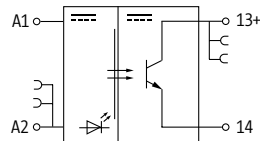


MIRO 6.2

Transistor 0.5 A
Spring clamp terminals



Circuit diagram



Order Data

24 V DC/10 mA (pulse control operation)

Art-No.

52521

Art-No.

6652521

Art-No.

52500

Art-No.

6652500

24 V DC/6 mA

Input

Voltage range ON

10...53 V DC

Voltage range OFF

0...5 V DC

Control current

10 mA

6 mA

LED display

LED (yellow)

Output

Switching voltage

5...48 V DC

Switching current per output

1 mA...10 A, short-circuit and overload protected (pulse switching)

0.1 mA...0.5 A

Saturation voltage (across output)

max. 0.12 V DC

max. 1.2 V DC

Leakage current (output is open)

max. 25 µA

max. 10 µA

Switching time ON/OFF

2/5 ms (10 A load)

35/400 µs

Switching frequency

max. 1/0.1 Hz (resist./ind.)

max. 1000/100 Hz (resist./ind.)

General data

Test isolation voltage

2.75 kV

3.75 kV

Mounting method

DIN-rail mountable (EN 60715)

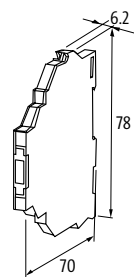
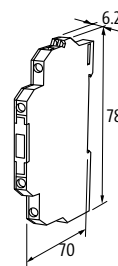
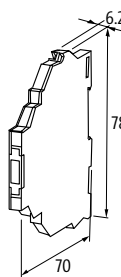
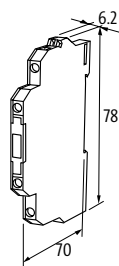
Housing

Black plastic, flame retardant

Temperature range

-20...+60 °C

Dimension drawing



Notes

OPTOCOUPLEDERS / SEMICONDUCTORS

Terminal optocoupler

– with bridge system

Approvals:  

MIRO 6.2

Transistor 0.5 A
Screw terminals



MIRO 6.2

Transistor 0.5 A
Spring clamp terminals



MIRO 6.2

Transistor 0.5 A
Screw terminals

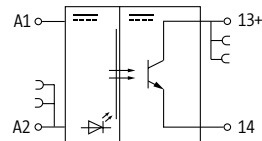


MIRO 6.2

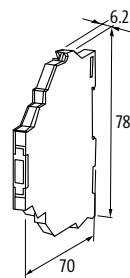
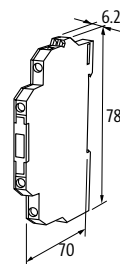
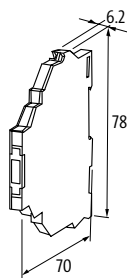
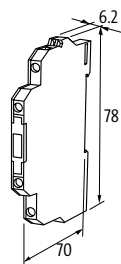
Transistor 0.5 A
Spring clamp terminals



Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
110 V AC/DC - 6 mA	52506	6652506		
230 V AC - 6 mA			52507	6652507
Input				
Voltage range ON	70...130 V AC/DC		90...250 V AC	
Voltage range OFF	0...30 V AC/DC		0...40 V AC	
Control current	6 mA		7 mA	
LED display	LED (yellow)			
Output				
Switching voltage	5...48 V DC			
Switching current per output	0.1 mA...0.5 A			
Saturation voltage (across output)	max. 1.2 V DC			
Leakage current (output is open)	max. 0.3 mA			
Switching time ON/OFF	100/700 µs		55/15 ms	
Switching frequency	max. 500/30 Hz (resist./ind.)			
General data				
Test isolation voltage	3.75 kV			
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Temperature range	-20...+60 °C			
Dimension drawing				



Notes

OPTOCOUPLEDERS / SEMICONDUCTORS

Terminal optocoupler

– with bridge system

Approvals:  

MIRO 6.2

Transistor 2 A
Screw terminals

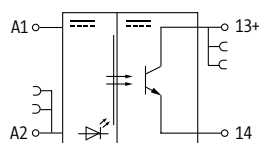


MIRO 6.2

Transistor 2 A
Spring clamp terminals



Circuit diagram



Order Data

230 V AC - 6 mA

Art-No.

52508

Art-No.

6652508

Input

Voltage range ON 90...250 V AC

Voltage range OFF 0...30 V AC

Control current 15 mA

LED display LED (yellow)

Output

Switching time ON/OFF 3/10 ms

Switching voltage 5...48 V DC

Switching current per output 1 mA...2 A (without derating)

Saturation voltage (across output) max. 0.3 V DC

Leakage current (output is open) max. 0.3 mA

Switching frequency max. 10/1 Hz (resist./ind.)

General data

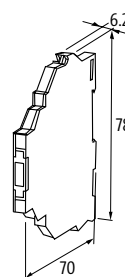
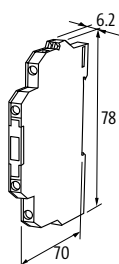
Test isolation voltage 2.5 kV

Mounting method DIN-rail mountable (EN 60715)

Housing Black plastic, flame retardant

Temperature range -20...+60 °C

Dimension drawing



Notes

OPTOCOUPLEDERS / SEMICONDUCTORS

Terminal optocoupler

– with bridge system

Approvals:  

MIRO 6.2

Transistor 2 A
Inrush current limiting
Screw terminals



MIRO 6.2

Transistor 2 A
Inrush current limiting
Spring clamp terminals



MIRO 6.2

Transistor 0.5 A
electr. NO/NC contact
Screw terminals

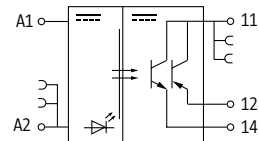
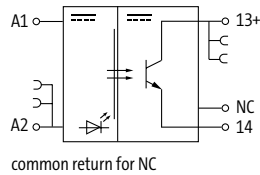


MIRO 6.2

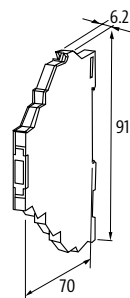
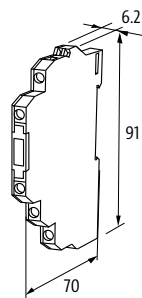
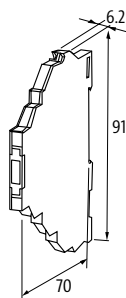
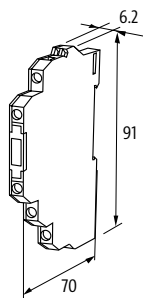
Transistor 0.5 A
electr. NO/NC contact
Spring clamp terminals



Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
24 V DC/6 mA	52512	6652512	52510	6652510
Input				
Voltage range ON	10...53 V DC			
Voltage range OFF	0...5 V DC			
Control current	6 mA			
LED display	LED (yellow)			
Output				
Switching voltage	5...48 V DC			
Switching current per output	1 mA...2 A (overload protected)		0.1 mA...0.5 A	
Saturation voltage (across output)	max. 0.35 V DC		max. 1.2 V DC	
Leakage current (output is open)	max. 0.1 mA			
Switching time ON/OFF	5/10 ms		40/150 µs	
Switching frequency	max. 10 Hz			
General data				
Test isolation voltage	2.5 kV		3.75 kV	
Housing	Black plastic, flame retardant			
Mounting method	DIN-rail mountable (EN 60715)			
Temperature range	-20...+60 °C			
Dimension drawing				



Notes

Terminal optocoupler

– with bridge system

Approvals: 

MIRO 6.2

Transistor 0.2 A
Control current 0.1 mA (5 V DC)
Screw terminals



MIRO 6.2

Transistor 0.2 A
Control current 0.1 mA (5 V DC)
Spring clamp terminals



MIRO 6.2

Transistor 2 A
short-circuit protected
Screw terminals

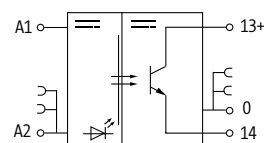
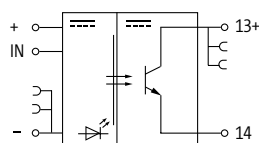


MIRO 6.2

Transistor 2 A
short-circuit protected
Spring clamp terminals



Circuit diagram



Order Data

24 V DC/0.1 mA (5 V DC)

cCSAus

Art-No.

52511

cCSAus

Art-No.

6652511

24 V DC/6 mA

Art-No.

52503

Art-No.

6652503

Input

Voltage range ON

15...30 V DC

Voltage range OFF

0...2 V DC

Control current

0.1 mA (5 V)

LED display

LED (yellow)

Output

Switching voltage

5...48 V DC

Switching current per output

0.1 mA...0.2 A

Saturation voltage (across output)

max. 1.2 V DC

Leakage current (output is open)

max. 0.1 mA

Switching frequency

max. 20 kHz

Switching time ON/OFF

10/18 µs

General data

Test isolation voltage

3.75 kV

Mounting method

DIN-rail mountable (EN 60715)

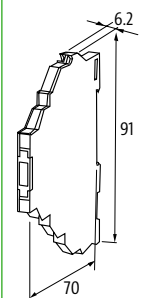
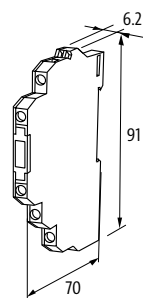
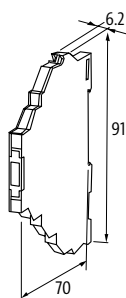
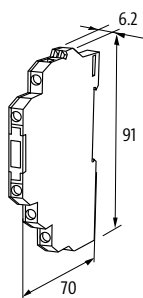
Housing

Black plastic, flame retardant

Temperature range

-20...+60 °C

Dimension drawing



Notes

OPTOCOUPERS / SEMICONDUCTORS

Terminal optocoupler

– with bridge system

MIRO 6.2

Transistor 1 A
Multi voltage output
Screw terminals



MIRO 6.2

Transistor 1 A
Multi voltage output
Spring clamp terminals



MIRO 6.2

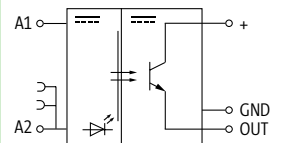
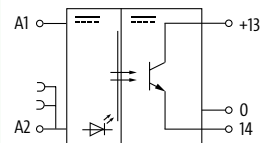
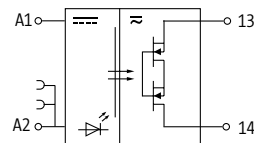
Transistor 0.2 A
Spring clamp terminals



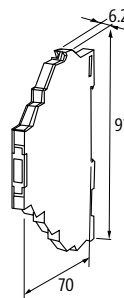
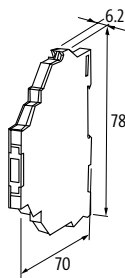
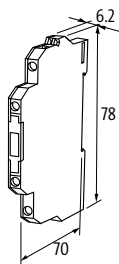
MIRO 6.2

Transistor 0.1 A
Spring clamp terminals

Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
24 V DC/10 mA	52572	6652572	UR, cCSAus	526071
			cURus, cCSAus	526100
Input				
Voltage range ON	10...53 V DC		10...35 V DC	10...30 V DC
Voltage range OFF	0...5 V DC			0...7 V DC
Control current	10 mA		6 mA	5.5 mA
LED display	LED (yellow)		LED (green)	LED (yellow)
Output				
Switching time ON/OFF	3/6 ms		5/7 µs	0.4/0.1 µs
Switching voltage	5...250 V AC/5...350 V DC		10...30 V DC	5...48 V DC
Switching current per output	1 mA...1 A		1 mA...0.2 A	0...0.1 A
Saturation voltage (across output)	max. 0.7 V AC/DC		max. 0.3 V AC/DC	max. 1.2 V AC/DC
Leakage current (output is open)	max. 25 µA			max. 250 µA
Switching frequency	max. 10 Hz		max. 20 kHz/200 Hz (resist./ind.)	500 kHz (ohmic)
General data				
Test isolation voltage	2.75 kV		2.5 kV	2.75 kV
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Temperature range	-20...+60 °C			
Dimension drawing				



Notes

OPTOCOUPERS / SEMICONDUCTORS

Terminal optocoupler

– Isolation function in output circuit

Approvals:   

MIRO 6.2

Transistor 2 A
Screw terminals

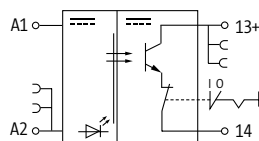


MIRO 6.2

Transistor 2 A
Spring clamp terminals



Circuit diagram



Order Data

24 V DC/7 mA

Art-No.

52513

Art-No.

6652513

Input

Voltage range ON 10...48 V DC

Voltage range OFF 0...5 V DC

Control current 7 mA

LED display LED (yellow)

Output

Switching time ON/OFF 1/5 ms

Switching voltage 5...48 V DC

Switching current per output 1 mA...2 A

Saturation voltage (across output) max. 0.3 V DC

Leakage current (output is open) max. 0.3 mA

Switching frequency max. 10/1 Hz (resist./ind.)

General data

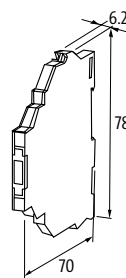
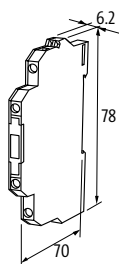
Housing Black plastic, flame retardant

Test isolation voltage 2.5 kV

Mounting method DIN-rail mountable (EN 60715)

Temperature range -20...+60 °C

Dimension drawing



Notes

OPTOCOUPLEDERS / SEMICONDUCTORS

Optocouplers

- Inrush current limiting
- Screw terminals

AMMS

Transistor 1.2 A



EMMS

Transistor 1.2 A

Circuit diagram			
Order Data	Art-No.	Art-No.	Art-No.
3.5...5.5 V DC/6 mA	50041		
24 V DC/6 mA		50040	
110/230 V AC/2.7 mA			50105
Input			
Voltage range ON	3.5...5.5 V DC	10...53 V DC	100...253 V AC
Voltage range OFF	0...0.8 V DC	0...3 V DC	0...40 V AC
Input current	6 mA		2.7 mA
LED display	LED (red)		
Output			
Leakage current (output is open)	max. 0.3 mA		
Switching current per output	1 mA...1.2 A		
Switching voltage	4.5...53 V DC		
Saturation voltage (across output)	max. 1.2 V DC		
Switching time ON/OFF	100/700 µs		20/50 ms
Switching frequency	max. 500 Hz (resist.) at max. 0.2 A/max. 30 Hz (ind.)		max. 5 Hz
General data			
Test isolation voltage	3.75 kV		
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)		
Housing	Black plastic, flame retardant		
Temperature range	-20...+60 °C		
Dimension drawing			
Notes			

OPTOCOUPPLERS / SEMICONDUCTORS

Optocouplers

- Inrush current limiting
- Screw terminals

AMMS

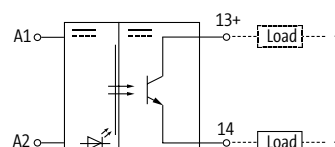
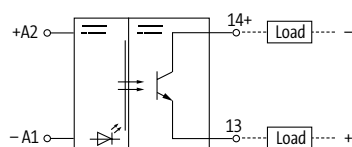
Transistor 0.5 A



AMMS

Transistor 2 A

Circuit diagram



Order Data

4...30 V DC/10 mA

Art-No.

50010

24 V DC/6 mA

Art-No.

50070

Input

Voltage range ON

4...30 V DC

Voltage range OFF

0...2 V DC

Input current

max. 10 mA

LED display

LED (red)

Output

Switching voltage

4.5...44 V DC

Switching current per output

1 mA...0.5 A

Saturation voltage (across output)

max. 1.2 V DC

Leakage current (output is open)

max. 0.3 mA

Switching time ON/OFF

65 µs/20 ms

Switching frequency

max. 7 kHz (resist.) at max. 0.1 A/max. 10 Hz (ind.)

General data

Test isolation voltage

3.75 kV

Mounting method

DIN-rail mountable TH35 or G32 (EN 60715)

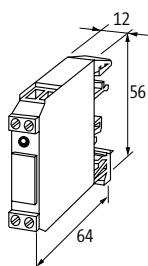
Housing

Black plastic, flame retardant

Temperature range

-20...+60 °C

Dimension drawing



Notes

OPTOCOUPLEDERS / SEMICONDUCTORS

Optocouplers

- Double terminals on the output side
- Screw terminals

AMMDS

Transistor 0.1 A
with minus plug link



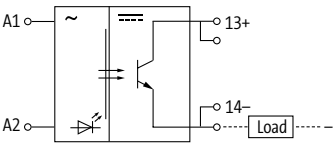
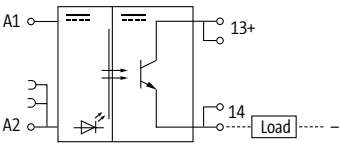
AMMDS

Transistor 2 A
with minus plug link

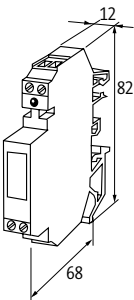
AMMDS

Transistor 0.1 A

Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.
24 V DC/6 mA	50081	50080	
230 V AC - 10 mA			50110
Input			
LED display	LED (red)		
Input current	6 mA		7.5 mA
Plug link (supplied)	Art.-No. 90960		–
Voltage range ON	10...53 V DC		195...253 V AC
Voltage range OFF	0...3 V DC		0...110 V AC
Output			
Switching voltage	4...40 V DC	4...35 V DC	4...40 V DC
Switching current per output	1 mA...0.1 A	10 mA...2 A (short-circuit protected)	1 mA...0.1 A
Saturation voltage (across output)	max. 1.2 V DC	max. 0.5 V DC	max. 1.2 V DC
Leakage current (output is open)	max. 0.3 mA		
Switching time ON/OFF	1.5/2 ms	5/15 ms	50/120 ms
Switching frequency	max. 300/40 Hz (resist./ind.)	max. 10/1 Hz (resist./ind.)	
General data			
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)		
Housing	Black plastic, flame retardant		
Temperature range	-20...+60 °C		
Test isolation voltage	3.75 kV	2.5 kV	3.75 kV
Dimension drawing			



Notes

Optocouplers

– with minus plug link

– Screw terminals

AMMDS

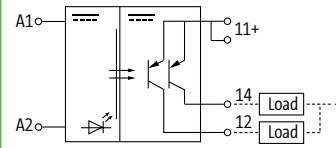
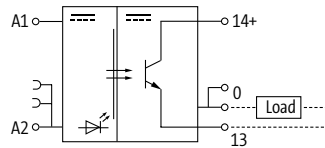
Transistor 0.2 A
Double terminals on the output side
for rapid switching



AMMDS

Transistor 1 A

Circuit diagram



Order Data

24 V DC/15 mA

Art-No.

50082

24 V AC/DC - 10 mA

Art-No.

50085

Input

Voltage range ON

10...35 V DC

Voltage range OFF

0...5 V DC

Input current

10 mA

LED display

LED (red)

Plug link (supplied)

Art-No. 90960

Output

Switching voltage

5...35 V DC

Switching current per output

1 mA...0.2 A

Saturation voltage (across output)

max. 0.5 V DC

Leakage current (output is open)

max. 0.3 mA

Switching time ON/OFF

20/14 µs

Switching frequency

max. 20 kHz/200 Hz (resist./ind.)

General data

Test isolation voltage

2.5 kV

Mounting method

DIN-rail mountable TH35 or G32 (EN 60715)

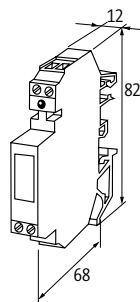
Housing

Black plastic, flame retardant

Temperature range

-20...+60 °C

Dimension drawing



Notes

OPTOCOUPLEDERS / SEMICONDUCTORS

Power opto-coupler modules

– Screw terminals

AMS

Transistor 4 A



AMS

Transistor 2 A (3-way)
3 NO contacts

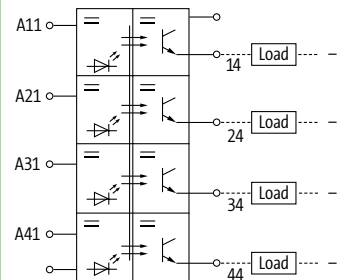
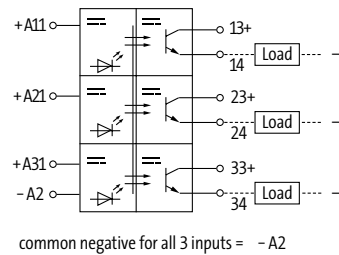
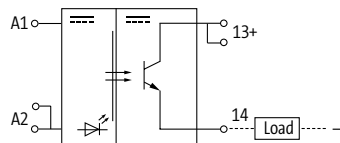


AMS

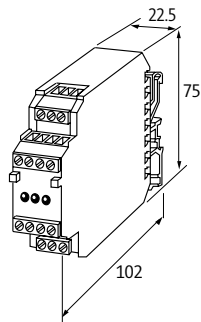
Transistor 2 A (4-way)
4 NO contacts



Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.
24 V DC/10 mA	50044	50043	
24 V DC/3 mA			cCSAus 50015
Input			
Voltage range ON	10...53 V DC		20...30 V DC
Voltage range OFF	0...3 V DC		0...6 V DC
Input current	14.5 mA	10 mA	27 mA
LED display	LED (red)		LED (yellow)
Output			
Switching voltage	4.5...53 V DC	4.5...35 V DC	5...30 V DC
Switching current per output	10 mA...4 A	10 mA...2 A (short-circuit protected)	1 mA...2 A
Saturation voltage (across output)	max. 1.5 V DC	max. 0.5 V DC	max. 0.05 V DC
Switching time ON/OFF	4/7 µs	2/15 ms	1/5 ms
Leakage current (output is open)	–	max. 0.3 mA	max. 0.01 mA
Switching frequency	max. 2 kHz/4 Hz (resist./ind.)	max. 10/1 Hz (resist./ind.)	
General data			
Test isolation voltage	3.75 kV	2.5 kV	
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)		
Housing	Black plastic, flame retardant		
Temperature range	-20...+60 °C		-25...+50 °C
Dimension drawing			



Notes

OPTOCOUPPLERS / SEMICONDUCTORS

Optocouplers

- DC Motor control
- Over current / temperature monitoring

MIRO 12.4

Transistor 3 A
Screw terminals

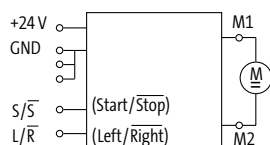


MIRO 12.4

Transistor 3 A
Spring clamp terminals



Circuit diagram



Order Data

24 V DC/10 mA

Art-No.

50140

Art-No.

6650140

Input

Voltage range ON	15...30 V DC
Voltage range OFF	0...5 V DC
Input current	10 mA
LED display	LED (yellow): right running; LED (green): left running

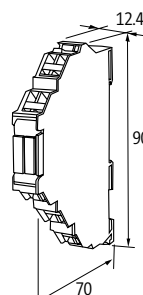
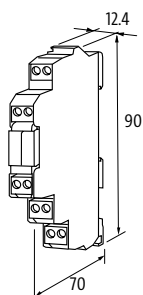
Output

Switching voltage	19.2...30 V DC
Switching current per output	max. 3 A
Highest current	approx. 6 A for 100 ms
Saturation voltage (across output)	max. 1.4 V DC
Leakage current (output is open)	max. 10 mA
Switching time ON/OFF	1.2/10 ms
Switching frequency	max. 1 Hz (motor dependant)
Changing time	max. 50 ms
LED display	LED (red): error (over current/over heated)

General data

Test isolation voltage	no galvanic separation
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)
Housing	Black plastic, flame retardant
Temperature range	0...+50 °C

Dimension drawing



Notes

OPTOCOUPLEDERS / SEMICONDUCTORS

Terminal triac

– Zero potential switch

Approvals:  

MIRO 6.2

Triac 0.5 A
Screw terminals



MIRO 6.2

Triac 0.5 A
Spring clamp terminals



MIRO 6.2

Triac 0.5 A
Screw terminals

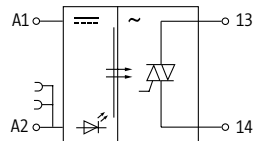


MIRO 6.2

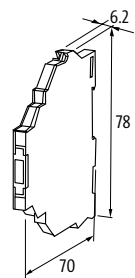
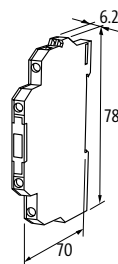
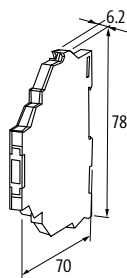
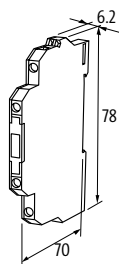
Triac 0.5 A
Spring clamp terminals



Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
5 V DC/6 mA	52551	6652551		
24 V DC/6 mA			52550	6652550
Input				
Voltage range ON	4...5.5 V DC		10...53 V DC	
Voltage range OFF	0...2 V DC		0...5 V DC	
Control current	6 mA			
LED display	LED (yellow)			
Output				
Switching voltage	24...250 V AC			
Switching current per output	2 mA...0.5 A		1.5 mA...0.5 A	
Saturation voltage (across output)	max. 1.5 V AC			
Leakage current (output is open)	max. 0.3 mA			
Switching time ON/OFF	10/10 ms			
Switching frequency	max. 20 Hz, depending on suppression			
General data				
Test isolation voltage	2.5 kV			
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Temperature range	-20...+60 °C			
Dimension drawing				



Notes

OPTOCOUPPLERS / SEMICONDUCTORS

Terminal triac

– Zero potential switch

MIRO 6.2

Triac 1 A
Screw terminals

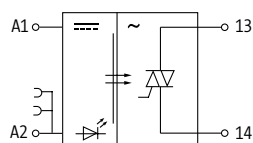


MIRO 6.2

Triac 1 A
Spring clamp terminals



Circuit diagram



Order Data

24 V DC/9 mA

Art-No.

52571

Art-No.

6652571

Input

Voltage range ON

12...53 V DC

Voltage range OFF

0...3 V DC

Control current

12 mA (24 V DC)

LED display

LED (yellow)

Output

Switching voltage

12...250 V AC

Switching current per output

10 mA...1 A

Saturation voltage (across output)

max. 1.5 V AC

Leakage current (output is open)

max. 1 mA

Switching time ON/OFF

10/10 ms

Switching frequency

max. 2 Hz, depending on suppression

General data

Test isolation voltage

2.5 kV

Mounting method

DIN-rail mountable (EN 60715)

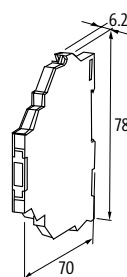
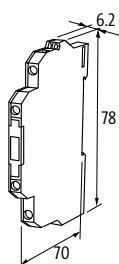
Housing

Black plastic, flame retardant

Temperature range

0...+60 °C

Dimension drawing



Notes

OPTOCOUPLEDERS / SEMICONDUCTORS

Terminal triac

– Zero potential switch

Approvals:  

MIRO 6.2

Triac 0.5 A
Screw terminals



MIRO 6.2

Triac 0.5 A
Spring clamp terminals



MIRO 6.2

Triac 0.5 A
Screw terminals

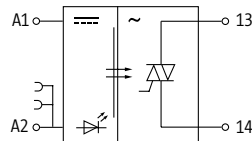


MIRO 6.2

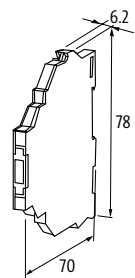
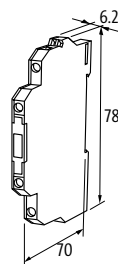
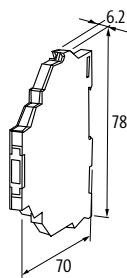
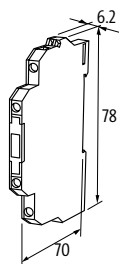
Triac 0.5 A
Spring clamp terminals



Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
110 V AC/DC (95...121 V AC/DC) - 3.5 mA	52556	6652556		
230 V AC - 7 mA			52557	6652557
Input				
Voltage range ON	70...130 V AC/DC		140...250 V AC	
Voltage range OFF	0...35 V AC/DC		0...80 V AC	
Control current	3.5 mA		7 mA	
LED display	LED (yellow)			
Output				
Switching voltage	12...250 V AC			
Switching current per output	2 mA...0.5 A			
Saturation voltage (across output)	max. 1.5 V AC			
Leakage current (output is open)	max. 0.3 A	max. 0.3 mA		
Switching time ON/OFF	10/10 ms			
Switching frequency	max. 20 Hz, depending on suppression			
General data				
Test isolation voltage	2.5 kV			
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Temperature range	-20...+60 °C			
Dimension drawing				



Notes

OPTOCOUPPLERS / SEMICONDUCTORS

Terminal triac

– Zero potential switch

MIRO 6.2

Triac 0.5 A
Screw terminals

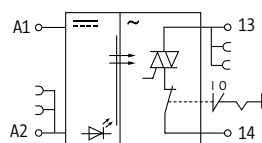


MIRO 6.2

Triac 0.5 A
Spring clamp terminals



Circuit diagram



Order Data

24 V DC/7 mA

Art-No.

52561

Art-No.

6652561

Input

Voltage range ON 10...53 V DC

Voltage range OFF 0...5 V DC

Control current 7 mA

LED display LED (yellow)

Output

Switching voltage 24...250 V AC

Switching current per output 2 mA...0.5 A

Saturation voltage (across output) max. 1.5 V AC

Leakage current (output is open) max. 0.3 mA

Switching time ON/OFF 10/10 ms

Switching frequency max. 20/1 Hz (resist./ind.)

General data

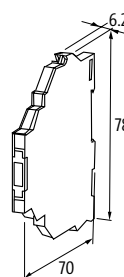
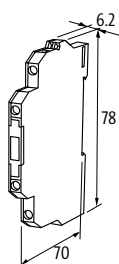
Test isolation voltage 2.5 kV

Mounting method DIN-rail mountable (EN 60715)

Housing Black plastic, flame retardant

Temperature range -20...+60 °C

Dimension drawing



Notes

Triac modules

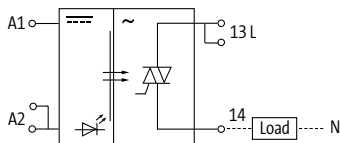
- Zero potential switch
- Screw terminals

AMS

Triac 4 A



Circuit diagram



Order Data

24 V DC/10 mA

Art-No.

50034

Input

Voltage range ON 10...53 V DC

Voltage range OFF 0...3 V DC

Input current 10 mA

LED display LED (red)

Output

Switching voltage 24...250 V AC

Switching current per output 10 mA...4 A

Saturation voltage (across output) max. 1.4 V AC

Leakage current (output is open) max. 10 mA

Switching time ON/OFF 10/10 ms

Switching frequency max. 30/5 Hz (resist./ind.)

General data

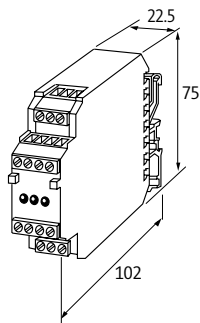
Test isolation voltage 6 kV

Mounting method DIN-rail mountable TH35 or G32 (EN 60715)

Housing Black plastic, flame retardant

Temperature range -20...+60 °C

Dimension drawing



Notes

Triac modules

- Zero potential switch
- Screw terminals

AMMS

Triac 1 A

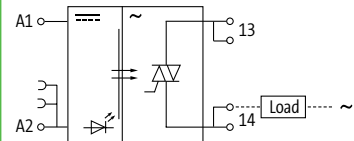
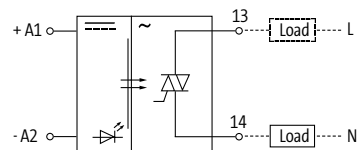


AMMDS

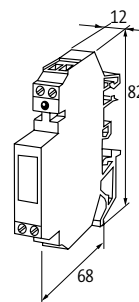
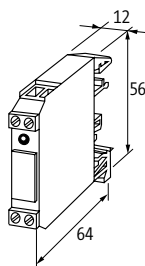
Triac 2 A
with minus plug link



Circuit diagram



Order Data	Art-No.	Art-No.
24 V DC/6.6 mA	50030	
24 V DC/6 mA		50092
Input		
Voltage range ON	10...53 V DC	10...35 V DC
Voltage range OFF	0...3 V DC	
Input current	6.6 mA	6 mA
LED display	LED (red)	
Plug link (supplied)	–	Art-No. 90960
Output		
Switching voltage	24...253 V AC	24...280 V AC
Switching current per output	50 mA...1 A	50 mA...2 A
Saturation voltage (across output)	max. 1.3 V AC	max. 1 V AC
Leakage current (output is open)	max. 5 mA	max. 2 mA
Switching time ON/OFF	10/10 ms	
Switching frequency	max. 20 Hz	max. 20/5 Hz (resist./ind.)
General data		
Test isolation voltage	2.5 kV	
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)	
Housing	Black plastic, flame retardant	
Temperature range	-20...+60 °C	
Dimension drawing		



Notes

OPTOCOUPERS / SEMICONDUCTORS

Labeling accessories			Art-No.
	ACS label plate (KM 5) for self marking (9 × 20 mm)		7000-99001-0000000
	Label plate (KM 4) 5 × 10 mm		90931
	ACS label plate (KM 6/18) for self marking with ADEMARK markers		7000-99003-0000000
	Label plate (KWI 5/15) (88 pieces per plate)		90901
Wiring accessories			Art-No.
	Potential plug link max. 50 V/2 A	MIRO	90961
	Potential plug link max. 48 V/2 A	RMM..., RMMD...	90960
	Potential rail blue 40-pole, spacing 12 mm	RMM..., RMMD...	90970
	10-pole, spacing 6.2 mm	MIRO 6.2 (screw terminals)	90975
	Potential rail red 40-pole, spacing 12 mm	RMM..., RMMD...	90971
	10-pole, spacing 6.2 mm	MIRO 6.2 (screw terminals)	90976
	End caps for potential rail blue	MIRO 6.2 RMM..., RMMD...	90980
	red	MIRO 6.2 RMM..., RMMD...	90982

Wiring accessories			Art-No.
	Wire chain 16-pole Connection cable left and right approx. 50 cm; bk; 1 mm ²	MIRO (spring clamp terminals)	90977



SWITCHES

PERFECT CROSS-LINKING FOR YOUR APPLICATION

- Reduces the installation effort
- Switches for the control cabinet IP20, IP50, and the field IP67
- Compact and robust design

FROM SOLID BASIC FUNCTIONS TO AN ENORMOUS FUNCTIONAL VARIETY

Murrelektronik offers a broad portfolio of switches. Unmanaged switches are used to reliably cover basic functions at an advantageous price-performance ratio. Lite-managed switches offer a large scope of functions and variants such as the PROFINET managed switches are tailored perfectly to the possibilities of PROFINET environments.

- Optimization of wiring flexibility and reduction of the complexity of installation solutions
- Easy insights into the communication and uncomplicated connection to network analysis tools or integrated web servers
- Relocation of the coupling level to the field creating space in the control cabinet by using compact and robust IP67 variants

Unmanaged Switches



Unmanaged Switches

- IP20
- IP50
- IP67

Page 1.11.1

Managed Switches



Lite-Managed Switches

- IP20
- IP67

Page 1.11.4



PROFINET-Managed Switches

- IP20
- IP67



Page 1.11.6

SWITCHES

Unmanaged Switch

Approvals:  UL Listed

TREE 4TX Metal

IP50



TREE 8TX Metal

IP50



TREE 6TX Eco

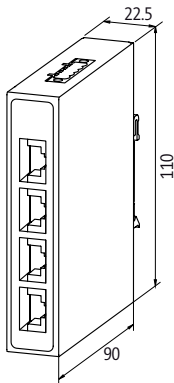
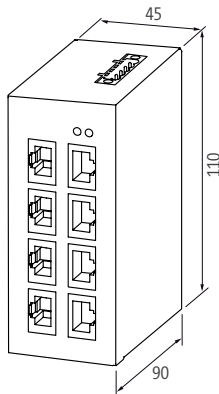
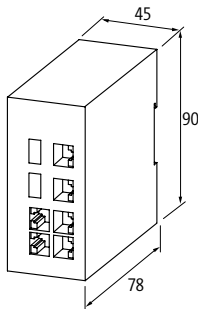
IP20



TREE 8TX Metal

IP50



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
4 ports	58151			
8 ports		58152		58171
6 ports			58170	
Connections				
Fieldbus	4 × RJ45	8 × RJ45	6 × RJ45	8 × RJ45
Supply	Spring clamp plug-in terminal: 0.2...2.5 mm²		Screw plug-in terminal: 0.2...1.5 mm²	
Technical Data				
Operating voltage	2 × 9...48 V DC, redundancy		2 × 9...30 V DC, redundancy	2 × 9...48 V DC, redundancy
Transfer rate	10/100 Mbit/s full duplex			
Operating modes	Autocrossing Autonegotiation			
Switch Management				
Switch Form	Unmanaged Switch			
Webserver	no			
VLAN (QoS) IEEE 802.p	yes			
Port Mirroring	no			
Protocols	no			
Remote maintenance	no			
Alarm contact	no			
Diagnostic				
Communication status	via LED			
Monitoring - no voltage	yes			
General data				
Protection	IP50		IP20	IP50
Housing	Metal black		Black plastic	Metal black
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	-10...+70 °C (storage temperature -40...+85 °C)		0...+60 °C (storage temperature -10...+70 °C)	-10...+70 °C (storage temperature -40...+85 °C)
Dimension drawing				
				
Notes				

SWITCHES

Unmanaged Switch

Approvals:  UL US
Listed

TREE 6TX Metal

IP50

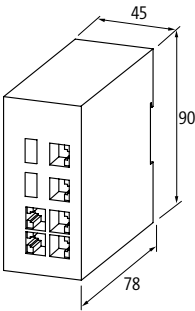


TREE 8TX Metal

8 ports Gigabit
IP50



Order Data	Art-No.	Art-No.
6 ports	58172	
8 ports Gigabit		58173
Connections		
Fieldbus	6 × RJ45	8 × RJ45
Supply	Screw plug-in terminal: 0.2...1.5 mm ²	
Technical Data		
Operating voltage	2 × 9...30 V DC, redundancy	2 × 9...48 V DC, redundancy
Transfer rate	10/100 Mbit/s full duplex	10/100/1 000 Mbit/s full duplex
Operating modes	Autocrossing Autonegotiation	
Switch Management		
Switch Form	Unmanaged Switch	
Webserver	no	
VLAN (QoS) IEEE 802.p	yes	
Port Mirroring	no	
Protocols	no	
Remote maintenance	no	
Alarm contact	no	
Diagnostic		
Communication status	via LED	
Monitoring - no voltage	yes	
General data		
Protection	IP50	
Housing	Metal black	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	-10...+70 °C (storage temperature -40...+85 °C)	
Dimension drawing		



Notes

Unmanaged Switch

Approvals:  **UL** US
Listed

TREE 4TX IP67 M12

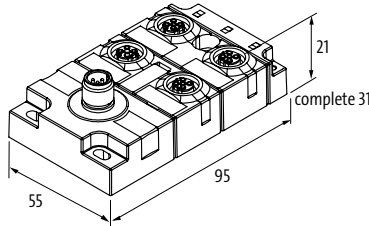
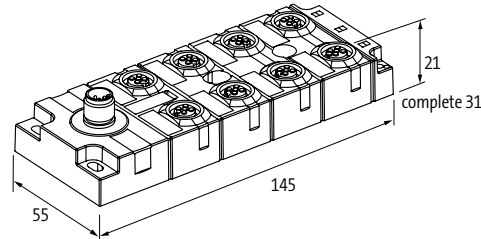
4 × M12 (female), D-coded
IP67



TREE 8TX IP67 M12

8 × M12 (female), D-coded
IP67



Order Data	Art-No.	Art-No.
4 ports	58160	
8 ports		58161
Connections		
Fieldbus	4 × M12 (female), D-coded	8 × M12 (female), D-coded
Supply	1 × M12 (male), A-coded	
Technical Data		
Operating voltage	2 × 18...30 V DC, redundancy	
Transfer rate	10/100 Mbit/s full duplex	
Operating modes	Autocrossing Autonegotiation	
Switch Management		
Switch Form	Unmanaged Switch	
Webserver	no	
VLAN (QoS) IEEE 802.p	yes	
Port Mirroring	no	
Protocols	no	
Remote maintenance	no	
Alarm contact	no	
Diagnostic		
Communication status	via LED	
Monitoring - no voltage	yes	
General data		
Protection	IP67	
Housing	Zinc die casting, matte nickel plated	
Mounting method	4 hole screw mounting	
Temperature range	-25...+60 °C (storage temperature -40...+80 °C)	
Dimension drawing		
		
Notes		

SWITCHES

Lite - Managed Switch

TREE M-4TX

IP20

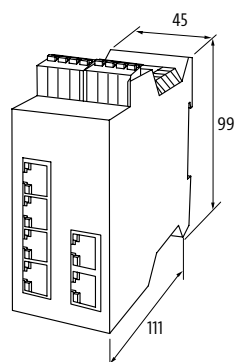
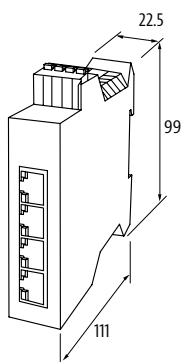


TREE M-6TX

IP20



Order Data	Art-No.	Art-No.
4 ports	58181	
6 ports		58182
Connections		
Fieldbus	4 × RJ45	6 × RJ45
Supply	Spring clamp plug-in terminal: 0.2...2.5 mm ²	
Technical Data		
Operating voltage	9.5...31.5 V	
Transfer rate	10/100 Mbit/s full duplex	
Operating modes	Autocrossing Autonegotiation	
Switch Management		
Switch Form	Lite - Managed Switch	
Webserver	HTTP, HTTPS	
VLAN (QoS) IEEE 802.p	yes	
Port Mirroring	DHCP, SNMP (v1, v2c, v3), RSTP, STP	
Protocols	DHCP, SNMP (v1, v2c, v3), RSTP, STP, LLDP, NTP, RMON, SSH (CLI)	
Remote maintenance	Open VPN	
Alarm contact	no	yes
Diagnostic		
Communication status	via LED, LLDP	
Monitoring - no voltage	yes	
General data		
Protection	IP20	
Housing	Black plastic	
Mounting method	DIN-rail mountable (EN 50022)	
Temperature range	0...+60 °C (storage temperature -40...+85 °C)	
Dimension drawing		



Notes

SWITCHES

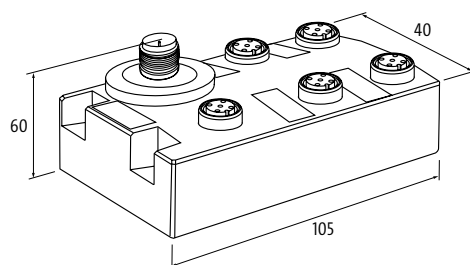
Lite - Managed Switch

TREE M-STX-PN IP67

IP67



Order Data	Art-No.
5 ports	58183
Connections	
Fieldbus	5 × M12 (female), D-coded
Supply	1 × M12 (male), A-coded
Technical Data	
Operating voltage	9.5...31.5 V
Transfer rate	10/100 Mbit/s full duplex
Operating modes	Autocrossing Autonegotiation
Switch Management	
Switch Form	Lite - Managed Switch
Webserver	HTTP, HTTPS
VLAN (QoS) IEEE 802.p	yes
Port Mirroring	yes
Protocols	DHCP, SNMP (v1, v2c, v3), RSTP, STP, LLDP, NTP, RMON, SSH (CLI)
Remote maintenance	Open VPN
Alarm contact	no
Diagnostic	
Communication status	via LED, LLDP
Monitoring - no voltage	yes
General data	
Protection	IP67
Housing	Black plastic
Mounting method	3 hole screw mounting
Temperature range	0...+60 °C (storage temperature -40...+85 °C)
Dimension drawing	



Notes

SWITCHES

PROFINET - Managed Switch



TREE M-4TX

PROFINET - Managed Switch
IP20

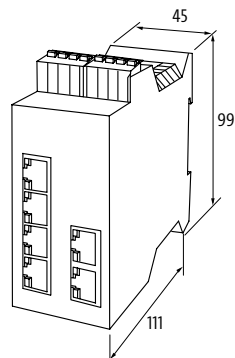
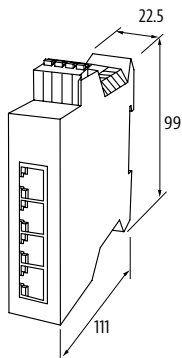


TREE M-6TX

PROFINET - Managed Switch
IP20



Order Data	Art-No.	Art-No.
4 ports	58185	
6 ports		58186
Connections		
Fieldbus	4 × RJ45	6 × RJ45
Supply	Spring clamp plug-in terminal: 0.2...2.5 mm ²	
Technical Data		
Operating voltage	9.5...31.5 V	
Transfer rate	10/100 Mbit/s full duplex	
Operating modes	Autocrossing Autonegotiation	
Switch Management		
Switch Form	PROFINET - Managed Switch	
Webserver	HTTP, HTTPS	
VLAN (QoS) IEEE 802.p	yes	
Port Mirroring	yes	
Protocols	DHCP, SNMP (v1, v2c, v3), RSTP, STP, LLDP, NTP, RMON, SSH (CLI)	
Remote maintenance	Open VPN	
Alarm contact	no	yes
PROFINET		
Addressing	DCP	
FSU (Fast-Start-Up)	no	
Shared Device/Input	no	
Profinet Netload Class	I	
Specification	V2.3, Conformance Class B	
MRP	yes	
Diagnostic		
Communication status	via LED, LLDP	
Monitoring - no voltage	yes	
General data		
Protection	IP20	
Housing	Black plastic	
Mounting method	DIN-rail mountable (EN 50022)	
Temperature range	0...+60 °C (storage temperature -40...+85 °C)	
Dimension drawing		



Notes

PROFINET - Managed Switch

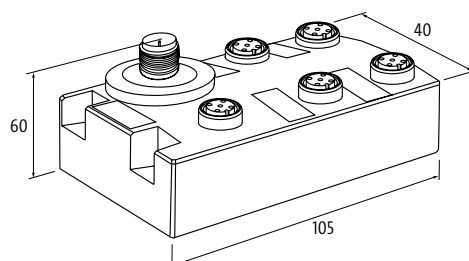


TREE M-STX-PN IP67

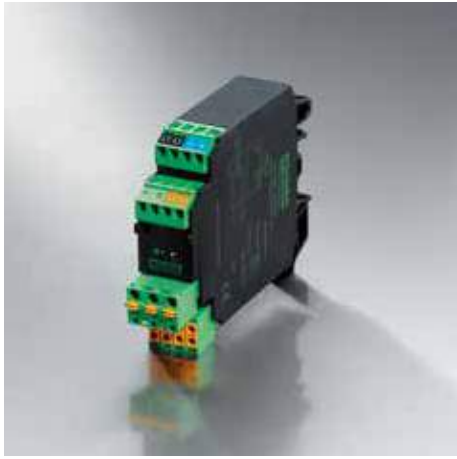
PROFINET - Managed Switch
IP67



Order Data	Art-No.
5 ports	58184
Connections	
Fieldbus	5 × M12 (female), D-coded
Supply	1 × M12 (male), A-coded
Technical Data	
Operating voltage	9.5...31.5 V
Transfer rate	10/100 Mbit/s full duplex
Operating modes	Autocrossing Autonegotiation
Switch Management	
Switch Form	PROFINET - Managed Switch
Webserver	HTTP, HTTPS
VLAN (QoS) IEEE 802.p	yes
Port Mirroring	yes
Protocols	DHCP, SNMP (v1, v2c, v3), RSTP, STP, LLDP, NTP, RMON, SSH (CLI)
Remote maintenance	Open VPN
Alarm contact	no
PROFINET	
Addressing	DCP
FSU (Fast-Start-Up)	no
Shared Device/Input	no
Profinet Netload Class	I
Specification	V2.3, Conformance Class B
MRP	yes
Diagnostic	
Communication status	via LED, LLDP
Monitoring - no voltage	yes
General data	
Protection	IP67
Housing	Black plastic
Mounting method	3 hole screw mounting
Temperature range	0...+60 °C (storage temperature -40...+85 °C)
Dimension drawing	



Notes



ACTIVE INTERFACE TECHNOLOGY ANALOG AND DIGITAL

- Solid state or relay outputs are short circuit protected
- LED display
- DIN-rail mounting

CONVERT MEASURED VALUES INTO SIGNALS

While measuring, positioning or checking systems, the status of the machine or installation should be monitored. The measured values have to be converted into digital or standard signals (0...20 mA, 4...20 mA or 0...10 V) so that PLCs and computers can process them.

Murrelektronik offers a wide range of intelligent interface modules that enable signal conversion or signal acquisition with galvanic separation.

Active Interface Technology



Converters

AD/DA converters, Analog converters,
Frequency converters, U/I converters

*An overview of this product range
can be found in our online shop*



Timer

MIRO 6.2 Timer

*An overview of this product range
can be found in our online shop*



Comparator modules

MAK

*An overview of this product range
can be found in our online shop*



Temperature converter

MTW

*An overview of this product range
can be found in our online shop*



Further

Brake rectifiers, Demagnetizer

*An overview of this product range
can be found in our online shop*



PASSIVE INTERFACE TECHNOLOGY INTERFACE MODULES

- Screw or spring clamp terminals
- LED displays
- DIN-rail mounting

FOR ANY APPLICATION

Murrelektronik's interface modules make the connections between the controls and the field.

They take over 3 major functions in the system:

- Signal transfer from the machine to the control
- Signal transfer inside the machine or control system
- Easy wiring in control systems

Murrelektronik has been an innovative partner in coming up with interface solutions for years. Their interface modules are fitted with different kinds of robust plugs like SUB-D connectors or ribbon cable connectors for strong signal or power transfers.

They are extremely compact. Individual terminal labels and status displays are integrated into the standard modules.

Interface Modules



With ribbon cable connection
UFL

*An overview of this product range can be
found in our online shop*



With SUB-D connector
UG SUB, SV

*An overview of this product range can be
found in our online shop*



With pluggable terminals
LUGS, PKB

*An overview of this product range can be
found in our online shop*



EUROCARD HOLDERS / CONTROL MODULES

- Flexible applications
- Compact modules
- Connections with up to 96-poles

THE IDEAL CONTROL TECHNOLOGY FOR THE CABINET

Various electronic circuits are fitted onto 100×160 mm Eurocards and then placed in 19" system housings. Murrelektronik's Eurocard holders are designed to mount Eurocards on DIN rails in the cabinet.

In control systems, units are used which require analog control signals (i.e. 0...10 V DC). With these well designed MPOT potentiometer modules, it is simple, cheap and easy to solve your set-point problems. The diode modules of the MKS series are designed for decoupling and interference applications. The LED indicators are available with diameters of 3, 5, and 10 mm. With their compact design, they are suitable for installation in front panels or process flow diagrams.

Eurocard Holders



SKT

*An overview of this product range
can be found in our online shop*



SKP

*An overview of this product range
can be found in our online shop*

Control Modules



Potentiometer modules
MPOT

*An overview of this product range
can be found in our online shop*



Diode modules
MKS-D, MKS-LDP, MKS-BCD

*An overview of this product range
can be found in our online shop*



Assembly modules
MKS-M, ML 14, MP

*An overview of this product range
can be found in our online shop*



2

INTERFACES

2

INTERFACES

Front Panel Interfaces	2.1
Control Cabinet Interfaces / Cable Entry Systems	2.2
Hybrid Fieldbus Coupling	<i>An overview of this product range can be found in our online shop</i> 2.3
Lighting Elements	2.4
Control Devices	2.5
Modular Connection Systems (Modlink Vario)	2.6
Heavy Duty Connectors (Modlink Heavy)	2.7



MODLINK MSDD FRONT PANEL INTERFACES

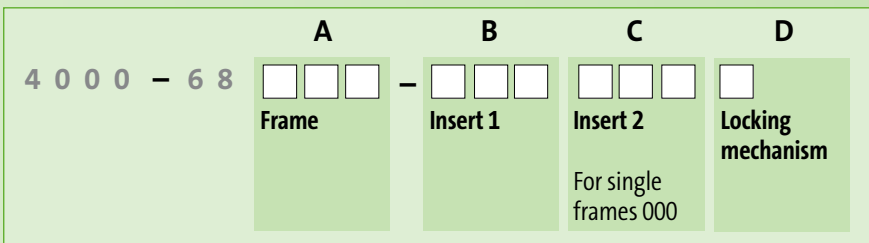
- PLC Service Port
- IP65 Protection; UL Type Rating 4, 4x, 12, 13
- Modular Inserts

DESIGN YOUR OWN PART – WITH OUR ARTICLE NUMBERS

The article numbers help you figure out whether you are ordering outlets, data connector inserts, individual frames or sets. The article numbers of the individual components can be found on the following pages. Both modules and sets can be ordered in quantities of 1 or more.

THE SET

The set article number is made up of A, B, C and D.



First select your components:

- Block A:** Frame (for example 4000-68**522**-000 0001 for transparent double frame)
- Block B:** Insert 1 (for example 4000-68000-**001** 0000 for Germany (VDE) gray)
- Block C:** Insert 2 (for example 4000-68000-**091** 0000 for 2× RJ45 + 2× USB)
- Block D:** Locking mechan. (for example 4000-68522-000 000**1** for 3 mm double-bit key)

The article number for this example set will be:

4 0 0 0 – 6 8 **5 2 2** – **0 0 1** **0 9 1** **1**

Modlink MSDD Front Panel Interfaces



Frames

- Single and double frames

[Page 2.1.1](#)



Inserts

- Power outlets
- Data connection inserts

[Page 2.1.2](#)



Built-in Sockets

- USB
- RJ45

[Page 2.1.14](#)

Modlink MSDD Front Panel Interfaces

An overview of this product range can be found in our online shop

FRONT PANEL INTERFACES

Frames (plastic)			Art-No.
	1-way transparent		
	Mounting frame plastic, PA black Lid: plastic, PC transparent	cURus Closure: 3 mm double bit with attachable rotation knob	4000-68512-0000001
	Mounting frame plastic, PA black Lid: plastic, PC transparent	Closure: Daimler	4000-68512-0000003
	1-way metallic		
	Mounting frame plastic, PA black Lid: plastic, ABS gray	cURus Closure: 3 mm double bit with attachable rotation knob	4000-68513-0000001
	Mounting frame plastic, PA black Lid: plastic, ABS gray	Closure: Daimler	4000-68513-0000003
	1-way gray		
	Mounting frame plastic, PA black Lid: plastic, PBT gray	cURus Closure: 3 mm double bit with attachable rotation knob	4000-68514-0000001
	Mounting frame plastic, PA black Lid: plastic, PBT gray	Closure: Daimler	4000-68514-0000003
	2-way transparent		
	Mounting frame plastic, PA black Lid: plastic, PC transparent	cURus Closure: 3 mm double bit with attachable rotation knob	4000-68522-0000001
	Mounting frame plastic, PA black Lid: plastic, PC transparent	Closure: Daimler	4000-68522-0000003
	2-way metallic		
	Mounting frame plastic, PA black Lid: plastic, ABS gray	cURus Closure: 3 mm double bit with attachable rotation knob	4000-68523-0000001
	Mounting frame plastic, PA black Lid: plastic, ABS gray	Closure: Daimler	4000-68523-0000003
	2-way gray		
	Mounting frame plastic, PA black Lid: plastic, PBT gray	cURus Closure: 3 mm double bit with attachable rotation knob	4000-68524-0000001
	Mounting frame plastic, PA black Lid: plastic, PBT gray	Closure: Daimler	4000-68524-0000003

FRONT PANEL INTERFACES

Power outlets			Art-No.
	Germany (VDE) white Screw terminals: max. 6 mm ² Operating voltage: 250 V AC Operating current: 16 A	LED (yellow)	4000-68000-0010000
	Germany (VDE) white Spring clamp terminals: max. 2.5 mm ² (AWG 14) Operating voltage: 250 V AC Operating current: 16 A		4000-68000-0160000
	Germany (VDE) yellow Screw terminals: max. 6 mm ² Operating voltage: 250 V AC Operating current: 16 A		4000-68000-0020000
	France (UTE-NF) gray Screw terminals: max. 6 mm ² Operating voltage: 250 V AC Operating current: 16 A	LED (yellow)	4000-68000-0050000
	France (UTE-NF) white Screw terminals: max. 2 × 4 mm ² (AWG 12) Operating voltage: 250 V AC Operating current: 16 A		4000-68000-3010000
	USA (NEMA 5-15) white Screw terminals: max. 2.5 mm ² (AWG 14) Operating voltage: 125 V AC Operating current: 15 A	cURus	4000-68000-3240000
	USA (2 × NEMA-GFCI 5-15) Screw terminals: max. 2.5 mm ² (AWG 14) Operating voltage: 125 V AC Operating current: 15 A	cURus	4000-68000-3220000

FRONT PANEL INTERFACES

Power outlets			Art-No.
	USA (2 × NEMA-GFCI 5-20) Screw terminals: max. 6 mm ² Operating voltage: 125 V AC Operating current: max. 20 A per socket	cURus	4000-68000-3280000
	England (BS) Screw terminals: max. 4 mm ² Operating voltage: 250 V AC Operating current: max. 13 A	with touch protection	4000-68000-0060000
	England (BS) orange Screw terminals: max. 4 mm ² Operating voltage: 250 V AC Operating current: max. 13 A		4000-68000-0190000
	Italy (CEI 23-16) Screw terminals: max. 2.5 mm ² (AWG 14) Operating voltage: 250 V AC Operating current: 16 A	Double	4000-68000-0070000
	Italy (CEI 23-16) Screw terminals: max. 2.5 mm ² (AWG 14) Operating voltage: 250 V AC Operating current: 16 A		4000-68000-0180000
	Denmark Spring clamp terminals: max. 2.5 mm ² (AWG 14) Operating voltage: 250 V AC Operating current: max. 10 A		4000-68000-0170000
	Swiss Spring clamp terminals: max. 1.5 mm ² (AWG 16) Operating voltage: 250 V AC Operating current: max. 10 A		4000-68000-0120000

FRONT PANEL INTERFACES

Power outlets			Art-No.
	Australia Screw terminals: max. 2.5 mm ² (AWG 14) Operating voltage: 250 V AC Operating current: max. 10 A		4000-68000-0090000
	India (IS 1293) Screw terminals: max. 4 mm ² Operating voltage: 240 V AC Operating current: max. 5 A		4000-68000-3210000
	China (CCC) Screw terminals: max. 4 mm ² Operating voltage: 250 V AC Operating current: max. 10 A		4000-68000-3250000
	Brazil Screw terminals: max. 2.5 mm ² (AWG 14) Operating voltage: 250 V AC Operating current: max. 10 A	Double	4000-68000-3290000
	Brazil Screw terminals: max. 2.5 mm ² (AWG 14) Operating voltage: 250 V AC Operating current: max. 10 A	Single	4000-68000-3310000

FRONT PANEL INTERFACES

Communication inserts			Art-No.
	SUB-D15 HD; RJ45; USB; USB (form A) 1 × SUB-D15 HD (female/male) VGA 1 × RJ45, 8-pole metal, CAT5e (female/female) 2 × USB (female/female) form A	cURus shielded	4000-68000-1040000
	RJ45; RJ45; USB (form A) 2 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A	cURus shielded	4000-68000-0940000
	RJ45; USB (form A); DVI 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A 1 × DVI (female/female)		4000-68000-0820000
	RJ45; RJ45; USB; USB (form A) 2 × RJ45, 8-pole metal, CAT5e (female/female) 2 × USB (female/female/0.7 m cable) form A	shielded	4000-68000-0990000
	RJ45; RJ12; USB; USB (form A) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × RJ12, 6-pole plastic 2 × USB (female/female) form A	cURus shielded	4000-68000-0910000
	RJ45; USB; USB (form A) 1 × RJ45, 8-pole metal, CAT5e (female/female) 2 × USB (female/female) form A	shielded	4000-68000-0960000
	RJ45; RJ45; USB; USB (form A) 2 × RJ45, 8-pole metal, CAT5e (female/female) 2 × USB (female/female) form A	shielded	4000-68000-0970000

FRONT PANEL INTERFACES

Communication inserts			Art-No.
	RJ45; SUB-D9; SUB-D9 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (female/female) 1 × SUB-D9 (male/male)	cURus	4000-68000-1110000
	RJ45; RJ45 2 × RJ45, 8-pole metal, CAT5e (female/female)	cURus shielded	4000-68000-1200000
	RJ45 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (blind plug)	cURus	4000-68000-1210000
	RJ45; RJ45; RJ45; RJ45 4 × RJ45, 8-pole metal, CAT5e (female/female)	shielded	4000-68000-1220000
	USB (form A); RJ45 1 × USB (female/female) form A 1 × RJ45, 8-pole metal, CAT5e (female/female)	cURus shielded	4000-68000-1310000
	RJ45; SUB-D9 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (female/female)	cURus shielded	4000-68000-1410000
	SUB-D9; RJ45; USB (form A) 1 × SUB-D9 (female/female) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female/0.7 m cable) form A	shielded	4000-68000-1420000

FRONT PANEL INTERFACES

Communication inserts			Art-No.
	RJ45; USB (form A); SUB-D9 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A 1 × SUB-D9 (female/male)	cURus shielded	4000-68000-1430000
	RJ45; USB (form A); SUB-D9 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A 1 × SUB-D9 (female/female)	cURus shielded	4000-68000-1440000
	RJ45; RJ45; SUB-D9 2 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (female/male)	shielded	4000-68000-1620000
	RJ45; SUB-D9; SUB-D25 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (female/male) 1 × SUB-D25 (female/male)	cURus	4000-68000-1700000
	BNC; RJ45; SUB-D9 1 × BNC (female/female) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (female/male)	shielded	4000-68000-1800000
	BNC; RJ45; SUB-D9 1 × BNC (female/female) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (female/female)		4000-68000-1810000
	USB (form A); SUB-D25; RJ45 1 × USB (female/female) form A 1 × SUB-D25 (female/male) 1 × RJ45, 8-pole metal, CAT5e (female/female)	cURus shielded	4000-68000-1450000

FRONT PANEL INTERFACES

Communication inserts			Art-No.
	USB (form A); RJ45 1 × USB (female/female/0.7 m cable) form A 1 × RJ45, 8-pole metal, CAT5e (female/female)	shielded	4000-68000-1300000
	USB (form A); SUB-D9; RJ45 1 × USB (female/female/0.7 m cable) form A 1 × SUB-D9 (female/male) 1 × RJ45, 8-pole metal, CAT5e (female/female)	shielded	4000-68000-1400000
	USB; USB (form A) 2 × USB (female/female/0.7 m cable) form A	shielded	4000-68000-0900000
	USB (form A to A) 1 × USB (female/female) form A	cURus shielded	4000-68000-0920000
	USB (form A); USB (form A) 2 × USB (female/female) form A	cURus shielded	4000-68000-0930000
	USB; USB; USB; USB (form A) 4 × USB (female/female) form A		4000-68000-0950000
	USB (form A); DVI 2 × USB (female/female) form A 1 × DVI (female/female)		4000-68000-1280000

Combinations			Art-No.
	Germany (VDE) 1 × Germany (VDE) white 2 × data cut-out	Spring clamp terminals: max. 2 × 2.5 mm ² (AWG 14) Operating voltage: 250 V AC Operating current: 16 A shielded	4000-68000-4500000
	Germany (VDE) white; RJ45 1 × Germany (VDE) white 1 × RJ45, 8-pole metal, CAT6A (female/female) 1 × data cut-out	Spring clamp terminals: max. 2 × 2.5 mm ² (AWG 14) Operating voltage: 250 V AC Operating current: 16 A shielded	4000-68000-4500001
	Germany (VDE) white; RJ45 1 × Germany (VDE) white 2 × RJ45, 8-pole metal, CAT6A (female/female)	Spring clamp terminals: max. 2 × 2.5 mm ² (AWG 14) Operating voltage: 250 V AC Operating current: 16 A shielded	4000-68000-4500004
	Germany (VDE) orange; RJ45 1 × Germany (VDE) orange 1 × RJ45, 8-pole metal, CAT6A (female/female) 1 × data cut-out	Spring clamp terminals: max. 2 × 2.5 mm ² (AWG 14) Operating voltage: 250 V AC Operating current: 16 A shielded	4000-68000-4620001
	France (UTE-NF); RJ45 1 × France (UTE-NF) white 1 × RJ45, 8-pole metal, CAT6A (female/female) 1 × data cut-out	Screw terminals: max. 2 × 4 mm ² (AWG 12) Operating voltage: 250 V AC Operating current: 16 A shielded	4000-68000-4510001
	France (UTE-NF) 1 × France (UTE-NF) white 2 × data cut-out	Screw terminals: max. 2 × 4 mm ² (AWG 12) Operating voltage: 250 V AC Operating current: 16 A shielded	4000-68000-4510000
	USA (NEMA 5-15); RJ45; USB (form A) 1 × NEMA 5-15 (plug-solder connection) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A	cURus	4000-68000-4030000

FRONT PANEL INTERFACES

Combinations			Art-No.
	USA (NEMA 5-15); RJ45 1 × NEMA 5-15 (plug-solder connection) 1 × RJ45, 8-pole metal, CAT5e (female/female)	cURus	4000-68000-4040000
	England (BS) 1 × Great Britain (BS) 2 × data cut-out	Screw terminals: max. 2 × 4 mm ² (AWG 12) Operating voltage: 250 V AC Operating current: max. 13 A shielded	4000-68000-4520000
	Great Britain (BS); RJ45 1 × Great Britain (BS) 1 × RJ45, 8-pole metal, CAT6A (female/female) 1 × data cut-out	Screw terminals: max. 2 × 4 mm ² (AWG 12) Operating voltage: 250 V AC Operating current: max. 13 A shielded	4000-68000-4520001
	Italy (CEI 23-16) 1 × Italy (CEI 23-16) 2 × data cut-out	Screw terminals: max. 2 × 4 mm ² (AWG 12) Operating voltage: 250 V AC Operating current: 16 A shielded	4000-68000-4530000
	Italy (CEI 23-16); RJ45 1 × Italy (CEI 23-16) 1 × RJ45, 8-pole metal, CAT6A (female/female) 1 × data cut-out	Screw terminals: max. 2 × 4 mm ² (AWG 12) Operating voltage: 250 V AC Operating current: 16 A shielded	4000-68000-4530001
	Italy (CEI 23-16); SUB-D9 1 × Italy (CEI 23-16) 1 × SUB-D9 (male/female) 1 × SUB-D9 cut-out	Screw terminals: max. 2 × 4 mm ² (AWG 12) Operating voltage: 250 V AC Operating current: 16 A shielded	4000-68000-4530004
	Denmark 1 × Denmark (white) 2 × data cut-out	Spring clamp terminals: max. 2 × 2.5 mm ² (AWG 14) Operating voltage: 250 V AC Operating current: max. 13 A shielded	4000-68000-4550000

FRONT PANEL INTERFACES

Combinations			Art-No.
	Denmark 1 × Denmark (white) 1 × RJ45, 8-pole metal, CAT6A (female/female) 1 × data cut-out	Spring clamp terminals: max. 2 × 2.5 mm ² (AWG 14) Operating voltage: 250 V AC Operating current: max. 13 A shielded	4000-68000-4550001
	Swiss 1 × Swiss 2 × data cut-out	Spring clamp terminals: max. 2 × 1.5 mm ² (AWG 16) Operating voltage: 250 V AC Operating current: max. 10 A shielded	4000-68000-4540000
	Swiss; RJ45 1 × Swiss 1 × RJ45, 8-pole metal, CAT6A (female/female) 1 × data cut-out	Spring clamp terminals: max. 2 × 1.5 mm ² (AWG 16) Operating voltage: 250 V AC Operating current: max. 10 A shielded	4000-68000-4540001
	India (IS 1293) 1 × India (white) 2 × data cut-out	Screw terminals: max. 2 × 1.5 mm ² (AWG 16) Operating voltage: 240 V AC Operating current: max. 5 A shielded	4000-68000-4570000
	India (IS 1293); RJ45 1 × India (white) 1 × RJ45, 8-pole metal, CAT6A (female/female) 1 × data cut-out	Screw terminals: max. 2 × 1.5 mm ² (AWG 16) Operating voltage: 240 V AC Operating current: max. 5 A shielded	4000-68000-4570001
	China (CCC) 1 × China (white) 2 × data cut-out	Screw terminals: max. 2 × 4 mm ² (AWG 12) Operating voltage: 250 V AC Operating current: max. 10 A shielded	4000-68000-4580000
	China (CCC); RJ45 1 × China (white) 1 × RJ45, 8-pole metal, CAT6A (female/female) 1 × data cut-out	Screw terminals: max. 2 × 4 mm ² (AWG 12) Operating voltage: 250 V AC Operating current: max. 10 A shielded	4000-68000-4580001

FRONT PANEL INTERFACES

Combinations			Art-No.
	Brazil 1 × Brazil 4 × data cut-out	Screw terminals: max. 2 × 1.5 mm ² (AWG 16) Operating voltage: 250 V AC Operating current: max. 10 A	4000-68000-4610000
	Brazil; RJ45 1 × Brazil 1 × RJ45, 8-pole metal, CAT6A (female/female) 3 × data cut-out	Screw terminals: max. 2 × 1.5 mm ² (AWG 16) Operating voltage: 250 V AC Operating current: max. 10 A shielded	4000-68000-4610001
	Brazil; SUB-D9 1 × Brazil 1 × SUB-D9 (male/female) 1 × SUB-D9 cut-out	Screw terminals: max. 2 × 1.5 mm ² (AWG 16) Operating voltage: 250 V AC Operating current: max. 10 A shielded	4000-68000-4610004
	Germany (VDE); RJ45; FI-cut-out 1 × VDE 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × FI cut-out		4000-68000-4300001
	Germany (VDE) yellow; RJ45; FI-cut-out 1 × VDE yellow 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × FI cut-out		4000-68000-4390001
	France (UTE-NF); RJ45; FI-cut-out 1 × France (UTE-NF) white 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × FI cut-out		4000-68000-4310001
	USA (2 × NEMA-GFCI 5-15); RJ45; USB (form A); fuse 2 × NEMA-GFCI 5-15 (screw terminals) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A 1 × fuse (3 A)	cURus with touch protection	4000-68000-4100000

FRONT PANEL INTERFACES

Combinations			Art-No.
	USA (2 × NEMA-GFCI 5-15); RJ45; fuse 2 × NEMA-GFCI 5-15 (screw terminals) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × fuse (3 A)	cURus with touch protection	4000-68000-4110000
	USA (2 × NEMA-GFCI 5-15); RJ45; RJ45; fuse 2 × NEMA-GFCI 5-15 (screw terminals) 2 × RJ45, 8-pole metal, CAT5e (female/female) 1 × fuse (3 A)	cURus with touch protection	4000-68000-4120000
	USA (2 × NEMA-GFCI 5-15); RJ45; SUB-D9; fuse 2 × NEMA-GFCI 5-15 (screw terminals) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (male/female) 1 × fuse (3 A)	cURus with touch protection	4000-68000-4130000
	USA (2 × NEMA-GFCI 5-15); fuse 2 × NEMA-GFCI 5-15 (screw terminals) 1 × fuse (3 A)	cURus with touch protection	4000-68000-4140000
	Great Britain (BS); RJ45; FI-cut-out 1 × Great Britain (BS) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × FI cut-out		4000-68000-4320001
	Italy (CEI 23-16); RJ45; FI-cut-out 1 × Italy (CEI 23-16) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × FI cut-out		4000-68000-4330001
	Swiss; RJ45; FI cut-out 1 × Swiss 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × FI cut-out		4000-68000-4340001
	Australia; RJ45; FI-cut-out 1 × Australia 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × FI cut-out		4000-68000-4360001

FRONT PANEL INTERFACES

Front Panel Interfaces

Pass-through			Art-No.
	Pass-through 1 × RJ45, 8-pole metal, CAT5e (female/female)	cULus	4000-73000-0010000
	Pass-through 1 × USB 3.0 (female/male) form A, 0.6 m cable	cULus	4000-73000-0150000
	1 × USB 3.0 (female/male) form A, 1.0 m cable	cULus	4000-73000-0160000
	1 × USB 3.0 (female/male) form A, 1.5 m cable	cULus	4000-73000-0170000
	1 × USB 3.0 (female/male) form A, 2.0 m cable	cULus	4000-73000-0180000

FRONT PANEL INTERFACES

Connection accessories			Art-No.
	Gender Changer RJ45 (female /female)	cURus	4000-68000-9040010
	Gender Changer RJ12; (female/female)		4000-68000-9040011
	Gender Changer RJ45 (female /female) Zinc die casting, nickel-plated	cURus	4000-68000-9040012
	Gender Changer USB (form A) 3.0 (female/female)		4000-68000-9040022
	Gender Changer SUB-D9 (female/female)	cURus	4000-68000-9040030
	SUB-D9 (female/male)	cURus	4000-68000-9040031
	Gender Changer SUB-D9 (male/male)	cURus	4000-68000-9040032
	Gender Changer SUB-D15 (female/male)	cURus	4000-68000-9040040
	SUB-D15 (female/female)	cURus	4000-68000-9040041
	Gender Changer SUB-D15 (male/male)	cURus	4000-68000-9040042
	Gender Changer SUB-D15 HD (female/male) VGA	cURus	4000-68000-9040045

FRONT PANEL INTERFACES

Connection accessories			Art-No.
	Gender Changer		
	SUB-D25 (female/female)	cURus	4000-68000-9040050
	SUB-D25 (female/male)	cURus	4000-68000-9040051
	Cables		
	SUB-D9 (male/male); 2 m	shielded	4000-68000-9030010
	SUB-D9 (male/male); 5 m	shielded	4000-68000-9030011
	SUB-D9 (female/male); 2 m	shielded	4000-68000-9030020
	SUB-D9 (female/male); 5 m	shielded	4000-68000-9030021
	Cables		
	SUB-D25 (female/male); 1.8 m	shielded	4000-68000-9030040
	SUB-D25 (female/male); 5 m	shielded	4000-68000-9030041
	Cables		
	USB (form A to A); 2 m (male/male)	shielded	4000-68000-9030050
	USB (form A to A); 5 m (male/male)	shielded	4000-68000-9030051
	USB (form A to A); 2 m (male/male) PUR	shielded	4000-68000-9030052
	USB (form A to A); 5 m (male/male) PUR	shielded	4000-68000-9030053
	USB (form A to B); 2 m	shielded	4000-68000-9030054
	USB (form A to B); 5 m	shielded	4000-68000-9030055
	Cables		
	RJ45 (8/8-pole) metal, CAT6; 2 m	shielded	4000-68000-9030060
	RJ45 (8/8-pole) metal, CAT6; 5 m	shielded	4000-68000-9030061
	RJ45 (8/8-pole) metal, CAT6; 10 m	shielded	4000-68000-9030062
Mounting accessories			Art-No.
	Ground strap 6 mm²		
	100 mm for screw (M4)		4000-71001-0610004
	200 mm for screw (M4)		4000-71001-0620004
	300 mm for screw (M4)		4000-71001-0630004
	Blind plate (flat)		
	Self-installation available space: 45 × 75 mm	cURus	4000-68000-8900000
	Blind plate (depth)		
	Self-installation available space: 34 × 58 mm Cavity: 13 mm deep	cURus	4000-68000-8910000

FRONT PANEL INTERFACES

Mounting accessories			Art-No.
	Blind plates (pre-cut) 1 × USB, 1 × RJ45, SUB-D9	cURus shielded	4000-68000-8500000
	Blind plates (pre-cut) 1 × USB, 1 × RJ45, 1 × SUB-D25	cURus shielded	4000-68000-8510000
	Housing (1-way) with 4 blind plugs (M16 × 1.5) H × W × D: 180×94×81 mm		4000-68000-9060010
	Housing (2-way) with 6 blind plugs (M16 × 1.5) H × W × D: 182×180×90 mm		4000-68000-9060020
	Touch protection box for double frame H × W × D: 124×124×67 mm	cURus	4000-68000-9140000
	Touch protection box for single frame H × W × D: 115×87×66 mm	cURus	4000-68000-9180000
	Cable compression gland M16	Sealing range (cable Ø): 4...8 mm	4000-68000-9060030
	Label plate Frame: 20 pcs	cURus	4000-68000-9000000



CONTROL CABINET INTERFACES / CABLE ENTRY SYSTEMS

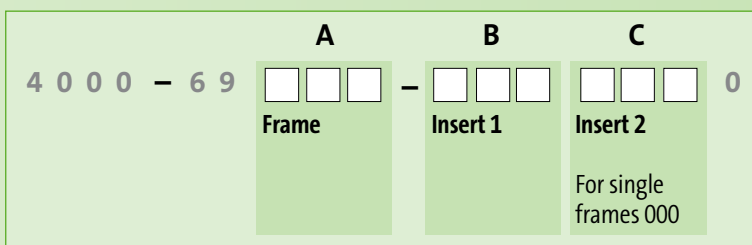
- Durable connections
- Modular system
- High protection degree

MODLINK MPV CABLE ENTRY SYSTEM

The article numbers help you figure out whether you are ordering inserts, individual frames or sets.
A set has one part number for up to three components.

THE MODLINK MPV SET

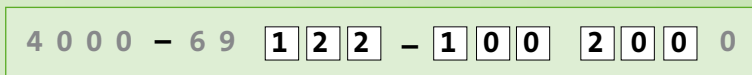
The set article number is made up of **A**, **B** and **C**.



First select your components:

- Block A:** Frame (e.g. 4000-69**122**-000 0000 for double frame)
Block B: Insert 1 (e.g. 4000-69000-**100** 0000 for M12 / SUB-D)
Block C: Insert 2 (e.g. 4000-69000-**200** 0000 for 7/8" / spring clamp terminal)

The article number for this example set will be:



Control Cabinet Interfaces



Modlink MPV – modular

- Frames
- Inserts
- Accessories

Page 2.2.1

Cable Entry Systems



Cable entry system – modular

- Cable entry plate
- Inserts

Page 2.2.3



Cable entry system – predefined

- Rectangular
- Round

Page 2.2.4

MPV Frame			Art-No.
	Single for standard cut-out Size 6 (35 x 52 mm) IP65	cURus	4000-69112-0000000
	Double for standard cut-out Size 24 (35 x 112 mm) IP65	cURus	4000-69122-0000000
	Single (30°-angle) for standard cut-out Size 6 (35 x 52 mm) IP65	cURus	4000-69212-0000000
	Double (30°-angle) for standard cut-out Size 24 (35 x 112 mm) IP65	cURus	4000-69222-0000000
MPV Inserts			Art-No.
	M12 M12 (male/female) 5-pole IP65	cURus	4000-69000-1040000
	M12 (male/female) 5-pole, B-coded IP65	cURus	4000-69000-1060000
	M12 (male/female) 6-pole, Cube67 IP65	cURus	4000-69000-1080000
	M12; SUB-D9 M12 (female) B-coded SUB-D9 (female) IP65	cURus	4000-69000-1000000
	M12; terminators M12 (female) 5-pole, A-coded Spring clamp terminal connection IP65		4000-69000-1050000

CONTROL CABINET INTERFACES / CABLE ENTRY SYSTEMS

MPV Inserts			Art-No.
	M12; terminators M12 (female) 5-pole, A-coded Screw terminal connection (yellow) Safety IP65		4000-69000-1090000
	M12; RJ45 M12 (female) 4-pole, D-coded RJ45 (8/8-pole) metal, CAT6 IP65		4000-69000-1100000
	7/8"; Spring clamp terminal 7/8" (female) Spring clamp terminal connection IP65	cURus	4000-69000-2000000
	7/8"; Spring clamp terminal 7/8" (male) Spring clamp terminal connection		4000-69000-2040000
	RJ45 RJ45 (8/8-pole) metal, CAT6 IP65	cURus	4000-69000-2500000
	LWL Fiber Optic (male/male) single mode IP65		4000-69000-5200000
MPV accessories			Art-No.
	Blind insert for sealing of unused openings IP65	cURus	4000-69000-9000000

CONTROL CABINET INTERFACES / CABLE ENTRY SYSTEMS

MPV accessories			Art-No.
	RJ45 Male straight, 4-pole IP65		4000-69000-9500050
	RJ45 Male 90°, 4-pole IP65		4000-69000-9500060
	Control cabinet entry system M12 straight, A-coded, 5-pole, shielded	DeviceNet, CANopen	7000-42111-0000000
	straight, B-coded, 5-pole, shielded	PROFIBUS, Interbus	7000-44111-0000000
	straight, A-coded, 6-pole, shielded	Cube67	7000-46111-0000000
	Control cabinet entry system M12 straight, D-coded, 4-pole, shielded (female/female)	Ethernet CAT5	7000-44611-0000000
Connectors			Art-No.
	Size 16 for 4 cables (0 large, 4 small)		4000-70103-0004000
	for 5 cables (1 large, 4 small)		4000-70103-0104000
	for 8 cables (0 large, 8 small)		4000-70103-0008000
	Size 24 for 4 cables (2 large, 2 small)		4000-70103-0202000
	for 7 cables (1 large, 6 small)		4000-70103-0106000
	for 10 cables (0 large, 10 small)		4000-70103-0010000

CONTROL CABINET INTERFACES / CABLE ENTRY SYSTEMS

Cable entry glands			Art-No.
	with cable tie eye		
	Cable diameter (3...4 mm)		4000-70403-0001030
	Cable diameter (4...5 mm)		4000-70403-0001040
	Cable diameter (5...6 mm)		4000-70403-0001050
	Cable diameter (6...7 mm)		4000-70403-0001060
	Cable diameter (7...8 mm)		4000-70403-0001070
	Cable diameter (8...9 mm)		4000-70403-0001080
	Cable diameter (9...10 mm)		4000-70403-0001090
	Cable diameter (10...11 mm)		4000-70403-0001100
	Cable diameter (11...12 mm)		4000-70403-0001110
	Cable diameter (12...13 mm)		4000-70403-0001120
	Cable diameter (13...14 mm)		4000-70403-0001130
	Cable diameter (14...15 mm)		4000-70403-0001140
	Cable diameter (15...16 mm)		4000-70403-0001150
	Cable diameter (16...17 mm)		4000-70403-0100160
	Cable diameter (17...18 mm)		4000-70403-0100170
	Cable diameter (18...19 mm)		4000-70403-0100180
	Cable diameter (19...20 mm)		4000-70403-0100190
	Cable diameter (20...21 mm)		4000-70403-0100200
	Cable diameter (21...22 mm)		4000-70403-0100210
	Cable diameter (22...23 mm)		4000-70403-0100220
	Cable diameter (23...24 mm)		4000-70403-0100230
	Cable diameter (24...25 mm)		4000-70403-0100240
	Cable diameter (24...25 mm)		4000-70403-0100250
	Cable diameter (26...27 mm)		4000-70403-0100260
	Cable diameter (27...28 mm)		4000-70403-0100270
	Cable diameter (28...29 mm)		4000-70403-0100280
	Cable diameter (29...30 mm)		4000-70403-0100290
	Cable diameter (30...31 mm)		4000-70403-0100300
	Special		
	Blind plug (plugs) single		4000-70503-0001010
	Blind plug (plugs) double		4000-70503-0100010
	Adapter		4000-70503-0100020
	for 1 AS-Interface cable		4000-70503-0001020
	for 2 AS-Interface cables		4000-70503-0001030
	for 2 cables (Ø 6 mm)		4000-70503-0001060
	for 2 cables (Ø 5 mm)		4000-70503-0001050
Plates			Art-No.
	Size 24		
	Cable diameter (12) × 8...12 mm		4000-70603-0240120
	Cable diameter (6) × 3...6.5 mm, (4) × 5...9.2 mm, (4) × 9.6...15.9 mm		4000-70603-0240140
	Cable diameter (17) × 5...9.2 mm		4000-70603-0240170
	Cable diameter (16) × 3...6.5 mm, (4) × 5...9.2 mm, (2) × 8...12.5 mm		4000-70603-0240220
	Cable diameter (23) × 4.3...8.1 mm		4000-70603-0240230
	Cable diameter (29) × 3...6.5 mm		4000-70603-0240290
	M50		
	Cable diameter (3) × 6...10 mm, (1) × 9.6...15.9 mm		4000-70703-0500040
	Cable diameter (1) × 3...5.5 mm, (5) × 5...9.2 mm		4000-70703-0500060
	Cable diameter (7) × 3...6.5 mm, (1) × 6...10 mm		4000-70703-0500080
	Locknut		4000-70704-0500000

Plates			Art-No.
	M63		
	Cable diameter (2) × 3...6.5 mm, (4) × 5...9.2 mm, (2) × 9.6...15.9 mm		4000-70703-0630080
	Cable diameter (6) × 3...5.5 mm, (6) × 3...6.5 mm, (1) × 6...10 mm		4000-70703-0630130
	Cable diameter (19) × 3...5 mm		4000-70703-0630190
	Locknut		4000-70704-0630000
Accessories			Art-No.
	Blind plate		
	Size 16		4000-70202-0001000
	Blind plate		
	Size 24		4000-70202-0002000
	Adapter		
	from size 24 to 16		4000-70203-0100000
	Cable strain relief		
	for 1 cable		4000-70302-0000010
	for 5 cables		4000-70302-0000050
	for 9 cables		4000-70302-0000090
	Label plate		
	20 × 9 mm		4000-70920-0000000
	Cable tie		
	for small glands L = 75 mm		4000-70902-0075220
	for large glands L = 160 mm		4000-70902-0160450
	for large glands L = 180 mm		4000-70902-0180800



HYBRID FIELDBUS COUPLING

- For durable connections
- A high degree of protection
- Repeater included

EASILY CONNECTED – QUICKLY AND SAFELY

MSDD hybrid fieldbus couplers transfer data and power from the cabinet into the industrial field. A repeater function amplifies and processes signals.

Active hybrid fieldbus coupling offers many benefits:

- Repeater and control cabinet interface in one module
- PROFIBUS FMS/DP galvanically separated
- Three independent PROFIBUS ports
- All three PROFIBUS segments are galvanically separated
- Baud rate change during operation – automatic and continuous Baud rate detection
- 3 × segment length – 200 m at 1.5 Mbit/s and 100 m at 12 Mbit/s
- Cascading capabilities for 31 modules per PROFIBUS segment
- Integrated terminating resistor

MSDD Hybrid Fieldbus Coupling



Active Hybrid Fieldbus Coupling

Active connection between control cabinet and fieldbus area (incl. repeater)

An overview of this product range can be found in our online shop



Passive Hybrid Fieldbus Coupling

Passive connection between control cabinet and fieldbus area

An overview of this product range can be found in our online shop



LIGHTING ELEMENTS MAXIMUM FLEXIBILITY

- High light yield
- Long life
- Plug-in solutions

DISTINCT SIGNALS AND PERFECT ILLUMINATION IN DAYLIGHT QUALITY

Modlight Pro LED signal towers

The signal towers are characterized by maximum flexibility in color selection and color composition. The elements of the signal towers with diameters of 50 and 70 millimeters are connected by bayonet locks, making for easy and quick assembly. The signal towers can be flexibly mounted.

Modlight Illumix LED machine light

The machine lights of the Modlight Illumix series ensure optimal illumination of machines and systems based on maintenance-free and durable LED technology in daylight quality. Rotatable mounting brackets provide flexibility in attaching the lights.

Signal lights



Modlight50 Pro / Modlight70 Pro

- 50/70 mm
- Connecting elements
- Buzzer modules
- LED modules

Page 2.4.1



Sets – Modlight30 / Modlight50 Pro / Modlight70 Pro

- 30/50/70 mm
- LED signal towers

Page 2.4.2



Comlight57

- 57 mm
- Single lights
- LED

Page 2.4.3

Machine lights



Modlight Illumix Slim Line

- Machine light (LED)
- Degree of protection IP54

Modlight Illumix Classic Line

- Machine light (LED)
- Degree of protection IP67

Page 2.4.5



Modlight Illumix Xtreme

- Machine light (LED)
- Degree of protection IP69K

Page 2.4.6

Connection modules			Art-No.
	Base for floor mount Modlight50 Pro	Spring clamp terminals cURus	4000-76050-1100002
	Base for floor mount Modlight70 Pro	Spring clamp terminals cURus	4000-76070-1100002
	Basic for tube mounting Modlight50 Pro	Spring clamp terminals cURus	4000-76050-1100003
	Basic for tube mounting Modlight70 Pro	Spring clamp terminals cURus	4000-76070-1100003
	Basic Modlight70 Pro	M12 (8-pole), down	4000-76070-1300002
	Basic Modlight70 Pro	M12 (8-pole), sideways	4000-76070-1400002
	Basic with magnet base Modlight70 Pro	M12 (8-pole), sideways	4000-76070-1500002
Buzzer modules			Art-No.
	Buzzer module Modlight50 Pro		4000-76050-1100004
	Buzzer module Modlight70 Pro		4000-76070-1100004
LED modules			Art-No.
	LED module Modlight50 Pro	red	4000-76050-1011000
	LED module Modlight70 Pro	red	4000-76070-1011000
	LED module Modlight50 Pro	yellow	4000-76050-1012000
	LED module Modlight70 Pro	yellow	4000-76070-1012000

LIGHTING ELEMENTS

LED modules			Art-No.
	LED module Modlight50 Pro	green	4000-76050-1013000
	LED module Modlight70 Pro	green	4000-76070-1013000
	LED module Modlight50 Pro	blue	4000-76050-1014000
	LED module Modlight70 Pro	blue	4000-76070-1014000
	LED module Modlight50 Pro	clear	4000-76050-1015000
	LED module Modlight70 Pro	clear	4000-76070-1015000
Sets			Art-No.
	Modlight30 (green/yellow/red)		
	Connection module + LED modules	Connection cable L = 300 mm	4000-75324-5310000
	Connection module + LED modules	Connection M12 (on bottom)	4000-75330-5310000
	Modlight50 Pro (green/yellow/red)		
	Basic + LED modules		4000-76501-5310000
	Basic, buzzer + LED modules		4000-76502-5310000
	Modlight70 Pro (green/yellow/red)		
	Basic + LED modules + M12 (down)		4000-76704-5310000
	Basic, buzzer + LED modules + M12 (down)		4000-76705-5310000
	Modlight70 Pro (green/yellow/red)		
	Basic + LED modules + M12 (side)		4000-76712-5310000
	Basic, buzzer + LED modules + M12 (side)		4000-76713-5310000

Compact status lights			Art-No.
	Comlight57		
	red	Spring clamp terminal connection	4000-75057-1111000
	red	Connection M12 (on bottom)	4000-75057-1311000
	Comlight57		
	yellow	Spring clamp terminal connection	4000-75057-1112000
	yellow	Connection M12 (on bottom)	4000-75057-1312000
	Comlight57		
	green	Spring clamp terminal connection	4000-75057-1113000
	green	Connection M12 (on bottom)	4000-75057-1313000
	Comlight57		
	blue	Spring clamp terminal connection	4000-75057-1114000
	blue	Connection M12 (on bottom)	4000-75057-1314000
	Comlight57		
	clear	Spring clamp terminal connection	4000-75057-1115000
	clear	Connection M12 (on bottom)	4000-75057-1315000

LIGHTING ELEMENTS

Accessories Modlight30			Art-No.
	Adapter for wall assembly		
			4000-75030-0000903
Accessories Modlight50/70 Pro			Art-No.
	Bottom adapter for tube mounting		
		for Modlight50/70 Pro	4000-76070-0000901
	Adapter for tube/wall mounting		
		for Modlight50/70 Pro	4000-76070-0000902
	Adapter for wall assembly		
		for Modlight70 Pro	4000-76070-0000903
	Adapter for wall assembly		
	Cable outlet (on the bottom)	for Modlight70 Pro	4000-75070-0000904
	Aluminum tube		
	300 mm	for Modlight50/70 Pro	4000-76070-0000913
	800 mm	for Modlight50/70 Pro	4000-76070-0000918
	Magnet base		
	with M16 × 1.5 gland	Sideways cable entry point for Modlight50/70 Pro	4000-75070-0000920
	Magnet base		
	with M12 flange plug connector (8-pole)	Sideways connection for Modlight50/70 Pro	4000-75070-0000921

Accessories Modlight50/70 Pro			Art-No.
	Mounting adapter for strain relief	bottom or side exit	4000-75070-0000922
	Label plate transparent	for Modlight50 Pro	4000-76050-0000923
	transparent	for Modlight70 Pro	4000-76070-0000923
LED machine lights			Art-No.
	Modlight Illumix Slim Line		
	4 W - 24 V DC Connection M8	IP54 cULus	4000-75800-1715004
	8 W - 24 V DC Connection M8	IP54 cULus	4000-75800-1715008
	16 W - 24 V DC Connection M8	IP54 cULus	4000-75800-1715016
	24 W - 24 V DC Connection M8	IP54 cULus	4000-75800-1715024
	32 W - 24 V DC Connection M8	IP54 cULus	4000-75800-1715032
	Modlight Illumix Slim Line C		
	4 W - 24 V DC Connection M8 expandability	IP54 cULus	4000-75900-1715004
	8 W - 24 V DC Connection M8 expandability	IP54 cULus	4000-75900-1715008
	16 W - 24 V DC Connection M8 expandability	IP54 cULus	4000-75900-1715016
	24 W - 24 V DC Connection M8 expandability	IP54 cULus	4000-75900-1715024
	32 W - 24 V DC Connection M8 expandability	IP54 cULus	4000-75900-1715032
	Modlight Illumix Classic Line		
	6 W - 24 V DC Connection M12	IP67 cULus	4000-75801-1415006
	12 W - 24 V DC Connection M12	IP67 cULus	4000-75801-1415012
	18 W - 24 V DC Connection M12	IP67 cULus	4000-75801-1415018
	24 W - 24 V DC Connection M12	IP67 cULus	4000-75801-1415024

LIGHTING ELEMENTS

LED machine lights			Art-No.
	Modlight Illumix Classic Line C		
	6 W - 24 V DC Connection M12 expandability	IP67 cULus	4000-75901-1415006
	12 W - 24 V DC Connection M12 expandability	IP67 cULus	4000-75901-1415012
	18 W - 24 V DC Connection M12 expandability	IP67 cULus	4000-75901-1415018
	24 W - 24 V DC Connection M12 expandability	IP67 cULus	4000-75901-1415024
	Modlight Illumix Xtreme		
	27 W - 24 V DC Connection M12	IP69K cULus	4000-75827-1315000
	Modlight Illumix Xtreme Joint coupling		4000-75800-0000900



CONTROL DEVICES EMERGENCY STOP AND RESET PUSHBUTTONS

- Easy mounting
- Error-free connection
- Suitable for applications in the safety technology

FAST AND ERROR-FREE WIRING WITH STANDARD CABLES

The **EMERGENCY STOP** and **RESET** buttons from Murrelektronik can be integrated very easily in electronic installations

These control and monitoring devices can be connected via preconfigured M12 cables (4-, 5-, or 8-pole). A time-saving solution excluding the risk of faulty wirings. The 'Plug & Play' feature makes integrating the control devices in machines and systems faster.

42 mm variants



E-Stop button

- With M12 connection
- 4-, 5-, or 8-pole variants

Page 2.5.1



R-Button

- With M12 connection
- 4- or 8-pole variants

Page 2.5.1

72 mm variants



E-Stop button

- With M12 connection
- 4-, 5-, or 8-pole variants
- With/without protective collar

Page 2.5.1

Control devices			Art-No.
	E-Stop 42 2NC M12(4) M12 (4-pole)	Emergency-Stop button 2 NC (positively-opening)	69000
	E-Stop 42 2NC M12(5) M12 (5-pole)	Emergency-Stop button 2 NC (positively-opening)	69001
	E-Stop 42 2NC L M12(8) M12 (8-pole)	Emergency-Stop button 2 NC (positively-opening) LED-Ring can be lit	69002
	E-Stop / R-B 42 2NC 1NO M12(8) M12 (8-pole)	Emergency-Stop button 2 NC (positively-opening) 1 button (1 NO contact) Flat lens, transparent clear, red, yellow, green, blue	69003
	E-Stop / R-B 42 2NC 1NO L M12(8) M12 (8-pole)	Emergency-Stop button 2 NC (positively-opening) 1 button can be lit (1 NO contact) Flat lens, transparent clear, red, yellow, green, blue	69004
	R-Button / 42 1NO M12(4) M12 (4-pole)	1 button (1 NO contact) Flat lens, transparent clear, red, yellow, green, blue	69010
	R-Button / 42 1NO L M12(4) M12 (4-pole)	1 button can be lit (1 NO contact) Flat lens, transparent clear, red, yellow, green, blue	69013
	R-Button / 42 2NO M12(4) M12 (4-pole)	2 buttons (each 1 NO contact) Flat lens, transparent clear, red, yellow, green, blue	69011
	R-Button / 42 2NO L M12(8) M12 (8-pole)	2 buttons can be lit (each 1 NO contact) Flat lens, transparent clear, red, yellow, green, blue	69012
	E-Stop 72 2NC M12(4) M12 (4-pole)	Emergency-Stop button 2 NC (positively-opening)	55550
	E-Stop 72 2NC M12(5) M12 (5-pole)	Emergency-Stop button 2 NC (positively-opening)	69041
	E-Stop 72 2NC L M12(8) M12 (8-pole)	Emergency-Stop button 2 NC (positively-opening) LED-Ring can be lit	69043
	E-Stop 72P 2NC M12(4) M12 (4-pole)	Emergency-Stop button 2 NC (positively-opening) with protection shroud	69040
	E-Stop 72P 2NC M12(5) M12 (5-pole)	Emergency-Stop button 2 NC (positively-opening) with protection shroud	69042

CONTROL DEVICES

Accessories control devices			Art-No.
	T-coupler (SlimLine) M12 - M12 Male straight - female/male straight	for 8-pole Emergency-Stop button	7030-42622-0000000



MODLINK VARIO MEDIA CONNECTOR

- Easy mounting and dismounting without the need of tools
- Maximum robustness, all components being made of solid metal
- Electronics and media in one coupling

MAXIMUM MODULARITY IN INDUSTRIAL ENVIRONMENT

Modlink Vario is a modular media connector to couple and decouple pneumatics, fluids and electronics with just one system.

It is suitable for uncomplicated use on switch cabinets, tools and machine parts. Its unique feature is that it allows simultaneous non-drip coupling under pressure of electrical connections and media. The basic modules are available in 4, 6, 8 or 10 different models.

For each bore, the type of application, pneumatics, fluids or electronics, can be freely selected. This gives almost unlimited equipment options.

Base body



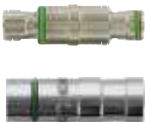
Round or rectangular

- Different locking types (union nut, lever)
- Connections made of aluminum or stainless steel
- Different types (e.g. 4, 6, 8, and 10 connections)

Page 2.6.1

An overview of this product range can be found in our online shop

Inserts



Inserts

- Inserts for power and media supply
- Inserts for the connection of different M12 connecting cables
- Pneumatics and fluid inserts for a variety of hose diameters

Page 2.6.2

MODULAR CONNECTION SYSTEMS (MODLINK VARIO)

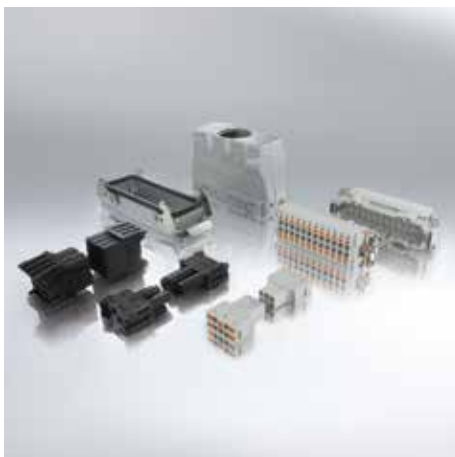
Stationary housing (round)			Art-No.
	4-way	Aluminium	M1850-040601
		Stainless Steel 1.4404 (V4A)	M1851-040601
	6-way	Aluminium	M1850-060601
		Stainless Steel 1.4404 (V4A)	M1851-060601
	8-way	Aluminium	M1850-080601
		Stainless Steel 1.4404 (V4A)	M1851-080601
	10-way	Aluminium	M1850-100601
		Stainless Steel 1.4404 (V4A)	M1851-100601
Mobile housing (round)			Art-No.
	4-way	Aluminium	M1850-040602
		Stainless Steel 1.4404 (V4A)	M1851-040602
	6-way	Aluminium	M1850-060602
		Stainless Steel 1.4404 (V4A)	M1851-060602
	8-way	Aluminium	M1850-080602
		Stainless Steel 1.4404 (V4A)	M1851-080602

MODULAR CONNECTION SYSTEMS (MODLINK VARIO)

Mobile housing (round)			Art-No.
	10-way	Aluminium	M1850-100602
		Stainless Steel 1.4404 (V4A)	M1851-100602
Stationary housing (rectangular)			Art-No.
	8-way	Aluminium	M1856-24080611
Mobile housing (rectangular)			Art-No.
	8-way	Aluminium	M1856-24080612
Inserts Media (Stationary housing)			Art-No.
	AD4 without shut-off	Brass, nickel plated	MVT1821-062406021
	AD6 without shut-off	Brass, nickel plated	MVT1821-062406041
	AD8 without shut-off	Brass, nickel plated	MVT1821-062406061
	AD4 with shut-off	Brass, nickel plated	MVT1820-062406021
	AD6 with shut-off	Brass, nickel plated	MVT1820-062406041
	AD8 with shut-off	Brass, nickel plated	MVT1820-062406061
	AD6 drip-free	Brass, dezincification-resistant	MVT1825-262406041
	AD8 drip-free	Brass, dezincification-resistant	MVT1825-262406061

MODULAR CONNECTION SYSTEMS (MODLINK VARIO)

Inserts Media (Mobile housing)			Art-No.
	AD4 without shut-off	Brass, nickel plated	MVT1821-062406022
	AD6 without shut-off	Brass, nickel plated	MVT1821-062406042
	AD8 without shut-off	Brass, nickel plated	MVT1821-062406062
	AD4 with shut-off	Brass, nickel plated	MVT1820-062406022
	AD6 with shut-off	Brass, nickel plated	MVT1820-062406042
	AD8 with shut-off	Brass, nickel plated	MVT1820-062406062
	AD6 drip-free	Brass, dezincification-resistant	MVT1825-262406042
	AD8 drip-free	Brass, dezincification-resistant	MVT1825-262406062
Inserts Electro (Stationary housing)			Art-No.
	M12, 5-pole	A-coded	7000-42114-0000000
	M12, 4-pole	B-coded	7000-44114-0000000
	M12, 6-pole	A-coded	7000-46114-0000000
	M12, 8-pole	A-coded	7000-48114-0000000
	M12, 4-pole	D-coded	7000-44624-0000000
Inserts Electro (Mobile housing)			Art-No.
	M12, 5-pole	A-coded	7000-42116-0000000
	M12, 4-pole	B-coded	7000-44116-0000000
	M12, 6-pole	A-coded	7000-46116-0000000
	M12, 4-pole	A-coded	7000-48116-0000000
	M12, 4-pole	D-coded	7000-44586-0000000



MODLINK HEAVY HEAVY DUTY CONNECTOR

- Maximum variety
- High tightness
- Worldwide use

MAXIMUM MODULARITY IN INDUSTRIAL ENVIRONMENT

The heavy-duty plug connectors of the Modlink Heavy series from Murrelektronik guarantee secure transmission of signals, energy, data and pneumatics - even in the roughest of industrial environments. They consistently protect interfaces from water, dirt and high mechanical loads.

We provide a broad range of products. For our customers, we offer a matching connector for every requirement - Flexibility in the configuration of the plug connectors is our great strength. Thus, for housings, we offer as many as four different types, each in seven different sizes. They can be locked, as needed, by three different methods. As for contact inserts, you can choose from a large number of fixed-pole or modular versions. Our offer of accessories is exactly tuned to the heavy-duty plug connectors from Murrelektronik and rounded off to the last detail.

Housings



- 4 housing types
- 7 different sizes
- 3 locking types
- Outgoing cables in all directions

Page 2.7.1

An overview of this product range can be found in our online shop

Inserts



- Series A, D, E, EE, K, HSE, HV and Q
- 3 different connection types

Page 2.7.3

An overview of this product range can be found in our online shop

Frames and modules



- 4 frame sizes
- Modules for signals, energy, data and pneumatics

Page 2.7.5

An overview of this product range can be found in our online shop

HEAVY DUTY CONNECTORS (MODLINK HEAVY)

Hood			Art-No.
	B6 Form Looking techniques Cable outlet Threaded hole	low Single locking lever straight M20	70MH-GTDNL-A01B000
	B6 Form Looking techniques Cable outlet Threaded hole	low Single locking lever laterally M20	70MH-GTDNL-A02B000
	B10 Form Looking techniques Cable outlet Threaded hole	low Double locking lever straight M25	70MH-GTENQ-A01C000
	B10 Form Looking techniques Cable outlet Threaded hole	low Double locking lever laterally M25	70MH-GTENQ-A02C000
	B16 Form Looking techniques Cable outlet Threaded hole	high Double locking lever straight M32	70MH-GTFHQ-A01D000
	B16 Form Looking techniques Cable outlet Threaded hole	high Double locking lever laterally M32	70MH-GTFHQ-A02D000
	B24 Form Looking techniques Cable outlet Threaded hole	high Double locking lever straight M32	70MH-GTGHQ-A01D000

HEAVY DUTY CONNECTORS (MODLINK HEAVY)

Hood			Art-No.
	B24		
	Form Looking techniques Cable outlet Threaded hole	high Double locking lever laterally M32	70MH-GTGHQ-A02D000
Bulkhead mounted housing			Art-No.
	B6		
	Looking techniques Protection	Single locking lever IP65	70MH-GADNL-B000000
	B10		
	Looking techniques Protection	Double locking lever IP65	70MH-GAENQ-B000000
	B16		
	Looking techniques Protection	Double locking lever IP65	70MH-GAFNQ-B000000
	B24		
	Looking techniques Protection	Double locking lever IP65	70MH-GAGNQ-B000000
Surface mounted housing			Art-No.
	B6		
	Form Looking techniques Cable outlet Threaded hole	low Single locking lever laterally M20	70MH-GSDNL-B01B000
	B10		
	Form Looking techniques Cable outlet Threaded hole	low Double locking lever laterally M25	70MH-GSENL-B01C000
	B10		
	Form Looking techniques Cable outlet Threaded hole	high Double locking lever double-sided M25	70MH-GSEHQ-B02C000

HEAVY DUTY CONNECTORS (MODLINK HEAVY)

Surface mounted housing			Art-No.
	B16		
	Form Looking techniques Cable outlet Threaded hole	high Double locking lever laterally M32	70MH-GSFHQ-B01D000
	B24		
	Form Looking techniques Cable outlet Threaded hole	high Double locking lever laterally M32	70MH-GSGHQ-B01D000
	Form Looking techniques Cable outlet Threaded hole	high Double locking lever double-sided M32	70MH-GSGHQ-B02D000
Coupling housing			Art-No.
	B10		
	Form Looking techniques Cable outlet Threaded hole	low Double locking lever straight M25	70MH-GKENQ-B01C000
	B16		
	Form Looking techniques Cable outlet Threaded hole	high Double locking lever straight M32	70MH-GKFHQ-B01D000
	B24		
	Form Looking techniques Cable outlet Threaded hole	high Double locking lever straight M32	70MH-GKGHQ-B01D000
Fixed-pole inserts			Art-No.
	B6		
	Type No. of poles Connection E-Series	Male 6 Push-In terminals	70MH-ES006-DP03020

HEAVY DUTY CONNECTORS (MODLINK HEAVY)

Fixed-pole inserts			Art-No.
	B10 Type No. of poles Connection E-Series	Male 10 Push-In terminals	70MH-ES010-EP03020
	B16 Type No. of poles Connection E-Series	Male 16 Push-In terminals	70MH-ES016-FP03020
	B24 Type No. of poles Connection E-Series	Male 24 Push-In terminals	70MH-ES024-GP03020
	B6 Type No. of poles Connection E-Series	Female 6 Push-In terminals	70MH-EB006-DP03020
	B10 Type No. of poles Connection E-Series	Female 10 Push-In terminals	70MH-EB010-EP03020
	B16 Type No. of poles Connection E-Series	Female 16 Push-In terminals	70MH-EB016-FP03020
	B24 Type No. of poles Connection E-Series	Female 24 Push-In terminals	70MH-EB024-GP03020

HEAVY DUTY CONNECTORS (MODLINK HEAVY)

Frame			Art-No.
	Male B6	for 2 modules	70MH-RD02S-0000000
	Male B10	for 3 modules	70MH-RE03S-0000000
	Male B16	for 4 modules	70MH-RF04S-0000000
	Male B24	for 6 modules	70MH-RG06S-0000000
	Female B6	for 2 modules	70MH-RD02B-0000000
	Female B10	for 3 modules	70MH-RE03B-0000000
	Female B16	for 4 modules	70MH-RF04B-0000000
	Female B24	for 6 modules	70MH-RG06B-0000000
Blind module			Art-No.
	Male/female		70MH-MAA10-0000000

HEAVY DUTY CONNECTORS (MODLINK HEAVY)

Module 1-pole (axial screw connection)		Art-No.	
	Male		
	Operating voltage	1 000 V AC/DC	70MH-MAB2A-0010707
	Operating current	200 A	
	No. of poles	1	
	Female		
	Operating voltage	1 000 V AC/DC	70MH-MAC2A-0010707
	Operating current	200 A	
	No. of poles	1	
PE modules 1-pole (axial screw connection)		Art-No.	
	Male		
	Operating current	200 A	70MH-MAQ2A-0010707
	No. of poles	1 (PE)	
	Female		
	Operating current	200 A	70MH-MAR2A-0010707
	No. of poles	1 (PE)	
Module 2-pole (axial screw connection)		Art-No.	
	Male		
	Operating voltage	1 000 V AC/DC	70MH-MAB1A-0020703
	Operating current	40 A	
	No. of poles	2	
	Operating voltage	1 000 V AC/DC	70MH-MAB1A-0020706
	Operating current	70 A	
	No. of poles	2	
	Operating voltage	1 000 V AC/DC	70MH-MAB2A-0020704
	Operating current	100 A	
	No. of poles	2	
	Female		
	Operating voltage	1 000 V AC/DC	70MH-MAC1A-0020703
	Operating current	40 A	
	No. of poles	2	
	Operating voltage	1 000 V AC/DC	70MH-MAC1A-0020706
	Operating current	70 A	
	No. of poles	2	
	Operating voltage	1 000 V AC/DC	70MH-MAC2A-0020704
	Operating current	100 A	
	No. of poles	2	

HEAVY DUTY CONNECTORS (MODLINK HEAVY)

Modules 2-pole (Crimp)			Art-No.
	Male		
	Operating voltage Operating current No. of poles	1 000 V AC/DC 100 A 2	70MH-MAF2C-0020704
	Female		
	Operating voltage Operating current No. of poles	1 000 V AC/DC 100 A 2	70MH-MAG2C-0020704
Modules 2-pole shielded (Crimp)			Art-No.
	Male		
	No. of poles for coax- and 4-pole contact carrier	2	70MH-MAD2C-0020101
	Female		
	No. of poles for coax- and 4-pole contact carrier	2	70MH-MAE2C-0020101
Modules 3 pole (crimp)			Art-No.
	Male		
	Operating voltage Operating current No. of poles	690 V AC/DC (PIN - PIN); 400 V AC/DC (PIN - PE) 40 A 3	70MH-MAB1C-0030903
	Female		
	Operating voltage Operating current No. of poles	690 V AC/DC (PIN - PIN); 400 V AC/DC (PIN - PE) 40 A 3	70MH-MAC1C-0030903
Modules 4 pole (crimp)			Art-No.
	Male		
	Operating voltage Operating current No. of poles	830 V AC/DC 40 A 4	70MH-MAB1C-0040603

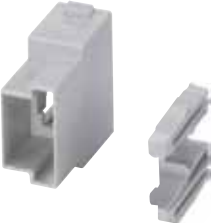
HEAVY DUTY CONNECTORS (MODLINK HEAVY)

Modules 4 pole (crimp)			Art-No.
	Female		
	Operating voltage	830 V AC/DC	70MH-MAC1C-0040603
	Operating current	40 A	
	No. of poles	4	
Modules 5 pole (push-in)			Art-No.
	Male		
	Operating voltage	400 V AC/DC	70MH-MAB1P-0050402
	Operating current	16 A	
	No. of poles	5	
	Female		
	Operating voltage	400 V AC/DC	70MH-MAC1P-0050402
	Operating current	16 A	
	No. of poles	5	
Modules 6 pole (crimp)			Art-No.
	Male		
	Operating voltage	500 V AC/DC	70MH-MAB1C-0060502
	Operating current	16 A	
	No. of poles	6	
	Female		
	Operating voltage	500 V AC/DC	70MH-MAC1C-0060502
	Operating current	16 A	
	No. of poles	6	
Modules 8-pole (Crimp)			Art-No.
	Male		
	Operating voltage	400 V AC/DC	70MH-MAB1C-0080402
	Operating current	16 A	
	No. of poles	8	
	Female		
	Operating voltage	400 V AC/DC	70MH-MAC1C-0080402
	Operating current	16 A	
	No. of poles	8	

HEAVY DUTY CONNECTORS (MODLINK HEAVY)

Modules 12 pole (crimp)		Art-No.	
	Male		
	Operating voltage	400 V AC/DC (PIN - PIN); 250 V AC/DC (PIN - PE)	70MH-MAB1C-0120801
	Operating current	10 A	
	No. of poles	12	
	Female		
	Operating voltage	400 V AC/DC (PIN - PIN); 250 V AC/DC (PIN - PE)	70MH-MAC1C-0120801
	Operating current	10 A	
	No. of poles	12	
Modules 17-pole (Crimp)		Art-No.	
	Male		
	Operating voltage	160 V AC/DC	70MH-MAB1C-0170201
	Operating current	10 A	
	No. of poles	17	
	Female		
	Operating voltage	160 V AC/DC	70MH-MAC1C-0170201
	Operating current	10 A	
	No. of poles	17	
Modules 20-pole (Crimp)		Art-No.	
	Male		
	Operating voltage	500 V AC/DC	70MH-MAB1C-0200502
	Operating current	16 A	
	No. of poles	20	
	Female		
	Operating voltage	500 V AC/DC	70MH-MAC1C-0200502
	Operating current	16 A	
	No. of poles	20	
Modules GIGABIT		Art-No.	
	Male		
	Transfer parameters	CAT6A	70MH-MAH1C-0000000

HEAVY DUTY CONNECTORS (MODLINK HEAVY)

Modules GIGABIT			Art-No.
	Female		
	Transfer parameters	CAT6A	70MH-MAL1C-0000000
Modules RJ45			Art-No.
	Male		
	Transfer parameters	CAT6A (IEC 60512-27-100:2008, TIA-568-C.2:2009)	70MH-MAL10-0000000
	Male		
	Transfer parameters	CAT5e	70MH-MAL10-0010000
	Male		
	Insert Transfer parameters	for 70MH-MAL10-0010000 CAT5	70MH-ZRJ45-1000000
	Male		
	Insert Transfer parameters	for 70MH-MAL10-0010000 CAT5	70MH-ZRJ45-2000000
	Female		
	Transfer parameters	CAT6A (IEC 60512-27-100:2008, TIA-568-C.2:2009)	70MH-MAM10-0000000
Modules pneumatic			Art-No.
	Male/female		
	2-pole	Internal hose Ø 6 mm	70MH-MAP10-0020000
	3-pole	Internal hose Ø 1.6, 3, 4 mm	70MH-MAP10-0030000



3

CONNECTION TECHNOLOGY

3

CONNECTION TECHNOLOGY

M8 Round Plug Connectors	3.1
M12 Round Plug Connectors	3.2
T-couplers M8, M12, 7/8"	3.3
Flange Connectors	3.4
MQ12 Round Plug Connectors	3.5
Fieldbus Connectors	3.6
Plug Connectors for Food & Beverage	3.7
Mobile Applications	3.8
M23 Round Plug Connectors	3.9
Round Plug Connectors Power	3.10
TPE Series – The North American standard	3.11
Valve Connectors	3.12
Technical Appendix Cables	3.13



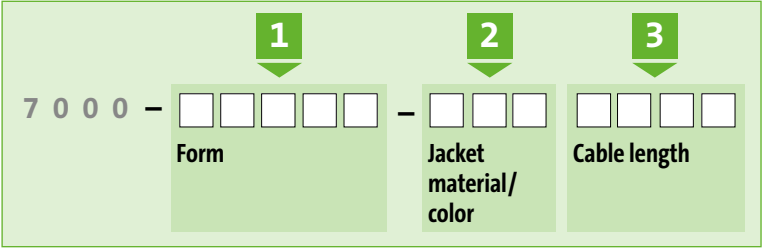
MURRELEKTRONIK'S CONNECTORS

ORDERING SYSTEM

Our concept for your individual application solutions.
Our connector range is a modular system that you can customize for your application.

ARTICLE NUMBER SYSTEM

The article number consists of three blocks: form, jacket material/color and cable length.



EXAMPLE

Block 1:	Form	1 2 4 0 1	M12 female 90° with LED, 4-pole
Block 2:	Jacket material/color	0 3 3	PUR (UL/CSA), yellow
Block 3:	Cable length	0 3 0 0	3 m

The resulting part number is how you will order your connector.

7 0 0 0 - 1 2 4 0 1 - 0 3 3 0 3 0 0

INTERNATIONAL APPROVALS FOR FLEXIBLE USE WORLDWIDE



DID YOU KNOW?

Every Murrelektronik connector is 100% tested.

This means:

- Electrically tested
- High voltage tested
- Performance tested
- Pin assignment tested
- Short circuit tested
- Visually controlled

YOUR BENEFITS

- **Modular connector program**
 - Find your connector quickly
- **International approvals**
 - Products approved for your market
- **Guaranteed quality**
 - 100% tested
 - All contacts gold-plated
 - High IP67 protection as standard
 - Shock and vibration resistant
- **Worldwide and industry wide**
 - Benefit from our expertise and our cross-industry expertise

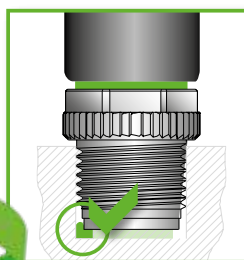


AUDIBLY SEALED – SIMPLE AND SAFE

Our torque wrench connects Murrelektronik M8-, M12-, 7/8" and M23 connectors simply and tightly, leaving no room for error.



click
click
click



M8	0.4 Nm
M12	0.6 Nm
7/8"	1.5 Nm
M23	2.0 Nm

Just turn until
you hear the
click.

No more
sore fingers!

STANDARD CABLE TYPES FOR YOUR APPLICATION



WIDE RANGE MEETS YOUR REQUIREMENTS

- **4 standard cable types for your application solution**
 - Always the right cable
- **3 cable colors (yellow, gray and black)**
 - The color you need for your industry
- **Meets the highest quality requirements**
 - Certified, application approved and successfully tested with many aggressive media (oil and lubricants)



Cable Types		PVC	PUR/PVC	PUR	PUR Welding Spark Resistant
Cable Standard		★	★★	★★★	★★★★★
Properties*	Flame retardant	■	■	■	■
	Resistant to chemicals	■	■	■	■
	Resistant to cleaning agents (Ecolab)	■			
	Resistant to oil and lubricants		■	■	■
	Suitable for use in Ctracks**		2 million	5 million	10 million
	Suitable for robotic applications			±180°	±360°
	Welding spark resistant				■
	UV resistant			■	■
	Halogen-free			■	■
	Varying temperatures	-5...+80 °C	-5...+80 °C	-25...+80 °C	-25...+90 °C
	UL/CSA approvals	■		■	■
	Compliant with NFPA 79 Edition 2012	■		■	
Application Examples		Packaging machines Food & Beverage Assembly lines Production lines	Packaging machines Handling machines Assembly lines Production lines	Machine tools Swivel tables Metal cutting	Machine tools Industrial robots Metal cutting High performance C-tracks

* The properties of some cable types may differ from this data.

** Max. 3.3 m/s at 5 m horizontal travel distance and max. acceleration of 5 m/s².



M8 ROUND PLUG CONNECTORS

SMALL, LIGHT, MEETS YOUR NEEDS

- Extensive selection
- Tested technology
- Modern design

M8 REDESIGN – MORE MODELS, & NEW DESIGN

M8's redesign introduces new innovations. We completely redesigned all Murrelektronik's molded M8 connectors. They now have a new look and have been upgraded. We also significantly expanded our range of shielded M8 connectors.

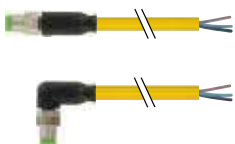
Features:

- Durable PUR molding
- Gold plated contacts
- Small dimensions and improved feel
- Corrugated tubing connection
- Hex screw with thread (SW9)

Huge Variety:

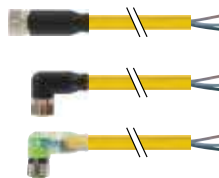
- Male/female, straight/90°, 3-pole/4-pole
- Shielded and unshielded connectors
- 3 standard colors, 4 standard cable types
- Cables, open ended wires, T-couplers, adapters, models with LED

With Open Ended Wires



M8 male
• Straight
• 90°

Page 3.1.1



M8 female
• Straight
• 90°
• 90° with LED

Page 3.1.3



M8 male (shielded)
• Straight
• 90°

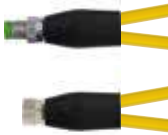
Page 3.1.6



M8 female (shielded)
• Straight
• 90°

Page 3.1.8

Connection Cables

		M8 male • Straight	M8 female • Straight • 90° • 90° with LED
		Y connector M8 • Male straight Y connector M8 • Female straight	M8 female • Straight M8 male • Straight
		M8 male (shielded) • Straight	M8 female (shielded) • Straight • 90°

Field-Wireable

	Insulation Displacement Technology (IDC) 0.14...0.34 mm²	M8 male/female • Straight
	Screw terminals	M8 male/female • Straight
	Screw terminals (shielded)	M8 male/female • Straight

M8 ROUND PLUG CONNECTORS

With open ended wires

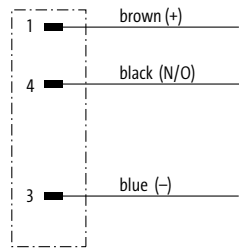
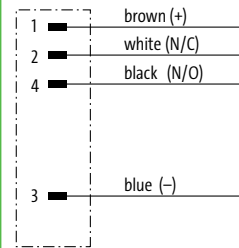
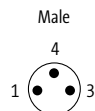
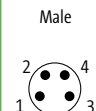
Male

straight



Approvals:  

* only for products with UL/CSA approved cable

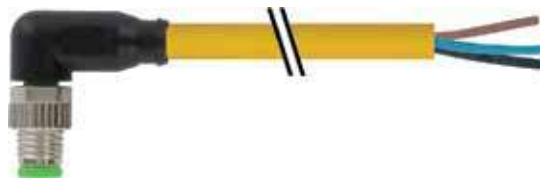
1	Form	08001			me		08011			me			
	Type	3-pole						4-pole					
	Circuit diagram												
2	Contact layout												
	Cable Type	Jacket Color						Jacket Color					
	Wire diameter 0.25 mm²	yellow	gray	black	yellow	gray	black	yellow	gray	black			
	PVC (UL/CSA)	010	210	610	011	211	611	011	211	611			
	PUR/PVC (UL/CSA)	020	220	620	021	221	621	021	221	621			
	PUR (UL/CSA), robots/C-tracks	030	230	630	031	231	631	031	231	631			
	PUR (UL/CSA), welding spark	050	250	650	051	251	651	051	251	651			
3	Cable Length												
	1.5 m	0150											
	3.0 m	0300											
	5.0 m	0500											
	7.5 m	0750											
	10.0 m	1000											
Technical Data													
	Operating voltage	max. 50 V AC/60 V DC											
	Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)											
	Temperature range	-25...+85 °C, depending on cable quality											
Article No.													
	The composition of your article number is explained on page 3.1.i	7 0 0 0			— — — —			— — — —					
		7 0 0 5			M8 Lite (plastic hexagonal screw) on request								
		1 Form			2 Cable Type			3 Cable Length					
Notes													
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.											

M8 ROUND PLUG CONNECTORS

With open ended wires

Male

90°



* only for products with UL/CSA approved cable

1	Form	08 021			me		08 031			me							
	Type	3-pole						4-pole									
	Circuit diagram																
Contact layout																	
2	Cable Type	Jacket Color						Jacket Color									
	Wire diameter 0.25 mm²	yellow	gray	black	yellow	gray	black	yellow	gray	black							
	PVC (UL/CSA)	010	210	610	011	211	611	011	211	611							
	PUR/PVC (UL/CSA)	020	220	620	021	221	621	021	221	621							
	PUR (UL/CSA), robots/C-tracks	030	230	630	031	231	631	031	231	631							
	PUR (UL/CSA), welding spark	050	250	650	051	251	651	051	251	651							
3	Cable Length																
	1.5 m	0150															
	3.0 m	0300															
	5.0 m	0500															
	7.5 m	0750															
	10.0 m	1000															
Technical Data																	
Operating voltage		max. 50 V AC/60 V DC															
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)															
Temperature range		-25...+85 °C, depending on cable quality															
Article No.																	
The composition of your article number is explained on page 3.1.i		7 0 0 0 - -															
		7 0 0 5 M8 Lite (plastic hexagonal screw) on request															
		1			Form			2		Cable Type			3		Cable Length		
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.															

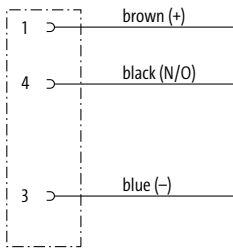
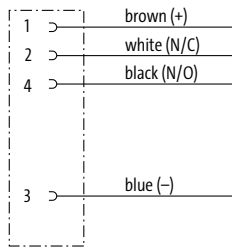
M8 ROUND PLUG CONNECTORS

With open ended wires

Female
straight



Approvals:  
 * only for products with UL/CSA approved cable

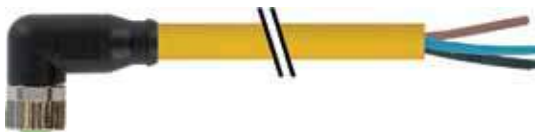
1	Form	08041			me x		08061			me x			
	Type	3-pole						4-pole					
	Circuit diagram												
2	Cable Type	Jacket Color						Jacket Color					
	Wire diameter 0.25 mm²	yellow	gray	black	yellow	gray	black	yellow	gray	black			
	PVC (UL/CSA)	010	210	610	011	211	611	011	211	611			
	PUR/PVC (UL/CSA)	020	220	620	021	221	621	021	221	621			
	PUR (UL/CSA), robots/C-tracks	030	230	630	031	231	631	031	231	631			
	PUR (UL/CSA), welding spark	050	250	650	051	251	651	051	251	651			
3	Cable Length												
	1.5 m	0150											
	3.0 m	0300											
	5.0 m	0500											
	7.5 m	0750											
	10.0 m	1000											
Technical Data													
	Operating voltage	max. 50 V AC/60 V DC											
	Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)											
	Temperature range	-25...+85 °C, depending on cable quality											
Article No.													
	The composition of your article number is explained on page 3.1.i	7 0 0 0 - -											
		7 0 0 5 M8 Lite (plastic hexagonal screw) on request											
		1			Form			2		Cable Type			
		3			Cable Length								
Notes													
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.											

M8 ROUND PLUG CONNECTORS

With open ended wires

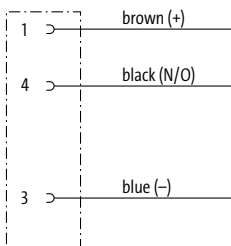
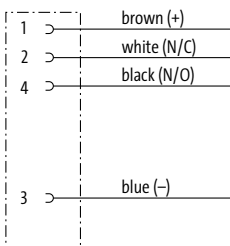
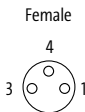
Female

90°



Approvals:  

* only for products with UL/CSA approved cable

1	Form	08081			me			08101			me								
	Type	3-pole						4-pole											
	Circuit diagram																		
2	Contact layout																		
	Cable Type	Jacket Color						Jacket Color											
	Wire diameter 0.25 mm²	yellow	gray	black	yellow	gray	black	yellow	gray	black									
	PVC (UL/CSA)	010	210	610	011	211	611	011	211	611									
	PUR/PVC (UL/CSA)	020	220	620	021	221	621	021	221	621									
	PUR (UL/CSA), robots/C-tracks	030	230	630	031	231	631	031	231	631									
	PUR (UL/CSA), welding spark	050	250	650	051	251	651	051	251	651									
3	Cable Length																		
	1.5 m	0150																	
	3.0 m	0300																	
	5.0 m	0500																	
	7.5 m	0750																	
	10.0 m	1000																	
Technical Data																			
Operating voltage		max. 50 V AC/60 V DC																	
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)																	
Temperature range		-25...+85 °C, depending on cable quality																	
Article No.																			
The composition of your article number is explained on page 3.1.i		7 0 0 0 0 - -																	
		7 0 0 5 M8 Lite (plastic hexagonal screw) on request																	
		1			Form			2			Cable Type			3			Cable Length		
Notes																			
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.																	

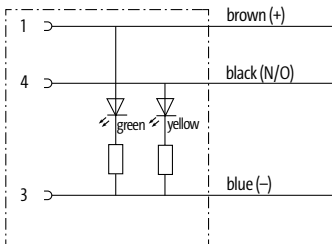
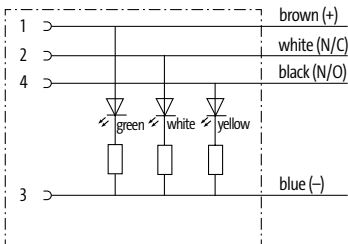
M8 ROUND PLUG CONNECTORS

With open ended wires

Female
90° with LED



Approvals:  
* only for products with UL/CSA approved cable

1 Form		08121	me	08141
Type		3-pole with 2 × LED (PNP) (NPN) on request		4-pole with 3 × LED (PNP) (NPN) on request
Circuit diagram				
Contact layout		Female 		Female 
2 Cable Type		Jacket Color		
Wire diameter 0.25 mm²		yellow	gray	black
PVC (UL/CSA)		010	210	610
PUR/PVC (UL/CSA)		020	220	620
PUR (UL/CSA), robots/C-tracks		030	230	630
PUR (UL/CSA), welding spark		050	250	650
3 Cable Length		Jacket Color		
1.5 m		0150		
3.0 m		0300		
5.0 m		0500		
7.5 m		0750		
10.0 m		1000		
Technical Data		Operating voltage		
		24 V DC ±25%		
		Protection		
		IP65, IP66K, IP67 inserted and tightened (EN 60529)		
		Temperature range		
		-25...+85 °C, depending on cable quality		
Article No.				
The composition of your article number is explained on page 3.1.i		7 0 0 0	-	-
		7 0 0 5	M8 Lite (plastic hexagonal screw) on request	
		1	Form	2 Cable Type
		3	Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.		

M8 ROUND PLUG CONNECTORS

With open ended wires

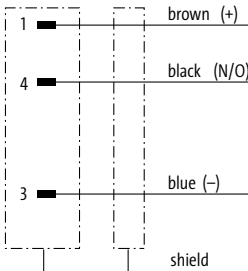
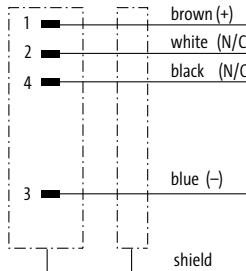
Male

straight



Approvals:  

* only for products with UL/CSA approved cable

1	Form	08701	08711
	Type	3-pole, shielded	4-pole, shielded
2	Circuit diagram		
	Contact layout	Male 	Male 
3	Cable Type	Jacket Color	
	Wire diameter 0.34 mm² PVC (UL/CSA) PUR (UL/CSA), robots/C-tracks	gray 200 240	black 600 640
3	Cable Length	Jacket Color	
	1.5 m 3.0 m 5.0 m 7.5 m 10.0 m	0150 0300 0500 0750 1000	gray 201 241
3	Technical Data	Jacket Color	
	Operating voltage Protection Temperature range	max. 50 V AC/60 V DC IP65, IP66K, IP67 inserted and tightened (EN 60529) -25...+85 °C, depending on cable quality	black 601 641
3	Article No.	Jacket Color	
	The composition of your article number is explained on page 3.1.i	7 0 0 0	1 Form
3	Article No.	Jacket Color	
	The composition of your article number is explained on page 3.1.i	2 Cable Type	3 Cable Length
3	Notes	Jacket Color	
	Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.		

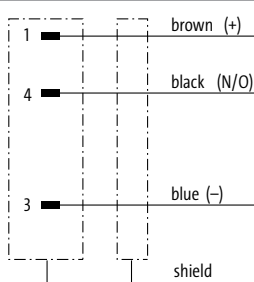
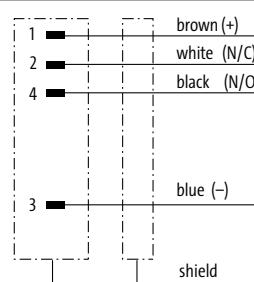
M8 ROUND PLUG CONNECTORS

With open ended wires

Male
90°



Approvals:  
* only for products with UL/CSA approved cable

1 Form		08721	08731
Type		3-pole, shielded	4-pole, shielded
Circuit diagram			
Contact layout		Male 	Male 
2 Cable Type		Jacket Color	
Wire diameter 0.34 mm²		gray	black
PVC (UL/CSA)		200	600
PUR (UL/CSA), robots/C-tracks		240	640
3 Cable Length		Jacket Color	
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data		Jacket Color	
Operating voltage		max. 50 V AC/60 V DC	
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.		Jacket Color	
The composition of your article number is explained on page 3.1.i		7 0 0 0	- - - - -
		1 Form	2 Cable Type
		3 Cable Length	
Notes		Jacket Color	
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

M8 ROUND PLUG CONNECTORS

With open ended wires

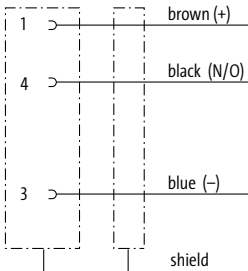
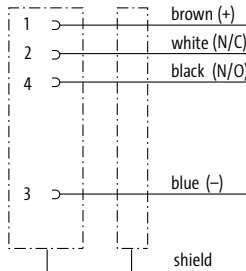
Female

straight



Approvals:  

* only for products with UL/CSA approved cable

1	Form	08741	08761
	Type	3-pole, shielded	4-pole, shielded
2	Circuit diagram		
	Contact layout	Female 	Female 
3	Cable Type	Jacket Color	
	Wire diameter 0.34 mm ² PVC (UL/CSA) PUR (UL/CSA), robots/C-tracks	gray 200 240	black 600 640
3	Cable Length	Jacket Color	
	1.5 m 3.0 m 5.0 m 7.5 m 10.0 m	0150 0300 0500 0750 1000	
3	Technical Data		
	Operating voltage Protection Temperature range	max. 50 V AC/60 V DC IP65, IP66K, IP67 inserted and tightened (EN 60529) -25...+85 °C, depending on cable quality	
3	Article No.		
	The composition of your article number is explained on page 3.1.i	7 0 0 0 - - - - -	
3	Notes	1 Form	2 Cable Type
		3 Cable Length	
3	Notes	Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

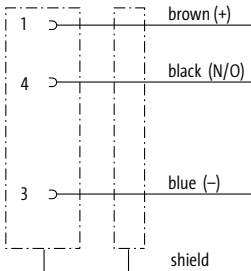
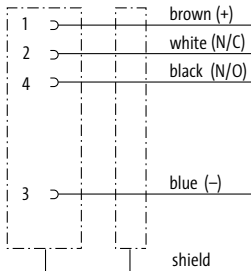
M8 ROUND PLUG CONNECTORS

With open ended wires

Female
90°



Approvals:  
 * only for products with UL/CSA approved cable

1 Form		08781	08801
Type		3-pole, shielded	4-pole, shielded
Circuit diagram			
Contact layout		Female 	Female 
2 Cable Type		Jacket Color	
Wire diameter 0.34 mm²		gray	black
PVC (UL/CSA)		200	600
PUR (UL/CSA), robots/C-tracks		240	640
3 Cable Length		Jacket Color	
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data		Jacket Color	
Operating voltage		max. 50 V AC/60 V DC	
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.		Jacket Color	
The composition of your article number is explained on page 3.1.i		7 0 0 0	- - - - -
		1 Form	2 Cable Type
		3 Cable Length	
Notes		Jacket Color	
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

M8 ROUND PLUG CONNECTORS

Connection cables

– M8 - M8



* only for products with UL/CSA approved cable

Male

straight

Female

straight



1	Form	88001			me✖			88011			me✖																							
Type		3-pole											4-pole																					
Circuit diagram																																		
Contact layout																																		
2	Cable Type	Jacket Color											Jacket Color																					
Wire diameter 0.25 mm²		yellow			gray			black			yellow			gray			black																	
PVC (UL/CSA)		010			210			610			011			211			611																	
PUR/PVC (UL/CSA)		020			220			620			021			221			621																	
PUR (UL/CSA), robots/C-tracks		030			230			630			031			231			631																	
PUR (UL/CSA), welding spark		050			250			650			051			251			651																	
3	Cable Length																																	
0.3 m		0030																																
0.6 m		0060																																
1.0 m		0100																																
1.5 m		0150																																
2.0 m		0200																																
Technical Data																																		
Operating voltage		max. 50 V AC/60 V DC																																
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)																																
Temperature range		-25...+85 °C, depending on cable quality																																
Article No.																																		
The composition of your article number is explained on page 3.1.i		<u>7</u> <u>0</u> <u>0</u> <u>0</u>											<u>7</u> <u>0</u> <u>0</u> <u>5</u>																					
		M12 Lite (plastic hexagonal screw) on request																																
		1 Form											2 Cable Type											3 Cable Length										
Notes																																		
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.																																

M8 ROUND PLUG CONNECTORS

Connection cables

– M8 - M8

Male

straight

Female

90°



Approvals:  

* only for products with UL/CSA approved cable

1	Form	88021	me	88031	me		
	Type	3-pole			4-pole		
	Circuit diagram						
Contact layout							
2	Cable Type	Jacket Color			Jacket Color		
	Wire diameter 0.25 mm²	yellow	gray	black	yellow	gray	black
	PVC (UL/CSA)	010	210	610	011	211	611
	PUR/PVC (UL/CSA)	020	220	620	021	221	621
	PUR (UL/CSA), robots/C-tracks	030	230	630	031	231	631
	PUR (UL/CSA), welding spark	050	250	650	051	251	651
3	Cable Length						
	0.3 m	0030					
	0.6 m	0060					
	1.0 m	0100					
	1.5 m	0150					
	2.0 m	0200					
Technical Data							
Operating voltage		max. 50 V AC/60 V DC					
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)					
Temperature range		-25...+85 °C, depending on cable quality					
Article No.							
The composition of your article number is explained on page 3.1.i		7000 - -					
		7005 M8 Lite (plastic hexagonal screw) on request					
		1	Form	2	Cable Type	3	Cable Length
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.					

M8 ROUND PLUG CONNECTORS

Connection cables

– M8 - M8

Approvals:  

* only for products with UL/CSA approved cable

Male

straight

Female

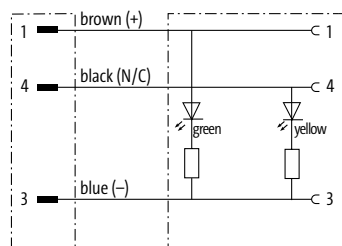
90° with LED



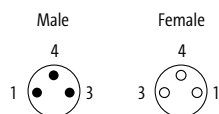
1 Form 88041 mex

Type 3-pole with 2 × LED (PNP)
(NPN) on request

Circuit diagram



Contact layout



2 Cable Type Jacket Color

Wire diameter 0.25 mm²	yellow	gray	black
PVC (UL/CSA)	010	210	610
PUR/PVC (UL/CSA)	020	220	620
PUR (UL/CSA), robots/C-tracks	030	230	630
PUR (UL/CSA), welding spark	050	250	650

3 Cable Length

0.3 m	0030
0.6 m	0060
1.0 m	0100
1.5 m	0150
2.0 m	0200

Technical Data

Operating voltage	24 V DC ±25%
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

8 8 0 4 1

-

7 0 0 5

M8 Lite (plastic hexagonal screw) on request

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M8 ROUND PLUG CONNECTORS

Connection cables

– M8 - M8

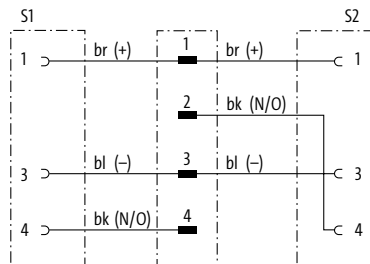
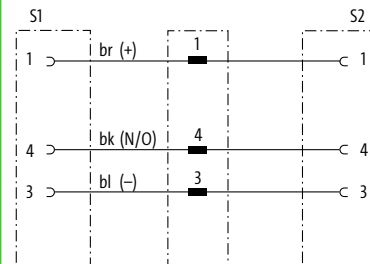
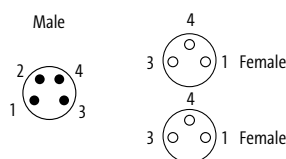
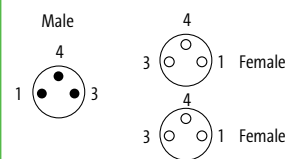
Y connector

Male straight

Females

straight



1	Form	87001	87011				
	Type	4-/3-pole	3-pole				
	Circuit diagram						
	Contact layout						
2	Cable Type	Jacket Color	Jacket Color				
	Wire diameter 0.25 mm²	yellow	gray	black	yellow	gray	black
	PVC (UL/CSA)	010	210	610	010	210	610
	PUR/PVC (UL/CSA)	020	220	620	020	220	620
	PUR (UL/CSA), robots/C-tracks	030	230	630	030	230	630
	PUR (UL/CSA), welding spark	050	250	650	050	250	650
3	Cable Length						
	0.3 m	0030					
	0.6 m	0060					
	1.0 m	0100					
	1.5 m	0150					
	2.0 m	0200					
	Technical Data						
	Operating voltage	max. 50 V AC/60 V DC					
	Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)					
	Temperature range	-25...+85 °C, depending on cable quality					
	Article No.						
	The composition of your article number is explained on page 3.1.i	7000 - - 7005 M8 Lite (plastic hexagonal screw) on request					
		1	Form	2	Cable Type	3	Cable Length
	Notes	Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.					

M8 ROUND PLUG CONNECTORS

Connection cables

– M8 - M8

Y connector

Male straight

Females

straight

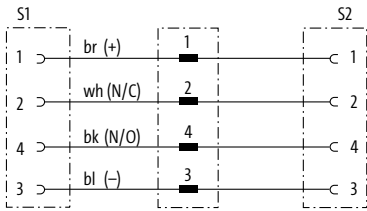
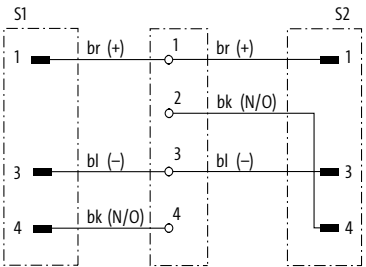
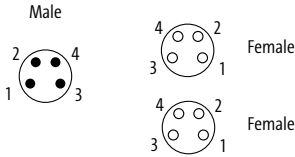
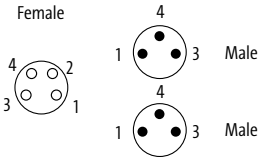
Y connector

Female straight

Male

straight



1	Form	87061	87251				
	Type	4-pole	4-/3-pole				
	Circuit diagram						
	Contact layout						
2	Cable Type	Jacket Color					
	Wire diameter 0.25 mm²	yellow	gray	black	yellow	gray	black
	PVC (UL/CSA)	011	211	611	010	210	610
	PUR/PVC (UL/CSA)	021	221	621	020	220	620
	PUR (UL/CSA), robots/C-tracks	031	231	631	030	230	630
	PUR (UL/CSA), welding spark	051	251	651	050	250	650
3	Cable Length						
	0.3 m	0030					
	0.6 m	0060					
	1.0 m	0100					
	1.5 m	0150					
	2.0 m	0200					
	Technical Data						
	Operating voltage	max. 50 V AC/60 V DC					
	Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)					
	Temperature range	-25...+85 °C, depending on cable quality					
	Article No.						
	The composition of your article number is explained on page 3.1.i	7 0 0 0 - -					
		7 0 0 5 M8 Lite (plastic hexagonal screw) on request					
		1 Form		2 Cable Type		3 Cable Length	
Notes	Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.						

M8 ROUND PLUG CONNECTORS

Connection cables

– M8 - M8

Male

straight

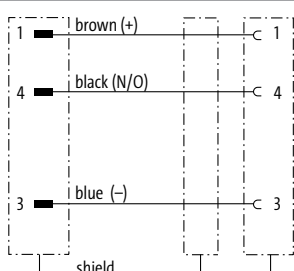
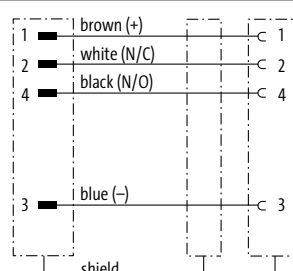
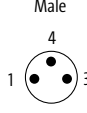
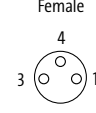
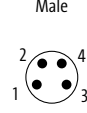
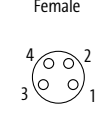
Female

straight



Approvals:  

* only for products with UL/CSA approved cable

1 Form		89501	89511
Type		3-pole, shielded	4-pole, shielded
Circuit diagram			
Contact layout		Male  Female 	Male  Female 
2 Cable Type		Jacket Color	
Wire diameter 0.34 mm²		gray	black
PVC (UL/CSA)		200	600
PUR (UL/CSA), robots/C-tracks		240	640
3 Cable Length		Jacket Color	
0.3 m		0030	
0.6 m		0060	
1.0 m		0100	
1.5 m		0150	
2.0 m		0200	
Technical Data		Jacket Color	
Operating voltage		max. 50 V AC/60 V DC	
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.		Jacket Color	
The composition of your article number is explained on page 3.1.i		7 0 0 0	
		1 Form	2 Cable Type
		3 Cable Length	
Notes		Jacket Color	
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

M8 ROUND PLUG CONNECTORS

Connection cables

– M8 - M8



* only for products with UL/CSA approved cable

Male

straight

Female

90°



1 Form

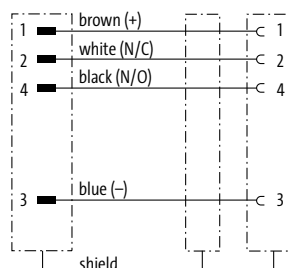
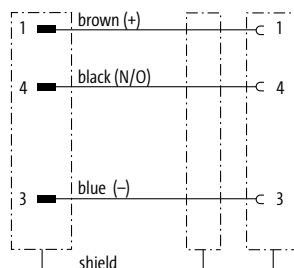
89521

89531

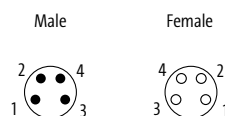
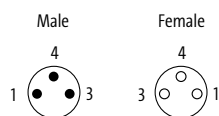
Type
Circuit diagram

3-pole, shielded

4-pole, shielded



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.34 mm²
PVC (UL/CSA)
PUR (UL/CSA), robots/C-tracks

	gray	black
200		
240		

	gray	black
201		
241		

3 Cable Length

0.3 m	0030
0.6 m	0060
1.0 m	0100
1.5 m	0150
2.0 m	0200

Technical Data

Operating voltage	max. 50 V AC/60 V DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M8 ROUND PLUG CONNECTORS

Field-wireable

– IDC terminals

Male

straight



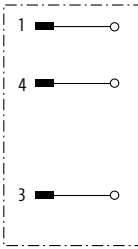
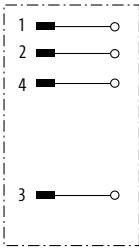
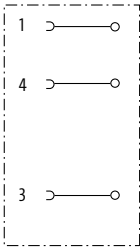
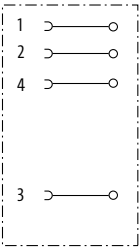
Female

straight



Approvals:

M8 Round Plug Connectors

1 Form		08331 me×	08351 me×	08371 me×	08391 me×
Type	3-pole	4-pole	3-pole	4-pole	
Circuit diagram					
Connection cross section	0.14...0.34 mm²				
Contact layout	Male 	Male 	Female 	Female 	
Technical Data					
Operating voltage	max. 32 V AC/DC				
Rated surge voltage	0.8 kV				
Operating current per contact	max. 4 A				
Configuration	fully used				
Material group	IEC 60664-1, category I				
Over voltage category	3				
Isolation resistance	≥ 10^8 Ohm				
Contact resistance	≤ 10 mOhm				
Connection cross section	0.14...0.34 mm² (conductor diameter min. 0.1 mm)				
Sealing range (cable Ø)	2.5...5.1 mm (gasket included)				
Outer wire Ø	1.0...1.6 mm				
Locking of ports	Screw thread M8 × 1 mm (recommended torque 0.4 Nm) self-securing				
Compression gland	M8 (SW9)				
Protection	IP67 inserted and tightened (EN 60529)				
Wire isolation	PVC, PP, TPE				
Material	PA				
Locking material	Zinc die casting, matte nickel plated				
Mating cycles	≥ 100				
Reconnection (cable)	10				
Temperature range	-25...+85 °C				
Article No.					
The composition of your article number is explained on page 3.1.i	7 0 0 0 - - 0 0 0 0 0 0 0				
	1 Form				
Notes					
Other versions on request.					

M8 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

Approvals: 

Male

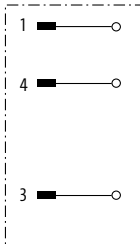
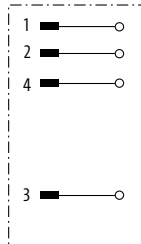
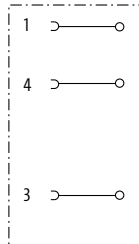
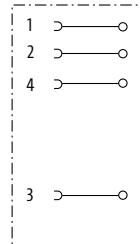
straight



Female

straight



1	Form	08601 me✖	08611 me✖	08621 me✖	08631 me✖
Type		3-pole	4-pole	3-pole	4-pole
Circuit diagram					
Connection cross section		0.14...0.5 mm²			
Contact layout		Male 	Male 	Female 	Female 
Technical Data					
Operating voltage		max. 60 V AC/DC	max. 30 V AC/DC	max. 60 V AC/DC	max. 30 V AC/DC
Rated surge voltage		1.5 kV	0.8 kV	1.5 kV	0.8 kV
Operating current per contact		max. 4 A			
Connection cross section		0.14...0.5 mm²			
Sealing range (cable Ø)		2.5...5.0 mm			
Protection		IP67 inserted and tightened (EN 60529)			
Temperature range		-25...+85 °C			
Article No.					
The composition of your article number is explained on page 3.1.i					
		<u>7</u> <u>0</u> <u>0</u> <u>0</u>	- - - - -	<u>0</u> <u>0</u> <u>0</u>	<u>0</u> <u>0</u> <u>0</u> <u>0</u>
		1 Form			

Notes

Other versions on request.

M8 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

Male

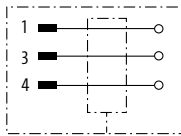
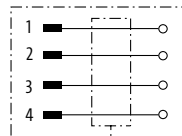
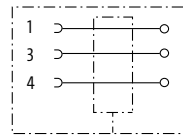
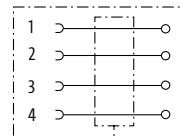
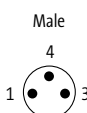
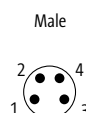
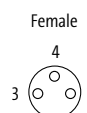
straight



Female

straight



1	Form	08641 me✕	08651 me✕	08661 me✕	08671 me✕
Type		3-pole, shielded	4-pole, shielded	3-pole, shielded	4-pole, shielded
Circuit diagram					
Connection cross section		0.14...0.5 mm²			
Contact layout		Male 	Male 	Female 	Female 
Technical Data					
Operating voltage		max. 50 V AC/60 V DC	max. 30 V AC/DC	max. 60 V AC/DC	max. 30 V AC/DC
Rated surge voltage		1.5 kV	0.8 kV	1.5 kV	0.8 kV
Operating current per contact		max. 4 A			
Material group		IEC 60664-1, category III			
Connection cross section		0.14...0.5 mm²			
Sealing range (cable Ø)		3.5...5.5 mm			
Locking of ports		Screw thread M8 × 1 mm (recommended torque 0.4 Nm) self-securing			
Protection		IP67 inserted and tightened (EN 60529)			
Locking material		Brass, nickel plated			
Temperature range		-25...+85 °C			
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 0 0		0 0 0	
		— — — —		0 0 0 0	
		1 Form			
Notes		Other versions on request.			

M8 ROUND PLUG CONNECTORS

Labeling accessories			Art-No.
	Slip-on cable sleeve for ACS label plates (4 × 18 mm)	Cable diameter (4...6.5 mm)	7000-99004-0000000
	Snap-on cable sleeve for ACS label plates (4 × 18 mm) for ACS label plates (4 × 18 mm)	Cable diameter (4.2...5.6 mm) Cable diameter (5...7 mm)	7000-99005-0000000 7000-99006-0000000
	ACS label plate for self marking (4 × 18 mm)		7000-99002-0000000
	Colored ring M8/M12		
	sandy yellow	for unshielded molding	7000-99301-V011002
	zinc yellow	for unshielded molding	7000-99301-V011018
	redorange	for unshielded molding	7000-99301-V012008
	red	for unshielded molding	7000-99301-V013020
	violet	for unshielded molding	7000-99301-V014003
	purple	for unshielded molding	7000-99301-V014006
	blue	for unshielded molding	7000-99301-V015005
	green	for unshielded molding	7000-99301-V016018
	gray	for unshielded molding	7000-99301-V017035
	white	for unshielded molding	7000-99301-V019003
	black	for unshielded molding	7000-99301-V019004
Mounting accessories			Art-No.
	Torque wrench set M8 (0.4 Nm, SW9)	M8 data connectors	7000-99101-0000000
	Torque wrench M8 (0.4 Nm, SW9)	M8 data connectors	7000-99091-0000000
End fitting accessories			Art-No.
	Tube adapter snap-in for corrugated tube (size 13mm)	Cable diameter (4...7 mm)	7000-99081-0000000
	Gasket MOSA M8		7000-99008-0000000

M8 ROUND PLUG CONNECTORS

Connection accessories			Art-No.
	Universal holder		
	modular	M8 M12	7000-99801-0000000
	Flange M8 male, pre-wired 0.2 m		
	suitable for mounting with wall thickness	max. 4.5 mm	7000-08552-9700020
	suitable for mounting with wall thickness	max. 4.5 mm	7000-08562-9690020
	Flange M8 female, pre-wired 0.2 m		
	straight, A-coded, 3-pole		7000-08571-9700020
			7000-08581-9710020



M12 ROUND PLUG CONNECTORS COMPREHENSIVE AND VERSATILE

- The right model for any application
- Shock and vibration resistant with integrated fastening
- Reliable – 100% tested

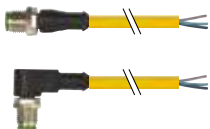
M12 CONNECTORS – DESIGNED FOR MANY DIFFERENT CUSTOMER APPLICATIONS

Murrelektronik offers one of the most comprehensive M12 connector ranges on the market. Reliable, quick and easy assembly, a clear LED indicator: these are only a few of the features that make this product range one of the best.

Features

- Combined hex screw with thread for secure connections
- Highly resistant, halogen-free PUR molding guarantees IP67/68 seal
- Wide range of cable material and color – always the right choice for your application

With Open Ended Wires



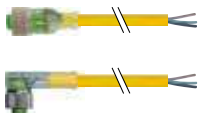
- M12 male**
- Straight
 - 90°

Page 3.2.1



- M12 female**
- Straight
 - 90°

Page 3.2.7



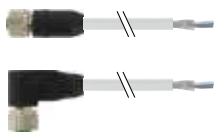
- M12 female with LED**
- Straight
 - 90°

Page 3.2.13



- M12 male (shielded)**
- Straight
 - 90°

Page 3.2.17



- M12 female (shielded)**
- Straight
 - 90°

Page 3.2.23

Connection Cables



M12 male

- Straight
- 90°

M12 female

- Straight
- 90°
- 90° with LED

Page 3.2.29



M12 Y connector male

- Straight

M12 female

- Straight
- 90°
- 90° with LED

Page 3.2.35



M12 male (shielded)

- Straight

M12 female (shielded)

- Straight

Page 3.2.38

Field-Wireable



Insulation Displacement Technology (IDC)

M12 male/female

- Straight
- 90°
- M12 female**
- 90° with LED

Page 3.2.41



Screw terminals

M12 male/female

- Straight
- 90°

Screw terminals

M12 Y connector male

- Straight

Page 3.2.47



Screw terminals (shielded)

M12 male/female

- Straight
- 90°

Page 3.2.54

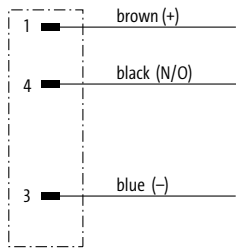
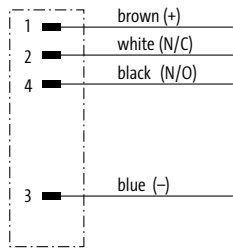
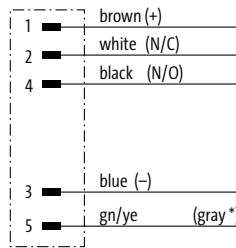
M12 ROUND PLUG CONNECTORS

With open ended wires

Male
straight



Approvals:  
 * only for products with UL/CSA approved cable

1	Form	12 001	me			12 021	me			12 041	me								
	Type	3-pole			4-pole			5-pole											
	Circuit diagram																		
	Contact layout																		
2	Cable Type	Jacket Color			Jacket Color			Jacket Color											
	Wire diameter 0.34 mm²	yellow	gray	black	yellow	gray	black	yellow	gray	black									
	PVC (UL/CSA)	013	213	613	014	214	614	015	215 (219)	615 (619)									
	PUR/PVC (UL/CSA)	023	223	623	024	224	624	025	225	625									
	PUR (UL/CSA), robots/C-tracks	033	233	633	034	234	634	035 (126)	235	635 (732)									
	PUR (UL/CSA), welding spark	053	253	653	054	254	654	055	255	655									
3	Cable Length																		
	1.5 m	0150																	
	3.0 m	0300																	
	5.0 m	0500																	
	7.5 m	0750																	
	10.0 m	1000																	
Technical Data																			
Operating voltage		max. 250 V AC/DC						max. 125 V AC/DC											
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)																	
Temperature range		-25...+85 °C, depending on cable quality																	
Article No.																			
The composition of your article number is explained on page 3.1.i		7 0 0 0			— — — — —			— — — — —											
		7 0 0 5			M12 Lite (plastic hexagonal screw) on request														
		1			Form			2			Cable Type			3			Cable Length		
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.																	

M12 ROUND PLUG CONNECTORS

With open ended wires

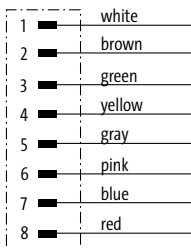
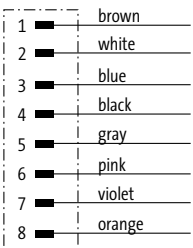
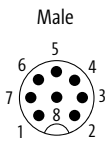
Male

straight



Approvals:  

* only for products with UL/CSA approved cable

1	Form	170 01			170 01		
	Type	8-pole			8-pole		
	Circuit diagram						
Contact layout							
2	Cable Type	Jacket Color			Jacket Color		
	Wire diameter 0.25 mm²	gray	black	yellow		gray	black
	PVC (UL/CSA)	207	607			208	608
	PUR (UL/CSA), robots/C-tracks	292	722	114		295	
3	Cable Length						
	1.5 m	0150					
	3.0 m	0300					
	5.0 m	0500					
	7.5 m	0750					
	10.0 m	1000					
Technical Data							
Operating voltage		max. 30 V AC/DC					
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)					
Temperature range		-25...+85 °C, depending on cable quality					
Article No.							
The composition of your article number is explained on page 3.1.i							
							
		1		Form	2		Cable Type
		3		Cable Length			
Notes							
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.					

M12 ROUND PLUG CONNECTORS

With open ended wires

Male

straight



Approvals: 

* only for products with UL/CSA approved cable

1 Form		19001	
Type	12-pole		
Circuit diagram	1 2 3 4 5 6 7 8 9 10 11 12 brown blue white green pink yellow black gray red violet gray/pink red/blue		
Contact layout	Male 1 2 3 4 5 6 7 8 9 10 11 12		
2 Cable Type		Jacket Color	
Wire diameter 0.14 mm²		gray	black
PVC (UL/CSA)		209	609
PUR (UL/CSA), robots/C-tracks			705
Wire diameter 0.25 mm²			
PUR (UL/CSA), robots/C-tracks		301	
PUR (UL/CSA), welding spark		302	
3 Cable Length			
1.5 m	0150		
3.0 m	0300		
5.0 m	0500		
7.5 m	0750		
10.0 m	1000		
Technical Data			
Operating voltage	max. 30 V AC/DC		
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)		
Temperature range	-25...+85 °C, depending on cable quality		
Article No.			
The composition of your article number is explained on page 3.1.i	7 0 0 0 - 1 9 0 0 1 - 7 0 0 5 M12 Lite (plastic hexagonal screw) on request		
	1 Form	2 Cable Type	3 Cable Length
Notes	Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.		

M12 ROUND PLUG CONNECTORS

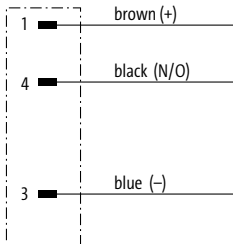
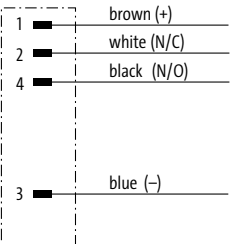
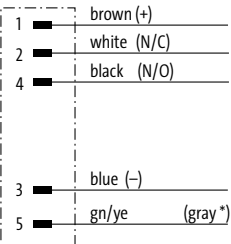
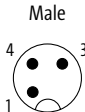
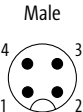
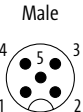
With open ended wires

Male
90°



Approvals:  

* only for products with UL/CSA approved cable

1	Form	12081me×			12101me×			12121me×		
	Type	3-pole			4-pole			5-pole		
	Circuit diagram									
								(* for cable type 126, 732, 219, 619)		
2	Contact layout									
	Cable Type	Jacket Color			Jacket Color			Jacket Color		
	Wire diameter 0.34 mm²	yellow	gray	black	yellow	gray	black	yellow	gray	black
	PVC (UL/CSA)	013	213	613	014	214	614	015	215 (219)	615 (619)
	PUR/PVC (UL/CSA)	023	223	623	024	224	624	025	225	625
	PUR (UL/CSA), robots/C-tracks	033	233	633	034	234	634	035 (126)	235	635 (732)
	PUR (UL/CSA), welding spark	053	253	653	054	254	654	055	255	655
3	Cable Length									
	1.5 m	0150								
	3.0 m	0300								
	5.0 m	0500								
	7.5 m	0750								
	10.0 m	1000								
Technical Data										
Operating voltage		max. 250 V AC/DC						max. 125 V AC/DC		
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)								
Temperature range		-25...+85 °C, depending on cable quality								
Article No.										
The composition of your article number is explained on page 3.1.i		7 0 0 0			— — — — —			— — — — —		
		7 0 0 5			M12 Lite (plastic hexagonal screw) on request					
					1 Form			2 Cable Type		
								3 Cable Length		
Notes										
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.								

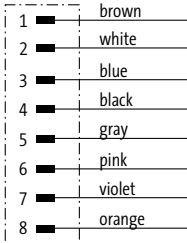
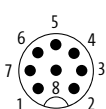
M12 ROUND PLUG CONNECTORS

With open ended wires

Male
90°



Approvals:  
* only for products with UL/CSA approved cable

1 Form		17021		17021	
Type		8-pole		8-pole	
Circuit diagram					
Contact layout		Male 			
2 Cable Type		Jacket Color		Jacket Color	
Wire diameter 0.25 mm²		gray	black	yellow	
PVC (UL/CSA)		207	607		208
PUR (UL/CSA), robots/C-tracks		292	722	114	295
3 Cable Length					
1.5 m		0150			
3.0 m		0300			
5.0 m		0500			
7.5 m		0750			
10.0 m		1000			
Technical Data					
Operating voltage		max. 30 V AC/DC			
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)			
Temperature range		-25...+85 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 0 0 - -			
		7 0 0 5 M12 Lite (plastic hexagonal screw) on request			
		1 Form	2 Cable Type	3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

M12 ROUND PLUG CONNECTORS

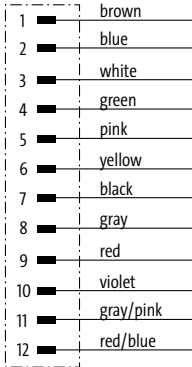
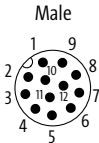
With open ended wires

Male

 90° 

Approvals: 

* only for products with UL/CSA approved cable

1	Form	19 021		
	Type	12-pole		
	Circuit diagram			
	Contact layout			
2	Cable Type	Jacket Color		
	Wire diameter 0.14 mm² PVC (UL/CSA) PUR (UL/CSA), robots/C-tracks Wire diameter 0.25 mm² PUR (UL/CSA), robots/C-tracks PUR (UL/CSA), welding spark		gray 209 301 302	black 609 705
3	Cable Length			
	1.5 m 3.0 m 5.0 m 7.5 m 10.0 m	0150 0300 0500 0750 1000		
Technical Data				
Operating voltage		max. 30 V AC/DC		
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)		
Temperature range		-25...+85 °C, depending on cable quality		
Article No.				
The composition of your article number is explained on page 3.1.i		<u>7</u> <u>0</u> <u>0</u> <u>0</u> - <u>1</u> <u>9</u> <u>0</u> <u>2</u> <u>1</u> - _ _ _ _		
		<u>7</u> <u>0</u> <u>0</u> <u>5</u> M12 Lite (plastic hexagonal screw) on request		
		1 Form 2 Cable Type 3 Cable Length		
Notes				
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.		

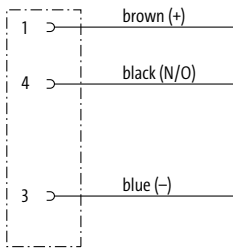
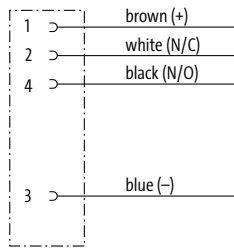
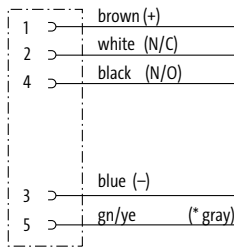
M12 ROUND PLUG CONNECTORS

With open ended wires

Female
straight



Approvals:  
 * only for products with UL/CSA approved cable

1 Form		12181 me			12221 me			12241		
Type		3-pole			4-pole			5-pole		
Circuit diagram								 (* for cable type 126, 732, 219, 619)		
Contact layout										
2 Cable Type		Jacket Color			Jacket Color			Jacket Color		
Wire diameter 0.34 mm²		yellow	gray	black	yellow	gray	black	yellow	gray	black
PVC (UL/CSA)		013	213	613	014	214	614	015	215 (219)	615 (619)
PUR/PVC (UL/CSA)		023	223	623	024	224	624	025	225	625
PUR (UL/CSA), robots/C-tracks		033	233	633	034	234	634	035 (126)	235	635 (732)
PUR (UL/CSA), welding spark		053	253	653	054	254	654	055	255	655
3 Cable Length										
1.5 m		0150								
3.0 m		0300								
5.0 m		0500								
7.5 m		0750								
10.0 m		1000								
Technical Data										
Operating voltage		max. 250 V AC/DC							max. 125 V AC/DC	
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)								
Temperature range		-25...+85 °C, depending on cable quality								
Article No.										
The composition of your article number is explained on page 3.1.i		7 0 0 0			— — — — —			— — — — —		
		7 0 0 5			M12 Lite (plastic hexagonal screw) on request					
		1 Form			2 Cable Type			3 Cable Length		
Notes										
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.								

M12 ROUND PLUG CONNECTORS

With open ended wires

Female
straight



Approvals:  
* only for products with UL/CSA approved cable

1 Form		17041			17041		
Type		8-pole			8-pole		
Circuit diagram		1 2 3 4 5 6 7 8 white brown green yellow gray pink blue red			1 2 3 4 5 6 7 8 brown white blue black gray pink violet orange		
Contact layout		Female 4 5 6 7 8 1 2 3					
2 Cable Type		Jacket Color			Jacket Color		
Wire diameter 0.25 mm²		gray	black	yellow		gray	black
PVC (UL/CSA)		207	607			208	608
PUR (UL/CSA), robots/C-tracks		292	722	114		295	
3 Cable Length							
1.5 m		0150					
3.0 m		0300					
5.0 m		0500					
7.5 m		0750					
10.0 m		1000					
Technical Data							
Operating voltage		max. 30 V AC/DC					
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)					
Temperature range		-25...+85 °C, depending on cable quality					
Article No.							
The composition of your article number is explained on page 3.1.i		7 0 0 0		— — — — —		— — — — —	
		7 0 0 5		M12 Lite (plastic hexagonal screw) on request			
		1 Form		2 Cable Type		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.					

M12 ROUND PLUG CONNECTORS

With open ended wires

Female

straight



Approvals: 

* only for products with UL/CSA approved cable

1 Form		19041	
Type	12-pole		
Circuit diagram	1 2 3 4 5 6 7 8 9 10 11 12 brown blue white green pink yellow black gray red violet gray/pink red/blue		
Contact layout	Female 9 1 2 3 4 5 6 7 8		
2 Cable Type		Jacket Color	
Wire diameter 0.14 mm²		gray	black
PVC (UL/CSA)		209	609
PUR (UL/CSA), robots/C-tracks			705
Wire diameter 0.25 mm²			
PUR (UL/CSA), robots/C-tracks		301	
PUR (UL/CSA), welding spark		302	
3 Cable Length			
1.5 m	0150		
3.0 m	0300		
5.0 m	0500		
7.5 m	0750		
10.0 m	1000		
Technical Data			
Operating voltage	max. 30 V AC/DC		
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)		
Temperature range	-25...+85 °C, depending on cable quality		
Article No.			
The composition of your article number is explained on page 3.1.i	7 0 0 0 - 1 9 0 4 1 -		
	7 0 0 5 M12 Lite (plastic hexagonal screw) on request		
	1 Form	2 Cable Type	3 Cable Length
Notes	Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.		

M12 ROUND PLUG CONNECTORS

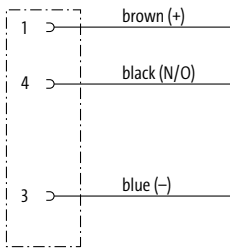
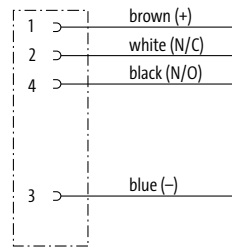
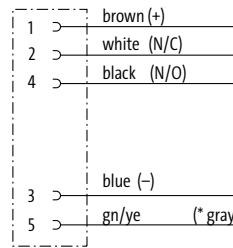
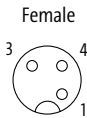
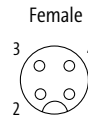
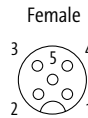
With open ended wires

Female
90°



Approvals:  

* only for products with UL/CSA approved cable

1	Form	12321	12341	12361						
	Type	3-pole	4-pole	5-pole						
	Circuit diagram			 (* for cable type 126, 732, 219, 619)						
	Contact layout									
2	Cable Type	Jacket Color			Jacket Color			Jacket Color		
	Wire diameter 0.34 mm²	yellow	gray	black	yellow	gray	black	yellow	gray	black
	PVC (UL/CSA)	013	213	613	014	214	614	015	215 (219)	615 (619)
	PUR/PVC (UL/CSA)	023	223	623	024	224	624	025	225	625
	PUR (UL/CSA), robots/C-tracks	033	233	633	034	234	634	035 (126)	235	635 (732)
	PUR (UL/CSA), welding spark	053	253	653	054	254	654	055	255	655
3	Cable Length									
	1.5 m	0150								
	3.0 m	0300								
	5.0 m	0500								
	7.5 m	0750								
	10.0 m	1000								
Technical Data										
Operating voltage		max. 250 V AC/DC						max. 125 V AC/DC		
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)								
Temperature range		-25...+85 °C, depending on cable quality								
Article No.										
The composition of your article number is explained on page 3.1.i		7 0 0 0 - 7 0 0 5 M12 Lite (plastic hexagonal screw) on request								
		1 Form			2 Cable Type			3 Cable Length		
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.								

M12 ROUND PLUG CONNECTORS

With open ended wires

Female
90°



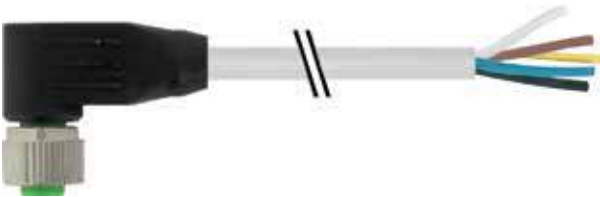
Approvals:  
* only for products with UL/CSA approved cable

1 Form		170 61			170 61			
Type		8-pole			8-pole			
Circuit diagram		1 2 3 4 5 6 7 8 white brown green yellow gray pink blue red			1 2 3 4 5 6 7 8 brown white blue black gray pink violet orange			
Contact layout		Female 4 3 2 5 8 1 6 7						
2 Cable Type		Jacket Color			Jacket Color			
Wire diameter 0.25 mm²		gray	black	yellow		gray	black	
PVC (UL/CSA)		207	607			208	608	
PUR (UL/CSA), robots/C-tracks		292	722	114		295		
3 Cable Length								
1.5 m		0150						
3.0 m		0300						
5.0 m		0500						
7.5 m		0750						
10.0 m		1000						
Technical Data								
Operating voltage		max. 30 V AC/DC						
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)						
Temperature range		-25...+85 °C, depending on cable quality						
Article No.								
The composition of your article number is explained on page 3.1.i		7 0 0 0			—		—	
		7 0 0 5			M12 Lite (plastic hexagonal screw) on request			
		1 Form		2 Cable Type		3 Cable Length		
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.						

M12 ROUND PLUG CONNECTORS

With open ended wires

Female
90°



Approvals: 
* only for products with UL/CSA approved cable

1	Form	19061					
	Type	12-pole					
	Circuit diagram	1 2 3 4 5 6 7 8 9 10 11 12 brown blue white green pink yellow black gray red violet gray/pink red/blue					
	Contact layout	Female 9 1 8 2 7 3 6 4 5					
2	Cable Type	Jacket Color					
	Wire diameter 0.14 mm²		gray	black			
	PVC (UL/CSA)		209	609			
	PUR (UL/CSA), robots/C-tracks			705			
	Wire diameter 0.25 mm²						
	PUR (UL/CSA), robots/C-tracks		301				
	PUR (UL/CSA), welding spark		302				
3	Cable Length						
	1.5 m	0150					
	3.0 m	0300					
	5.0 m	0500					
	7.5 m	0750					
	10.0 m	1000					
	Technical Data						
	Operating voltage	max. 30 V AC/DC					
	Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)					
	Temperature range	-25...+85 °C, depending on cable quality					
	Article No.						
	The composition of your article number is explained on page 3.1.i	7 0 0 0 - 1 9 0 6 1 -					
		7 0 0 5 M12 Lite (plastic hexagonal screw) on request					
		1	Form	2	Cable Type	3	Cable Length
	Notes						
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.					

M12 ROUND PLUG CONNECTORS

With open ended wires

Female

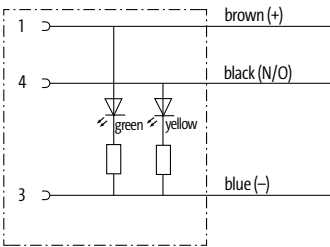
straight, with LED


Female

90° with LED



* only for products with UL/CSA approved cable

1 Form		12261			12381			
Type		3-pole with 2 × LED (PNP) (NPN) on request			3-pole with 2 × LED (PNP) (NPN) on request			
Circuit diagram								
Contact layout								
2 Cable Type		Jacket Color			Jacket Color			
Wire diameter 0.34 mm²		yellow	gray	black	yellow	gray	black	
PVC (UL/CSA)		013	213	613	013	213	613	
PUR/PVC (UL/CSA)		023	223	623	023	223	623	
PUR (UL/CSA), robots/C-tracks		033	233	633	033	233	633	
PUR (UL/CSA), welding spark		053	253	653	053	253	653	
3 Cable Length								
1.5 m		0150						
3.0 m		0300						
5.0 m		0500						
7.5 m		0750						
10.0 m		1000						
Technical Data								
Operating voltage		24 V DC ±25%						
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)						
Temperature range		-25...+85 °C, depending on cable quality						
Article No.								
The composition of your article number is explained on page 3.1.i		7 0 0 0			— — — —			— — — —
		7 0 0 5			M12 Lite (plastic hexagonal screw) on request			
		1 Form		2 Cable Type		3 Cable Length		
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.						

M12 ROUND PLUG CONNECTORS

With open ended wires

Female

straight, with LED



Female

90° with LED



Approvals:  

* only for products with UL/CSA approved cable

1 Form

12281

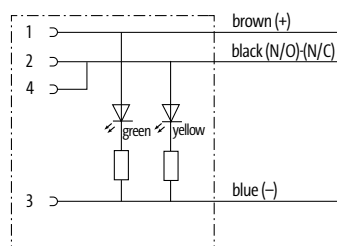
12401

Type

4-pole with 2 × LED (PNP)
(NPN) on request

4-pole with 2 × LED (PNP)
(NPN) on request

Circuit diagram



Contact layout

Female



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.34 mm²

yellow	gray	black	yellow	gray	black
013	213	613	013	213	613
023	223	623	023	223	623
033	233	633	033	233	633
053	253	653	053	253	653

PVC (UL/CSA)

PUR/PVC (UL/CSA)

PUR (UL/CSA), robots/C-tracks

PUR (UL/CSA), welding spark

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	24 V DC ±25%
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

7 0 0 5

M12 Lite (plastic hexagonal screw) on request

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

With open ended wires

Female

straight, with LED



Female

90° with LED



Approvals:

* only for products with UL/CSA approved cable

1	Form	12231			12421			
	Type	4-pole with 3 × LED (PNP) (NPN) on request			4-pole with 3 × LED (PNP) (NPN) on request			
	Circuit diagram							
Contact layout		Female						
2	Cable Type	Jacket Color			Jacket Color			
	Wire diameter 0.34 mm²	yellow	gray	black	yellow	gray	black	
	PVC (UL/CSA)	014	214	614	014	214	614	
	PUR/PVC (UL/CSA)	024	224	624	024	224	624	
	PUR (UL/CSA), robots/C-tracks	034	234	634	034	234	634	
	PUR (UL/CSA), welding spark	054	254	654	054	254	654	
3	Cable Length							
	1.5 m	0150						
	3.0 m	0300						
	5.0 m	0500						
	7.5 m	0750						
	10.0 m	1000						
Technical Data								
Operating voltage		24 V DC ±25%						
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)						
Temperature range		-25...+85 °C, depending on cable quality						
Article No.								
The composition of your article number is explained on page 3.1.i		7 0 0 0			— — — —		— — — —	
		7 0 0 5			M12 Lite (plastic hexagonal screw) on request			
		1 Form		2 Cable Type		3 Cable Length		
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.						

M12 ROUND PLUG CONNECTORS

With open ended wires

Female

straight, with LED

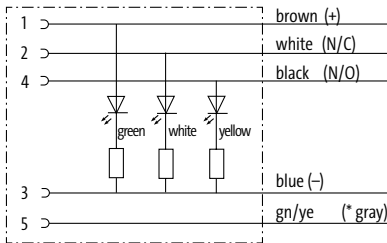


Female

90° with LED



Approvals: 
 * only for products with UL/CSA approved cable

1	Form	12251	12441				
	Approvals		cULus *				
	Type	5-pole with 3 × LED (PNP) (NPN) on request	5-pole with 3 × LED (PNP) (NPN) on request				
	Circuit diagram	 (* for cable type 126, 732, 219, 619)					
	Contact layout	Female 					
2	Cable Type	Jacket Color	Jacket Color				
	Wire diameter 0.34 mm²	yellow	gray	black	yellow	gray	black
	PVC (UL/CSA)	015	215 (219)	615 (619)	015	215 (219)	615 (619)
	PUR/PVC (UL/CSA)	025	225	625	025	225	625
	PUR (UL/CSA), robots/C-tracks	035 (126)	235	635 (732)	035 (126)	235	635 (732)
	PUR (UL/CSA), welding spark	055	255	655	055	255	655
3	Cable Length						
	1.5 m	0150					
	3.0 m	0300					
	5.0 m	0500					
	7.5 m	0750					
	10.0 m	1000					
	Technical Data						
	Operating voltage	24 V DC ±25%					
	Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)					
	Temperature range	-25...+85 °C, depending on cable quality					
	Article No.						
	The composition of your article number is explained on page 3.1.i	7 0 0 0 - -					
		7 0 0 5 M12 Lite (plastic hexagonal screw) on request					
		1	Form	2	Cable Type	3	Cable Length
Notes	Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.						

M12 ROUND PLUG CONNECTORS

With open ended wires

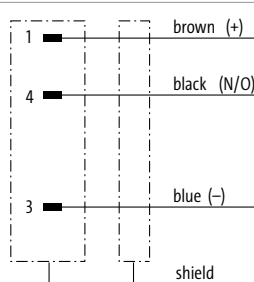
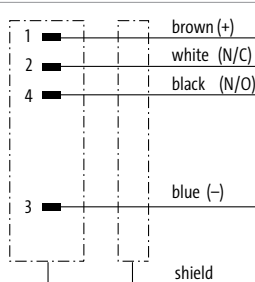
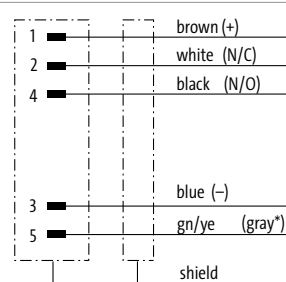
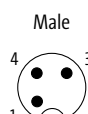
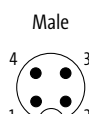
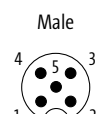
Male

straight



Approvals:  

* only for products with UL/CSA approved cable

1 Form		13061	13081	13101
Type	3-pole, shielded	4-pole, shielded	5-pole, shielded	
Circuit diagram			 (* for cable type 203, 603, 243, 643)	
Contact layout				
2 Cable Type		Jacket Color		Jacket Color
Wire diameter 0.34 mm²		gray	black	gray
PVC (UL/CSA)		200	600	202 (203)
PUR (UL/CSA), robots/C-tracks		240	640	242 (243)
3 Cable Length				
1.5 m		0150		
3.0 m		0300		
5.0 m		0500		
7.5 m		0750		
10.0 m		1000		
Technical Data				
Operating voltage		max. 60 V AC/DC		
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)		
Temperature range		-25...+85 °C, depending on cable quality		
Article No.				
The composition of your article number is explained on page 3.1.i		7000 - -		
		1 Form 2 Cable Type 3 Cable Length		
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.		

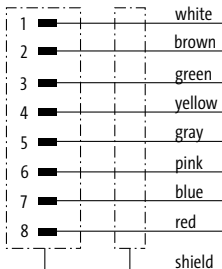
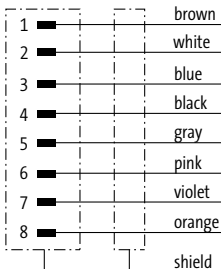
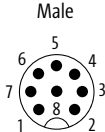
M12 ROUND PLUG CONNECTORS

With open ended wires

Male
straight



Approvals:  
* only for products with UL/CSA approved cable

1	Form	17081			17081		
	Type	8-pole, shielded			8-pole, shielded		
	Circuit diagram						
	Contact layout						
2	Cable Type	Jacket Color			Jacket Color		
	Wire diameter 0.25 mm²		gray	black		gray	black
	PVC (UL/CSA)		204			205	
	PUR (UL/CSA), robots/C-tracks		291	717		294	715
3	Cable Length						
	1.5 m	0150					
	3.0 m	0300					
	5.0 m	0500					
	7.5 m	0750					
	10.0 m	1000					
	Technical Data						
	Operating voltage	max. 30 V AC/DC					
	Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)					
	Temperature range	-25...+85 °C, depending on cable quality					
	Article No.						
	The composition of your article number is explained on page 3.1.i	7 0 0 0 - -					
		1 Form		2 Cable Type		3 Cable Length	
	Notes						

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

With open ended wires

Male

straight



Approvals: 

* only for products with UL/CSA approved cable

1 Form		19301	
Type	12-pole, shielded		
Circuit diagram	1 2 3 4 5 6 7 8 9 10 11 12 brown blue white green pink yellow black gray red violet gray/pink red/blue shield		
Contact layout	Male 1 2 3 4 5 6 7 8 9 10 11 12		
2 Cable Type		Jacket Color	
Wire diameter 0.14 mm²	black		
PVC (UL/CSA)	703		
PUR (UL/CSA), robots/C-tracks	706		
3 Cable Length			
1.5 m	0150		
3.0 m	0300		
5.0 m	0500		
7.5 m	0750		
10.0 m	1000		
Technical Data			
Operating voltage	max. 30 V AC/DC		
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)		
Temperature range	-25...+85 °C, depending on cable quality		
Article No.			
The composition of your article number is explained on page 3.1.i	7 0 0 0 — 1 9 3 0 1 — — — — — — — —		
	1 Form	2 Cable Type	3 Cable Length
Notes	Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.		

M12 ROUND PLUG CONNECTORS

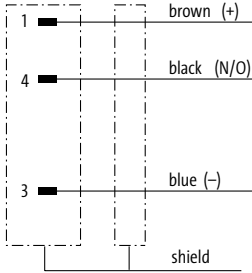
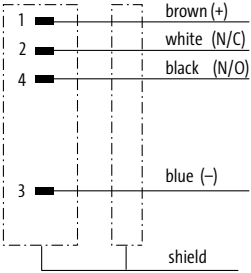
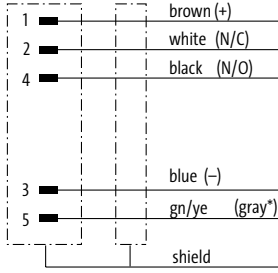
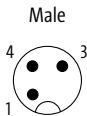
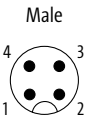
With open ended wires

Male
90°



Approvals:

* only for products with UL/CSA approved cable

1	Form	13121	13141	13161			
	Type	3-pole, shielded	4-pole, shielded	5-pole, shielded			
	Circuit diagram			 (* for cable type 203, 603, 243, 643)			
	Contact layout						
2	Cable Type	Jacket Color	Jacket Color	Jacket Color			
	Wire diameter 0.34 mm²	grayblack	grayblack	grayblack			
	PVC (UL/CSA)	200600	201601	202 (203)602 (603)			
	PUR (UL/CSA), robots/C-tracks	240640	241641	242 (243)642 (643)			
3	Cable Length						
	1.5 m	0150					
	3.0 m	0300					
	5.0 m	0500					
	7.5 m	0750					
	10.0 m	1000					
	Technical Data						
	Operating voltage	max. 60 V AC/DC					
	Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)					
	Temperature range	-25...+85 °C, depending on cable quality					
	Article No.						
	The composition of your article number is explained on page 3.1.i	7 0 0 0 - -					
		1	Form	2	Cable Type	3	Cable Length
Notes	Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.						

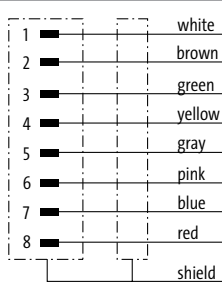
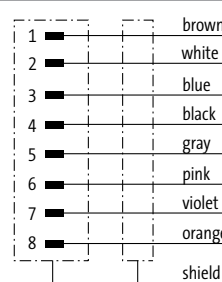
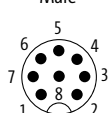
M12 ROUND PLUG CONNECTORS

With open ended wires

Male
90°



Approvals:  
* only for products with UL/CSA approved cable

1 Form		17101	17101
Type		8-pole, shielded	8-pole, shielded
Circuit diagram			
Contact layout		Male 	
2 Cable Type		Jacket Color	
Wire diameter 0.25 mm²		gray	black
PVC (UL/CSA)		204	205
PUR (UL/CSA), robots/C-tracks		291	717
3 Cable Length		Jacket Color	
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data		Jacket Color	
Operating voltage		max. 30 V AC/DC	
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.		Jacket Color	
The composition of your article number is explained on page 3.1.i		7 0 0 0	
		1 Form	2 Cable Type
		3 Cable Length	
Notes		Jacket Color	
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

M12 ROUND PLUG CONNECTORS

With open ended wires

Male

90°



Approvals: 

* only for products with UL/CSA approved cable

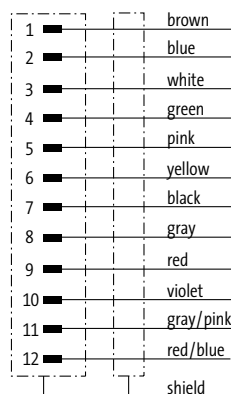
1 Form

19321

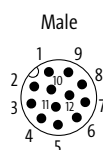
Type

12-pole, shielded

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Wire diameter 0.14 mm²

black

PVC (UL/CSA)

703

PUR (UL/CSA), robots/C-tracks

706

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 30 V AC/DC

Protection

IP65, IP66K, IP67 inserted and tightened (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

1 9 3 2 1

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

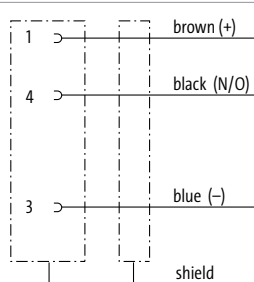
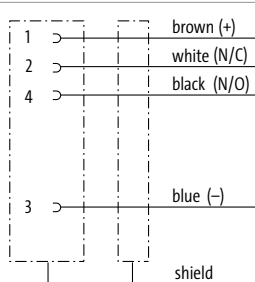
M12 ROUND PLUG CONNECTORS

With open ended wires

Female
straight



Approvals:  
* only for products with UL/CSA approved cable

1 Form		13181	13201	13221
Type	3-pole, shielded		4-pole, shielded	
Circuit diagram				
Contact layout				
2 Cable Type		Jacket Color		Jacket Color
Wire diameter 0.34 mm²		gray	black	gray
PVC (UL/CSA)		200	600	201
PUR (UL/CSA), robots/C-tracks		240	640	241
3 Cable Length				
1.5 m		0150		
3.0 m		0300		
5.0 m		0500		
7.5 m		0750		
10.0 m		1000		
Technical Data				
Operating voltage		max. 60 V AC/DC		
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)		
Temperature range		-25...+85 °C, depending on cable quality		
Article No.				
The composition of your article number is explained on page 3.1.i		7000 - -		
		1 Form 2 Cable Type 3 Cable Length		
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.		

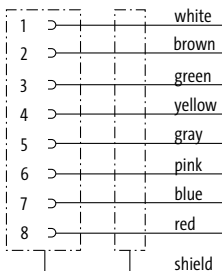
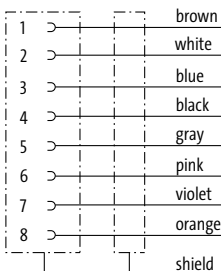
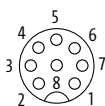
M12 ROUND PLUG CONNECTORS

With open ended wires

Female
straight



Approvals: 
* only for products with UL/CSA approved cable

1	Form		17121		17121		
	Type	8-pole, shielded		8-pole, shielded			
	Circuit diagram						
	Contact layout						
	Cable Type	Jacket Color		Jacket Color			
	Wire diameter 0.25 mm²		gray	black		gray	black
	PVC (UL/CSA)		204			205	
	PUR (UL/CSA), robots/C-tracks		291	717		294	715
	Cable Length						
	1.5 m	0150					
3.0 m	0300						
5.0 m	0500						
7.5 m	0750						
10.0 m	1000						
Technical Data							
Operating voltage		max. 30 V AC/DC					
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)					
Temperature range		-25...+85 °C, depending on cable quality					
Article No.							
The composition of your article number is explained on page 3.1.i		7000 - -					
		1 Form		2 Cable Type		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.					

M12 ROUND PLUG CONNECTORS

With open ended wires

Female

straight



Approvals: 

* only for products with UL/CSA approved cable

1 Form		19341	
Type	12-pole, shielded		
Circuit diagram	1 2 3 4 5 6 7 8 9 10 11 12 brown blue white green pink yellow black gray red violet gray/pink red/blue shield		
Contact layout	Female 9 1 2 3 4 5 6 7 8		
2 Cable Type		Jacket Color	
Wire diameter 0.14 mm²			black
PVC (UL/CSA)			703
PUR (UL/CSA), robots/C-tracks			706
3 Cable Length			
1.5 m	0150		
3.0 m	0300		
5.0 m	0500		
7.5 m	0750		
10.0 m	1000		
Technical Data			
Operating voltage	max. 30 V AC/DC		
Protection	IP67 inserted and tightened (EN 60529)		
Temperature range	-25...+85 °C, depending on cable quality		
Article No.			
The composition of your article number is explained on page 3.1.i	7 0 0 0 - 1 9 3 4 1 -		
	1 Form	2 Cable Type	3 Cable Length
Notes	Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.		

M12 ROUND PLUG CONNECTORS

With open ended wires

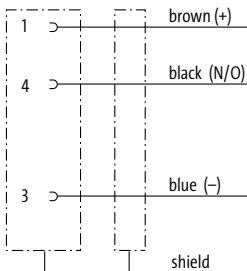
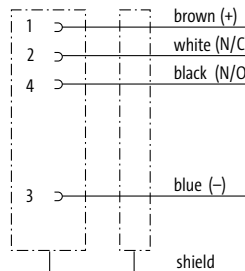
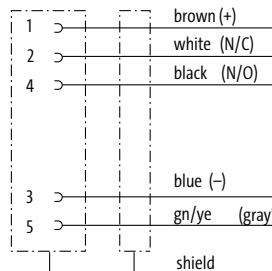
Female

90°



Approvals:  

* only for products with UL/CSA approved cable

1	Form	13241	13261	13281						
	Type	3-pole, shielded	4-pole, shielded	5-pole, shielded						
	Circuit diagram			 (* for cable type 203, 603, 243, 643)						
	Contact layout									
2	Cable Type	Jacket Color		Jacket Color		Jacket Color				
	Wire diameter 0.34 mm²		gray	black		gray	black			
	PVC (UL/CSA)		200	600		201	601			
	PUR (UL/CSA), robots/C-tracks		240	640		241	641			
3	Cable Length									
	1.5 m	0150								
	3.0 m	0300								
	5.0 m	0500								
	7.5 m	0750								
	10.0 m	1000								
	Technical Data									
Operating voltage	max. 60 V AC/DC									
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)									
Temperature range	-25...+85 °C, depending on cable quality									
Article No.										
The composition of your article number is explained on page 3.1.i		7 0 0 0 - -								
		1		Form	2		Cable Type	3		Cable Length
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.								

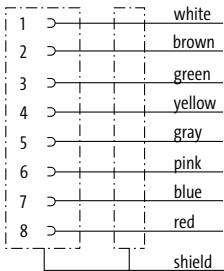
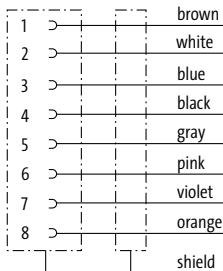
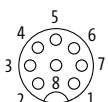
M12 ROUND PLUG CONNECTORS

With open ended wires

Female
90°



Approvals:  
* only for products with UL/CSA approved cable

1 Form		17141	17141
Type		8-pole, shielded	8-pole, shielded
Circuit diagram			
Contact layout		Female 	
2 Cable Type		Jacket Color	
Wire diameter 0.25 mm²		gray	black
PVC (UL/CSA)		204	205
PUR (UL/CSA), robots/C-tracks		291	717
3 Cable Length		Jacket Color	
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data		Jacket Color	
Operating voltage		max. 30 V AC/DC	
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.		Jacket Color	
The composition of your article number is explained on page 3.1.i		7 0 0 0	- - - - -
		1 Form	2 Cable Type
		3 Cable Length	
Notes		Jacket Color	
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

M12 ROUND PLUG CONNECTORS

With open ended wires

Female

90°



Approvals: 

* only for products with UL/CSA approved cable

1 Form

19361

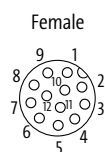
Type

12-pole, shielded

Circuit diagram

1	↷	brown
2	↷	blue
3	↷	white
4	↷	green
5	↷	pink
6	↷	yellow
7	↷	black
8	↷	gray
9	↷	red
10	↷	violet
11	↷	gray/pink
12	↷	red/blue
		shield

Contact layout



2 Cable Type

Jacket Color

Wire diameter 0.14 mm²

black

PVC (UL/CSA)

703

PUR (UL/CSA), robots/C-tracks

706

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 30 V AC/DC

Protection

IP65, IP66K, IP67 inserted and tightened (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

1 9 3 6 1

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Male

straight

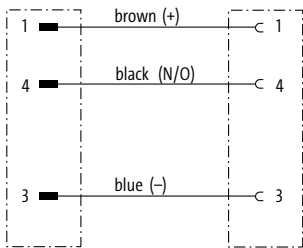
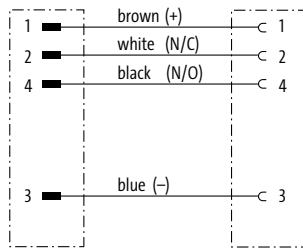
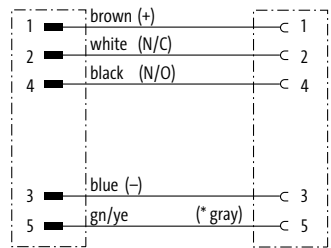
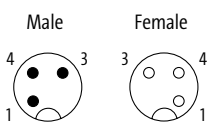
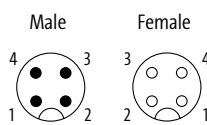
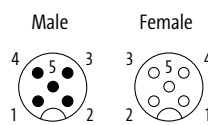
Female

straight



Approvals:  

* only for products with UL/CSA approved cable

1 Form		40001			40021			40041		
Type		3-pole			4-pole			5-pole		
Circuit diagram								 (* for cable type 126, 732, 219, 619)		
Contact layout										
2 Cable Type		Jacket Color			Jacket Color			Jacket Color		
Wire diameter 0.34 mm²		yellow	gray	black	yellow	gray	black	yellow	gray	black
PVC (UL/CSA)		013	213	613	014	214	614	015	215 (219)	615 (619)
PUR/PVC (UL/CSA)		023	223	623	024	224	624	025	225	625
PUR (UL/CSA), robots/C-tracks		033	233	633	034	234	634	035 (126)	235	635 (732)
PUR (UL/CSA), welding spark		053	253	653	054	254	654	055	255	655
3 Cable Length										
0.3 m		0030								
0.6 m		0060								
1.0 m		0100								
1.5 m		0150								
2.0 m		0200								
Technical Data										
Operating voltage		max. 250 V AC/DC						max. 125 V AC/DC		
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)								
Temperature range		-25...+85 °C, depending on cable quality								
Article No.										
The composition of your article number is explained on page 3.1.i		7000 - -								
		7005 M12 Lite (plastic hexagonal screw) on request								
		1 Form			2 Cable Type			3 Cable Length		
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.								

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Male

straight

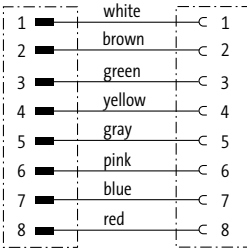
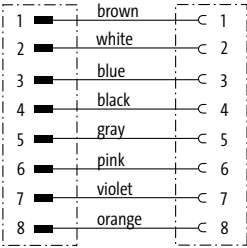
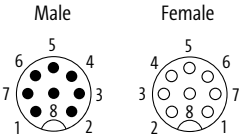
Female

straight



Approvals:  

* only for products with UL/CSA approved cable

1 Form		48001		48001	
Type		8-pole		8-pole	
Circuit diagram					
Contact layout					
2 Cable Type		Jacket Color		Jacket Color	
Wire diameter 0.25 mm²		gray	black	yellow	
PVC (UL/CSA)		207	607		
PUR (UL/CSA), robots/C-tracks		292	722	114	
					gray
					black
					208
					608
					295
3 Cable Length					
0.3 m		0030			
0.6 m		0060			
1.0 m		0100			
1.5 m		0150			
2.0 m		0200			
Technical Data					
Operating voltage		max. 30 V AC/DC			
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)			
Temperature range		-25...+85 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 0 0			
		7 0 0 5		M12 Lite (plastic hexagonal screw) on request	
		1 Form	2 Cable Type	3 Cable Length	
Notes					
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Male

straight

Female

straight



Approvals: 

* only for products with UL/CSA approved cable

1 Form		53001	
Type	12-pole		
Circuit diagram	1 2 3 4 5 6 7 8 9 10 11 12 brown blue white green pink yellow black gray red violet gray/pink red/blue ⌋ ⌋ ⌋ ⌋ ⌋ ⌋ ⌋ ⌋ ⌋ ⌋ ⌋ ⌋		
Contact layout	Male Female		
2 Cable Type		Jacket Color	
Wire diameter 0.14 mm²		gray	black
PVC (UL/CSA)		209	609
PUR (UL/CSA), robots/C-tracks			705
Wire diameter 0.25 mm²			
PUR (UL/CSA), robots/C-tracks		301	
PUR (UL/CSA), welding spark		302	
3 Cable Length			
0.3 m	0030		
0.6 m	0060		
1.0 m	0100		
1.5 m	0150		
2.0 m	0200		
Technical Data			
Operating voltage	max. 30 V AC/DC		
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)		
Temperature range	-25...+85 °C, depending on cable quality		
Article No.			
The composition of your article number is explained on page 3.1.i	7 0 0 0 – 5 3 0 0 1 – – – –		
	7 0 0 5 M12 Lite (plastic hexagonal screw) on request		
	1 Form	2 Cable Type	3 Cable Length
Notes			
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Male

straight

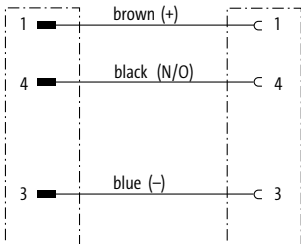
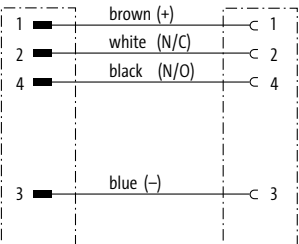
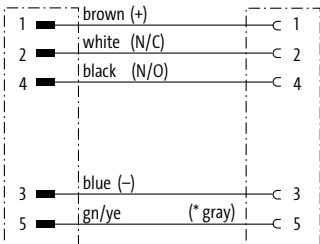
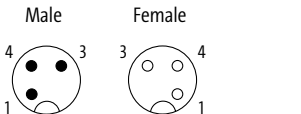
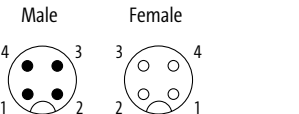
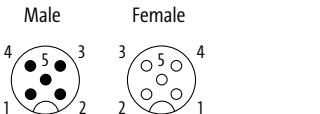
Female

90°



Approvals:  

* only for products with UL/CSA approved cable

1 Form		40101			40121			40141		
Type		3-pole			4-pole			5-pole		
Circuit diagram								 (* for cable type 126, 732, 219, 619)		
Contact layout										
2 Cable Type		Jacket Color			Jacket Color			Jacket Color		
Wire diameter 0.34 mm²		yellow	gray	black	yellow	gray	black	yellow	gray	black
PVC (UL/CSA)		013	213	613	014	214	614	015	215 (219)	615 (619)
PUR/PVC (UL/CSA)		023	223	623	024	224	624	025	225	625
PUR (UL/CSA), robots/C-tracks		033	233	633	034	234	634	035 (126)	235	635 (732)
PUR (UL/CSA), welding spark		053	253	653	054	254	654	055	255	655
3 Cable Length										
0.3 m		0030								
0.6 m		0060								
1.0 m		0100								
1.5 m		0150								
2.0 m		0200								
Technical Data										
Operating voltage		max. 250 V AC/DC						max. 125 V AC/DC		
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)								
Temperature range		-25...+85 °C, depending on cable quality								
Article No.										
The composition of your article number is explained on page 3.1.i		7 0 0 0			— — — — —			— — — — —		
		7 0 0 5			M12 Lite (plastic hexagonal screw) on request					
		1 Form			2 Cable Type			3 Cable Length		
Notes										
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.								

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Male

straight

Female

90° with LED



* only for products with UL/CSA approved cable

1 Form		4 0 3 2 1			4 0 3 4 1			4 0 3 6 1		
Type		3-pole with 2 × LED (PNP) (NPN) on request			4-pole with 3 × LED (PNP) (NPN) on request			5-pole with 3 × LED (PNP) (NPN) on request		
Circuit diagram								 (* for cable type 126, 732, 219, 619)		
Contact layout										
2 Cable Type		Jacket Color			Jacket Color			Jacket Color		
Wire diameter 0.34 mm ²		yellow	gray	black	yellow	gray	black	yellow	gray	black
PVC (UL/CSA)		013	213	613	014	214	614	015	215 (219)	615 (619)
PUR/PVC (UL/CSA)		023	223	623	024	224	624	025	225	625
PUR (UL/CSA), robots/C-tracks		033	233	633	034	234	634	035 (126)	235	635 (732)
PUR (UL/CSA), welding spark		053	253	653	054	254	654	055	255	655
3 Cable Length										
0.3 m		0030								
0.6 m		0060								
1.0 m		0100								
1.5 m		0150								
2.0 m		0200								
Technical Data										
Operating voltage		24 V DC ±25%								
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)								
Temperature range		-25...+85 °C, depending on cable quality								
Article No.										
The composition of your article number is explained on page 3.1.i		7 0 0 0			— — — — —			— — — — —		
		7 0 0 5			M12 Lite (plastic hexagonal screw) on request					
		1 Form			2 Cable Type			3 Cable Length		
Notes										
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.								

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Male

straight

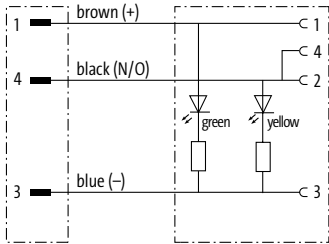
Female

90° with LED



Approvals:  

* only for products with UL/CSA approved cable

1 Form		40381		
Type		3-pole with 2 × LED (PNP) (NPN) on request		
Circuit diagram				
Contact layout		Male  Female 		
2 Cable Type		Jacket Color		
Wire diameter 0.34 mm ²		yellow	gray	black
PVC (UL/CSA)		013	213	613
PUR/PVC (UL/CSA)		023	223	623
PUR (UL/CSA), robots/C-tracks		033	233	633
PUR (UL/CSA), welding spark		053	253	653
3 Cable Length				
0.3 m		0030		
0.6 m		0060		
1.0 m		0100		
1.5 m		0150		
2.0 m		0200		
Technical Data				
Operating voltage		24 V DC ±25%		
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)		
Temperature range		-25...+85 °C, depending on cable quality		
Article No.				
The composition of your article number is explained on page 3.1.i		7 0 0 0 - 4 0 3 8 1 - 7 0 0 5 M12 Lite (plastic hexagonal screw) on request		
		1 Form	2 Cable Type	3 Cable Length
Notes				
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.		

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

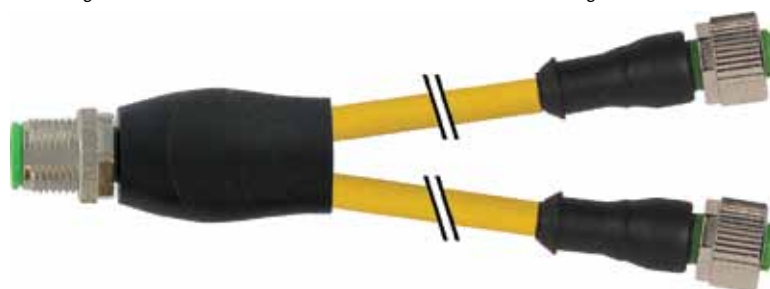
Approvals:  
 * only for products with UL/CSA approved cable

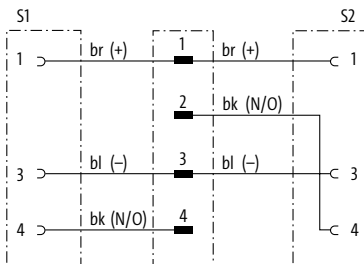
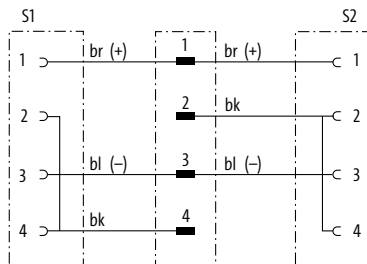
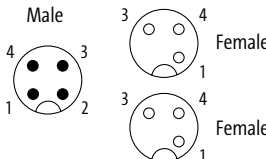
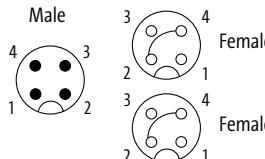
Y connector

Male straight

Females

straight



1 Form		40701			40721		
Type		4-/3-pole			4-pole		
Circuit diagram							
Contact layout							
2 Cable Type		Jacket Color			Jacket Color		
Wire diameter 0.34 mm²		yellow	gray	black	yellow	gray	black
PVC (UL/CSA)		013	213	613	013	213	613
PUR/PVC (UL/CSA)		023	223	623	023	223	623
PUR (UL/CSA), robots/C-tracks		033	233	633	033	233	633
PUR (UL/CSA), welding spark		053	253	653	053	253	653
3 Cable Length							
0.3 m		0030					
0.6 m		0060					
1.0 m		0100					
1.5 m		0150					
2.0 m		0200					
Technical Data							
Operating voltage		max. 250 V AC/DC					
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)					
Temperature range		-25...+85 °C, depending on cable quality					
Article No.							
The composition of your article number is explained on page 3.1.i		7000 - -					
		7005 M12 Lite (plastic hexagonal screw) on request					
		1 Form		2 Cable Type		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.					

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Y connector

Male straight

Females

90°



Approvals:  

* only for products with UL/CSA approved cable

1 Form

40741

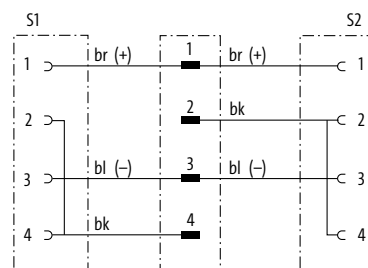
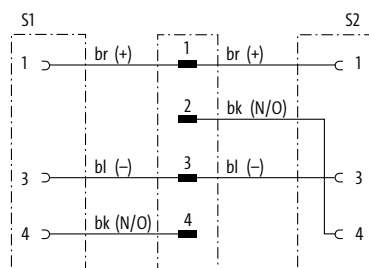
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Type

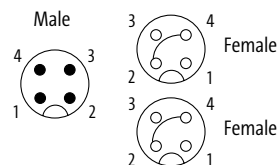
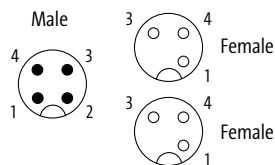
4-/3-pole

4-pole

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.34 mm²

yellow

gray

black

yellow

gray

black

PVC (UL/CSA)

013

213

613

013

213

613

PUR/PVC (UL/CSA)

023

223

623

023

223

623

PUR (UL/CSA), robots/C-tracks

033

233

633

033

233

633

PUR (UL/CSA), welding spark

053

253

653

053

253

653

3 Cable Length

0.3 m

0030

0.6 m

0060

1.0 m

0100

1.5 m

0150

2.0 m

0200

Technical Data

Operating voltage

max. 250 V AC/DC

Protection

IP65, IP66K, IP67 inserted and tightened (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

-

7 0 0 5

M12 Lite (plastic hexagonal screw) on request

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Approvals:  
* only for products with UL/CSA approved cable

Y connector

Male straight

Females

90° with LED



1	Form	40781			40801		
	Type	4-/3-pole LED (yellow/green)			4-pole LED (yellow/green)		
	Circuit diagram						
Contact layout							
2	Cable Type	Jacket Color			Jacket Color		
	Wire diameter 0.34 mm²	yellow	gray	black	yellow	gray	black
	PVC (UL/CSA)	013	213	613	013	213	613
	PUR/PVC (UL/CSA)	023	223	623	023	223	623
	PUR (UL/CSA), robots/C-tracks	033	233	633	033	233	633
PUR (UL/CSA), welding spark	053	253	653	053	253	653	
3	Cable Length						
	0.3 m	0030					
	0.6 m	0060					
	1.0 m	0100					
	1.5 m	0150					
2.0 m	0200						
Technical Data							
Operating voltage		24 V DC ±25%					
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)					
Temperature range		-25...+85 °C, depending on cable quality					
Article No.							
The composition of your article number is explained on page 3.1.i		7000 - -					
		7005 M12 Lite (plastic hexagonal screw) on request					
		1 Form		2 Cable Type		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.					

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Male

straight

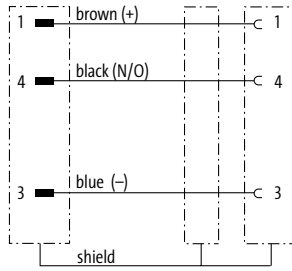
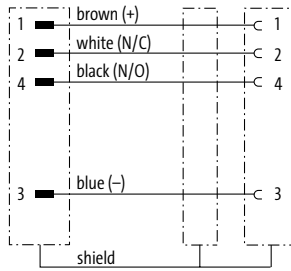
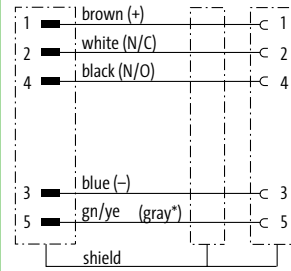
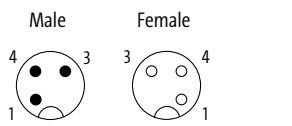
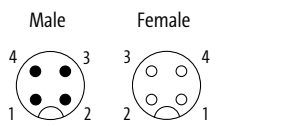
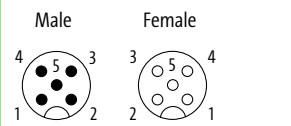
Female

straight



Approvals:  

* only for products with UL/CSA approved cable

1 Form	40481	40501	40521
Type	3-pole, shielded	4-pole, shielded	5-pole, shielded
Circuit diagram			 (* for cable type 203, 603, 243, 643)
Contact layout			
2 Cable Type	Jacket Color		Jacket Color
Wire diameter 0.34 mm ²	gray	black	gray
PVC (UL/CSA)	200	600	201
PUR (UL/CSA), robots/C-tracks	240	640	241
3 Cable Length	Jacket Color		Jacket Color
0.3 m	0030		
0.6 m	0060		
1.0 m	0100		
1.5 m	0150		
2.0 m	0200		
Technical Data	Jacket Color		Jacket Color
Operating voltage	max. 60 V AC/DC		
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)		
Temperature range	-25...+85 °C, depending on cable quality		
Article No.	Jacket Color		Jacket Color
The composition of your article number is explained on page 3.1.i	7 0 0 0	-	-
	1 Form	2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Male

straight

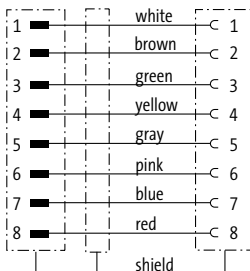
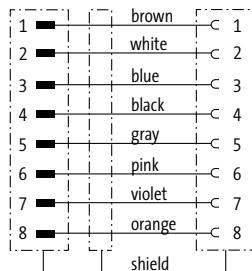
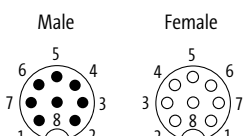
Female

straight



Approvals:  

* only for products with UL/CSA approved cable

1 Form		48041		48041	
Type		8-pole, shielded		8-pole, shielded	
Circuit diagram					
Contact layout					
2 Cable Type		Jacket Color		Jacket Color	
Wire diameter 0.25 mm²		gray		black	
PVC (UL/CSA)		204		205	
PUR (UL/CSA), robots/C-tracks		291		717	
3 Cable Length					
0.3 m		0030			
0.6 m		0060			
1.0 m		0100			
1.5 m		0150			
2.0 m		0200			
Technical Data					
Operating voltage		max. 30 V AC/DC			
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)			
Temperature range		-25...+85 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		7000 — —			
		1 Form		2 Cable Type	
				3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Male

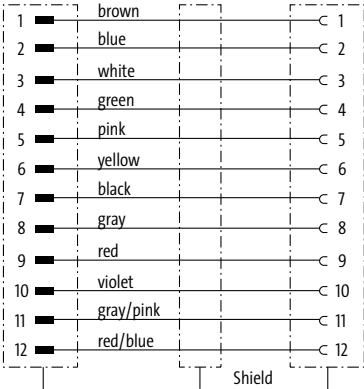
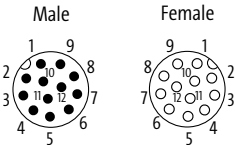
straight

Female

straight



Approvals: 
 * only for products with UL/CSA approved cable

1	Form	53301		
M12 Round Plug Connectors	Type	12-pole, shielded		
	Circuit diagram			
	Contact layout			
2	Cable Type	Jacket Color		
	Wire diameter 0.14 mm²	black		
	PVC (UL/CSA)	703		
	PUR (UL/CSA), robots/C-tracks	706		
3	Cable Length			
	0.3 m	0030		
	0.6 m	0060		
	1.0 m	0100		
	1.5 m	0150		
	2.0 m	0200		
Technical Data				
Operating voltage		max. 30 V AC/DC		
Protection		IP67 inserted and tightened (EN 60529)		
Temperature range		-25...+85 °C, depending on cable quality		
Article No.				
The composition of your article number is explained on page 3.1.i		7 0 0 0 - 5 3 3 0 1 -		
		1 Form 2 Cable Type 3 Cable Length		
Notes				
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.		

M12 ROUND PLUG CONNECTORS

Field-wireable

– IDC terminals

Male

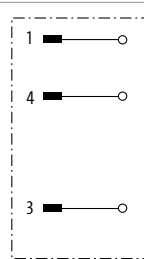
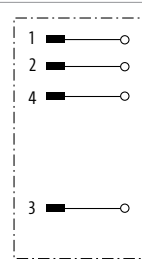
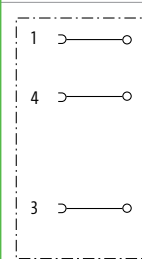
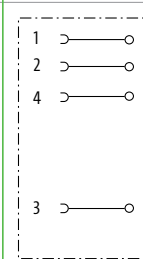
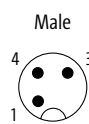
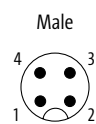
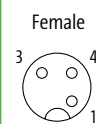
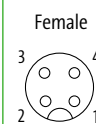
straight



Female

straight



1	Form	12461 me	12481 me	12581 me	12601 me
	Type	3-pole	4-pole	3-pole	4-pole
	Circuit diagram				
	Connection cross section	0.25...0.5 mm ²			
	Contact layout	Male 	Male 	Female 	Female 
Technical Data					
Operating voltage		max. 32 V AC/DC			
Operating current per contact		max. 4 A			
Connection cross section		0.25...0.5 mm ² (conductor diameter min. 0.1 mm)			
Sealing range (cable Ø)		4...5.1 mm			
Wire isolation		PVC, PP, TPE			
Outer wire Ø		1.2...1.6 mm			
Locking of ports		Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing			
Protection		IP67 inserted and tightened (EN 60529)			
Reconnection (cable)		10			
Temperature range		-25...+85 °C			
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 0 0 —			

M12 ROUND PLUG CONNECTORS

Field-wireable

– IDC terminals

Male

straight, compact



Female

straight, compact



1	Form	12491	me	12611	me
Approvals		cURus			
Type		4-pole			
Circuit diagram		1 2 4 3			
Connection cross section		0.14...0.34 mm²			
Contact layout		Male 4 3 1 2 Female 3 4 2 1			
Technical Data					
Operating voltage		max. 32 V AC/DC			
Operating current per contact		max. 4 A			
Connection cross section		0.14...0.34 mm² (conductor diameter min. 0.1 mm)			
Sealing range (cable Ø)		2.9...5.1 mm			
Wire isolation		PVC, PP, TPE			
Outer wire Ø		1.0...1.6 mm			
Locking of ports		Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing			
Protection		IP67 inserted and tightened (EN 60529)			
Reconnection (cable)		10			
Temperature range		-25...+85 °C			
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - 0 0 0 0 0 0 0			
		1 Form			
Notes		Other versions on request.			

M12 ROUND PLUG CONNECTORS

Field-wireable

– IDC terminals

Male

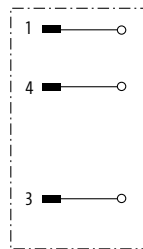
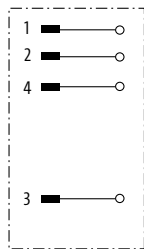
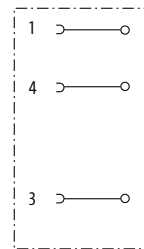
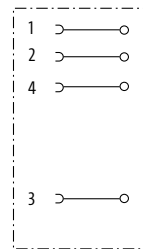
90°



Female

90°



1	Form	12541 me×	12561 me×	12661 me×	12681 me×
	Approvals		cURus		
	Type	3-pole	4-pole	3-pole	4-pole
	Circuit diagram				
	Connection cross section	0.25...0.5 mm²			
	Contact layout	Male 	Male 	Female 	Female 
Technical Data					
	Operating voltage	max. 32 V AC/DC			
	Operating current per contact	max. 4 A			
	Connection cross section	0.25...0.5 mm² (conductor diameter min. 0.1 mm)			
	Sealing range (cable Ø)	4...5.1 mm			
	Wire isolation	PVC, PP, TPE			
	Outer wire Ø	1.2...1.6 mm			
	Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing			
	Protection	IP67 inserted and tightened (EN 60529)			
	Reconnection (cable)	10			
	Temperature range	-25...+85 °C			
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - 0 0 0 0 0 0 0			
		7 0 0 5 M12 Lite (plastic hexagonal screw) on request			
			1	Form	
Notes					
	Other versions on request.				

M12 ROUND PLUG CONNECTORS

Field-wireable

– IDC terminals

Female

90° with LED



1	Form	12671	me	12691	me
Type		3-pole with 2 × LED (PNP)		4-pole with 3 × LED (PNP)	
Circuit diagram					
Connection cross section		0.25...0.5 mm ²			
Contact layout		Female 		Female 	
Technical Data					
Operating voltage		24 V DC ±25%			
Operating current per contact		max. 4 A			
Connection cross section		0.25...0.5 mm ² (conductor diameter min. 0.1 mm)			
Sealing range (cable Ø)		4...5.1 mm			
Wire isolation		PVC, PP, TPE			
Outer wire Ø		1.2...1.6 mm			
Locking of ports		Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing			
Protection		IP67 inserted and tightened (EN 60529)			
Reconnection (cable)		10			
Temperature range		-25...+85 °C			
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 0 0	-	0 0 0	0 0 0 0
		7 0 0 5	M12 Lite (plastic hexagonal screw) on request		
		1	Form		
Notes					
		Other versions on request.			

M12 ROUND PLUG CONNECTORS

Field-wireable

- IDC terminals

Male

straight



1	Form	12501	me	12521	me	12515	me
	Type	3-pole		4-pole		4-pole	
	Circuit diagram						
	Connection cross section	0.5...1.0 mm²					
	Contact layout						
Technical Data							
Operating voltage		max. 32 V AC/DC					
Operating current per contact		max. 4 A					
Connection cross section		0.5...1.0 mm² (conductor diameter min. 0.1 mm)					
Sealing range (cable Ø)		5.5...8 mm					
Wire isolation		PVC, PP, TPE					
Outer wire Ø		1.6...2.0 mm					
Locking of ports		Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing					
Protection		IP67 inserted and tightened (EN 60529)					
Reconnection (cable)		10					
Temperature range		-25...+85 °C					
Article No.							
The composition of your article number is explained on page 3.1.i		7 0 0 0		- - - - -		0 0 0	
		7 0 0 5		M12 Lite (plastic hexagonal screw) on request			
		1 Form					
Notes		Other versions on request.					

M12 ROUND PLUG CONNECTORS

Field-wireable

– IDC terminals

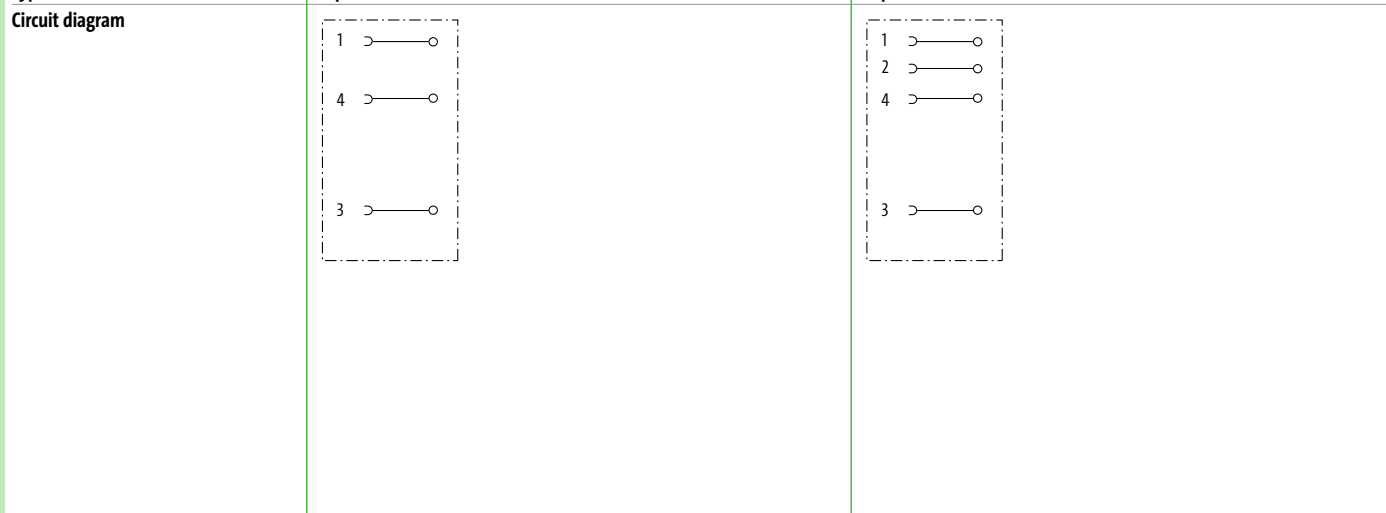
Female

straight

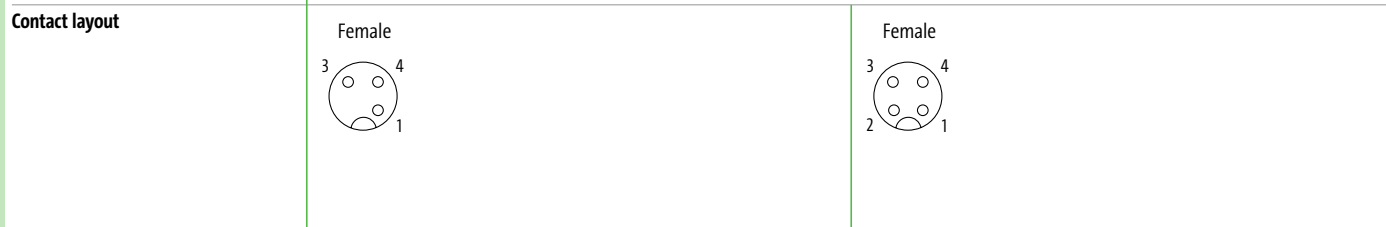


1 Form	12621 me	12641 me
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Type	3-pole	4-pole
------	--------	--------



Connection cross section	0.5...1.0 mm ²	
--------------------------	---------------------------	--



Technical Data

Operating voltage	max. 32 V AC/DC
Operating current per contact	max. 4 A
Connection cross section	0.5...1.0 mm ² (conductor diameter min. 0.1 mm)
Sealing range (cable Ø)	5.5...8 mm
Wire isolation	PVC, PP, TPE
Outer wire Ø	1.6...2.0 mm
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing
Protection	IP67 inserted and tightened (EN 60529)
Reconnection (cable)	10
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

- - - - -

0 0 0

0 0 0 0

7 0 0 5

M12 Lite (plastic hexagonal screw) on request

1 Form

Notes

Other versions on request.

M12 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

Male

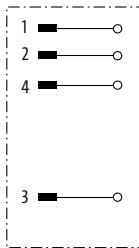
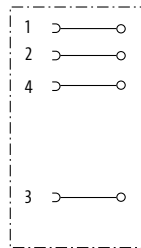
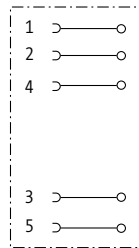
straight



Female

straight


 Approvals: 

1	Form	12701 me	12721 me	12901 me	12921 me
Type	4-pole	5-pole	4-pole	5-pole	
Circuit diagram					
Sealing range (cable Ø)	4...6 mm				
Contact layout	Male 	Male 	Female 	Female 	
Technical Data					
Operating voltage	max. 250 V AC/DC		max. 60 V AC/DC		max. 250 V AC/DC
Operating current per contact	max. 4 A				
Connection cross section	max. 0.75 mm²				
Sealing range (cable Ø)	4...6 mm				
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing				
Protection	IP67 inserted and tightened (EN 60529)				
Temperature range	-40...+85 °C				
Article No.					
The composition of your article number is explained on page 3.1.i	7 0 0 0		0 0 0		0 0 0 0
	1		Form		
Notes					
Other versions on request.					

M12 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

Male

straight



Female

straight



Approvals:

1	Form	12741 me	12761 me	12941 me	12961 me
Type		4-pole	5-pole	4-pole	5-pole
Circuit diagram					
Sealing range (cable Ø)	6...8 mm				
Contact layout		Male 	Male 	Female 	Female
Technical Data					
Operating voltage	max. 250 V AC/DC		max. 60 V AC/DC		max. 250 V AC/DC
Operating current per contact	max. 4 A		max. 60 V AC/DC		max. 60 V AC/DC
Connection cross section	max. 0.75 mm²				
Sealing range (cable Ø)	6...8 mm				
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing				
Protection	IP67 inserted and tightened (EN 60529)				
Temperature range	-40...+85 °C				
Article No.					
The composition of your article number is explained on page 3.1.i	7 0 0 0 - - 0 0 0 0 0 0 0				
		1	Form		

Notes

Other versions on request.

M12 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

Male
straight



Female
straight



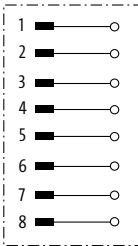
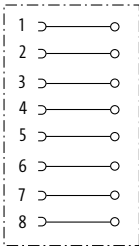
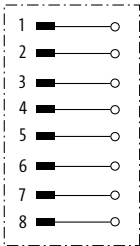
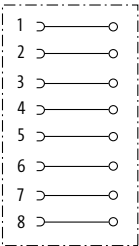
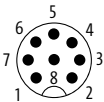
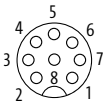
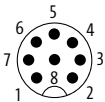
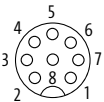
Male
90°



Female
90°



Approvals:

1	Form	17301	me×	17321	me×	17311	me×	17331	me×
Type		8-pole		8-pole		8-pole		8-pole	
Circuit diagram									
Sealing range (cable Ø)		6...8 mm							
Contact layout		Male 		Female 		Male 		Female 	
Technical Data									
Operating voltage		max. 30 V AC/DC							
Operating current per contact		max. 2 A							
Connection cross section		max. 0.5 mm²							
Sealing range (cable Ø)		6...8 mm							
Locking of ports		Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing							
Protection		IP67 inserted and tightened (EN 60529)							
Temperature range		-40...+85 °C							
Article No.									
The composition of your article number is explained on page 3.1.i		<u>7</u> <u>0</u> <u>0</u> <u>0</u>		— — — — —		<u>0</u> <u>0</u> <u>0</u>		<u>0</u> <u>0</u> <u>0</u> <u>0</u>	
				1 Form					
Notes		Other versions on request.							

M12 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

Male

90°

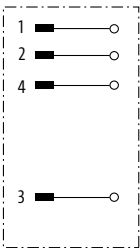
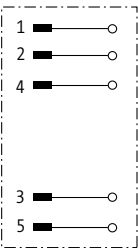
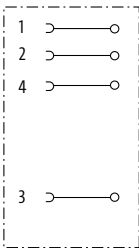
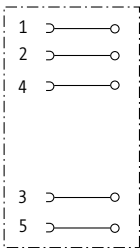


Female

90°



Approvals: 

1	Form	12821 me✖	12841 me✖	12981 me✖	13001 me✖
Type		4-pole	5-pole	4-pole	5-pole
Circuit diagram					
Sealing range (cable Ø)		4...6 mm			
Contact layout		Male 	Male 	Female 	Female 
Technical Data					
Operating voltage		max. 250 V AC/DC	max. 60 V AC/DC	max. 250 V AC/DC	max. 60 V AC/DC
Operating current per contact		max. 4 A			
Connection cross section		max. 0.75 mm²			
Sealing range (cable Ø)		4...6 mm			
Locking of ports		Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing			
Protection		IP67 inserted and tightened (EN 60529)			
Temperature range		-40...+85 °C			
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 0 0	— — — —	0 0 0	0 0 0 0
		1	Form		
Notes		Other versions on request.			

M12 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

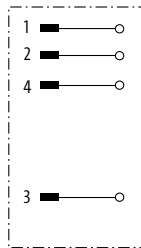
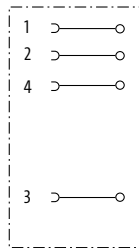
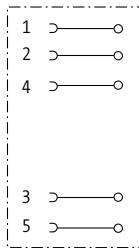
Approvals:  **us**

Male
90°



Female
90°



1	Form	12861 me×	12881 me×	13021 me×	13041 me×
Type		4-pole	5-pole	4-pole	5-pole
Circuit diagram					
Sealing range (cable Ø)		6...8 mm			
Contact layout		Male 	Male 	Female 	Female 
Technical Data					
Operating voltage		max. 250 V AC/DC	max. 60 V AC/DC	max. 250 V AC/DC	max. 60 V AC/DC
Operating current per contact		max. 4 A			
Connection cross section		max. 0.75 mm²			
Sealing range (cable Ø)		6...8 mm			
Locking of ports		Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing			
Protection		IP67 inserted and tightened (EN 60529)			
Temperature range		-40...+85 °C			
Article No.					
The composition of your article number is explained on page 3.1.i	7 0 0 0 - - 0 0 0 0 0 0 0				
	1 Form				
Notes					
Other versions on request.					

M12 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

Approvals:  US
Listed

Male
straight



Female
straight



Male
90°

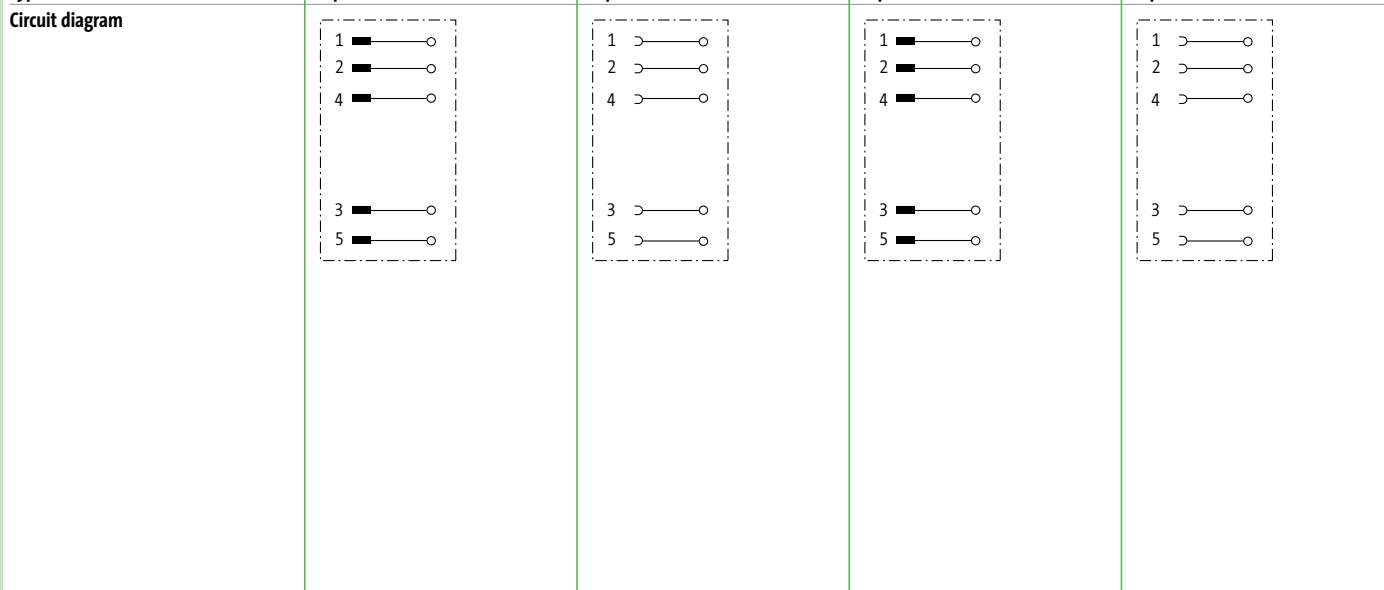


Female
90°

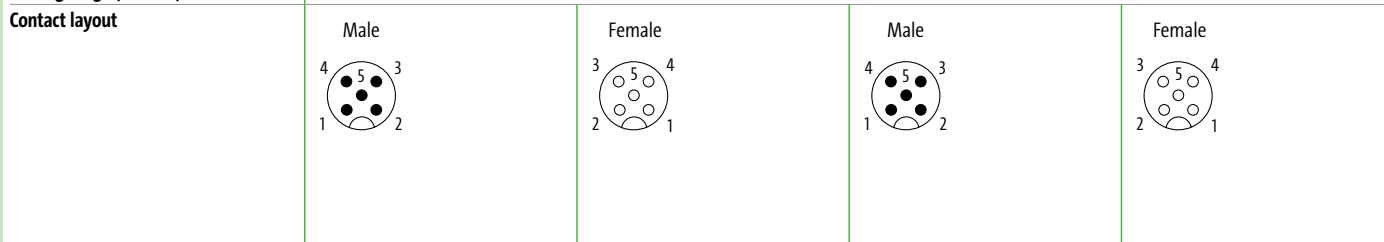


1 Form	12731 me×	12931 me×	12851 me×	13011 me×
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Type	5-pole	5-pole	5-pole	5-pole
------	--------	--------	--------	--------



Sealing range (cable Ø)	2.5...8.0 mm			
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Technical Data

Operating voltage	max. 60 V AC/DC
Operating current per contact	max. 7.5 A (+40 °C; 1.5 mm ²)
Connection cross section	max. 1.5 mm ²
Sealing range (cable Ø)	2.5...8.0 mm
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm)
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-30...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

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0 0 0

0 0 0 0

1 Form

Notes

Other versions on request.

M12 ROUND PLUG CONNECTORS

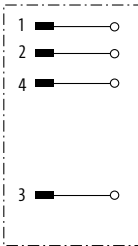
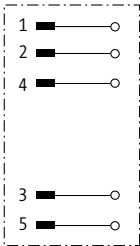
Field-wireable

– Screw terminals

Y connector

Male straight



1	Form	12781	me	12801	me
	Type	4-pole		5-pole	
	Circuit diagram				
	Sealing range (cable Ø)	2.1...3/4...5 mm			
	Contact layout	Male 		Male 	
	Technical Data				
	Operating voltage	max. 250 V AC/DC		max. 125 V AC/DC	
	Operating current per contact	max. 4 A			
	Connection cross section	max. 0.75 mm²			
	Sealing range (cable Ø)	2.1...3/4...5 mm (2 cable entries)			
	Protection	IP67 inserted and tightened (EN 60529)			
	Temperature range	-40...+85 °C			
	Article No.				
	The composition of your article number is explained on page 3.1.i	7 0 0 0 - - 0 0 0 0 0 0 0			
		1 Form			
	Notes	Other versions on request.			

M12 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

Male

straight



Female

straight



1	Form	13301	me✕	13321	me✕	13381	me✕	13401	me✕
Approvals				cURus				cURus	
Type		5-pole, shielded		5-pole, shielded		5-pole, shielded		5-pole, shielded	
Circuit diagram									
Sealing range (cable Ø)		4...6 mm		6...8 mm		4...6 mm		6...8 mm	
Contact layout		Male				Female			
Technical Data									
Operating voltage		max. 60 V AC/DC							
Operating current per contact		max. 4 A							
Connection cross section		max. 0.75 mm²							
Sealing range (cable Ø)		4...6 mm		6...8 mm		4...6 mm		6...8 mm	
Protection		IP67 inserted and tightened (EN 60529)							
Housing		Brass, nickel plated							
Temperature range		-40...+85 °C							
Article No.									
The composition of your article number is explained on page 3.1.i		7 0 0 0		- - - - -		0 0 0		0 0 0 0	
				1 Form					
Notes		Other versions on request.							

M12 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

Male
straight



Female
straight



Male
90°



Female
90°



Approvals:

1	Form	17341 me×	17361 me×	17351 me×	17371 me×
Type		8-pole, shielded	8-pole, shielded	8-pole, shielded	8-pole, shielded
Circuit diagram					
Sealing range (cable Ø)		6...8 mm			
Contact layout		Male 	Female 	Male 	Female
Technical Data					
Operating voltage		max. 30 V AC/DC			
Operating current per contact		max. 2 A			
Connection cross section		max. 0.5 mm²			
Sealing range (cable Ø)		6...8 mm			
Protection		IP67 inserted and tightened (EN 60529)			
Housing		Brass, nickel plated			
Temperature range		-40...+85 °C			
Article No.					
The composition of your article number is explained on page 3.1.i	7 0 0 0		0 0 0		0 0 0 0
	1		Form		
Notes					
Other versions on request.					

M12 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

Male

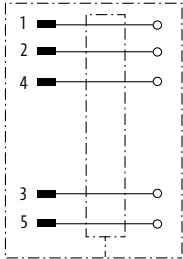
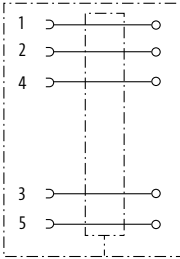
90°



Female

90°



1	Form	13341 me✕	13361 me✕	13421 me✕	13441 me✕
Approvals					cURus
Type		5-pole, shielded	5-pole, shielded	5-pole, shielded	5-pole, shielded
Circuit diagram					
Sealing range (cable Ø)		4...6 mm	6...8 mm	4...6 mm	6...8 mm
Contact layout		Male 		Female 	
Technical Data					
Operating voltage	max. 60 V AC/DC				
Operating current per contact	max. 4 A				
Connection cross section	max. 0.75 mm²				
Sealing range (cable Ø)	4...6 mm	6...8 mm	4...6 mm	6...8 mm	
Protection	IP67 inserted and tightened (EN 60529)				
Housing	Brass, nickel plated				
Temperature range	-40...+85 °C				
Article No.					
The composition of your article number is explained on page 3.1.i	7 0 0 0 0 - - 0 0 0 0 0 0 0				
	1 Form				
Notes					
Other versions on request.					

M12 ROUND PLUG CONNECTORS

Labeling accessories			Art-No.
	Slip-on cable sleeve for ACS label plates (4 × 18 mm)	Cable diameter (4...6.5 mm)	7000-99004-0000000
	Snap-on cable sleeve for ACS label plates (4 × 18 mm)	Cable diameter (4.2...5.6 mm)	7000-99005-0000000
	for ACS label plates (4 × 18 mm)	Cable diameter (5...7 mm)	7000-99006-0000000
	ACS label plate for self marking (4 × 18 mm)		7000-99002-0000000
	Colored ring M8/M12		
	sandy yellow	for unshielded molding	7000-99301-V011002
	zinc yellow	for unshielded molding	7000-99301-V011018
	redorange	for unshielded molding	7000-99301-V012008
	red	for unshielded molding	7000-99301-V013020
	violet	for unshielded molding	7000-99301-V014003
	purple	for unshielded molding	7000-99301-V014006
	blue	for unshielded molding	7000-99301-V015005
	green	for unshielded molding	7000-99301-V016018
	gray	for unshielded molding	7000-99301-V017035
	white	for unshielded molding	7000-99301-V019003
	black	for unshielded molding	7000-99301-V019004
Mounting accessories			Art-No.
	Torque wrench set M12 (0.6 Nm, SW13)	M12 data connenctor molded (standard)	7000-99102-0000000
	Torque wrench M12 (0.6 Nm, SW13)	M12 data connenctor molded (standard)	7000-99109-0000000
	Torque wrench M12 (0.6 Nm, SW17)	M12 field-wireable (IDC terminal)	7000-99094-0000000
	Torque wrench M12 (0.6 Nm, SW18)	M12 field-wireable via (screw terminals)	7000-99103-0000000
	Hold clip M12 Plastic		7000-99045-0000000

M12 ROUND PLUG CONNECTORS

End fitting accessories			Art-No.
	Tube adapter		
	snap-in for corrugated tube (size 13mm)	Cable diameter (4...7 mm)	7000-99081-0000000
Connection accessories			Art-No.
	Universal holder		
	modular	M8 M12	7000-99801-0000000
	Universal holder		
	modular	M12 Y-connector M12	7000-99811-0000000
	Flange M12 male, pre-wired 0.2 m		
	straight, A-coded, 4-pole		7000-13501-9710020
	straight, A-coded, 5-pole	DeviceNet, CANopen	7000-13521-9720020
	Flange M12 female, pre-wired 0.2 m		
	straight, A-coded, 4-pole		7000-13541-9710020
	straight, A-coded, 5-pole	DeviceNet, CANopen	7000-13561-9720020
	straight, A-coded, 8-pole		7000-17181-9730020

T-COUPLERS VERSATILE ADAPTERS

- Slimline saves space
- Minimizes wiring efforts
- Many different configurations

T-COUPLERS FOR PERFECT SYSTEM INSTALLATIONS

Increasingly, automation requires a large number of sensors and with each sensor comes more wiring.

By using T-couplers you reduce the number of cables required and you can combine inputs and outputs depending on the application. Thanks to the slim design, you can connect several M12 ports to our Cube module. The handy torque wrench makes installation easy even in tight spaces and guarantees IP67 seals.

The slimline T-couplers feature a new female screw connection which makes the connection even safer and easier.

T-couplers



M8 male
T-coupler
T-coupler (Nano)

M8 female
T-coupler
T-coupler (Nano)

Page 3.3.1



M12 male
T-coupler

M12 female
T-coupler

Page 3.3.2



M12 female
T-coupler
• Industrial Ethernet

M12 male/M12 female
T-coupler

Page 3.3.4



7/8" male
T-coupler

7/8" female
T-coupler

Page 3.3.5

T-COUPPLERS M8, M12, 7/8"

M8 - M8

T-coupler

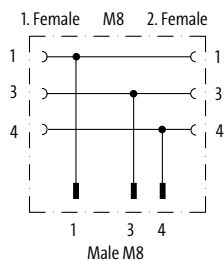
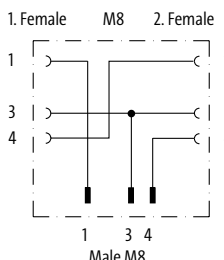
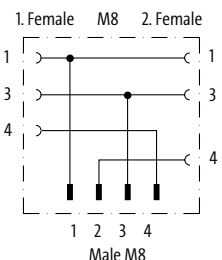
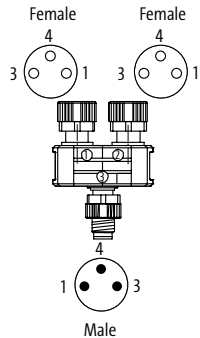
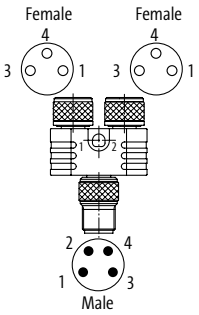
Male straight - female straight



T-coupler (Nano)

Male straight - female straight



1 Form	88611	88621	88602
Approvals	cULus	cULus	
Type	3-pole	3-pole	3-/4-pole
Circuit diagram	Parallel circuit 	Series connection 	Distribution function (NO) 
Contact layout			
Technical Data			
Operating voltage	max. 50 V AC/60 V DC		max. 32 V AC/DC
Rated surge voltage	1.5 kV		0.8 kV
Operating current per contact	max. 4 A		max. 2 A
Locking of ports	Screw thread M8 x 1 mm (recommended torque 0.4 Nm) self-securing		Screw thread M8 x 1 mm, self-securing
Protection	IP67 inserted and tightened (EN 60529)		
Temperature range	-25...+85 °C		-30...+80 °C
Article No.			
The composition of your article number is explained on page 3.1.i	7000 - - - - - 000 0000		
	1 Form		
Notes	Other versions on request.		

T-couplers M8, M12, 7/8"

T-COUPPLERS M8, M12, 7/8"

M12 - M12

T-coupler
Male straight - female straight



Approvals: UL US
Listed

T-couplers M8, M12, 7/8"

1	Form	41121	41141	41161	41181
Type		5-pole	5-pole	4-pole	5-pole
		Distribution function (NO)	Parallel circuit	Series connection	Distribution function (NO)
Circuit diagram		1. Female M12 2. Female	1. Female M12 2. Female	1. Female M12 2. Female	1. Female M12 2. Female
Contact layout		Female Female	Female Female	Female Female	Female Female
Technical Data					
Operating voltage	max. 60 V AC/DC				
Operating voltage (only UL listed)	30 V AC/DC				
Rated surge voltage	1.5 kV				
Operating current per contact	max. 4 A				
Material group	IEC 60664-1, category I				
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing				
Protection	IP67 inserted and tightened (EN 60529)				
Locking material	Zinc die casting, matte nickel plated				
Temperature range	-25...+85 °C				
Article No.					
The composition of your article number is explained on page 3.1.i					
		1 Form			
Notes					
		Other versions on request.			

T-COUPPLERS M8, M12, 7/8"

M12 - M12

T-coupler (Slim Line)

Male straight - female straight

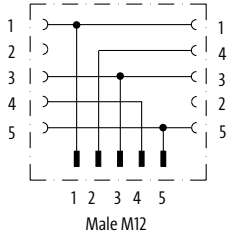
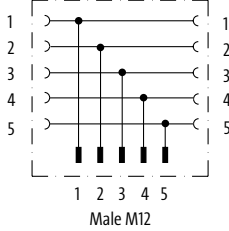
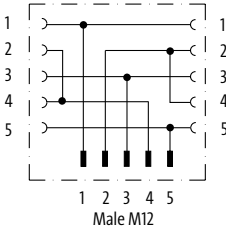
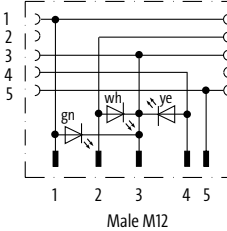
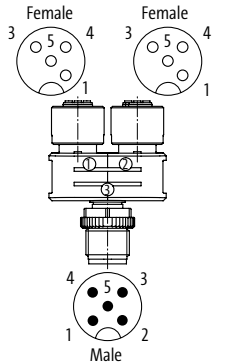
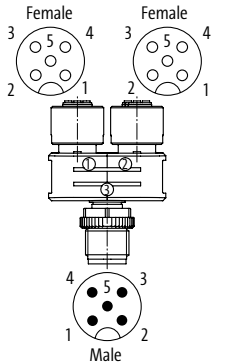
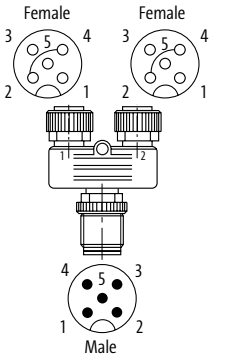
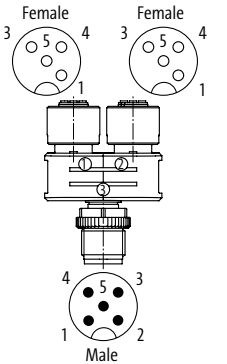


T-coupler (Slim Line)

Male straight - female straight
with LED



Approvals: UL US
Listed

1 Form	41131	41151	41191	41135
Type	5-pole	5-pole	5-pole	5-pole with 3 × LED (PNP)
Distribution function (NO)		Parallel circuit		
Circuit diagram	1. Female M12 2. Female  Male M12	1. Female M12 2. Female  Male M12	1. Female M12 2. Female  Male M12	1. Female M12 2. Female  Male M12
Contact layout	 Female Male	 Female Male	 Female Male	 Female Male
Technical Data				
Operating voltage	max. 60 V AC/DC			24 V DC ±25%
Operating voltage (only UL listed)	30 V AC/DC			30 V DC
Rated surge voltage	1.5 kV			0.8 kV
Operating current per contact	max. 4 A			
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing			
Protection	IP67 inserted and tightened (EN 60529)			
Temperature range	-25...+85 °C			
Article No.				
The composition of your article number is explained on page 3.1.i	7000 - - 000 0000			
1 Form				
Notes				
Other versions on request.				

T-COUPLERS M8, M12, 7/8"

Industrial Ethernet

– M12 - M12

T-coupler

Female straight - male/female straight



T-coupler

Female straight - female straight



1 Form

Type

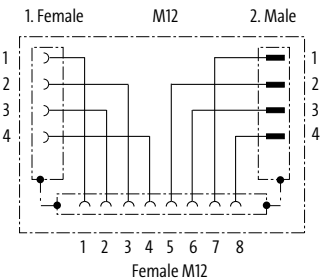
47301

4-/8-pole, shielded

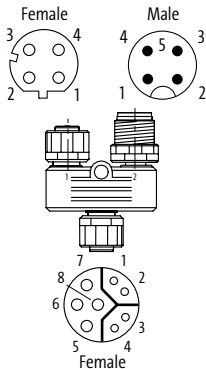
Y-coded, D-coded

Distribution function (NO)

Circuit diagram



Contact layout

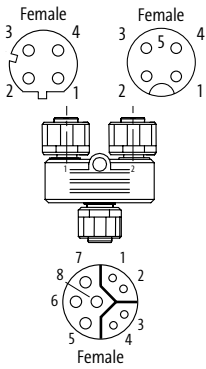
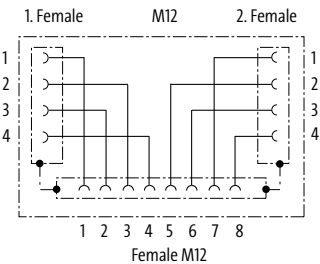


47311

4-/8-pole, shielded

Y-coded, D-coded

Distribution function (NO)



Technical Data

Operating voltage	max. 30 V DC
Rated surge voltage	0.8 kV
Operating current per contact	4 A (Power), 0.5 A (Data)
Material group	IEC 60664-1, category I
Transfer parameters	CAT5, Class D (ISO/IEC 11801:2002), (EN 50173-1)
Transfer rate	to 100 Mbit/s Full Duplex
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing
Protection	IP54 inserted and tightened (EN 60529)
Locking material	Zinc die casting, matte nickel plated
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

0 0 0

0 0 0 0

1 Form

Notes

Other versions on request.

T-COUPPLERS M8, M12, 7/8"

7/8" - 7/8"

T-coupler

Female straight - male/female straight



1 Form	50061
Type	5-pole Parallel circuit
Circuit diagram	Male 7/8" 1. Female 2. Female
Contact layout	Male Female Female
Technical Data	
Operating voltage	max. 50 V AC/DC
Operating current per contact	max. 8 A
Protection	IP67 inserted and tightened (EN 60529)
Locking material	Zinc die casting
Temperature range	-20...+80 °C
Article No.	
The composition of your article number is explained on page 3.1.i	7000 - 50061 - 000 0000
	1 Form
Notes	Other versions on request.

T-couplers M8, M12, 7/8"

T-COUPPLERS M8, M12, 7/8"

Mounting accessories			Art-No.
	Holding plate for T-couplers M12 (SlimLine)	with mounting set	7000-99062-0000000
	Mounting clamp		7000-99063-0000000

T-couplers M8, M12, 7/8"

FLANGE CONNECTORS READY FOR ANYTHING

- Molded PVC or PP wires
- Anti-twist protection ensures convenient assembly
- Front and rear mounting

COMPREHENSIVE RANGE TO CUSTOMER NEEDS

Murrelektronik has a wide range of M12 flange plug connectors and offers solutions for all kinds of applications. Encapsulated components guarantee a high level of short-circuit protection. In addition, the integrated anti-rotation protection makes installation very easy.

Don't see what you needed? Visit shop.murrelektronik.com for other styles including V4A Stainless Steel for Food & Beverage applications.

M8



- Male/female**
- 3-pole
 - 4-pole

Page 3.4.1

M12



- Male/female**
- 3-pole
 - 4-pole
 - 5-pole
 - 8-pole

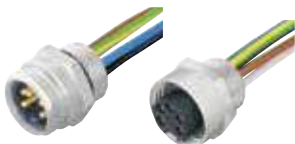
Page 3.4.2



- Control Cabinet Entry System
Male/female (shielded)**
- 5-pole
 - 6-pole
 - 8-pole

Page 3.4.12

Power



- 7/8"
Male/female**
- 5-pole

Page 3.4.4



- M12 Power
Male/female**
- 4-pole
 - 5-pole

Page 3.4.5



- MQ15 X-Power
Male/female**
- 4-pole
 - 6-pole

Page 3.4.8



- MQ15 X-Power
Male/female (shielded housing)**
- 4-pole
 - 6-pole

Page 3.4.10

FLANGE CONNECTORS

With multi-strand wire

– M8

Approvals: 

Flange male

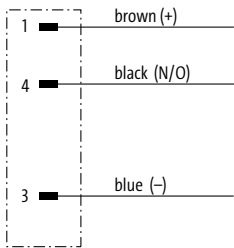
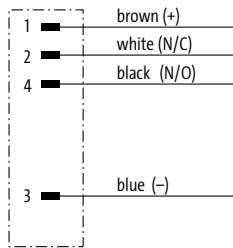
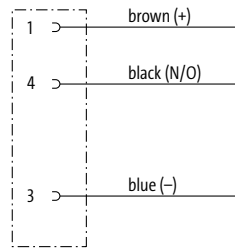
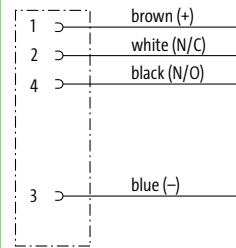
Front mounting



Flange female

Front mounting



1 Form		08552		08562		08571		08581	
Type		3-pole		4-pole		3-pole		4-pole	
Circuit diagram									
Contact layout									
2 Wires									
Wire diameter 0.25 mm²		multi-colored		multi-colored		multi-colored		multi-colored	
PP		970		969		970		969	
PVC		910		911		910		911	
Hexagonal nut M8 × 0.5		7000-08591-0000000							
3 Wires Length									
0.2 m		0020							
0.5 m		0050							
1.0 m		0100							
Technical Data									
Operating voltage		max. 50 V AC/60 V DC							
Protection		IP67 inserted and tightened (EN 60529)							
Temperature range		-25...+85 °C							
Article No.									
The composition of your article number is explained on page 3.1.i		7 0 0 0		-		-			
		1 Form		2 Wires		3 Wires Length			
Notes									
		Other versions on request.							

FLANGE CONNECTORS

With multi-strand wire

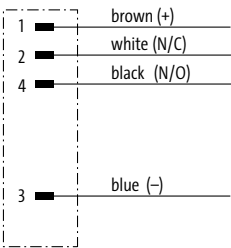
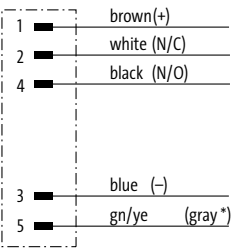
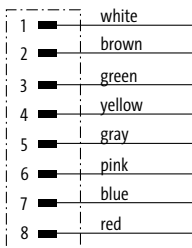
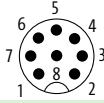
– M12

Flange male

Front mounting



Approvals: 

1	Form	13501	13521	17161
	Type	4-pole	5-pole	8-pole
	Circuit diagram		 (* for cable type 902 and 972)	
	Contact layout	Male 	Male 	Male 
2	Wires			
	Wire diameter 0.34 mm ²	multi-colored	multi-colored	multi-colored
	PUR		975 (972)	
	PVC	901	902	
	PP	971		
	Wire diameter 0.25 mm ²			
	PP			973
	PVC			903
	Hexagonal nut M16 × 1.5	7000-13581-0000000		
3	Wires Length			
	0.2 m	0020		
	0.5 m	0050		
	1.0 m	0100		
Technical Data				
	Operating voltage	max. 250 V AC/DC	max. 125 V AC/DC	max. 30 V AC/DC
	Protection	IP67 inserted and tightened (EN 60529)		
	Temperature range	-25...+85 °C		
Article No.				
	The composition of your article number is explained on page 3.1.i	7 0 0 0 - -		
		1 Form	2 Wires	3 Wires Length
Notes		Other versions on request.		

FLANGE CONNECTORS

With multi-strand wire

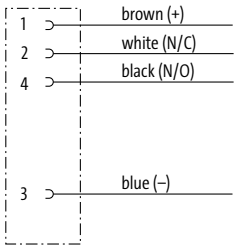
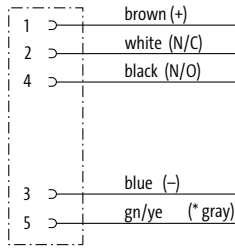
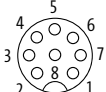
– M12

Flange female

Front mounting



Approvals: 

1 Form		13541	13561	17181
Type		4-pole	5-pole	8-pole
Circuit diagram			 (* for cable type 902, 972)	
Contact layout		Female 	Female 	Female 
2 Wires				
Wire diameter 0.34 mm²		multi-colored	multi-colored	multi-colored
PUR			975 (972)	
PVC		901	902	
PP		971		
Wire diameter 0.25 mm²				
PP				973
PVC				903
3 Wires Length				
0.2 m		0020		
0.5 m		0050		
1.0 m		0100		
Technical Data				
Operating voltage		max. 250 V AC/DC	max. 125 V AC/DC	max. 30 V AC/DC
Protection		IP67 inserted and tightened (EN 60529)		
Temperature range		-25...+85 °C		
Article No.				
The composition of your article number is explained on page 3.1.i		7 0 0 0	-	-
		1 Form	2 Wires	3 Wires Length
Notes		Other versions on request.		

FLANGE CONNECTORS

With multi-strand wire

– M12 Power

Approvals: 

Flange male

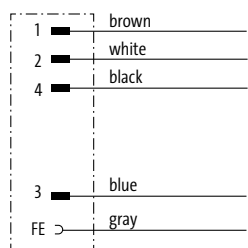
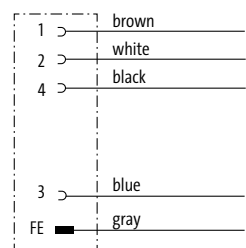
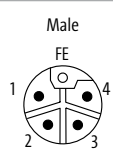
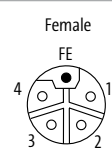
Front mounting



Flange female

Front mounting



1 Form		P 4281	P 4291
Type		5-pole L-coded	5-pole L-coded
Circuit diagram			
Contact layout		Male 	Female 
2 Wires			
Wire diameter 1.5 mm ²		multi-colored	multi-colored
PUR		980	980
3 Wires Length			
0.2 m		0020	
0.5 m		0050	
1.0 m		0100	
Technical Data			
Operating voltage		max. 63 V AC/DC	
Protection		IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0 - -	
		1 Form	2 Wires
		3 Wires Length	
Notes		Other versions on request.	

FLANGE CONNECTORS

With multi-strand wire

– M12 Power

Approvals: 

Flange male

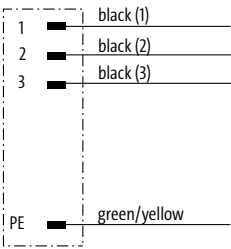
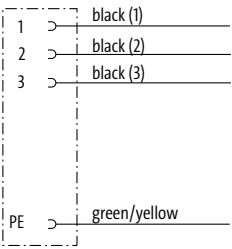
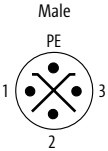
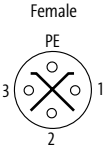
Front mounting



Flange female

Front mounting



1 Form		P 6281	P 6291
Type		4-pole	4-pole
		S-coded	S-coded
Circuit diagram			
Contact layout		Male 	Female 
2 Wires			
Wire diameter 1.5 mm ²		multi-colored	multi-colored
mPPE		940	940
3 Wires Length			
0.2 m		0020	
0.5 m		0050	
1.0 m		0100	
1.5 m		0150	
Technical Data			
Operating voltage		max. 630 V AC/DC	
Protection		IP67 inserted and tightened (EN 60529)	
Temperature range		-40...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0	1 Form
		2 Wires	3 Wires Length
Notes		Other versions on request.	

FLANGE CONNECTORS

With multi-strand wire

– M12 Power

Approvals: 

Flange male

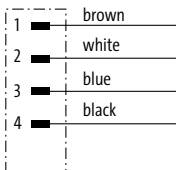
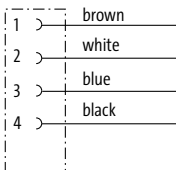
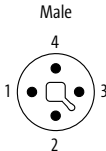
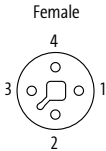
Front mounting



Flange female

Front mounting



1 Form		P7281	P7291
Type		4-pole T-coded	4-pole T-coded
Circuit diagram			
Contact layout			
2 Wires			
Wire diameter 1.5 mm ²		multi-colored	multi-colored
PVC		941	941
3 Wires Length			
0.2 m		0020	
0.5 m		0050	
1.0 m		0100	
Technical Data			
Operating voltage		max. 63 V AC/DC	
Protection		IP67 inserted and tightened (EN 60529)	
Temperature range		-40...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - - - - - - - - -	
		1 Form	2 Wires
		3 Wires Length	
Notes		Other versions on request.	

FLANGE CONNECTORS

With multi-strand wire

– MQ15 X-Power

Flange male

Front mounting



1	Form	P 8181	P 8081	P 8081
	Type	6-pole max. 16 A (Power); max. 10 A (Signal)	4-pole Operating current: max. 13 A	4-pole Operating current: max. 16 A
	Circuit diagram			
	Contact layout			
2	Wires			
	Wire diameter 2.5 mm ²	multi-colored	multi-colored	multi-colored
	PVC (UL)	P80		P82
	Wire diameter 1.5 mm ²			
	PVC (UL)		P81	
3	Wires Length			
	0.25 m	0025		
	0.5 m	0050		
	1.0 m	0100		
Technical Data				
	Operating voltage	max. 600 V AC (Power); max. 63 V AC/DC (Signal)	max. 600 V AC	
	Protection	IP67 inserted and tightened (EN 60529)		
	Temperature range	-40...+70 °C, depending on cable quality		
Article No.				
	The composition of your article number is explained on page 3.1.i	7 0 0 0	-	-
		1 Form	2 Wires	3 Wires Length
Notes		Other versions on request.		

FLANGE CONNECTORS

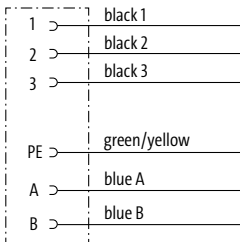
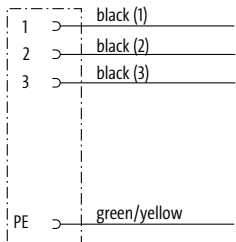
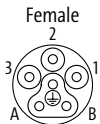
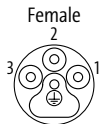
With multi-strand wire

– MQ15 X-Power

Flange female

Front mounting



1 Form		P8191	P8091
Type		6-pole max. 16 A (Power); max. 10 A (Signal)	4-pole Operating current: max. 13 A
Circuit diagram			
Contact layout			
2 Wires			
Wire diameter 2.5 mm ²		multi-colored	multi-colored
PVC (UL)		P80	
Wire diameter 1.5 mm ²			
PVC (UL)			P81
3 Wires Length			
0.25 m		0025	
0.5 m		0050	
1.0 m		0100	
Technical Data			
Operating voltage		max. 600 V AC (Power); max. 63 V AC/DC (Signal)	max. 600 V AC
Protection		IP67 inserted and tightened (EN 60529)	
Temperature range		-40...+70 °C, depending on cable quality	-40...+90 °C, depending on cable quality
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0 — — — — —	— — — — —
		1 Form	2 Wires
			3 Wires Length
Notes		Other versions on request.	

FLANGE CONNECTORS

With multi-strand wire

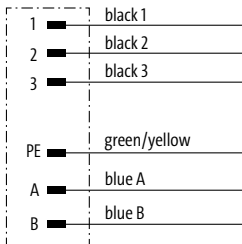
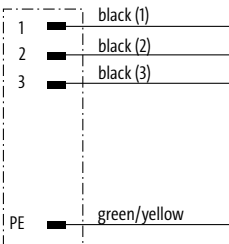
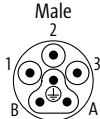
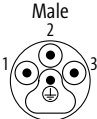
– MQ15 X-Power

– shielded housing

Flange male

Front mounting



1	Form	P 8381	P 8281	P 8281
	Type	6-pole max. 16 A (Power); max. 10 A (Signal)	4-pole Operating current: max. 13 A	4-pole Operating current: max. 16 A
	Circuit diagram			
	Contact layout			
2	Wires			
	Wire diameter 2.5 mm²	multi-colored	multi-colored	multi-colored
	PVC (UL)	P80		P82
	Wire diameter 1.5 mm²			
	PVC (UL)		P81	
3	Wires Length			
	0.25 m	0025		
	0.5 m	0050		
	1.0 m	0100		
Technical Data				
	Operating voltage	max. 600 V AC (Power); max. 63 V AC/DC (Signal)	max. 600 V AC	
	Protection	IP67 inserted and tightened (EN 60529)		
	Temperature range	-40...+90 °C, depending on cable quality		
Article No.				
	The composition of your article number is explained on page 3.1.i			
		7000	-	-
		1 Form	2 Wires	3 Wires Length
Notes				
		Other versions on request.		

FLANGE CONNECTORS

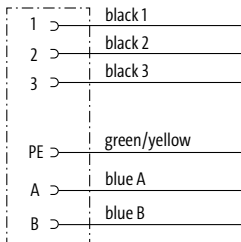
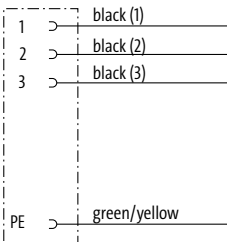
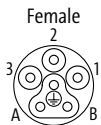
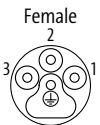
With multi-strand wire

- MQ15 X-Power
- shielded housing

Flange female

Front mounting



1	Form	P 8391	P 8291	P 8291
Type	6-pole	4-pole	4-pole	
	max. 16 A (Power); max. 10 A (Signal)	Operating current: max. 13 A	Operating current: max. 16 A	
Circuit diagram				
Contact layout				
2	Wires			
Wire diameter 2.5 mm ²	multi-colored	multi-colored	multi-colored	
PVC (UL)	P80		P82	
Wire diameter 1.5 mm ²				
PVC (UL)		P81		
3	Wires Length			
0.25 m	0025			
0.5 m	0050			
1.0 m	0100			
Technical Data				
Operating voltage	max. 600 V AC (Power); max. 63 V AC/DC (Signal)	max. 600 V AC		
Protection	IP67 inserted and tightened (EN 60529)			
Temperature range	-40...+90 °C, depending on cable quality	-40...+70 °C, depending on cable quality		
Article No.				
The composition of your article number is explained on page 3.1.i	7 0 0 0	-	-	-
	1	Form	2	Wires
	3	Wires Length		
Notes	Other versions on request.			

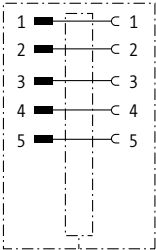
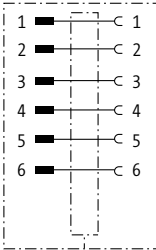
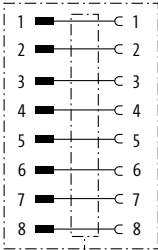
FLANGE CONNECTORS

Control cabinet entry system

– M12 - M12

Male/female



1	Form	42111	44111	46111	48111
Type		5-pole, shielded	5-pole, shielded B-coded	6-pole, shielded	8-pole, shielded
Circuit diagram					
Contact layout		Male  Female 	Male  Female 	Male  Female 	Male  Female 
Technical Data					
Operating voltage	max. 60 V AC/DC			max. 30 V AC/DC	
Rated surge voltage	1.5 kV			0.8 kV	
Operating current per contact	max. 4 A				max. 2 A
Material group	IEC 60664-1, category I				
Coding	A-coded		B-coded	A-coded	
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing				
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)				
Material	Brass, nickel plated				
Temperature range	-25...+85 °C				
Article No.					
The composition of your article number is explained on page 3.1.i					
	<u>7</u> <u>0</u> <u>0</u> <u>0</u>		<u>0</u> <u>0</u> <u>0</u>		<u>0</u> <u>0</u> <u>0</u> <u>0</u>
	1		Form		

Notes

Other versions on request.

FLANGE CONNECTORS

Control cabinet entry system

– M12 - M12

EtherCAT  EtherNet/IP

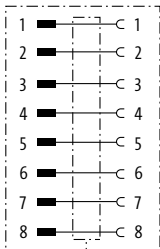
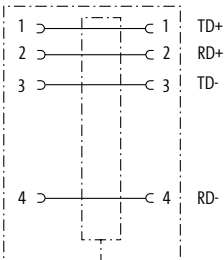
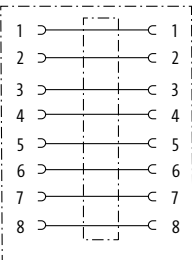
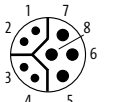
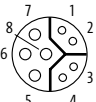
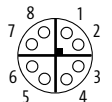
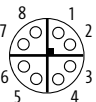
PROFI
NET

Male/female



Female/female



1 Form	47281	44611	51521
Type	8-pole, shielded Y-coded	4-pole, shielded D-coded	8-pole, shielded X-coded
Circuit diagram			
Contact layout	Male  Female 	Female  Female 	Female  Female 
Technical Data			
Operating voltage	max. 30 V DC	max. 60 V AC/DC	max. 50 V AC/60 V DC
Rated surge voltage	0.8 kV		
Operating current per contact	max. 6 A	max. 4 A	max. 0.5 A
Operating current per contact (Signal)	max. 0.5 A	–	
Material group	IEC 60664-1, category I	–	IEC 60664-1, category III
Transfer parameters	CAT5, Class D (ISO/IEC 11801:2002), (EN 50173-1)		CAT6, Class EA (ISO/IEC 11801:2002), (EN 50173-1)
Transfer rate	to 100 Mbit/s Full Duplex		GIGABIT
Coding	Y-coded	D-coded	X-coded
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing		Screw thread M12 × 1 mm
Compression gland	M16 (SW19)		
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	IP67 inserted and tightened (EN 60529)	
Material	Brass, nickel plated		
Temperature range	-25...+85 °C		-40...+85 °C
Article No.			
The composition of your article number is explained on page 3.1.i	7 0 0 0 - - - - - 0 0 0 0 0 0 0 0		
	1 Form		
Notes	Other versions on request.		

FLANGE CONNECTORS

Connection accessories			Art-No.
	Shielding plate		
		Quantity: 1 000 pcs.	7000-99951-0000000
	Protection cap		
	Flange M8 male	Quantity: 10 pcs.	7000-99901-0000000
	Flange M12 male	Quantity: 10 pcs.	7000-99921-0000000
	Protection cap		
	Flange M8 female	Quantity: 10 pcs.	7000-99911-0000000
	Flange M12 female	Quantity: 10 pcs.	7000-99931-0000000

Flange Connectors



THE MQ12 SYSTEM THE CLEVER SOLUTION

- Effective quick connection system
- Saves installation time – up to 80%
- Plug in, ¼ turn – done!

COMPATIBLE, QUICK AND SAFE

Simply clever – it's our quick connection system that doesn't require any changes on the sensor side. MQ12 is completely compatible and interchangeable with all standard systems.

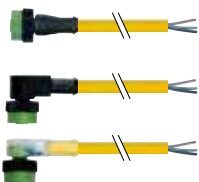
More features:

- Fits on all existing sensor and distributor systems
- High resistance to shock and vibration
- IP67 sealed



Murrelektronik's Efficient
Quick Connection System

With Open Ended Wires



MQ12 female

- Straight
- 90°
- 90° with LED

Page 3.5.1

Connection Cables



MQ12 male

- Straight

MQ12 female

- Straight
- 90°
- 90° with LED

Page 3.5.3

Field-Wireable



Insulation Displacement Technology (IDT)

MQ12 male/female

- Straight

Page 3.5.5

MQ12 ROUND PLUG CONNECTORS

With open ended wires

– M12

Approvals: 

* only for products with UL/CSA approved cable

Female

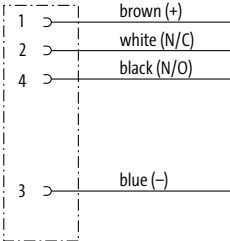
straight



Female

90°



1 Form		12221			12341		
Type		4-pole			4-pole		
Circuit diagram							
Contact layout		Female 					
2 Cable Type		Jacket Color			Jacket Color		
Wire diameter 0.34 mm²		yellow	gray	black	yellow	gray	black
PVC (UL/CSA)		014	214	614	014	214	614
PUR/PVC (UL/CSA)		024	224	624	024	224	624
PUR (UL/CSA), robots/C-tracks		034	234	634	034	234	634
3 Cable Length							
1.5 m		0150					
3.0 m		0300					
5.0 m		0500					
7.5 m		0750					
10.0 m		1000					
Technical Data							
Operating voltage		max. 250 V AC/DC					
Protection		IP65 and IP67 when plugged and screwed down (EN 60529)					
Temperature range		-25...+85 °C, depending on cable quality					
Article No.							
The composition of your article number is explained on page 3.1.i		7050 - -					
		1 Form		2 Cable Type		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.					

MQ12 ROUND PLUG CONNECTORS

With open ended wires

– M12

Approvals: 

* only for products with UL/CSA approved cable

Female

90° with LED



1 Form

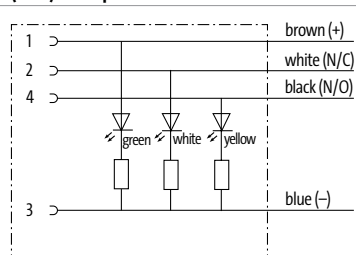
12421

Type

4-pole with 3 × LED (PNP)

(NPN) on request

Circuit diagram



Contact layout

Female



2 Cable Type

Jacket Color

Wire diameter 0.34 mm²

yellow	gray	black
014	214	614
024	224	624
034	234	634

PVC (UL/CSA)

PUR/PVC (UL/CSA)

PUR (UL/CSA), robots/C-tracks

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	24 V DC ±25%
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 5 0

–

1 2 4 2 1

–

– – –

– – – –

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MQ12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Male
straight

Female
straight

Male
straight

Female
90°



1 Form		4 0 0 2 1			4 0 1 2 1			
Type		4-pole			4-pole			
Circuit diagram		1 2 4 3 brown (+) white (N/C) black (N/O) blue (-) C 1 C 2 C 4 C 3						
Contact layout		Male Female 4 3 1 2 3 2 4 1						
2 Cable Type		Jacket Color			Jacket Color			
Wire diameter 0.34 mm²		yellow	gray	black	yellow	gray	black	
PVC (UL/CSA)		014	214	614	014	214	614	
PUR/PVC (UL/CSA)		024	224	624	024	224	624	
PUR (UL/CSA), robots/C-tracks		034	234	634	034	234	634	
3 Cable Length								
0.3 m		0030						
0.6 m		0060						
1.0 m		0100						
1.5 m		0150						
2.0 m		0200						
Technical Data								
Operating voltage		max. 250 V AC/DC						
Protection		IP65 and IP67 when plugged and screwed down (EN 60529)						
Temperature range		-25...+85 °C, depending on cable quality						
Article No.								
The composition of your article number is explained on page 3.1.i		7 0 5 0 - -						
		1 Form		2 Cable Type		3 Cable Length		
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.						

MQ12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Male

straight

Female

90° with LED



1 Form

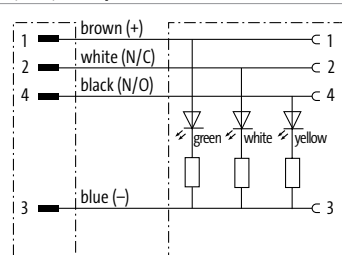
40341

Type

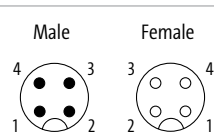
4-pole with 3 × LED (PNP)

(NPN) on request

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Wire diameter 0.34 mm ²	yellow	gray	black
PVC (UL/CSA)	014	214	614
PUR/PVC (UL/CSA)	024	224	624
PUR (UL/CSA), robots/Ctracks	034	234	634

3 Cable Length

0.3 m	0030
0.6 m	0060
1.0 m	0100
1.5 m	0150
2.0 m	0200

Technical Data

Operating voltage	24 V DC ±25%
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 5 0

–

4 0 3 4 1

–

– – – –

– – – –

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MQ12 ROUND PLUG CONNECTORS

Field-wireable

– M12

– IDC terminals

Male

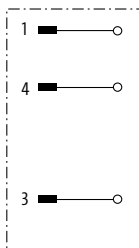
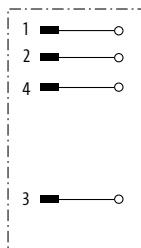
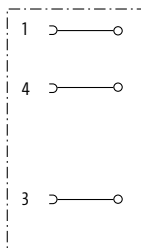
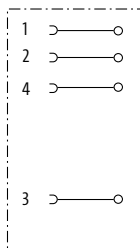
straight



Female

straight



1	Form	12461	12481	12581	12601
	Type	3-pole	4-pole	3-pole	4-pole
	Circuit diagram				
	Connection cross section	0.25...0.5 mm ²			
	Contact layout	Male 	Male 	Female 	Female 
Technical Data					
	Operating voltage	max. 32 V AC/DC			
	Rated surge voltage	0.8 kV			
	Operating current per contact	max. 4 A			
	Material group	IEC 60664-1, category II			
	Connection cross section	0.25...0.5 mm ² (conductor diameter min. 0.1 mm)			
	Sealing range (cable Ø)	4...5.1 mm			
	Wire isolation	PVC, PP, TPE			
	Outer wire Ø	1.2...1.6 mm			
	Protection	IP67 inserted and tightened (EN 60529)			
	Temperature range	-25...+85 °C			
Article No.					
	The composition of your article number is explained on page 3.1.i	7 0 5 0 - - 0 0 0 0 0 0 0			
		1 Form			
Notes					
		Other versions on request.			

MQ12 ROUND PLUG CONNECTORS

Field-wireable

– M12

- IDC terminals

Male

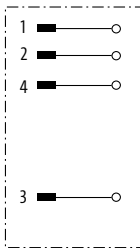
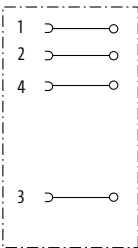
straight



Female

straight



1	Form	12521	12641
	Type	4-pole	4-pole
	Circuit diagram		
Connection cross section		0.5...1.0 mm²	
Contact layout		Male 	Female 
Technical Data			
Operating voltage		max. 250 V AC/DC	
Rated surge voltage		2.5 kV	
Operating current per contact		max. 4 A	
Material group		IEC 60664-1, category III	
Connection cross section		0.5...1.0 mm² (conductor diameter min. 0.1 mm)	
Sealing range (cable Ø)		5.5...8 mm	
Wire isolation		PVC, PP, TPE	
Outer wire Ø		1.6...2.0 mm	
Protection		IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 5 0 - - 0 0 0 0 0 0 0	
		1 Form	
Notes			
Other versions on request.			

MQ12 ROUND PLUG CONNECTORS

Labeling accessories			Art-No.
	Slip-on cable sleeve for ACS label plates (4 × 18 mm)	Cable diameter (4...6.5 mm)	7000-99004-0000000
	Snap-on cable sleeve for ACS label plates (4 × 18 mm)	Cable diameter (4.2...5.6 mm)	7000-99005-0000000
	for ACS label plates (4 × 18 mm)	Cable diameter (5...7 mm)	7000-99006-0000000
	ACS label plate for self marking (4 × 18 mm)		7000-99002-0000000
	Colored ring M8/M12		
	sandy yellow	for unshielded molding	7000-99301-V011002
	zinc yellow	for unshielded molding	7000-99301-V011018
	redorange	for unshielded molding	7000-99301-V012008
	red	for unshielded molding	7000-99301-V013020
	violet	for unshielded molding	7000-99301-V014003
	purple	for unshielded molding	7000-99301-V014006
	blue	for unshielded molding	7000-99301-V015005
	green	for unshielded molding	7000-99301-V016018
	gray	for unshielded molding	7000-99301-V017035
	white	for unshielded molding	7000-99301-V019003
	black	for unshielded molding	7000-99301-V019004
End fitting accessories			Art-No.
	Tube adapter snap-in for corrugated tube (size 13mm)	Cable diameter (4...7 mm)	7000-99081-0000000



CONNECTORS FOR FIELDBUS

- Wide range of M8, M12 and RJ45 connectors
- 360° shielding
- Flex rated cables

FROM AS-INTERFACE TO ETHERNET TO PROFIBUS AND MORE...

Murrelektronik offers connection accessories for the fieldbus products. In addition to both field-wireable M12 and RJ45 connectors we have a wide range of pre-wired, molded models. Both the 15° locking mechanism and the PUR molding ensure an IP65/67 rated connection which make the connectors suitable for many rough industrial environments.



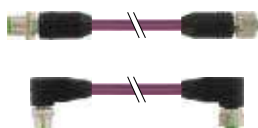
PROFIBUS



With open ended wires

M12 male/female (shielded)
• Straight/90°

Page 3.6.1



Connection Cables

M12 male – M12 female (shielded)
• Straight/90°

Page 3.6.3

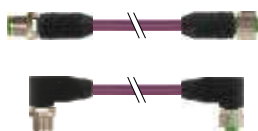
DeviceNet, CANopen



With open ended wires

M12 male/female
• Straight/90°

Page 3.6.4

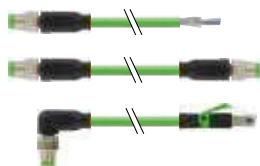


Connection Cables

M12 male – M12 female
• Straight/90°

Page 3.6.6

EtherNet, EtherCAT, PROFINET



With open ended wires

M8 male/female (shielded)

• Straight/90°

Connection Cables

M8 male – M8 male/M8 female/RJ45 male (shielded)

• Straight/90°

Page 3.6.7



With open ended wires

M8 female

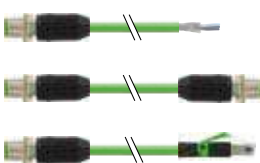
• Straight/90°

Connection Cables

M8 male – M8 female

• Straight/90°

Page 3.6.10



With open ended wires

M12 male/female (shielded)

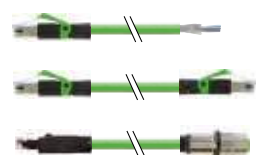
• Straight/90°

Connection Cables

M12 male – M12 male/M12 female/RJ45 male (shielded)

• Straight/90°

Page 3.6.12



With open ended wires

RJ45 male (shielded)

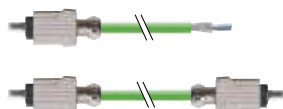
• Straight/90°

Connection Cables

RJ45 male – RJ45 male/M12 female flange plug (shielded)

• Straight/90°

Page 3.6.21



With open ended wires

RJ45 male Push Pull Power

• Straight

Connection Cables

RJ45 male Push Pull Power – RJ45 male Push Pull Power

• Straight

Page 3.6.26

Cube67

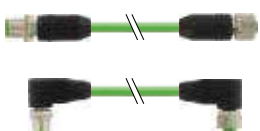


With open ended wires

M12 female

• Straight/90°

Page 3.6.28



Connection Cables

M12 male – M12 female (shielded)

• Straight/90°

Page 3.6.29

AS-Interface



Connection Cables
for MASI68

M12 male – M12 female

• Straight

Page 3.6.30

FIELDBUS CONNECTORS

PROFIBUS

– with open ended wires M12



Approvals:
* only for products with UL/CSA approved cable

Male
straight



Male
90°



1 Form		14051	14081
Type		2-pole, shielded B-coded	2-pole, shielded B-coded
Circuit diagram			
Contact layout	Male		
2 Cable Type		Jacket Color	Jacket Color
1x2x0.25 mm²		violet	violet
PUR (UL/CSA), C-tracks		841	841
PUR (UL/CSA), Highspeed C-track		840	840
PUR (UL/CSA), Torsion		843	843
PVC (UL), C-tracks		850	850
Terminator M12 (male)	7000-14041-0000000		
Control cabinet entry system M12	7000-44111-0000000		
3 Cable Length			
1.5 m	0150		
3.0 m	0300		
5.0 m	0500		
7.5 m	0750		
10.0 m	1000		
Technical Data			
Operating voltage	max. 60 V AC/DC		
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)		
Temperature range	-25...+85 °C, depending on cable quality		
Article No.			
The composition of your article number is explained on page 3.1.i	7 0 0 0 - - - - - - - - - -		
	1 Form	2 Cable Type	3 Cable Length
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.	

FIELD BUS CONNECTORS

PROFIBUS

– with open ended wires M12



* only for products with UL/CSA approved cable

Female

straight



Female

90°



1 Form		14061	14071
Type		2-pole, shielded B-coded	2-pole, shielded B-coded
Circuit diagram			
Contact layout	Female 		
2 Cable Type		Jacket Color	Jacket Color
1x2x0.25 mm ²		violet	violet
PUR (UL/CSA), C-tracks		841	841
PUR (UL/CSA), Highspeed C-track		840	840
PUR (UL/CSA), Torsion		843	843
PVC (UL), C-tracks		850	850
Terminator M12 (male)		7000-14041-0000000	
Control cabinet entry system M12		7000-44111-0000000	
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 60 V AC/DC	
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0	1 Form
		2 Cable Type	3 Cable Length
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.	

FIELD BUS CONNECTORS

PROFIBUS

– Connection cables M12 - M12



* only for products with UL/CSA approved cable

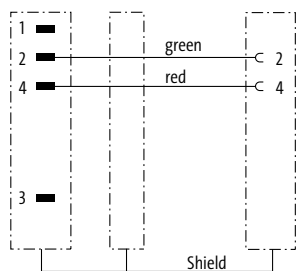
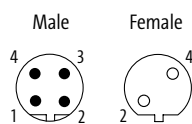
Male
straight

Female
straight

Male
90°

Female
90°



1 Form		44001	44021
Type		2-pole, shielded B-coded	2-pole, shielded B-coded
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	Jacket Color
1x2x0.25 mm²		violet	violet
PUR (UL/CSA), C-tracks		841	841
PUR (UL/CSA), Highspeed C-track		840	840
PUR (UL/CSA), Torsion		843	843
PVC (UL), C-tracks		850	850
Terminator M12 (male)		7000-14041-0000000	
Control cabinet entry system M12		7000-44111-0000000	
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 60 V AC/DC	
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - - - - - - - - -	- - - - -
		1 Form	2 Cable Type
			3 Cable Length
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.	

FIELD BUS CONNECTORS

DeviceNet, CANopen

– with open ended wires M12

DeviceNet CANopen

Approvals:  

* only for products with UL/CSA approved cable

Male

straight



Male

90°



1 Form

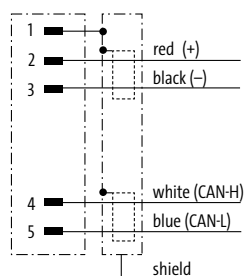
13105

13125

Type
Circuit diagram

5-pole

5-pole



Contact layout

Male



2 Cable Type

Jacket Color

Jacket Color

2×0.25 + 2×0.34 mm²
PUR (UL/CSA), C-tracks

black
838

violet
803

black
838

violet
803

3 Cable Length

1.5 m
3.0 m
5.0 m
7.5 m
10.0 m

0150
0300
0500
0750
1000

Technical Data

Operating voltage: max. 60 V AC/DC
Protection: IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range: -25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

- - - - -

-

- - - - -

- - - - -

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELD BUS CONNECTORS

DeviceNet, CANopen

– with open ended wires M12

DeviceNet CANopen

Approvals:  

* only for products with UL/CSA approved cable

Female

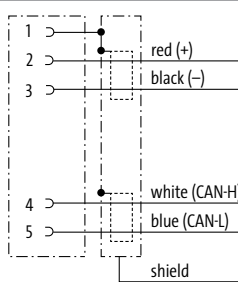
straight



Female

90°



1 Form		13225	13251
Type		5-pole	5-pole
Circuit diagram			
Contact layout	Female 		
2 Cable Type		Jacket Color	
2×0.25 + 2×0.34 mm ²		black	violet
PUR (UL/CSA), C-tracks		838	803
Control cabinet entry system M12	7000-42111-0000000		
3 Cable Length			
1.5 m	0150		
3.0 m	0300		
5.0 m	0500		
7.5 m	0750		
10.0 m	1000		
Technical Data			
Operating voltage	max. 60 V AC/DC		
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)		
Temperature range	-25...+85 °C, depending on cable quality		
Article No.			
The composition of your article number is explained on page 3.1.i	7 0 0 0 - - - - -		
	1 Form	2 Cable Type	3 Cable Length
Notes			
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.			

FIELD BUS CONNECTORS

DeviceNet, CANopen

– Connection cables M12 - M12

DeviceNet CANopen



* only for products with UL/CSA approved cable

Male

straight

Female

straight

Male

90°

Female

90°

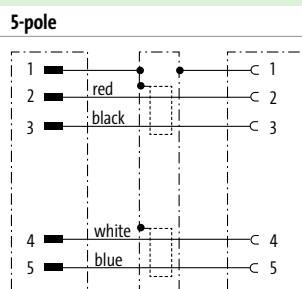


1 Form

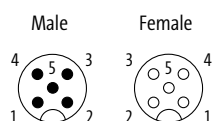
40531

40551

Type
Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

2×0.25 + 2×0.34 mm²
PUR (UL/CSA), C-tracks

black
838

violet
803

black
838

violet
803

Control cabinet entry system M12

7000-42111-0000000

3 Cable Length

1.5 m
3.0 m
5.0 m
7.5 m
10.0 m

0150
0300
0500
0750
1000

Technical Data

Operating voltage: max. 60 V AC/DC
Protection: IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range: -25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

- - - - -

- - - - -

- - - - -

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

| FIELDBUS CONNECTORS

Industrial Ethernet

– with open ended wires M8

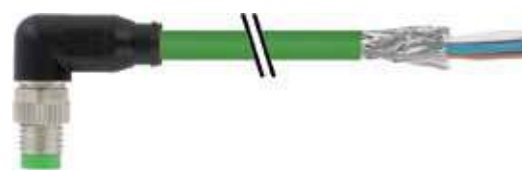
EtherCAT[®]

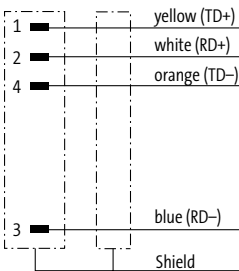
Approvals:  
 * only for products with UL/CSA approved cable

Male
straight



Male
90°



1 Form		08811	08821
Type		4-pole, shielded	4-pole, shielded
Circuit diagram			
Contact layout	Male 		
2 Cable Type		Jacket Color	
1×4×0.15 mm ²		green	green
PUR (UL/CSA), C-tracks		791	791
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 30 V AC/DC	
Protection		IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0 - -	
		1 Form	2 Cable Type
		3 Cable Length	
Notes			
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.	

FIELD BUS CONNECTORS

Industrial Ethernet

– Connection cables M8 - M8

EtherCAT[®]

Approvals:  

* only for products with UL/CSA approved cable

Male

straight

Male

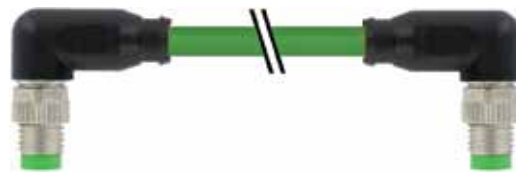
straight

Male

90°

Male

90°



1 Form

89701

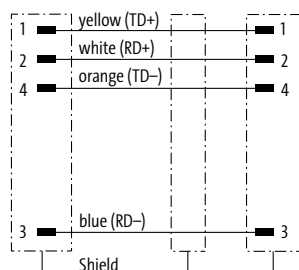
89771

Type

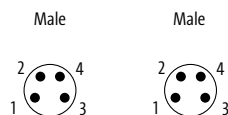
4-pole, shielded

4-pole, shielded

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

1x4x0.15 mm²
PUR (UL/CSA), C-tracks

green
791

green
791

3 Cable Length

1.5 m
3.0 m
5.0 m
7.5 m
10.0 m

0150
0300
0500
0750
1000

Technical Data

Operating voltage: max. 50 V AC/60 V DC
Protection: IP67 inserted and tightened (EN 60529)
Temperature range: -25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

-

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELD BUS CONNECTORS

Industrial Ethernet

– Connection cables M8 - RJ45

EtherCAT[®]

Approvals: 

* only for products with UL/CSA approved cable

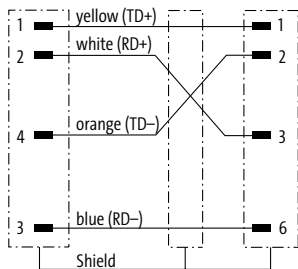
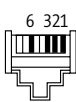
Male
straight

Male
straight

Male
90°

Male
straight



1 Form		89721	89781
Type		4-pole, shielded	4-pole, shielded
Circuit diagram			
Contact layout		Male  Male 	
2 Cable Type		Jacket Color	
1x4x0.15 mm ²		green	green
PUR (UL/CSA), C-tracks		791	791
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 60 V DC	
Protection		IP67 (M8) - IP20 (RJ45)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - - - -	
		1 Form	2 Cable Type
		3 Cable Length	
Notes			
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.	

FIELD BUS CONNECTORS

Industrial Ethernet

– with open ended wires M8

– EtherCAT Power

EtherCAT

Approvals: 

* only for products with UL/CSA approved cable

Female

straight



Female

90°



1	Form	08871		08881	
	Type	4-pole		4-pole	
	Circuit diagram	1 2 4 3 brown (+) white (N/C) black (N/O) blue (-)			
	Contact layout	Female 4 2 3 1			
2	Cable Type	Jacket Color		Jacket Color	
	Wire diameter 0.34 mm² PUR (UL/CSA), robots/C-tracks	black 634		black 634	
3	Cable Length				
	1.5 m	0150			
	3.0 m	0300			
	5.0 m	0500			
	7.5 m	0750			
	10.0 m	1000			
	Technical Data				
	Operating voltage	max. 50 V AC/60 V DC			
	Protection	IP65 and IP67 when plugged and screwed down (EN 60529)			
	Temperature range	-25...+85 °C, depending on cable quality			
	Article No.				
	The composition of your article number is explained on page 3.1.i	7 0 0 0 – – 7 0 0 5 M8 Lite (plastic hexagonal screw) on request			
		1 Form		2 Cable Type	
				3 Cable Length	
	Notes				
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.			

FIELD BUS CONNECTORS

Industrial Ethernet

– Connection cables M8 - M8

– EtherCAT Power

EtherCAT 

Approvals: 

* only for products with UL/CSA approved cable

Male

straight

Female

straight

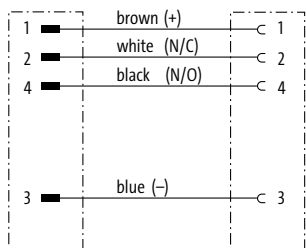
Male

90°

Female

90°



1 Form		89401	89431
Type		4-pole	4-pole
Circuit diagram			
Contact layout		Male  Female 	
2 Cable Type		Jacket Color	Jacket Color
Wire diameter 0.34 mm ²		black	black
PUR (UL/CSA), robots/C-tracks		634	634
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 50 V AC/60 V DC	
Protection		IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0	
		7 0 0 5	M8 Lite (plastic hexagonal screw) on request
		1 Form	2 Cable Type
			3 Cable Length
Notes			
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.	

FIELD BUS CONNECTORS

Industrial Ethernet

– with open ended wires M12

EtherNet/IP EtherCAT

PROFINET

Approvals:  

* only for products with UL/CSA approved cable

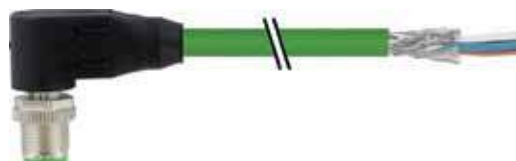
Male

straight



Male

90°



1 Form

14541

14561

Type

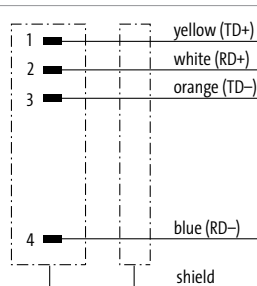
4-pole, shielded

4-pole, shielded

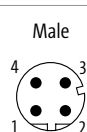
D-coded

D-coded

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

1x4x0.34 mm²

green

black

red

green

black

red

PVC (UL/CSA), C-tracks

800

800

PUR (UL/CSA), Torsion

793

793

2x2x0.34 mm²

794

794

PUR (UL/CSA)

796

851

792

796

851

792

PUR (UL/CSA), robots/C-tracks

659

659

PUR (UL/CSA), C-tracks, 600 V

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 60 V DC

Protection

IP65, IP66K, IP67 inserted and tightened (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELD BUS CONNECTORS

Industrial Ethernet

– with open ended wires M12

– Hybrid cable

Approvals: 

* only for products with UL/CSA approved cable

Male

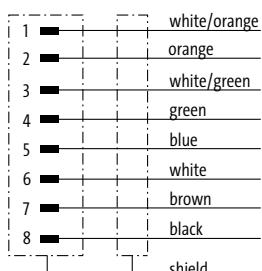
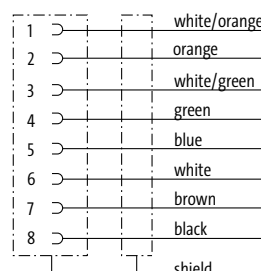
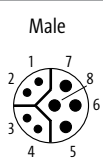
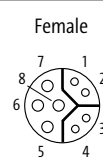
straight



Female

straight



1 Form		15501	15551
Type		8-pole, shielded Y-coded	8-pole, shielded Y-coded
Circuit diagram			
Contact layout		Male 	Female 
2 Cable Type		Jacket Color	
4×0.5 + 1×4×0.14 mm ² PUR (UL/CSA), robots/C-tracks		black	green
		805	831
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 50 V AC/DC	
Protection		IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0	
		1 Form	2 Cable Type
			3 Cable Length
Notes			
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.	

FIELD BUS CONNECTORS

Industrial Ethernet

– with open ended wires M12

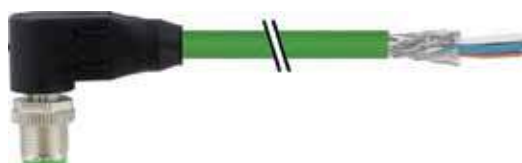
– Hybrid cable

Approvals: 

* only for products with UL/CSA approved cable

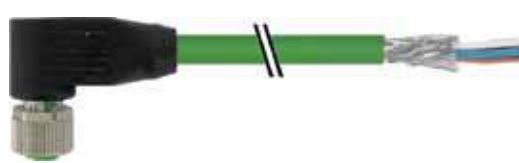
Male

90°



Female

90°



1 Form

15521

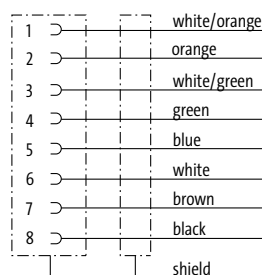
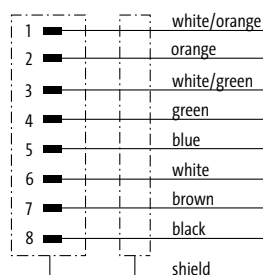
15571

Type

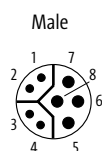
8-pole, shielded

8-pole, shielded

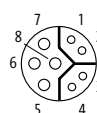
Circuit diagram



Contact layout



Female



2 Cable Type

Jacket Color

Jacket Color

4×0.5 + 1×4×0.14 mm²

PUR (UL/CSA), robots/C-tracks

black

green

805

831

black

green

805

831

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 50 V AC/DC

Protection

IP65 and IP67 when plugged and screwed down (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

-

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELDBUS CONNECTORS

Industrial Ethernet

– with open ended wires M12

– Gigabit Ethernet CAT6A

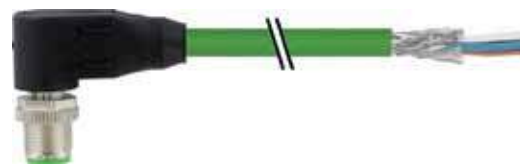
Male

straight

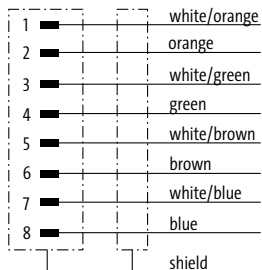
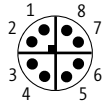


Male

90°



* only for products with UL/CSA approved cable

1 Form		210 01	210 21
Approvals		cULus *	
Type		8-pole, shielded	8-pole, shielded
		X-coded	X-coded
Circuit diagram			
Contact layout		Male 	
2 Cable Type		Jacket Color	Jacket Color
4x2x0.14 mm ²		green	green
PUR (UL/CSA)		790	790
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 50 V AC/60 V DC	
Protection		IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0	
		1 Form	2 Cable Type
			3 Cable Length
Notes			
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.	

FIELD BUS CONNECTORS

Industrial Ethernet

– Connection cables M12 - M12

EtherNet/IP EtherCAT

PROFI
NET

Approvals:
UL
US
Listed
CSA
US

* only for products with UL/CSA approved cable

Male
straight



Male
straight

Male
90°

Male
90°



1	Form	4 4 5 1 1			4 4 5 6 1		
	Type	4-pole, shielded D-coded			4-pole, shielded D-coded		
	Circuit diagram						
	Contact layout						
2	Cable Type	Jacket Color			Jacket Color		
	1×4×0.34 mm²	green	black	red	green	black	red
	PVC (UL/CSA), C-tracks	800			800		
	PUR (UL/CSA), Torsion	793			793		
	2×2×0.34 mm²						
	PUR (UL/CSA)	794			794		
	PUR (UL/CSA), robots/C-tracks	796	851	792	796	851	792
PUR (UL/CSA), C-tracks, 600 V	659			659			
3	Cable Length						
	1.5 m	0150					
	3.0 m	0300					
	5.0 m	0500					
	7.5 m	0750					
	10.0 m	1000					
Technical Data							
Operating voltage		max. 60 V DC					
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)					
Temperature range		-25...+85 °C, depending on cable quality					
Article No.							
The composition of your article number is explained on page 3.1.i		7 0 0 0 - -					
		1 Form		2 Cable Type		3 Cable Length	

Notes
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELD BUS CONNECTORS

Industrial Ethernet

– Connection cables M12 - RJ45



Approvals:  ^{*}
Listed

^{*} only for products with UL/CSA approved cable

Male
straight



Male
straight

Male
straight



Male
45° on bottom

1 Form

44711

44731

Type

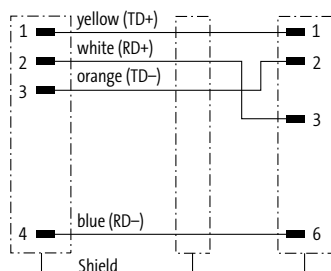
4-pole, shielded

4-pole, shielded

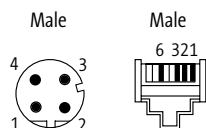
D-coded

D-coded

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

1×4×0.34 mm²

green

black

red

green

black

red

PVC (UL/CSA), C-tracks

800

800

PUR (UL/CSA), Torsion

793

793

2×2×0.34 mm²

794

794

PUR (UL/CSA)

796

851

792

796

851

792

PUR (UL/CSA), robots/C-tracks

659

659

PUR (UL/CSA), C-tracks, 600 V

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 60 V DC

Protection

IP67 (M12) - IP20 (RJ45)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELD BUS CONNECTORS

Industrial Ethernet

– Connection cables M12 - M12

– Hybrid cable

Approvals:  ^{*}
Listed

^{*} only for products with UL/CSA approved cable

Male
straight

Male
straight

Male
90°

Male
90°

Male
straight

Female
straight



1 Form

47001

47021

47051

Type

8-pole, shielded

8-pole, shielded

8-pole, shielded

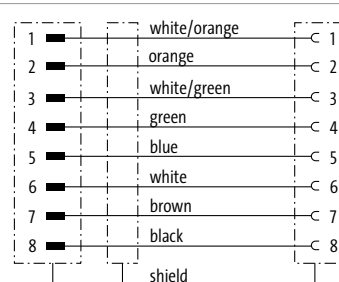
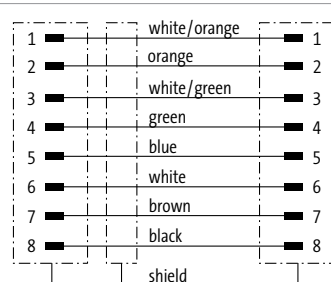
Y-coded

Y-coded

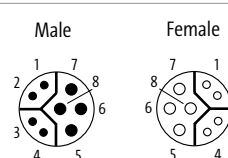
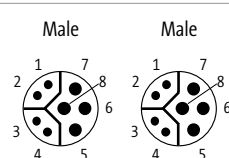
Y-coded

Y-coded

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Jacket Color

4×0.5 + 1×4×0.14 mm²

PUR (UL/CSA), robots/Ctracks

black

green

black

green

green

805

831

805

831

831

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 50 V AC/DC

Protection

IP65 and IP67 when plugged and screwed down (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

-

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELD BUS CONNECTORS

Industrial Ethernet

– Connection cables M12 - M12

– Gigabit Ethernet CAT6A

Male

straight

Male

straight

Male

90°

Male

90°



* only for products with UL/CSA approved cable

1	Form	51001		51021	
Approvals		cULus *			
Type		8-pole, shielded		8-pole, shielded	
		X-coded		X-coded	
Circuit diagram					
Contact layout					
2	Cable Type	Jacket Color		Jacket Color	
4×2×0.14 mm²		green		green	
PUR (UL/CSA)		790		790	
3	Cable Length				
1.5 m		0150			
3.0 m		0300			
5.0 m		0500			
7.5 m		0750			
10.0 m		1000			
Technical Data					
Operating voltage		max. 50 V AC/60 V DC			
Protection		IP65 and IP67 when plugged and screwed down (EN 60529)			
Temperature range		-25...+85 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		7000 - -			
		1 Form		2 Cable Type	
		3 Cable Length			
Notes					
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.			

FIELD BUS CONNECTORS

Industrial Ethernet

– Connection cables M12 - RJ45

– Gigabit Ethernet CAT6A

Male

straight

Male

straight

Male

straight

Flange female

straight



1 Form

51101

51551

Type

8-pole, shielded

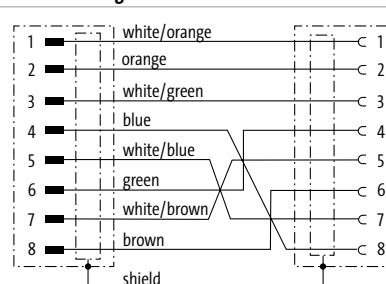
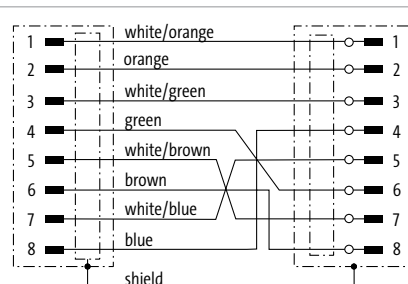
8-pole, shielded

X-coded

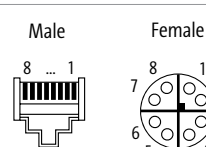
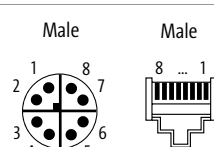
X-coded

X-coded

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

4×2×0.14 mm²

PUR (UL/CSA)

green

790

green

790

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 60 V DC

Protection

IP67 (M12) - IP20 (RJ45)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

-

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELD BUS CONNECTORS

Industrial Ethernet

– with open ended wires RJ45

EtherNet/IP EtherCAT

PROFI
NET

Approvals:  ^{*}
Listed

^{*} only for products with UL/CSA approved cable

Male

straight



Male

45° on top



Male

45° on bottom



1	Form	74101			74121			74141		
	Type	4-pole, shielded			4-pole, shielded			4-pole, shielded		
	Circuit diagram									
	Contact layout									
2	Cable Type	Jacket Color			Jacket Color			Jacket Color		
	1×4×0.34 mm²	green	black	red	green	black	red	green	black	red
	PVC (UL/CSA), C-tracks	800			800			800		
	PUR (UL/CSA), Torsion	793			793			793		
	2×2×0.34 mm²									
	PUR (UL/CSA)	794			794			794		
	PUR (UL/CSA), robots/C-tracks	796	851	792	796	851	792	796	851	792
	PUR (UL/CSA), C-tracks, 600 V	659			659			659		
3	Cable Length									
	1.5 m	0150								
	3.0 m	0300								
	5.0 m	0500								
	7.5 m	0750								
	10.0 m	1000								
Technical Data										
	Operating voltage	max. 60 V DC								
	Protection	IP20 inserted and tightened (EN 60529)								
	Temperature range	-25...+85 °C, depending on cable quality								
Article No.										
	The composition of your article number is explained on page 3.1.i	7000 - -								
		1 Form			2 Cable Type			3 Cable Length		
Notes										
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.								

FIELD BUS CONNECTORS

Industrial Ethernet

– with open ended wires RJ45

EtherNet/IP EtherCAT

PROFINET

Approvals:


* only for products with UL/CSA approved cable

Male

45° left



Male

45° right

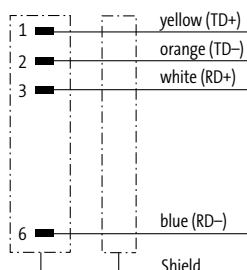


1 Form

Type
Circuit diagram

74161

4-pole, shielded



Contact layout



2 Cable Type

1×4×0.34 mm²
PVC (UL/CSA), C-tracks
PUR (UL/CSA), Torsion
2×2×0.34 mm²
PUR (UL/CSA)
PUR (UL/CSA), robots/C-tracks
PUR (UL/CSA), C-tracks, 600 V

Jacket Color

green	black	red
800		
793		
794		
796	851	792
659		

Jacket Color

green	black	red
800		
793		
794		
796	851	792
659		

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	max. 60 V DC
Protection	IP20 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

- - - - -

- - - - -

- - - - -

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELD BUS CONNECTORS

Industrial Ethernet

– Connection cables RJ45 - RJ45



* only for products with UL/CSA approved cable

Male
straight



Male
straight

Male
45° on bottom



Male
45° right

1 Form

74301

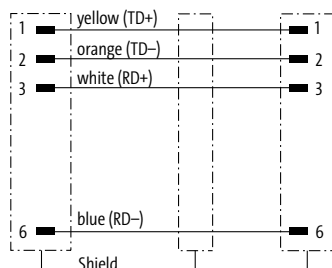
74521

Type

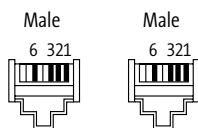
4-pole, shielded

4-pole, shielded

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

1×4×0.34 mm²

green

black

red

green

black

red

PVC (UL/CSA), C-tracks

800

800

PUR (UL/CSA), Torsion

793

793

2×2×0.34 mm²

794

794

PUR (UL/CSA), robots/C-tracks

796

851

792

796

851

792

PUR (UL/CSA), C-tracks, 600 V

659

659

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 60 V DC

Protection

IP20 inserted and tightened (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

-

-

-

-

-

-

-

-

-

-

-

-

-

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELD BUS CONNECTORS

Industrial Ethernet

- Connection cables RJ45 - RJ45
- Gigabit Ethernet CAT6A

Male
straight

Male
straight



1	Form	74311		
	Type	8-pole, shielded		
	Circuit diagram	1 2 3 4 5 6 7 8 white/orange orange white/green blue white/blue green white/brown brown 1 2 3 4 5 6 7 8 shield		
	Contact layout	Male Male		
2	Cable Type	Jacket Color		
	4×2×0.14 mm ²		green	
	PUR (UL/CSA)		790	
3	Cable Length			
	1.5 m	0150		
	3.0 m	0300		
	5.0 m	0500		
	7.5 m	0750		
	10.0 m	1000		
Technical Data				
Operating voltage		max. 60 V DC		
Protection		IP20 inserted and tightened (EN 60529)		
Temperature range		-25...+85 °C, depending on cable quality		
Article No.				
The composition of your article number is explained on page 3.1.i		7	0	0
		0	7	4
		3	1	1
		–	–	–
		1	Form	2
		2	Cable Type	3
		3	Cable Length	
Notes				
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.		
		Connection accessories and general accessories can be found at the end of chapter 3.6.		

| FIELDBUS CONNECTORS

Cabinetline

– Connection cables RJ45 - RJ45

Male
straight

Male
straight

Male
straight

Male
straight



1 Form

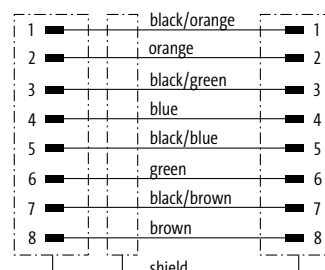
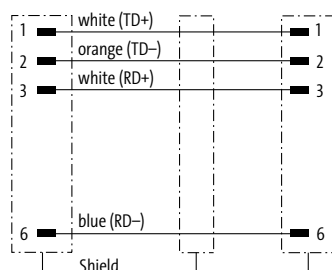
74701

74711

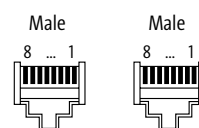
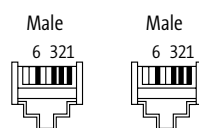
Type
Circuit diagram

4-pole, shielded

8-pole, shielded



Contact layout



2 Cable Type

Jacket Color

Jacket Color

4×2×0.14 mm²

FRNC

2×2×0.14 mm²

FRNC, C-tracks

gray

777

green

478

black

380

red

578

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 60 V DC

Protection

IP20 inserted and tightened (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELD BUS CONNECTORS

Ethernet CAT5e

– Push Pull RJ45

– AIDA conform



Approvals: ^{*}
Listed

^{*} only for products with UL/CSA approved cable

Male
straight



Male
straight



Male
straight

1 Form

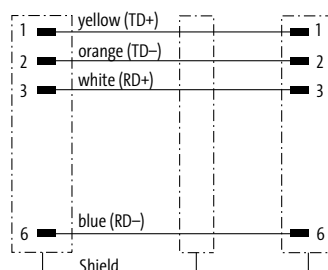
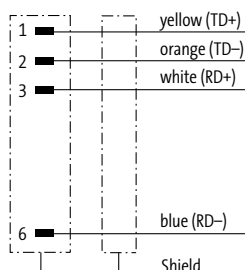
74601

74641

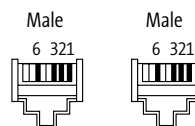
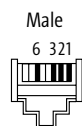
Type
Circuit diagram

4-pole, shielded

4-pole, shielded



Contact layout



2 Cable Type

Jacket Color

Jacket Color

2x2x0.34 mm²
PUR (UL/CSA)
PUR (UL/CSA), robots/Ctracks

green
794
796

green
794
796

3 Cable Length

1.5 m
3.0 m
5.0 m
7.5 m
10.0 m

0150
0300
0500
0750
1000

Technical Data

Operating voltage max. 60 V DC
Protection IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range -25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

- - - - -

- - - - -

- - - - -

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Further cable lengths on request.
Connection accessories and general accessories can be found at the end of chapter 3.6.

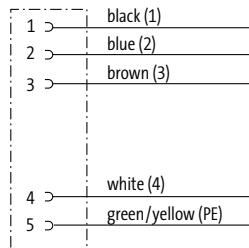
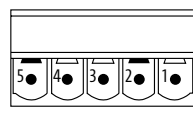
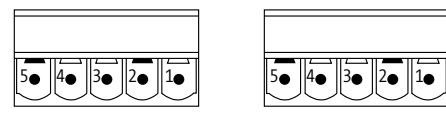
| FIELDBUS CONNECTORS

Push Pull Power

 Male
straight

 Male
straight

 Male
straight

1 Form	99621	99641
Type	5-pole	5-pole
Circuit diagram		
Contact layout		
2 Cable Type	Jacket Color	Jacket Color
Wire diameter 2.5 mm ² PUR (UL/CSA), robots/C-tracks	gray 962	gray 962
3 Cable Length		
1.5 m	0150	
3.0 m	0300	
5.0 m	0500	
7.5 m	0750	
10.0 m	1000	
Technical Data		
Operating voltage	max. 24 V AC/DC	
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-40...+85 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	7 0 0 0 - - - - - - - -	
	1 Form	2 Cable Type
		3 Cable Length
Notes	Other versions on request. Further cable lengths on request. Connection accessories and general accessories can be found at the end of chapter 3.6.	

FIELD BUS CONNECTORS

Cube67

- with open ended wires M12
- Actuator supply external

Approvals:  

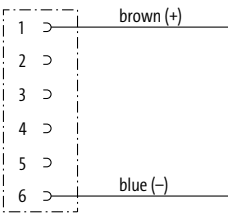
* only for products with UL/CSA approved cable

Female
straight



Female
90°



1 Form		150 01	150 21
Type		2-pole	2-pole
Circuit diagram			
Contact layout	Female 		
2 Cable Type		Jacket Color	Jacket Color
Wire diameter 0.5 mm ² PUR (UL/CSA), robots/C-tracks		gray 414	gray 414
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 30 V AC/DC	
Protection		IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0	
		7 0 0 5	M12 Lite (plastic hexagonal screw) on request
		1 Form	2 Cable Type
		3 Cable Length	
Notes			
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.	

FIELD BUS CONNECTORS

Cube67

– Connection cables M12 - M12

– Hybrid cable



* only for products with UL/CSA approved cable

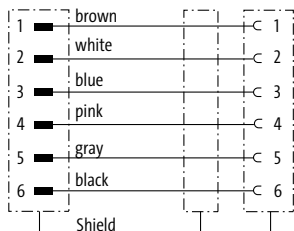
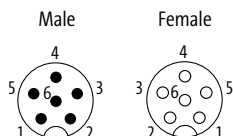
Male
straight

Female
straight

Male
90°

Female
90°



1 Form		46041	46061
Type		6-pole, shielded	6-pole, shielded
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	Jacket Color
4x0.5 + 2x0.25 mm ²		green	green
PUR (UL/CSA), robots/C-tracks		802	802
Terminator M12 (male)		7000-15041-0000000	
Control cabinet entry system M12		7000-46111-0000000	
T-coupler M12/M12, female/male		7000-46101-0000000	
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 30 V AC/DC	
Protection		IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - - - -	- - - - -
		1 Form	2 Cable Type
			3 Cable Length
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.	

FIELD BUS CONNECTORS

AS-Interface

– Connection cables M12 - M12

– for MASI68



* only for products with UL/CSA approved cable

Male

straight

Female

straight



1 Form

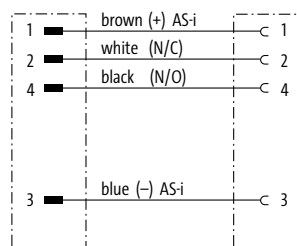
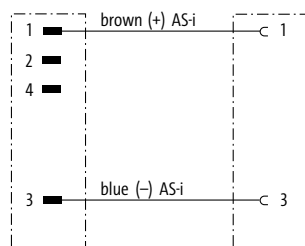
40005

40021

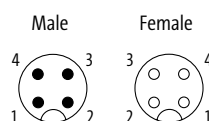
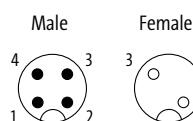
Type
Circuit diagram

2-pole

4-pole



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 1.5 mm²
PUR (UL/CSA), robots/C-tracks
Wire diameter 0.75 mm²
PUR (UL/CSA), robots/C-tracks

gray
588

gray

862

3 Cable Length

1.5 m 0150
3.0 m 0300
5.0 m 0500
7.5 m 0750
10.0 m 1000

Technical Data

Operating voltage max. 250 V AC/DC
Protection IP67/IP68 inserted and tightened (EN 60529)
Temperature range -25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 6 0

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

Connection accessories			Art-No.
	T-coupler M12 – M12 Male straight - female/male straight straight, B-coded, 5-pole, shielded	PROFIBUS	7000-44151-0000000
	T-coupler M12 – M12 Female straight - male/female straight straight, B-coded, 5-pole, shielded	PROFIBUS	7000-44161-0000000
	T-coupler M12 – M12 Male straight - female straight straight, A-coded, 6-pole, shielded	Cube67 additional actuator power supply	7000-46101-0000000
	T-coupler M12 – M12 Female straight - male/male straight straight, A-coded, 4-pole	MAS168 additional actuator power supply	7060-42701-0000000
	Male M12, field-wireable, screw terminals straight, B-coded, 5-pole, shielded	PROFIBUS, Interbus Sealing range (cable Ø): 6...8 mm	7000-14001-0000000
	Female M12, field-wireable, screw terminals straight, B-coded, 5-pole, shielded	PROFIBUS, Interbus Sealing range (cable Ø): 6...8 mm	7000-14021-0000000
	Male M12, field-wireable, screw terminals 90°, B-coded, 5-pole, shielded	PROFIBUS, Interbus Sealing range (cable Ø): 6...8 mm	7000-14011-0000000
	90°, D-coded, 4-pole, shielded	Ethernet CAT5 Sealing range (cable Ø): 6...8 mm	7000-14581-0000000
	Female M12, field-wireable, screw terminals 90°, B-coded, 5-pole, shielded	PROFIBUS, Interbus Sealing range (cable Ø): 6...8 mm	7000-14031-0000000
	Male M12, field-wireable, IDC terminals straight, B-coded, 3-pole, shielded	PROFIBUS Sealing range (cable Ø): 7...8.8 mm	7000-14201-0000000
	straight, D-coded, 4-pole, shielded	Ethernet CAT5 Sealing range (cable Ø): 4.5...8.8 mm	7000-14521-0000000
	Female M12, field-wireable, IDC terminals straight, B-coded, 3-pole, shielded	PROFIBUS Sealing range (cable Ø): 7...8.8 mm	7000-14221-0000000
	straight, D-coded, 4-pole, shielded	Ethernet CAT5 Sealing range (cable Ø): 4.5...8.8 mm	7000-14621-0000000

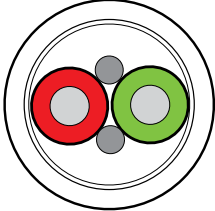
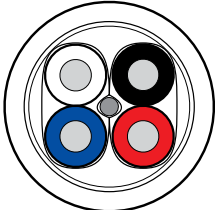
FIELDBUS CONNECTORS

Connection accessories			Art-No.
	Male M12, field-wireable, screw terminals straight, A-coded, 5-pole	DeviceNet, CANopen Sealing range (cable Ø): 6...8 mm	7000-12761-0000000
	Female M12, field-wireable, screw terminals straight, A-coded, 5-pole	DeviceNet, CANopen Sealing range (cable Ø): 6...8 mm	7000-12961-0000000
	Male M12, field-wireable, screw terminals 90°, A-coded, 5-pole	DeviceNet, CANopen Sealing range (cable Ø): 6...8 mm	7000-12881-0000000
	Female M12, field-wireable, screw terminals 90°, A-coded, 5-pole	DeviceNet, CANopen Sealing range (cable Ø): 6...8 mm	7000-13041-0000000
	Male RJ45, field-wireable, IDC terminals straight, IP20, 4-pole, shielded	Ethernet CAT5 Sealing range (cable Ø): 4.5...9 mm	7000-74001-0000000
	straight, IP20, 8-pole, shielded	Ethernet CAT6A Sealing range (cable Ø): 4.5...9 mm	7000-74011-0000000
	straight, IP20, 8-pole, shielded	PROFINET Ethernet CAT5 Sealing range (cable Ø): 5...9 mm	7000-74071-0000000
	straight, IP20, 8-pole, shielded	Ethernet CAT5 Sealing range (cable Ø): 5...9 mm	7000-74075-0000000
	Male RJ45, field-wireable, IDC terminals 45°, IP20, 4-pole, shielded	Ethernet CAT5e Sealing range (cable Ø): 4.5...8 mm	7000-74021-0000000
	45°, IP20, 8-pole, shielded	Ethernet CAT6A Sealing range (cable Ø): 4.5...8 mm	7000-74031-0000000
	Male RJ45, field-wireable, IDC terminals 90°, IP20, 8-pole, shielded on top	Ethernet CAT5 PROFINET Sealing range (cable Ø): 5...9 mm	7000-74081-0000000
	90°, IP20, 8-pole, shielded on top	Ethernet CAT5 Sealing range (cable Ø): 5...9 mm	7000-74085-0000000
	90°, IP20, 8-pole, shielded on bottom	Ethernet CAT5 PROFINET Sealing range (cable Ø): 5...9 mm	7000-74091-0000000
	90°, IP20, 8-pole, shielded on bottom	Ethernet CAT5 Sealing range (cable Ø): 5...9 mm	7000-74095-0000000

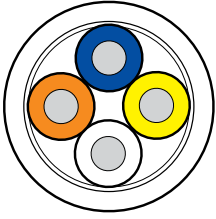
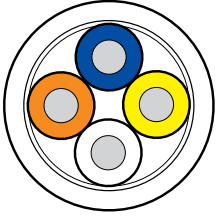
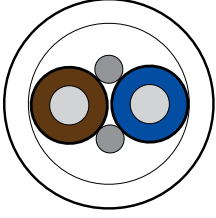
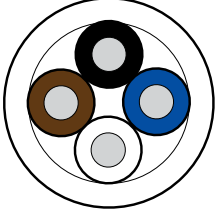
Connection accessories			Art-No.
	Adapter M12/RJ45 (female/female) straight, D-coded, 4-pole, shielded	Ethernet CAT5	7000-44671-0000000
	Adapter M12/RJ45 (female/female) 90°, D-coded, 4-pole, shielded	Ethernet CAT5	7000-44681-0000000
	Adapter M12/RJ45 (female/female) straight, X-coded, 8-pole, shielded	Ethernet CAT6A	7000-51531-0000000
	Adapter M12/RJ45 (female/female) 90°, X-coded, 8-pole, shielded	Ethernet CAT6A	7000-51541-0000000
	Terminator M12 (male) straight, A-coded, 5-pole	DeviceNet, CANopen	7000-13461-0000000
	straight, B-coded, 4-pole	PROFIBUS	7000-14041-0000000
	straight, A-coded, 6-pole	Cube67	7000-15041-0000000
	Terminator 7/8" (male) straight, screw fixing, 5-pole	DeviceNet, CANopen	7000-78301-0000000
	Male M12, field-wireable, IDC terminals straight, X-coded, 8-pole, shielded	Ethernet CAT6A Sealing range (cable Ø): 5.5...9 mm	7000-21101-0000000
	M12 Flange female straight straight, X-coded, 8-pole, shielded Front mounting	Ethernet CAT6A	7000-21151-0000000
	straight, X-coded, 8-pole, shielded Rear mounting	Ethernet CAT6A	7000-21161-0000000
	M12 Flange female straight straight, Y-coded, 8-pole, shielded Front mounting	Ethernet CAT5	7000-15701-0000000

FIELDBUS CONNECTORS

Connection accessories			Art-No.
	M12 Flange female 90° 90°, Y-coded, 8-pole, shielded Front mounting	Ethernet CAT5	7000-15711-0000000
	Control cabinet entry system M12 straight, A-coded, 5-pole, shielded straight, B-coded, 5-pole, shielded straight, A-coded, 6-pole, shielded	DeviceNet, CANopen PROFIBUS, Interbus Cube67	7000-42111-0000000 7000-44111-0000000 7000-46111-0000000
	Control cabinet entry system M12 straight, D-coded, 4-pole, shielded (female/female)	Ethernet CAT5	7000-44611-0000000
	Flange M12 male, pre-wired 0.2 m straight, B-coded, 5-pole straight, A-coded, 5-pole	PROFIBUS, Interbus DeviceNet, CANopen	7000-14121-9750020 7000-13521-9720020
	Flange M12 female, pre-wired 0.2 m straight, B-coded, 5-pole straight, A-coded, 5-pole	PROFIBUS, Interbus DeviceNet, CANopen	7000-14161-9750020 7000-13561-9720020
	Flange M12 female, CAT 5, pre-wired 0.2 m straight, D-coded, 4-pole, shielded	Ethernet CAT5	7000-14501-9760020
	Push Pull Power connector, spring clamp terminals straight, IP65/67, 5-pole	Sealing range (cable Ø): 9...13 mm	7000-99601-0000000
	Push Pull RJ45 data connector, IDC terminals straight, IP65/67, 8-pole	Ethernet CAT5 Sealing range (cable Ø): 5.5...10 mm	7000-99591-0000000
	Push Pull RJ45 data connector, IDC terminals straight, IP65/67, 4-pole	PROFINET IO Sealing range (cable Ø): 4...11 mm	7000-74041-0000000

Connection accessories			Art-No.
	Push Pull RJ45 data connector, IDC terminals 45°, IP65/67, 4-pole	PROFINET IO Sealing range (cable Ø): 6.5...9.5 mm	7000-74061-0000000
	Push Pull SCRJ POF male, field-wireable straight, IP65/67, for POF 1 mm	PROFINET IO Sealing range (cable Ø): 6.5...9.5 mm	7000-99701-0000000
	Push Pull SCRJ POF male, field-wireable straight, IP65/67, for POF 1 mm Connection Crimp	PROFINET IO Sealing range (cable Ø): 6.5...9.5 mm	7000-99691-0000000
	Push Pull SCRJ POF male, field-wireable straight Connection Crimp		7000-99695-0000000
	Protective cover Push Pull Power		7000-99661-0000000
	Protective cover Push Pull RJ45		7000-99671-0000000
	Cable drum (100 m) 1 × 2 × 0.64 mm², violet suitable for C-tracks	PROFIBUS	7000-C0201-8400000
	Cable drum (100 m) 2×0.25 + 2×0.34 mm², violet suitable for C-tracks	DeviceNet, CANopen	7000-C0201-8030000

FIELDBUS CONNECTORS

Connection accessories			Art-No.
	Cable drum (100 m) 2 × 2 × 0.34 mm², green suitable for C-tracks	Ethernet CAT5, PROFINET IO, EtherCAT	7000-C0201-7960000
	Cable drum (100 m) 2 × 2 × 0.34 mm², violet suitable for C-tracks	Ethernet CAT5, PROFINET IO, EtherCAT	7000-C0201-7980000
	Cable drum (100 m) 2 × 1.5 mm², gray suitable for C-tracks	AS-Interface, MASI68	7000-C0201-5880000
	Cable drum (100 m) 4 × 0.75 mm², gray suitable for C-tracks	AS-Interface, MASI68	7000-C0201-8620000
	Bus Connection Plug 90° SUB-D9 (female), screw terminals	CANopen	55760
	SUB-D9 (male), screw terminals	PROFIBUS	55762
	Bus Connection Plug 180° SUB-D9 (male), IDC terminals, rigid cable	PROFIBUS	55584
	Bus Connection Plug 90° SUB-D9 (male), IDC terminals, rigid cable	PROFIBUS	55585

Connection accessories			Art-No.
	Bus Connection Plug 90° SUB-D9 (male), IDC terminals, rigid cable, programming device conn.	PROFIBUS	55586
	Bus Connection Plug 90° SUB-D9 (male); M12 × 1, B-coded	PROFIBUS	7000-99441-0000000
	Bus Connection Plug 35° SUB-D9 (male); M12 × 1, B-coded	PROFIBUS	7000-99401-0000000
	Bus Connection Plug 90° SUB-D9 (male); M12 × 1, B-coded	PROFIBUS	7000-99411-0000000
	Bus Connection Plug 180° SUB-D9 (male); M12 × 1, B-coded	PROFIBUS	7000-99421-0000000
	Bus Connection Plug 90° SUB-D9 (male); M12 × 1, B-coded Zinc die casting	PROFIBUS	7000-99431-0000000
Labeling accessories			Art-No.
	Slip-on cable sleeve for ACS label plates (4 × 18 mm)	Cable diameter (4...6.5 mm)	7000-99004-0000000

FIELDBUS CONNECTORS

Labeling accessories		Art-No.	
	Snap-on cable sleeve		
	for ACS label plates (4 × 18 mm)	Cable diameter (4.2...5.6 mm)	7000-99005-0000000
	for ACS label plates (4 × 18 mm)	Cable diameter (5...7 mm)	7000-99006-0000000
			
	ACS label plate		
	for self marking (4 × 18 mm)		7000-99002-0000000
Mounting accessories		Art-No.	
	Torque wrench set		
	M8 (0.4 Nm, SW9)	M8 data connectors	7000-99101-0000000
	Torque wrench set		
	M12 (0.6 Nm, SW13)	M12 data connenctor molded (standard)	7000-99102-0000000
End fitting accessories		Art-No.	
	Tube adapter		
	snap-in for corrugated tube (size 13mm)	Cable diameter (4...7 mm)	7000-99081-0000000



CONNECTORS FOR FOOD & BEVERAGE

- Made with stainless steel
- Resistant to cleaning substances
- High protection degree

MEETS DEMANDING HYGIENIC STANDARDS

The food and beverage industry needs an extremely clean environment – perfect hygiene is required. Products and components have to be highly resistant and handle tough environments. Murrelektronik offers a wide connector range for this industry and each product meets the tough requirements. All metal parts are made of stainless steel and the cables feature a PVC or TPE-S jacket.

Murrelektronik is closely connected to this industry and can fulfill all the important requirements of the food and beverage industry. And Murrelektronik offers even more:

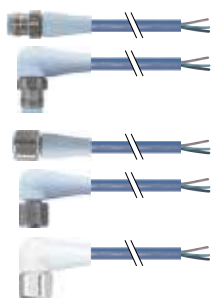
- Complete system solutions
- Comprehensive diagnostic options
- Vibration-proof products
- Excellent logistics for fast deliveries
- Specialists with industry-specific knowledge

ECOLAB[®]



STAINLESS STEEL

With Open Ended Wires



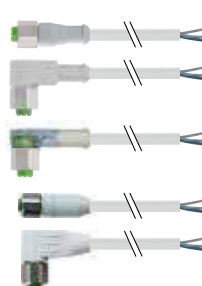
M12 F&B Pro male

- Straight
- 90°

M12 F&B Pro female

- Straight
- 90°
- 90° with LED

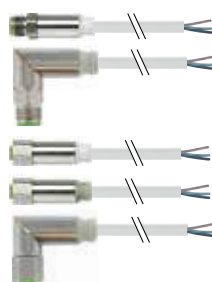
Page 3.7.1



M12 F&B female

- Straight
- 90°
- 90° with LED
- Straight (shielded)
- 90° (shielded)

Page 3.7.10



M12 Steel male

- Straight
- 90°

M12 Steel female

- Straight
- Straight with LED
- 90°

Page 3.7.15

Connection Cables



M12 F&B Pro male

- Straight
- 90°

M12 F&B Pro female

- Straight
- 90°

Page 3.7.19



M12 F&B male

- Straight

M12 F&B female

- Straight
- 90°
- 90° with LED

Page 3.7.14



M12 Steel male

- Straight
- 90°

M12 Steel female

- Straight
- Straight with LED
- 90°

Page 3.7.16

PLUG CONNECTORS FOR FOOD & BEVERAGE

M12 F&B Pro

- with open ended wires M12
- high resistance PP materials
- Screw, Stainless Steel 1.4404 (V4A)

Approvals: **ECOLAB**

Male
straight



Male
90°



1	Form	12001	12081
	Type	3-pole	3-pole
	Circuit diagram		
	Contact layout	Male	
2	Cable Type	Jacket Color	Jacket Color
	Wire diameter 0.34 mm² TPE-S (UL) robots/C-tracks	pastel blue 315	pastel blue 315
3	Cable Length		
	1.5 m	0150	
	3.0 m	0300	
	5.0 m	0500	
	7.5 m	0750	
	10.0 m	1000	
	Technical Data		
	Operating voltage	max. 250 V AC/DC	
	Protection	IP65/IP68/IP69K inserted and tightened (EN 60529)	
	Temperature range	-40...+105 °C, depending on cable quality	
	Article No.		
	The composition of your article number is explained on page 3.1.i	7 0 2 4 - - - - - - - - - -	
		1 Form	2 Cable Type 3 Cable Length
	Notes	Other versions on request. Further cable lengths on request.	

PLUG CONNECTORS FOR FOOD & BEVERAGE

M12 F&B Pro

- with open ended wires M12
- high resistance PP materials
- Screw, Stainless Steel 1.4404 (V4A)

Approvals: **ECOLAB**

Male

straight



Male

90°



1 Form

12021

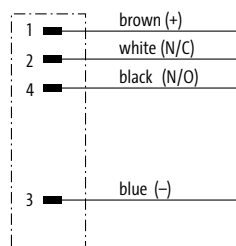
12101

Type

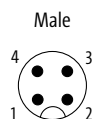
4-pole

4-pole

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.34 mm²

pastel blue

pastel blue

TPE-S (UL) robots/C-tracks

321

321

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 250 V AC/DC

Protection

IP65/IP68/IP69K inserted and tightened (EN 60529)

Temperature range

-40...+105 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 2 4

-

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Further cable lengths on request.

PLUG CONNECTORS FOR FOOD & BEVERAGE

M12 F&B Pro

- with open ended wires M12
- high resistance PP materials
- Screw, Stainless Steel 1.4404 (V4A)

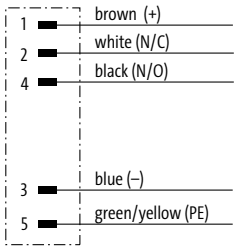
Approvals: 

Male
straight



Male
90°



1 Form		12041	12121
Type		5-pole	5-pole
Circuit diagram			
Contact layout		Male 	
2 Cable Type		Jacket Color	Jacket Color
Wire diameter 0.34 mm²		pastel blue	pastel blue
TPE-S (UL) robots/C-tracks		339	339
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 125 V AC/DC	
Protection		IP65/IP68/IP69K inserted and tightened (EN 60529)	
Temperature range		-40...+105 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 2 4 - - - - -	- - - - -
		1 Form	2 Cable Type 3 Cable Length
Notes		Other versions on request. Further cable lengths on request.	

PLUG CONNECTORS FOR FOOD & BEVERAGE

M12 F&B Pro

- with open ended wires M12
- high resistance PP materials
- Screw, Stainless Steel 1.4404 (V4A)

Approvals: **ECOLAB**

Female
straight



Female
90°



1 Form

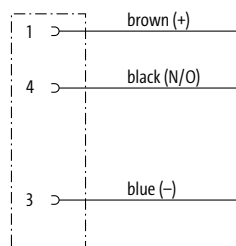
12181

12321

Type
Circuit diagram

3-pole

3-pole



Contact layout

Female



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.34 mm²
TPE-S (UL) robots/C-tracks

pastel blue
315

pastel blue
315

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	max. 250 V AC/DC
Protection	IP65/IP68/IP69K inserted and tightened (EN 60529)
Temperature range	-40...+105 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 2 4

-

-

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Further cable lengths on request.

PLUG CONNECTORS FOR FOOD & BEVERAGE

M12 F&B Pro

- with open ended wires M12
- high resistance PP materials
- Screw, Stainless Steel 1.4404 (V4A)

Approvals: **ECOLAB**

Female
straight



Female
90°



1 Form	12221	12341
Type	4-pole	4-pole
Circuit diagram		
Contact layout	Female	
2 Cable Type	Jacket Color	Jacket Color
Wire diameter 0.34 mm² TPE-S (UL) robots/C-tracks	pastel blue 321	pastel blue 321
3 Cable Length		
1.5 m	0150	
3.0 m	0300	
5.0 m	0500	
7.5 m	0750	
10.0 m	1000	
Technical Data		
Operating voltage	max. 250 V AC/DC	
Protection	IP65/IP68/IP69K inserted and tightened (EN 60529)	
Temperature range	-40...+105 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	7 0 2 4 - - - - - - - - - -	
	1 Form	2 Cable Type
		3 Cable Length
Notes	Other versions on request. Further cable lengths on request.	

PLUG CONNECTORS FOR FOOD & BEVERAGE

M12 F&B Pro

- with open ended wires M12
- high resistance PP materials
- Screw, Stainless Steel 1.4404 (V4A)

Approvals: **ECOLAB**

Female

straight



Female

90°



1 Form

12241

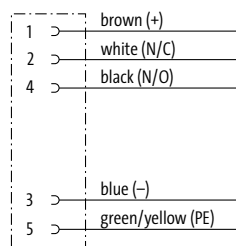
12361

Type

5-pole

5-pole

Circuit diagram



Contact layout

Female



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.34 mm²

pastel blue

pastel blue

TPE-S (UL) robots/C-tracks

339

339

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 125 V AC/DC

Protection

IP65/IP68/IP69K inserted and tightened (EN 60529)

Temperature range

-40...+105 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 2 4

-

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Further cable lengths on request.

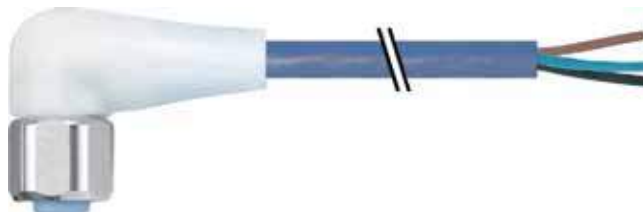
PLUG CONNECTORS FOR FOOD & BEVERAGE

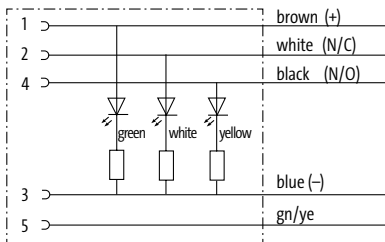
M12 F&B Pro

- with open ended wires M12
- high resistance PP materials
- Screw, Stainless Steel 1.4404 (V4A)

Approvals: **ECOLAB**

Female
90° with LED



1 Form		12441		
Type	5-pole with 3 × LED (PNP) (NPN) on request			
Circuit diagram				
Contact layout	Female 			
2 Cable Type		Jacket Color		
Wire diameter 0.34 mm² TPE-S (UL) robots/C-tracks		pastel blue 339		
3 Cable Length				
1.5 m		0150		
3.0 m		0300		
5.0 m		0500		
7.5 m		0750		
10.0 m		1000		
Technical Data				
Operating voltage		24 V DC ±25%		
Protection		IP65/IP68/IP69K inserted and tightened (EN 60529)		
Temperature range		-40...+85 °C, depending on cable quality		
Article No.				
The composition of your article number is explained on page 3.1.i		7 0 2 4 - 1 2 4 4 1 -		
		1 Form 2 Cable Type 3 Cable Length		
Notes		Other versions on request. Further cable lengths on request.		

PLUG CONNECTORS FOR FOOD & BEVERAGE

M12 F&B Pro

- Connection cables M12 - M12
- high resistance PP materials
- Screw, Stainless Steel 1.4404 (V4A)

Approvals: **ECOLAB**

Male

straight

Female

straight



1 Form

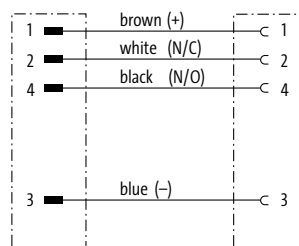
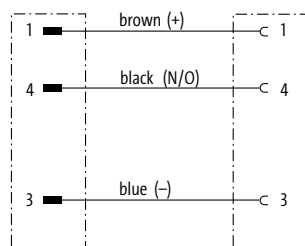
40001

40021

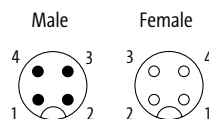
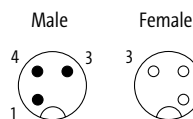
Type
Circuit diagram

3-pole

4-pole



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.34 mm²
TPE-S (UL) robots/C-tracks

pastel blue
315

pastel blue
321

3 Cable Length

0.3 m	0030
0.6 m	0060
1.0 m	0100
1.5 m	0150
2.0 m	0200

Technical Data

Operating voltage	max. 250 V AC/DC
Protection	IP65/IP68/IP69K inserted and tightened (EN 60529)
Temperature range	-40...+105 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 2 4

- - - - -

- - - - -

- - - - -

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Further cable lengths on request.

PLUG CONNECTORS FOR FOOD & BEVERAGE

M12 F&B Pro

- Connection cables M12 - M12
- high resistance PP materials
- Screw, Stainless Steel 1.4404 (V4A)

Approvals:

Male
straight

Female
straight

Male
90°

Female
90°



1 Form		40041	40281
Type		5-pole	5-pole
Circuit diagram			
Contact layout	Male Female		
2 Cable Type		Jacket Color	
Wire diameter 0.34 mm²		pastel blue	pastel blue
TPE-S (UL) robots/C-tracks		339	339
3 Cable Length			
0.3 m		0030	
0.6 m		0060	
1.0 m		0100	
1.5 m		0150	
2.0 m		0200	
Technical Data			
Operating voltage		max. 125 V AC/DC	
Protection		IP65/IP68/IP69K inserted and tightened (EN 60529)	
Temperature range		-40...+105 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 2 4	- - - - -
		1 Form	2 Cable Type 3 Cable Length
Notes		Other versions on request. Further cable lengths on request.	

PLUG CONNECTORS FOR FOOD & BEVERAGE

with open ended wires M12

– Stainless Steel 1.4404 (V4A)

– Profile gasket

Approvals:   
* only for products with UL/CSA approved cable

Female

straight



Female

90°



1 Form

12221

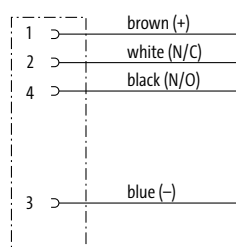
12341

Type

4-pole

4-pole

Circuit diagram



Contact layout

Female



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.34 mm²
PVC (UL/CSA)

gray
214

gray
214

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	max. 250 V AC/DC
Protection	IP65, IP68 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 1 4

–

–

–

–

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Further cable lengths on request.

PLUG CONNECTORS FOR FOOD & BEVERAGE

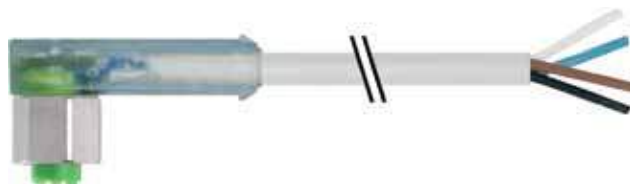
with open ended wires M12

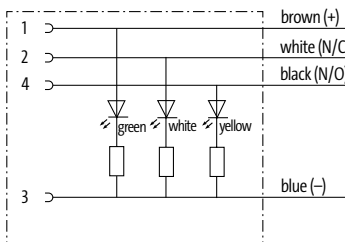
– Stainless Steel 1.4404 (V4A)

– Profile gasket

Approvals: **ECOLAB**  
* only for products with UL/CSA approved cable

Female
90° with LED



1 Form		12421		
Type	4-pole with 3 × LED (PNP) (NPN) on request			
Circuit diagram				
Contact layout				
2 Cable Type		Jacket Color		
Wire diameter 0.34 mm² PVC (UL/CSA)		gray 214		
3 Cable Length				
1.5 m		0150		
3.0 m		0300		
5.0 m		0500		
7.5 m		0750		
10.0 m		1000		
Technical Data				
Operating voltage		24 V DC ±25%		
Protection		IP65, IP68 inserted and tightened (EN 60529)		
Temperature range		-25...+85 °C, depending on cable quality		
Article No.				
The composition of your article number is explained on page 3.1.i		7 0 1 4 – 1 2 4 2 1 –		
		1 Form 2 Cable Type 3 Cable Length		
Notes		Other versions on request. Further cable lengths on request.		

PLUG CONNECTORS FOR FOOD & BEVERAGE

- with open ended wires M12
- Stainless Steel 1.4404 (V4A)
 - Profile gasket

Approvals:   

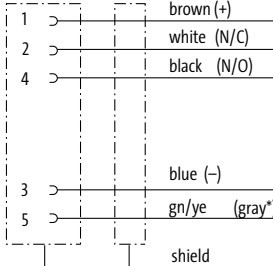
* only for products with UL/CSA approved cable

Female
straight



Female
90°



1	Form	13221			13281		
	Type	5-pole, shielded			5-pole, shielded		
	Circuit diagram	 (* for cable type 203)					
2	Contact layout	Female 					
	Cable Type	Jacket Color			Jacket Color		
	Wire diameter 0.34 mm²		gray	black		gray	black
	PVC (UL/CSA)		202 (203)	602 (603)		202 (203)	602 (603)
3	Cable Length						
	1.5 m	0150					
	3.0 m	0300					
	5.0 m	0500					
	7.5 m	0750					
	10.0 m	1000					
Technical Data							
Operating voltage		max. 60 V AC/DC					
Protection		IP65, IP68 inserted and tightened (EN 60529)					
Temperature range		-25...+85 °C, depending on cable quality					
Article No.							
The composition of your article number is explained on page 3.1.i		7 0 1 4 - -					
		1 Form		2 Cable Type		3 Cable Length	
Notes		Other versions on request. Further cable lengths on request.					

PLUG CONNECTORS FOR FOOD & BEVERAGE

Connection cables M12 - M12

– Stainless Steel 1.4404 (V4A)

– Profile gasket

Approvals:
 * only for products with UL/CSA approved cable

Male
straight

Female
straight

Male
straight

Female
90°



1 Form		40021	40121
Type		4-pole	4-pole
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	
Wire diameter 0.34 mm²		gray	gray
PVC (UL/CSA)		214	214
3 Cable Length			
0.3 m		0030	
0.6 m		0060	
1.0 m		0100	
1.5 m		0150	
2.0 m		0200	
Technical Data			
Operating voltage		max. 250 V AC/DC	
Protection		IP65, IP68 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 1 4	— — — —
		1 Form	2 Cable Type 3 Cable Length
Notes		Other versions on request. Further cable lengths on request.	

PLUG CONNECTORS FOR FOOD & BEVERAGE

Connection cables M12 - M12

– Stainless Steel 1.4404 (V4A)

– Profile gasket

Approvals:   
* only for products with UL/CSA approved cable

Male

straight

Female

90° with LED



1 Form

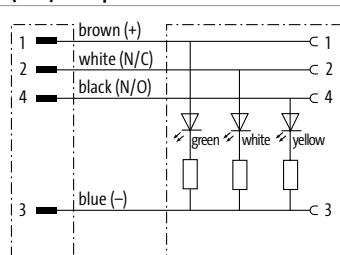
40341

Type

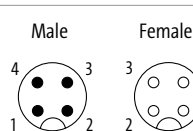
4-pole with 3 × LED (PNP)

(NPN) on request

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Wire diameter 0.34 mm²
PVC (UL/CSA)

gray
214

3 Cable Length

0.3 m	0030
0.6 m	0060
1.0 m	0100
1.5 m	0150
2.0 m	0200

Technical Data

Operating voltage	24 V DC ±25%
Protection	IP65, IP68 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 1 4

–

4 0 3 4 1

–

– – –

– – – –

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Further cable lengths on request.

PLUG CONNECTORS FOR FOOD & BEVERAGE

With open ended wires

- M12-Steel
- Stainless Steel 1.4404 (V4A)
- Permanently IP69K

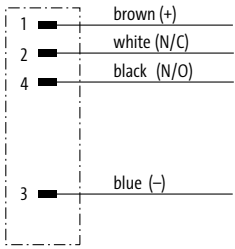
Approvals:  
 * only for products with UL/CSA approved cable

Male
straight



Male
90°



1 Form		12021	12101
Type		4-pole	4-pole
Circuit diagram			
Contact layout	Male 		
2 Cable Type		Jacket Color	
Wire diameter 0.34 mm²		gray	gray
PVC (UL/CSA)		214	214
TPE-S		336	336
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 32 V AC/DC	
Protection		IP68, IP69K inserted and tightened (EN 60529)	
Temperature range		-40...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 4 4	- - - - -
		1 Form	2 Cable Type 3 Cable Length
Notes		Other versions on request. Further cable lengths on request.	

PLUG CONNECTORS FOR FOOD & BEVERAGE

With open ended wires

- M12-Steel
- Stainless Steel 1.4404 (V4A)
- Permanently IP69K

Approvals:  

* only for products with UL/CSA approved cable

Female
straight



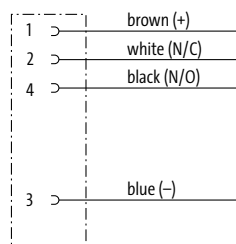
1 Form

12221

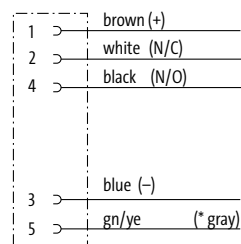
12241

Type
Circuit diagram

4-pole



5-pole



(* for cable type 219)

Contact layout

Female



Female



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.34 mm²
PVC (UL/CSA)
TPE-S

gray
214
336

gray
215
black
615

3 Cable Length

1.5 m 0150
3.0 m 0300
5.0 m 0500
7.5 m 0750
10.0 m 1000

Technical Data

Operating voltage max. 32 V AC/DC
Protection IP68, IP69K inserted and tightened (EN 60529)
Temperature range -40...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 4 4

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Further cable lengths on request.

PLUG CONNECTORS FOR FOOD & BEVERAGE

With open ended wires

- M12-Steel
- Stainless Steel 1.4404 (V4A)
- Permanently IP69K

Approvals: 

* only for products with UL/CSA approved cable

Female
90°



1 Form		12341			
Type	4-pole				
Circuit diagram	1 2 4 brown (+) white (N/C) black (N/O) 3 blue (-)				
Contact layout	Female 3 4 2 1				
2 Cable Type		Jacket Color			
Wire diameter 0.34 mm²		gray			
PVC (UL/CSA)		214			
TPE-S		336			
3 Cable Length					
1.5 m		0150			
3.0 m		0300			
5.0 m		0500			
7.5 m		0750			
10.0 m		1000			
Technical Data					
Operating voltage		max. 32 V AC/DC			
Protection		IP68, IP69K inserted and tightened (EN 60529)			
Temperature range		-40...+85 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 4 4 - 1 2 3 4 1 -			
		1 Form		2 Cable Type	
				3 Cable Length	
Notes		Other versions on request. Further cable lengths on request.			

PLUG CONNECTORS FOR FOOD & BEVERAGE

With open ended wires

- M12-Steel
- Stainless Steel 1.4404 (V4A)
- Permanently IP69K

Approvals: 

* only for products with UL/CSA approved cable

Female

straight, with LED



1 Form

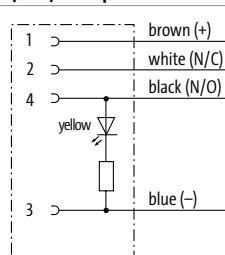
12292

Type

4-pole with 1 × LED (PNP)

(NPN) on request

Circuit diagram



Contact layout

Female



2 Cable Type

Jacket Color

Wire diameter 0.34 mm²

PVC (UL/CSA)

TPE-S

gray

214

336

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

24 V AC/DC ±25%

Protection

IP68, IP69K inserted and tightened (EN 60529)

Temperature range

-40...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 4 4

-

1 2 2 9 2

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Further cable lengths on request.

PLUG CONNECTORS FOR FOOD & BEVERAGE

Connection cables

- M12-Steel
- Stainless Steel 1.4404 (V4A)
- Permanently IP69K

Approvals:   ^{*}
^{*} only for products with UL/CSA approved cable

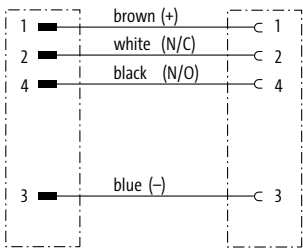
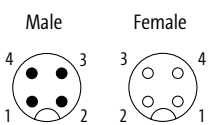
Male
straight

Female
straight

Male
straight

Female
90°



1 Form		40021	40121
Type		4-pole	4-pole
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	Jacket Color
Wire diameter 0.34 mm ²		gray	gray
PVC (UL/CSA)		214	214
TPE-S		336	336
3 Cable Length			
0.3 m		0030	
0.6 m		0060	
1.0 m		0100	
1.5 m		0150	
2.0 m		0200	
Technical Data			
Operating voltage		max. 32 V AC/DC	
Protection		IP68, IP69K inserted and tightened (EN 60529)	
Temperature range		-40...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 4 4 - - - - - - - - - -	
		1 Form	2 Cable Type
		3 Cable Length	
Notes		Other versions on request. Further cable lengths on request.	

PLUG CONNECTORS FOR FOOD & BEVERAGE

Connection cables

- M12-Steel
- Stainless Steel 1.4404 (V4A)
- Permanently IP69K

Approvals: 

* only for products with UL/CSA approved cable

Male
90°

Female
straight



Male
90°

Female
90°



1 Form

40201

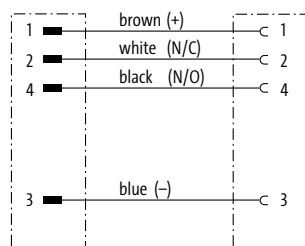
40261

Type

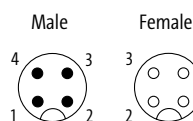
4-pole

4-pole

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.34 mm²

PVC (UL/CSA)

TPE-S

gray

214

336

gray

214

336

3 Cable Length

0.3 m

0030

0.6 m

0060

1.0 m

0100

1.5 m

0150

2.0 m

0200

Technical Data

Operating voltage

max. 32 V AC/DC

Protection

IP68, IP69K inserted and tightened (EN 60529)

Temperature range

-40...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 4 4

-

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Further cable lengths on request.

PLUG CONNECTORS FOR FOOD & BEVERAGE

Connection cables

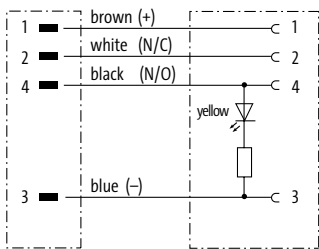
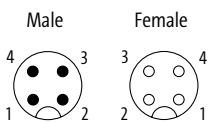
- M12-Steel
- Stainless Steel 1.4404 (V4A)
- Permanently IP69K

Approvals:  
 * only for products with UL/CSA approved cable

Male
straight

Female
straight, with LED



1 Form		4 0 3 1 2	
Type		4-pole with 1 × LED (PNP) (NPN) on request	
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	
Wire diameter 0.34 mm²		gray	
PVC (UL/CSA)		214	
TPE-S		336	
3 Cable Length			
0.3 m		0030	
0.6 m		0060	
1.0 m		0100	
1.5 m		0150	
2.0 m		0200	
Technical Data			
Operating voltage		24 V AC/DC ±25%	
Protection		IP68, IP69K inserted and tightened (EN 60529)	
Temperature range		-40...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7044 – 40312 – – – – – – – –	
		1 Form 2 Cable Type 3 Cable Length	
Notes		Other versions on request. Further cable lengths on request.	

PLUG CONNECTORS FOR FOOD & BEVERAGE

Labeling accessories			Art-No.
	Slip-on cable sleeve for ACS label plates (4 × 18 mm)	Cable diameter (4...6.5 mm)	7000-99004-0000000
	Snap-on cable sleeve for ACS label plates (4 × 18 mm)	Cable diameter (4.2...5.6 mm)	7000-99005-0000000
	for ACS label plates (4 × 18 mm)	Cable diameter (5...7 mm)	7000-99006-0000000
	ACS label plate for self marking (4 × 18 mm)		7000-99002-0000000
	Colored ring M8/M12		
	sandy yellow	for unshielded molding	7000-99301-V011002
	zinc yellow	for unshielded molding	7000-99301-V011018
	redorange	for unshielded molding	7000-99301-V012008
	red	for unshielded molding	7000-99301-V013020
	violet	for unshielded molding	7000-99301-V014003
	purple	for unshielded molding	7000-99301-V014006
	blue	for unshielded molding	7000-99301-V015005
	green	for unshielded molding	7000-99301-V016018
	gray	for unshielded molding	7000-99301-V017035
	white	for unshielded molding	7000-99301-V019003
	black	for unshielded molding	7000-99301-V019004
Mounting accessories			Art-No.
	Torque wrench set M8 (0.4 Nm, SW9)	M8 data connectors	7000-99101-0000000
	Torque wrench set M12 (0.6 Nm, SW13)	M12 data connenctor molded (standard)	7000-99102-0000000
	Torque wrench set M12 (0.6 Nm, SW14)		7000-99107-0000000
	Torque wrench M12 (0.6 Nm, SW14)	M12 data connenctor moulded (Xtreme)	7000-99108-0000000
	Torque wrench M12 (0.6 Nm, SW17)	M12 field-wireable (IDC terminal)	7000-99094-0000000
	Torque wrench M12 (0.6 Nm, SW18)	M12 field-wireable via (screw terminals)	7000-99103-0000000

PLUG CONNECTORS FOR FOOD & BEVERAGE

Mounting accessories			Art-No.
	Hold clip M12		
	Plastic		7000-99045-0000000
End fitting accessories			Art-No.
	Tube adapter		
	snap-in for corrugated tube (size 13mm)	Cable diameter (4...7 mm)	7000-99081-0000000
Connection accessories			Art-No.
	Universal holder		
	modular	M8 M12	7000-99801-0000000
	Universal holder		
	modular	M12 Y-connector M12	7000-99811-0000000



MOBILE APPLICATIONS FOR ROUGH APPLICATIONS

- Robust
- Resistant
- Sealed

KEEP YOUR MOBILE EQUIPMENT GOING STRONG WITH OUR FULLY POTTED CONNECTORS

Many leading mobile hydraulic valve manufacturers are currently updating their connection concepts. Instead of the old-fashioned (rectangular) valve connectors compliant with DIN EN 175301-803, they are increasingly recommending alternatives with Junior Power Timer, Deutsch or SuperSeal connectors.

MDC – MURRELEKTRONIK DEUTSCH CONNECTOR

Murrelektronik MDC connectors are pre-wired valve connectors, which are 100% compatible with Deutsch DT connectors. Even though the cables are connected to the housing and fully sealed, the connector is as compact as possible.

MSC – MURRELEKTRONIK SUPERSEAL CONNECTOR

Murrelektronik MSC cordsets are pre-wired valve connectors that are 100% compatible with the size 1.5 SuperSeal connectors. Even though the cables are connected to the housing and fully sealed, the connector is as compact as possible.

With Open Ended Wires



AMP Junior Power Timer

- Female straight
- Female 90°

Page 3.8.1



Deutsch MDC

- Male straight
- Y connector male
- Female straight

Page 3.8.3



SuperSeal MSC1.5

- Male straight
- Female straight

Page 3.8.8

MOBILE APPLICATIONS

Xtreme - Mobile Applications

- with open ended wires
- compatible with:
- AMP Junior Power Timer

Female
straight



1	Form	70001	70021	70061
	Type	max. 230 V AC/DC	12...24 V AC/DC	12...24 V AC/DC
		without components	LED	LED and VDR
	Circuit diagram	* for cable type (740)	* for cable type (740)	
Contact layout				
2	Cable Type	Jacket Color	Jacket Color	Jacket Color
	Wire diameter 0.75 mm²	black	black	black
	PUR/PVC	750	750	750
	PUR (UL/CSA), robots/C-tracks	754	754	754
	Wire diameter 0.5 mm²			
	PUR, C-tracks	740	740	740
3	Cable Length			
	1.5 m	0150		
	3.0 m	0300		
	5.0 m	0500		
	7.5 m	0750		
	10.0 m	1000		
Technical Data				
Operating voltage	max. 230 V AC/DC	12...24 V AC/DC		
Protection	IP65 inserted and tightened			
Temperature range	-25...+85 °C, depending on cable quality			
Article No.				
The composition of your article number is explained on page 3.1.i	7072 - -			
	1	Form	2	Cable Type
	3	Cable Length		
Notes				
	Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

MOBILE APPLICATIONS

Xtreme - Mobile Applications

- with open ended wires
- compatible with:
- AMP Junior Power Timer

Female
90°



1	Form	70301	70321	70361
	Type	max. 230 V AC/DC without components	12...24 V AC/DC LED	12...24 V AC/DC LED and VDR
	Circuit diagram			
	Contact layout			
2	Cable Type	Jacket Color	Jacket Color	Jacket Color
	Wire diameter 0.75 mm²	black	black	black
	PUR/PVC	750	750	750
	PUR (UL/CSA), robots/C-tracks	754	754	754
	Wire diameter 0.5 mm²			
	PUR, C-tracks	740	740	740
3	Cable Length			
	1.5 m	0150		
	3.0 m	0300		
	5.0 m	0500		
	7.5 m	0750		
	10.0 m	1000		
Technical Data				
Operating voltage		max. 230 V AC/DC	12...24 V AC/DC	
Protection		IP65 inserted and tightened		
Temperature range		-25...+85 °C, depending on cable quality		
Article No.				
The composition of your article number is explained on page 3.1.i		7 0 7 2	-	-
		1	Form	2 Cable Type 3 Cable Length
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.		

MOBILE APPLICATIONS

Xtreme - Mobile Applications

- with open ended wires
- compatible with:
- Deutsch DT 06

Deutsch MDC 06-2S

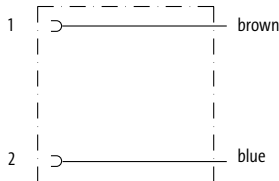
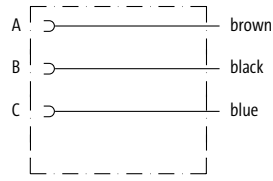
Male straight



Deutsch MDC 06-3S

Male straight



1 Form		72011	72081
Type		2-pole	3-pole
		12...230 V AC/DC	6...230 V AC/DC
		without components	without components
Circuit diagram			
Contact layout		Male female contacts 	Male female contacts 
2 Cable Type		Jacket Color	
Wire diameter 0.75 mm²		black	yellow
PUR/PVC		750	
PUR (UL/CSA), robots/C-tracks		754	145
Jacket Color			black
			564
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		12...230 V AC/DC	6...230 V AC/DC
Protection		IP68 inserted and tightened	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 7 2	- - - - -
		1 Form	2 Cable Type
		3 Cable Length	
Notes			
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

MOBILE APPLICATIONS

Xtreme - Mobile Applications

- with open ended wires
- compatible with:
- Deutsch DT 06

Deutsch MDC 06-4S

Male straight



Deutsch MDC 06-6S

Male straight



1 Form

72161

72221

Type

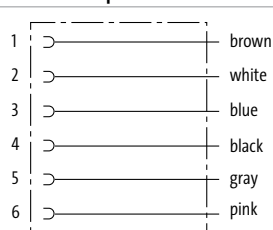
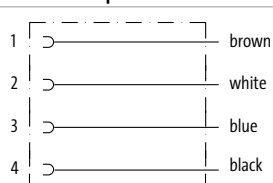
4-pole

6-pole

6...230 V AC/DC

6...230 V AC/DC

Circuit diagram



Contact layout

Male
female contacts



Male
female contacts



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.75 mm²

PUR (UL/CSA), robots/C-tracks

black

569

black

572

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

6...230 V AC/DC

Protection

IP68 inserted and tightened

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 7 2

-

-

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MOBILE APPLICATIONS

Xtreme - Mobile Applications

- with open ended wires
- compatible with:
- Deutsch DT 06

Deutsch MDC 06-4S

Y connector
Male



1	Form	72191						
	Type	4-/2-pole						
		6...230 V AC/DC						
		without components						
	Circuit diagram							
	Contact layout	Male female contacts						
2	Cable Type	Jacket Color						
	Wire diameter 0.75 mm²		black	yellow				
	PUR (UL/CSA), robots/C-tracks		754	145				
3	Cable Length							
	1.5 m	0150						
	3.0 m	0300						
	5.0 m	0500						
	7.5 m	0750						
	10.0 m	1000						
	Technical Data							
	Operating voltage	6...230 V AC/DC						
	Protection	IP68 inserted and tightened						
	Temperature range	-25...+85 °C, depending on cable quality						
	Article No.							
	The composition of your article number is explained on page 3.1.i	7 0 7 2 - 7 2 1 9 1 -						
			1	Form	2	Cable Type	3	Cable Length
	Notes	Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.						

MOBILE APPLICATIONS

Xtreme - Mobile Applications

- with open ended wires
- compatible with:
- Deutsch DT 06

Deutsch MDC 04-2P

Female straight



Deutsch MDC 04-3P

Female straight



1 Form

723 01

723 81

Type

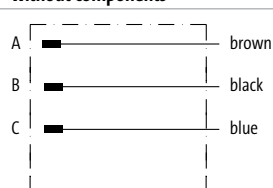
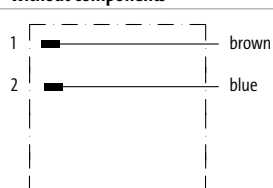
2-pole

3-pole

6...230 V AC/DC

6...230 V AC/DC

Circuit diagram



Contact layout

Female
male contacts



Female
male contacts



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.75 mm²

PUR/PVC

PUR (UL/CSA), robots/C-tracks

black	yellow
750	
754	145

black

564

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	6...230 V AC/DC
Protection	IP68 inserted and tightened
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 7 2

-

-

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Xtreme - Mobile Applications

- with open ended wires
- compatible with:
- Deutsch DT 06

Deutsch MDC 04-4P

Female straight



Deutsch MDC 04-6P

Female straight



1 Form		72461	72521
Type		4-pole	6-pole
		6...230 V AC/DC	6...230 V AC/DC
		without components	without components
Circuit diagram			
Contact layout		Female male contacts 	Female male contacts
2 Cable Type		Jacket Color	
Wire diameter 0.75 mm²		black	black
PUR (UL/CSA), robots/C-tracks		569	572
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		6...230 V AC/DC	
Protection		IP68 inserted and tightened	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 7 2	— — — — —
		1 Form	2 Cable Type 3 Cable Length
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

MOBILE APPLICATIONS

Xtreme - Mobile Applications

- with open ended wires
- compatible with:
- AMP SuperSeal 1.5

SuperSeal MSC1.5-2S

Male straight



SuperSeal MSC1.5-3S

Male straight



1 Form

73001

73081

Type

2-pole

3-pole

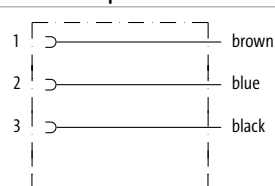
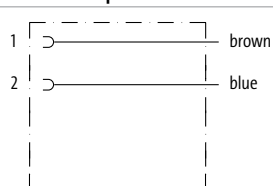
max. 24 V DC

max. 24 V DC

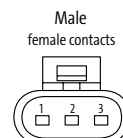
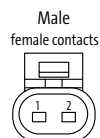
without components

without components

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.75 mm²

black

black

PUR (UL), C-tracks

512

513

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 24 V DC

Protection

IP67 inserted and tightened (EN 60529)

Temperature range

-40...+125 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 7 2

-

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MOBILE APPLICATIONS

Xtreme - Mobile Applications

- with open ended wires
- compatible with:
- AMP SuperSeal 1.5

SuperSeal MSC1.5-4S

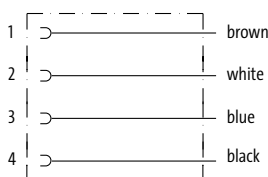
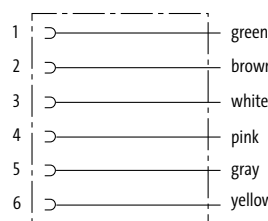
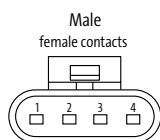
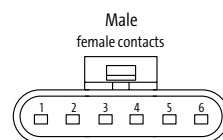
Male straight



SuperSeal MSC1.5-6S

Male straight



1 Form		73161	73221
Type		4-pole	6-pole
		max. 24 V DC	max. 24 V DC
		without components	without components
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	
Wire diameter 0.75 mm²		black	black
PUR (UL), C-tracks		514	516
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 24 V DC	
Protection		IP67 inserted and tightened (EN 60529)	
Temperature range		-40...+125 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 7 2	- - - - -
		1 Form	2 Cable Type
		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

MOBILE APPLICATIONS

Xtreme - Mobile Applications

- with open ended wires
- compatible with:
- AMP SuperSeal 1.5

SuperSeal MSC1.5-2P

Female straight



SuperSeal MSC1.5-3P

Female straight



1 Form

73301

73381

Type

2-pole

3-pole

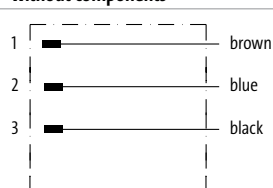
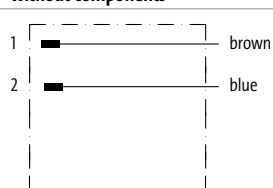
max. 24 V DC

max. 24 V DC

without components

without components

Circuit diagram

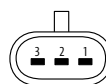


Contact layout

Female
male contacts



Female
male contacts



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.75 mm²

PUR (UL), C-tracks

black

512

black

513

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 24 V DC

Protection

IP67 inserted and tightened (EN 60529)

Temperature range

-40...+125 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 7 2

-

-

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MOBILE APPLICATIONS

Xtreme - Mobile Applications

- with open ended wires
- compatible with:
- AMP SuperSeal 1.5

SuperSeal MSC1.5-4P

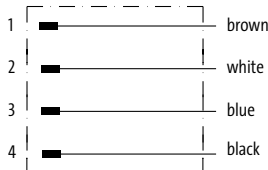
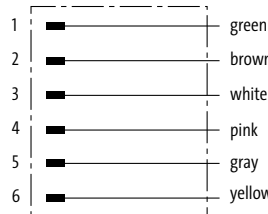
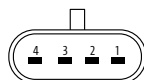
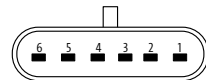
Female straight



SuperSeal MSC1.5-6P

Female straight



1 Form		73461	73521
Type		4-pole	6-pole
		max. 24 V DC	max. 24 V DC
		without components	without components
Circuit diagram			
Contact layout		Female male contacts 	Female male contacts 
2 Cable Type		Jacket Color	
Wire diameter 0.75 mm²		black	black
PUR (UL), C-tracks		514	516
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 24 V DC	
Protection		IP67 inserted and tightened (EN 60529)	
Temperature range		-40...+125 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 7 2	- - - - -
		1 Form	2 Cable Type
		3 Cable Length	
Notes			
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	



M23 ROUND PLUG CONNECTORS MADE FOR DISTRIBUTION BOXES

- Highly resistant, halogen-free molding
- Safely sealed – acc. to IP67
- Reliable – 100% tested

COMPACT CONNECTOR FOR SAFE SIGNAL TRANSFER

Murrelektronik's M23 connectors are specially designed for distribution systems with M23 connections. They ensure a safe signal transfer from the distribution box to the control cabinet and a safe power supply to the distributor as well as the sensors and actuators connected to it.

With Open Ended Wires



M23 female, 12-pole

- Straight/90°
- For unshielded distribution boxes

Page 3.9.1



M23 female, 19-pole

- Straight/90°
- For unshielded distribution boxes

Page 3.9.2



M23 female, 19-pole

- Straight
- For shielded distribution boxes

Page 3.9.4

M23 ROUND PLUG CONNECTORS

With open ended wires

– 12-pole

Female

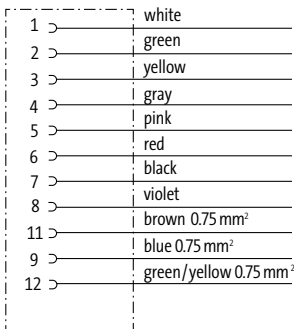
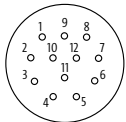
straight



Female

90°



1 Form		23051	23151
Type		11-pole used for 8-way distribution box, 4-pole	11-pole used for 8-way distribution box, 4-pole
Circuit diagram			
Contact layout		Female 	
2 Cable Type		Jacket Color – No./diameter of wires	
PUR/PVC (UL/CSA), C-tracks		gray 362 – 8 × 0.34 + 3 × 0.75 mm²	gray 362 – 8 × 0.34 + 3 × 0.75 mm²
3 Cable Length			
5.0 m		0500	
10.0 m		1000	
15.0 m		1500	
Technical Data			
Operating voltage		max. 125 V AC/DC	
Protection		IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0 – –	
		1 Form	2 Cable Type
		3 Cable Length	
Notes		Other versions on request.	

M23 ROUND PLUG CONNECTORS

With open ended wires

– 19-pole

Female

straight



1 Form		23251	23251
Approvals	Type	19-pole used	cULus
		for 8-way distribution boxes, 5-pole	19-pole used
			for 8-way distribution boxes, 5-pole
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color – No./diameter of wires	
		gray	gray
PUR/PVC (UL/CSA), C-tracks		398 – 16 × 0.34 + 3 × 0.75 mm²	
PUR (UL/CSA), robots/C-tracks			452 – 16 × 0.5 + 3 × 1.0 mm²
3 Cable Length			
5.0 m		0500	
10.0 m		1000	
15.0 m		1500	
Technical Data			
Operating voltage		max. 125 V AC/DC	
Protection		IP67 inserted and tightened (EN 60529)	
Temperature range		-5...+70 °C, depending on cable quality	-5...+70 °C, depending on cable quality
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0	
		1 Form	2 Cable Type
		3 Cable Length	
Notes		Other versions on request.	

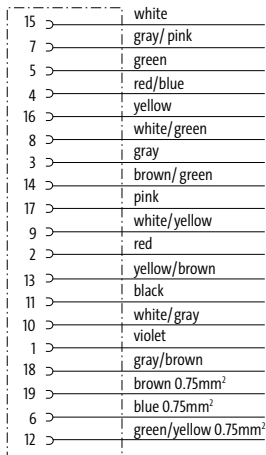
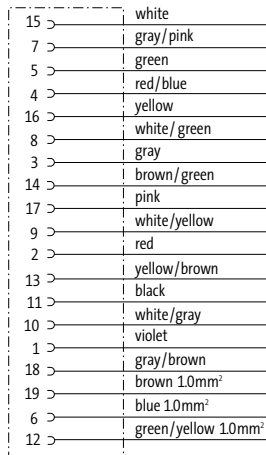
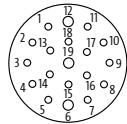
M23 ROUND PLUG CONNECTORS

With open ended wires

– 19-pole

Female
90°



1	Form	23351	23351
Approvals			cULus
Type	19-pole used	19-pole used	19-pole used
	for 8-way distribution boxes, 5-pole	for 8-way distribution boxes, 5-pole	for 8-way distribution boxes, 5-pole
Circuit diagram			
Contact layout	Female 		
2	Cable Type	Jacket Color – No./diameter of wires	
		gray	gray
	PUR/PVC (UL/CSA), C-tracks	398 – 16 × 0.34 + 3 × 0.75 mm ²	
	PUR (UL/CSA), robots/C-tracks		452 – 16 × 0.5 + 3 × 1.0 mm ²
3	Cable Length		
	5.0 m	0500	
	10.0 m	1000	
	15.0 m	1500	
Technical Data			
	Operating voltage	max. 125 V AC/DC	
	Protection	IP67 inserted and tightened (EN 60529)	
	Temperature range	-5...+70 °C, depending on cable quality	-5...+70 °C, depending on cable quality
Article No.			
	The composition of your article number is explained on page 3.1.i	7 0 0 0 – – – – –	– – – – –
		1 Form	2 Cable Type 3 Cable Length
Notes			
		Other versions on request.	

M23 ROUND PLUG CONNECTORS

With open ended wires

– 19-pole

Female

straight



1 Form

23711

23751

Type

11-pole used

19-pole used

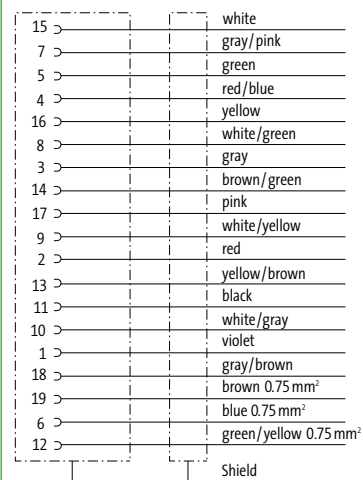
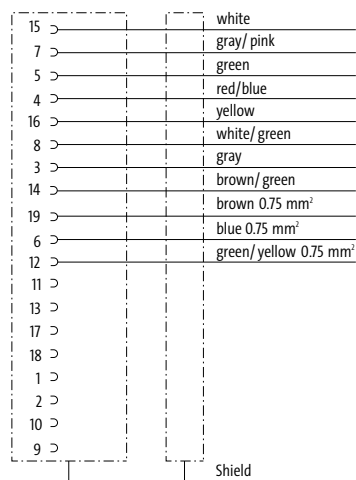
shielded

shielded

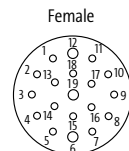
for 4-way distribution boxes, 5-pole

for 8-way distribution boxes, 5-pole

Circuit diagram



Contact layout



2 Cable Type

Jacket Color – No./diameter of wires

PUR (UL/CSA), robots/C-tracks

gray

gray

373 – 8 × 0.34 + 3 × 0.75 mm²

401 – 16 × 0.34 + 3 × 0.75 mm²

3 Cable Length

5.0 m

0500

10.0 m

1000

15.0 m

1500

Technical Data

Operating voltage

max. 125 V AC/DC

Protection

IP65 and IP67 when plugged and screwed down (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request.



ROUND PLUG CONNECTORS

POWER

POWERFUL AND SAFE

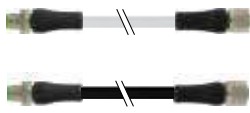
- Proven and reliable
- Molded and encapsulated plug connector
- Easy and safe connection

PLUG CONNECTOR FOR HIGH POWER TRANSFER

Perfect electrical connection, tightness and media resistance are the basic requirements for all types of plug connectors. In the field of motor connection technology, additional special properties are required: large connection cross-sections, high power with the smallest possible design and – most importantly – integrated anti-vibration locks that keeps the connector securely in place even if severe vibrations occur.

- The **M12 Power** is an extremely compact and performant M12 plug connector.
- The **MQ15 X-Power** enables particularly fast installation.
- The **7/8" round plug connector** has been optimized for highest performance

As a matter of course, all our plug connectors are tested 100%.

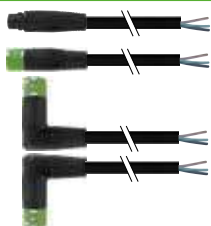
M12 Power		
	With open ended wires	M12 male/female • Straight • K-coded, L-coded, S-coded, T-coded
	Connection cables	M12 male – M12 female • Straight • K-coded, L-coded, S-coded, T-coded
	Field-wireable Screw terminals Field-wireable Terminals with Insulation Displacement Technology (IDC)	M12 male/female • Straight • S-coded, T-coded M12 male/female • Straight • L-coded

Page 3.10.1

Page 3.10.5

Page 3.10.7

MQ15 X-Power



With open ended wires

MQ15 X-Power male/female

- Unshielded/shielded
- Straight
- 90°

Page 3.10.10



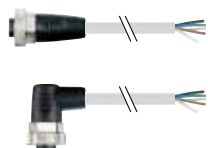
Connection cables

MQ15 X-Power male – MQ15 X-Power female

- Unshielded/shielded
- Straight

Page 3.10.25

7/8"

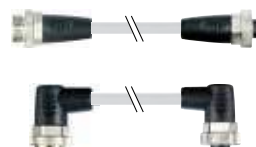


With open ended wires

7/8" male/female

- Straight/90°

Page 3.10.29



Connection cables

7/8" male – 7/8" female

- Straight/90°

Page 3.10.30

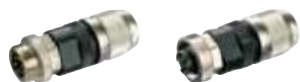


Field-wireable
Screw terminals

7/8" male/female

- Straight/90°

Page 3.10.31



Field-wireable
Terminals with Insulation
Displacement Technology (IDC)

7/8" male/female

- Straight

Page 3.10.33

M23 Drives (Motors)



*We offer a wide range
for M23 Drives. Just talk to us!*

ROUND PLUG CONNECTORS POWER

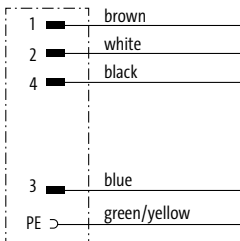
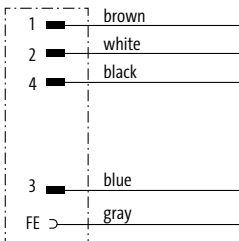
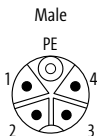
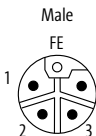
With open ended wires

– M12 Power

Male

straight



1 Form		P3201	P4201
Type		5-pole	5-pole
		K-coded	L-coded
		Operating current: max. 12 A	Operating current: max. 16 A
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	
Wire diameter 1.5 mm ²		black	gray
PUR/PVC			966
PUR (UL/CSA), robots/C-tracks		P05	P04
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 630 V AC/DC	max. 63 V AC/DC
Protection		IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0	
		1 Form	2 Cable Type
		3 Cable Length	
Notes			
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

ROUND PLUG CONNECTORS POWER

With open ended wires

– M12 Power

Female

straight



1 Form

P 3 2 2 1

P 4 2 2 1

Type

5-pole

5-pole

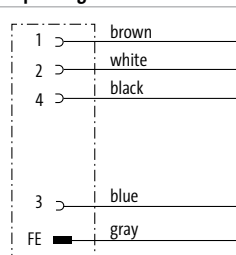
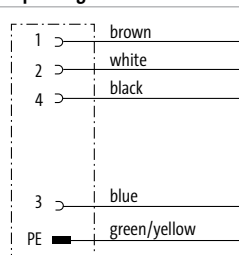
K-coded

L-coded

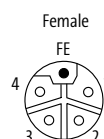
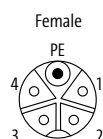
Operating current: max. 12 A

Operating current: max. 16 A

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 1.5 mm²

PUR/PVC

PUR (UL/CSA), robots/C-tracks

black

P05

gray

966

black

P04

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 630 V AC/DC

max. 63 V AC/DC

Protection

IP65 and IP67 when plugged and screwed down (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

-

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

ROUND PLUG CONNECTORS POWER

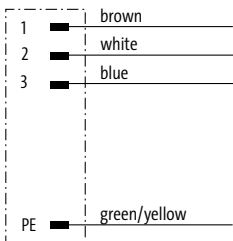
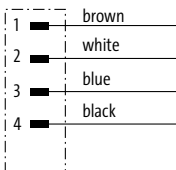
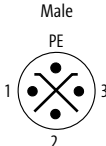
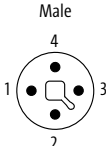
With open ended wires

– M12 Power

Male

straight



1 Form		P 6201	P 7201
Type		4-pole	4-pole
		S-coded	T-coded
		Operating current: max. 12 A	Operating current: max. 12 A
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	
Wire diameter 1.5 mm ²		black	black
PUR (UL/CSA), robots/C-tracks		P06	P07
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 630 V AC/DC	max. 63 V AC/DC
Protection		IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0	— — — —
		1 Form	2 Cable Type
		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

ROUND PLUG CONNECTORS POWER

With open ended wires

– M12 Power

Female
straight



1	Form	P 6221		P 7221	
	Type	4-pole		4-pole	
		S-coded		T-coded	
		Operating current: max. 12 A		Operating current: max. 12 A	
	Circuit diagram				
	Contact layout				
2	Cable Type	Jacket Color		Jacket Color	
	Wire diameter 1.5 mm²	black		black	
	PUR (UL/CSA), robots/C-tracks	P06		P07	
3	Cable Length				
	1.5 m	0150			
	3.0 m	0300			
	5.0 m	0500			
	7.5 m	0750			
	10.0 m	1000			
Technical Data					
	Operating voltage	max. 630 V AC/DC		max. 63 V AC/DC	
	Protection	IP65 and IP67 when plugged and screwed down (EN 60529)			
	Temperature range	-25...+85 °C, depending on cable quality			
Article No.					
	The composition of your article number is explained on page 3.1.i	7 0 0 0 - -			
		1 Form		2 Cable Type	
				3 Cable Length	
Notes					
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

ROUND PLUG CONNECTORS POWER

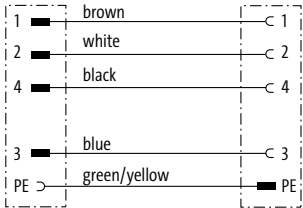
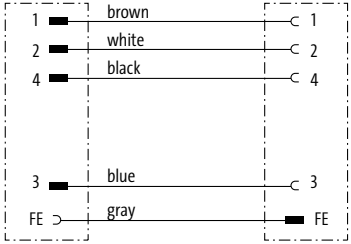
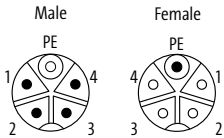
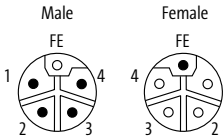
Connection cables

– M12 Power

Male
straight

Female
straight



1 Form		P 3 2 4 1	P 4 2 4 1
Type		5-pole	5-pole
		K-coded	L-coded
		Operating current: max. 12 A	Operating current: max. 16 A
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	
Wire diameter 1.5 mm ²		black	gray
PUR/PVC			966
PUR (UL/CSA), robots/C-tracks		P05	P04
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 630 V AC/DC	max. 63 V AC/DC
Protection		IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0	
		1 Form	2 Cable Type
		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

ROUND PLUG CONNECTORS POWER

Connection cables

– M12 Power

Male

straight

Female

straight



1 Form		P 6241	P 7241
Type		4-pole	4-pole
		S-coded	T-coded
		Operating current: max. 12 A	Operating current: max. 12 A
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	
Wire diameter 1.5 mm ² PUR (UL/CSA), robots/C-tracks		black P06	black P07
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 630 V AC/DC	max. 63 V AC/DC
Protection		IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0	— — — —
		1 Form	2 Cable Type
			3 Cable Length
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

ROUND PLUG CONNECTORS POWER

Field-wireable

– M12 Power

– Screw terminals

Approvals: 

Male

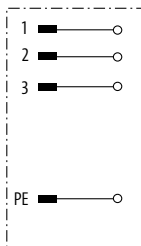
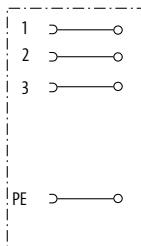
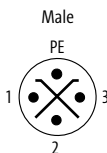
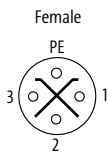
straight



Female

straight



1	Form	P 6391		P 6411	
Type		4-pole S-coded		4-pole S-coded	
Circuit diagram					
Sealing range (cable Ø)		8...10 mm			
Contact layout		Male 		Female 	
Technical Data					
Operating voltage		max. 630 V AC/DC			
Rated surge voltage		6 kV			
Operating current per contact		max. 12 A			
Material group		IEC 60664-1, category III			
Connection cross section		max. 1.5 mm²			
Coding		S-coded			
Sealing range (cable Ø)		8...10 mm			
Locking of ports		Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing			
Protection		IP67 inserted and tightened (EN 60529)			
Material		PA			
suitable for corrugated tube (internal Ø)		without			
Temperature range		-40...+85 °C			
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 0 0		0 0 0	
		1 Form			
Notes		Other versions on request.			

ROUND PLUG CONNECTORS POWER

Field-wireable

– M12 Power

- Screw terminals

Approvals: c **RA**[®] US

Male

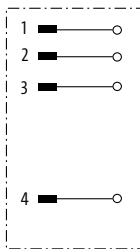
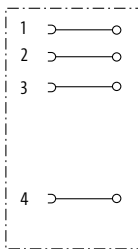
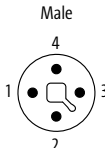
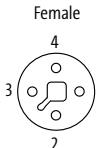
straight



Female

straight



1	Form	P7391	P7411
	Type	4-pole	4-pole
		T-coded	T-coded
	Circuit diagram		
Sealing range (cable Ø)	8...10 mm		
Contact layout	Male 	Female 	
Technical Data			
Operating voltage	max. 63 V AC/DC		
Rated surge voltage	1.5 kV		
Operating current per contact	max. 12 A		
Material group	IEC 60664-1, category III		
Connection cross section	max. 1.5 mm²		
Coding	T-coded		
Sealing range (cable Ø)	8...10 mm		
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing		
Protection	IP67 inserted and tightened (EN 60529)		
Material	PA		
suitable for corrugated tube (internal Ø)	without		
Compression gland	M12 (SW18)		
Temperature range	-40...+85 °C		
Article No.			
The composition of your article number is explained on page 3.1.i	7 0 0 0 - - 0 0 0 0 0 0 0		
	1 Form		
Notes	Other versions on request.		

ROUND PLUG CONNECTORS POWER

Field-wireable

– M12 Power

– IDC terminals

Male

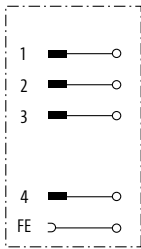
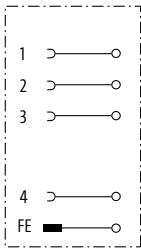
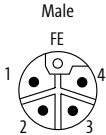
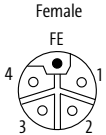
straight



Female

straight



1 Form		P4391	P4421
Type		5-pole L-coded	5-pole L-coded
Circuit diagram			
Contact layout		Male 	Female 
Technical Data			
Operating voltage		max. 63 V DC	
Operating current per contact		max. 12 A	
Connection cross section		max. 1.5 mm ²	
Coding		L-coded	
Sealing range (cable Ø)		5.8...13.5 mm	
Locking of ports		Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing	
Compression gland		M12 (SW17)	
Protection		IP65 and IP67 when plugged and screwed down (EN 60529)	
Material		Zinc die casting	
suitable for corrugated tube (internal Ø)		without	
Mating cycles		≥ 500	
Temperature range		-40...+85 °C	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0	0 0 0 0
		1 Form	
Notes		Other versions on request.	

ROUND PLUG CONNECTORS POWER

With open ended wires

– MQ15 X-Power

Male

straight



1	Form	P 8101	
	Type	6-pole max. 13 A (Power); max. 10 A (Signal)	6-pole max. 16 A (Power); max. 10 A (Signal)
	Circuit diagram		
	Contact layout		
2	Cable Type	Jacket Color	Jacket Color
	Wire diameter 1.5 mm ²	black	black
	PVC (UL)	P24	
	PUR (UL), C-tracks	P84	
	Wire diameter 2.5 mm ²		
3	PUR (UL), C-tracks		P01
	PVC (UL)		P21
	Cable Length		
	1.0 m	0100	
	2.0 m	0200	
Technical Data	3.0 m	0300	
	5.0 m	0500	
	10.0 m	1000	
	Operating voltage	max. 600 V AC (Power); max. 63 V AC/DC (Signal)	
	Protection	IP67 inserted and tightened (EN 60529)	
Article No.	Temperature range	-25...+80 °C, depending on cable quality	
	The composition of your article number is explained on page 3.1.i	7 0 0 0 - -	
	1	Form	2
	Cable Type	3	Cable Length
	Notes	Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

ROUND PLUG CONNECTORS POWER

With open ended wires

– MQ15 X-Power

Female

straight



1 Form		P 8121	P 8121
Type		6-pole max. 13 A (Power); max. 10 A (Signal)	6-pole max. 16 A (Power); max. 10 A (Signal)
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	Jacket Color
Wire diameter 1.5 mm ²		black	black
PVC (UL)		P24	
PUR (UL), C-tracks		P84	
Wire diameter 2.5 mm ²			
PUR (UL), C-tracks			P01
PVC (UL)			P21
3 Cable Length			
1.0 m		0100	
2.0 m		0200	
3.0 m		0300	
5.0 m		0500	
10.0 m		1000	
Technical Data			
Operating voltage		max. 600 V AC (Power); max. 63 V AC/DC (Signal)	
Protection		IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+80 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0	— — — —
		1 Form	2 Cable Type
		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

ROUND PLUG CONNECTORS POWER

With open ended wires

– MQ15 X-Power

Male

straight



1 Form

P 8 2 0 1

P 8 2 0 1

Type

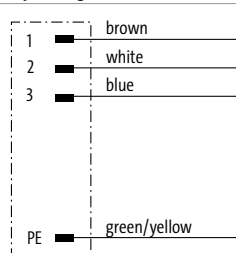
4-pole

4-pole

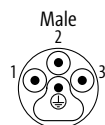
Operating current: max. 13 A

Operating current: max. 16 A

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 1.5 mm²

PVC (UL)

PUR (UL), C-tracks

Wire diameter 2.5 mm²

PUR (UL), C-tracks

PVC (UL)

black

P22

P02

black

P03

P23

3 Cable Length

1.0 m

0100

2.0 m

0200

3.0 m

0300

5.0 m

0500

10.0 m

1000

Technical Data

Operating voltage

max. 600 V AC

Protection

IP67 inserted and tightened (EN 60529)

Temperature range

-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

–

–

–

–

–

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

ROUND PLUG CONNECTORS POWER

With open ended wires

– MQ15 X-Power

Female

straight



1 Form		P 8 2 2 1	P 8 2 2 1
Type		4-pole Operating current: max. 13 A	4-pole Operating current: max. 16 A
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	Jacket Color
Wire diameter 1.5 mm ²		black	black
PVC (UL)		P22	
PUR (UL), C-tracks		P02	
Wire diameter 2.5 mm ²			
PUR (UL), C-tracks			P03
PVC (UL)			P23
3 Cable Length			
1.0 m		0100	
2.0 m		0200	
3.0 m		0300	
5.0 m		0500	
10.0 m		1000	
Technical Data			
Operating voltage		max. 600 V AC	
Protection		IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+80 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0	— — — —
		1 Form	2 Cable Type
		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

ROUND PLUG CONNECTORS POWER

With open ended wires
– MQ15 X-Power

Female
90°



1	Form	P 8131		P 8131	
	Type	6-pole max. 13 A (Power); max. 10 A (Signal)		6-pole max. 16 A (Power); max. 10 A (Signal)	
	Circuit diagram	1 2 3 PE A B black 1 black 2 black 3 green/yellow black 4 black 5			
	Contact layout	Female 2 3 1 A B			
2	Cable Type	Jacket Color		Jacket Color	
	Wire diameter 1.5 mm ²	black		black	
	PVC (UL)	P24			
	PUR (UL), C-tracks	P84			
	Wire diameter 2.5 mm ²				
	PUR (UL), C-tracks			P01	
PVC (UL)			P21		
3	Cable Length				
	1.0 m	0100			
	2.0 m	0200			
	3.0 m	0300			
	5.0 m	0500			
	10.0 m	1000			
	Technical Data				
Operating voltage	max. 600 V AC (Power); max. 63 V AC/DC (Signal)				
Protection	IP67 inserted and tightened (EN 60529)				
Temperature range	-25...+80 °C, depending on cable quality				
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 0 0 - — — — — — — - — — — — — — — —			
		1 Form		2 Cable Type	
				3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

ROUND PLUG CONNECTORS POWER

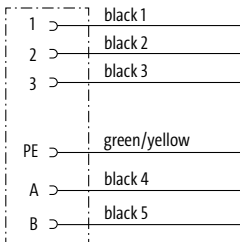
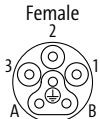
With open ended wires

– MQ15 X-Power

Female

90°



1 Form		P 8132	P 8132
Type		6-pole max. 13 A (Power); max. 10 A (Signal)	6-pole max. 16 A (Power); max. 10 A (Signal)
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	Jacket Color
Wire diameter 1.5 mm ²		black	black
PVC (UL)		P24	
PUR (UL), C-tracks		P84	
Wire diameter 2.5 mm ²			
PUR (UL), C-tracks			P01
PVC (UL)			P21
3 Cable Length			
1.0 m		0100	
2.0 m		0200	
3.0 m		0300	
5.0 m		0500	
10.0 m		1000	
Technical Data			
Operating voltage		max. 600 V AC (Power); max. 63 V AC/DC (Signal)	
Protection		IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+80 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0	– – – – –
		1 Form	2 Cable Type
		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

ROUND PLUG CONNECTORS POWER

With open ended wires

– MQ15 X-Power

Male

90°



1	Form	P 8 2 1 1					
	Type	4-pole					
		Operating current: max. 13 A					
	Circuit diagram	1 2 3 black (1) black (2) black (3) PE green/yellow					
	Contact layout	Male 1 2 3					
2	Cable Type	Jacket Color					
	Wire diameter 1.5 mm² PVC (UL)	black P22					
3	Cable Length						
	1.0 m	0100					
	2.0 m	0200					
	3.0 m	0300					
	5.0 m	0500					
	10.0 m	1000					
	Technical Data						
	Operating voltage	max. 600 V AC					
	Protection	IP67 inserted and tightened (EN 60529)					
	Temperature range	-25...+80 °C, depending on cable quality					
	Article No.						
	The composition of your article number is explained on page 3.1.i	7 0 0 0 - P 8 2 1 1 -					
		1	Form	2	Cable Type	3	Cable Length
	Notes	Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.					

ROUND PLUG CONNECTORS POWER

With open ended wires

– MQ15 X-Power

Female
90°



1 Form		P 8231	P 8231
Type		4-pole Operating current: max. 13 A	4-pole Operating current: max. 16 A
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	Jacket Color
Wire diameter 1.5 mm ²		black	black
PVC (UL)		P22	
PUR (UL), C-tracks		P02	
Wire diameter 2.5 mm ²			
PUR (UL), C-tracks			P03
PVC (UL)			P23
3 Cable Length			
1.0 m		0100	
2.0 m		0200	
3.0 m		0300	
5.0 m		0500	
10.0 m		1000	
Technical Data			
Operating voltage		max. 600 V AC	
Protection		IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+80 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0	— — — —
		1 Form	2 Cable Type
		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

ROUND PLUG CONNECTORS POWER

With open ended wires

– MQ15 X-Power

Female

90°



1 Form

P 8 2 3 2

P 8 2 3 2

Type

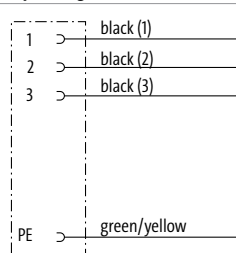
4-pole

4-pole

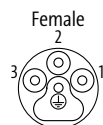
Operating current: max. 13 A

Operating current: max. 16 A

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 1.5 mm²

PVC (UL)

PUR (UL), C-tracks

Wire diameter 2.5 mm²

PUR (UL), C-tracks

PVC (UL)

black

P22

P02

black

P03

P23

3 Cable Length

1.0 m

0100

2.0 m

0200

3.0 m

0300

5.0 m

0500

10.0 m

1000

Technical Data

Operating voltage

max. 600 V AC

Protection

IP67 inserted and tightened (EN 60529)

Temperature range

-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

–

–

–

–

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

ROUND PLUG CONNECTORS POWER

With open ended wires

– MQ15 X-Power

Male

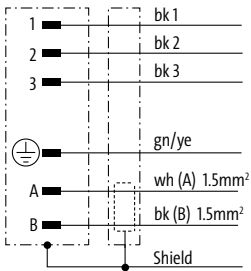
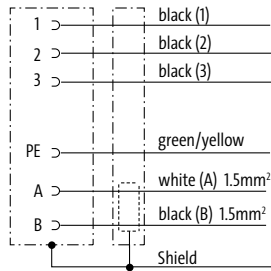
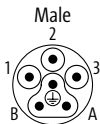
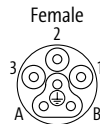
straight



Female

straight



1 Form		P8301	P8321
Type		6-pole, shielded max. 16 A (Power); max. 10 A (Signal)	6-pole, shielded max. 16 A (Power); max. 10 A (Signal)
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	Jacket Color
4×2.5 + 2×1.5 mm² PUR (UL), C-tracks		orange P11	orange P11
3 Cable Length			
1.0 m		0100	
2.0 m		0200	
3.0 m		0300	
5.0 m		0500	
10.0 m		1000	
Technical Data			
Operating voltage		max. 600 V AC (Power); max. 63 V AC/DC (Signal)	
Protection		IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+80 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - - - -	- - - - -
		1 Form	2 Cable Type 3 Cable Length
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

ROUND PLUG CONNECTORS POWER

With open ended wires

– MQ15 X-Power

Male

straight



1	Form	P 8 0 0 1		P 8 0 0 1	
	Type	4-pole, shielded		4-pole, shielded	
		Operating current: max. 13 A		Operating current: max. 16 A	
	Circuit diagram				
	Contact layout				
2	Cable Type	Jacket Color		Jacket Color	
	Wire diameter 1.5 mm²		orange		orange
	PUR (UL), C-tracks		P12		
	Wire diameter 2.5 mm²				P13
	PUR (UL), C-tracks				
3	Cable Length				
	1.0 m	0100			
	2.0 m	0200			
	3.0 m	0300			
	5.0 m	0500			
	10.0 m	1000			
	Technical Data				
Operating voltage	max. 600 V AC				
Protection	IP67 inserted and tightened (EN 60529)				
Temperature range	-25...+80 °C, depending on cable quality				
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 0 0 - -			
		1 Form 2 Cable Type 3 Cable Length			
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

ROUND PLUG CONNECTORS POWER

With open ended wires

– MQ15 X-Power

Female

straight



1 Form		P 8 0 2 1	P 8 0 2 1
Type		4-pole, shielded Operating current: max. 13 A	4-pole, shielded Operating current: max. 16 A
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	Jacket Color
Wire diameter 1.5 mm ² PUR (UL), C-tracks		orange P12	orange
Wire diameter 2.5 mm ² PUR (UL), C-tracks			P13
3 Cable Length			
1.0 m		0100	
2.0 m		0200	
3.0 m		0300	
5.0 m		0500	
10.0 m		1000	
Technical Data			
Operating voltage		max. 600 V AC	
Protection		IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+80 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - - - - - - - - -	
		1 Form	2 Cable Type
		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

ROUND PLUG CONNECTORS POWER

With open ended wires

– MQ15 X-Power

Female

90°



1 Form

P 8331

P 8332

Type

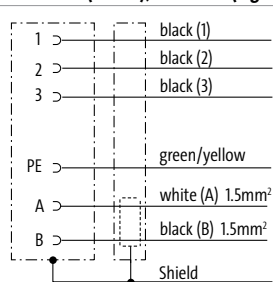
6-pole, shielded

6-pole, shielded

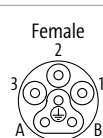
max. 16 A (Power); max. 10 A (Signal)

max. 16 A (Power); max. 10 A (Signal)

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

4×2.5 + 2×1.5 mm²

orange

orange

PUR (UL), C-tracks

P11

P11

3 Cable Length

1.0 m

0100

2.0 m

0200

3.0 m

0300

5.0 m

0500

10.0 m

1000

Technical Data

Operating voltage

max. 600 V AC (Power); max. 63 V AC/DC (Signal)

Protection

IP67 inserted and tightened (EN 60529)

Temperature range

-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

-

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

ROUND PLUG CONNECTORS POWER

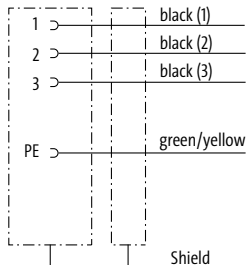
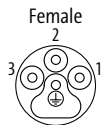
With open ended wires

– MQ15 X-Power

Female

90°



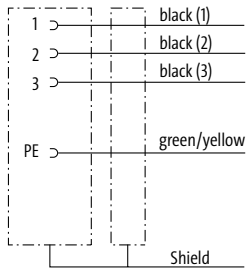
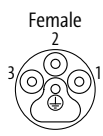
1 Form		P 8 0 3 1	P 8 0 3 1
Type		4-pole, shielded Operating current: max. 13 A	4-pole, shielded Operating current: max. 16 A
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	Jacket Color
Wire diameter 1.5 mm ² PUR (UL), C-tracks		orange P12	orange
Wire diameter 2.5 mm ² PUR (UL), C-tracks			P13
3 Cable Length			
1.0 m		0100	
2.0 m		0200	
3.0 m		0300	
5.0 m		0500	
10.0 m		1000	
Technical Data			
Operating voltage		max. 600 V AC	
Protection		IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+80 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0 - -	
		1 Form	2 Cable Type
		3 Cable Length	
Notes			
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

ROUND PLUG CONNECTORS POWER

With open ended wires
– MQ15 X-Power

Female
90°



1	Form	P 8 0 3 2		P 8 0 3 2	
	Type	4-pole, shielded		4-pole, shielded	
		Operating current: max. 13 A		Operating current: max. 16 A	
	Circuit diagram				
	Contact layout				
2	Cable Type	Jacket Color		Jacket Color	
	Wire diameter 1.5 mm²		orange		orange
	PUR (UL), C-tracks		P12		
	Wire diameter 2.5 mm²				P13
	PUR (UL), C-tracks				
3	Cable Length				
	1.0 m	0100			
	2.0 m	0200			
	3.0 m	0300			
	5.0 m	0500			
	10.0 m	1000			
Technical Data					
Operating voltage		max. 600 V AC			
Protection		IP67 inserted and tightened (EN 60529)			
Temperature range		-25...+80 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		7000 - -			

ROUND PLUG CONNECTORS POWER

Connection cables

– MQ15 X-Power

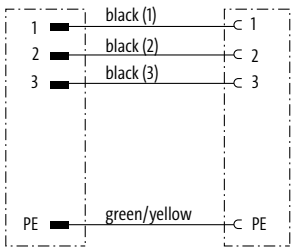
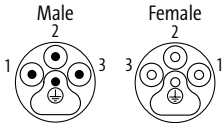
Male

straight

Female

straight



1 Form		P 8241	P 8241
Type		4-pole Operating current: max. 13 A	4-pole Operating current: max. 16 A
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	Jacket Color
Wire diameter 1.5 mm ²		black	black
PVC (UL)		P22	
PUR (UL), C-tracks		P02	
Wire diameter 2.5 mm ²			
PUR (UL), C-tracks			P03
PVC (UL)			P23
3 Cable Length			
1.0 m		0100	
2.0 m		0200	
3.0 m		0300	
5.0 m		0500	
10.0 m		1000	
Technical Data			
Operating voltage		max. 600 V AC	
Protection		IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+80 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - - - - - - - - -	- - - - -
		1 Form	2 Cable Type
			3 Cable Length
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

ROUND PLUG CONNECTORS POWER

Connection cables

– MQ15 X-Power

Male

straight

Female

straight



1 Form		P 8141	P 8141
Type		6-pole max. 13 A (Power); max. 10 A (Signal)	6-pole max. 16 A (Power); max. 10 A (Signal)
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	Jacket Color
Wire diameter 1.5 mm ²		black	black
PVC (UL)		P24	
PUR (UL), C-tracks		P84	
Wire diameter 2.5 mm ²			
PUR (UL), C-tracks			P01
PVC (UL)			P21
3 Cable Length			
1.0 m		0100	
2.0 m		0200	
3.0 m		0300	
5.0 m		0500	
10.0 m		1000	
Technical Data			
Operating voltage		max. 600 V AC (Power); max. 63 V AC/DC (Signal)	
Protection		IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+80 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0	
		1 Form	2 Cable Type
		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

ROUND PLUG CONNECTORS POWER

Connection cables

– MQ15 X-Power

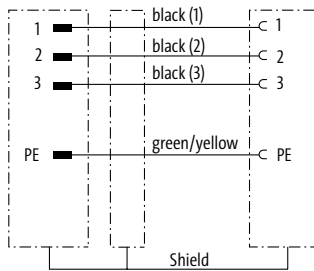
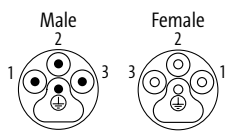
Male

straight

Female

straight



1 Form		P 80 41	P 80 41
Type		4-pole, shielded Operating current: max. 13 A	4-pole, shielded Operating current: max. 16 A
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	Jacket Color
Wire diameter 1.5 mm ² PUR (UL), C-tracks		orange P12	orange
Wire diameter 2.5 mm ² PUR (UL), C-tracks			P13
3 Cable Length			
1.0 m		0100	
2.0 m		0200	
3.0 m		0300	
5.0 m		0500	
10.0 m		1000	
Technical Data			
Operating voltage		max. 600 V AC	
Protection		IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+80 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0 - -	
		1 Form	2 Cable Type
		3 Cable Length	
Notes			
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

ROUND PLUG CONNECTORS POWER

Connection cables

– MQ15 X-Power

Male straight

Female straight



1 Form		P 8 3 4 1	
Type		6-pole, shielded	
		max. 16 A (Power); max. 10 A (Signal)	
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	
4×2.5 + 2×1.5 mm²		orange	
PUR (UL), C-tracks		P11	
3 Cable Length			
1.0 m		0100	
2.0 m		0200	
3.0 m		0300	
5.0 m		0500	
10.0 m		1000	
Technical Data			
Operating voltage		max. 600 V AC (Power); max. 63 V AC/DC (Signal)	
Protection		IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+80 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7000 - P8341 -	
		1 Form	2 Cable Type
		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

ROUND PLUG CONNECTORS POWER

With open ended wires

– 7/8"

Approvals: 

* only for products with UL/CSA approved cable

Female

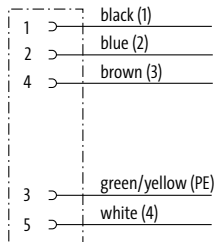
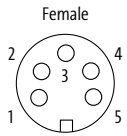
straight



Female

90°



1 Form		78021	78051
Type		5-pole Power cable	5-pole Power cable
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	Jacket Color
Wire diameter 1.0 mm² PUR/PVC		gray 965	gray 965
Wire diameter 2.5 mm² PUR (UL/CSA), robots/C-tracks		962	962
Wire diameter 1.5 mm² PUR (UL/CSA), robots/C-tracks		961	961
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 230/400 V AC/DC	
Protection		IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0	– – – – –
		1 Form	2 Cable Type 3 Cable Length
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

ROUND PLUG CONNECTORS POWER

Connection cables

– 7/8"

Approvals: 

* only for products with UL/CSA approved cable

Male

straight

Female

straight

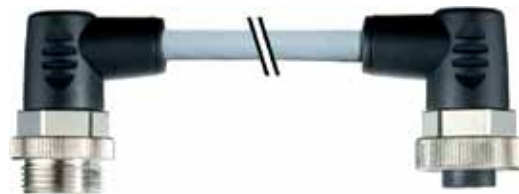


Male

90°

Female

90°



1 Form

50 021

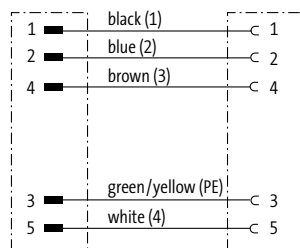
50 051

Type

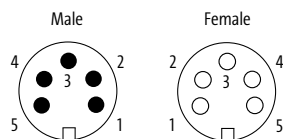
5-pole

5-pole

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 1.0 mm²

PUR/PVC

gray

965

gray

965

Wire diameter 2.5 mm²

PUR (UL/CSA), robots/C-tracks

962

962

Wire diameter 1.5 mm²

PUR (UL/CSA), robots/C-tracks

961

961

3 Cable Length

0.3 m

0030

0.6 m

0060

1.0 m

0100

1.5 m

0150

2.0 m

0200

Technical Data

Operating voltage

max. 230/400 V AC/DC

Protection

IP67 inserted and tightened (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

-

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

ROUND PLUG CONNECTORS POWER

Field-wireable

– 7/8"

– Screw terminals

Approvals:  **us**

Male

straight



Male

90°



1	Form	78081	me✕	78101	me✕	78141	me✕
	Type	5-pole		5-pole		5-pole	
	Circuit diagram	1 2 4 3 5					
	Sealing range (cable Ø)	6...8 mm		10...12 mm		6...8.7 mm	
	Contact layout	Male 4 3 2 5 1					
Technical Data							
	Operating voltage	max. 250 V AC/DC					
	Operating current per contact	max. 9 A					
	Connection cross section	max. 1.5 mm²					
	Sealing range (cable Ø)	6...8 mm		10...12 mm		6...8.7 mm	
	Locking of ports	Screw thread 7/8" (recommended torque 1.5 Nm) self-securing					
	Protection	IP67 inserted and tightened (EN 60529)					
	Temperature range	-25...+85 °C					
Article No.							
	The composition of your article number is explained on page 3.1.i	7 0 0 0		- - - - -		0 0 0	
				1 Form			
Notes		Other versions on request.					

ROUND PLUG CONNECTORS POWER

Field-wireable

– 7/8"

– Screw terminals

Approvals: 

Female
straight



Female
90°



1	Form	78201	me✕	78221	me✕	78261	me✕
	Type	5-pole		5-pole		5-pole	
	Circuit diagram	1 2 4 3 5					
	Sealing range (cable Ø)	6...8 mm		10...12 mm		6...8.7 mm	
	Contact layout	Female 2 4 3 1 5					
Technical Data							
Operating voltage		max. 250 V AC/DC					
Operating current per contact		max. 9 A					
Connection cross section		max. 1.5 mm²					
Sealing range (cable Ø)		6...8 mm		10...12 mm		6...8.7 mm	
Protection		IP67 inserted and tightened (EN 60529)					
Locking of ports		Screw thread 7/8" (recommended torque 1.5 Nm) self-securing					
Locking material		Zinc die casting, matte nickel plated					
Temperature range		-25...+85 °C					
Article No.							
The composition of your article number is explained on page 3.1.i		7000		— — — —		0000	
				1 Form			
Notes		Other versions on request.					

ROUND PLUG CONNECTORS POWER

Field-wireable

– 7/8"

– IDC terminals

Male

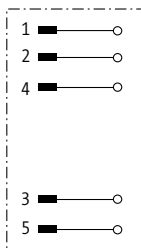
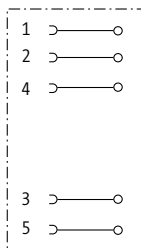
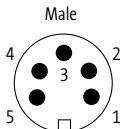
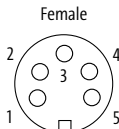
straight



Female

straight



1	Form	78091	me	78211	me
Type		5-pole		5-pole	
Circuit diagram					
Connection cross section		0.75...1.5 mm²			
Contact layout					
Technical Data					
Operating voltage		max. 230/400 V AC/DC			
Rated surge voltage		4 kV			
Operating current per contact		max. 10 A			
Material group		IEC 60664-1, category I			
Connection cross section		0.75...1.5 mm² (conductor diameter min. 0.15 mm)			
Coding		A-coded, 5-pole			
Sealing range (cable Ø)		6.8...9.5 mm			
Wire isolation		PVC, PP, TPE			
Outer wire Ø		max. 2.8 mm			
Locking of ports		Screw thread 7/8" (recommended torque 1.5 Nm) self-securing			
Protection		IP65 and IP67 when plugged and screwed down (EN 60529)			
Locking material		Brass			
Temperature range		-40...+85 °C			
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - 0 0 0 0 0 0 0			
		1 Form			
Notes					
		Other versions on request.			

ROUND PLUG CONNECTORS POWER

Connection accessories			Art-No.
	Flange 7/8" male, pre-wired 0.2 m		
	5-pole	7/8" Round Plug Connectors	7000-78341-9780020
	Flange 7/8" female, pre-wired 0.2 m		
	5-pole	7/8" Round Plug Connectors	7000-78381-9780020
	Control cabinet entry system 7/8"		
		7/8" Round Plug Connectors Ethernet CAT5	7000-50111-0000000
	T-coupler 7/8"-7/8", female/male		
	5-pole		7000-50061-0000000
Mounting accessories			Art-No.
	Torque wrench set		
	7/8" (1.5 Nm, SW22)	7/8" data connenctor moulded (IDC terminal)	7000-99104-0000000
	Torque wrench set		
	7/8" (1.5 Nm, SW24)	7700-XXXXX - 7/8" data connenctor moulded (screw terminals)	7000-99105-0000000
	Torque wrench		
	7/8" (1.5 Nm, SW22)	7/8" data connenctor moulded (IDC terminal)	7000-99096-0000000
	Torque wrench		
	7/8" (1.5 Nm, SW24)	7700-XXXXX - 7/8" data connenctor moulded (screw terminals)	7000-99097-0000000



TPE SERIES – THE NORTH AMERICAN STANDARD

- Product range RJ45, M12, 7/8"
- High material resistance
- Reliable – 100% tested

FROM SIGNAL AND DATA TO POWER

Our Ethernet products developed for the requirements of the North American market use shielded UL-approved cables and are approved for a voltage of 600 V.

The 4- and 8-pole cables are available in a great variety of configurations. The three cable types are suitable for moving applications, fulfil the CAT5 requirements and are resistant against different media such as welding sparks, oils and UV radiation. The S7V cable is ITC/PLTC/CMX-Outdoor-approved and suitable for PROFINET.

The MINI-A (7/8") cables are the perfect solution for current and switching circuit connections. The cables are cULus-listed. Available with 3, 4 and 5 pole and all configurations of head types. The range of 600 V cables in AWG 16 includes a TC-ER-approved TPR variant with flame resistance FT4 and a halogen-free PUR type.

Signal



M12 male
• Straight
• 90°

Page 3.11.1



M12 female
• Straight
• 90°

Page 3.11.3



M12 male
• Straight
• 90°

M12 female
• Straight
• 90°

Page 3.11.5

Data



M12 male (shielded)

- Straight
- 90°

EtherNet/IP
PROFINET
EtherCAT

Page 3.11.9



M12 female flange plug (shielded)

- Straight

EtherNet/IP
PROFINET

Page 3.11.11



RJ45 male (shielded)

- Straight

EtherNet/IP
PROFINET

Page 3.11.12

EtherNet/IP

PROFINET

EtherCAT



M12 male (shielded)

- Straight
- 90°

M12 female flange plug (shielded)

- Straight

RJ45 male (shielded)

- Straight

M12 male (shielded)

- Straight
- 90°

M12 female (shielded)

- Straight

M12 female flange plug (shielded)

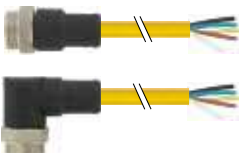
- Straight

RJ45 male (shielded)

- Straight

Page 3.11.17

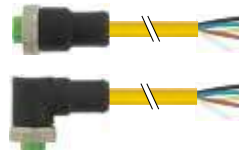
Power



7/8" MINI male

- Straight
- 90°

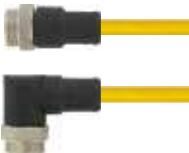
Page 3.11.36



7/8" MINI female

- Straight
- 90°

Page 3.11.42



7/8" MINI male

- Straight
- 90°

7/8" MINI female

- Straight
- 90°

Page 3.11.48

TPE SERIES - THE NORTH AMERICAN STANDARD

With open ended wires M12

– ITC, PLTC cable

– Signal

Approvals: 

* only for products with UL/CSA approved cable

Male

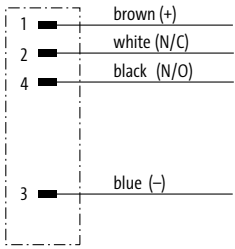
straight



Male

90°



1 Form		12021	12101
Type		4-pole	4-pole
Circuit diagram			
Contact layout	Male 		
2 Cable Type		Jacket Color	Jacket Color
Wire diameter 0.75 mm²		yellow	yellow
TPE (UL/CSA), welding spark, C-tracks		150	150
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 250 V AC/DC	
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 7 0 0 - - - - - -	
		1 Form	2 Cable Type
			3 Cable Length
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

TPE SERIES - THE NORTH AMERICAN STANDARD

With open ended wires M12

– ITC, PLTC cable

– Signal

Approvals: 

* only for products with UL/CSA approved cable

Male

straight



Male

90°



1 Form

12041

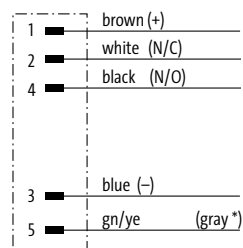
12121

Type

5-pole

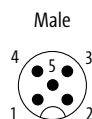
5-pole

Circuit diagram



(* for cable type 162)

Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.75 mm²

yellow

yellow

TPE (UL/CSA), welding spark, C-tracks

161 (162)

161 (162)

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 125 V AC/DC

Protection

IP65, IP66K, IP67 inserted and tightened (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 7 0 0

-

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

With open ended wires M12

– ITC, PLTC cable

– Signal

Approvals: 

* only for products with UL/CSA approved cable

Female

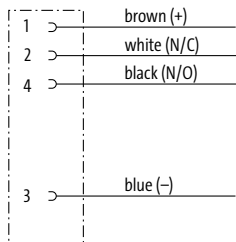
straight



Female

90°



1 Form		12221	12341
Type		4-pole	4-pole
Circuit diagram			
Contact layout	Female 		
2 Cable Type		Jacket Color	Jacket Color
Wire diameter 0.75 mm²		yellow	yellow
TPE (UL/CSA), welding spark, C-tracks		150	150
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 250 V AC/DC	
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 7 0 0 - - - - -	- - - - -
		1 Form	2 Cable Type 3 Cable Length
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

TPE SERIES - THE NORTH AMERICAN STANDARD

With open ended wires M12

– ITC, PLTC cable

– Signal

Approvals: 

* only for products with UL/CSA approved cable

Female

straight



Female

90°



1 Form

12241

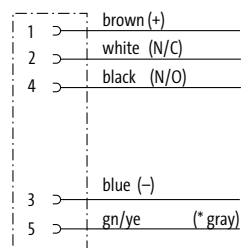
12361

Type

5-pole

5-pole

Circuit diagram



(* for cable type 162)

Contact layout

Female



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.75 mm²

yellow

yellow

TPE (UL/CSA), welding spark, C-tracks

161 (162)

161 (162)

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 125 V AC/DC

Protection

IP65, IP66K, IP67 inserted and tightened (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 7 0 0

-

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables M12 - M12

– ITC, PLTC cable

– Signal

Male
straight

Female
straight

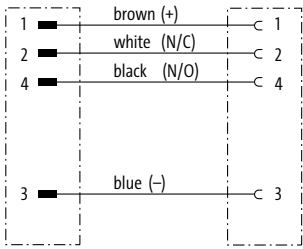
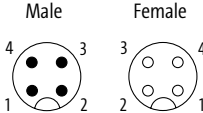
Male
straight

Female
90°



Approvals: 

* only for products with UL/CSA approved cable

1 Form		40021	40121
Type		4-pole	4-pole
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	Jacket Color
Wire diameter 0.75 mm²		yellow	yellow
TPE (UL/CSA), welding spark, C-tracks		150	150
3 Cable Length			
0.3 m		0030	
0.6 m		0060	
1.0 m		0100	
1.5 m		0150	
2.0 m		0200	
Technical Data			
Operating voltage		max. 250 V AC/DC	
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 7 0 0	— — — —
		1 Form	2 Cable Type
		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables M12 - M12

– ITC, PLTC cable

– Signal

Approvals: 

* only for products with UL/CSA approved cable

Male
90°



Female
straight

Male
90°



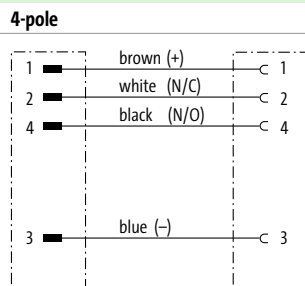
Female
90°

1 Form

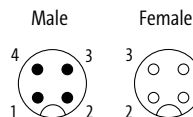
40201

40261

Type
Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.75 mm²
TPE (UL/CSA), welding spark, C-tracks

yellow
150

yellow
150

3 Cable Length

0.3 m	0030
0.6 m	0060
1.0 m	0100
1.5 m	0150
2.0 m	0200

Technical Data

Operating voltage	max. 250 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 7 0 0

- - - - -

- - - - -

- - - - -

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables M12 - M12

– ITC, PLTC cable

– Signal

Male
straight

Female
straight

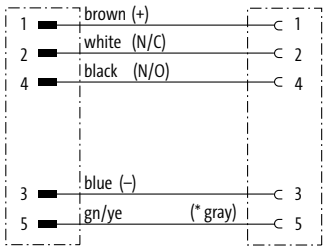
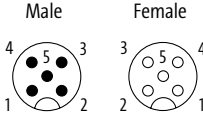
Male
straight

Female
90°



Approvals: 

* only for products with UL/CSA approved cable

1 Form		40041	40141
Type		5-pole	5-pole
Circuit diagram	 (* for cable type 162)		
Contact layout	Male Female 		
2 Cable Type		Jacket Color	Jacket Color
Wire diameter 0.75 mm²		yellow	yellow
TPE (UL/CSA), welding spark, C-tracks		161 (162)	161 (162)
3 Cable Length			
0.3 m		0030	
0.6 m		0060	
1.0 m		0100	
1.5 m		0150	
2.0 m		0200	
Technical Data			
Operating voltage		max. 125 V AC/DC	
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 7 0 0	— — — —
		1 Form	2 Cable Type
		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables M12 - M12

– ITC, PLTC cable

– Signal

Approvals: 

* only for products with UL/CSA approved cable

Male

90°



Female

straight

Male

90°



Female

90°

1 Form		4 0 2 2 1		4 0 2 8 1	
Type		5-pole		5-pole	
Circuit diagram		1 2 4 1 2 4 brown (+) white (N/C) black (N/O) 3 5 blue (-) gn/ye (* gray) C 1 C 2 C 4 C 3 C 5 (* for cable type 162)			
Contact layout		Male Female 4 3 5 1 2 3 5 1 2 4			
2 Cable Type		Jacket Color		Jacket Color	
Wire diameter 0.75 mm²		yellow		yellow	
TPE (UL/CSA), welding spark, C-tracks		161 (162)		161 (162)	
3 Cable Length					
0.3 m		0030			
0.6 m		0060			
1.0 m		0100			
1.5 m		0150			
2.0 m		0200			
Technical Data					
Operating voltage		max. 125 V AC/DC			
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)			
Temperature range		-25...+85 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		7 7 0 0 - -			
		1 Form		2 Cable Type	
				3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

TPE SERIES - THE NORTH AMERICAN STANDARD

with open ended wires RJ45

– CMX-Outdoor

– Data

PROFI® EtherNet/IP™
NET

Approvals:  ^{*}
Listed

* only for products with UL/CSA approved cable

Male

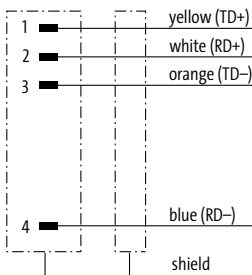
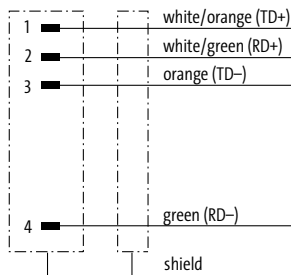
straight
ITC, PLIC cable



Male

straight



1 Form		14541		14541	
Type		4-pole, shielded		4-pole, shielded	
Circuit diagram					
Contact layout		Male 			
2 Cable Type		Jacket Color		Jacket Color	
2×2×0.34 mm²		green		blue	
TPE (UL/CSA), robots/C-tracks		S7V			
2×2×0.25 mm²				S4U	
TPE (UL/CSA), robots/C-tracks					
3 Cable Length					
1.5 m		0150			
3.0 m		0300			
5.0 m		0500			
7.5 m		0750			
10.0 m		1000			
Technical Data					
Operating voltage		max. 60 V DC			
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)			
Temperature range		-25...+85 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		7 7 0 0 - -			
		1 Form		2 Cable Type	
				3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

TPE SERIES - THE NORTH AMERICAN STANDARD

with open ended wires RJ45

– CMX-Outdoor

– Data

PROFI[®] EtherNet/IP[™]

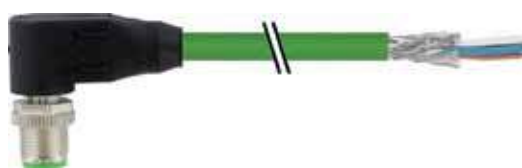
Approvals:  ^{*}
Listed

* only for products with UL/CSA approved cable

Male

90°

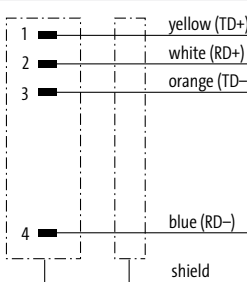
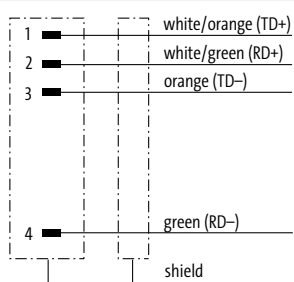
ITC, PLTC cable



Male

90°



1 Form		145 61		145 61	
Type		4-pole, shielded		4-pole, shielded	
		D-coded		D-coded	
Circuit diagram					
Contact layout		Male 			
2 Cable Type		Jacket Color		Jacket Color	
2×2×0.34 mm²			green		blue
TPE (UL/CSA), robots/C-tracks			S7V		
2×2×0.25 mm²					S4U
TPE (UL/CSA), robots/C-tracks					
3 Cable Length					
1.5 m		0150			
3.0 m		0300			
5.0 m		0500			
7.5 m		0750			
10.0 m		1000			
Technical Data					
Operating voltage		max. 60 V DC			
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)			
Temperature range		-25...+85 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		7700 - -			
		1 Form		2 Cable Type	
				3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

TPE SERIES - THE NORTH AMERICAN STANDARD

with open ended wires RJ45

– CMX-Outdoor

– Data

PROFI® EtherNet/IP™

Approvals: 

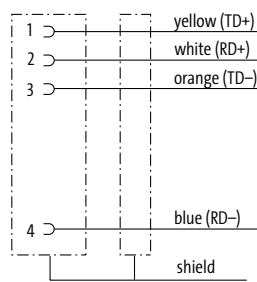
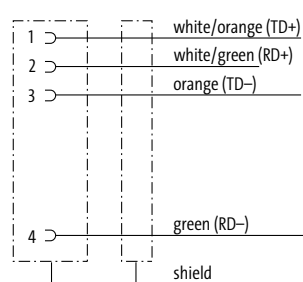
Flange female

ITC, PLTC cable



Flange female



1 Form		14 5 1 1		14 5 1 1	
Type	4-pole, shielded		4-pole, shielded		
	D-coded		D-coded		
	Rear mounting		Rear mounting		
Circuit diagram					
Contact layout		Female 			
2 Cable Type		Jacket Color		Jacket Color	
2×2×0.34 mm²		green		blue	
TPE (UL/CSA), robots/C-tracks		S7V			
2×2×0.25 mm²					
TPE (UL/CSA), robots/C-tracks				S4U	
3 Cable Length					
1.5 m		0150			
3.0 m		0300			
5.0 m		0500			
7.5 m		0750			
10.0 m		1000			
Technical Data					
Operating voltage		max. 60 V DC			
Protection		IP67 inserted and tightened (EN 60529)			
Temperature range		-25...+85 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		7 7 0 0 - -			
		1 Form		2 Cable Type	
				3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

TPE SERIES - THE NORTH AMERICAN STANDARD

with open ended wires RJ45

– CMX-Outdoor

– Data

PROFI[®] EtherNet/IP[™]

Approvals:  ^{*}
Listed

* only for products with UL/CSA approved cable

Male

straight
ITC, PLTC cable



Male

straight



1	Form	74101		74101	
	Type	4-pole, shielded		4-pole, shielded	
	Circuit diagram	1 2 3 6 yellow (TD+) orange (TD-) white (RD+) blue (RD-) shield		1 2 3 6 white/orange (TD+) orange (TD-) white/green (RD+) green (RD-) shield	
	Contact layout	Male 6 321			
2	Cable Type	Jacket Color		Jacket Color	
	2×2×0.34 mm² TPE (UL/CSA), robots/C-tracks 2×2×0.25 mm² TPE (UL/CSA), robots/C-tracks	green S7V	blue S4U		
3	Cable Length				
	1.5 m 3.0 m 5.0 m 7.5 m 10.0 m	0150 0300 0500 0750 1000			
Technical Data					
Operating voltage		max. 60 V DC			
Protection		IP20 inserted and tightened (EN 60529)			
Temperature range		-25...+85 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		7 7 0 0 - -			
		1 Form		2 Cable Type	
				3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

TPE SERIES - THE NORTH AMERICAN STANDARD

With open ended wires M12

– CMX-Outdoor

– Data

PROFI® EtherNet/IP™

Male

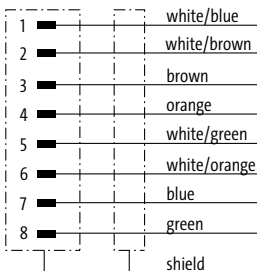
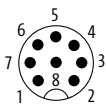
straight



Male

90°



1 Form		17541	17561
Type		8-pole, shielded	8-pole, shielded
Circuit diagram			
Contact layout		Male 	
2 Cable Type		Jacket Color	Jacket Color
4x2x0.25 mm ²		blue	blue
TPE (UL/CSA), robots/C-tracks		S4W	S4W
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 60 V AC/DC	
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 7 0 0	
	1 Form	2 Cable Type	3 Cable Length
Notes	Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.		

TPE SERIES - THE NORTH AMERICAN STANDARD

With open ended wires M12

– CMX-Outdoor

– Data

PROFI® EtherNet/IP™

Female
straight



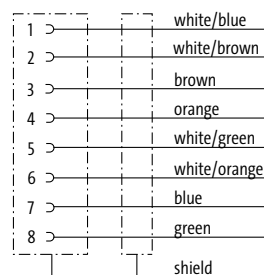
1 Form

17581

Type

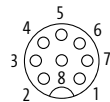
8-pole, shielded

Circuit diagram



Contact layout

Female



2 Cable Type

Jacket Color

4×2×0.25 mm²

blue

TPE (UL/CSA), robots/C-tracks

S4W

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 60 V AC/DC

Protection

IP65, IP66K, IP67 inserted and tightened (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 7 0 0

-

1 7 5 8 1

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

With open ended wires M12

– CMX-Outdoor

– Data

PROFI® EtherNet/IP™
NET

Flange female



1 Form		17511		
Type	8-pole, shielded			
Circuit diagram	Rear mounting			
	1 2 3 4 5 6 7 8 white/blue white/brown brown orange white/green white/orange blue green			

TPE SERIES - THE NORTH AMERICAN STANDARD

with open ended wires RJ45

– CMX-Outdoor

– Data

PROFI[®] EtherNet/IP[™]

Male

straight



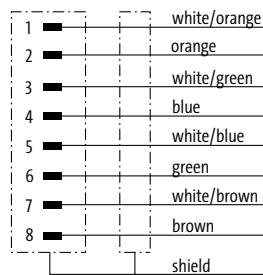
1 Form

74118

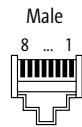
Type

8-pole, shielded

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

4×2×0.25 mm²

blue

TPE (UL/CSA), robots/C-tracks

S4W

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 60 V DC

Protection

IP20 inserted and tightened (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 7 0 0

–

7 4 1 1 8

–

– – –

– – – –

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables M12 - M12

– CMX-Outdoor

– Data

EtherNet/IP 

Approvals: 

* only for products with UL/CSA approved cable

Male

straight
ITC, PLIC cable

Male

straight

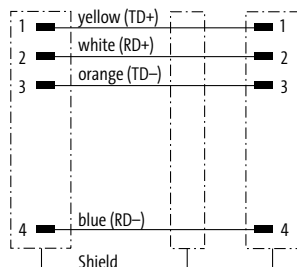
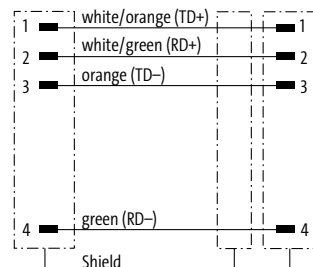
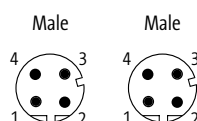
Male

straight

Male

straight



1	Form	44511		44511	
	Type	4-pole, shielded D-coded		4-pole, shielded D-coded	
	Circuit diagram				
	Contact layout				
2	Cable Type	Jacket Color		Jacket Color	
	2×2×0.34 mm² TPE (UL/CSA), robots/C-tracks		green S7V		blue
	2×2×0.25 mm² TPE (UL/CSA), robots/C-tracks				S4U
3	Cable Length				
	1.5 m	0150			
	3.0 m	0300			
	5.0 m	0500			
	7.5 m	0750			
	10.0 m	1000			
	Technical Data				
	Operating voltage	max. 60 V DC			
	Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)			
	Temperature range	-25...+85 °C, depending on cable quality			
	Article No.				
	The composition of your article number is explained on page 3.1.i	7700 - -			
		1 Form		2 Cable Type	
				3 Cable Length	
	Notes				
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables M12 - M12

– CMX-Outdoor

– Data

PROFI® EtherNet/IP™

Approvals:  ^{*}
Listed

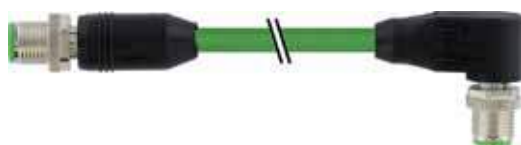
^{*} only for products with UL/CSA approved cable

Male

straight
ITC, PLTC cable

Male

90°



Male

straight

Male

90°



1 Form

4 4 5 4 1

4 4 5 4 1

Type

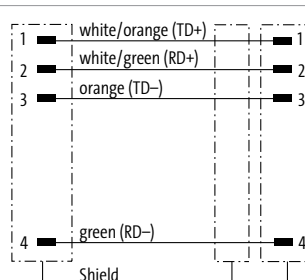
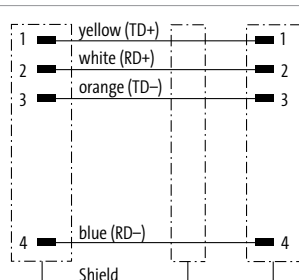
4-pole, shielded

4-pole, shielded

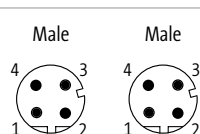
D-coded

D-coded

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

2x2x0.34 mm²

TPE (UL/CSA), robots/C-tracks

green

S7V

blue

2x2x0.25 mm²

TPE (UL/CSA), robots/C-tracks

S4U

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 60 V DC

Protection

IP65, IP66K, IP67 inserted and tightened (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 7 0 0

-

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables M12 - M12

– CMX-Outdoor

– Data



* only for products with UL/CSA approved cable

Male

90°
ITC, PLTC cable

Male

90°

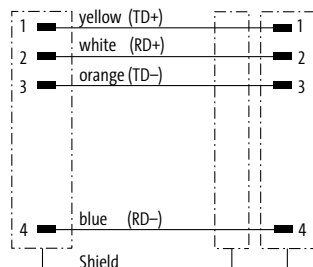
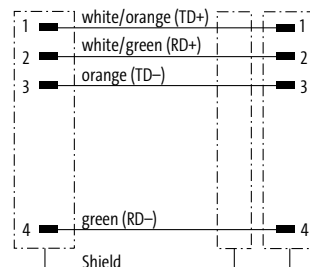
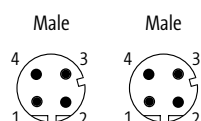
Male

90°

Male

90°



1	Form	44561		44561	
	Type	4-pole, shielded		4-pole, shielded	
	Circuit diagram				
	Contact layout				
	Cable Type	Jacket Color		Jacket Color	
	2x2x0.34 mm² TPE (UL/CSA), robots/C-tracks	green S7V		blue S4U	
3	Cable Length				
	1.5 m	0150			
	3.0 m	0300			
	5.0 m	0500			
	7.5 m	0750			
	10.0 m	1000			
	Technical Data				
	Operating voltage	max. 60 V DC			
	Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)			
	Temperature range	-25...+85 °C, depending on cable quality			
	Article No.				
	The composition of your article number is explained on page 3.1.i	7 7 0 0 - -			
		1 Form		2 Cable Type	
				3 Cable Length	
Notes					
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables M12 - M12

– CMX-Outdoor

– Data

PROFI® EtherNet/IP™

Approvals:  **UL** ^{us}
Listed

* only for products with UL/CSA approved cable

Male

straight
ITC, PLTC cable

Female

straight



Male

straight

Female

straight



1 Form

4 4 5 7 1

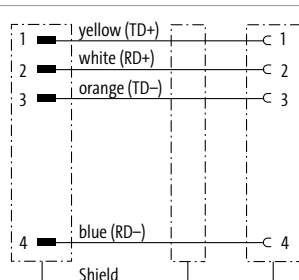
4 4 5 7 1

Type

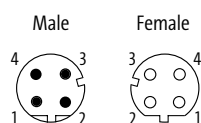
4-pole, shielded

4-pole, shielded

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

2x2x0.34 mm²
TPE (UL/CSA), robots/C-tracks
2x2x0.25 mm²
TPE (UL/CSA), robots/C-tracks

green
S7V

blue
S4U

3 Cable Length

1.5 m **0150**
3.0 m **0300**
5.0 m **0500**
7.5 m **0750**
10.0 m **1000**

Technical Data

Operating voltage max. 60 V DC
Protection IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range -25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 7 0 0

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables M12 - M12

– CMX-Outdoor

– Data

PROFI® EtherNet/IP™

Approvals:  ^{*}
Listed

* only for products with UL/CSA approved cable

Male

straight
ITC, PLIC cable

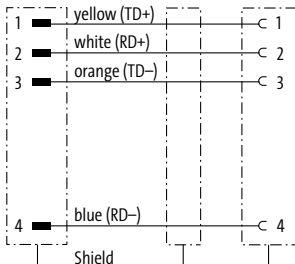
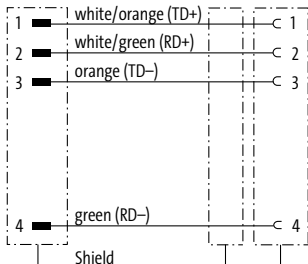
Flange female

Male

straight

Flange female



1	Form	44811		44811	
	Type	4-pole, shielded		4-pole, shielded	
		D-coded		D-coded	
		Rear mounting		Rear mounting	
Circuit diagram					
Contact layout	Male  Female 				
2	Cable Type	Jacket Color		Jacket Color	
	2x2x0.34 mm²		green		blue
	TPE (UL/CSA), robots/C-tracks		S7V		
	2x2x0.25 mm²				
	TPE (UL/CSA), robots/C-tracks				S4U
3	Cable Length				
	1.5 m	0150			
	3.0 m	0300			
	5.0 m	0500			
	7.5 m	0750			
	10.0 m	1000			
Technical Data					
Operating voltage		max. 60 V DC			
Protection		IP67 inserted and tightened (EN 60529)			
Temperature range		-25...+85 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		7 7 0 0 - -			
		1 Form		2 Cable Type	
				3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables M12 - RJ45

– CMX-Outdoor

– Data

PROFI[®] NET EtherNet/IP[™]

Approvals:  ^{*}
Listed

* only for products with UL/CSA approved cable

Male

straight
ITC, PLTC cable

Male

straight



Male

straight

Male

straight



1 Form

4 4 7 1 1

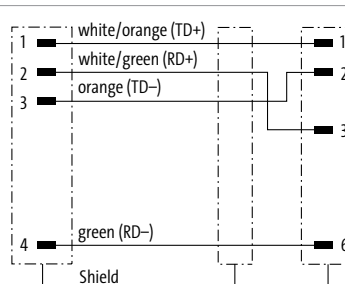
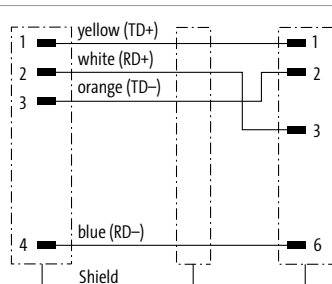
4 4 7 1 1

Type

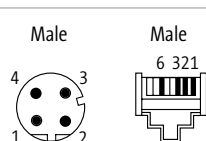
4-pole, shielded

4-pole, shielded

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

2×2×0.34 mm²
TPE (UL/CSA), robots/C-tracks
2×2×0.25 mm²
TPE (UL/CSA), robots/C-tracks

green
S7V

blue
S4U

3 Cable Length

1.5 m **0150**
3.0 m **0300**
5.0 m **0500**
7.5 m **0750**
10.0 m **1000**

Technical Data

Operating voltage max. 60 V DC
Protection IP67 (M12) - IP20 (RJ45)
Temperature range -25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 7 0 0

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables M12 - RJ45

– CMX-Outdoor

– Data

PROFI® EtherNet/IP™
NET

Approvals:  ^{*}
Listed

^{*} only for products with UL/CSA approved cable

Male

90°
ITC, PLTC cable

Male

straight



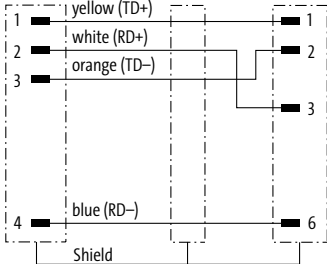
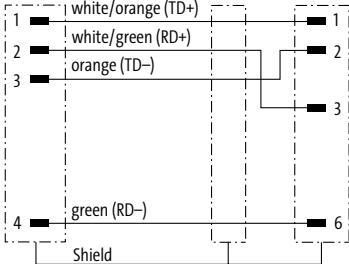
Male

90°

Male

straight



1	Form	44761		44761	
	Type	4-pole, shielded		4-pole, shielded	
		D-coded		D-coded	
	Circuit diagram				
	Contact layout	Male  Male 			
2	Cable Type	Jacket Color		Jacket Color	
	2×2×0.34 mm²		green		blue
	TPE (UL/CSA), robots/C-tracks		S7V		
	2×2×0.25 mm²				S4U
	TPE (UL/CSA), robots/C-tracks				
3	Cable Length				
	1.5 m	0150			
	3.0 m	0300			
	5.0 m	0500			
	7.5 m	0750			
	10.0 m	1000			
	Technical Data				
	Operating voltage	max. 60 V DC			
	Protection	IP67 (M12) - IP20 (RJ45)			
	Temperature range	-25...+85 °C, depending on cable quality			
	Article No.				
	The composition of your article number is explained on page 3.1.i	7700 - -			
		1 Form		2 Cable Type	
				3 Cable Length	
	Notes				
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables M12 - RJ45

– CMX-Outdoor

– Data

PROFI® EtherNet/IP™

Approvals:  **UL** ^{us}
Listed

* only for products with UL/CSA approved cable

Flange female

ITC, PLTC cable

Male

straight



Flange female

Male

straight



1 Form

4 4 8 5 1

4 4 8 5 1

Type

4-pole, shielded

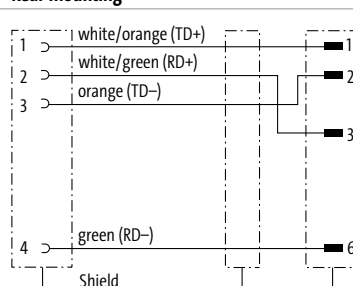
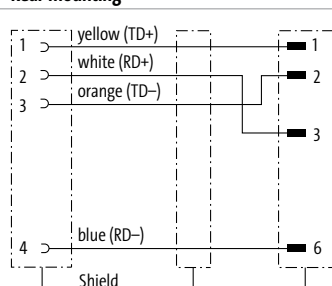
4-pole, shielded

D-coded

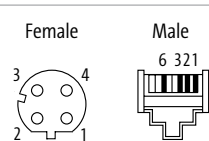
D-coded

D-coded

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

2×2×0.34 mm²

TPE (UL/CSA), robots/C-tracks

green

S7V

blue

2×2×0.25 mm²

TPE (UL/CSA), robots/C-tracks

S4U

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 60 V DC

Protection

IP67 (M12) - IP20 (RJ45)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 7 0 0

-

-

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables RJ45 - RJ45

– CMX-Outdoor

– Data

PROFI® EtherNet/IP™

Approvals:  ^{*}
Listed

* only for products with UL/CSA approved cable

Male

straight
ITC, PLTC cable

Male

straight

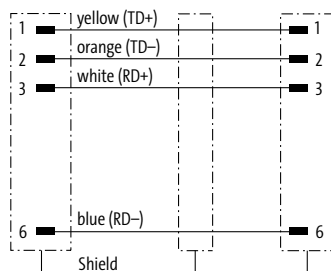
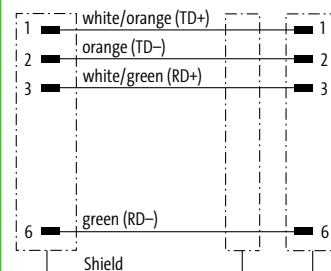
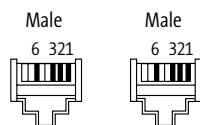
Male

straight

Male

straight



1	Form	743 01		743 01	
	Type	4-pole, shielded		4-pole, shielded	
	Circuit diagram				
Contact layout					
2	Cable Type	Jacket Color		Jacket Color	
	2×2×0.34 mm²		green		blue
	TPE (UL/CSA), robots/C-tracks		S7V		
	2×2×0.25 mm²				S4U
TPE (UL/CSA), robots/C-tracks					
3	Cable Length				
	1.5 m	0150			
	3.0 m	0300			
	5.0 m	0500			
	7.5 m	0750			
	10.0 m	1000			
Technical Data					
Operating voltage		max. 60 V DC			
Protection		IP20 inserted and tightened (EN 60529)			
Temperature range		-25...+85 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		7700 - -			
		1 Form		2 Cable Type	
				3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables M12 - M12

– CMX-Outdoor

– Data

PROFI® EtherNet/IP™

Male

straight

Male

straight

Male

straight

Male

90°



1 Form

48511

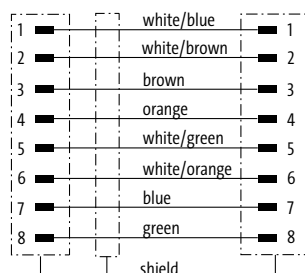
48541

Type

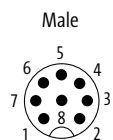
8-pole, shielded

8-pole, shielded

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

4x2x0.25 mm²

blue

blue

TPE (UL/CSA), robots/C-tracks

S4W

S4W

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 60 V AC/DC

Protection

IP65 and IP67 when plugged and screwed down (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 7 0 0

-

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables M12 - M12

– CMX-Outdoor

– Data

PROFI® EtherNet/IP™
NET

Male
90°

Male
90°



1 Form		48561			
Type		8-pole, shielded			
Circuit diagram		1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 white/blue white/brown brown orange white/green white/orange blue green shield			
Contact layout		Male 6 5 4 3 2 1 7 8			
2 Cable Type		Jacket Color			
4×2×0.25 mm²		blue			
TPE (UL/CSA), robots/C-tracks		S4W			
3 Cable Length					
1.5 m		0150			
3.0 m		0300			
5.0 m		0500			
7.5 m		0750			
10.0 m		1000			
Technical Data					
Operating voltage		max. 60 V AC/DC			
Protection		IP65 and IP67 when plugged and screwed down (EN 60529)			
Temperature range		-25...+85 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		7 7 0 0 – 4 8 5 6 1 –			
		1 Form 2 Cable Type 3 Cable Length			
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables M12 - M12

– CMX-Outdoor

– Data

PROFI® EtherNet/IP™

Male

straight

Female

straight



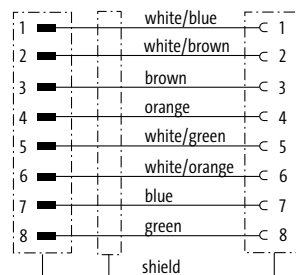
1 Form

48571

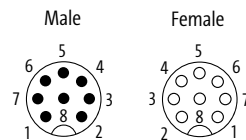
Type

8-pole, shielded

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

4x2x0.25 mm²

blue

TPE (UL/CSA), robots/C-tracks

S4W

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	max. 60 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 7 0 0

–

4 8 5 7 1

–

– – –

– – – –

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables M12 - M12

– CMX-Outdoor

– Data

PROFI® EtherNet/IP™
NET

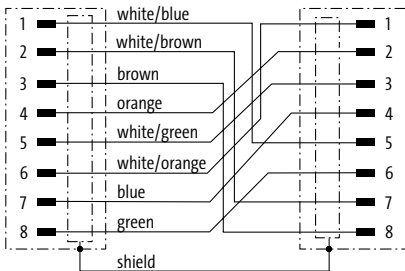
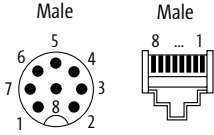
Male
straight

Male
straight

Male
90°

Male
straight



1 Form		48521	48551
Type		8-pole, shielded	8-pole, shielded
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	Jacket Color
4x2x0.25 mm ²		blue	blue
TPE (UL/CSA), robots/C-tracks		S4W	S4W
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 30 V AC/DC	
Protection		IP67 (M12) - IP20 (RJ45)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 7 0 0 - - - - -	- - - - -
		1 Form	2 Cable Type 3 Cable Length
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables M12 - M12

– CMX-Outdoor

– Data

PROFI® EtherNet/IP™
NET

Flange female

Male

straight



1 Form

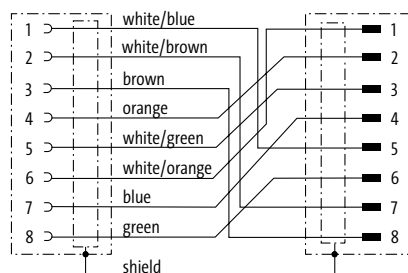
48851

Type

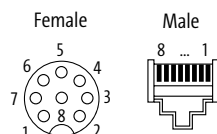
8-pole, shielded

Rear mounting

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

4×2×0.25 mm²

blue

TPE (UL/CSA), robots/C-tracks

S4W

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 30 V AC/DC

Protection

IP67 (M12) - IP20 (RJ45)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 7 0 0

-

4 8 8 5 1

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables RJ45 - RJ45

– CMX-Outdoor

– Data

 EtherNet/IP™

Male

straight

Male

straight



1 Form		74718	
Type		8-pole, shielded	
Circuit diagram		1 2 3 4 5 6 7 8 white/orange orange white/green green white/brown brown white/blue blue 1 2 3 4 5 6 7 8 shield	
Contact layout		Male 8 ... 1	
2 Cable Type		Jacket Color	
4×2×0.25 mm²		blue	
TPE (UL/CSA), robots/C-tracks		S4W	
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 60 V DC	
Protection		IP20 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 7 0 0 - 7 4 7 1 8 -	
		1 Form 2 Cable Type 3 Cable Length	
Notes			
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables M12 - M12

– CMX-Outdoor

– Data

– X-coded



* only for products with UL/CSA approved cable

Male

straight

Male

straight

Male

straight

Male

90°



1	Form	51001		51011	
	Approvals	cULus *			
	Type	8-pole, shielded		8-pole, shielded	
		X-coded		X-coded	
	Circuit diagram				
	Contact layout				
2	Cable Type	Jacket Color		Jacket Color	
	4×2×0.14 mm² TPE (UL/CSA), robots/C-tracks	blue S4X		blue S4X	
3	Cable Length				
	1.5 m 3.0 m 5.0 m 7.5 m 10.0 m	0150 0300 0500 0750 1000			
Technical Data					
Operating voltage		max. 50 V AC/60 V DC			
Protection		IP67 inserted and tightened (EN 60529)			
Temperature range		-25...+85 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		7700 - -			
		1 Form		2 Cable Type	
				3 Cable Length	
Notes					
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables M12 - M12

– CMX-Outdoor

– Data

– X-coded

PROFI® EtherNet/IP™
NET

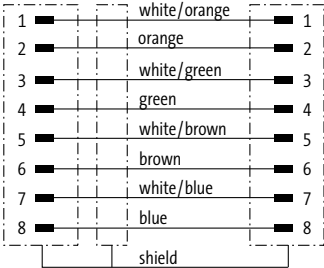
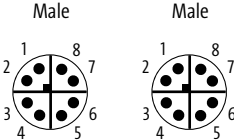
Male

90°

Male

90°



1 Form		51021	
Type	8-pole, shielded		
	X-coded		
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	
4×2×0.14 mm²			blue
TPE (UL/CSA), robots/C-tracks			S4X
3 Cable Length			
1.5 m			0150
3.0 m			0300
5.0 m			0500
7.5 m			0750
10.0 m			1000
Technical Data			
Operating voltage	max. 50 V AC/60 V DC		
Protection	IP67 inserted and tightened (EN 60529)		
Temperature range	-25...+85 °C, depending on cable quality		
Article No.			
The composition of your article number is explained on page 3.1.i		7 7 0 0 - 5 1 0 2 1 -	
		1 Form	2 Cable Type
		3 Cable Length	
Notes			
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables M12 - RJ45

– CMX-Outdoor

– Data

– X-coded

PROFI® EtherNet/IP™

Male

straight

Male

straight



Male

90°

Male

straight



1 Form

51101

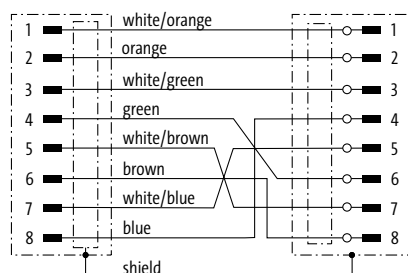
51201

Type

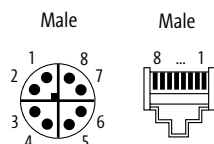
8-pole, shielded

8-pole, shielded

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

4×2×0.14 mm²

blue

blue

TPE (UL/CSA), robots/C-tracks

S4X

S4X

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 60 V DC

Protection

IP66K, IP67 (M12) - IP20 (RJ45)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 7 0 0

-

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables RJ45 - RJ45

– CMX-Outdoor

– Data

– X-coded

PROFI® EtherNet/IP™
NET

Male
straight

Male
straight

Male
straight

Flange female



1 Form

74315

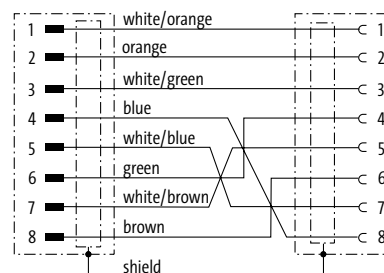
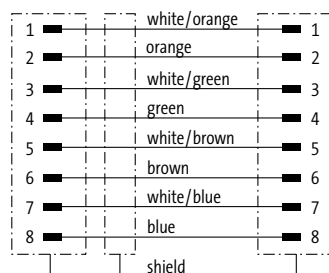
51551

Type

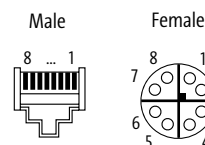
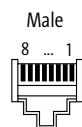
8-pole, shielded

8-pole, shielded

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

4×2×0.14 mm²
TPE (UL/CSA), robots/C-tracks

blue
S4X

blue
S4X

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	max. 60 V DC
Protection	IP20 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 7 0 0

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

With open ended wires

– 7/8" MINI

– Power

Approvals: 

* only for products with UL/CSA approved cable

Male

straight
TC-ER



Male

straight



1 Form

A3001

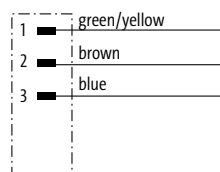
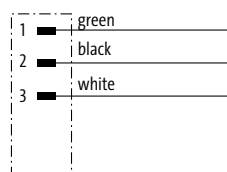
A3001

Type

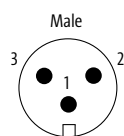
3-pole

3-pole

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 1.5 mm²

PUR (UL/CSA), C-tracks

TPE (UL/CSA), robots

yellow

U1B

black

UMB

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 600 V AC/DC

Protection

IP68 inserted and tightened (EN 60529)

Temperature range

-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 7 0 0

-

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

With open ended wires

– 7/8" MINI

– Power

Approvals: 

* only for products with UL/CSA approved cable

Male
straight
TC-ER



Male
straight



1	Form	A4001		A4001	
	Type	4-pole		4-pole	
	Circuit diagram	1 2 3 4 black white red green		1 2 3 4 brown white blue black	
Contact layout	Male 3 2 4 1		Male 1 3 2 4		
2	Cable Type	Jacket Color		Jacket Color	
	Wire diameter 1.5 mm²				
	PUR (UL/CSA), C-tracks				
	TPE (UL/CSA), robots	yellow		black	
		U1C		UMC	
3	Cable Length				
	1.5 m	0150			
	3.0 m	0300			
	5.0 m	0500			
	7.5 m	0750			
	10.0 m	1000			
	Technical Data				
Operating voltage	max. 600 V AC/DC				
Protection	IP68 inserted and tightened (EN 60529)				
Temperature range	-25...+80 °C, depending on cable quality				
Article No.					
	The composition of your article number is explained on page 3.1.i	7 7 0 0			
		-		-	
		1	Form	2	Cable Type
		3	Cable Length		
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

TPE SERIES - THE NORTH AMERICAN STANDARD

With open ended wires

– 7/8" MINI

– Power

Approvals: 

* only for products with UL/CSA approved cable

Male

straight
TC-ER



Male

straight



1 Form

A5001

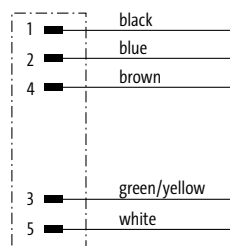
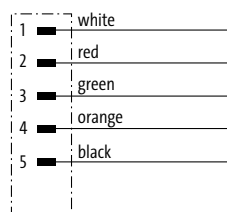
A5001

Type

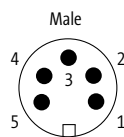
5-pole

5-pole

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 1.5 mm²

PUR (UL/CSA), C-tracks

TPE (UL/CSA), robots

yellow

U1D

black

UMD

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 600 V AC/DC

Protection

IP68 inserted and tightened (EN 60529)

Temperature range

-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 7 0 0

-

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

With open ended wires

– 7/8" MINI

– Power

Approvals: 

* only for products with UL/CSA approved cable

Male

90°

TC-ER



Male

90°



1	Form	A3011		A3011	
	Type	3-pole		3-pole	
	Circuit diagram	1 2 3 green black white		1 2 3 green/yellow brown blue	
	Contact layout	Male 3 1 2			
2	Cable Type	Jacket Color		Jacket Color	
	Wire diameter 1.5 mm²		yellow		black
	PUR (UL/CSA), C-tracks				UMB
	TPE (UL/CSA), robots		U1B		
3	Cable Length				
	1.5 m	0150			
	3.0 m	0300			
	5.0 m	0500			
	7.5 m	0750			
	10.0 m	1000			
	Technical Data				
	Operating voltage	max. 600 V AC/DC			
	Protection	IP68 inserted and tightened (EN 60529)			
	Temperature range	-25...+80 °C, depending on cable quality			
	Article No.				
	The composition of your article number is explained on page 3.1.i	7 7 0 0 - -			
		1 Form		2 Cable Type	
				3 Cable Length	
	Notes	Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

TPE SERIES - THE NORTH AMERICAN STANDARD

With open ended wires

– 7/8" MINI

– Power

Approvals: 

* only for products with UL/CSA approved cable

Male

90°
TC-ER



Male

90°



1 Form

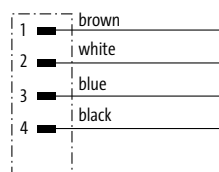
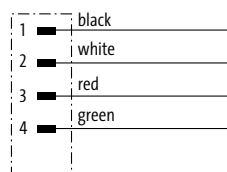
A4 011

A4 011

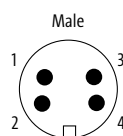
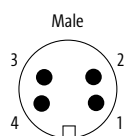
Type
Circuit diagram

4-pole

4-pole



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 1.5 mm²
PUR (UL/CSA), C-tracks
TPE (UL/CSA), robots

yellow

U1C

black

UMC

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	max. 600 V AC/DC
Protection	IP68 inserted and tightened (EN 60529)
Temperature range	-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 7 0 0

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

With open ended wires

– 7/8" MINI

– Power

Approvals: 

* only for products with UL/CSA approved cable

Male

90°

TC-ER



Male

90°



1 Form		A 5 0 1 1		A 5 0 1 1	
Type		5-pole		5-pole	
Circuit diagram		1 2 3 4 5 white red green orange black		1 2 4 3 5 black blue brown green/yellow white	
Contact layout		Male 4 3 2 5 1			
2 Cable Type		Jacket Color		Jacket Color	
Wire diameter 1.5 mm²		yellow		black	
PUR (UL/CSA), C-tracks				UMD	
TPE (UL/CSA), robots		U1D			
3 Cable Length					
1.5 m		0150			
3.0 m		0300			
5.0 m		0500			
7.5 m		0750			
10.0 m		1000			
Technical Data					
Operating voltage		max. 600 V AC/DC			
Protection		IP68 inserted and tightened (EN 60529)			
Temperature range		-25...+80 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		7 7 0 0 - -			
		1 Form		2 Cable Type	
				3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

TPE SERIES - THE NORTH AMERICAN STANDARD

With open ended wires

– 7/8" MINI

– Power

Approvals: 

* only for products with UL/CSA approved cable

Female

straight
TC-ER



Female

straight



1 Form

A3021

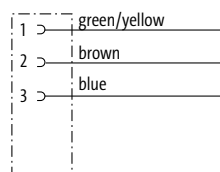
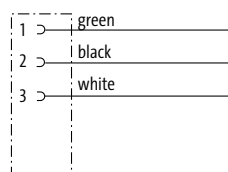
A3021

Type

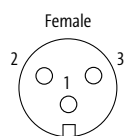
3-pole

3-pole

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 1.5 mm²

PUR (UL/CSA), C-tracks

TPE (UL/CSA), robots

yellow

U1B

black

UMB

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 600 V AC/DC

Protection

IP68 inserted and tightened (EN 60529)

Temperature range

-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 7 0 0

-

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

With open ended wires

– 7/8" MINI

– Power

Approvals: 

* only for products with UL/CSA approved cable

Female

straight
TC-ER



Female

straight



1	Form	A4021		A4021	
	Type	4-pole		4-pole	
	Circuit diagram	1 2 3 4 black white red green		1 2 3 4 brown white blue black	
Contact layout	Female 2 1 3 4		Female 3 4 1 2		
2	Cable Type	Jacket Color		Jacket Color	
	Wire diameter 1.5 mm²				
	PUR (UL/CSA), C-tracks				
3	Cable Length				
	1.5 m	0150			
	3.0 m	0300			
	5.0 m	0500			
	7.5 m	0750			
	10.0 m	1000			
Technical Data					
Operating voltage		max. 600 V AC/DC			
Protection		IP68 inserted and tightened (EN 60529)			
Temperature range		-25...+80 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		7 7 0 0 - -			
		1 Form		2 Cable Type	
				3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

TPE SERIES - THE NORTH AMERICAN STANDARD

With open ended wires

– 7/8" MINI

– Power

Approvals: 

* only for products with UL/CSA approved cable

Female

straight
TC-ER



Female

straight



1 Form

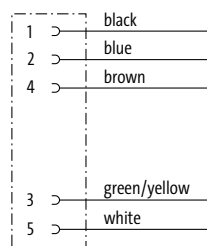
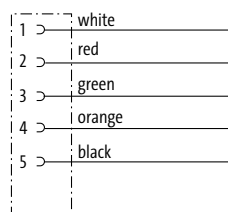
A 5021

A 5021

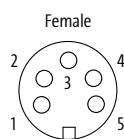
Type
Circuit diagram

5-pole

5-pole



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 1.5 mm²
PUR (UL/CSA), C-tracks
TPE (UL/CSA), robots

yellow

U1D

black

UMD

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	max. 600 V AC/DC
Protection	IP68 inserted and tightened (EN 60529)
Temperature range	-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 7 0 0

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

With open ended wires

– 7/8" MINI

– Power

Approvals: 

* only for products with UL/CSA approved cable

Female

90°
TC-ER



Female

90°



1 Form		A3031		A3031	
Type		3-pole		3-pole	
Circuit diagram		1 2 3 green black white		1 2 3 green/yellow brown blue	
Contact layout		Female 2 1 3			
2 Cable Type		Jacket Color		Jacket Color	
Wire diameter 1.5 mm²		yellow		black	
PUR (UL/CSA), C-tracks				UMB	
TPE (UL/CSA), robots		U1B			
3 Cable Length					
1.5 m		0150			
3.0 m		0300			
5.0 m		0500			
7.5 m		0750			
10.0 m		1000			
Technical Data					
Operating voltage		max. 600 V AC/DC			
Protection		IP68 inserted and tightened (EN 60529)			
Temperature range		-25...+80 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		7 7 0 0 - -			
		1 Form		2 Cable Type	
				3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

TPE SERIES - THE NORTH AMERICAN STANDARD

With open ended wires

– 7/8" MINI

– Power

Approvals: 

* only for products with UL/CSA approved cable

Female

90°

TC-ER



Female

90°



1 Form

A4031

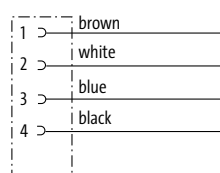
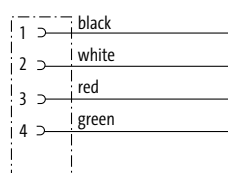
A4031

Type

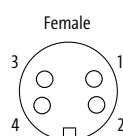
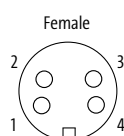
4-pole

4-pole

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 1.5 mm²

PUR (UL/CSA), C-tracks

TPE (UL/CSA), robots

yellow

U1C

black

UMC

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 600 V AC/DC

Protection

IP68 inserted and tightened (EN 60529)

Temperature range

-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 7 0 0

-

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

With open ended wires

– 7/8" MINI

– Power

Approvals: 

* only for products with UL/CSA approved cable

Female

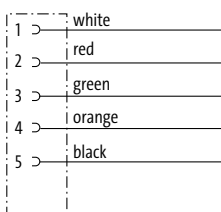
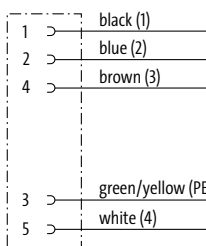
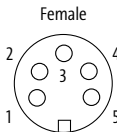
90°
TC-ER



Female

90°



1	Form	A 5 0 3 1		A 5 0 3 1	
	Type	5-pole		5-pole	
	Circuit diagram				
Contact layout					
2	Cable Type	Jacket Color		Jacket Color	
	Wire diameter 1.5 mm²		yellow		black
	PUR (UL/CSA), C-tracks				UMD
	TPE (UL/CSA), robots		U1D		
3	Cable Length				
	1.5 m	0150			
	3.0 m	0300			
	5.0 m	0500			
	7.5 m	0750			
	10.0 m	1000			
Technical Data					
Operating voltage		max. 600 V AC/DC			
Protection		IP68 inserted and tightened (EN 60529)			
Temperature range		-25...+80 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		7 7 0 0 - -			
		1 Form		2 Cable Type	
				3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables

– 7/8" MINI - 7/8" MINI

– Power

Approvals: 

* only for products with UL/CSA approved cable

Male

straight
TC-ER

Female

straight



Male

straight

Female

straight



1 Form

A3A01

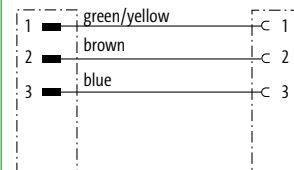
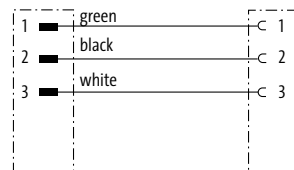
A3A01

Type

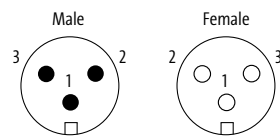
3-pole

3-pole

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 1.5 mm²

PUR (UL/CSA), C-tracks

TPE (UL/CSA), robots

yellow

U1B

black

UMB

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 600 V AC/DC

Protection

IP68 inserted and tightened (EN 60529)

Temperature range

-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 7 0 0

-

-

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables

– 7/8" MINI - 7/8" MINI

– Power

Approvals: 

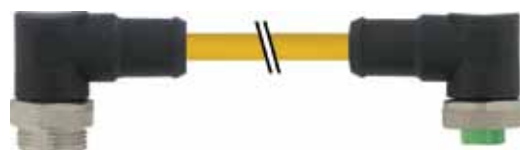
* only for products with UL/CSA approved cable

Male

90°
TC-ER

Female

90°



Male

90°

Female

90°



1 Form

A3A31

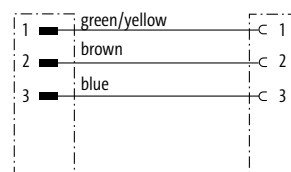
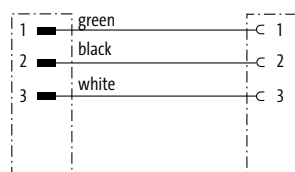
A3A31

Type

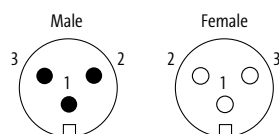
3-pole

3-pole

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 1.5 mm²

PUR (UL/CSA), C-tracks

TPE (UL/CSA), robots

yellow

U1B

black

UMB

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 600 V AC/DC

Protection

IP68 inserted and tightened (EN 60529)

Temperature range

-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 7 0 0

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables

– 7/8" MINI - 7/8" MINI

– Power

Approvals: 

* only for products with UL/CSA approved cable

Male

straight
TC-ER

Female

straight



Male

straight

Female

straight



1 Form

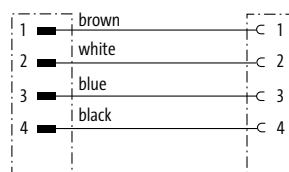
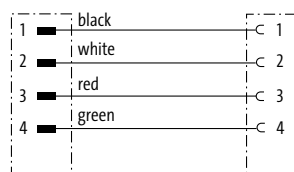
A4A01

A4A01

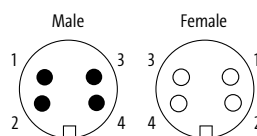
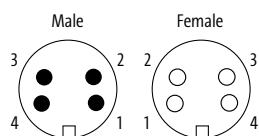
Type
Circuit diagram

4-pole

4-pole



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 1.5 mm²
PUR (UL/CSA), C-tracks
TPE (UL/CSA), robots

yellow

U1C

black
UMC

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	max. 600 V AC/DC
Protection	IP68 inserted and tightened (EN 60529)
Temperature range	-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 7 0 0

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables

– 7/8" MINI - 7/8" MINI

– Power

Approvals: 

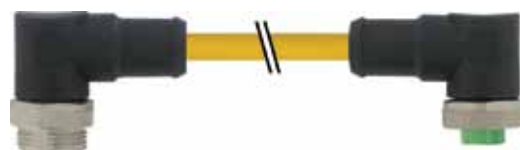
* only for products with UL/CSA approved cable

Male

90°
TC-ER

Female

90°



Male

90°

Female

90°



1 Form

A4A31

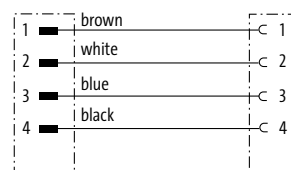
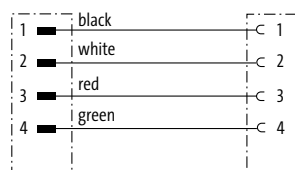
A4A31

Type

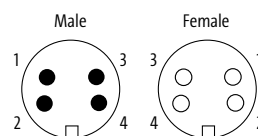
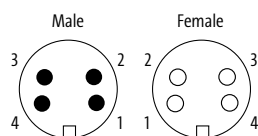
4-pole

4-pole

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 1.5 mm²

PUR (UL/CSA), C-tracks

TPE (UL/CSA), robots

yellow

U1C

black

UMC

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 600 V AC/DC

Protection

IP68 inserted and tightened (EN 60529)

Temperature range

-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 7 0 0

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables

– 7/8" MINI - 7/8" MINI

– Power

Approvals: 

* only for products with UL/CSA approved cable

Male

straight
TC-ER

Female

straight



Male

straight

Female

straight



1 Form

A5A01

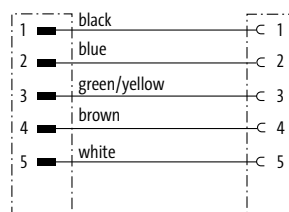
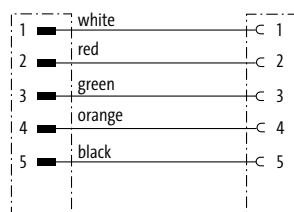
A5A01

Type

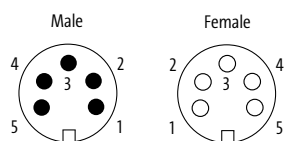
5-pole

5-pole

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 1.5 mm²

PUR (UL/CSA), C-tracks

TPE (UL/CSA), robots

yellow

U1D

black

UMD

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	max. 600 V AC/DC
Protection	IP68 inserted and tightened (EN 60529)
Temperature range	-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 7 0 0

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables

– 7/8" MINI - 7/8" MINI

– Power

Approvals: 

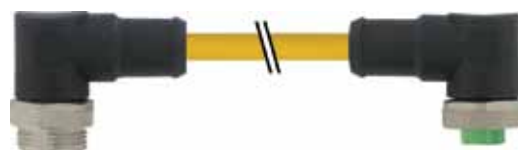
* only for products with UL/CSA approved cable

Male

90°
TC-ER

Female

90°



Male

90°

Female

90°



1 Form		A5A31		A5A31	
Type		5-pole		5-pole	
Circuit diagram		1 2 3 4 5 white red green orange black 1 2 3 4 5		1 2 3 4 5 black blue green/yellow brown white 1 2 3 4 5	
Contact layout		Male Female			
2 Cable Type		Jacket Color		Jacket Color	
Wire diameter 1.5 mm²		yellow		black	
PUR (UL/CSA), C-tracks				UMD	
TPE (UL/CSA), robots		U1D			
3 Cable Length					
1.5 m		0150			
3.0 m		0300			
5.0 m		0500			
7.5 m		0750			
10.0 m		1000			
Technical Data					
Operating voltage		max. 600 V AC/DC			
Protection		IP68 inserted and tightened (EN 60529)			
Temperature range		-25...+80 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		7 7 0 0 - -			
		1 Form		2 Cable Type	
				3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			



VALVE CONNECTORS MORE MODELS THAN EVER

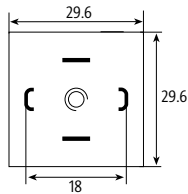
- Molded construction – resistant to shock and vibration
- Tested to ensure reliability
- IP65 to IP67 Rated

THE CONNECTOR FOR VALVES AND PRESSURE SWITCHES

25 years ago, Murrelektronik developed and produced the first pre-wired and molded valve connector. It was a revolution! Now, more than ever, Murrelektronik's valve plugs enjoy long-running success as a result of continuous improvement. A captive gasket, integrated LED status indicator and suppression are the top features of Murrelektronik's MSUD valve plug.

With Open Ended Wires

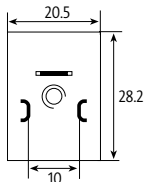
Valve Diagram



MSUD Valve Connector

- Form A
- acc. to EN 175301-803 (ISO 4400)
- Pin spacing 18 mm

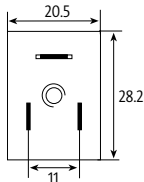
Page 3.12.1



MSUD Valve Connector

- Form B
- acc. to EN 175301-803 (ISO 6952)
- Pin spacing 10 mm

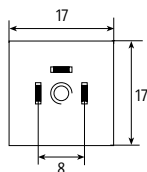
Page 3.12.4



MSUD Valve Connector

- Form BI
- Industrial standard
- Pin spacing 11 mm

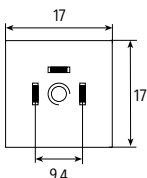
Page 3.12.6



MSUD Valve Connector

- Form C
- acc. to EN 175301-803 (ISO 6952)
- Pin spacing 8 mm

Page 3.12.8

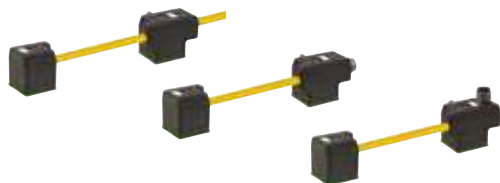


MSUD Valve Connector

- Form CI
- Industrial standard
- Pin spacing 9.4 mm

Page 3.12.10

Connection Cables



MSUD Double Valve Connector

- Form A
- Form B
- Form BI
- Form C
- Form CI

M12 male

- Top connection
- Rear connection
- With connection cable

Page 3.12.12



MSUD Valve Connector

- Form A
- Form B
- Form BI
- Form C
- Form CI

M12 male

- Straight
- 90°

Page 3.12.19



MSUD Valve Connector Adapter

- Form A
- Form B
- Form BI
- Form C
- Form CI

M12 male

- Top connection
- Rear connection

Page 3.12.23

Field-Wireable



Screw Terminals

SVS Valve Connector

- Form A
- Form B
- Form BI

Page 3.12.27



Insulation Displacement Technology (IDC)

MOSA Valve Connector

- Form C
- Form CI

Page 3.12.35



Screw Terminals

SVS Eco Valve Connector

- Form A
- Form B
- Form BI
- Form C
- Form CI

Page 3.12.36

| VALVE CONNECTORS

MSUD

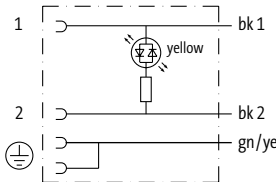
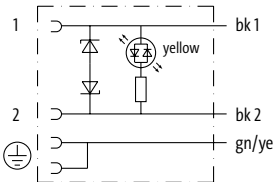
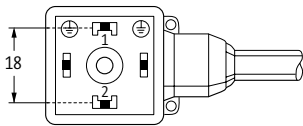
– with open ended wires

Approvals: 

* only for products with UL/CSA approved cable

Form A (18 mm)



1	Form	18001	18021	18041
Type		24 V AC/DC ±25%	24 V AC ±20% / DC ±25%	110 V AC/DC ±10%
		LED	LED and suppression	LED and suppression
Circuit diagram				
Contact layout				
2	Cable Type	Jacket Color		
	Wire diameter 0.75 mm²	yellow	gray	black
	PVC	016	216	616
	PUR/PVC (UL/CSA)	026	226	626
	PUR (UL/CSA), robots/C-tracks	036	236	636
	PUR (UL/CSA), welding spark	056	256	656
3	Cable Length			
	1.5 m	0150		
	3.0 m	0300		
	5.0 m	0500		
	7.5 m	0750		
	10.0 m	1000		
Technical Data				
Operating voltage		24 V AC/DC ±25%	24 V AC ±20% / DC ±25%	110 V AC/DC ±10%
Protection		IP67 inserted and tightened (EN 60529)		
Temperature range		-25...+85 °C, depending on cable quality		
Article No.				
The composition of your article number is explained on page 3.1.i		7 0 0 0	-	-
		1	Form	2
		2	Cable Type	3
		3	Cable Length	
Notes				
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.		

| VALVE CONNECTORS

MSUD

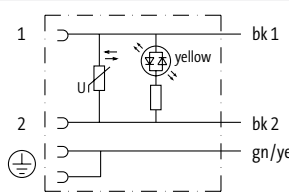
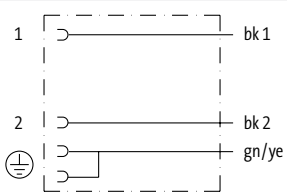
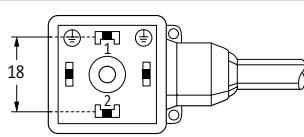
– with open ended wires

Approvals: 

* only for products with UL/CSA approved cable

Form A (18 mm)



1	Form	18061			18081		
	Type	230 V AC/DC ±10%			max. 230 V AC/DC		
		LED and suppression			without components		
	Circuit diagram						
	Contact layout						
2	Cable Type	Jacket Color			Jacket Color		
	Wire diameter 0.75 mm²	yellow	gray	black	yellow	gray	black
	PVC	016	216	616	016	216	616
	PUR/PVC (UL/CSA)	026	226	626	026	226	626
	PUR (UL/CSA), robots/C-tracks	036	236	636	036	236	636
	PUR (UL/CSA), welding spark	056	256	656	056	256	656
3	Cable Length						
	1.5 m	0150					
	3.0 m	0300					
	5.0 m	0500					
	7.5 m	0750					
	10.0 m	1000					
Technical Data							
Operating voltage		230 V AC/DC ±10%			max. 230 V AC/DC		
Protection		IP67 inserted and tightened (EN 60529)					
Temperature range		-25...+85 °C, depending on cable quality					
Article No.							
The composition of your article number is explained on page 3.1.i		7 0 0 0			-		-
		1		Form		2	
				Cable Type		3	
						Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.					

VALVE CONNECTORS

MSUD

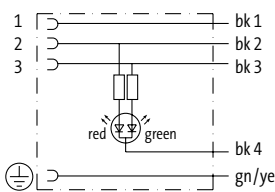
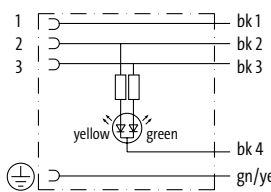
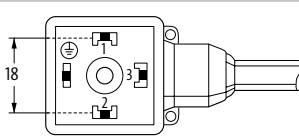
- with open ended wires
- for pressure switches

Approvals: 

* only for products with UL/CSA approved cable

Form A (18 mm)



1 Form		18121	18141
Type		24 V DC ±25% LED (red/green)	24 V DC ±25% LED (yellow/green)
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	
Wire diameter 0.75 mm²		yellow	gray
PVC		018	218
PUR/PVC (UL/CSA)		028	228
PUR (UL/CSA), robots/C-tracks		038	238
3 Cable Length		Jacket Color	
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data		Jacket Color	
Operating voltage		24 V DC ±25%	
Protection		IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.		Jacket Color	
The composition of your article number is explained on page 3.1.i		7 0 0 0	
		1 Form	2 Cable Type
		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

VALVE CONNECTORS

MSUD

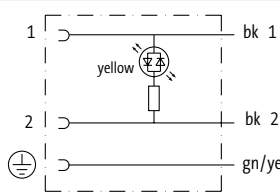
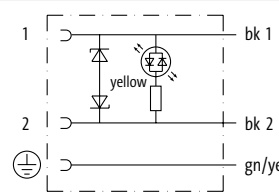
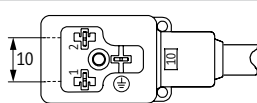
– with open ended wires

Approvals: 

* only for products with UL/CSA approved cable

Form B (10 mm)



1	Form	10001			10021			10041		
	Type	24 V AC/DC ±25%			24 V AC ±20% / DC ±25%			110 V AC/DC ±10%		
		LED			LED and suppression			LED and suppression		
Circuit diagram										
Contact layout										
2	Cable Type	Jacket Color			Jacket Color			Jacket Color		
	Wire diameter 0.75 mm²	yellow	gray	black	yellow	gray	black	yellow	gray	black
	PVC	016	216	616	016	216	616	016	216	616
	PUR/PVC (UL/CSA)	026	226	626	026	226	626	026	226	626
	PUR (UL/CSA), robots/C-tracks	036	236	636	036	236	636	036	236	636
	PUR (UL/CSA), welding spark	056	256	656	056	256	656	056	256	656
3	Cable Length									
	1.5 m	0150								
	3.0 m	0300								
	5.0 m	0500								
	7.5 m	0750								
	10.0 m	1000								
Technical Data										
Operating voltage		24 V AC/DC ±25%			24 V AC ±20% / DC ±25%			110 V AC/DC ±10%		
Protection		IP67 inserted and tightened (EN 60529)								
Temperature range		-25...+85 °C, depending on cable quality								
Article No.										
The composition of your article number is explained on page 3.1.i		7 0 0 0 - -								
					1 Form		2 Cable Type		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.								

| VALVE CONNECTORS

MSUD

– with open ended wires

Approvals: 

* only for products with UL/CSA approved cable

Form B (10 mm)



1	Form	10061			10081						
	Type	max. 230 V AC/DC without components			24 V AC ±20% / DC ±25% LED and suppression						
	Circuit diagram										
	Contact figure	PE at cable entry (0°)			PE opposite cable entry (180°)						
	Contact layout										
2	Cable Type	Jacket Color			Jacket Color						
	Wire diameter 0.75 mm²	yellow	gray	black	yellow	gray	black				
	PVC	016	216	616	016	216	616				
	PUR/PVC (UL/CSA)	026	226	626	026	226	626				
	PUR (UL/CSA), robots/C-tracks	036	236	636	036	236	636				
	PUR (UL/CSA), welding spark	056	256	656	056	256	656				
3	Cable Length										
	1.5 m	0150									
	3.0 m	0300									
	5.0 m	0500									
	7.5 m	0750									
	10.0 m	1000									
Technical Data											
Operating voltage		max. 230 V AC/DC			24 V AC ±20% / DC ±25%						
Protection		IP67 inserted and tightened (EN 60529)									
Temperature range		-25...+85 °C, depending on cable quality									
Article No.											
The composition of your article number is explained on page 3.1.i		7000 - -									
		1		Form	2		Cable Type	3		Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.									

| VALVE CONNECTORS

MSUD

– with open ended wires

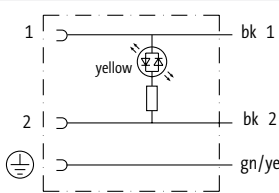
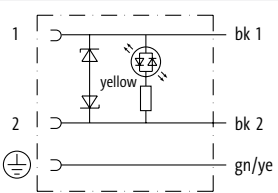
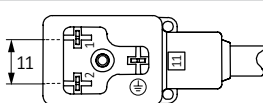
Approvals: 

* only for products with UL/CSA approved cable

Form BI (11 mm)

Industrial standard



1	Form	11001			11021			11041		
	Type	24 V AC/DC ±25%			24 V AC ±20% / DC ±25%			110 V AC/DC ±10%		
		LED			LED and suppression			LED and suppression		
	Circuit diagram									
	Contact layout									
2	Cable Type	Jacket Color			Jacket Color			Jacket Color		
	Wire diameter 0.75 mm²	yellow	gray	black	yellow	gray	black	yellow	gray	black
	PVC	016	216	616	016	216	616	016	216	616
	PUR/PVC (UL/CSA)	026	226	626	026	226	626	026	226	626
	PUR (UL/CSA), robots/C-tracks	036	236	636	036	236	636	036	236	636
	PUR (UL/CSA), welding spark	056	256	656	056	256	656	056	256	656
3	Cable Length									
	1.5 m	0150								
	3.0 m	0300								
	5.0 m	0500								
	7.5 m	0750								
	10.0 m	1000								
Technical Data										
Operating voltage		24 V AC/DC ±25%			24 V AC ±20% / DC ±25%			110 V AC/DC ±10%		
Protection		IP67 inserted and tightened (EN 60529)								
Temperature range		-25...+85 °C, depending on cable quality								
Article No.										
The composition of your article number is explained on page 3.1.i		7 0 0 0			— — — — —			— — — — —		
		1 Form			2 Cable Type			3 Cable Length		
Notes										
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.								

VALVE CONNECTORS

MSUD

– with open ended wires

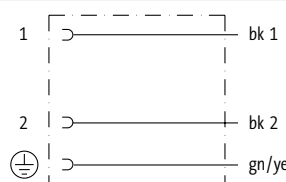
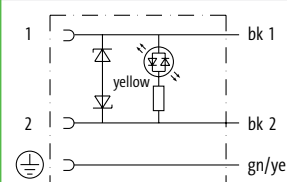
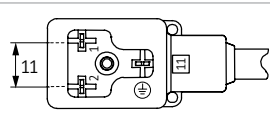
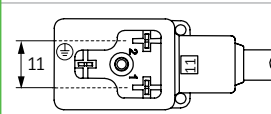
Approvals: 

* only for products with UL/CSA approved cable

Form BI (11 mm)

Industrial standard



1 Form		11061			11081		
Type		max. 250 V AC/DC			24 V AC ±20% / DC ±25%		
		without components			LED and suppression		
Circuit diagram							
Contact figure		PE at cable entry (0°)			PE opposite cable entry (180°)		
Contact layout							
2 Cable Type		Jacket Color			Jacket Color		
Wire diameter 0.75 mm²		yellow	gray	black	yellow	gray	black
PVC		016	216	616	016	216	616
PUR/PVC (UL/CSA)		026	226	626	026	226	626
PUR (UL/CSA), robots/C-tracks		036	236	636	036	236	636
PUR (UL/CSA), welding spark		056	256	656	056	256	656
3 Cable Length							
1.5 m		0150					
3.0 m		0300					
5.0 m		0500					
7.5 m		0750					
10.0 m		1000					
Technical Data							
Operating voltage		max. 250 V AC/DC			24 V AC ±20% / DC ±25%		
Protection		IP67 inserted and tightened (EN 60529)					
Temperature range		-25...+85 °C, depending on cable quality					
Article No.							
The composition of your article number is explained on page 3.1.i		7 0 0 0 - -					
		1 Form		2 Cable Type		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.					

| VALVE CONNECTORS

MSUD

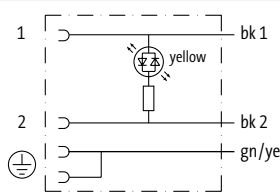
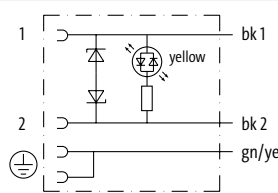
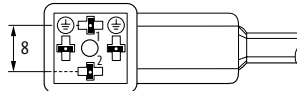
– with open ended wires

Approvals: 

* only for products with UL/CSA approved cable

Form C (8 mm)



1	Form	8 0 0 0 1			8 0 0 2 1			
	Type	24 V AC/DC ±25%			24 V AC ±20% / DC ±25%			
		LED			LED and suppression			
Circuit diagram								
Contact layout								
2	Cable Type	Jacket Color			Jacket Color			
	Wire diameter 0.75 mm²	yellow	gray	black	yellow	gray	black	
	PVC	016	216	616	016	216	616	
	PUR/PVC (UL/CSA)	026	226	626	026	226	626	
	PUR (UL/CSA), robots/C-tracks	036	236	636	036	236	636	
	PUR (UL/CSA), welding spark	056	256	656	056	256	656	
3	Cable Length							
	1.5 m	0150						
	3.0 m	0300						
	5.0 m	0500						
	7.5 m	0750						
	10.0 m	1000						
Technical Data								
Operating voltage		24 V AC/DC ±25%			24 V AC ±20% / DC ±25%			
Protection		IP67 inserted and tightened (EN 60529)						
Temperature range		-25...+85 °C, depending on cable quality						
Article No.								
The composition of your article number is explained on page 3.1.i		7000 - -						
		1 Form		2 Cable Type		3 Cable Length		
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.						

VALVE CONNECTORS

MSUD

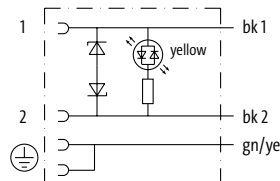
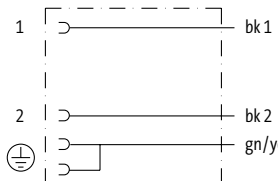
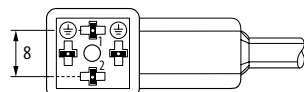
– with open ended wires

Approvals: 

* only for products with UL/CSA approved cable

Form C (8 mm)



1 Form		80041			80061		
Type		110 V AC/DC ±10%			max. 230 V AC/DC		
		LED and suppression			without components		
Circuit diagram							
Contact layout							
2 Cable Type		Jacket Color			Jacket Color		
Wire diameter 0.75 mm²		yellow	gray	black	yellow	gray	black
PVC		016	216	616	016	216	616
PUR/PVC (UL/CSA)		026	226	626	026	226	626
PUR (UL/CSA), robots/C-tracks		036	236	636	036	236	636
PUR (UL/CSA), welding spark		056	256	656	056	256	656
3 Cable Length							
1.5 m		0150					
3.0 m		0300					
5.0 m		0500					
7.5 m		0750					
10.0 m		1000					
Technical Data							
Operating voltage		110 V AC/DC ±10%			max. 230 V AC/DC		
Protection		IP67 inserted and tightened (EN 60529)					
Temperature range		-25...+85 °C, depending on cable quality					
Article No.							
The composition of your article number is explained on page 3.1.i		7000 - -					
		1 Form		2 Cable Type		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.					

| VALVE CONNECTORS

MSUD

– with open ended wires

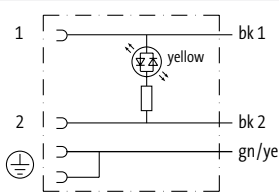
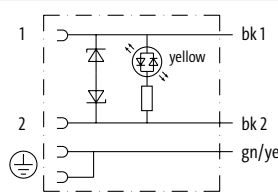
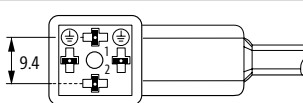
Approvals: 

* only for products with UL/CSA approved cable

Form CI (9.4 mm)

Industrial standard



1	Form	94001			94021					
	Type	24 V AC/DC ±25%			24 V AC ±20% / DC ±25%					
		LED			LED and suppression					
	Circuit diagram									
	Contact layout									
2	Cable Type	Jacket Color			Jacket Color					
	Wire diameter 0.75 mm²	yellow	gray	black	yellow	gray	black			
	PVC	016	216	616	016	216	616			
	PUR/PVC (UL/CSA)	026	226	626	026	226	626			
	PUR (UL/CSA), robots/C-tracks	036	236	636	036	236	636			
	PUR (UL/CSA), welding spark	056	256	656	056	256	656			
3	Cable Length									
	1.5 m	0150								
	3.0 m	0300								
	5.0 m	0500								
	7.5 m	0750								
	10.0 m	1000								
Technical Data										
Operating voltage		24 V AC/DC ±25%			24 V AC ±20% / DC ±25%					
Protection		IP67 inserted and tightened (EN 60529)								
Temperature range		-25...+85 °C, depending on cable quality								
Article No.										
The composition of your article number is explained on page 3.1.i		7 0 0 0 - -								
		1		Form	2		Cable Type	3		Cable Length
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.								

VALVE CONNECTORS

MSUD

– with open ended wires

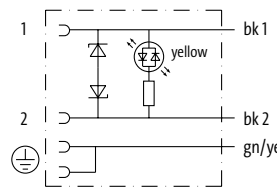
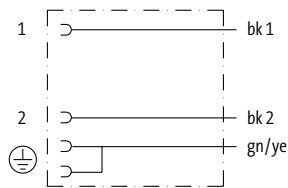
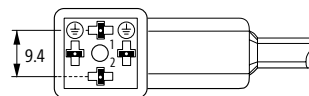
Approvals: 

* only for products with UL/CSA approved cable

Form CI (9.4 mm)

Industrial standard



1	Form	94041			94061		
	Type	110 V AC/DC ±10%			max. 230 V AC/DC		
		LED and suppression			without components		
	Circuit diagram						
Contact layout							
2	Cable Type	Jacket Color			Jacket Color		
	Wire diameter 0.75 mm²	yellow	gray	black	yellow	gray	black
	PVC	016	216	616	016	216	616
	PUR/PVC (UL/CSA)	026	226	626	026	226	626
	PUR (UL/CSA), robots/C-tracks	036	236	636	036	236	636
	PUR (UL/CSA), welding spark	056	256	656	056	256	656
	3	Cable Length					
1.5 m		0150					
3.0 m		0300					
5.0 m		0500					
7.5 m		0750					
10.0 m		1000					
Technical Data							
Operating voltage	110 V AC/DC ±10%			max. 230 V AC/DC			
Protection	IP67 inserted and tightened (EN 60529)						
Temperature range	-25...+85 °C, depending on cable quality						
Article No.							
The composition of your article number is explained on page 3.1.i		7000 - -					
		1 Form		2 Cable Type		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.					

VALVE CONNECTORS

MSUD - MSUD

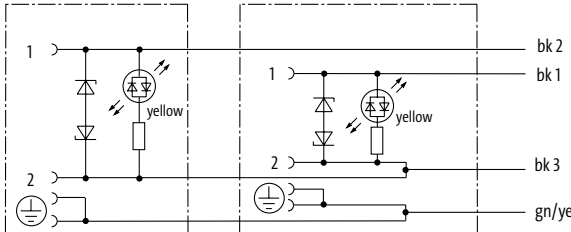
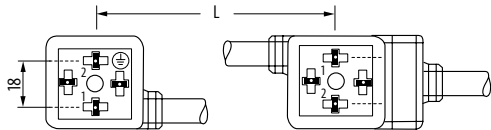
– Double valve plugs with connection cable

Approvals: 

* only for products with UL/CSA approved cable

Form A (18 mm)



1	Form	58001			58021			58041		
	Type	24 V AC ±20% / DC ±25%			24 V AC ±20% / DC ±25%			24 V AC ±20% / DC ±25%		
		LED and suppression			LED and suppression			LED and suppression		
		L = 110 mm			L = 150 mm			L = 200 mm		
Circuit diagram		Valve plug 2 Valve plug 1 Connection cable 								
Contact layout										
2	Cable Type	Jacket Color			Jacket Color			Jacket Color		
	Wire diameter 0.75 mm²	yellow	gray	black	yellow	gray	black	yellow	gray	black
	PVC	017	217	617	017	217	617	017	217	617
	PUR/PVC (UL/CSA)	027	227	627	027	227	627	027	227	627
	PUR (UL/CSA), robots/C-tracks	037	237	637	037	237	637	037	237	637
3	Cable Length									
	1.5 m	0150								
	3.0 m	0300								
	5.0 m	0500								
	7.5 m	0750								
	10.0 m	1000								
Technical Data										
Operating voltage		24 V AC ±20% / DC ±25%								
Protection		IP67 inserted and tightened (EN 60529)								
Temperature range		-25...+85 °C, depending on cable quality								
Article No.										
The composition of your article number is explained on page 3.1.i		7000 - -								
		1 Form			2 Cable Type			3 Cable Length		
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.								

VALVE CONNECTORS

MSUD - MSUD

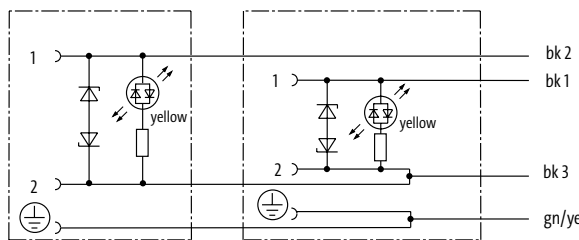
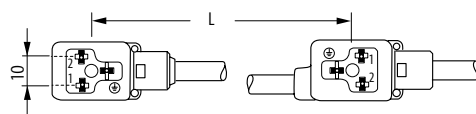
– Double valve plugs with connection cable

Approvals: 

* only for products with UL/CSA approved cable

Form B (10 mm)



1 Form	58201	58221	58241
Type	24 V AC ±20% / DC ±25%	24 V AC ±20% / DC ±25%	24 V AC ±20% / DC ±25%
LED and suppression	LED and suppression	LED and suppression	LED and suppression
L = 100 mm	L = 150 mm	L = 200 mm	
Circuit diagram	Valve plug 2 Valve plug 1 Connection cable 		
Contact layout			
2 Cable Type	Jacket Color		
Wire diameter 0.75 mm²	yellow	gray	black
PVC	017	217	617
PUR/PVC (UL/CSA)	027	227	627
PUR (UL/CSA), robots/C-tracks	037	237	637
3 Cable Length	Jacket Color		
1.5 m	0150		
3.0 m	0300		
5.0 m	0500		
7.5 m	0750		
10.0 m	1000		
Technical Data	Jacket Color		
Operating voltage	24 V AC ±20% / DC ±25%		
Protection	IP67 inserted and tightened (EN 60529)		
Temperature range	-25...+85 °C, depending on cable quality		
Article No.	Jacket Color		
The composition of your article number is explained on page 3.1.i	7 0 0 0	-	-
	1 Form	2 Cable Type	3 Cable Length
Notes	Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.		

VALVE CONNECTORS

MSUD - MSUD

– Double valve plugs with connection cable

Approvals: 

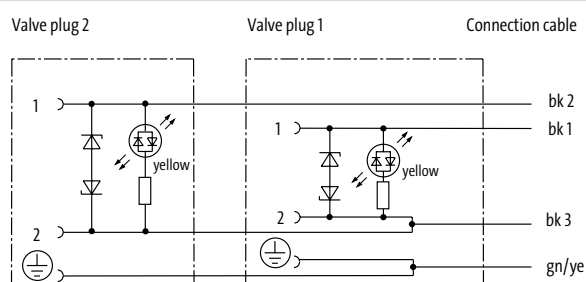
* only for products with UL/CSA approved cable

Form BI (11 mm)

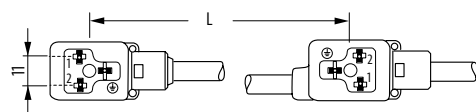


1 Form	58101	58121	58141
Type	24 V AC ±20% / DC ±25%	24 V AC ±20% / DC ±25%	24 V AC ±20% / DC ±25%
	LED and suppression	LED and suppression	LED and suppression
	L = 100 mm	L = 150 mm	L = 200 mm

Circuit diagram



Contact layout



2 Cable Type	Jacket Color			Jacket Color			Jacket Color		
Wire diameter 0.75 mm ²	yellow	gray	black	yellow	gray	black	yellow	gray	black
PVC	017	217	617	017	217	617	017	217	617
PUR/PVC (UL/CSA)	027	227	627	027	227	627	027	227	627
PUR (UL/CSA), robots/C-tracks	037	237	637	037	237	637	037	237	637

3 Cable Length	
1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	24 V AC ±20% / DC ±25%
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

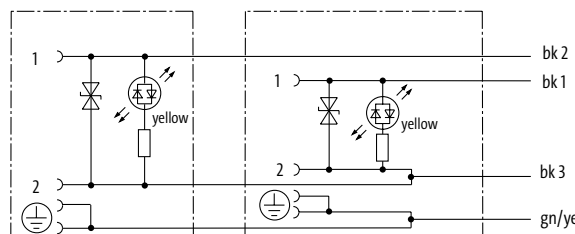
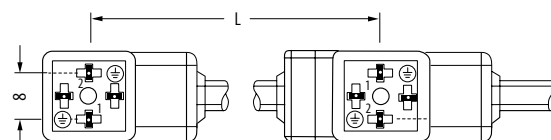
VALVE CONNECTORS

MSUD - MSUD

– Double valve plugs with connection cable

Form C (8 mm)



1	Form	58401	58411	58421									
	Type	24 V AC ±20% / DC ±25%	24 V AC ±20% / DC ±25%	24 V AC ±20% / DC ±25%									
		LED and suppression	LED and suppression	LED and suppression									
		L = 110 mm	L = 150 mm	L = 200 mm									
Circuit diagram		Valve plug 2Valve plug 1Connection cable 											
Contact layout													
2	Cable Type	Jacket Color			Jacket Color			Jacket Color					
	Wire diameter 0.75 mm²	yellow	gray	black	yellow	gray	black	yellow	gray	black			
	PVC	017	217	617	017	217	617	017	217	617			
	PUR/PVC (UL/CSA)	027		627	027		627	027		627			
3	Cable Length												
	1.5 m	0150											
	3.0 m	0300											
	5.0 m	0500											
	7.5 m	0750											
	10.0 m	1000											
	Technical Data												
Operating voltage	24 V AC ±20% / DC ±25%												
Protection	IP67 inserted and tightened (EN 60529)												
Temperature range	-25...+85 °C, depending on cable quality												
Article No.													
The composition of your article number is explained on page 3.1.i		7000 - -											
		1		Form		2		Cable Type		3		Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.											

VALVE CONNECTORS

MSUD - MSUD

– Double valve plugs with connection cable

Form CI (9.4 mm)

Industrial standard



1	Form	58431			58441			58451						
	Type	24 V AC ±20% / DC ±25%			24 V AC ±20% / DC ±25%			24 V AC ±20% / DC ±25%						
		LED and suppression			LED and suppression			LED and suppression						
		L = 110 mm			L = 150 mm			L = 200 mm						
Circuit diagram		Valve plug 2 Valve plug 1 Connection cable												
Contact layout														
2	Cable Type	Jacket Color			Jacket Color			Jacket Color						
	Wire diameter 0.75 mm²	yellow	gray	black	yellow	gray	black	yellow	gray	black				
	PVC	017	217	617	017	217	617	017	217	617				
	PUR/PVC (UL/CSA)	027		627	027		627	027		627				
3	Cable Length													
	1.5 m	0150												
	3.0 m	0300												
	5.0 m	0500												
	7.5 m	0750												
	10.0 m	1000												
Technical Data														
Operating voltage		24 V AC ±20% / DC ±25%												
Protection		IP67 inserted and tightened (EN 60529)												
Temperature range		-25...+85 °C, depending on cable quality												
Article No.														
The composition of your article number is explained on page 3.1.i		7 0 0 0 - -												
		1			Form		2		Cable Type		3		Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.												

| VALVE CONNECTORS

MSUD - MSUD

– Double valve plugs with M12 male, connector top entry

Approvals: 

* only for products with UL/CSA approved cable

Form A (18 mm)



1	Form	41501			41521			41541					
	Type	24 V AC ±20% / DC ±25%			24 V AC ±20% / DC ±25%			24 V AC ±20% / DC ±25%					
		LED and suppression			LED and suppression			LED and suppression					
		L = 110 mm			L = 150 mm			L = 200 mm					
Circuit diagram		Valve plug 2 Valve plug 1 Male M12											
Contact layout													
2	Cable Type	Jacket Color			Jacket Color			Jacket Color					
	Wire diameter 0.75 mm²	yellow	gray	black	yellow	gray	black	yellow	gray	black			
	PVC	016	216	616	016	216	616	016	216	616			
	PUR/PVC (UL/CSA)	026	226	626	026	226	626	026	226	626			
	PUR (UL/CSA), robots/C-tracks	036	236	636	036	236	636	036	236	636			
Technical Data													
Operating voltage		24 V AC ±20% / DC ±25%											
Protection		IP67 inserted and tightened (EN 60529)											
Temperature range		-25...+85 °C, depending on cable quality											
Article No.													
The composition of your article number is explained on page 3.1.i		7 0 0 0 0 - - - - - 0 0 0 0 0											
		1			Form			2			Cable Type		
Notes		Other versions on request.											

| VALVE CONNECTORS

MSUD - MSUD

– Double valve plugs with M12 male, connector at the rear

Approvals: 

* only for products with UL/CSA approved cable

Form A (18 mm)



1	Form	41561			41581			41601		
	Type	24 V AC ±20% / DC ±25%			24 V AC ±20% / DC ±25%			24 V AC ±20% / DC ±25%		
		LED and suppression			LED and suppression			LED and suppression		
		L = 110 mm			L = 150 mm			L = 200 mm		
Circuit diagram		Valve plug 2 Valve plug 1 Male M12								
Contact layout										
2	Cable Type	Jacket Color			Jacket Color			Jacket Color		
	Wire diameter 0.75 mm²	yellow	gray	black	yellow	gray	black	yellow	gray	black
	PVC	016	216	616	016	216	616	016	216	616
	PUR/PVC (UL/CSA)	026	226	626	026	226	626	026	226	626
	PUR (UL/CSA), robots/C-tracks	036	236	636	036	236	636	036	236	636
Technical Data										
Operating voltage		24 V AC ±20% / DC ±25%								
Protection		IP67 inserted and tightened (EN 60529)								
Temperature range		-25...+85 °C, depending on cable quality								
Article No.										
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - 0 0 0 0								
		1		Form		2		Cable Type		
Notes		Other versions on request.								

VALVE CONNECTORS

MSUD - M12

– Connection cables

Form A (18 mm)

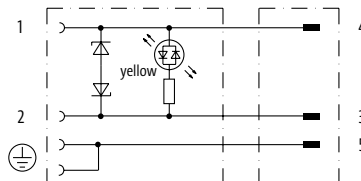
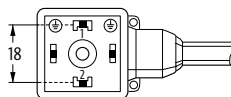
Male M12

straight



Approvals: 

* only for products with UL/CSA approved cable

1 Form		40881			
Type		24 V AC ±20% / DC ±25%			
Circuit diagram		LED and suppression			
					
Contact layout		Female  Male 			
2 Cable Type		Jacket Color			
Wire diameter 0.75 mm²		yellow	gray	black	
PVC		016	216	616	
PUR/PVC (UL/CSA)		026	226	626	
PUR (UL/CSA), robots/C-tracks		036	236	636	
PUR (UL/CSA), welding spark		056	256	656	
3 Cable Length					
0.3 m		0030			
0.6 m		0060			
1.0 m		0100			
1.5 m		0150			
2.0 m		0200			
Technical Data					
Operating voltage		24 V AC ±20% / DC ±25%			
Protection		IP67 inserted and tightened (EN 60529)			
Temperature range		-25...+85 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 0 0 - 4 0 8 8 1 -			
		1 Form		2 Cable Type	
				3 Cable Length	
Notes					
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

VALVE CONNECTORS

MSUD - M12

- Connection cables
- for pressure switches

Approvals: 

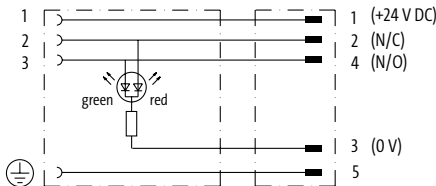
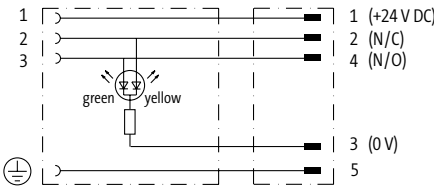
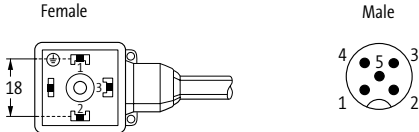
* only for products with UL/CSA approved cable

Form A (18 mm)

Male M12

straight



1	Form	4 0 9 2 1			4 0 9 3 1		
	Type	24 V DC ±25% LED (red/green)			24 V DC ±25% LED (yellow/green)		
	Circuit diagram						
Contact layout							
2	Cable Type	Jacket Color			Jacket Color		
	Wire diameter 0.34 mm²	yellow	gray	black	yellow	gray	black
	PVC (UL/CSA)	015	215 (219)	615 (619)	015	215 (219)	615 (619)
	PUR/PVC (UL/CSA)	025	225	625	025	225	625
	PUR (UL/CSA), robots/C-tracks	035	235	635	035	235	635
	PUR (UL/CSA), welding spark	055	255	655	055	255	655
3	Cable Length						
	0.3 m	0030					
	0.6 m	0060					
	1.0 m	0100					
	1.5 m	0150					
	2.0 m	0200					
Technical Data							
Operating voltage		24 V DC ±25%					
Protection		IP67 inserted and tightened (EN 60529)					
Temperature range		-25...+85 °C, depending on cable quality					
Article No.							
The composition of your article number is explained on page 3.1.i		7000 - -					
		1 Form		2 Cable Type		3 Cable Length	
Notes							
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.					

VALVE CONNECTORS

MSUD - M12

– Connection cables

Form B (10 mm)

Male M12
straight

Form BI (11 mm)

Industrial standard

Male M12
straight



Approvals:

* only for products with UL/CSA approved cable

1 Form		41001			40961			
Type		24 V AC ±20% / DC ±25%			24 V AC ±20% / DC ±25%			
		LED and suppression			LED and suppression			
Circuit diagram								
Contact layout								
2 Cable Type		Jacket Color			Jacket Color			
Wire diameter 0.75 mm²		yellow	gray	black	yellow	gray	black	
PVC		016	216	616	016	216	616	
PUR/PVC (UL/CSA)		026	226	626	026	226	626	
PUR (UL/CSA), robots/C-tracks		036	236	636	036	236	636	
PUR (UL/CSA), welding spark		056	256	656	056	256	656	
3 Cable Length								
0.3 m		0030						
0.6 m		0060						
1.0 m		0100						
1.5 m		0150						
2.0 m		0200						
Technical Data								
Operating voltage		24 V AC ±20% / DC ±25%						
Protection		IP67 inserted and tightened (EN 60529)						
Temperature range		-25...+85 °C, depending on cable quality						
Article No.								
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - - - -						
		1 Form		2 Cable Type		3 Cable Length		
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.						

VALVE CONNECTORS

MSUD - M12

– Connection cables

Approvals: 

* only for products with UL/CSA approved cable

Form C (8 mm)

Male M12
straight



Form CI (9.4 mm)

Industrial standard

Male M12
straight



1 Form

41081

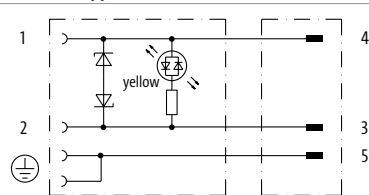
41041

Type

24 V AC $\pm 20\%$ / DC $\pm 25\%$

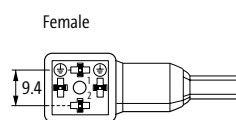
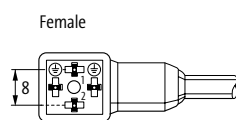
24 V AC $\pm 20\%$ / DC $\pm 25\%$

Circuit diagram



LED and suppression

Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.75 mm²

yellow

gray

black

yellow

gray

black

PVC

016

216

616

016

216

616

PUR/PVC (UL/CSA)

026

226

626

026

226

626

PUR (UL/CSA), robots/C-tracks

036

236

636

036

236

636

PUR (UL/CSA), welding spark

056

256

656

056

256

656

3 Cable Length

0.3 m

0030

0.6 m

0060

1.0 m

0100

1.5 m

0150

2.0 m

0200

Technical Data

Operating voltage

24 V AC $\pm 20\%$ / DC $\pm 25\%$

Protection

IP67 inserted and tightened (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

VALVE CONNECTORS

MSUD - M12

– Adapter

Approvals: 

Form A (18 mm)

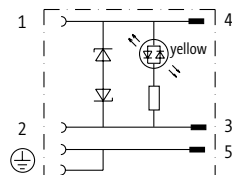
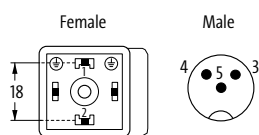
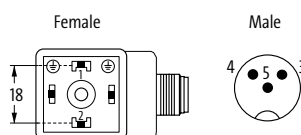
Top connection



Form A (18 mm)

Rear connection



1 Form		41301		41421	
Type	24 V AC ±20% / DC ±25%		24 V AC ±20% / DC ±25%		
	M12, 3-pole		M12, 3-pole		
	LED and suppression		LED and suppression		
Circuit diagram					
Contact layout					
Technical Data					
Operating voltage	24 V AC ±20% / DC ±25%				
Rated surge voltage	0.8 kV				
Operating current per contact	max. 4 A				
Configuration	2 contacts + bridged PE				
Locking of ports	M3/M12 × 1 mm (recommended torque 0.4/0.6 Nm)				
Protection	IP67 inserted and tightened (EN 60529)				
Temperature range	-25...+85 °C				
Article No.					
The composition of your article number is explained on page 3.1.i					
	7 0 0 0 - - 0 0 0 0 0 0 0				
	1 Form				
Notes					
Other versions on request.					

| VALVE CONNECTORS

MSUD - M12

– Adapter

Approvals: 

Form A (18 mm)

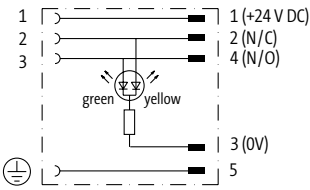
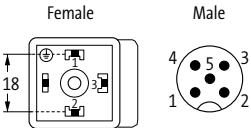
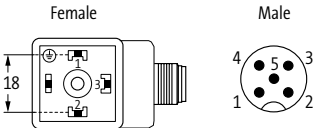
Top connection



Form A (18 mm)

Rear connection



1 Form		413 21	414 41
Type		24 V DC ±25%	24 V DC ±25%
		M12, 5-pole	M12, 5-pole
		for pressure switches	for pressure switches
Circuit diagram			
Contact layout			
Technical Data			
Operating voltage		24 V DC ±25%	
Rated surge voltage		0.8 kV	
Operating current per contact		max. 4 A	
Configuration		3 contacts + PE	
Locking of ports		M3/M12 × 1 mm (recommended torque 0.4/0.6 Nm)	
Protection		IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0	0 0 0 0
		1 Form	
Notes		Other versions on request.	

VALVE CONNECTORS

MSUD - M12

– Adapter

Approvals: 

Form B (10 mm)

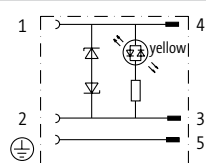
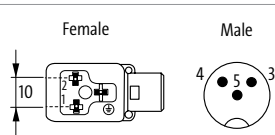
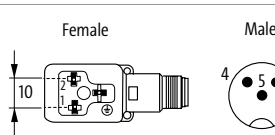
Top connection



Form B (10 mm)

Rear connection



1 Form		419 01		419 61	
Type	24 V AC ±20% / DC ±25%		24 V AC ±20% / DC ±25%		
	M12, 3-pole		M12, 3-pole		
	LED and suppression		LED and suppression		
Circuit diagram					
Contact layout					
Technical Data					
Operating voltage	24 V AC ±20% / DC ±25%				
Rated surge voltage	0.8 kV				
Operating current per contact	max. 4 A				
Configuration	2 contacts + PE				
Locking of ports	M3/M12 × 1 mm (recommended torque 0.4/0.6 Nm)				
Protection	IP67 inserted and tightened (EN 60529)				
Temperature range	-25...+85 °C				
Article No.					
The composition of your article number is explained on page 3.1.i	7 0 0 0		0 0 0		0 0 0 0
	1 Form				
Notes	Other versions on request.				

VALVE CONNECTORS

MSUD - M12

– Adapter

Approvals: 

Form BI (11 mm)

Industrial standard
Top connection



Form BI (11 mm)

Industrial standard
Rear connection



1 Form

42021

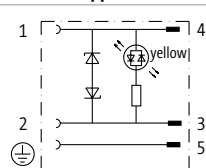
42081

Type

24 V AC $\pm 20\%$ / DC $\pm 25\%$

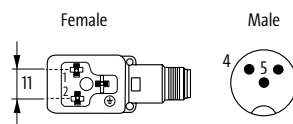
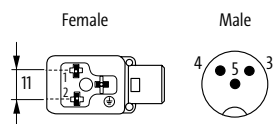
24 V AC $\pm 20\%$ / DC $\pm 25\%$

Circuit diagram



LED and suppression

Contact layout



Technical Data

Operating voltage 24 V AC $\pm 20\%$ / DC $\pm 25\%$

Rated surge voltage 0.8 kV

Operating current per contact max. 4 A

Configuration 2 contacts + PE

Locking of ports M3/M12 $\times$ 1 mm (recommended torque 0.4/0.6 Nm)

Protection IP67 inserted and tightened (EN 60529)

Temperature range -25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

- - - - -

0 0 0

0 0 0 0

1 Form

Notes

Other versions on request.

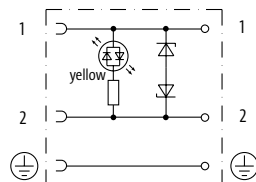
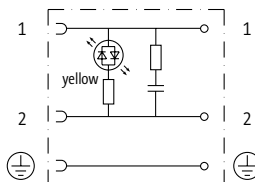
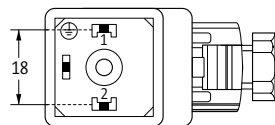
VALVE CONNECTORS

SVS

- Field-wireable
- Convenient connection, screw terminals

Form A (18 mm)



1	Form	29001	29021	29041	29061
	Type	24 V AC ±20% / DC ±25%	24 V AC ±20% / DC ±25%	max. 24 V AC/DC	max. 24 V AC/DC
		LED and Z-diode	LED and Z-diode	LED and RC	LED and RC
		metric	PG9	metric	PG9
	Circuit diagram				
	Contact figure	Cable outlet can be turned in 90° steps			
	Contact layout				
Technical Data					
	Operating voltage	24 V AC ±20% / DC ±25%		max. 24 V AC/DC	
	Operating current per contact	max. 4 A		max. 2 A	
	Configuration	2 contacts + PE			
	Locking of ports	M3 (recommended torque 0.4 Nm)			
	Protection	IP65 inserted and tightened (EN 60529)			
	Temperature range	-20...+60 °C			
Article No.					
The composition of your article number is explained on page 3.1.i	7 0 0 0		0 0 0		0 0 0 0
	1		Form		
Notes		Other versions on request.			

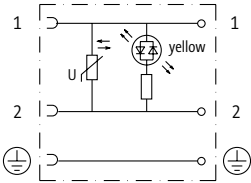
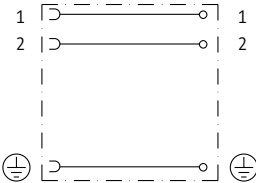
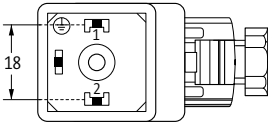
VALVE CONNECTORS

SVS

- Field-wireable
- Convenient connection, screw terminals

Form A (18 mm)



1	Form	29081	29101	29241	29261
Type		max. 110 V AC/DC	max. 110 V AC/DC	max. 230 V AC/DC	max. 230 V AC/DC
LED and VDR			LED and VDR	without components	without components
metric			PG9	metric	PG9
Circuit diagram					
Contact figure Contact layout		Cable outlet can be turned in 90° steps 			
Technical Data					
Operating voltage		max. 110 V AC/DC		max. 230 V AC/DC	
Operating current per contact		max. 1 A		max. 10 A	
Configuration		2 contacts + PE			
Locking of ports		M3 (recommended torque 0.4 Nm)			
Protection		IP65 inserted and tightened (EN 60529)			
Temperature range		-20...+60 °C			
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - 0 0 0 0 0 0 0			
		1 Form			
Notes		Other versions on request.			

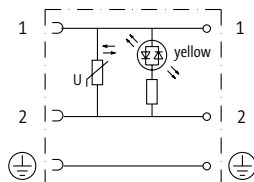
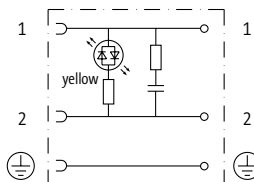
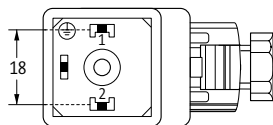
VALVE CONNECTORS

SVS

- Field-wireable
- Convenient connection, screw terminals

Form A (18 mm)



1	Form	29161	29181	29121	29141
	Type	max. 230 V AC/DC	max. 230 V AC/DC	110 V AC/DC and 230 V AC/DC	110 V AC/DC and 230 V AC/DC
		LED and VDR	LED and VDR	LED and RC	LED and RC
		metric	PG9	metric	PG9
	Circuit diagram				
	Contact figure	Cable outlet can be turned in 90° steps			
	Contact layout				
Technical Data					
	Operating voltage	max. 230 V AC/DC		110 V AC/DC and 230 V AC/DC	
	Operating current per contact	max. 1 A			
	Configuration	2 contacts + PE			
	Locking of ports	M3 (recommended torque 0.4 Nm)			
	Protection	IP65 inserted and tightened (EN 60529)			
	Temperature range	-20...+60 °C			
Article No.					
The composition of your article number is explained on page 3.1.i	7 0 0 0 - 1 Form - 0 0 0 0 0 0 0				
	1 Form				
Notes					
	Other versions on request.				

VALVE CONNECTORS

SVS

- Field-wireable
- Convenient connection, screw terminals

Form A (18 mm)



1	Form	29481	29501	29521	29541
	Type	12...30 V DC LED and switching amplifier metric	12...30 V DC LED and switching amplifier PG9	24...230 V AC/DC LED and bridge rectifier metric	24...230 V AC/DC LED and bridge rectifier PG9
	Circuit diagram				
	Contact figure	Cable outlet can be turned in 90° steps			
Contact layout					
Technical Data					
Operating voltage		12...30 V DC		24...230 V AC/DC	
Operating current per contact		max. 2 A (short-circuit protected)		max. 1 A	
Configuration		2 contacts + PE			
Locking of ports		M3 (recommended torque 0.4 Nm)			
Protection		IP65 inserted and tightened (EN 60529)			
Temperature range		-20...+60 °C			
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - 0 0 0 0 0 0 0			
		1 Form			
Notes		Other versions on request.			

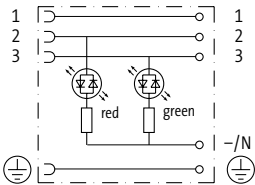
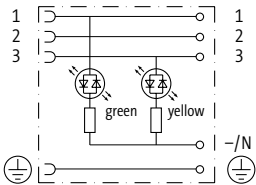
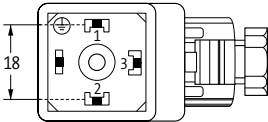
VALVE CONNECTORS

SVS

- Field-wireable
- Convenient connection, screw terminals
- for pressure switches

Form A (18 mm)



1	Form	29281	29301	29441	29461
	Type	24...230 V AC/DC	24...230 V AC/DC	max. 24 V AC/DC	max. 24 V AC/DC
		LED red (2) green (3)	LED red (2) green (3)	LED green (1) yellow (3)	LED green (1) yellow (3)
		metric	PG9	metric	PG9
	Circuit diagram				
	Contact figure	Cable outlet can be turned in 90° steps			
	Contact layout				
Technical Data					
	Operating voltage	24...230 V AC/DC		max. 24 V AC/DC	
	Operating current per contact	max. 4 A			
	Configuration	3 contacts + PE			
	Locking of ports	M3 (recommended torque 0.4 Nm)			
	Protection	IP65 inserted and tightened (EN 60529)			
	Temperature range	-20...+60 °C			
Article No.					
	The composition of your article number is explained on page 3.1.i	7 0 0 0		0 0 0	
		1 Form			
Notes		Other versions on request.			

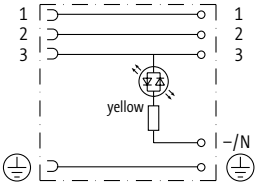
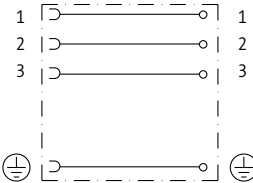
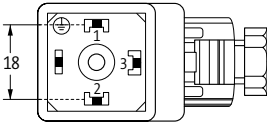
VALVE CONNECTORS

SVS

- Field-wireable
- Convenient connection, screw terminals
- for pressure switches

Form A (18 mm)



1	Form	29361	29381	29401	29421
Type		24...230 V AC/DC	24...230 V AC/DC	max. 230 V AC/DC	max. 230 V AC/DC
		LED yellow (3)	LED yellow (3)	without components	without components
		metric	PG9	metric	PG9
Circuit diagram					
Contact figure		Cable outlet can be turned in 90° steps			
Contact layout					
Technical Data					
Operating voltage		24...230 V AC/DC		max. 230 V AC/DC	
Operating current per contact		max. 4 A		max. 10 A	
Configuration		3 contacts + PE			
Locking of ports		M3 (recommended torque 0.4 Nm)			
Protection		IP65 inserted and tightened (EN 60529)			
Temperature range		-20...+60 °C			
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - 0 0 0 0 0 0 0			
		1 Form			
Notes		Other versions on request.			

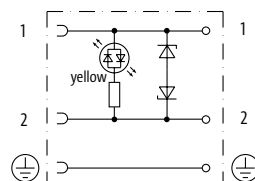
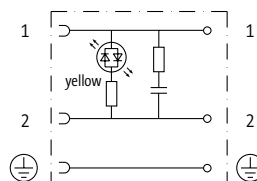
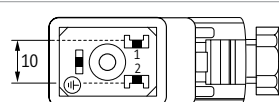
VALVE CONNECTORS

SVS

- Field-wireable
- Convenient connection, screw terminals

Form B (10 mm)



1	Form	29561	29581	29601	29621
	Type	24 V AC ±20% / DC ±25%	24 V AC ±20% / DC ±25%	max. 24 V AC/DC	max. 24 V AC/DC
		LED and Z-diode	LED and Z-diode	LED and RC	LED and RC
		metric	PG9	metric	PG9
	Circuit diagram				
	Contact figure	Cable outlet can be turned in 180° steps			
	Contact layout				
Technical Data					
	Operating voltage	24 V AC ±20% / DC ±25%		max. 24 V AC/DC	
	Operating current per contact	max. 4 A		max. 2 A	
	Configuration	2 contacts + PE			
	Locking of ports	M3 (recommended torque 0.4 Nm)			
	Protection	IP65 inserted and tightened (EN 60529)			
	Temperature range	-20...+60 °C			
Article No.					
	The composition of your article number is explained on page 3.1.i				
		7 0 0 0 - 1 Form - 0 0 0 0 0 0 0			
Notes		Other versions on request.			

VALVE CONNECTORS

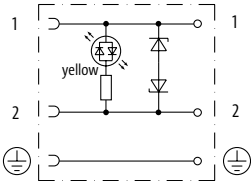
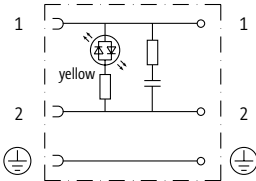
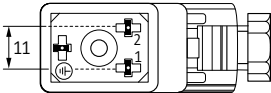
SVS

- Field-wireable
- Convenient connection, screw terminals

Form BI (11 mm)

Industrial standard



1	Form	29801	29821	29841	29861
Type		24 V AC ±20% / DC ±25%	24 V AC ±20% / DC ±25%	max. 24 V AC/DC	max. 24 V AC/DC
		LED and Z-diode	LED and Z-diode	LED and RC	LED and RC
		metric	PG9	metric	PG9
Circuit diagram					
Contact figure		Cable outlet can be turned in 180° steps			
Contact layout					
Technical Data					
Operating voltage		24 V AC ±20% / DC ±25%		max. 24 V AC/DC	
Operating current per contact		max. 4 A		max. 2 A	
Configuration		2 contacts + PE			
Locking of ports		M3 (recommended torque 0.4 Nm)			
Protection		IP65 inserted and tightened (EN 60529)			
Temperature range		-20...+60 °C			
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - 0 0 0 0 0 0 0			
		1 Form			
Notes		Other versions on request.			

VALVE CONNECTORS

MOSA

- Field-wireable
- IDC terminals

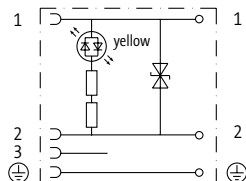
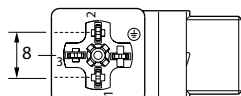
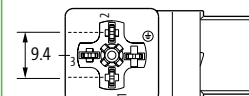
Form C (8 mm)



Form CI (9.4 mm)

Industrial standard



1 Form		80081	94081
Type	24 V AC/DC ±25%	24 V AC/DC ±25%	
	LED and suppression	LED and suppression	
Circuit diagram			
Contact figure	Cable outlet can be turned in 90° steps		
Contact layout			
Technical Data			
Operating voltage	24 V AC/DC ±25%		
Operating current per contact	max. 3 A		
Configuration	3 contacts + PE		
Contact figure	Cable outlet can be turned in 3 × 90° steps		
Protection	IP65 inserted and tightened (EN 60529)		
Temperature range	-25...+85 °C		
Article No.			
The composition of your article number is explained on page 3.1.i	7 0 0 0 - - 0 0 0 0 0 0 0		
	1 Form		
Notes	Other versions on request.		

VALVE CONNECTORS

SVS Eco

- Field-wireable
- Screw terminals
- without components

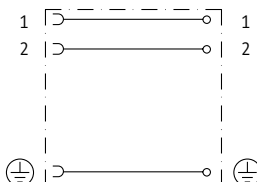
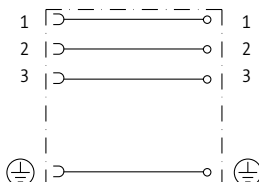
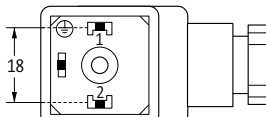
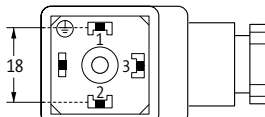
Form A (18 mm)



Form A (18 mm)

for pressure switches



1	Form	29245	29405
Type	max. 250 V AC/DC	max. 250 V AC/DC	
	without components	without components	
	metric	metric	
Circuit diagram			
Contact figure	Cable outlet can be turned in 90° steps		
Contact layout			
Technical Data			
Operating voltage	max. 250 V AC/DC		
Operating current per contact	max. 10 A		
Configuration	2 contacts + PE	3 contacts + PE	
Locking of ports	M3 (recommended torque 0.4 Nm)		
Contact figure	Cable outlet can be turned in 90° steps		
Protection	IP65 inserted and tightened (EN 60529)		
Temperature range	-40...+90 °C		
Article No.			
The composition of your article number is explained on page 3.1.i	7000 - - 000 0000		
	1 Form		
Notes	Other versions on request.		

VALVE CONNECTORS

SVS Eco

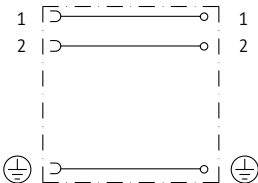
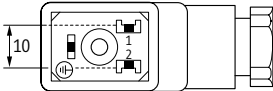
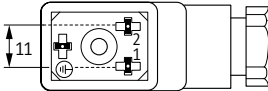
- Field-wireable
- Screw terminals
- without components

Form B (10 mm)



Form BI (11 mm)



1 Form		29765		30005	
Type		max. 250 V AC/DC without components metric		max. 250 V AC/DC without components metric	
Circuit diagram					
Contact figure		Cable outlet can be turned in 180° steps			
Contact layout					
Technical Data					
Operating voltage		max. 250 V AC/DC			
Operating current per contact		max. 10 A			
Configuration		2 contacts + PE			
Locking of ports		M3 (recommended torque 0.4 Nm)			
Contact figure		Cable outlet can be turned in 180° steps			
Protection		IP65 inserted and tightened (EN 60529)			
Temperature range		-40...+90 °C			
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 0 0		0 0 0	
		1 Form			
Notes					
Other versions on request.					

VALVE CONNECTORS

- SVS Eco
- Field-wireable
- Screw terminals
- without components

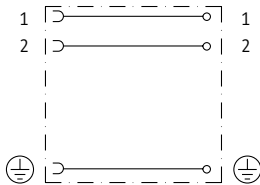
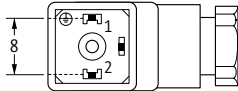
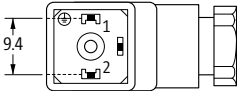
Form C (8 mm)



Form CI (9.4 mm)

Industrial standard



1	Form	30055		30155	
	Type	max. 250 V AC/DC		max. 250 V AC/DC	
		without components		without components	
		metric		metric	
Circuit diagram					
Contact figure	Cable outlet can be turned in 90° steps				
Contact layout					
Technical Data					
Operating voltage	max. 250 V AC/DC				
Operating current per contact	max. 6 A				
Configuration	2 contacts + PE				
Locking of ports	M2.5 (recommended torque 0.4 Nm)			M3 (recommended torque 0.4 Nm)	
Contact figure	Cable outlet can be turned in 90° steps				
Protection	IP65 inserted and tightened (EN 60529)				
Temperature range	-40...+90 °C				
Article No.					
The composition of your article number is explained on page 3.1.i		7000 - - 000 0000			
		1Form			
Notes					
Other versions on request.					

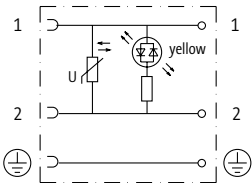
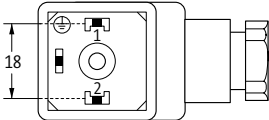
VALVE CONNECTORS

SVS Eco, LED

- Field-wireable
- Screw terminals

Form A (18 mm)



1	Form	29005	29085	29165
	Type	24 V AC/DC ±10%	110 V AC/DC ±10%	230 V AC/DC
		LED and VDR	LED and VDR	LED and VDR
		metric	metric	metric
	Circuit diagram			
	Contact figure	Cable outlet can be turned in 90° steps		
	Contact layout			
Technical Data				
	Operating voltage	24 V AC/DC ±10%	110 V AC/DC ±10%	230 V AC/DC ±10%
	Operating current per contact	max. 1.5 A		
	Configuration	2 contacts + PE		
	Locking of ports	M3 (recommended torque 0.4 Nm)		
	Contact figure	Cable outlet can be turned in 90° steps		
	Protection	IP65 inserted and tightened (EN 60529)		
	Temperature range	-40...+60 °C		
Article No.				
	The composition of your article number is explained on page 3.1.i			
		7 0 0 0 - - 0 0 0 0 0 0 0		
		1	Form	
Notes				
		Other versions on request.		

| VALVE CONNECTORS

SVS Eco, LED

– Field-wireable

– Screw terminals

Form B (10 mm)



1	Form	29565	29645	29685
	Type	24 V AC/DC ±10%	110 V AC/DC ±10%	230 V AC/DC ±10%
		LED and VDR	LED and VDR	LED and VDR
		metric	metric	metric
	Circuit diagram			
	Contact figure	Cable outlet can be turned in 180° steps		
	Contact layout			
	Technical Data			
	Operating voltage	24 V AC/DC ±10%	110 V AC/DC ±10%	230 V AC/DC ±10%
	Operating current per contact	max. 1.5 A		
	Configuration	2 contacts + PE		
	Locking of ports	M3 (recommended torque 0.4 Nm)		
	Contact figure	Cable outlet can be turned in 180° steps		
	Protection	IP65 inserted and tightened (EN 60529)		
	Temperature range	-40...+60 °C		
	Article No.			
	The composition of your article number is explained on page 3.1.i	<u>7</u> <u>0</u> <u>0</u> <u>0</u>	- - - - -	- <u>0</u> <u>0</u> <u>0</u> <u>0</u> <u>0</u> <u>0</u>
		1	Form	
	Notes	Other versions on request.		

VALVE CONNECTORS

SVS Eco, LED

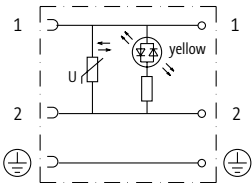
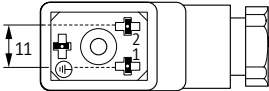
– Field-wireable

– Screw terminals

Form BI (11 mm)

Industrial standard



1	Form	29805	29885	29925	
	Type	24 V AC/DC ±10%	110 V AC/DC ±10%	230 V AC ±10%	
		LED and VDR	LED and VDR	LED and VDR	
		metric	metric	metric	
	Circuit diagram				
	Contact figure	Cable outlet can be turned in 180° steps			
	Contact layout				
	Technical Data				
	Operating voltage	24 V AC/DC ±10%	110 V AC/DC ±10%	230 V AC ±10%	
	Operating current per contact	max. 1.5 A			
	Configuration	2 contacts + PE			
	Locking of ports	M3 (recommended torque 0.4 Nm)			
	Contact figure	Cable outlet can be turned in 180° steps			
	Protection	IP65 inserted and tightened (EN 60529)			
	Temperature range	-40...+60 °C			
	Article No.				
	The composition of your article number is explained on page 3.1.i	7 0 0 0 - 1 Form - 0 0 0 0 0 0 0			
		1	Form		
	Notes	Other versions on request.			

| VALVE CONNECTORS

SVS Eco, LED

– Field-wireable

– Screw terminals

Form C (8 mm)



1	Form	30105	30115	30125
	Type	24 V AC/DC ±10%	110 V AC/DC ±10%	230 V AC/DC ±10%
	LED and VDR		LED and VDR	LED and VDR
		metric	metric	metric
	Circuit diagram			
Contact figure		Cable outlet can be turned in 90° steps		
Contact layout				
Technical Data				
Operating voltage		24 V AC/DC ±10%	110 V AC/DC ±10%	230 V AC/DC ±10%
Operating current per contact		max. 1.5 A		
Configuration		2 contacts + PE		
Locking of ports		M2.5 (recommended torque 0.4 Nm)		
Contact figure		Cable outlet can be turned in 90° steps		
Protection		IP65 inserted and tightened (EN 60529)		
Temperature range		-40...+60 °C		
Article No.				
The composition of your article number is explained on page 3.1.i		<u>7</u> <u>0</u> <u>0</u> <u>0</u>	- - - - -	<u>0</u> <u>0</u> <u>0</u> <u>0</u>
		1	Form	
Notes		Other versions on request.		

VALVE CONNECTORS

SVS Eco, LED

– Field-wireable

– Screw terminals

Form CI (9.4 mm)

Industrial standard



1 Form		30205	30215
Type		24 V AC/DC $\pm 10\%$	110 V AC/DC $\pm 10\%$
		LED and VDR	LED and VDR
		metric	metric
Circuit diagram			
Contact figure		Cable outlet can be turned in 90° steps	
Contact layout			
Technical Data			
Operating voltage		24 V AC/DC $\pm 10\%$	110 V AC/DC $\pm 10\%$
Operating current per contact		max. 1.5 A	
Configuration		2 contacts + PE	
Locking of ports		M3 (recommended torque 0.4 Nm)	
Contact figure		Cable outlet can be turned in 90° steps	
Protection		IP65 inserted and tightened (EN 60529)	
Temperature range		-40...+60 °C	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0	0 0 0 0
		1 Form	
Notes		Other versions on request.	

VALVE CONNECTORS

Labeling accessories			Art-No.
	ACS label plate (KM 5)		
	for self marking (9 × 20 mm)		7000-99001-0000000
	for self marking with ADEMARK markers		7000-99003-0000000
Gasket accessories			Art-No.
	Silicon gasket	Valve plug (form A)	7000-99011-0000000
	Flat gasket, NBR	Valve plug (form A)	7000-99012-0000000
	Silicon gasket	Valve plug (form B, BI)	7000-99013-0000000
	Flat gasket, NBR	Valve plug (form B, BI)	7000-99014-0000000
	Accessories set		
	Screw, isolation plate, label plate, flat gasket	Valve plug (form A)	7000-99015-0000000
	Screw, isolation plate, label plate, flat gasket	Valve plug (form A), field wireable	7000-99016-0000000
	Screw, isolation plate, label plate, flat gasket	Valve plug (form B, BI)	7000-99017-0000000
	Screw, isolation plate, label plate, flat gasket	Valve plug (form B, BI), field wireable	7000-99018-0000000
	Screw, isolation plate, label plate, flat gasket	Valve plug (form C)	7000-99019-0000000
	Screw, isolation plate, label plate, flat gasket	Valve plug (form CI)	7000-99020-0000000
	Hexagonal screw		
	Metal	Valve plug (form A)	7000-99021-0000000
	Metal	Valve plug (form A, B, BI), field wireable	7000-99022-0000000
	Stainless Steel 1.4404 (V4A)	Valve plug (form A)	7000-99024-0000000
	Plastic	Valve plug (form A)	7000-99023-0000000
	Gasket for valve plug socket		
	2 contacts + PE and 3 contacts + PE	Valve plug (form A)	7000-99251-0000000
	2 contacts + PE and 3 contacts + PE	Valve plug (form A)	7000-99255-0000000
	FPM		
	2 contacts + PE	Valve plug (form B)	7000-99271-0000000
	2 contacts + PE	Valve plug (form BI)	7000-99261-0000000
	2 contacts + PE and 3 contacts + PE	Valve plug (form C)	7000-99291-0000000
	2 contacts + PE and 3 contacts + PE	Valve plug (form CI)	7000-99281-0000000
End fitting accessories			Art-No.
	Cable compression gland PG 9		
	(gray)	Valve plug (form A, B, BI), field wireable	7000-99025-0000000
	(black)	Valve plug (form A, B, BI), field wireable	7000-99026-0000000

VALVE CONNECTORS

End fitting accessories			Art-No.
	Tube adapter snap-in for corrugated tube (size 13mm)	Cable diameter (4...7 mm)	7000-99081-0000000
	Valve plug socket 2 contacts + PE	Valve plug (form A)	7000-99201-0000000
	2 contacts + PE	Valve plug (form B)	7000-99221-0000000
	2 contacts + PE	Valve plug (form Bl)	7000-99211-0000000
	2 contacts + PE	Valve plug (form C)	7000-99241-0000000
	2 contacts + PE	Valve plug (form Cl)	7000-99231-0000000
	Valve plug socket 3 contacts + PE	Valve plug (form A)	7000-99205-0000000
	3 contacts + PE	Valve plug (form C)	7000-99245-0000000
	3 contacts + PE	Valve plug (form Cl)	7000-99235-0000000

Cables										
yellow	gray	black	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
010	210	610	3 × 0.25 mm ²	PVC (br, bl, bk)		PVC (UL/CSA)	4.5 ±5%	10 × outer Ø	-30...+80 °C	-5...+80 °C
011	211	611	4 × 0.25 mm ²	PVC (br, wh, bl, bk)		PVC (UL/CSA)	4.8 ±5%	10 × outer Ø	-30...+80 °C	-5...+80 °C
013	213	613	3 × 0.34 mm ²	PVC (br, bl, bk)		PVC (UL/CSA)	4.6 ±5%	10 × outer Ø	-30...+80 °C	-5...+80 °C
014	214	614	4 × 0.34 mm ²	PVC (br, wh, bl, bk)		PVC (UL/CSA)	5.0 ±5%	10 × outer Ø	-30...+80 °C	-5...+80 °C
015	215	615	5 × 0.34 mm ²	PVC (br, wh, bl, bk, gnye)		PVC (UL/CSA)	5.2 ±5%	10 × outer Ø	-30...+80 °C	-5...+80 °C
–	219	619	5 × 0.34 mm ²	PVC (br, wh, bl, bk, gr)		PVC (UL/CSA)	5.2 ±5%	10 × outer Ø	-30...+80 °C	-5...+80 °C
015	215	615	5 × 0.34 mm ²	PVC (br, wh, bl, bk, gnye)		PVC (UL/CSA)	5.2 ±5%	10 × outer Ø	-30...+80 °C	-5...+80 °C
016	216	616	3 × 0.75 mm ²	PVC (bk num, gnye)		PVC	5.9 ±5%	10 × outer Ø	-30...+70 °C	-5...+70 °C
017	217	617	4 × 0.75 mm ²	PVC (bk num, gnye)		PVC	6.5 ±5%	10 × outer Ø	-30...+70 °C	-5...+70 °C
018	218	618	5 × 0.75 mm ²	PVC (bk num, gnye)		PVC	7.0 ±5%	10 × outer Ø	-30...+70 °C	-5...+70 °C
020	220	620	3 × 0.25 mm ²	PVC (br, bl, bk)	2 Mio.	PUR/PVC (UL/CSA)	4.5 ±5%	15 × outer Ø	-30...+80 °C	-5...+80 °C
021	221	621	4 × 0.25 mm ²	PVC (br, wh, bl, bk)	2 Mio.	PUR/PVC (UL/CSA)	4.8 ±5%	15 × outer Ø	-30...+80 °C	-5...+80 °C
023	223	623	3 × 0.34 mm ²	PVC (br, bl, bk)	2 Mio.	PUR/PVC (UL/CSA)	4.9 ±5%	15 × outer Ø	-30...+80 °C	-5...+80 °C
024	224	624	4 × 0.34 mm ²	PVC (br, wh, bl, bk)	2 Mio.	PUR/PVC (UL/CSA)	5.2 ±5%	15 × outer Ø	-30...+80 °C	-5...+80 °C
025	225	625	5 × 0.34 mm ²	PVC (br, wh, bl, bk, gnye)	2 Mio.	PUR/PVC (UL/CSA)	5.9 ±5%	15 × outer Ø	-30...+80 °C	-5...+80 °C
025	225	625	5 × 0.34 mm ²	PVC (br, wh, bl, bk, gnye)	2 Mio.	PUR/PVC (UL/CSA)	5.9 ±5%	15 × outer Ø	-30...+80 °C	-5...+80 °C
026	226	626	3 × 0.75 mm ²	PVC (bk num, gnye)	2 Mio.	PUR/PVC (UL/CSA)	5.9 ±5%	15 × outer Ø	-30...+80 °C	-5...+80 °C
027	227	627	4 × 0.75 mm ²	PVC (bk num, gnye)	2 Mio.	PUR/PVC (UL/CSA)	6.5 ±5%	15 × outer Ø	-30...+80 °C	-5...+80 °C
028	228	628	5 × 0.75 mm ²	PVC (bk num, gnye)	2 Mio.	PUR/PVC (UL/CSA)	7.0 ±5%	15 × outer Ø	-30...+80 °C	-5...+80 °C
030	230	630	3 × 0.25 mm ²	PP (br, bl, bk)	5 Mio.	PUR (UL/CSA)	4.3 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
031	231	631	4 × 0.25 mm ²	PP (br, wh, bl, bk)	5 Mio.	PUR (UL/CSA)	4.7 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
033	233	633	3 × 0.34 mm ²	PP (br, bl, bk)	5 Mio.	PUR (UL/CSA)	4.3 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
034	234	634	4 × 0.34 mm ²	PP (br, wh, bl, bk)	5 Mio.	PUR (UL/CSA)	4.7 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
035	235	635	5 × 0.34 mm ²	PP (br, wh, bl, bk, gnye)	5 Mio.	PUR (UL/CSA)	5.0 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
126	–	732	5 × 0.34 mm ²	PP (br, wh, bl, bk, gr)	5 Mio.	PUR (UL/CSA)	5.0 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
035	235	635	5 × 0.34 mm ²	PP (br, wh, bl, bk, gnye)	5 Mio.	PUR (UL/CSA)	5.0 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
036	236	636	3 × 0.75 mm ²	PP (bk num, gnye)	5 Mio.	PUR (UL/CSA)	5.9 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
037	237	637	4 × 0.75 mm ²	PP (bk num, gnye)	5 Mio.	PUR (UL/CSA)	6.5 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
038	238	638	5 × 0.75 mm ²	PP (bk num, gnye)	5 Mio.	PUR (UL/CSA)	7.0 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
050	250	650	3 × 0.25 mm ²	PP (br, bl, bk)	10 Mio.	PUR (UL/CSA),welding spark	4.3 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
051	251	651	4 × 0.25 mm ²	PP (br, wh, bl, bk)	10 Mio.	PUR (UL/CSA),welding spark	4.7 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
053	253	653	3 × 0.34 mm ²	PP (br, bl, bk)	10 Mio.	PUR (UL/CSA),welding spark	4.3 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
054	254	654	4 × 0.34 mm ²	PP (br, wh, bl, bk)	10 Mio.	PUR (UL/CSA),welding spark	4.7 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
055	255	655	5 × 0.34 mm ²	PP (br, wh, bl, bk, gnye)	10 Mio.	PUR (UL/CSA),welding spark	5.0 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
055	255	655	5 × 0.34 mm ²	PP (br, wh, bl, bk, gnye)	10 Mio.	PUR (UL/CSA),welding spark	5.0 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
056	256	656	3 × 0.75 mm ²	PP (bk num, gnye)	10 Mio.	PUR (UL/CSA),welding spark	5.2 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
114	292	722	8 × 0.25 mm ²	PP (wh, br, gn, ye, gr, pk, bl, rd)	5 Mio.	PUR (UL/CSA)	6.0 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C

CABLES

Cables								
green	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
659 shielded	2×2×0.34 mm²	PE (wh, ye, bl, or)	2 Mio.	PUR (UL/CSA)	7.4 ±5%	12 × outer Ø	-40...+80 °C	-30...+70 °C
794 shielded	2×2×0.34 mm²	PE (wh, ye, bl, or)		PUR (UL/CSA)	6.5 ±5%	12 × outer Ø	-40...+80 °C	-20...+60 °C

green	black	red	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
478	380	578	4×2×0.14 mm²	PE (bkor, or, bkgn, gn, bkbl, bl, bkbr, br)		FRNC	5.9 ±5%	3 × outer-Ø	0...+50 °C	-20...+60 °C
796 shielded	851 shielded	792 shielded	2×2×0.34 mm²	PO (wh, ye, bl, or)	3 Mio.	PUR (UL/CSA)	6.7 ±5%	12 × outer Ø	-40...+80 °C	-30...+70 °C

gray	black	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
200 shielded	600 shielded	3 × 0.34 mm²	PVC (br, bl, bk)		PVC (UL/CSA)	5.0 ±5%		-30...+80 °C	-5...+80 °C
201 shielded	601 shielded	4 × 0.34 mm²	PVC (br, wh, bl, bk)		PVC (UL/CSA)	5.3 ±5%		-30...+80 °C	-5...+80 °C
202 shielded	602 shielded	5 × 0.34 mm²	PVC (br, wh, bl, bk, gnye)		PVC (UL/CSA)	5.6 ±5%		-30...+80 °C	-5...+80 °C
203 shielded	603 shielded	5 × 0.34 mm²	PVC (br, wh, bl, bk, gr)		PVC (UL/CSA)	5.6 ±5%		-30...+80 °C	-5...+80 °C
204 shielded	604 shielded	8 × 0.25 mm²	PVC (bl, wh, gn, ye, gr, pk, rd, br)		PVC (UL/CSA)	7.0 ±5%		-30...+80 °C	-5...+80 °C
205 shielded	605 shielded	8 × 0.25 mm²	PVC (br, wh, bl, bk, gr, pk, vi, or)		PVC (UL/CSA)	7.0 ±5%		-30...+80 °C	-5...+80 °C
206 shielded	706 shielded	12 × 0.14 mm²	PP (br, bl, wh, gn, pk, ye, bk, gr, rd, vi, grpk, rdbl)	5 Mio.	PUR (UL/CSA)	6.5 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
207	607	8 × 0.25 mm²	PVC (bl, wh, gn, ye, gr, pk, rd, br)		PVC (UL/CSA)	6.0 ±5%	10 × outer Ø	-30...+80 °C	-5...+80 °C
208	608	8 × 0.25 mm²	PVC (br, wh, bl, bk, gr, pk, vi, or)		PVC (UL/CSA)	6.0 ±5%	10 × outer Ø	-30...+80 °C	-5...+80 °C
209	609	12 × 0.14 mm²	PVC (br, bl, wh, gn, pk, ye, bk, gr, rd, vi, grpk, rdbl)		PVC (UL/CSA)	6.0 ±5%	10 × outer Ø	-30...+80 °C	-5...+80 °C
240 shielded	640 shielded	3 × 0.34 mm²	PP (br, bl, bk)	5 Mio.	PUR (UL/CSA)	5.0 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
241 shielded	641 shielded	4 × 0.34 mm²	PP (br, wh, bl, bk)	5 Mio.	PUR (UL/CSA)	5.3 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
242 shielded	642 shielded	5 × 0.34 mm²	PP (br, wh, bl, bk, gnye)	5 Mio.	PUR (UL/CSA)	5.6 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
243 shielded	643 shielded	5 × 0.34 mm²	PP (br, wh, bl, bk, gr)	5 Mio.	PUR (UL/CSA)	5.6 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
291 shielded	717 shielded	8 × 0.25 mm²	PP (wh, br, gn, ye, gr, pk, bl, rd)	5 Mio.	PUR (UL/CSA)	7.0 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
294 shielded	715 shielded	8 × 0.25 mm²	PP (br, wh, bl, bk, gr, pk, vi, or)	5 Mio.	PUR (UL/CSA)	7.0 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C

Technical Appendix

Cables									
black	violet	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
838 shielded	803 shielded	2×0.25 + 2×0.34 mm ²	PE (rd, bk), (bl, wh)		PUR (UL/CSA)	6.9 ±5%	10 × outer Ø	-40...+80 °C	-30...+70 °C

black	green	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
805	831	4×0.5 + 1×4×0.14 mm ²	PUR (bl, wh, br, bk, (whor, or)) + (whgn, gn)	5 Mio.	PUR (UL/CSA)	8.1 ±5%	10 × outer Ø	-50...+80 °C	-40...+80 °C

black	yellow	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
754	145	2 × 0.75 mm ²	PP (br, bl)	5 Mio.	PUR (UL/CSA)	5.0 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C

multi-colored	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
901	4 × 0.34 mm ²	PVC (br, wh, bl, bk)			1.3 ±5%		-40...+105 °C	-5...+105 °C
902	5 × 0.34 mm ²	PVC (br, wh, bl, bk, gr)			1.4 ±5%		-40...+105 °C	-5...+105 °C
903	8 × 0.25 mm ²	PVC (bl, wh, gn, ye, gr, pk, rd, br)			1.15 ±5%		-40...+105 °C	-5...+105 °C
910	3 × 0.25 mm ²	PVC (br, bl, bk)			1.15 ±5%		-40...+105 °C	-5...+105 °C
911	4 × 0.25 mm ²	PVC (br, wh, bl, bk)			2.0 ±5%		-40...+105 °C	-5...+105 °C
940	4 × 1.5 mm ²	PPE (bk num, gnye)					-40...+85 °C	
941	4 × 1.5 mm ²	PVC (br, wh, bl, bk)					-40...+85 °C	
969	4 × 0.25 mm ²	PP (br, bk, bl, wh)			1.1 ±5%		-40...+90 °C	-25...+90 °C
970	3 × 0.25 mm ²	PP (br, bk, bl)			1.1 ±5%		-40...+90 °C	-25...+90 °C
971	4 × 0.34 mm ²	PP (br, wh, bl, bk)			1.3 ±5%		-40...+90 °C	-25...+90 °C
973	8 × 0.25 mm ²	PUR (wh, br, gn, ye, gr, pk, bl, rd)			1.25 ±5%		-40...+90 °C	-25...+90 °C
975	5 × 0.34 mm ²	PUR (br, wh, bl, bk, gnye)			1.3 ±5%		-40...+90 °C	-25...+90 °C
972	5 × 0.34 mm ²	PUR (br, wh, bl, bk, gr)			1.3 ±5%		-40...+90 °C	-25...+90 °C
978	5 × 0.75 mm ²	PVC (br, wh, bl, bk, gnye)			3.1 ±5%		-25...+85 °C	-10...+50 °C
980	5 × 1.5 mm ²	PUR (br, wh, bl, bk, gr)			2.4 ±5%		-40...+90 °C	-25...+90 °C
P80	6 × 2.5 mm ²	PVC (bk, bl, num, gnye)			3.7 ±5%		-40...+70 °C	
P81	4 × 1.5 mm ²	PVC (bk num, gnye)			3.1 ±5%		-40...+70 °C	
P82	4 × 2.5 mm ²	PVC (bk num, gnye)			3.7 ±5%		-40...+70 °C	

gray	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
202 shielded	5 × 0.34 mm ²	PVC (br, wh, bl, bk, gnye)		PVC (UL/CSA)	5.6 ±5%		-30...+80 °C	-5...+80 °C
203 shielded	5 × 0.34 mm ²	PVC (br, wh, bl, bk, gr)		PVC (UL/CSA)	5.6 ±5%		-30...+80 °C	-5...+80 °C
215	5 × 0.34 mm ²	PVC (br, wh, bl, bk, gnye)		PVC (UL/CSA)	5.2 ±5%	10 × outer Ø	-30...+80 °C	-5...+80 °C
295	8 × 0.25 mm ²	PP (br, wh, bl, bk, gr, pk, vi, or)	5 Mio.	PUR (UL/CSA)	6.0 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C

CABLES

Cables								
gray	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
301	12 × 0.25 mm ²	PP (br, bl, wh, gn, pk, ye, bk, gr, rd, vi, grpk, rdbl)	3 Mio.	PUR (UL/CSA)	6.9 ±5%	15 × outer Ø	-40...+80 °C	-20...+80 °C
302	12 × 0.25 mm ²	PP (br, bl, wh, gn, pk, ye, bk, gr, rd, vi, grpk, rdbl)	5 Mio.	PUR (UL/CSA),welding spark	6.9 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
336	4 × 0.34 mm ²	TPE-S (br, wh, bl, bk)		TPE-S	5.2 ±5%	15 × outer Ø	-50...+125 °C	-30...+105 °C
414	2 × 0.5 mm ²	PP (br, bl)	5 Mio.	PUR (UL/CSA)	4.4 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
588	2 × 1.5 mm ²	PP (br, bl)	5 Mio.	PUR (UL/CSA)	8.0 ±5%	15 × outer Ø	-50...+80 °C	-25...+80 °C
777	2×2×AWG26	FRNC (wh, bl, wh, or)		FRNC	5.0 ±5%	10 × outer Ø	0...+50 °C	-20...+60 °C
862	4 × 0.75 mm ²	PP (br, wh, bl, bk)	5 Mio.	PUR (UL/CSA)	6.5 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
961	5 × 1.5 mm ²	PP (br, wh, bl, bk, gnye)	5 Mio.	PUR (UL/CSA)	8.7 ±5%	10 × outer Ø	-50...+80 °C	-20...+80 °C
962	5 × 2.5 mm ²	PP (br, wh, bl, bk num, gnye)	5 Mio.	PUR (UL/CSA)	9.7 ±5%	10 × outer Ø	-50...+80 °C	-20...+80 °C
965	5 × 1.0 mm ²	PP (br, wh, bl, bk num, gnye)		PUR/PVC	7.2 ±5%	10 × outer Ø	-30...+70 °C	-5...+70 °C
966	5 × 1.5 mm ²	PP (br, wh, bl, bk, gr)		PUR/PVC	8.7 ±5%	10 × outer Ø	-30...+70 °C	-5...+70 °C

yellow	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
150	4 × 0.75 mm ²	PVC (br, wh, bl, bk)	10 Mio.	TPE (UL/CSA)	7.2 ±5%	15 × outer Ø	-40...+105 °C	-20...+90 °C
161	5 × 0.75 mm ²	PVC (br, wh, bl, bk, gnye)	10 Mio.	TPE (UL/CSA)	7.7 ±5%	15 × outer Ø	-40...+105 °C	-20...+90 °C
162	5 × 0.75 mm ²	PVC (br, wh, bl, bk, gr)	10 Mio.	TPE (UL/CSA)	7.7 ±5%	15 × outer Ø	-40...+105 °C	-20...+90 °C
U1B	3 × 1.5 mm ²	PVC (bk, gn, wh)		TPE (UL/CSA)	8.4 ±5%	10 × outer Ø	-50...+105 °C	-20...+90 °C
U1C	4 × 1.5 mm ²	PVC (bk, gn, rd, wh)		TPE (UL/CSA)	9.0 ±5%	10 × outer Ø	-50...+105 °C	-20...+90 °C
U1D	5 × 1.5 mm ²	PVC (bk, or, gn, rd, wh)		TPE (UL/CSA)	9.8 ±5%	10 × outer Ø	-50...+105 °C	-20...+90 °C

green	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
659 shielded	2×2×0.34 mm ²	PE (wh, ye, bl, or)	2 Mio.	PUR (UL/CSA)	7.4 ±5%	12 × outer Ø	-40...+80 °C	-30...+70 °C
790 shielded	4×2×0.14 mm ²	PE (whbl, bl, whor, or, whgn, gn, whbr, br)		PUR (UL/CSA)	6.4 ±5%	12 × outer Ø	-30...+80 °C	-10...+50 °C
791 shielded	1×4×0.15 mm ²	PO (wh, ye, bl, or)	5 Mio.	PUR (UL/CSA)	4.9 ±5%	12 × outer Ø	-20...+80 °C	-20...+50 °C
793 shielded	1×4×0.34 mm ²	PE (wh, ye, bl, or)		PUR (UL/CSA)	6.6 ±5%	12 × outer Ø	-40...+80 °C	-20...+60 °C
794 shielded	2×2×0.34 mm ²	PE (wh, ye, bl, or)		PUR (UL/CSA)	6.5 ±5%	12 × outer Ø	-40...+80 °C	-20...+60 °C
800 shielded	2×2×0.34 mm ²	PE (wh, ye, bl, or)	2 Mio.	PVC (UL/CSA)	6.5 ±5%	15 × outer Ø	-30...+80 °C	-10...+70 °C
802 shielded	4×0.5 + 2×0.25 mm ²	TPE (bl, wh, br, bk), (gr, pk)	5 Mio.	PUR (UL/CSA)	7.9 ±5%	10 × outer Ø	-50...+80 °C	-40...+80 °C
57V shielded	2×2×0.34 mm ²	HDPE (wh, ye, bl, or)	1 Mio.	TPE (UL)	7.9 ±5%	10 × outer Ø	-40...+80 °C	-20...+80 °C

Cables								
violet	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
840 shielded	1×2×0.25 mm ²	PE (rd, gn)	5 Mio.	PUR (UL/CSA)	7.8 ±5%	12 × outer Ø	-40...+80 °C	-20...+60 °C
841 shielded	1×2×0.25 mm ²	PE (rd, gn)	5 Mio.	PUR (UL/CSA)	7.7 ±5%	12 × outer Ø	-40...+80 °C	-20...+60 °C
843 shielded	1×2×0.25 mm ²	PE (rd, gn)		PUR (UL/CSA)	8.0 ±5%	12 × outer Ø	-40...+80 °C	-20...+50 °C
850 shielded	1×2×0.25 mm ²	PE (rd, gn)	2 Mio.	PVC (UL)	7.8 ±5%	12 × outer Ø	-25...+70 °C	-20...+60 °C

black	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
512	2 × 0.75 mm ²	PP (br, bl)	4 Mio.	PUR (UL)	5.0 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
513	3 × 0.75 mm ²	PP (br, bl, bk)	4 Mio.	PUR (UL)	5.3 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
514	4 × 0.75 mm ²	PP (br, wh, bl, bk)	2 Mio.	PUR (UL)	5.7 ±5%	6 × outer Ø		-25...+80 °C
516	6 × 0.75 mm ²	PP (br, gn, ye, gr, pk, wh)	4 Mio.	PUR (UL)	6.9 ±5%	12 × outer Ø	-40...+80 °C	-25...+80 °C
564	3 × 0.75 mm ²	PP (br, bl, bk)	5 Mio.	PUR (UL/CSA)	5.9 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
569	4 × 0.75 mm ²	PP (br, wh, bl, bk)	5 Mio.	PUR (UL/CSA)	6.5 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
572	6 × 0.75 mm ²	PP (br, wh, bl, bk, gr, pk)	5 Mio.	PUR (UL/CSA)	7.3 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
634	4 × 0.34 mm ²	PP (br, wh, bl, bk)	5 Mio.	PUR (UL/CSA)	4.7 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
703 shielded	12 × 0.14 mm ²	PVC (br, bl, wh, gn, pk, ye, bk, gr, rd, vi, grp, rdbl)		PVC (UL/CSA)	6.5 ±5%	10 × outer Ø	-30...+80 °C	-5...+80 °C
705	12 × 0.14 mm ²	PP (br, bl, wh, gn, pk, ye, bk, gr, rd, vi, grp, rdbl)	2 Mio.	PUR (UL/CSA)	6.0 ±5%	10 × outer Ø	-40...+85 °C	-25...+85 °C
740	2 × 0.5 mm ²	TPE (bk, wh)	2 Mio.	PUR	5.0 ±5%	10 × outer Ø	-50...+90 °C	-30...+90 °C
750	2 × 0.75 mm ²	PVC (br, bl)		PUR/PVC	5.9 ±5%	15 × outer Ø	-40...+80 °C	-5...+80 °C
P01	6 × 2.5 mm ²	TPM (bk num, gnye)	5 Mio.	PUR (UL)	11.1 ±5%	10 × outer Ø	-40...+80 °C	-20...+60 °C
P02	4 × 1.5 mm ²	TPM (bk num, gnye)	5 Mio.	PUR (UL)	7.4 ±5%	10 × outer Ø	-50...+80 °C	-20...+70 °C
P03	4 × 2.5 mm ²	TPM (bk num, gnye)	5 Mio.	PUR (UL)	9.0 ±5%	10 × outer Ø	-50...+80 °C	-20...+70 °C
P04	5 × 1.5 mm ²	PP (br, wh, bl, bk, gr, num)	5 Mio.	PUR (UL/CSA)	8.7 ±5%	10 × outer Ø	-50...+80 °C	-20...+80 °C
P05	5 × 1.5 mm ²	PP (br, wh, bl, bk num, gnye)	5 Mio.	PUR (UL/CSA)	8.7 ±5%	10 × outer Ø	-50...+80 °C	-20...+80 °C
P06	4 × 1.5 mm ²	PP (br, wh, bl, num; gnye longitudinally striped)	5 Mio.	PUR (UL/CSA)	7.7 ±5%	10 × outer Ø	-50...+80 °C	-20...+80 °C
P07	4 × 1.5 mm ²	PP (br, wh, bl, bk, num)	5 Mio.	PUR (UL/CSA)	7.7 ±5%	10 × outer Ø	-50...+80 °C	-20...+80 °C
P21	6 × 2.5 mm ²	PP (bk num, gnye)		PVC (UL)	11.0 ±5%	15 × outer Ø	-20...+80 °C	-5...+80 °C
P22	4 × 1.5 mm ²	PP (bk num, gnye)		PVC (UL)	7.4 ±5%	15 × outer Ø	-20...+80 °C	-5...+80 °C
P23	4 × 2.5 mm ²	PP (bk num, gnye)		PVC (UL)	9.1 ±5%	15 × outer Ø	-20...+80 °C	-5...+80 °C
P24	6 × 1.5 mm ²	PP (bk num, gnye)		PVC (UL)	9.0 ±5%	15 × outer Ø	-20...+80 °C	-5...+80 °C
P84	6 × 1.5 mm ²	TPM (bk num, gnye)	5 Mio.	PUR (UL)	9.0 ±5%	6.8 × outer Ø	-50...+80 °C	-20...+70 °C
UMB	3 × 1.5 mm ²	TPM (br, bl, gnye)	5 Mio.	PUR (UL/CSA)	7.4 ±5%	10 × outer Ø	-40...+80 °C	-20...+80 °C
UMC	4 × 1.5 mm ²	TPM (br, wh, bl, bk)	5 Mio.	PUR (UL/CSA)	8.0 ±5%	10 × outer Ø	-50...+80 °C	-20...+80 °C
UMD	5 × 1.5 mm ²	TPM (br, wh, bl, bk, gnye)	5 Mio.	PUR (UL/CSA)	8.7 ±5%	10 × outer Ø	-50...+80 °C	-20...+80 °C

CABLES

Cables								
orange	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
P11 shielded	4×2.5 + 2×1.5 mm ²	TPM (bk num, gnye)	5 Mio.	PUR (UL)	12.8 ±5%	10 × outer Ø	-25...+80 °C	-20...+80 °C
P12 shielded	4 × 1.5 mm ²	TPM (bk num, gnye)	5 Mio.	PUR (UL)	8.0 ±5%	10 × outer Ø	-40...+80 °C	-20...+60 °C
P13 shielded	4 × 2.5 mm ²	TPM (bk num, gnye)	5 Mio.	PUR (UL)	10.6 ±5%	7.5 × outer Ø	-50...+80 °C	-35...+70 °C

pastel blue	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
315	3 × 0.34 mm ²	PP (br, bl, bk)	4 Mio.	TPE-S (UL)	4.3 ±5%	10 × outer Ø	-40...+105 °C	-25...+105 °C
321	4 × 0.34 mm ²	PP (br, wh, bl, bk)	4 Mio.	TPE-S	4.7 ±5%	10 × outer Ø	-40...+105 °C	-25...+105 °C
339	5 × 0.34 mm ²	PP (br, wh, bl, bk, gnye)	4 Mio.	TPE (UL)	5.0 ±5%	10 × outer Ø	-40...+105 °C	-25...+105 °C

blue	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
S4U shielded	2×2×0.25 mm ²	HDPE (whor, or, whgn, gn)	1 Mio.	TPE (UL/CSA)	6.6 ±5%	10 × outer Ø	-40...+80 °C	-20...+80 °C
S4W shielded	4×2×0.25 mm ²	HDPE (whbl, bl, whor, or, whgn, gn, whbr, br)	1 Mio.	TPE (UL/CSA)	7.6 ±5%	10 × outer Ø	-40...+80 °C	-20...+80 °C
S4X shielded	4×2×0.14 mm ²	HDPE (whbl, bl, whor, or, whgn, gn, whbr, br)	1 Mio.	TPE (UL/CSA)	7.4 ±5%	10 × outer Ø	-40...+80 °C	-20...+80 °C

gray	No./diameter of wires	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
333	4×0.34 + 3×0.75 mm ²	2 Mio.	PUR/PVC	7.4 ±5%	12 × outer Ø	-30...+80 °C	-5...+80 °C
334	4×0.34 + 2×0.75 mm ²	5 Mio.	PUR (UL/CSA)	7.6 ±5%	10 × outer Ø	-40...+80 °C	-5...+60 °C
337	4×0.34 + 2×0.75 mm ²	2 Mio.	PUR/PVC	6.9 ±5%	10 × outer Ø	-30...+80 °C	-5...+60 °C
350	6×0.34 + 2×0.75 mm ²	2 Mio.	PUR/PVC	7.8 ±5%	10 × outer Ø	-30...+80 °C	-5...+60 °C
356	6×0.34 + 2×0.75 mm ²	5 Mio.	PUR (UL/CSA)	8.5 ±5%	10 × outer Ø	-40...+80 °C	-5...+60 °C
357	8×0.34 + 2×0.75 mm ²	2 Mio.	PUR/PVC	8.6 ±5%	10 × outer Ø	-30...+80 °C	-5...+60 °C
358	8×0.34 + 2×0.75 mm ²	1.5 Mio.	PUR/PVC	8.6 ±5%	12 × outer Ø	-30...+70 °C	-5...+60 °C
359	8×0.34 + 2×0.75 mm ²	5 Mio.	PUR (UL/CSA)	9.2 ±5%	10 × outer Ø	-40...+80 °C	-5...+60 °C
360	8×0.34 + 2×0.75 mm ²	5 Mio.	PUR (UL/CSA)	9.2 ±5%	10 × outer Ø	-40...+80 °C	-5...+60 °C
362	8×0.34 + 3×0.75 mm ²	2 Mio.	PUR/PVC (UL/CSA)	8.1 ±5%	10 × outer Ø	-30...+80 °C	-5...+70 °C
363	8×0.34 + 3×0.75 mm ²	2 Mio.	PUR/PVC (UL/CSA)	8.1 ±5%	10 × outer Ø	-30...+80 °C	-5...+70 °C
373 shielded	8×0.34 + 3×0.75 mm ²	5 Mio.	PUR (UL/CSA)	9.3 ±5%	12 × outer Ø	-40...+90 °C	-40...+90 °C
374	8×0.34 + 5×0.75 mm ²	1.5 Mio.	PUR/PVC	9.2 ±5%	12 × outer Ø	-30...+80 °C	-30...+80 °C
384	10×0.34 + 2×0.75 mm ²	5 Mio.	PUR (UL/CSA)	9.3 ±5%	10 × outer Ø	-40...+80 °C	-5...+60 °C
385	10×0.34 + 2×0.75 mm ²	2 Mio.	PUR/PVC	8.3 ±5%	10 × outer Ø	-30...+80 °C	-5...+60 °C
386	12×0.34 + 2×0.75 mm ²	1.5 Mio.	PUR/PVC	8.8 ±5%	12 × outer Ø	-30...+70 °C	-5...+60 °C
389	12×0.34 + 2×0.75 mm ²	5 Mio.	PUR (UL/CSA)	9.5 ±5%	10 × outer Ø	-40...+80 °C	-5...+60 °C
395	16×0.34 + 2×0.75 mm ²	1.5 Mio.	PUR/PVC	9.6 ±5%	12 × outer Ø	-30...+70 °C	-5...+60 °C
396	16×0.34 + 2×0.75 mm ²	5 Mio.	PUR (UL/CSA)	10.4 ±5%	10 × outer Ø	-40...+80 °C	-5...+60 °C
398	16×0.34 + 3×0.75 mm ²	2 Mio.	PUR/PVC (UL/CSA)	10.0 ±5%	10 × outer Ø	-30...+80 °C	-5...+70 °C
401 shielded	16×0.34 + 3×0.75 mm ²	5 Mio.	PUR (UL/CSA)	11.7 ±5%	12 × outer Ø	-40...+90 °C	-40...+90 °C
403	16×0.34 + 5×0.75 mm ²	5 Mio.	PUR (UL/CSA)	11.5 ±5%	10 × outer Ø	-40...+90 °C	-40...+90 °C
404	16×0.34 + 5×0.75 mm ²	1.5 Mio.	PUR/PVC	12.5 ±5%	12 × outer Ø	-30...+80 °C	-30...+80 °C
407	20×0.34 + 3×0.75 mm ²	2 Mio.	PUR/PVC (UL/CSA)	10.0 ±5%	12 × outer Ø	-30...+80 °C	-5...+60 °C
408	20×0.34 + 3×0.75 mm ²	5 Mio.	PUR (UL/CSA)	10.4 ±5%	10 × outer Ø	-40...+80 °C	-5...+80 °C
411	20×0.34 + 2×0.75 mm ²	5 Mio.	PUR (UL/CSA)	11.3 ±5%	10 × outer Ø	-40...+80 °C	-5...+60 °C
412	20×0.34 + 2×0.75 mm ²	1.5 Mio.	PUR/PVC	10.4 ±5%	12 × outer Ø	-30...+70 °C	-5...+60 °C
447	8×0.5 + 3×1.0 mm ²	5 Mio.	PUR (UL/CSA)	9.4 ±5%	10 × outer Ø	-40...+80 °C	-5...+80 °C
448	8×0.5 + 3×1.0 mm ²	5 Mio.	PUR (UL/CSA)	9.1 ±5%	10 × outer Ø	-40...+90 °C	-40...+90 °C
452	16×0.5 + 3×1.0 mm ²	5 Mio.	PUR (UL/CSA)	11.5 ±5%	10 × outer Ø	-40...+80 °C	-5...+80 °C



4

I/O SYSTEMS

4

I/O SYSTEMS

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CUBE67 MODULAR I/O STATION IP67

- Distributed
- Flexible
- Open system

THE COMPACT MODULAR I/O SYSTEM

Cube is a modular field bus system for perfect distributed installation concepts. Its flexibility facilitates developing the perfect solution for any application – with consistent degrees of protection from IP20 to IP69K.

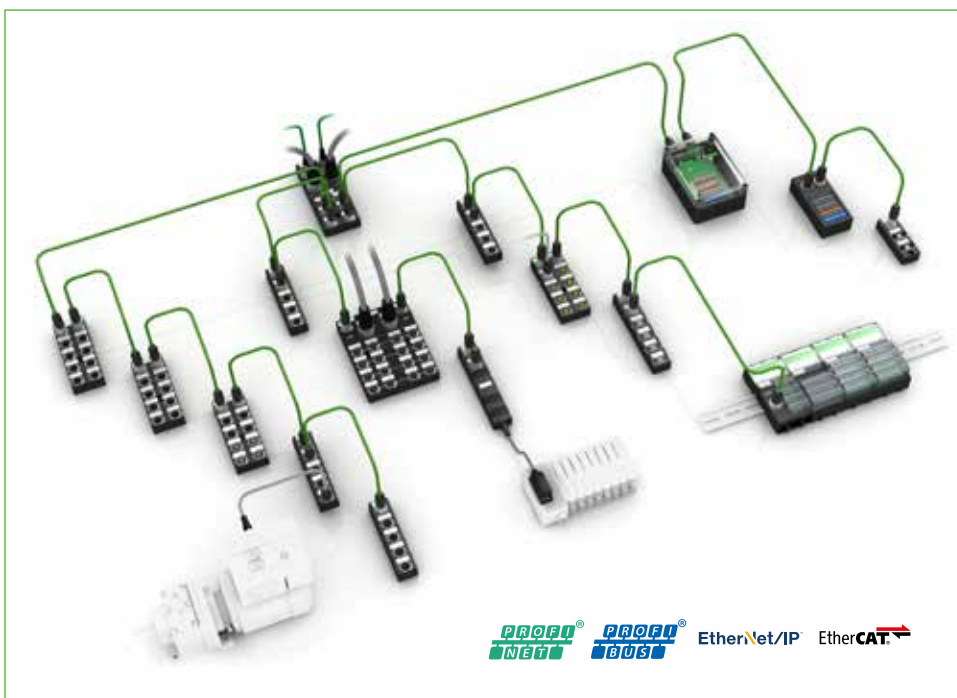
Cube's characteristics are: great functionality, plug-in connections, a robust and compact design, encapsulated modules, and multi-functional inputs and outputs. The modules are installed next to the sensors and actuators.

Cube67 I/O modules

 Bus nodes • PROFIBUS DP • PROFINET IO • EtherNet/IP • EtherCAT <i>Page 4.1.1</i>	 Diagnostic gateway • Diagnostics made easy • Ethernet TCP/IP <i>Page 4.1.3</i>
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 Function modules • IO-Link • Counter module • Communication module <i>Page 4.1.14</i>	 Analog inputs/outputs • Voltage/current • For resistors and temperature • For thermo elements <i>Page 4.1.17</i>
 Safe outputs • Passive <i>Page 4.1.20</i>	 Function modules hygienic design • Multifunctional • IO-Link <i>Page 4.1.21</i>
 Cable/Valve • Digital outputs • Digital inputs/outputs (multifunctional) • Safe outputs • Valve connections • With open ended wires <i>Page 4.1.23</i>	 <i>Please do not hesitate to contact us. We offer a wide range for Cube67 system cables.</i>

HIGHLIGHTS OF THE CUBE SYSTEM

- **Customer-oriented installation concepts**, perfectly customized solutions for any given application
- **Great cost-benefit ratio** through lower planning and installation effort
- **Extreme flexibility** through multi-functional slots and numerous function modules (IO-Link, RS485/ MOVIMOT®...)
- System-independent through **"bus replacement without system replacement"** for all common bus systems worldwide
- **Maximized transparency** through precise and detailed diagnostics options



PROFINET PROFI-BUS EtherNet/IP EtherCAT

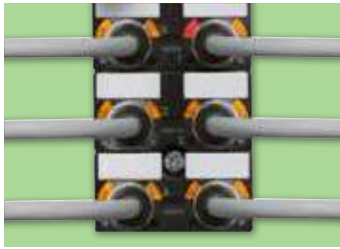
CUBE67 DIAGNOSTICS GATEWAY

Diagnostics made easy

- **Commissioning engineers** use the diagnostics gateway to examine the topology of the Cube system and to detect installation faults at an early stage.
- The service personnel of the machine or system builder quickly identifies errors by temporarily integrating the diagnostics gateway. Moreover, this system is a perfect solution for machine acceptance tests. Permanent integration is also of great interest in order to be able to guide, for example the electrician, in the field via remote access.
- The **operator of a machine or system** who incorporates the diagnostics gateway permanently is able to react to potential problems at an early stage. In a best-case scenario, instructions for troubleshooting have already been implemented, allowing the installer to bring the required spare part right with him when he comes for repairs.



FUNCTIONALITY WITH GREAT UTILIZABLE VALUE



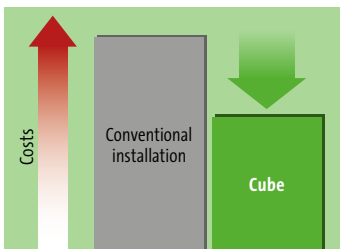
Diagnostics

Detailed diagnostics messages to the controller and LED status indicators at the slots facilitate fast localization of errors. **This reduces commissioning time and downtimes.**



Multi-functional I/Os

Connections can – depending on the requirement at any given location in the distributed installation – be parameterized as inputs, diagnostic inputs or outputs. This allows the connection of various components to a module. **As a result, there is great flexibility and a reduced number of variants.**



Saves time and money

Maximized economy through reduced effort in design and installation of hardware and software. Increased production capacities and shorter lead times. **This is how Cube secures you a competitive edge.**



Safety

Cube enables passive safety technology solutions. The M12 outputs and connections for the valve terminals can be used in installations up to category 3 and performance level d (according DIN EN ISO 13849). **This facilitates easy integration of safety technology without great wiring effort.**



Cable

Cube67 only needs a single system bus cable for both power supply and data transmission. Prefabricated cables minimize error sources. **The installation requires just half the space and can be completed in half the time.**



IO-Link by Murrelektronik

The integration of up to 128 smart IO-Link devices in Cube67+ opens up additional possibilities in using variable machines. Cube67+ in combination with IO-Link offers this additional functionality for M12 ports. **This enables flexible and automated parameterization of devices.**

Bus nodes, Cube67+

– up to 32 modules



Approvals: UL
Listed

Cube67+ BN-P

PROFIBUS DP

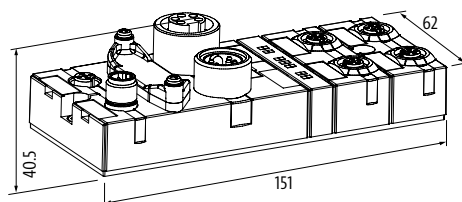


Cube67+ BN-PNIO

PROFINET IO



Order Data	Art-No.	Art-No.
PROFIBUS DP	56521	
PROFINET IO		56526
Connections		
Fieldbus	PROFIBUS 12 Mbit/s; M12, B-coded	Ethernet 10/100Mbit/s; M12, D-coded
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 8 A	
Internal system connection	4 × M12 (female) A-coded, 6-pole, 2 × max. 4 A	
Module Supply		
Operating voltage	24 V DC (EN 61131-2)	
Current consumption	max. 120 mA	max. 200 mA
PROFIBUS		
Addressing	Rotary switch 0...99	–
PROFINET		
Addressing	–	DCP
Specification	–	V2.2, Conformance Class B
Cube system		
Module capacity	max. 32	
I/O capacity	max. 244 Byte (Input), max. 244 Byte (Output)	max. 1024 Byte (Input), max. 1024 Byte (Output)
Machine Option Management	yes	
No. of masterports (IO-Link)	max. 12	max. 128
Diagnostic		
Communication status	via LED and BUS	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short-circuit and overload	yes	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	0...+55 °C (storage temperature -20...+75 °C)	
Dimension drawing		



Notes	Cube67+ modules can only be operated on Cube67+, EtherNet/IP, Profibus + ProfiNet bus nodes.
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CUBE67

Bus nodes, Cube67+

– up to 32 modules

EtherNet/IP EtherCAT

Approvals:  Listed

Cube67+ BN-E

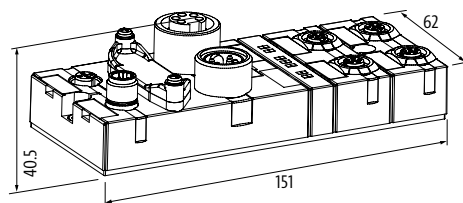
EtherNet/IP

Cube67+ BN-EC

EtherCAT



Order Data	Art-No.	Art-No.	Art-No.
EtherNet/IP	56535		
EtherCAT		56527	
EtherCAT Rotary Switch			5652701
Connections			
Fieldbus	Ethernet 10/100Mbit/s; M12, D-coded		
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 8 A		
Internal system connection	4 × M12 (female) A-coded, 6-pole, 2 × max. 4 A		
Module Supply			
Operating voltage	24 V DC (EN 61131-2)		
Current consumption	max. 200 mA		
EtherNet/IP			
Addressing	DHCP, BOOTP or IP address by rotary switch	–	
EtherCAT			
Addressing	–	automatic	Rotary switch 0...999
Cube system			
Module capacity	max. 32		
I/O capacity	max. 504 Byte (Input), max. 500 Byte (Output)	max. 65 636 Byte (Input), max. 65 636 Byte (Output)	
Machine Option Management	yes	–	
No. of masterports (IO-Link)	max. 128	–	
Diagnostic			
Communication status	via LED and BUS		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short-circuit and overload	yes		
General data			
Protection	IP67		
Mounting method	2-hole screw mounting		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Dimension drawing			



Notes

Cube67+ modules can only be operated on Cube67+, EtherNet/IP, Profibus + ProfiNet bus nodes.

CUBE67

Diagnostic gateway

– Ethernet TCP/IP

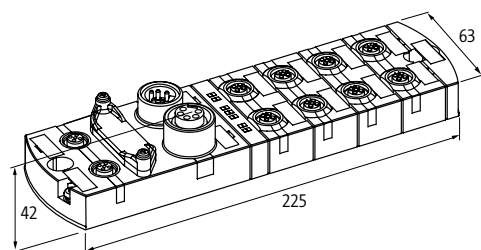
Approvals:  **UL**
Listed

Cube67

Diagnostics made easy



Order Data	Art-No.
Diagnostic Gateway	56968
Connections	
Fieldbus	2 × M12 (female), D-coded
Internal system connection	8 × M12 (female), 6-pole
Supply	2 × 7/8" (male/female), 5-pole
Module Supply	
Operating voltage	24 V DC ±25%
Current consumption	max. 200 mA
Cube system	
Cube67 system connection	yes
Protection	
Reverse polarity protection module	yes
Over voltage protection	yes
General data	
Protection	IP67
Mounting method	2-hole screw mounting
Temperature range	0...+55 °C (storage temperature -25...+70 °C)
Dimension drawing	



Notes

Current manuals can be downloaded at: www.murrelektronik.com

CUBE67

Digital inputs

Cube67 DI16 C - 8×M12

Compact module



Cube67 DI8 C - 4×M12

Compact module

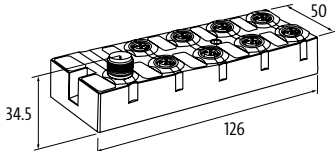
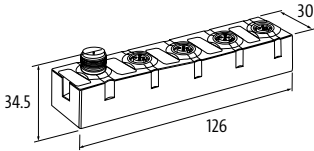
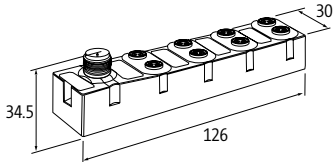


Cube67 DI8 C - 8×M8

Compact module



Approvals:  US
Listed

Order Data	Art-No.	Art-No.	Art-No.
DI16 - (C) 8×M12	56602		
DI8 - (C) 4×M12		56612	
DI8 - (C) 8×M8			56622
Internal communication			
Current consumption	max. 50 mA		max. 30 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Terminating resistor	integrated into the module		
Connections			
Fieldbus	via internal system connection		
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)		
I/O ports	M12 (female) 5-pole, A-coded	M8 (female) 3-pole, A-coded	
Input			
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	24 V DC (EN 61131-2), max. 200 mA (M8 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP		
Input filter	1 ms		
Parameterization			
PIN 2	Input/Diagnostic	–	
PIN 4	Input		
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short-circuit and overload	yes		
General data			
Protection	IP67		
Mounting method	2-hole screw mounting		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Dimension drawing			
Notes			

Digital inputs

Cube67 DI16 E - 8×M12

Expansion module



Cube67 DI8 E - 4×M12

Expansion module



Cube67 DI8 E - 8×M8

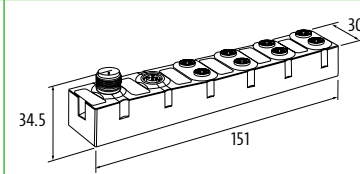
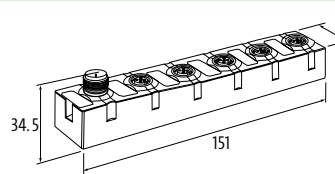
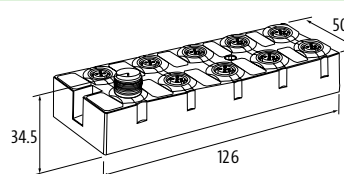
Expansion module



Approvals:  Listed

Order Data	Art-No.	Art-No.	Art-No.
DI16 - (E) PNP (8×M12)	56603		
DI8 - (E) PNP (4×M12)		56613	
DI8 - (E) PNP (8×M8)			56623
Internal communication			
Current consumption	max. 50 mA		max. 30 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Connections			
Fieldbus	via internal system connection		
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)		
I/O ports	M12 (female) 5-pole, A-coded		M8 (female) 3-pole, A-coded
Input			
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected		24 V DC (EN 61131-2), max. 200 mA (M8 female), short-circuit and overload protected
Type	for 3-wire sensors or mechanical switches, PNP		
Input filter	1 ms		
Parameterization			
PIN 2	Input/Diagnostic		–
PIN 4	Input		
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short-circuit and overload	yes		
General data			
Protection	IP67		
Mounting method	2-hole screw mounting		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Dimension drawing			

Dimension drawing



Notes

CUBE67

Digital inputs

Cube67 DI16 E - 8×M12

Expansion module
Form NPN



Cube67 DI8 E - 4×M12

Expansion module
Form NPN



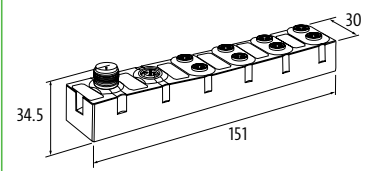
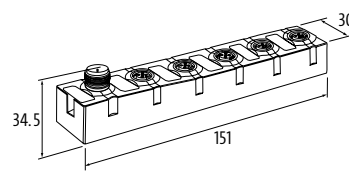
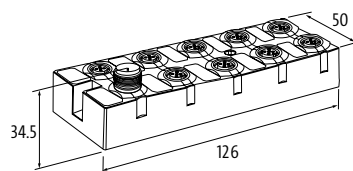
Cube67 DI8 E - 8×M8

Expansion module
Form NPN



Approvals:  Listed

Order Data	Art-No.	Art-No.	Art-No.
DI16 - (E) NPN (8×M12)	56606		
DI8 - (E) NPN (4×M12)		56616	
DI8 - (E) NPN (8×M8)			56626
Internal communication			
Current consumption	max. 50 mA		max. 30 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Connections			
Fieldbus	via internal system connection		
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)		
I/O ports	M12 (female) 5-pole, A-coded		M8 (female) 3-pole, A-coded
Input			
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected		24 V DC (EN 61131-2), max. 200 mA (M8 female), short-circuit and overload protected
Type	for 3-wire sensors or mechanical switches, NPN, (EN 61131-2)		
Input filter	1 ms		
Parameterization			
PIN 2	Input/Diagnostic	–	
PIN 4	Input		
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short-circuit and overload	yes		
General data			
Protection	IP67		
Mounting method	2-hole screw mounting		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Dimension drawing			



Notes

CUBE67

Digital inputs/outputs (multifunctional)

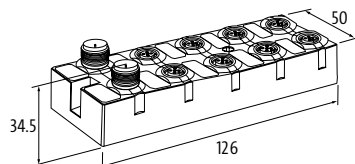
Approvals:  UL
Listed

Cube67 DIO16 C - 8×M12

Compact module
additional actuator supply 1 × 4 A



Order Data	Art-No.	Art-No.
DIO16 - 0.5 A (C) 8×M12	56600	
DIO16 - 1.6 A (C) 8×M12		56640
Internal communication		
Current consumption	max. 50 mA	
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Terminating resistor	integrated into the module	
Connections		
Fieldbus	via internal system connection	
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)	
I/O ports	M12 (female) 5-pole, A-coded	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP	
Input filter	1 ms	
Output		
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A) + right actuators via supply right (max. 4 A)	
Switching current per output	max. 0.5 A (short-circuit and overload protected)	max. 1.6 A (short-circuit and overload protected)
Parameterization		
PIN 2	Input/Output/Diagnostic	
PIN 4	Input/Output	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short-circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	0...+55 °C (storage temperature -20...+75 °C)	
Dimension drawing		



Notes

CUBE67

Digital inputs/outputs (multifunctional)

Cube67 DIO8 C - 4×M12

Compact module



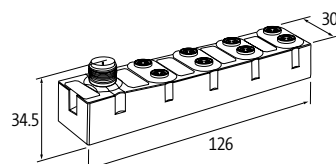
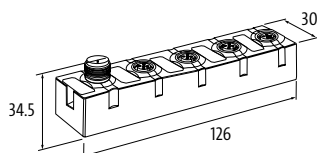
Cube67 DIO8 C - 8×M12

Compact module



Approvals:  US
Listed

Order Data	Art-No.	Art-No.
DIO8 - 0.5 A (C) 4×M12	56610	
DIO8 - 0.5 A (C) 8×M8		56620
Internal communication		
Current consumption	max. 50 mA	max. 30 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Terminating resistor	integrated into the module	
Connections		
Fieldbus	via internal system connection	
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)	
I/O ports	M12 (female) 5-pole, A-coded	M8 (female) 3-pole, A-coded
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	24 V DC (EN 61131-2), max. 200 mA (M8 female), short-circuit and overload protected
Type	for 3-wire sensors or mechanical switches, PNP	
Input filter	1 ms	
Output		
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)	
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Parameterization		
PIN 2	Input/Output/Diagnostic	–
PIN 4	Input/Output	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short-circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	0...+55 °C (storage temperature -20...+75 °C)	
Dimension drawing		



Notes

CUBE67

Digital inputs/outputs (multifunctional)

Approvals:  Listed

Cube67 DIO16 E - 8×M12

Expansion module

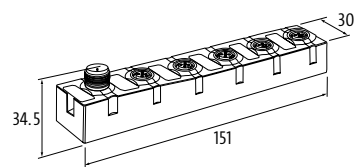
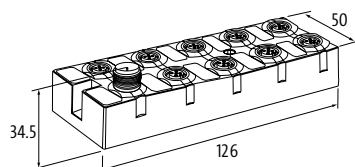


Cube67 DIO8 E - 4×M12

Expansion module



Order Data	Art-No.	Art-No.
DIO16 - 0.5 A (E) 8×M12	56601	
DIO8 - 0.5 A (E) 4×M12		56611
Internal communication		
Current consumption	max. 50 mA	
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Connections		
Fieldbus	via internal system connection	
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)	
I/O ports	M12 (female) 5-pole, A-coded	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP	
Input filter	1 ms	
Output		
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)	
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Parameterization		
PIN 2	Input/Output/Diagnostic	
PIN 4	Input/Output	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short-circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	0...+55 °C (storage temperature -20...+75 °C)	
Dimension drawing		



Notes

CUBE67

Digital inputs/outputs
(multifunctional)

Cube67 DIO8 E - 4×M12

Expansion module



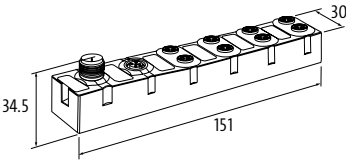
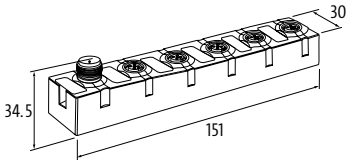
Cube67 DIO8 E - 8×M8

Expansion module



Approvals:  US
Listed

Order Data	Art-No.		Art-No.
DIO8 - 1.0 A (E) 4×M12	56631		
DIO8 - 0.5 A (E) 8×M8			56621
Internal communication			
Current consumption	max. 50 mA	max. 30 mA	
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Connections			
Fieldbus	via internal system connection		
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)		
I/O ports	M12 (female) 5-pole, A-coded	M8 (female) 3-pole, A-coded	
Input			
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	24 V DC (EN 61131-2), max. 200 mA (M8 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP		
Input filter	1 ms		
Output			
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)		
Switching current per output	max. 1 A (short-circuit and overload protected)	max. 0.5 A (short-circuit and overload protected)	
Parameterization			
PIN 2	Input/Output/Diagnostic	–	
PIN 4	Input/Output		
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short-circuit and overload	yes		
Actuator warning	per channel via LED and BUS		
General data			
Protection	IP67		
Mounting method	2-hole screw mounting		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Dimension drawing			



Notes

CUBE67

Digital inputs/outputs (multifunctional)

Approvals:  **UL US**
Listed

Cube67 DIO8 C - 4×M8

Compact module
4-pole



Cube67 DIO8 E - 0.5 A 8×M8

Expansion module
4-pole



Cube67

Contact layout

Female



PIN 1: Us: +24 V
PIN 2: DIO 0.5 A 0.x
PIN 3: 0 V DC
PIN 4: DIO 0.5 A 1.x

Order Data

DIO8 - 0.5 A (C) 4×M8

Art-No.

56627

Art-No.

DIO16 - 0.5 A (E) 8×M8

56625

Internal communication

Current consumption

max. 30 mA

LED display

US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)

Connections

Fieldbus

via internal system connection

Sensor-system/actuator supply

via internal system connection (max. 2×4 A)

I/O ports

M8 (female), 4-pole, A-coded

Input

Sensor supply US

24 V DC (EN 61131-2), max. 200 mA (M8 female), short-circuit and overload protected

Type

for 3-wire sensors or mechanical switches, PNP

Input filter

1 ms

Output

Actuator supply UA

24 V DC (EN 61131-2), via system connection (max. 4 A)

Switching current per output

max. 0.5 A (short-circuit and overload protected)

Parameterization

PIN 4

Input/Output

PIN 2

Input/Output/Diagnostic

Diagnostic

Communication status

via LED

Diagnostic via LED

per module and channel

Diagnostic via BUS

per module and channel

Monitoring - under voltage

yes

Monitoring - no voltage

yes

Short-circuit and overload

yes

Actuator warning

per channel via LED and BUS

General data

Protection

IP67

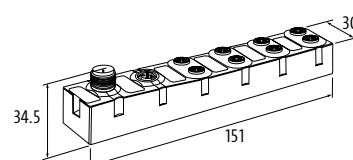
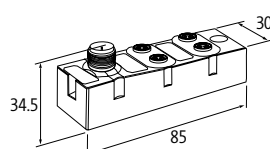
Mounting method

2-hole screw mounting

Temperature range

0...+55 °C (storage temperature -20...+75 °C)

Dimension drawing



CUBE67

Digital inputs/outputs (multifunctional)

Cube67 DIO32 E - 16×M12

Expansion module

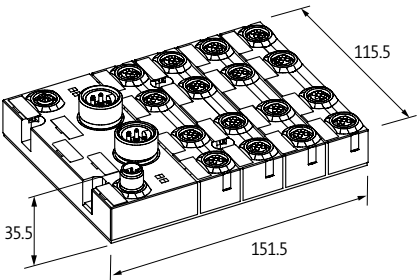
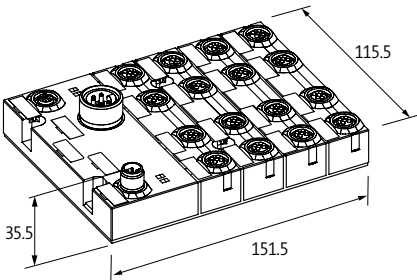


Cube67 DIO16 DO16 E - 1.6/2 A 16×M12

Expansion module



Order Data	Art-No.		Art-No.
DIO32 - 0.5 A (E) 16×M12	56642		
DIO16 - 1.6 A DO16 - 2 A (E) 16×M12			56641
Internal communication			
Current consumption	max. 60 mA	max. 50 mA	
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Connections			
Fieldbus	via internal system connection		
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)		
I/O ports	M12 (female) 5-pole, A-coded		
Input			
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected		
Type	for 3-wire sensors or mechanical switches, PNP		
Input filter	1 ms		
Output			
Actuator supply (8×M12 left side)	24 V DC (EN 61131-2), via 7/8" male (max. 1 × 9 A)	24 V DC (EN 61131-2), via 7/8" male (max. 2 × 9 A)	
Actuator supply (8×M12 right side)	24 V DC (EN 61131-2), via 7/8" male (max. 1 × 9 A)	24 V DC (EN 61131-2), via 7/8" male (max. 2 × 9 A)	
Switching current per output (8×M12 left)	max. 0.5 A (short-circuit and overload protected)	max. 1.6 A (short-circuit and overload protected), coincidence factor 50% per port	
Switching current per output (8×M12 right)	max. 0.5 A (short-circuit and overload protected)	max. 2 A (short-circuit and overload protected), coincidence factor 50% per port	
Parameterization			
PIN 2 (8 × M12 left side)	Input/Output/Diagnostic		
PIN 4 (8 × M12 left side)	Input/Output		
PIN 2 (8 × M12 right side)	Input/Output/Diagnostic	Output	
PIN 4 (8 × M12 right side)	Input/Output	Output	
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short-circuit and overload	yes		
Actuator warning	per channel via LED and BUS		
General data			
Protection	IP67		
Mounting method	4 hole screw mounting		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Dimension drawing			



Terminal modules

– Digital inputs/outputs (multifunctional)

– Digital inputs

Cube67 DIO8/DI8 E (TB-Box)

Expansion module



Cube67 DIO8/DI8 E (TB-Box)

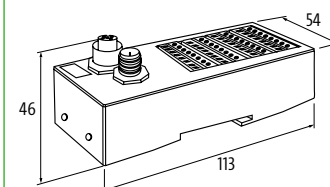
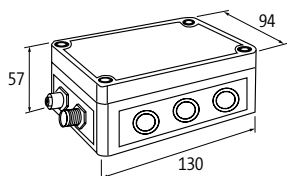
Expansion module
with additional potential terminals

Cube67 DIO8/DI8 E (TB-Rail)

Expansion module



Order Data	Art-No.	Art-No.	Art-No.
DIO8/DI8 - (E) TB-Box	56681	5668100	
DIO8/DI8 - (E) TB-Rail			cULus56691
Internal communication			
Current consumption	max. 50 mA		
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Connections			
Fieldbus	via internal system connection		
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)		
I/O ports	16 × Spring clamp plug-in terminals, max. 2.5 mm²		
Input			
Sensor supply US	24 V DC (EN 61131-2), max. 8 × 200 mA		
Type	for 3-wire sensors or mechanical switches, PNP		
Input filter	1 ms		
Output			
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)		
Switching current per output	max. 0.5 A (short-circuit and overload protected)		
Parameterization			
Terminal row X0 (8 channels)	Input		
Terminal row X1 (8 channels)	Input/Output		
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short-circuit and overload	yes		
Actuator warning	per channel via LED and BUS		
General data			
Protection	IP66	IP20	
Mounting method	screw fixing	DIN-rail mountable (EN 60715)	
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Dimension drawing			



Notes

CUBE67

Function modules

– multifunctional

– IO-Link Master

IO-Link

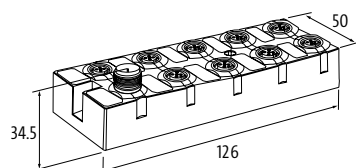
Approvals:  Listed

Cube67+ DIO12 IOL4 - E 8×M12

Expansion module



Order Data	Art-No.
DIO12/IOL4 - (E) 8×M12	56766
Internal communication	
Current consumption	max. 100 mA
LED display	US: sensor supply (green: OK); IOL: (green: OK); UA: actuator supply (green: OK)
Connections	
Fieldbus	via internal system connection
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)
I/O ports	M12 (female) 5-pole, A-coded
IO-Link	
IO-Link	4 × Master
Operating modes	COM1; COM2; COM3 (automatic)
Transfer parameters	32 Byte (via IO-Link Port)
Port class	Class A + B (not galvanically separated)
Specification	IO-Link Master V1.12
Input	
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (port 0...3); max. 700 mA (port 4...7)
Type	for 3-wire sensors or mechanical switches, PNP
Input filter	1 ms
Output	
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)
Switching current per output	max. 1.6 A (short-circuit and overload protected)
Parameterization	
PIN 2	Input/Output/Diagnostic
PIN 4	Input/Output (port 0...3); IO-Link Master (port 4...7)
Diagnostic	
Communication status	via LED
Diagnostic via LED	per module and channel
Diagnostic via BUS	per module and channel
Monitoring - under voltage	yes
Monitoring - no voltage	yes
Short-circuit and overload	yes
Actuator warning	per channel via LED and BUS
General data	
Protection	IP67
Mounting method	2-hole screw mounting
Temperature range	0...+55 °C (storage temperature -20...+75 °C)
Dimension drawing	



Notes

Cube67+ modules can only be operated on Cube67+, EtherNet/IP, Profibus + ProfiNet bus nodes.

Function modules

– Counter module with preprocessing

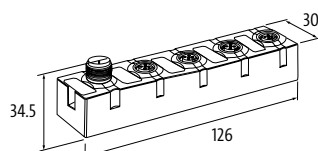
Approvals:  UL
Listed

Cube67 CNT2 - C 4xM12

Compact module



Order Data	Art-No.
Compact module	56750
Internal communication	
Current consumption	max. 50 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)
Connections	
Fieldbus	via internal system connection
Sensor-system/actuator supply	via internal system connection (max. 2x4 A)
I/O ports	M12 (female) 5-pole, A-coded
Input	
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected
Type	for 3-wire sensors or mechanical switches, PNP
Input filter	1 ms
Output	
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)
Switching current per output	max. 1.6 A (short-circuit and overload protected)
Counter	
Counter frequency	max. 300 kHz
Counter input	EN 61131-2
Counter depth	32 Bit (31 Bit + sign)
Diagnostic	
Communication status	via LED
Diagnostic via LED	per module and channel
Diagnostic via BUS	per module and channel
Monitoring - under voltage	yes
Monitoring - no voltage	yes
Short-circuit and overload	yes
Actuator warning	per channel via LED and BUS
General data	
Protection	IP67
Mounting method	2-hole screw mounting
Temperature range	0...+55 °C (storage temperature -20...+75 °C)
Dimension drawing	



Notes	Cube67+ modules can only be operated on Cube67+, EtherNet/IP, Profibus + ProfiNet bus nodes.
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Function modules

– Communication module

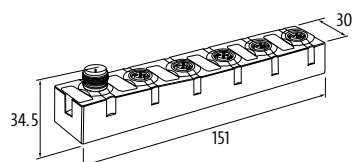
Cube67+ DIO4 RS232/485 - E 4×M12 MOVIMOT®

Expansion module
Serial interface



Approvals:  Listed

Order Data	Art-No.
DIO4 - (E) RS232/485 (4×M12) MOVIMOT®	56761
Internal communication	
Current consumption	max. 80 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)
Connections	
Fieldbus	via internal system connection
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)
I/O ports	M12 (female) 5-pole, A-coded
Technical Data	
Transfer parameters	RS232: 230.4 kBaud, full duplex; RS485: 230.4 kBaud, half duplex
RS232-Type	galvanically separated, M12 female 5-pole, B-coded
RS485-Type	galvanically separated, M12 female 5-pole, B-coded
Input	
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected
Type	for 3-wire sensors or mechanical switches, PNP
Input filter	1 ms
Output	
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)
Switching current per output	max. 0.5 A (short-circuit and overload protected)
Parameterization	
PIN 2	Input/Output/Diagnostic
PIN 4	Input/Output
Diagnostic	
Communication status	via LED
Diagnostic via LED	per module and channel
Diagnostic via BUS	per module and channel
Monitoring - under voltage	yes
Monitoring - no voltage	yes
Short-circuit and overload	yes
Actuator warning	per channel via LED and BUS
General data	
Protection	IP67
Mounting method	2-hole screw mounting
Temperature range	0...+55 °C (storage temperature -20...+75 °C)
Dimension drawing	



Notes

Cube67+ modules can only be operated on Cube67+, EtherNet/IP, Profibus + ProfiNet bus nodes.

Analog inputs

– Voltage/current

Cube67 AI4 C - 4×M12

Compact module
Voltage

Cube67 AI4 C - 4×M12

Compact module
Current

Cube67 AI4 E - 4×M12

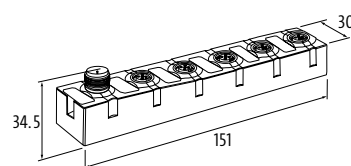
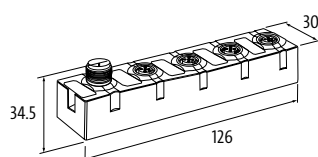
Expansion module
Voltage

Cube67 AI4 E - 4×M12

Expansion module
Current



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
AI4 - (C) 4×M12 (U)	cULus	56700		
AI4 - (C) 4×M12 (I)		cULus	56730	
AI4 - (E) 4×M12 (U)			cULus	56701
AI4 - (E) 4×M12 (I)				56731
Internal communication				
Current consumption	max. 50 mA			
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)			
Connections				
Fieldbus	via internal system connection			
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)			
I/O ports	M12 (female) 5-pole, A-coded			
Input				
Conversion time (analog)	approx. 2 ms (per channel)			
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected			
Resolution (analog)	15 Bit + sign	15 Bit	15 Bit + sign	15 Bit
Accuracy	max. ±0.5% (of range limit)			
Voltage inputs				
Input resistor	approx. 1 MOhm, differential input	–	approx. 1 MOhm, differential input	–
Input range	±10 V DC, 0...10 V DC	–	±10 V DC, 0...10 V DC	–
Current input signals				
Load	–	approx. 300 Ohm, differential input	–	approx. 300 Ohm, differential input
Input range	–	0...20 mA, 4...20 mA	–	0...20 mA, 4...20 mA
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module and channel			
Diagnostic via BUS	per module and channel			
Monitoring - under voltage	yes			
Monitoring - no voltage	yes			
Short-circuit and overload	yes			
Actuator warning	per channel via LED and BUS			
Wire break upper/lower limit overload	per channel via LED and BUS			
General data				
Protection	IP67			
Mounting method	2-hole screw mounting			
Temperature range	0...+55 °C (storage temperature -20...+75 °C)			
Dimension drawing				



Notes

CUBE67

Analog inputs

– for resistors and temperature

– for thermo elements

Cube67 AI4 C (RTD) - 4×M12

Compact module
for resistors and temperature



Cube67 AI4 C (TH) - 4×M12

Compact module
for thermo elements

Cube67 AI4 E (RTD) - 4×M12

Expansion module
for resistors and temperature



Cube67 AI4 E (TH) - 4×M12

Expansion module
for thermo elements

Order Data	Art-No.	Art-No.	Art-No.	Art-No.
AI4 - (C) 4×M12 (RTD)	cULus	56740		
AI4 - (C) 4×M12 (TH)		cULus	56748	
AI4 - (E) 4×M12 (RTD)			56741	
AI4 - (E) 4×M12 (TH)				56749
Internal communication				
Current consumption	max. 50 mA			
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)			
Connections				
Fieldbus	via internal system connection			
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)			
I/O ports	M12 (female) 5-pole, A-coded			
Input				
Sensor type	Pt100, 200, 500, 1000; Ni100, 120, 200, 500, 1000; R 0...3000 Ohm	K, N, J, E, R	Pt100, 200, 500, 1000; Ni100, 120, 200, 500, 1000; R 0...3000 Ohm	K, N, J, E, R
Conversion time (analog)	approx. 58 ms per channel	approx. 65 ms per channel	approx. 58 ms per channel	approx. 65 ms per channel
Resolution (analog)	15 Bit + sign			
Accuracy	max. ±0.5% (of range limit)			
Accuracy (Ni)	max. ±1% (of range limit)	–	max. ±1% (of range limit)	–
Connection	2-, 3-, 4-wire technology	2-wire technology	2-, 3-, 4-wire technology	2-wire technology
Cold junction compensation	–	inside M12 connector	–	inside M12 connector
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module and channel			
Diagnostic via BUS	per module and channel			
Monitoring - under voltage	yes			
Monitoring - no voltage	yes			
Short-circuit and overload	yes			
Actuator warning	per channel via LED and BUS			
Wire break upper/lower limit overload	per channel via LED and BUS			
General data				
Protection	IP67			
Mounting method	2-hole screw mounting			
Temperature range	0...+55 °C (storage temperature -20...+75 °C)			
Dimension drawing				
Notes				

Analog outputs

– Voltage/current

Cube67 AO4 C 4×M12

Compact module
Voltage

Cube67 AO4 C 4×M12

Compact module
Current

Cube67 AO4 E 4×M12

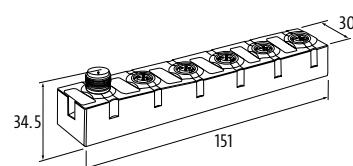
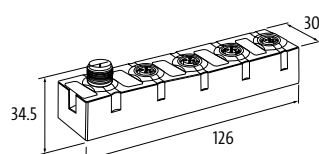
Expansion module
Voltage

Cube67 AO4 E 4×M12

Expansion module
Current



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
AO4 - (C) 4×M12 (U)	cULus	56710		
AO4 - (C) 4×M12 (I)		cULus	56720	
AO4 - (E) 4×M12 (U)			56711	
AO4 - (E) 4×M12 (I)				56721
Internal communication				
Current consumption	max. 50 mA			
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)			
Connections				
Fieldbus	via internal system connection			
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)			
I/O ports	M12 (female) 5-pole, A-coded			
Output				
Supply voltage	24 V DC (EN 61131-2), via system connection (max. 4 A)			
Conversion time (analog)	approx. 1 ms (per channel)			
Actuator supply UA	24 V DC (EN 61131-2), max. 1.6 A per M12 female, (short-circuit and overload protected)			
Resolution (analog)	11 Bit + sign	11 Bit	11 Bit + sign	11 Bit
Accuracy	max. ±0.5% (of range limit)			
Voltage output signals				
Load	min. 500 Ohm	–	min. 500 Ohm	–
Input range	±10 V DC, 0...10 V DC	–	±10 V DC, 0...10 V DC	–
Current outputs				
Load	–	max. 500 Ohm	–	max. 500 Ohm
Input range	–	0...20 mA, 4...20 mA	–	0...20 mA, 4...20 mA
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module and channel			
Diagnostic via BUS	per module and channel			
Monitoring - under voltage	yes			
Monitoring - no voltage	yes			
Short-circuit and overload	yes			
Actuator warning	per channel via LED and BUS			
Wire break upper/lower limit overload	per channel via LED and BUS			
General data				
Protection	IP67			
Mounting method	2-hole screw mounting			
Temperature range	0...+55 °C (storage temperature -20...+75 °C)			
Dimension drawing				



Notes

CUBE67

Safe outputs (Safety)

– passive safety

– Output groups up to PLd (EN ISO 13849-1) can be switched off via safety relays

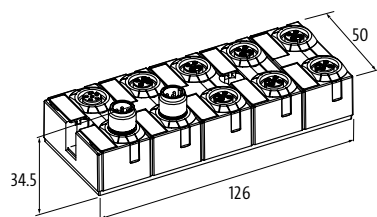
Approvals:  US
Listed

Cube67 DO6/DO6 - E 6×M12 (K3)

Expansion module



Order Data	Art-No.
DO6/DO6 - (E) 6×M12 (K3)	56605
Internal communication	
Current consumption	max. 50 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)
Connections	
Fieldbus	via internal system connection
Sensor-system/actuator supply	via internal system connection (max. 1×4 A) / actuators via external cable (max. 4×2 A)
I/O ports	M12 (female) 5-pole, A-coded
Output	
Actuator supply UA	24 V DC (EN 61131-2), 2 circuits, (max. 2 × 4 A)
Switching current per output	max. 1.6 A (short-circuit and overload protected)
Diagnostic	
Communication status	via LED
Diagnostic via LED	per module and channel
Diagnostic via BUS	per module and channel
Monitoring - under voltage	yes
Monitoring - no voltage	yes
Short-circuit and overload	yes
Actuator warning	per channel via LED and BUS
General data	
Protection	IP67
Mounting method	2-hole screw mounting
Temperature range	0...+55 °C (storage temperature -20...+70 °C)
Dimension drawing	



Notes

Function modules

– Hygienic Design

– multifunctional

– IP69K

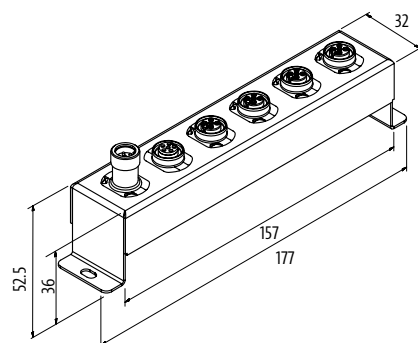
IO-Link

Cube67+ DIO12 IOL4 - E 8×M12 HD

Expansion module
IO-Link Master



Order Data	Art-No.
DIO12/IOL4 - (E) 8×M12	5676660
Internal communication	
Current consumption	max. 100 mA
LED display	US: sensor supply (green: OK); IOL: (green: OK); UA: actuator supply (green: OK)
Connections	
Fieldbus	via internal system connection
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)
I/O ports	M12 (female) 5-pole, A-coded
IO-Link	
IO-Link	4 × Master
Operating modes	COM1; COM2; COM3 (automatic)
Transfer parameters	32 Byte (via IO-Link Port)
Port class	Class A + B (not galvanically separated)
Specification	IO-Link Master V1.12
Input	
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (port 0...3); max. 700 mA (port 4...7)
Type	for 3-wire sensors or mechanical switches, PNP
Input filter	1 ms
Output	
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)
Switching current per output	max. 1.6 A (short-circuit and overload protected)
Parameterization	
PIN 2	Input/Output/Diagnostic
PIN 4	Input/Output (port 0...3); IO-Link Master (port 4...7)
Diagnostic	
Communication status	via LED
Diagnostic via LED	per module and channel
Diagnostic via BUS	per module and channel
Monitoring - under voltage	yes
Monitoring - no voltage	yes
Short-circuit and overload	yes
Actuator warning	per channel via LED and BUS
General data	
Protection	IP69K
Mounting method	2-hole screw mounting
Temperature range	0...+55 °C (storage temperature -20...+75 °C)
Dimension drawing	



CUBE67

Hygienic Design

– multifunctional

– IP69K

Cube67 DIO8 E - 4×M12 HD

Expansion module

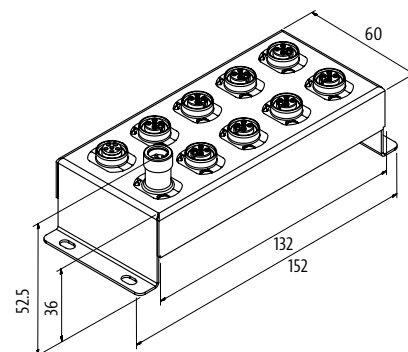
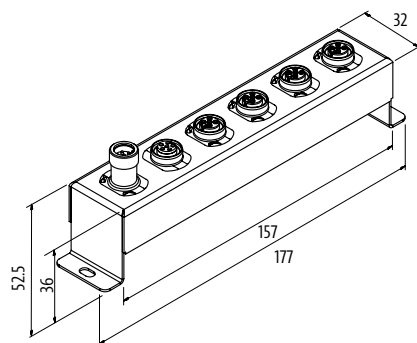


Cube67 DIO16 E - 8×M12 HD

Expansion module



Order Data	Art-No.	Art-No.
DIO8 - 0.5 A (E) 4×M12	5661160	
DIO16 - 0.5 A (E) 8×M12		5660160
Internal communication		
Current consumption	max. 50 mA	
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Connections		
Fieldbus	via internal system connection	
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)	
I/O ports	M12 (female) 5-pole, A-coded	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP	
Input filter	1 ms	
Output		
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)	
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Parameterization		
PIN 2	Input/Output/Diagnostic	
PIN 4	Input/Output	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short-circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
General data		
Protection	IP69K	
Mounting method	2-hole screw mounting	
Temperature range	0...+55 °C (storage temperature -20...+75 °C)	
Dimension drawing		



Notes

Digital outputs

– with open ended wires

Cube67 DO8 - Valve

Expansion module

Cube67 DO16 - E Valve

Expansion module

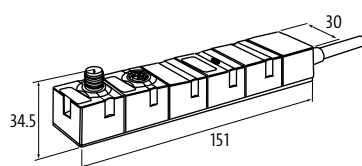
Cube67 DO32 - E Valve

Expansion module



Approvals:  UL US
Listed

Order Data	Art-No.	Art-No.	Art-No.
DO8 - 0.5 A (E) 0.5 m (open cable)	56655		
DO16 - 60 mA (E) 0.5 m (open cable)		56651	
DO32 - 0.5 A (E) 0.5 m (open cable)			56656
Internal communication			
Current consumption	max. 50 mA		
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Connections			
Fieldbus	via internal system connection		
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)		
I/O ports	Open cable		
Output			
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)		
Switching current per output	max. 0.5 A (short-circuit and overload protected)	max. 60 mA (short-circuit and overload protected)	max. 0.5 A (short-circuit and overload protected)
Cables			
No./diameter of wires	10 × 0.34 mm²	18 × 0.25 mm²	36 × 0.14 mm²
Material (jacket)	PUR	PVC	
Cable length	0.5 m		
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short-circuit and overload	yes		
Actuator warning	per channel via BUS		
General data			
Protection	IP67		
Mounting method	2-hole screw mounting		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Dimension drawing			



Notes

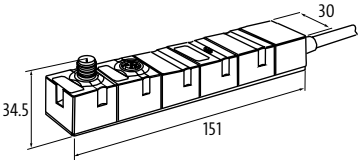
CUBE67

Digital inputs/outputs
(multifunctional)

Cube67 DIO8 E - Cable
Expansion module



Order Data	Art-No.	Art-No.
DIO8 - 60 mA (E) 0.5 m (open cable)	cULus	5666100
DIO8 - 60 mA (E) 2 m (open cable)	56661	
Internal communication		
Current consumption	max. 30 mA	
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Connections		
Fieldbus	via internal system connection	
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)	
I/O ports	Open cable	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 1.6 A	
Type	for 3-wire sensors or mechanical switches, PNP	
Input filter	1 ms	
Output		
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)	
Switching current per output	max. 60 mA (short-circuit and overload protected)	
Cables		
No./diameter of wires	10 × 0.34 mm²	
Material (jacket)	PVC	
Cable length	0.5 m	2.0 m
Parameterization		
I/O channels	Input/Output	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short-circuit and overload	yes	
Actuator warning	per channel via BUS	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	0...+55 °C (storage temperature -20...+75 °C)	
Dimension drawing		



Notes

Digital inputs/outputs (multifunctional)

Cube67 DIO16 E - Cable

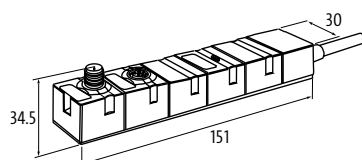
Expansion module

Cube67 DI16 DO16 E - Cable

Expansion module



Order Data	Art-No.		Art-No.
DIO16 - 0.5 A (E) 0.5 m (open cable)	cULus	56662	
DIO16 - 0.5 A (E) 1.5 m (open cable)		5666200	
DI16/DO16 - 0.5 A (E) 0.5 m (open cable)			56671
Internal communication			
Current consumption	max. 30 mA		max. 50 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Connections			
Fieldbus	via internal system connection		
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)		
I/O ports	Open cable		
Input			
Sensor supply US	24 V DC (EN 61131-2), max. 0.5 A		24 V DC (EN 61131-2), max. 0.2 A
Type	for 3-wire sensors or mechanical switches, PNP		
Input filter	1 ms		
Output			
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)		
Switching current per output	max. 0.5 A (short-circuit and overload protected)		
Cables			
No./diameter of wires	20 × 0.14 mm²		36 × 0.14 mm²
Material (jacket)	PVC		
Cable length	0.5 m	1.5 m	0.5 m
Parameterization			
I/O channels	Input/Output		–
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short-circuit and overload	yes		
Actuator warning	per channel via BUS		
General data			
Protection	IP67		
Mounting method	2-hole screw mounting		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Dimension drawing			



Notes

CUBE67

Digital inputs/outputs (multifunctional)

– Digital outputs

Cube67 D07 - E Cable M12

for Modlight70 Pro basic
Expansion module



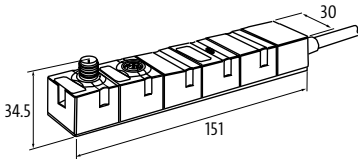
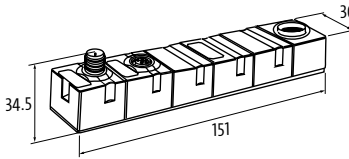
Cube67 DIO8 E - Cable M12

Expansion module

Cube67 DIO8 - E M16 female

Expansion module



Order Data	Art-No.	Art-No.	Art-No.
DO7 - 0.5 A (E) 0.5 m (M12)	Modlight70 Pro - M12 (female) 8-pole 5665503		
DIO8 - 60 mA (E) 0.5 m (M12)		cULus 5666201	
DIO8 - 0.5 A (E) M16			cULus 56663
Internal communication			
Current consumption	max. 50 mA		max. 30 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Connections			
Fieldbus	via internal system connection		
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)		
I/O ports	Modlight70 Pro - M12 (female) 8-pole	M12 (male) 5-pole, A-coded	M16 (female)
Input			
Sensor supply US	–	24 V DC (EN 61131-2), max. 0.5 A	24 V DC (EN 61131-2), max. 200 mA
Type	–	for 3-wire sensors or mechanical switches, PNP	
Input filter	–	1 ms	
Output			
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)		
Switching current per output	max. 0.5 A (short-circuit and overload protected)	max. 60 mA (short-circuit and overload protected)	max. 0.5 A (short-circuit and overload protected)
Cables			
No./diameter of wires	8 × 0.25 mm²		–
Material (jacket)	PUR		–
Cable length	0.5 m		–
Parameterization			
I/O channels	7 outputs	Input/Output	
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short-circuit and overload	yes		
Actuator warning	per channel via BUS		
General data			
Protection	IP67		
Mounting method	2-hole screw mounting		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Dimension drawing			
			
Notes			

CUBE67

Safe outputs (Safety)

- passive safety
- Output groups up to PLd (EN ISO 13849-1) can be switched off via safety relays

Cube67 DO16 - C Valve (K3)

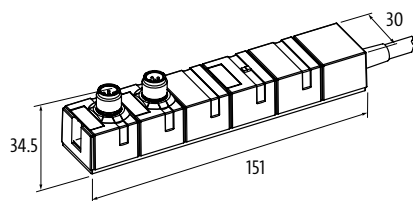
Compact module

Cube67 DO8 - C Valve (K3)

Compact module



Order Data	Art-No.	Art-No.
DO16 - 0.5 A Valve (C) 0.5 m (K3)	FESTO - CPV (SUB-D25) – cULus	56650
DO8 - 0.5 A Valve (C) 0.5 m (K3)		FESTO - CPV (SUB-D9)5665003
Internal communication		
Current consumption	max. 50 mA	
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Connections		
Fieldbus	via internal system connection	
Sensor-system/actuator supply	via internal system connection (max. 1×4 A) / actuators via external cable (max. 4×2 A)	
I/O ports	FESTO - CPV (SUB-D25)	FESTO - CPV (SUB-D9)
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 4 × 2 A	
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Cables		
No./diameter of wires	4×4×0.14 mm²	
Material (jacket)	PVC, cross-link safe	
Cable length	0.5 m	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short-circuit and overload	yes	
Actuator warning	per channel via BUS	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	0...+55 °C (storage temperature -20...+70 °C)	
Dimension drawing		



Notes

Digital outputs

Cube67 DO16 - C Valve

Compact module
(4 × actuator supply UA)



Cube67 DO32 - E Valve

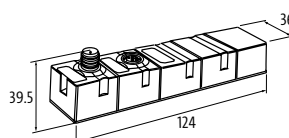
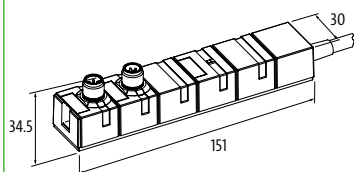
Expansion module



Cube67 DO16 - E Valve

Expansion module

Order Data	Art-No.		Art-No.
DO16 - 0.5 A Valve (C) 0.5 m	SMC - SUB-D25	5665000	
	SMC - Series SV/VQ	5665002	
	FESTO - MPA (SUB-D25)	5665001	
	FESTO - CPV (SUB-D25)	5665004	
DO32 - 0.5 A Valve (E)		MAC - SUB-D44	56657
DO16 - 0.5 A Valve (E)			MAC - SUB-D44
Internal communication			
Current consumption	max. 50 mA		
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Connections			
Fieldbus	via internal system connection		
Sensor-system/actuator supply	via internal system connection (max. 1×4 A) / actuators via external cable (max. 4×2 A)	via internal system connection (max. 2×4 A)	
I/O ports	SMC - SUB-D25	MAC - SUB-D44	
Output			
Actuator supply UA	24 V DC (EN 61131-2), max. 4 × 2 A	24 V DC (EN 61131-2)	
Switching current per output	max. 0.5 A (short-circuit and overload protected)		
Cables			
No./diameter of wires	4×4×0.14 mm²	–	
Material (jacket)	PVC, cross-link safe	–	
Cable length	0.5 m	–	
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short-circuit and overload	yes		
Actuator warning	per channel via BUS		
General data			
Protection	IP67		
Mounting method	2-hole screw mounting		
Temperature range	0...+55 °C (storage temperature -20...+70 °C)		
Dimension drawing			



Notes

Versions			Art-No.
	based of: Art.-No. 56655		
	Multipole plug (70 mA)	FESTO - CPV	5665500
	Multipole plug (70 mA)	FESTO - CPV (SUB-D9)	5665501
	Multipole plug (0.5 A)	FESTO - MPA	5665502
	based of: Art.-No. 56651		
	Multipole plug (70 mA)	SMC - Series SV/VQ	5665119
	Multipole plug (0.5 A)	SMC - Series SV/VQ	5665120
	Multipole plug (0.5 A)	FESTO - CPV-VA (SUB-D25)	5665151
	based of: Art.-No. 56651		
	Multipole plug (70 mA)	FESTO - CPV (cULus-Listed)	5665100
	Multipole plug (70 mA)	PARKER - Series V	5665101
	Multipole plug (70 mA)	NORGREN - V20/22	5665110
	Multipole plug (70 mA)	NORGREN - VM10	5665111
	Multipole plug (70 mA)	NORGREN - V20/22	5665112
	Multipole plug (70 mA)	SMC - Series SV/VQ	5665113
	Multipole plug (70 mA)	SMC - M27	5665114
	Multipole plug (70 mA)	NORGREN - V20/220	5665115
	Multipole plug (0.5 A)	MAC Valves	5665116
	Multipole plug (70 mA)	FESTO - MPA	5665118
	Multipole plug (70 mA)	FESTO - VTSA	5665105
	Multipole plug (70 mA)	FESTO - CPV-SC (SUB-D15)	5665102
	Multipole plug (70 mA)	FESTO - CPV-SC (SUB-D26)	5665103
	Multipole plug (0.5 A)	HDM (SUB-D25)	5665106
	based of: Art.-No. 56656		
	Multipole plug (0.5 A)	NORGREN - VM10	5665600
	Multipole plug (0.5 A)	FESTO - MPA	5665601
	Multipole plug (0.5 A)	AVENTICS - HF03	5665602
	Multipole plug (0.5 A)	NORGREN - VM10	5665603
	Multipole plug (0.5 A)	SMC - Series SV	5665604
	Multipole plug (0.5 A)	FESTO - CPA	5665605
	Multipole plug (0.5 A)	AVENTICS - HF04	5665621
	Multipole plug (0.5 A)	AVENTICS - HF02/03-LG	5665606
	Multipole plug (0.5 A)	SMC - M27	5665607
	Multipole plug (0.5 A)	MAC Valves (UL-Listed)	5665609
	Multipole plug (0.5 A)	VESTA (SUB-D37)	5665610
	Multipole plug (0.5 A)	VESTA (SUB-D25)	5665611
	Multipole plug (0.5 A)	FESTO - VTSA	5665613
	Multipole plug (0.5 A)	SMC - SUB-D25	5665614
	Multipole plug (0.5 A)	FESTO - CPA-SC	5665615
	Multipole plug (0.5 A)	FESTO - MPA-L	5665616
	Multipole plug (0.5 A)	AVENTICS - HF02/03-LG	5665617
	Multipole plug (0.5 A)	Numatics Generation 2000 (UL-Listed)	5665618
	Multipole plug (0.5 A)	FESTO - MPA-L	5665619
	based of: Art.-No. 56671		
	DI16/DO16 - 0.5 A (E) AMP (0.5 m)	with AMP connector 32-pole (female)	5667100
	DI16/DO16 - 0.5 A (E) SUB-D37 (0.5 m)	with SUB-D37 (female)	5667101
	DI16/DO16 - 0.5 A (E) SUB-D37 (5 m)	with SUB-D37 (female)	5667102
	DI16/DO16 - 0.5 A E (0.72 m)	with open ended wires	5667103
	DI16/DO16 - 0.5 A E (2 m)	with open ended wires	5667104
	DI16/DO16 - 0.5 A E (3 m)	with open ended wires	5667106
	DI16/DO16 - 0.5 A E (5 m)	with open ended wires	5667105

CUBE67

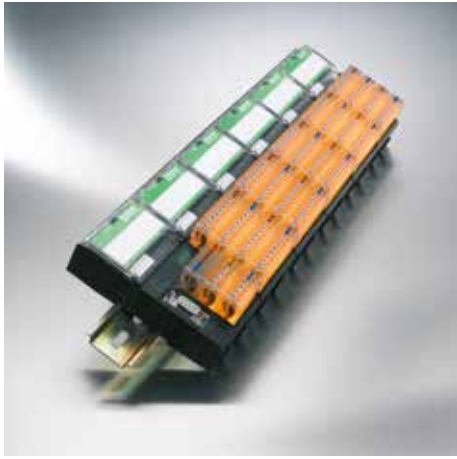
Labeling accessories			Art-No.
	Label plates 20 × 8 mm	(20 pieces per plate)	55318
	Label plates 20 × 8 mm (20 pieces per plate)	Safety	55316
Blind Plug/caps			Art-No.
	Screw plug M8 × 1 mm (for female) Plastic, hex without gasket	Quantity: 10 pcs.	3858627
	Screw plug M12 × 1 mm (for female) Plastic, hex without gasket	Quantity: 10 pcs.	58627
	Screw plug M12 × 1 mm (for female) Plastic, hex without gasket	Quantity: 4 pcs.	56952
	Screw plug M12 × 1 mm (for male) Plastic	Quantity: 4 pcs.	56951
	Screw plug 7/8" (for male) Plastic		55385
	Blind plug diagnostic M12 × 1 mm Bridge PIN 1 and PIN 2		7000-13481-0000000
Connection accessories			Art-No.
	Ground strap 4 mm² 100 mm for screw (M4)		4000-71001-0410004
	T-coupler M12 – M12 Male straight - female straight straight, A-coded, 6-pole, shielded	Cube67 additional actuator power supply	7000-46101-0000000
	T-coupler M12/M12, female/male straight, A-coded, 6-pole, shielded	Cube67 additional actuator power supply	7000-46091-0000000

Connection accessories			Art-No.
	T-coupler 7/8"-7/8", female/male 5-pole		7000-50061-0000000
	Terminator M12 (male) straight, A-coded, 6-pole	Cube67	7000-15041-0000000
	Control cabinet entry system M12 straight, A-coded, 6-pole, shielded	Cube67	7000-46111-0000000
	Cube67 FSC Connector Set with mounting socket Han-Brid®, 6-pole - M12, 6-pole	Cable length (120 mm)	56953
	DIN-rail adapter for bus nodes		56961
	DIN-rail adapter for extension modules 50 mm		56962
	DIN-rail adapter for extension modules 30 mm		56963
	Power distributor 4 x M12 for additional actuator supply		56955
	Repeater PROFIBUS DP + PROFIsafe 2 segments		56960
	3 segments		56965

CUBE67

Cube67

Connection accessories			Art-No.
	Male M12, field-wireable, screw terminals Analog input with integrated compensation	Cube67	56945
	Male M12, field-wireable, screw terminals Analog input with integrated compensation	Cube67	56946
	Male M12 Internal system connection		56947
	Female M12 Internal system connection with mounting socket		56948
	Female M12 Internal system connection		56949



CUBE20

MODULAR I/O STATION IP20

- High channel density due to compact design
- Modular structure
- I/O connections with maintenance-free terminals

INNOVATIVE INSTALLATION TECHNOLOGY

Cube20 is an expandable modular fieldbus I/O system for control cabinets. It can be operated as a stand-alone unit or with a Cube67. Cube20 is consistently designed for the requirements of modern control cabinet wiring. High costs due to handling of many individual components can be reduced to a minimum with Cube20.



EtherNet/IP

Cube20 I/O Modules

 Bus nodes • PROFIBUS DP • PROFINET IO • EtherNet/IP <i>Page 4.2.1</i>	 System connection to Cube67 <i>Page 4.2.3</i>
 Digital inputs <i>Page 4.2.5</i>	 Digital inputs/outputs <i>Page 4.2.5</i>
 Digital outputs <i>Page 4.2.6</i>	 Analog inputs <i>Page 4.2.8</i>
 Analog outputs <i>Page 4.2.10</i>	

Bus Nodes

– Digital inputs



Approvals: UL
Listed

Cube20 BN-P DI8

PROFIBUS DP

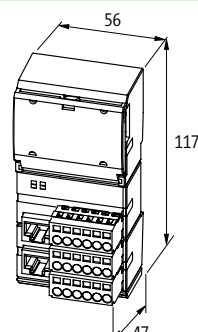
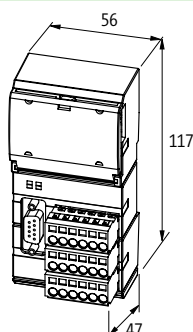


Cube20 BN-PNIO DI8

PROFINET IO



Order Data	Art-No.	Art-No.
PROFIBUS DP	56001	
PROFINET IO		56006
Connections		
Fieldbus	PROFIBUS 12 Mbit/s; SUB-D9	Ethernet 10/100 Mbit/s; 2 × RJ45 (female)
Sensor-system/actuator supply	4 × Spring clamp plug-in terminals, max. 2.5 mm ² (max. 12 A)	
Internal system connection	4 × Spring clamp plug-in terminals, max. 2.5 mm ² (max. 12 A)	
I/O ports	8 × Spring clamp plug-in terminals, max. 2.5 mm ²	
Module Supply		
Operating voltage	24 V DC (EN 61131-2)	
Current consumption	max. 150 mA	
PROFIBUS		
Addressing	Rotary switch 0...99	–
PROFINET		
Addressing	–	DCP
Specification	–	V2.2, Conformance Class B
Cube system		
Module capacity	max. 15	
I/O capacity	max. 244 Byte (Input), max. 244 Byte (Output)	max. 1024 Byte (Input), max. 1024 Byte (Output)
Machine Option Management	yes	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 700 mA per module	
Type	PNP (EN 61131-2)	
Input filter	1 ms	
Galvanic isolation	500 V DC between I/O and system electronics	
Parameterization		
Terminal row X2 (4 channels)	Input	
Terminal row X3 (4 channels)	Input	
Diagnostic		
Communication status	via LED and BUS	
Diagnostic via LED	per module	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
General data		
Protection	IP20	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+55 °C (storage temperature -20...+85 °C)	
Dimension drawing		



CUBE20

Bus Nodes

– Digital inputs

EtherNet/IP™

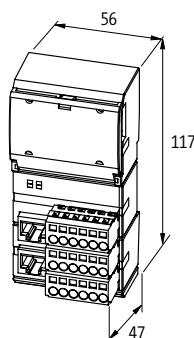
Approvals:  US
Listed

Cube20 BN-E DI8

EtherNet/IP



Order Data	Art-No.
EtherNet/IP	56005
Connections	
Fieldbus	Ethernet 10/100 Mbit/s; 2 × RJ45 (female)
Sensor-system/actuator supply	4 × Spring clamp plug-in terminals, max. 2.5 mm ² (max. 12 A)
Internal system connection	4 × Spring clamp plug-in terminals, max. 2.5 mm ² (max. 12 A)
I/O ports	8 × Spring clamp plug-in terminals, max. 2.5 mm ²
Module Supply	
Operating voltage	24 V DC (EN 61131-2)
Current consumption	max. 150 mA
EtherNet/IP	
Addressing	DHCP, BOOTP or IP address by rotary switch
Cube system	
Module capacity	max. 15
I/O capacity	max. 504 Byte (Input), max. 500 Byte (Output)
Input	
Sensor supply US	24 V DC (EN 61131-2), max. 700 mA per module
Type	PNP (EN 61131-2)
Input filter	1 ms
Galvanic isolation	500 V DC between I/O and system electronics
Parameterization	
Terminal row X2 (4 channels)	Input
Terminal row X3 (4 channels)	Input
Diagnostic	
Communication status	via LED and BUS
Diagnostic via LED	per module
Diagnostic via BUS	per module and channel
Monitoring - under voltage	yes
Monitoring - no voltage	no
Short circuit and overload	yes
General data	
Protection	IP20
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	0...+55 °C (storage temperature -20...+85 °C)
Dimension drawing	



Notes

CUBE20

Cube20/67-Interface

– Digital inputs/outputs
(multifunctional)

– Cube67

Approvals: 

Cube20 BN-67 DIO8

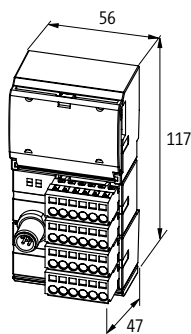
Power external



Cube20 BN-67 DIO8

M12 Power
via internal system connection

Order Data	Art-No.	Art-No.
Cube67 system connection	56450	564501
Connections		
Fieldbus	M12 (male) 6-pole	M12 (female) 6-pole
Sensor-system/actuator supply	4 × Spring clamp plug-in terminals, max. 2.5 mm ² (max. 12 A)	via internal system connection (max. 2×4 A)
I/O ports	8 × Spring clamp plug-in terminals, max. 2.5 mm ²	
Module Supply		
Operating voltage	24 V DC (EN 61131-2)	
Current consumption	max. 100 mA	
Cube system		
Module capacity	max. 3	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 700 mA per module, short-circuit and overload protected	
Type	PNP (EN 61131-2)	
Input filter	1 ms	
Galvanic isolation	500 V DC between I/O and system electronics	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 12 A	24 V DC (EN 61131-2), max. 4 A
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Galvanic isolation	500 V DC between I/O and system electronics	
Lamp load	10 W	
Parameterization		
Terminal row X2 (4 channels)	Input/Output	
Terminal row X3 (4 channels)	Input/Output	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel (only outputs)	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
General data		
Protection	IP20	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+55 °C (storage temperature -20...+85 °C)	
Dimension drawing		



Notes

CUBE20

Cube20/67-Interface

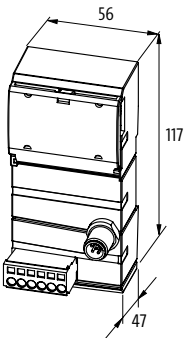
– Cube67

Approvals:  US
Listed

Cube20/67-Interface



Order Data		Art-No.
Cube67 system connection		56140
Connections		
Fieldbus	M12 (female) 6-pole	
Sensor-system/actuator supply	4 × Spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)	
I/O ports	8 × Spring clamp plug-in terminals, max. 2.5 mm²	
Module Supply		
Operating voltage	24 V DC (EN 61131-2)	
Current consumption	max. 25 mA	
Cube system		
Module capacity	max. 15	
Sensor supply US	24 V DC (18...30.2 V DC) EN 61131-2, max. 4 A	
Actuator supply UA	24 V DC (18...30.2 V DC) EN 61131-2, max. 4 A	
Diagnostic		
Communication status	via LED	
General data		
Protection	IP20	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+55 °C (storage temperature -20...+85 °C)	
Dimension drawing		



Notes

Digital inputs/outputs

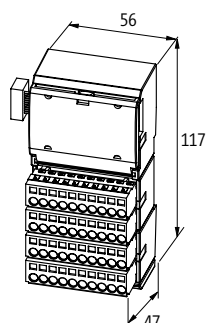
Cube20 DI32 E Expansion module



Cube20 DI16 DO16 E Expansion module



Order Data		Art-No.	Art-No.
DI32 - (E)	cULus	56112	
DI16/DO16 - (E)			56168
Internal communication			
Module Supply	via system connection		
Current consumption	max. 25 mA		
Connections			
Fieldbus	Ribbon cable connection		
Sensor-system/actuator supply	8 × Spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)		
I/O ports	32 × Spring clamp plug-in terminals, max. 2.5 mm²		
Input			
Sensor supply US	24 V DC (EN 61131-2), max. 700 mA per module		
Type	PNP (EN 61131-2)		
Input filter	1 ms		
Galvanic isolation	500 V DC between inputs and internal communication		
Output			
Actuator supply UA	–	24 V DC (EN 61131-2), max. 12 A	
Galvanic isolation	–	500 V DC between outputs and internal communication	
Switching current per output	–	max. 0.5 A (short-circuit and overload protected)	
Lamp load	–	10 W	
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module	per module and channel (only outputs)	
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	no		
Short circuit and overload	yes		
General data			
Protection	IP20		
Mounting method	DIN-rail mountable (EN 60715)		
Temperature range	0...+55 °C (storage temperature -20...+85 °C)		
Dimension drawing			



Notes

CUBE20

Digital outputs

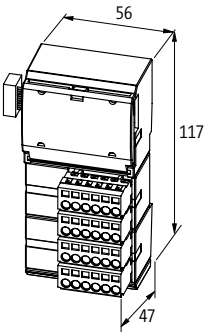
Cube20 DO16 E - 2 A

Expansion module



Approvals:  US
Listed

Order Data		Art-No.
DO16 - 2 A (E)		56117
Internal communication		
Module Supply	via system connection	
Current consumption	max. 25 mA	
Connections		
Fieldbus	Ribbon cable connection	
Sensor-system/actuator supply	8 × Spring clamp plug-in terminals, max. 2.5 mm ² (max. 12 A)	
I/O ports	16 × Spring clamp plug-in terminals, max. 2.5 mm ²	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 12 A	
Switching current per output	max. 2 A	
Galvanic isolation	500 V DC between outputs and internal communication	
Lamp load	40 W	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
General data		
Protection	IP20	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+55 °C (storage temperature -20...+85 °C)	
Dimension drawing		



Notes

CUBE20

Digital outputs

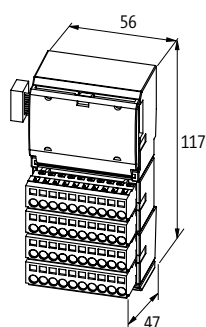
Cube20 DO32 E

Expansion module



Approvals:  UL
Listed

Order Data	Art-No.
DO32 - (E)	56118
Internal communication	
Module Supply	via system connection
Current consumption	max. 25 mA
Connections	
Fieldbus	Ribbon cable connection
Sensor-system/actuator supply	8 × Spring clamp plug-in terminals, max. 2.5 mm ² (max. 12 A)
I/O ports	32 × Spring clamp plug-in terminals, max. 2.5 mm ²
Output	
Actuator supply UA	24 V DC (EN 61131-2), max. 12 A
Switching current per output	max. 0.5 A (short-circuit and overload protected)
Galvanic isolation	500 V DC between outputs and internal communication
Lamp load	10 W
Diagnostic	
Communication status	via LED
Diagnostic via LED	per module and channel
Diagnostic via BUS	per module and channel
Monitoring - under voltage	yes
Monitoring - no voltage	no
Short circuit and overload	yes
General data	
Protection	IP20
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	0...+55 °C (storage temperature -20...+85 °C)
Dimension drawing	



Notes

CUBE20

Analog inputs

– Voltage/current

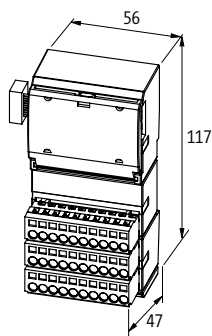
Cube20 AI4 E

Expansion module
Voltage/current



Approvals:  US
Listed

Order Data	Art-No.
AI4 - (E)	56200
Internal communication	
Module Supply	via system connection
Current consumption	max. 25 mA from system, max. 60 mA externally (UI)
Connections	
Fieldbus	Ribbon cable connection
Sensor-system/actuator supply	4 × Spring clamp plug-in terminals, max. 2.5 mm ² (max. 12 A)
I/O ports	24 × Spring clamp plug-in terminals, max. 2.5 mm ²
Input	
Conversion time (analog)	max. 2 ms (per channel)
Resolution (analog)	15 Bit + sign
Accuracy	max. 0.3%
Connection	Differential voltage/current input
Voltage inputs	
Input resistor	min. 1 MOhm, (EN 61131-2)
Input range	±10 V DC, 0...10 V DC
Current input signals	
Load	max. 300 Ohm (20 mA), (EN 61131-2)
Input range	0...20 mA, 4...20 mA
Diagnostic	
Communication status	via LED
Diagnostic via LED	per module
Diagnostic via BUS	per module and channel
Monitoring - under voltage	yes
Monitoring - no voltage	no
Short circuit and overload	yes
Wire break upper/lower limit overload	per channel via LED and BUS
General data	
Protection	IP20
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	0...+55 °C (storage temperature -40...+85 °C)
Dimension drawing	



Notes

Analog inputs

– Temperature converter

Approvals:  UL
Listed

Cube20 AI4 E RTD

Expansion module
for resistors and temperature

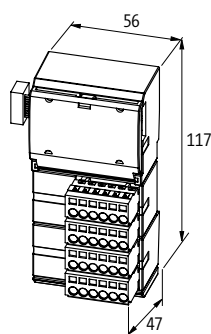


Cube20 AI4 E TH

Expansion module
for thermo elements



Order Data	Art-No.	Art-No.
AI4 - (E) RTD	56230	
AI4 - (E) TH		56240
Internal communication		
Module Supply	via system connection	
Current consumption	max. 25 mA from system, max. 70 mA externally (UI)	max. 25 mA from system, max. 45 mA externally (UI)
Connections		
Fieldbus	Ribbon cable connection	
Sensor-system/actuator supply	4 × Spring clamp plug-in terminals, max. 2.5 mm ² (max. 12 A)	
I/O ports	16 × Spring clamp plug-in terminals, max. 2.5 mm ²	12 × Spring clamp plug-in terminals, max. 2.5 mm ²
Input		
Conversion time (analog)	max. 600 ms (per channel)	max. 300 ms (per channel)
Type	Pt100, 200, 500; Ni100, 120, 200, 500, 1000, R 0...3000 Ohm	K, N, E, J, R
Resolution (analog)	15 Bit + sign	
Accuracy	0.7...1.4%	max. ±2%, cold junction compensation
Connection	2-wire input: +Rx, -Rx / 3-wire input: +Rx, RLx, -Rx	2-wire input; TH+x, TH-x
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
Wire break upper/lower limit overload	per channel via LED and BUS	
General data		
Protection	IP20	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+55 °C (storage temperature -20...+85 °C)	
Dimension drawing		



Notes

CUBE20

Analog outputs

– Voltage/current

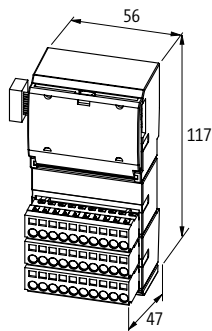
Cube20 AO4 E

Expansion module
Voltage/current



Approvals:  US
Listed

Order Data	Art-No.
AO4 - (E) U/I	56220
Internal communication	
Module Supply	via system connection
Current consumption	max. 25 mA from system, max. 90 mA externally (UI), idle load
Connections	
Fieldbus	Ribbon cable connection
Sensor-system/actuator supply	4 × Spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)
I/O ports	24 × Spring clamp plug-in terminals, max. 2.5 mm²
Output	
Conversion time (analog)	max. 1 ms (per channel)
Resolution (analog)	15 Bit + sign
Accuracy	max. 0.5%
Galvanic isolation	500 V DC between inputs and internal communication
Voltage output signals	
Load	min. 1 kOhm, (EN 61131-2)
Input range	±10 V DC, 0...10 V DC
Current outputs	
Load	max. 60 Ohm, (EN 61131-2)
Input range	0...20 mA, 4...20 mA
Diagnostic	
Communication status	via LED
Diagnostic via LED	per module and channel
Diagnostic via BUS	per module and channel
Monitoring - under voltage	yes
Monitoring - no voltage	no
Short circuit and overload	yes
Actuator warning	per channel via LED and BUS
Wire break upper/lower limit overload	per channel via LED and BUS
General data	
Protection	IP20
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	0...+55 °C (storage temperature -20...+85 °C)
Dimension drawing	



Notes

Connection accessories			Art-No.
	Bus Connection Plug 90°		
	SUB-D9 (male), screw terminals	PROFIBUS	55762
	SUB-D9 (female), screw terminals	CANopen	55760
	Bus Connection Plug 180°		
	SUB-D9 (male), IDC terminals, rigid cable	PROFIBUS	55584
	SUB-D9 (male), IDC terminals, flexible cable	PROFIBUS	55583
	Bus Connection Plug 90°		
	SUB-D9 (male), IDC terminals, rigid cable	PROFIBUS	55585
	SUB-D9 (male), IDC terminals, flexible cable	PROFIBUS	55587
	Bus Connection Plug 90°		
	SUB-D9 (male), IDC terminals, rigid cable, programming device conn.	PROFIBUS	55586
	SUB-D9 (male), IDC terminals, flexible cable, programming device conn.	PROFIBUS	55588
	Bus Connection Plug 90°		
	SUB-D9 (male); M12 × 1, B-coded	PROFIBUS	7000-99441-0000000
	Label-sheet		
	Quantity: 40 pcs.		56113
	Potential terminal block		
	gray/gray/brown/blue		56078
	gray/gray/yellow/blue		56079
	yellow/blue/yellow/blue		56080
	brown/blue/brown/blue		56081
	blue/yellow/brown/blue		56111
	gray/gray/gray/gray		56084
	blue/blue/blue/blue		56085
	brown/brown/brown/brown		56077
	brown/brown/blue/blue		56109
	blue/yellow		56110

CUBE20

Connection accessories



Potential terminal block
Multi color

Art-No.

56083



Potential terminal block
Slim Line

56082



CUBE20S

SMALL, SPEEDY, SAFE

- Extremely modular
- Up to 64 modules per bus node
- Quick reaction time: up to 20 μ s

A MEMBER OF THE CUBE-FAMILY

Murrelektronik's modular Cube20S I/O system expands the field-tested Cube family with another product line that is extremely useful.

The compact modules are only 12.9 millimeters wide and have modular design, allowing them to be installed in series easily, quickly and according to individual requirements – the integrated backplane bus connects the modules to energy and data.

Bus nodes for Cube20S are available for standard fieldbus protocols.



Cube20S I/O Modules

 Bus nodes/Power modules Page 4.3.1	 Supply module Page 4.3.4
 Digital inputs Page 4.3.6	 Digital outputs Page 4.3.8
 Analog inputs Page 4.3.11	 Analog outputs Page 4.3.13
 Safety modules • Digital inputs • Digital outputs Page 4.3.7/4.3.10 	

Bus Nodes

– Power module included



Approvals: UL
Listed

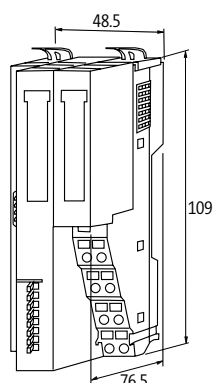
Cube20S



Cube20S



Order Data	Art-No.	Art-No.
PROFIBUS DP	57101	
PROFINET IO		57106
Connections		
Fieldbus	PROFIBUS 12 Mbit/s; SUB-D9	Ethernet 10/100 Mbit/s; 2 × RJ45 (female)
Internal system connection	4 × Spring clamp plug-in terminals, max. 1.5 mm ² (max. 10 A)	
Sensor-system/actuator supply	4 × Spring clamp plug-in terminals, max. 1.5 mm ² (max. 10 A)	
Module supply		
Operating voltage	24 V DC (EN 61131-2)	
Current consumption	max. 95 mA	
PROFIBUS		
Addressing	Address switch 1...125	–
PROFINET		
Addressing	–	DCP
Shared Device/Input	–	yes, for 3 controls
Specification	–	V2.2, Conformance Class B
MRP	–	yes
Cube system		
Module capacity	max. 64	
I/O capacity	max. 244 Byte (Input), max. 244 Byte (Output)	max. 512 Byte (Input), max. 512 Byte (Output)
Machine Option Management	–	yes
Output		
Output voltage (I/Os / Backplane)	24 V DC/5 V DC	
Output current (I/Os / Backplane)	10 A/3 A	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module	
Monitoring - under voltage	no	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	no	
General data		
Protection	IP20	
Connection	Spring clamp plug-in terminals: max. 1.5 mm ² (max. 10 A)	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+60 °C (storage temperature -25...+70 °C)	
Dimension drawing		



CUBE20S

Bus Nodes

– Power module included

EtherNet/IP EtherCAT

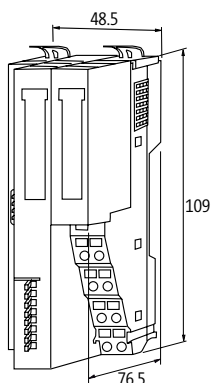
Approvals:  US Listed

Cube20S



Cube20S

Order Data	Art-No.	Art-No.
EtherNet/IP	57105	
EtherCAT		57103
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; 1 × RJ45 (female)	Ethernet 10/100 Mbit/s; 2 × RJ45 (female)
Internal system connection	4 × Spring clamp plug-in terminals, max. 1.5 mm ² (max. 10 A)	
Sensor-system/actuator supply	4 × Spring clamp plug-in terminals, max. 1.5 mm ² (max. 10 A)	
Module supply		
Operating voltage	24 V DC (EN 61131-2)	
Current consumption	max. 95 mA	
EtherNet/IP		
Addressing	DHCP, BOOTP or IP address by rotary switch	–
EtherCAT		
Addressing	–	automatic
Operating modes	–	FreeRun, SyncManager-Event, Distributed Clock, HotConnect
Cube system		
Module capacity	max. 64	
I/O capacity	max. 1024 Byte (Input), max. 1024 Byte (Output)	
Output		
Output voltage (I/Os / Backplane)	24 V DC/5 V DC	
Output current (I/Os / Backplane)	10 A/3 A	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module	
Monitoring - under voltage	no	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	no	
General data		
Protection	IP20	
Connection	Spring clamp plug-in terminals: max. 1.5 mm ² (max. 10 A)	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+60 °C (storage temperature -25...+70 °C)	
Dimension drawing		



Notes

Bus Nodes

– Power module included

CANopen 

Approvals:  **UL** US
Listed

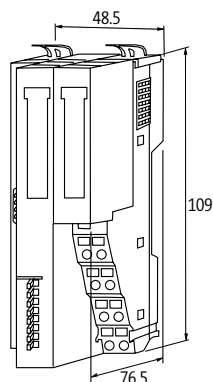
Cube20S



Cube20S



Order Data	Art-No.	Art-No.
CANopen	57104	
Modbus TCP		57108
Connections		
Fieldbus	CAN 1 Mbit/s; SUB-D9	Ethernet 10/100 Mbit/s; 1 × RJ45 (female)
Internal system connection	4 × Spring clamp plug-in terminals, max. 1.5 mm ² (max. 10 A)	
Sensor-system/actuator supply	4 × Spring clamp plug-in terminals, max. 1.5 mm ² (max. 10 A)	
Module supply		
Operating voltage	24 V DC (EN 61131-2)	
Current consumption	max. 95 mA	
CANopen		
Addressing	DIP switch	–
Modbus		
Addressing	–	Webserver
Cube system		
Module capacity	max. 64	
I/O capacity	max. 128 Byte (Input), max. 128 Byte (Output)	max. 1024 Byte (Input), max. 1024 Byte (Output)
Output		
Output voltage (I/Os / Backplane)	24 V DC/5 V DC	
Output current (I/Os / Backplane)	10 A/3 A	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module	
Monitoring - under voltage	no	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	no	
General data		
Protection	IP20	
Connection	Spring clamp plug-in terminals: max. 1.5 mm ² (max. 10 A)	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+60 °C (storage temperature -25...+70 °C)	
Dimension drawing		



Notes

CUBE20S

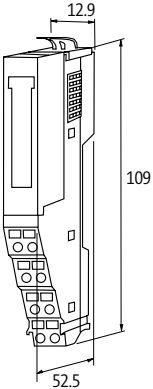
Power supplies

Cube20S
Potential distributor



Approvals:  US
Listed

Order Data	Art-No.	Art-No.	Art-No.
8 × 24 V DC	57120		
8 × 0 V DC		57121	
4×24 + 4×0 V DC			57122
Module supply			
Operating voltage	max. 30 V DC	max. 0 V DC	max. 30 V DC
Total current	max. 10 A		
General data			
Protection	IP20		
Connection	Spring clamp terminals: 0.08...2.5 mm ² (AWG 28...14)		
Mounting method	DIN-rail mountable (EN 60715)		
Temperature range	0...+60 °C (storage temperature -25...+70 °C)		
Dimension drawing			



Notes

CUBE20S

Power supplies

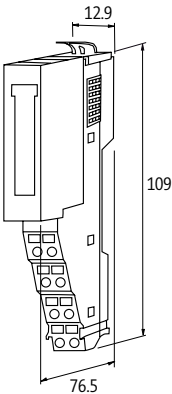
Cube20S
for external voltage supply

Cube20S
for external voltage supply and internal backplane

Approvals:  UL
Listed



Order Data	Art-No.		Art-No.
Power module	57130		57131
Module supply			
Operating voltage	max. 28.8 V DC		
Total current	max. 10 A		max. 6 A
Output			
Output current (I/Os /Backplane)	10/0 A		4 A/2 A
Output voltage (I/Os /Backplane)	24 V AC		24 V DC/5 V DC
General data			
Protection	IP20		
Connection	Spring clamp terminals: 0.08...2.5 mm² (AWG 28...14)		
Mounting method	DIN-rail mountable (EN 60715)		
Temperature range	0...+60 °C (storage temperature -25...+70 °C)		
Dimension drawing			



Notes

Cube20S

CUBE20S

Digital inputs

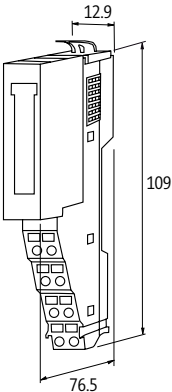
Cube20S



Approvals:  US
Listed

Cube20S

Order Data		Art-No.
DI2 - (E) NPN		57220
DI4 - (E)		57240
DI8 - (E)		57280
Internal communication		
Module supply	via system connection	
Current consumption	max. 55 mA	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 500 mA per module	
Type	PNP (EN 61131-2)	
Input filter	3 ms	
Galvanic isolation	500 V DC between inputs and internal communication	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module	
Monitoring - under voltage	no	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
General data		
Protection	IP20	
Connection	Spring clamp plug-in terminals: max. 1.5 mm ² (AWG 16)	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+60 °C (storage temperature -20...+70 °C)	
Dimension drawing		



Notes

Safe inputs (Safety)

– active safety

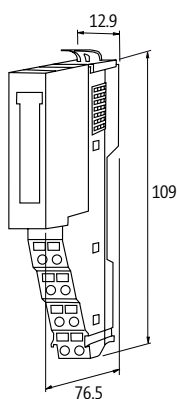


Approvals:  UL US
Listed

Cube20S FDI4/2



Order Data	Art-No.
FDI4/2 - (E)	57290
Internal communication	
Module supply	via system connection
Current consumption	max. 95 mA
Safety Indicators	
PL	up to e
Category	up to 4
PFH	0.25E-9
DC	high
SIL	up to 3
SIL CL	up to 3
Service life	20 years
Input	
Sensor supply US	24 V DC (EN 61131-2), max. 500 mA per module
Type	PNP (EN 61131-2)
Input filter	3 ms
Galvanic isolation	500 V DC between inputs and internal communication
Diagnostic	
Communication status	via LED
Diagnostic via LED	per module and channel
Diagnostic via BUS	per module and channel
Short circuit and overload	yes
General data	
Protection	IP20
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	0...+60 °C (storage temperature -20...+70 °C)
Dimension drawing	



Notes	

CUBE20S

Digital outputs

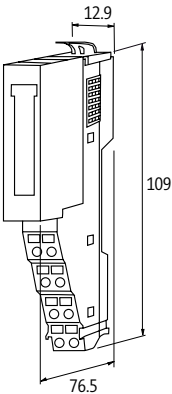
Cube20S



Approvals:  UL US
Listed

Cube20S

Order Data		Art-No.
D02 - (E)		57320
D04 - (E)		57340
D08 - (E)		57380
Internal communication		
Module supply	via system connection	
Current consumption	max. 55 mA	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 1 A	
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Galvanic isolation	500 V DC between outputs and internal communication	
Lamp load	5 W	
Output delay time	175 ns	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
General data		
Protection	IP20	
Connection	Spring clamp plug-in terminals: max. 1.5 mm ² (AWG 16)	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+60 °C (storage temperature -25...+70 °C)	
Dimension drawing		



Notes

Digital outputs

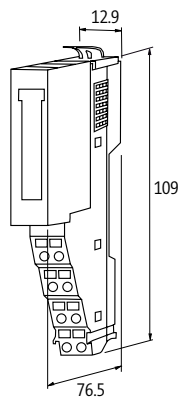
Cube20S - 2 A

Cube20S - 230 V AC (Relays)

Approvals:  **UL**
Listed



Order Data	Art-No.	Art-No.
DO2 - (E)	57325	57327
DO4 - (E)	57345	
Internal communication		
Module supply	via system connection	
Current consumption	max. 60 mA	max. 130 mA
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 4 A	max. 30 V DC/230 V AC
Switching current per output	max. 2 A (short-circuit and overload protected)	max. 3 A (short-circuit and overload protected)
Galvanic isolation	500 V DC between outputs and internal communication	
Lamp load	10 W	–
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
General data		
Protection	IP20	
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+60 °C (storage temperature -25...+70 °C)	
Dimension drawing		



Notes	
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CUBE20S

Safe outputs (Safety)

– active safety

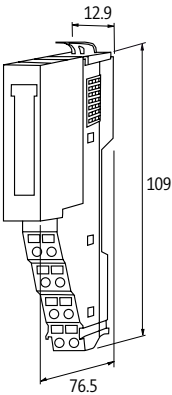


Approvals: UL US
Listed

Cube20S FDO4/2



Order Data		Art-No.
FDO4/2 - (E)		57390
Internal communication		
Module supply	via system connection	
Current consumption	max. 75 mA	
Safety Indicators		
PL	up to e	
Category	up to 4	
PFH	0.22E-9	
DC	high	
SIL	up to 3	
SIL CL	up to 3	
Service life	20 years	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 2 A	
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Galvanic isolation	500 V DC between outputs and internal communication	
Lamp load	5 W	
Output delay time	175 µs	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Short circuit and overload	yes	
General data		
Protection	IP20	
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+60 °C (storage temperature -25...+70 °C)	
Dimension drawing		



Notes

CUBE20S

Analog inputs

Cube20S

Voltage

Cube20S

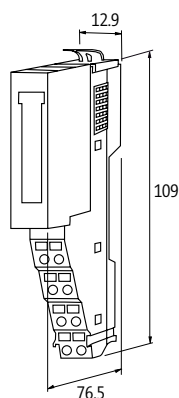
Current

Cube20S

Voltage


 Approvals: 

Order Data	Art-No.	Art-No.	Art-No.
AI2 - (E)	57231	57232	57233
AI4 - (E)	57261	57262	57263
Internal communication			
Module supply	via system connection		
Current consumption	max. 60 mA from system, max. 25 mA externally (UI)	max. 60 mA from system, max. 15 mA externally (UI)	max. 60 mA from system, max. 25 mA externally (UI)
Input			
Conversion time (analog)	240 µs (all channels)		
Resolution (analog)	15 Bit + sign		
Accuracy	max. ±0.2%	max. 0.3%	max. ±0.2%
Connection	Differential voltage input	Differential current input	Differential voltage input
Voltage inputs			
Input resistor	200 kOhm	–	200 kOhm
Input range	0...10 V	–	-10 V DC...+10 V DC
Current input signals			
Load	–	max. 60 Ohm, (EN 61131-2)	–
Input range	–	0...20 mA, 4...20 mA	–
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module		
Monitoring - under voltage	yes		
Monitoring - no voltage	no		
Short circuit and overload	yes		
Wire break upper/lower limit overload	per module via LED and BUS		
General data			
Protection	IP20		
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)		
Mounting method	DIN-rail mountable (EN 60715)		
Temperature range	0...+60 °C (storage temperature -25...+70 °C)		
Dimension drawing			



Notes

CUBE20S

Analog inputs

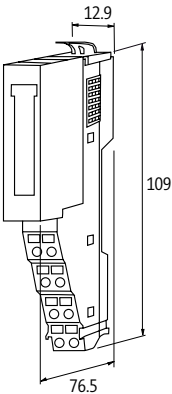
Cube20S (TH)
for thermo elements

Cube20S (RTD)
for resistors and temperature

Approvals:  UL US
Listed



Order Data	Art-No.	Art-No.
AI2 - (E)	57230	
AI4 - (E)		57265
Internal communication		
Module supply	via system connection	
Current consumption	max. 75 mA from the system, max. 30 mA externally (UI)	max. 75 mA
Input		
Conversion time (analog)	max. 4.2...324.1 ms, 50 Hz (per channel)	
Type	B, C, E, J, K, L, N, R, S, T	Pt100, Pt1000, Ni100, Ni1000, R 0...3000 Ohm
Resolution (analog)	15 Bit + sign	
Accuracy	max. ±0.3%, cold junction compensation	0.7...1.4%
Connection	2-wire input; TH+x, TH-x	2-wire (4 input); 3-, 4-wire (2 input)
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
Wire break upper/lower limit overload	per channel via LED and BUS	
General data		
Protection	IP20	
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+55 °C (storage temperature -20...+85 °C)	0...+60 °C (storage temperature -25...+70 °C)
Dimension drawing		



Notes

CUBE20S

Analog outputs

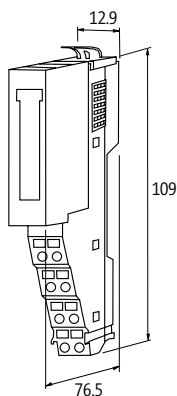
Cube20S

Voltage



Approvals: 

Order Data	Art-No.	Art-No.	Art-No.	Art-No.
AO2 - (E)	57331		57333	
AO4 - (E)		57361		57363
Internal communication				
Module supply	via system connection			
Current consumption	max. 60 mA from system, max. 25 mA externally (UI), idle load			
Output				
Conversion time (analog)	200 µs (all channels)			
Resolution (analog)	15 Bit + sign			
Accuracy	max. 0.5%		max. 0.2%	
Galvanic isolation	500 V DC between inputs and internal communication			
Voltage output signals				
Load	5 kOhm			
Input range	0...10 V		-10 V DC...+10 V DC	
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module and channel			
Diagnostic via BUS	per module			
Monitoring - under voltage	yes			
Monitoring - no voltage	no			
Short circuit and overload	yes			
Actuator warning	per module via LED and BUS			
Wire break upper/lower limit overload	per module via LED and BUS			
General data				
Protection	IP20			
Connection	Spring clamp plug-in terminals: max. 1.5 mm ² (AWG 16)			
Mounting method	DIN-rail mountable (EN 60715)			
Temperature range	0...+60 °C (storage temperature -25...+70 °C)			
Dimension drawing				



Notes	
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Cube20S

CUBE20S

Connection accessories			Art-No.
	Bus cover		
	Black plastic		57190
	Shield bus carrier		
	Black plastic	Quantity: 10 pcs.	57191
	Bus connection plug 90°		
	SUB-D9 (male), screw terminals	PROFIBUS	55762
	SUB-D9 (female), screw terminals	CANopen	55760
	Bus connection plug 180°		
	SUB-D9 (male), IDC terminals, rigid cable	PROFIBUS	55584
	SUB-D9 (male), IDC terminals, flexible cable	PROFIBUS	55583
	Bus connection plug 90°		
	SUB-D9 (male), IDC terminals, rigid cable	PROFIBUS	55585
	SUB-D9 (male), IDC terminals, flexible cable	PROFIBUS	55587
	Bus connection plug 90°		
	SUB-D9 (male), IDC terminals, rigid cable, programming device conn.	PROFIBUS	55586
	SUB-D9 (male), IDC terminals, flexible cable, programming device conn.	PROFIBUS	55588
	Bus connection plug 90°		
	SUB-D9 (male); M12 × 1, B-coded	PROFIBUS	7000-99441-0000000



MVK METAL COMPACT I/O MODULES FOR DEMANDING REQUIREMENTS

- Tough and reliable
- Safe (safety circuits according to EN 13849-1 up to PLe)
- PROFINET – versions compliant with AIDA

MAXIMUM FLEXIBILITY

MVK Metal features a robust metal housing and is extremely resistant to vibration, media, and weld splatter.

- Double valves occupy only one M12 port
- PROFINET versions with Fast Start Up (< 500 ms)
- Models with multi-functional I/Os
- Fewer variations required, minimizes inventory costs
- Maximum flexibility for expansions

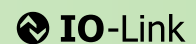
DON'T LOOK FOR ERRORS, FIND THEM

MVK Metal's diagnostic options offer detailed information about the type and location of the failure or the error.

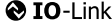
- Only the affected port shuts down, not the whole module
- Detailed message sent to controls and device LED
- Minimizes downtime – failures are fixed faster



EtherNet/IP™



MVK Metal I/O Modules

 MVK-MP • Multifunctional I/Os • Digital I/Os • Safety outputs • Analog I/Os  Page 4.4.1	 MVK-MPNIO • Multifunctional I/Os • Digital I/Os • Push Pull • IO-Link • Safety inputs/outputs    Page 4.4.6
 MVK-ME • Multifunctional I/Os • IO-Link   Page 4.4.14	 MIRO BT • Bluetooth Master/Slave  Page 4.4.16

MVK METAL

Expanded diagnostic

– 7/8"

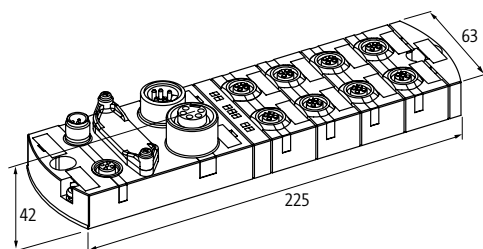


Approvals: UL US
Listed

MVK-MP



Order Data	Art-No.	Art-No.	Art-No.
DI8 (DI8)	55307		
DIO8 (DI8)		55308	
DIO8 (DIO8)			55309
Connections			
Fieldbus	PROFIBUS 12 Mbit/s; M12, B-coded		
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A		
I/O ports	M12, 5-pole, A-coded		
PROFIBUS			
Addressing	Rotary switch 1...99		
Input			
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected		
Type	for 3-wire sensors or mechanical switches, PNP		
Output			
Actuator supply UA	–	24 V DC (EN 61131-2), max. 9 A	
Switching current per output	–	max. 1.6 A (short-circuit and overload protected)	
Lamp load	–	10 W	
Parameterization			
PIN 4	Input	Input/Output	
PIN 2	Input/Diagnostic		Input/Output/Diagnostic
General data			
Protection	IP67		
Mounting method	2-hole screw mounting		
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)		
Dimension drawing			



Notes

MVK METAL

Expanded diagnostic

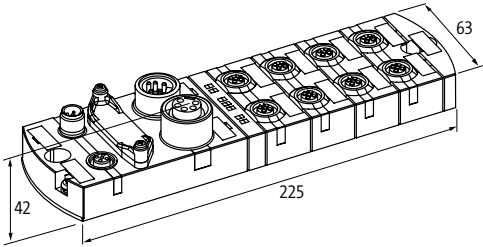
– 7/8"



MVK-MP



Order Data	Art-No.	Art-No.
DO8 (DO8)	55290	
DO4 (DO4) DI4 (DI4)		55274
Connections		
Fieldbus	PROFIBUS 12 Mbit/s; M12, B-coded	
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A	
I/O ports	M12, 5-pole, A-coded	
PROFIBUS		
Addressing	Rotary switch 1...99	
Input		
Sensor supply US	–	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected
Type	–	for 3-wire sensors or mechanical switches, PNP
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Lamp load	10 W	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)	
Dimension drawing		



Notes

MVK METAL

Expanded diagnostic

- passive safety
- Output groups up to PLd (EN ISO 13849-1) can be switched off via safety relays

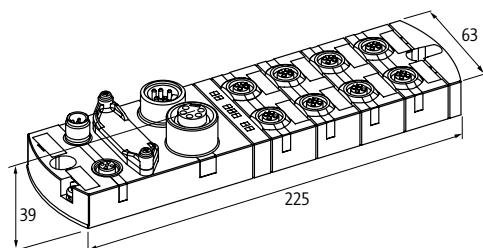
PROFIBUS

Approvals:  UL US
Listed

MVK-MP Safety



Order Data	Art-No.
K3 DO4 (DO4) DIO4 (DIO4)	55291
Connections	
Fieldbus	PROFIBUS 12 Mbit/s; M12, B-coded
I/O ports	M12, 5-pole, A-coded
Sensor-system/actuator supply	7/8", 5-pole, max. 9 A, safe circuits (1 + 2) via separate 7/8" supply (yellow), 2-pole disconnectable
PROFIBUS	
Addressing	Rotary switch 1...99
Input	
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected
Type	for 3-wire sensors or mechanical switches, PNP
Output	
Actuator supply UA	24 V DC (EN 61131-2), 3 circuits, (max. 9 A)
Switching current per output	max. 1.6 A (short-circuit and overload protected)
Lamp load	10 W
Safe output	
Switching current by safe output	max. 2 A short-circuit and overload protected, (EN13849-1) PLd
M12-(yellow) PIN 4	2 safety circuits (UA1/UA2) with 2 digital outputs each (EN13849-1) PLd
M12-(yellow) PIN 2	2 safety circuits (UA1/UA2) with 2 digital outputs each (EN13849-1) PLd
Parameterization	
PIN 4	4 × input/output
PIN 2	4 × Input/Output/Diagnostic
General data	
Protection	IP67
Mounting method	2-hole screw mounting
Temperature range	0...+55 °C (storage temperature -20...+70 °C)
Dimension drawing	



Notes

MVK METAL

Expanded diagnostic

– Analog outputs

– Current

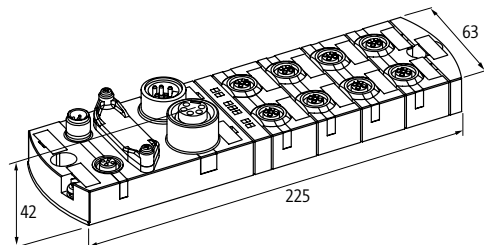


Approvals: UL US
Listed

MVK-MP



Order Data	Art-No.
AO4 (I) DIO4 (DIO4)	55292
Connections	
Fieldbus	PROFIBUS 12 Mbit/s; M12, B-coded
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A
I/O ports	M12, 5-pole, A-coded
PROFIBUS	
Addressing	Rotary switch 1...99
Input	
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected
Type	for 3-wire sensors or mechanical switches, PNP
Output	
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A
Switching current per output	max. 1.6 A (short-circuit and overload protected)
Lamp load	10 W
Input range (analog)	0...20 mA, 4...20 mA (0...10 V via adapter Art-No. 7000-42252-0000000)
Conversion time (analog)	1 ms
General data	
Protection	IP67
Mounting method	2-hole screw mounting
Temperature range	0...+55 °C (storage temperature -20...+70 °C)
Dimension drawing	



Notes

MVK METAL

Expanded diagnostic

– Analog inputs

– Voltage

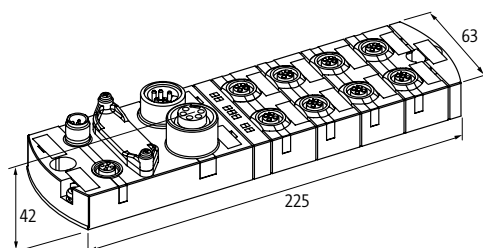


Approvals: UL
Listed

MVK-MP



Order Data	Art-No.
AI4 (U) DIO4 (DIO4)	55293
Connections	
Fieldbus	PROFIBUS 12 Mbit/s; M12, B-coded
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A
I/O ports	M12, 5-pole, A-coded
PROFIBUS	
Addressing	Rotary switch 1...99
Input	
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected
Type	for 3-wire sensors or mechanical switches, PNP
Resolution (analog)	16 Bit
Input range (analog)	0...10 V, (0...20 mA and 4...20 mA via adapter Art.-No. 7000-42251-0000000)
Input resistor (analog)	approx. 1 MOhm, differential input
Conversion time (analog)	1 ms
Output	
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A
Lamp load (8×M12 left)	max. 1.6 A (short-circuit and overload protected)
Lamp load	10 W
General data	
Protection	IP67
Mounting method	2-hole screw mounting
Temperature range	0...+55 °C (storage temperature -20...+70 °C)
Dimension drawing	



Notes

Galvanic isolation K3

– POF Push Pull

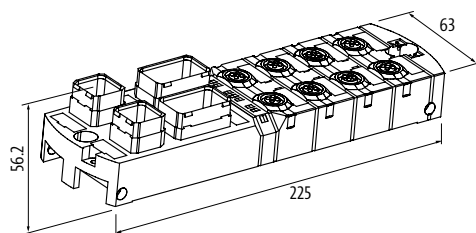


Approvals: Listed

MVK+ MPNIO POF



Order Data	Art-No.	Art-No.
D18 D18 IRT	55254	
D18 D08 IRT		55255
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; 2 × SCRJ45 POF-Push Pull	
Sensor-system/actuator supply	Power plug, Push Pull, max. 12 A	
I/O ports	M12, 5-pole, A-coded	
PROFINET		
FSU (Fast-Start-Up)	max. 500 ms	
Shared Device/Input	yes, for 2 controls	
Profinet Netload Class	III	
Specification	V2.2, Conformance Class C (IRT)	
MRP	yes	
Addressing	DCP	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP	
Output		
Actuator supply UA	–	24 V DC (EN 61131-2), max. 12 A
Switching current per output	–	max. 2 A (short-circuit and overload protected)
Lamp load	–	10 W
Parameterization		
PIN 4	Input	Input (port 4...7); Output (port 0...3)
PIN 2	Input	Input (port 4...7); Output (port 0...3)
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	0...+55 °C (storage temperature -20...+70 °C)	
Dimension drawing		



Notes

Galvanic isolation K3

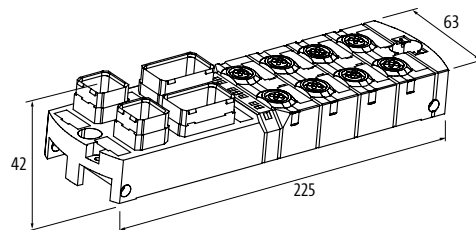
– Push Pull



MVK+ MPNIO



Order Data	Art-No.	Art-No.
DI8 DI8 IRT	55528	
DI8 DO8 IRT		55529
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; Push Pull RJ45 Data connector	
Sensor-system/actuator supply	Power plug, Push Pull, max. 12 A	
I/O ports	M12, 5-pole, A-coded	
PROFINET		
FSU (Fast-Start-Up)	max. 500 ms	
Shared Device/Input	yes, for 2 controls	
Profinet Netload Class	III	
Specification	V2.2, Conformance Class C (IRT)	
MRP	yes	
Addressing	DCP	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP	
Output		
Actuator supply UA	–	24 V DC (EN 61131-2), max. 12 A
Switching current per output	–	max. 2 A (short-circuit and overload protected)
Lamp load	–	10 W
Parameterization		
PIN 4	Input	Input (port 4...7); Output (port 0...3)
PIN 2	Input	Input (port 4...7); Output (port 0...3)
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	0...+55 °C (storage temperature -20...+70 °C)	
Dimension drawing		



Notes

MVK METAL

Galvanic isolation K3

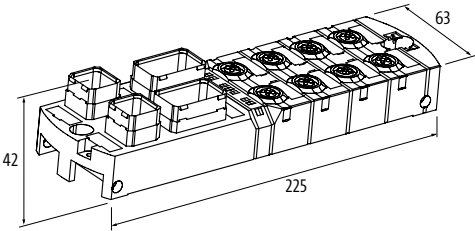
– Push Pull



MVK+ MPNIO



Order Data	Art-No.
DIO8 (DIO8)	55283
Connections	
Fieldbus	Ethernet 10/100 Mbit/s; Push Pull RJ45 Data connector
Sensor-system/actuator supply	Power plug, Push Pull, max. 12 A
I/O ports	M12, 5-pole, A-coded
PROFINET	
Specification	V2.2, Conformance Class B
MRP	yes
Addressing	DCP
Input	
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected
Type	for 3-wire sensors or mechanical switches, PNP
Output	
Actuator supply UA	24 V DC (EN 61131-2), max. 12 A
Switching current per output	max. 1.6 A (short-circuit and overload protected)
Lamp load	10 W
Parameterization	
PIN 4	Input/Output
PIN 2	Input/Output/Diagnostic
General data	
Protection	IP67
Mounting method	2-hole screw mounting
Temperature range	0...+55 °C (storage temperature -20...+70 °C)
Dimension drawing	



Notes

MVK METAL

Galvanic isolation K3

– FSU (Fast-Start-Up)

– 7/8"

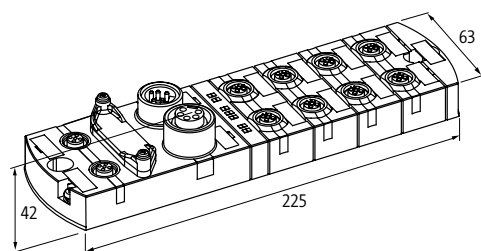


Approvals: UL US
Listed

MVK+ MPNIO



Order Data	Art-No.
DO8 (DI4 DI4)	55339
Connections	
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded
Sensor-system/actuator supply	7/8", 5-pole, max. 9 A, protection against reverse polarization
I/O ports	M12, 5-pole, A-coded
PROFINET	
FSU (Fast-Start-Up)	max. 500 ms
Specification	V2.2, Conformance Class B
MRP	yes
Addressing	DCP
Input	
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected
Type	for 3-wire sensors or mechanical switches, PNP
Output	
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A
Switching current per output	max. 2 A (short-circuit and overload protected)
Lamp load	10 W
Parameterization	
PIN 4	Input (port 4...7); Output (port 0...3)
PIN 2	Input (port 4...7); Output (port 0...3)
General data	
Protection	IP67
Mounting method	2-hole screw mounting
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)
Dimension drawing	



Notes

MVK METAL

FSU (Fast-Start-Up)

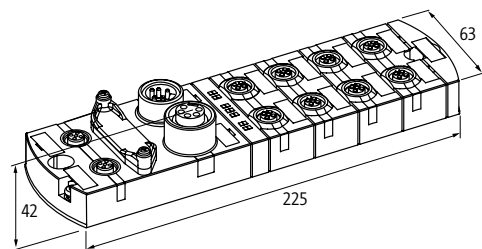
– 7/8"



MVK-MPNIO



Order Data		Art-No.
DIO16 IRT		55530
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded	
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A	
I/O ports	M12, 5-pole, A-coded	
PROFINET		
FSU (Fast-Start-Up)	max. 500 ms	
Shared Device/Input	yes, for 2 controls	
Profinet Netload Class	III	
Specification	V2.3, Conformance Class C (IRT)	
MRP	yes	
Addressing	DCP	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Lamp load	10 W	
Parameterization		
PIN 4	Input/Output (port X0...X7)	
PIN 2	Input/Output (port X0...X7)	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	-25...+60 °C (storage temperature -25...+70 °C)	
Dimension drawing		



Notes

FSU (Fast-Start-Up)

– 7/8"

PROFINET **IO-Link**

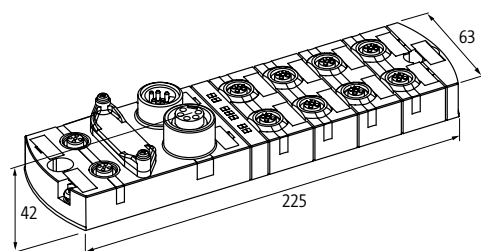
MVK-MPNIO IO-Link



MVK-MPNIO IO-Link



Order Data	Art-No.	Art-No.
DIO14 IOL2 IRT	55531	
DIO12 IOL4 IRT		55532
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded	
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A	
I/O ports	M12, 5-pole, A-coded	
PROFINET		
FSU (Fast-Start-Up)	max. 500 ms	
Shared Device/Input	yes, for 2 controls	
Profinet Netload Class	III	
Specification	V2.3, Conformance Class C (IRT)	
MRP	yes	
Addressing	DCP	
IO-Link		
IO-Link	2 × Master	4 × Master
Operating modes	COM1; COM2; COM3 (automatic)	
Transfer parameters	32 Byte (via IO-Link Port)	
Port class	Class B (not galvanically separated)	Class A + B (not galvanically separated)
Specification	IO-Link Master V1.12	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP, IO-Link Devices	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Lamp load	10 W	
Parameterization		
PIN 4	Input (port X0...X7); Output (port X0...X5); IO-Link Master (port X6, X7)	Input (port X0...X7); Output (port X0...X3); IO-Link Master (port X4...X7)
PIN 2	Input/Output (port X0...X7); U-Actuator IO-Link Class B (port X6, X7)	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	-25...+60 °C (storage temperature -25...+70 °C)	
Dimension drawing		



Notes	
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MVK METAL

Active safety

- safe inputs/outputs up to cat.4/PLe (EN ISO 13849-1), up to SIL3 (IEC 61508), up to SILCL3 (IEC 62061)



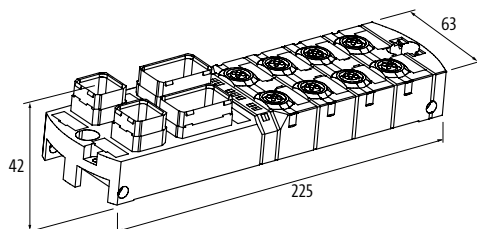
Approvals: UL US Listed

MVK-MPNIO Safety

Push Pull



Order Data	Art-No.	Art-No.
DI16/8 F	55562	
DI8/4 F DO4		55563
Safety Indicators		
PL	up to e	
Category	up to 4	
PFH	1.70E-9	1.653E-9
DC	98%	
SIL	up to 3	
SIL CL	up to 3	
Service life	20 years	
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; Push Pull RJ45 Data connector	
Sensor-system/actuator supply	Power plug, Push Pull, max. 12 A	
I/O ports	M12, 5-pole, A-coded	
PROFINET		
Shared Device/Input	yes, for 2 controls	
Specification	V2.2, Conformance Class C (IRT)	
MRP	yes	
Addressing	DCP	
Safety input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (PIN 1+5), short-circuit and overload protected, or max. 700 mA for only one PIN	
Type	for electronical sensors or mechanical switches	
Safe output		
Actuator supply UA	–	24 V DC (EN 61131-2), max. 9 A
Switching current by safe output	–	max. 2 A (short-circuit and overload protected)
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	-20...+55 °C (storage temperature -40...+70 °C)	
Dimension drawing		



Notes

MVK METAL

Active safety

- safe inputs/outputs up to cat.4/PLe (EN ISO 13849-1), up to SIL3 (IEC 61508), up to SILCL3 (IEC 62061)



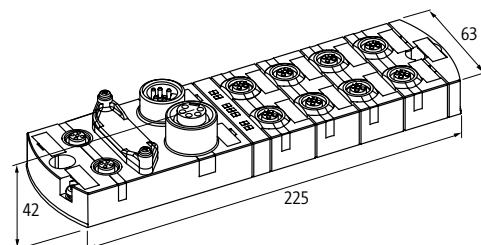
Approvals:  UL US Listed

MVK-MPNIO Safety

7/8"



Order Data	Art-No.	Art-No.
DI16/8 F IRT	55556	
DI8/4 F DO4 IRT		55557
Safety Indicators		
PL	up to e	
Category	up to 4	
PFH	1.70E-9	1.653E-9
DC	98%	
SIL	up to 3	
SIL CL	up to 3	
Service life	20 years	
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded	
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A	
I/O ports	M12, 5-pole, A-coded	
PROFINET		
Shared Device/Input	yes, for 2 controls	
Specification	V2.2, Conformance Class C (IRT)	
MRP	yes	
Addressing	DCP	
Safety input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (PIN 1+5), short-circuit and overload protected, or max. 700 mA for only one PIN	
Type	for electronic sensors or mechanical switches	
Safe output		
Actuator supply UA	–	24 V DC (EN 61131-2), max. 9 A
Switching current by safe output	–	max. 2 A (short-circuit and overload protected)
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	-20...+55 °C (storage temperature -40...+70 °C)	
Dimension drawing		



Notes	
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MVK METAL

Expanded diagnostic

– 7/8"

EtherNet/IP™

Approvals:  

MVK-ME

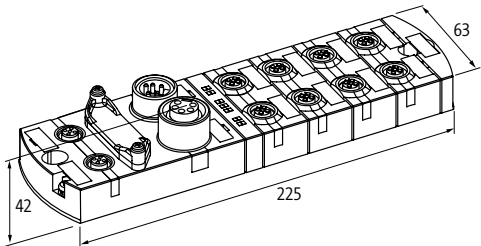
DIO8 (DIO8)
DLR (Device Level Ring)

MVK-ME

DIO16
DLR (Device Level Ring)



Order Data	Art-No.	Art-No.
DIO8 (DIO8)	55099	
DIO16		55542
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded	
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A	7/8", 4-pole, 2 × max. 9 A
I/O ports	M12, 5-pole, A-coded	
EtherNet/IP		
Addressing	DHCP, BOOTP or IP address by rotary switch	DHCP, BOOTP or IP address by DIP switch
DLR (Device Level Ring)	yes	
QC (Quick Connect)	–	max. 360 ms
Multiple connections	–	yes
CIP Sync	–	yes
Composite Test Revision	–	CT14
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Lamp load	10 W	
Parameterization		
PIN 4	Input/Output (port X0...X7)	
PIN 2	Input/Output (port X0...X7)	
General data		
Protection	IP67	
Mounting method	2 hole screw mounting, compatible with I/O modules of MVK model range	2-hole screw mounting
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)	-25...+60 °C (storage temperature -40...+85 °C)
Dimension drawing		



Notes

MVK METAL

Expanded diagnostic

– 7/8"

EtherNet/IP  IO-Link

Approvals:  

MVK-ME IO-Link

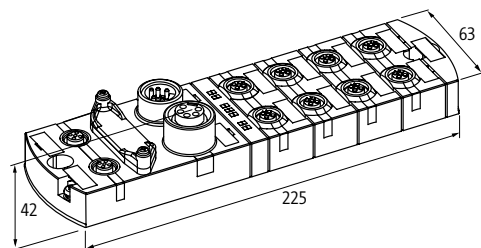
DIO14 IOL2
DLR (Device Level Ring)

MVK-ME IO-Link

DIO12 IOL4
DLR (Device Level Ring)



Order Data	Art-No.	Art-No.
DIO14 IOL2	55543	
DIO12 IOL4		55544
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded	
Sensor-system/actuator supply	7/8", 4-pole, 2 × max. 9 A	
I/O ports	M12, 5-pole, A-coded	
EtherNet/IP		
Addressing	DHCP, BOOTP or IP address by DIP switch	
QC (Quick Connect)	max. 360 ms	
Multiple connections	yes	
CIP Sync	yes	
Composite Test Revision	CT14	
DLR (Device Level Ring)	yes	
IO-Link		
IO-Link	2 × Master	4 × Master
Operating modes	COM1; COM2; COM3 (automatic)	
Transfer parameters	32 Byte (via IO-Link Port)	
Port class	Class B (not galvanically separated)	
Specification	IO-Link Master V1.12	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP, IO-Link Devices	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Lamp load	10 W	
Parameterization		
PIN 4	Input/Output (port X0...X7); IO-Link Master (port X6, X7)	Input/Output (port X0...X7); IO-Link Master (port X4...X7)
PIN 2	Input/Output (port X0...X7); U-Actuator IO-Link Class B (port X6, X7)	Input/Output (port X0...X7); U-Actuator IO-Link Class B (port X4...X7)
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	-25...+55 °C (storage temperature -40...+85 °C)	
Dimension drawing		



Notes	
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MVK METAL

Accessories for MVK PROFINET

– Wireless transmission

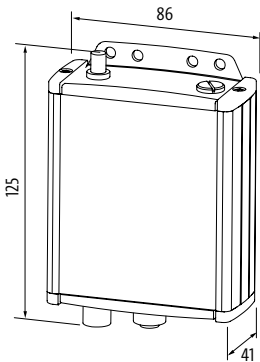


MIRO BT

Bluetooth Master/Slave
PROFINET



Order Data	Art-No.
Master/Slave	57018
Connections	
Fieldbus	Ethernet 10/100Mbit/s; M12, D-coded
Supply	M12, 5-pole, A-coded
Technical Data	
Operating voltage	24 V DC (EN 61131-2)
Operating current	max. 150 mA
Wireless technology	
Frequency	2.4 GHz Bluetooth
Transmission power	100 mW
No. of wireless slaves/devices	max. 4/max. 6
Coverage indoor	100 m
Coverage outdoor	300 m
Antenna connection	SMA (50 Ohm)
General data	
Standards	approved in: BE, DK, DE, EE, FI, FR (restricted), GR, GB, IE, IS, IT, CA, LV, LT, LU, MT, NL, NO (without Spitzbergen), AT, PL, PT, SE, CH, SK, SI, ES, CZ, HU, US, CY
Housing	Metal black
Protection	IP65
Mounting method	screw fixing, M4
Temperature range	-20...+60 °C (storage temperature -40...+75 °C)
Dimension drawing	



Notes

Blind Plug/caps			Art-No.
	Screw plug M12 x 1 mm Metal, hex, 1 piece		996049
	Blind cap 7/8" Metal		55390
	Blind plug diagnostic M12 x 1 mm Bridge PIN 1 and PIN 2		7000-13481-0000000
	Addressing cap Metal		55317
Labeling accessories			Art-No.
	Label plates 20 x 8 mm	(20 pieces per plate)	55318
Connection accessories			Art-No.
	Adapter Current /voltage converter Voltage/current converter		7000-42251-0000000 7000-42252-0000000
	MVK Push Pull Dust Protection Set		553260
	Ground strap 4 mm² 100 mm for screw (M4)		4000-71001-0410004
	Screw plug M23 Metal		55352
	Adapter plug M12/M12 for inputs		7030-42291-0000000

MVK METAL

Connection accessories			Art-No.
	T-coupler (Slim Line) Male straight - female/male straight M12 - M12, 4-pole for 8-pole units	AIDA conform Connection cable L = 200 mm	7030-42602-0000000
	T-coupler (Slim Line) Male straight - female/male straight M12 - M12, 2-pole	AIDA conform Connection cable L = 200 mm	7030-42612-0000000
	T-coupler (SlimLine) M12 - M12 5-pole		7000-41155-0000000
	Cable fixation 8xM12 Cable diameter (4...7 mm)		55554



SOLID67 COMPACT I/O-MODULES

- Shorter installation times and Using all slots
- Minimizing space requirements
- Simplifying storage

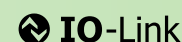
PROTOCOL CHANGE IN THE BLINK OF AN EYE

SOLID67 are the new compact I/O modules from Murrelektronik. They make installation in the field easier and are very attractive for applications with IO-Link sensors and actuators. They provide eight IO-Link slots directly adjacent to the process and can easily incorporate classic IOs into the system.

Full encapsulation and impressive vibration and shock values (15 and 50 G) prepare the modules for use in harsh industrial environments – within a temperature range of –20 to +70 °C. This opens a door to numerous applications. Comprehensive diagnostic options at the module, through the control unit, and through an integrated web server, make troubleshooting a simple exercise.



EtherNet/IP



Shorter installation times



Using all slots



Minimizing space requirements



Simplifying storage

SOLID67 I/O-Modules



SOLID67 PN/E 60 mm
• Multi protocol



Page 4.5.1



SOLID67 PN/E 60 mm
• Multi protocol
• IOL8



Page 4.5.3



SOLID67 PN/E 30 mm
• Multi protocol
• IOL8



Page 4.5.4

SOLID67

Multi protocol



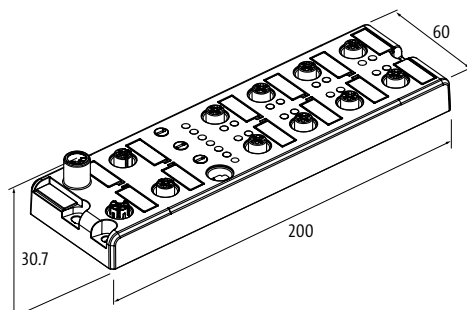
Approvals: UL US
Listed

SOLID67 PN/E

60 mm



Order Data	Art-No.	Art-No.
DI16	54500	
DI8 DO8		54501
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded	
Sensor-system/actuator supply	M12 Power, 5-pole, L-coded	
I/O ports	M12, 5-pole, A-coded	
PROFINET		
Addressing	DCP	
Shared Device/Input	–	
Profinet Netload Class	III	
Specification	V2.3, Conformance Class C (IRT)	
MRP	yes	
EtherNet/IP		
Addressing	DHCP, BOOTP or IP address by rotary switch	
QC (Quick Connect)	max. 500 ms	
DLR (Device Level Ring)	yes	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP	
Output		
Actuator supply UA	–	24 V DC (EN 61131-2), max. 9 A
Switching current per output	–	max. 2 A (short-circuit and overload protected)
Parameterization		
PIN 4	Input (port X1...X8)	Input (port X1...X4); Output (port X5...X8)
PIN 2	Input (port X1...X8)	Input (port X1...X4); Output (port X5...X8)
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	-20...+70 °C	
Dimension drawing		



Notes	
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SOLID67

SOLID67

Multi protocol



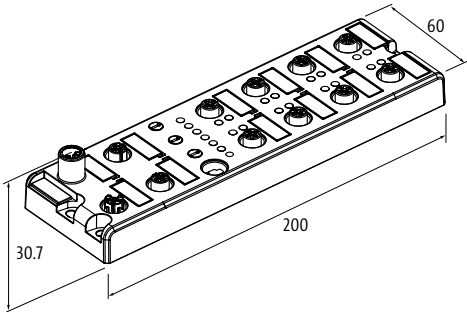
Approvals: Listed

SOLID67 PN/E

60 mm



Order Data	Art-No.	Art-No.
DIO16	54503	
DO16		54502
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded	
Sensor-system/actuator supply	M12 Power, 5-pole, L-coded	
I/O ports	M12, 5-pole, A-coded	
PROFINET		
Addressing	DCP	
Shared Device/Input	–	
Profinet Netload Class	III	
Specification	V2.3, Conformance Class C (IRT)	
MRP	yes	
EtherNet/IP		
Addressing	DHCP, BOOTP or IP address by rotary switch	
QC (Quick Connect)	max. 500 ms	
DLR (Device Level Ring)	yes	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	–
Type	for 3-wire sensors or mechanical switches, PNP	–
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A	
Switching current per output	max. 2 A (short-circuit and overload protected)	
Parameterization		
PIN 4	Input/Output (port X1...X8)	Output (port X1...X8)
PIN 2	Input/Output (port X1...X8)	Output (port X1...X8)
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	-20...+70 °C	
Dimension drawing		



Notes

Multi protocol

PROFINET EtherNet/IP™

IO-Link

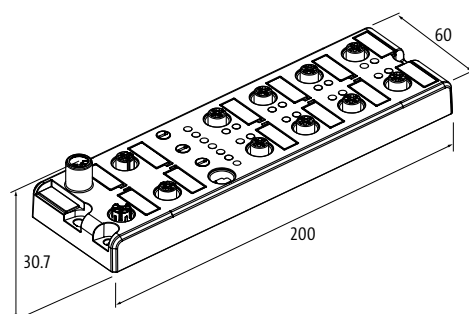
Approvals:  **UL** US Listed

SOLID67 PN/E

IOL8
60 mm



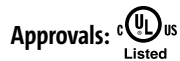
Order Data	Art-No.
IOL8	54504
Connections	
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded
Sensor-system/actuator supply	M12 Power, 5-pole, L-coded
I/O ports	M12, 5-pole, A-coded
PROFINET	
Addressing	DCP
Shared Device/Input	yes, for 2 controls
Profinet Netload Class	II
Specification	V2.3, Conformance Class C (IRT)
MRP	yes
EtherNet/IP	
Addressing	DHCP, BOOTP or IP address by rotary switch
DLR (Device Level Ring)	yes
IO-Link	
IO-Link	8 × Master
Operating modes	COM1; COM2; COM3 (automatic)
Transfer parameters	32 Input byte and/or 32 Output byte (per IO-Link port)
Port class	4 × A (port X1...X4), 4 × B (port X5...X8, galvanically separated, max. 2 A per port)
Specification	IO-Link Master V1.1
Input	
Sensor supply US	24 V DC (EN 61131-2), max. 500 mA (M12 female), short-circuit and overload protected
Type	for 3-wire sensors or mechanical switches, PNP, IO-Link Devices
Output	
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A
Switching current per output	max. 0.5 A (PIN 4, X1...X8); 2 A (PIN 2/5 Uaux, X5...X8), short-circuit and overload protected
Parameterization	
PIN 4	Input (port X1...X8); Output (port X1...X8); IO-Link Master (port X1...X8)
PIN 2	Input (port X1...X4); Output (port X5...X8)
General data	
Protection	IP67
Mounting method	2-hole screw mounting
Temperature range	-20...+70 °C
Dimension drawing	



Notes

SOLID67

Multi protocol



SOLID67 PN/E

IOL8
30 mm

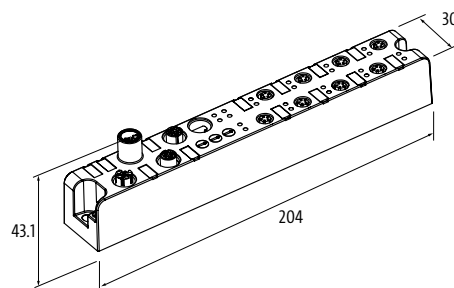
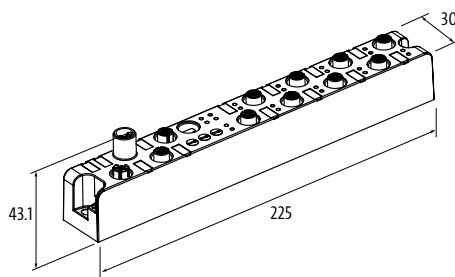


SOLID67 PN/E

IOL8
30 mm



Order Data	Art-No.	Art-No.
IOL8	54505	54506
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded	
Sensor-system/actuator supply	M12 Power, 5-pole, L-coded	
I/O ports	M12, 5-pole, A-coded	M8, 5-pole, B-coded
PROFINET		
Addressing	DCP	
Shared Device/Input	yes, for 2 controls	
Profinet Netload Class	II	
Specification	V2.3, Conformance Class C (IRT)	
MRP	yes	
EtherNet/IP		
Addressing	DHCP, BOOTP or IP address by rotary switch	
DLR (Device Level Ring)	yes	
IO-Link		
IO-Link	8 × Master	
Operating modes	COM1; COM2; COM3 (automatic)	
Transfer parameters	32 Input byte and/or 32 Output byte (per IO-Link port)	
Port class	4 × A (port X1...X4), 4 × B (port X5...X8, galvanically separated, max. 4 A per module)	
Specification	IO-Link Master V1.1	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 500 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP, IO-Link Devices	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A	
Switching current per output	max. 0.5 A (PIN 4, X1...X8), short-circuit and overload protected	
Parameterization		
PIN 4	Input (port X1...X8); Output (port X1...X8); IO-Link Master (port X1...X8)	
PIN 2	Input (port X1...X4)	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	-20...+70 °C	
Dimension drawing		



Notes

Blind plug/caps			Art-No.
	Screw plug M12 × 1 mm (for female)		
	Plastic, hex without gasket	Quantity: 10 pcs.	58627
Labeling accessories			Art-No.
	Label plates		
	20 × 8 mm	(20 pieces per plate)	55318
	Label plate (KM 4)		
	5 × 10 mm		90931



IMPACT67 COMPACT I/O MODULES FOR THE FIELD

- Application oriented
- Easy to Install
- Cost-effective

ECONOMIC DECENTRALIZATION

Impact67 is the perfect fieldbus solution for basic applications that need to be cost-effective. The modules in this series are available with different bus protocols, they feature pluggable connections, diagnostics and IP67 tested seals.

This makes Impact67 the perfect choice for an electrical engineer whose objective is to minimize costs while maintaining digital inputs and outputs under ordinary conditions.

FOCUSED ON ESSENTIALS

- Single channel diagnostic via LED – don't look for errors, find them
- Group diagnostics via the bus – easy remote diagnostics
- Port-related shut off – only the affected port is shut off



EtherNet/IP

EtherCAT

CANopen

DeviceNet

IO-Link

Impact67 I/O Modules

 Impact67-P • Digital I/Os PROFI BUS Page 4.6.1	 Impact67-PN • Multifunctional I/Os • Digital I/Os • IO-Link PROFI NET IO-Link Page 4.6.2
 Impact67-E • Multifunctional I/Os • Digital I/Os • IO-Link EtherNet/IP IO-Link Page 4.6.5	 Impact67-EC • Digital I/Os EtherCAT Page 4.6.8
 Impact67-C • Digital I/Os CANopen Page 4.6.9	 Impact67-DN • Digital I/Os DeviceNet Page 4.6.10

IMPACT67

Basic diagnostic



Approvals:

Impact67-P

DI16

Impact67-P

DI8/DO8 - 2 A

Impact67-P

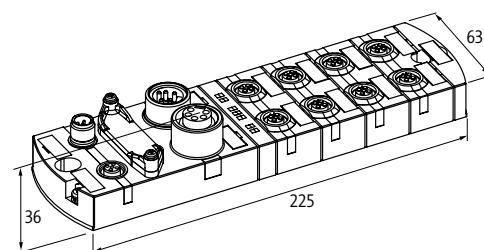
DO8 - 2 A

Impact67-P

DO16 - 0.5 A



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
DI16	55345			
DI8/DO8 - 2 A		55346		
DO8 - 2 A			55347	
DO16 - 0.5 A				55348
Connections				
Fieldbus	PROFIBUS 12 Mbit/s; M12, B-coded			
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A			
I/O ports	M12, 5-pole, A-coded			
PROFIBUS				
Addressing	Rotary switch 3...99			
Input				
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected		–	
Type	for 3-wire sensors or mechanical switches, PNP		–	
Output				
Switching current per output	–	max. 2 A (short-circuit and overload protected)		max. 0.5 A (short-circuit and overload protected)
General data				
Protection	IP67			
Mounting method	2 hole screw mounting, compatible with I/O modules of MVK model range			
Temperature range	0...+55 °C (storage temperature -25...+70 °C)			
Dimension drawing				



Notes	
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IMPACT67

Basic diagnostic



Impact67-PN

DI16

Impact67-PN

DI8/DO8 - 2 A

Impact67-PN

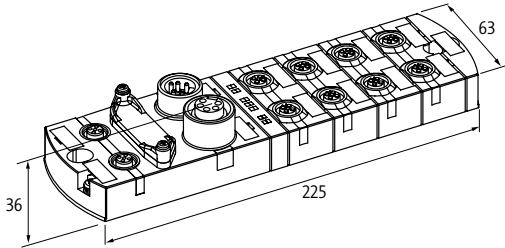
DO8 - 2 A

Impact67-PN

DO16 - 0.5 A



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
DI16	55091			
DI8/DO8 - 2 A		55092		
DO8 - 2 A			55093	
DO16 - 0.5 A				55094
Connections				
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded			
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A			
I/O ports	M12, 5-pole, A-coded			
PROFINET				
Addressing	DCP			
Input				
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected		–	
Type	for 3-wire sensors or mechanical switches, PNP		–	
Output				
Switching current per output	–	max. 2 A (short-circuit and overload protected)		max. 0.5 A (short-circuit and overload protected)
General data				
Protection	IP67			
Mounting method	2 hole screw mounting, compatible with I/O modules of MVK model range			
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)			
Dimension drawing				



Notes

Expanded diagnostic

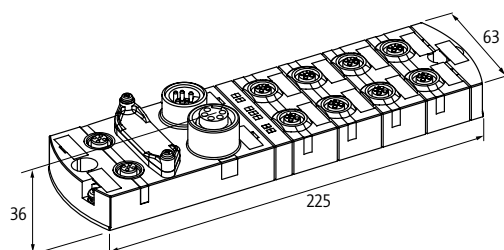


Impact67-PN

DIO16 IRT



Order Data	Art-No.
DIO16 IRT	55130
Connections	
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A
I/O ports	M12, 5-pole, A-coded
PROFINET	
FSU (Fast-Start-Up)	max. 500 ms
Shared Device/Input	yes, for 2 controls
Profinet Netload Class	III
Specification	V2.3, Conformance Class C (IRT)
Addressing	DCP
Input	
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected
Type	for 3-wire sensors or mechanical switches, PNP
Output	
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A
Switching current per output	max. 1.6 A (short-circuit and overload protected)
Lamp load	10 W
Parameterization	
PIN 4	Input/Output (port X0...X7)
PIN 2	Input/Output (port X0...X7)
General data	
Protection	IP67
Mounting method	2-hole screw mounting
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)
Dimension drawing	



Notes

IMPACT67

Expanded diagnostic



Impact67-PN IO-Link

DIO14 IOL2 IRT

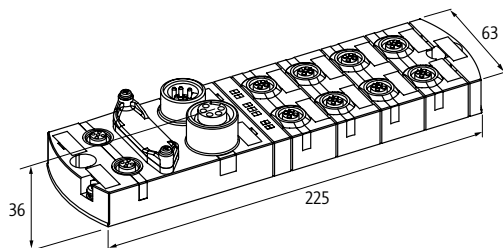


Impact67-PN IO-Link

DIO12 IOL4 IRT



Order Data	Art-No.	Art-No.
DIO14 IOL2 IRT	55131	
DIO12 IOL4 IRT		55132
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded	
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A	
I/O ports	M12, 5-pole, A-coded	
PROFINET		
FSU (Fast-Start-Up)	max. 500 ms	
Shared Device/Input	yes, for 2 controls	
Profinet Netload Class	III	
Specification	V2.3, Conformance Class C (IRT)	
Addressing	DCP	
IO-Link		
IO-Link	2 × Master	4 × Master
Operating modes	COM1; COM2; COM3 (automatic)	
Transfer parameters	32 Byte (via IO-Link Port)	
Port class	Class B (not galvanically separated)	Class A + B (not galvanically separated)
Specification	IO-Link Master V1.12	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP, IO-Link Devices	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Lamp load	10 W	
Parameterization		
PIN 4	Input (port X0...X7); Output (port X0...X4, X6); IO-Link Master (port X5, X7)	Input (port X0...X7); Output (port X0, X2, X4, X6); IO-Link Master (port X1, X3, X5, X7)
PIN 2	Input/Output (port X0...X7); U-Actuator IO-Link Class B (port X5, X7)	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	2 hole screw mounting, compatible with I/O modules of MVK model range
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)	
Dimension drawing		



Notes

IMPACT67

Basic diagnostic

EtherNet/IP

Impact67-E

DI16

Impact67-E

DI8/DO8 - 2 A

Impact67-E

DO8 - 2 A

Impact67-E

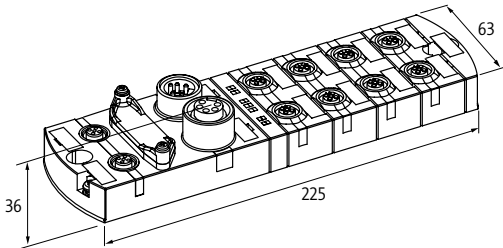
DO16 - 0.5 A



Approvals:




Order Data	Art-No.	Art-No.	Art-No.	Art-No.
DI16	55085			
DI8/DO8 - 2 A		55086		
DO8 - 2 A			55087	
DO16 - 0.5 A				55088
Connections				
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded			
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A			
I/O ports	M12, 5-pole, A-coded			
EtherNet/IP				
Addressing	DHCP, BOOTP or IP address by rotary switch			
Input				
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected		–	
Type	for 3-wire sensors or mechanical switches, PNP		–	
Output				
Switching current per output	–	max. 2 A (short-circuit and overload protected)		max. 0.5 A (short-circuit and overload protected)
General data				
Protection	IP67			
Mounting method	2 hole screw mounting, compatible with I/O modules of MVK model range			
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)			0...+55 °C (storage temperature -25...+70 °C)
Dimension drawing				



Notes

IMPACT67

Expanded diagnostic

EtherNet/IP™

Approvals:  

Impact67-E

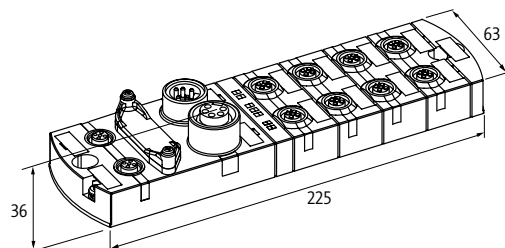
DIO8 (DIO8)
DLR (Device Level Ring)



Impact67-E

DIO16
DLR (Device Level Ring)

Order Data	Art-No.	Art-No.
DIO8 (DIO8)	55089	
DIO16		55142
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded	
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A	7/8", 4-pole, 2 × max. 9 A
I/O ports	M12, 5-pole, A-coded	
EtherNet/IP		
Addressing	DHCP, BOOTP or IP address by rotary switch	DHCP, BOOTP or IP address by DIP switch
DLR (Device Level Ring)	yes	
QC (Quick Connect)	–	max. 360 ms
Multiple connections	–	yes
CIP Sync	–	yes
Composite Test Revision	–	CT14
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Lamp load	10 W	
Parameterization		
PIN 4	Input/Output (port X0...X7)	
PIN 2	Input/Output (port X0...X7)	
General data		
Protection	IP67	
Mounting method	2 hole screw mounting, compatible with I/O modules of MVK model range	2-hole screw mounting
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)	-25...+55 °C (storage temperature -40...+85 °C)
Dimension drawing		



Notes

Expanded diagnostic

EtherNet/IP  IO-Link

Impact67-E IO-Link

DIO14 IOL2
DLR (Device Level Ring)

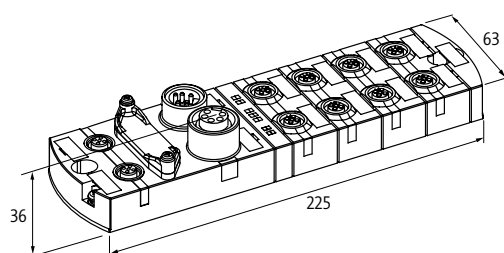
Impact67-E IO-Link

DIO12 IOL4
DLR (Device Level Ring)



Approvals:  

Order Data	Art-No.	Art-No.
DIO14 IOL2	55143	
DIO12 IOL4		55144
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded	
Sensor-system/actuator supply	7/8", 4-pole, 2 × max. 9 A	
I/O ports	M12, 5-pole, A-coded	
EtherNet/IP		
Addressing	DHCP, BOOTP or IP address by DIP switch	
QC (Quick Connect)	max. 360 ms	
Multiple connections	yes	
CIP Sync	yes	
Composite Test Revision	CT14	
DLR (Device Level Ring)	yes	
IO-Link		
IO-Link	2 × Master	4 × Master
Operating modes	COM1; COM2; COM3 (automatic)	
Transfer parameters	32 Byte (via IO-Link Port)	
Port class	Class B (not galvanically separated)	
Specification	IO-Link Master V1.12	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP, IO-Link Devices	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Lamp load	10 W	
Parameterization		
PIN 4	Input/Output (port X0...X7); IO-Link Master (port X6, X7)	Input/Output (port X0...X7); IO-Link Master (port X4...X7)
PIN 2	Input/Output (port X0...X7); U-Actuator IO-Link Class B (port X6, X7)	Input/Output (port X0...X7); U-Actuator IO-Link Class B (port X4...X7)
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	-25...+55 °C (storage temperature -40...+85 °C)	
Dimension drawing		



Notes

IMPACT67

Basic diagnostic

EtherCAT

Approvals:  

Impact67-EC

DI16

Impact67-EC

DI8/DO8 - 2 A

Impact67-EC

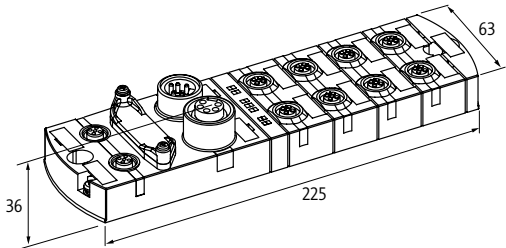
DO8 - 2 A

Impact67-EC

DO16 - 0.5 A



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
DI16	55081			
DI8/DO8 - 2 A		55082		
DO8 - 2 A			55083	
DO16 - 0.5 A				55084
Connections				
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded			
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A			
I/O ports	M12, 5-pole, A-coded			
EtherCAT				
Addressing	automatic or Device ID by rotary switch			
Input				
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected		–	
Type	for 3-wire sensors or mechanical switches, PNP		–	
Output				
Switching current per output	–	max. 2 A (short-circuit and overload protected)		max. 0.5 A (short-circuit and overload protected)
General data				
Protection	IP67			
Mounting method	2 hole screw mounting, compatible with I/O modules of MVK model range			
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)			0...+55 °C (storage temperature -25...+70 °C)
Dimension drawing				



Notes

IMPACT67

Basic diagnostic

CANopen

Impact67-C

DI16

Impact67-C

DI8/DO8 - 2 A

Impact67-C

DO8 - 2 A

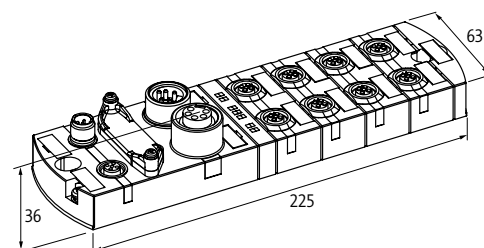
Impact67-C

DO16 - 0.5 A



Approvals:  

Order Data	Art-No.	Art-No.	Art-No.	Art-No.
DI16	55075			
DI8/DO8 - 2 A		55076		
DO8 - 2 A			55077	
DO16 - 0.5 A				55078
Connections				
Fieldbus	CAN 1 Mbit/s; M12, A-coded			
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A			
I/O ports	M12, 5-pole, A-coded			
CANopen				
Addressing	Rotary switch 1...99			
Input				
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected		–	
Type	for 3-wire sensors or mechanical switches, PNP	–		
Output				
Switching current per output	–	max. 2 A (short-circuit and overload protected)		max. 0.5 A (short-circuit and overload protected)
General data				
Protection	IP67			
Mounting method	2 hole screw mounting, compatible with I/O modules of MVK model range			
Temperature range	-25...+70 °C (storage temperature -25...+70 °C)			
Dimension drawing				



Notes	
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IMPACT67

Basic diagnostic
DeviceNet

Approvals:  

Impact67-DN
DI16

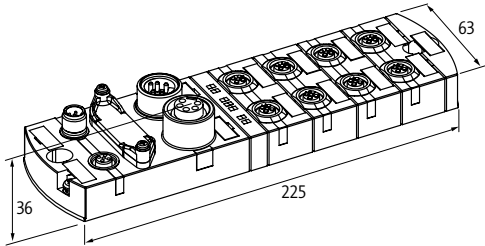
Impact67-DN
DI8/DO8 - 2 A

Impact67-DN
DO8 - 2 A

Impact67-DN
DO16 - 0.5 A



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
DI16	55071			
DI8/DO8 - 2 A		55072		
DO8 - 2 A			55073	
DO16 - 0.5 A				55074
Connections				
Fieldbus	DN 125 kbit/s; 250 kbit/s; 500 kbit/s; M12, A-coded			
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A			
I/O ports	M12, 5-pole, A-coded			
DeviceNet				
Addressing	Rotary switch 0...63			
Input				
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected		–	
Type	for 3-wire sensors or mechanical switches, PNP		–	
Output				
Switching current per output	–	max. 2 A (short-circuit and overload protected)		max. 0.5 A (short-circuit and overload protected)
General data				
Protection	IP67			
Mounting method	2 hole screw mounting, compatible with I/O modules of MVK model range			
Temperature range	-25...+70 °C (storage temperature -25...+70 °C)			
Dimension drawing				



Notes

Accessories			Art-No.
	Label plates		
	20 × 8 mm	(20 pieces per plate)	55318
	Screw plug M12 × 1 mm (for female)		
	Plastic, hex without gasket	Quantity: 10 pcs.	58627
	Screw plug 7/8" (for male)		
	Plastic		55385



IO-LINK DEVICES

INTELLIGENT NETWORKING

- Flexible
- Easy handling
- Economical

IO-LINK ANALOG CONVERTER

The IO-Link analog converter from Murrelektronik can be used to connect regular analog sensors and actuators easily to the IO-Link master.

IO-LINK COUPLER

The IO-Link inductive couplers from Murrelektronik are designed for a non-contact transmission of energy and bi-directional IO-Link communication through an air gap. This prevents mechanical wear and is ideally suited to replace intensively stressed plug-in or looped connections.

IO-LINK HUB

The IO-Link hubs from Murrelektronik can be used to connect several digital sensors and actuators easily to the IO-Link master ports via a standard sensor cable.



IO-LINK DEVICES



IO-Link/Analog Converters

- Analog inputs
- Analog outputs

Page 4.7.1



IO-Link Coupler

- Primary
- Secondary

Page 4.7.7



IO-Link Hubs

- Metal version
- Plastic version

Page 4.7.8

IO-LINK DEVICES

Analog inputs

– Plug & Play

– IO-Link V1.1

 IO-Link

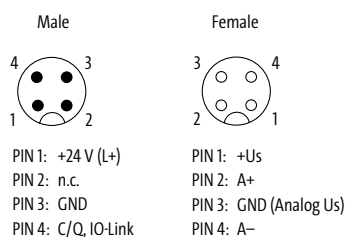
Approvals: 

IO-Link/Analog Converter

Current



Contact layout



Order Data

INPUT: 0...20 mA

Art-No.

5000-00501-1100000

INPUT: 4...20 mA

5000-00501-1110000

Connections

IO-Link

M12 (male) 5-pole, A-coded

Analog input

M12 (female) 5-pole, A-coded, shielded

Module Supply

Operating voltage

24 V DC (18...30 V DC)

IO-Link

Specification

IO-Link V1.1

Operating modes

COM2 (38.4 kBit/s)

Port class

A

Cycle time

min. 2.3 ms

Data width

16 Bit / 2 Byte

Input

Sensor supply US

24 V DC (EN 61131-2), max. 200 mA

Resolution (analog)

15 Bit + sign

Accuracy

0.10% (25° C)

Conversion time (analog)

max. 5 ms

Parameterization

Diagnostics

lower limit, upper limit, over heated, supply over voltage, supply under voltage, defective device, sensor supply over current, overrun

General data

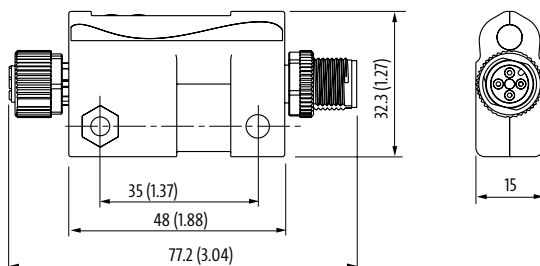
Protection

IP65/IP67

Temperature range

-30...+70 °C (storage temperature -40...+85 °C)

Dimension drawing



Notes

IO-LINK DEVICES

Analog inputs

– Plug & Play

– IO-Link V1.1

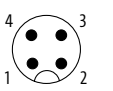
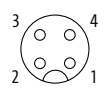
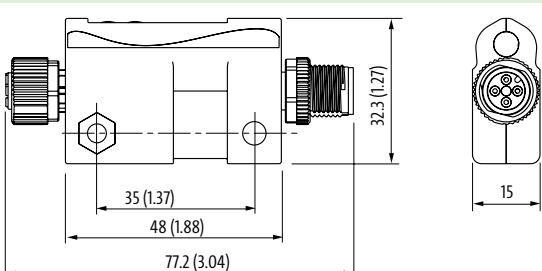
 IO-Link

Approvals:  Listed

IO-Link/Analog Converter

Voltage



Contact layout	
Male	Female
 PIN 1: +24 V (L+) PIN 2: n.c. PIN 3: GND PIN 4: C/Q, IO-Link	 PIN 1: +Us PIN 2: A+ PIN 3: GND (Analog Us) PIN 4: A-
Order Data	
INPUT: 0...10 V	Art-No. 5000-00501-1200000
INPUT: -10...+10 V	5000-00501-1210000
Connections	
IO-Link	M12 (male) 5-pole, A-coded
Analog input	M12 (female) 5-pole, A-coded, shielded
Module Supply	
Operating voltage	24 V DC (18...30 V DC)
IO-Link	
Specification	IO-Link V1.1
Operating modes	COM2 (38.4 kBit/s)
Port class	A
Cycle time	min. 2.3 ms
Data width	16 Bit / 2 Byte
Input	
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA
Resolution (analog)	15 Bit + sign
Accuracy	0.10% (25 °C)
Conversion time (analog)	max. 5 ms
Parameterization	
Diagnostics	lower limit, upper limit, over heated, supply over voltage, supply under voltage, defective device, sensor supply over current, overrun
General data	
Protection	IP65/IP67
Temperature range	-30...+70 °C (storage temperature -40...+85 °C)
Dimension drawing	
	
Notes	

IO-LINK DEVICES

Analog inputs

– Multifunctional

– IO-Link V1.1

IO-Link

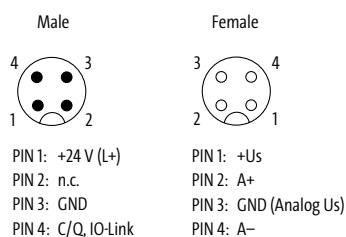
Approvals:  UL US
Listed

IO-Link/Analog Converter

Current/Voltage



Contact layout



Order Data

INPUT: 0...20 mA, 4...20 mA, 0...10 V, -10...+10 V

Art-No.

5000-00501-1300001

Connections

IO-Link M12 (male) 5-pole, A-coded
Analog input M12 (female) 5-pole, A-coded, shielded

Module Supply

Operating voltage 24 V DC (18...30 V DC)

IO-Link

Specification IO-Link V1.1
Operating modes COM2 (38.4 kBit/s)
Port class A
Cycle time min. 2.3 ms
Data width 16 Bit / 2 Byte

Input

Sensor supply US 24 V DC (EN 61131-2), max. 200 mA
Resolution (analog) 15 Bit + sign
Accuracy 0.10% (25° C)
Conversion time (analog) max. 5 ms

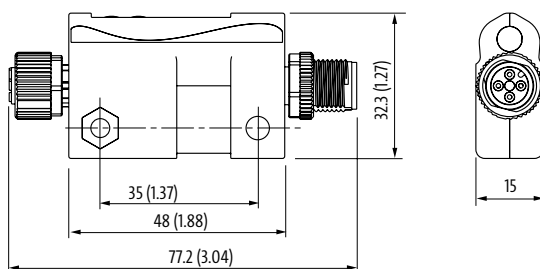
Parameterization

Diagnostics 2 Byte

General data

Protection IP65/IP67
Temperature range -30...+70 °C (storage temperature -40...+85 °C)

Dimension drawing



Notes

IO-LINK DEVICES

Analog outputs

– Plug & Play

– IO-Link V1.1

 IO-Link

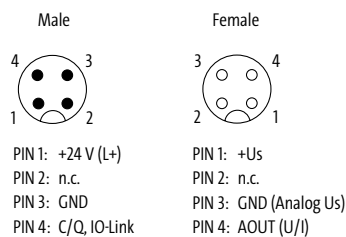
Approvals:  Listed

IO-Link/Analog Converter

Current



Contact layout



Order Data	Art-No.
OUTPUT: 0...20 mA	5000-00501-2100000
OUTPUT: 4...20 mA	5000-00501-2110000

Connections

IO-Link	M12 (male) 5-pole, A-coded
Analog output	M12 (female) 5-pole, A-coded, shielded

Module Supply

Operating voltage	24 V DC (18...30 V DC)
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IO-Link

Specification	IO-Link V1.1
Operating modes	COM2 (38.4 kBit/s)
Port class	A
Cycle time	min. 2.3 ms
Data width	16 Bit / 2 Byte

Output

Actuator supply UA	24 V DC (EN 61131-2), max. 200 mA
Resolution (analog)	15 Bit + sign
Type	2-, 3-, 4-wire technology
Accuracy	0.10% (25° C)
Conversion time (analog)	max. 5 ms
Over voltage protection	30 V DC

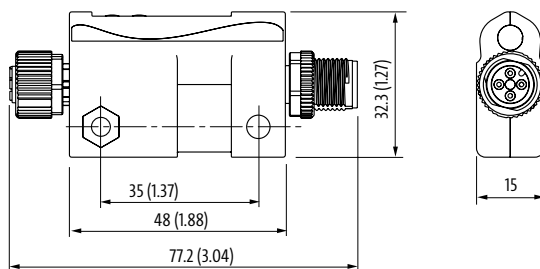
Parameterization

Diagnostics	lower limit, upper limit, over heated, supply over voltage, supply under voltage, defective device, sensor cable break, sensor supply over current, overrun
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General data

Protection	IP65/IP67
Temperature range	-30...+70 °C (storage temperature -40...+85 °C)

Dimension drawing



Notes

IO-LINK DEVICES

Analog outputs

– Plug & Play

– IO-Link V1.1

 IO-Link

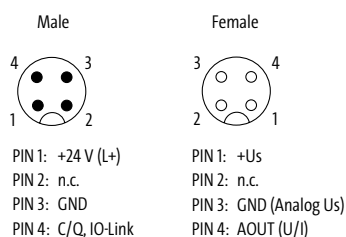
Approvals:  Listed

IO-Link/Analog Converter

Voltage



Contact layout



Order Data

OUTPUT: 0...10 V

Art-No.

5000-00501-2200000

OUTPUT: -10...+10 V

5000-00501-2210000

Connections

IO-Link M12 (male) 5-pole, A-coded

Analog output M12 (female) 5-pole, A-coded, shielded

Module Supply

Operating voltage 24 V DC (18...30 V DC)

IO-Link

Specification IO-Link V1.1

Operating modes COM2 (38.4 kBit/s)

Port class A

Cycle time min. 2.3 ms

Data width 16 Bit / 2 Byte

Output

Actuator supply UA 24 V DC (EN 61131-2), max. 200 mA

Resolution (analog) 15 Bit + sign

Type 2-, 3-, 4-wire technology

Accuracy 0.10% (25° C)

Conversion time (analog) max. 5 ms

Over voltage protection 30 V DC

Parameterization

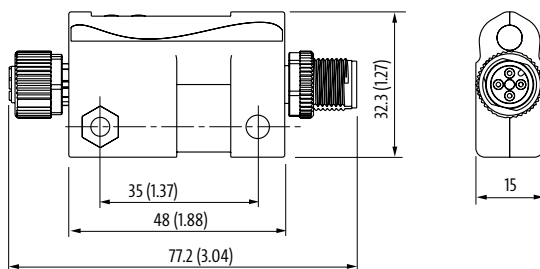
Diagnostics lower limit, upper limit, over heated, supply over voltage, supply under voltage, defective device, sensor cable break, sensor supply over current, overrun

General data

Protection IP65/IP67

Temperature range -30...+70 °C (storage temperature -40...+85 °C)

Dimension drawing



Notes

IO-LINK DEVICES

Analog outputs

– Multifunctional

– IO-Link V1.1

 IO-Link

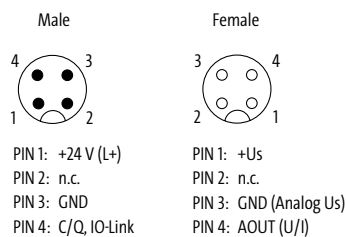
Approvals:  Listed

IO-Link/Analog Converter

Current/Voltage



Contact layout



Order Data

OUTPUT: 0...20 mA, 4...20 mA, 0...10 V, -10...+10 V

Art-No.

5000-00501-2300001

Connections

IO-Link M12 (male) 5-pole, A-coded
Analog output M12 (female) 5-pole, A-coded, shielded

Module Supply

Operating voltage 24 V DC (18...30 V DC)

IO-Link

Specification IO-Link V1.1
Operating modes COM2 (38.4 kBit/s)
Port class A
Cycle time min. 2.3 ms
Data width 16 Bit / 2 Byte

Output

Actuator supply UA 24 V DC (EN 61131-2), max. 200 mA
Resolution (analog) 15 Bit + sign
Type 2-, 3-, 4-wire technology
Accuracy 0.10% (25° C)
Conversion time (analog) max. 5 ms
Over voltage protection 30 V DC

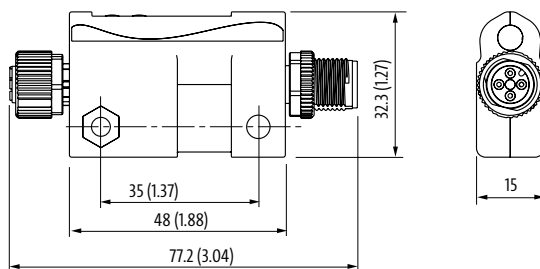
Parameterization

Diagnostics lower limit, upper limit, over heated, supply over voltage, supply under voltage, defective device, sensor cable break, sensor supply over current, overrun

General data

Protection IP65/IP67
Temperature range -30...+70 °C (storage temperature -40...+85 °C)

Dimension drawing



Notes

IO-LINK DEVICES

IO-Link V1.1



IO-Link Coupler (prim.)

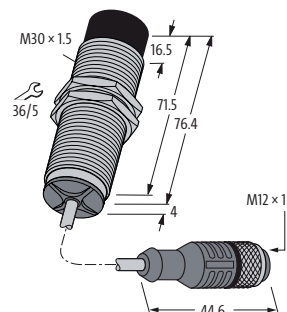
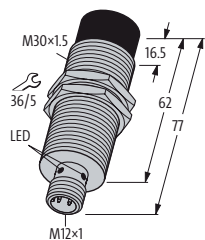


IO-Link Coupler (sec.)

Connection cable L = 300 mm



Order Data	Art-No.	Art-No.
Primary	59450	
Secondary		59451
Accessories		Art-No.
M30 holder		59452
Connections		
IO-Link	M12 (male) 4-pole, A-coded	M12 (female) 4-pole, A-coded
Technical Data		
Nominal distance	0...7 mm (prim./sec.)	
Standby power (coupled)	4 W	
Standby power (uncoupled)	1 W	
Short circuit protection	yes	
Invers-polarity protection	yes	
Start-/coupling time	–	10 ms
Rotation	1 250 rpm	
Standby time	–	160 ms
Supply (prim.)		
Operating voltage	24 V DC $\pm 10\%$	–
Operating current	750 mA	–
Output (sec.)		
Operating voltage	–	24 V DC $\pm 10\%$
Output current	–	500 mA
Highest current	–	2.4 A (0.1 ms); 10 A (0.02 ms)
IO-Link		
Specification	IO-Link V1.1	
Operating modes	COM2 (38.4 kBit/s)	
Port class	A	
General data		
Protection	IP67/IP68	
Temperature range	-20...+55 °C	
Dimension drawing		



Notes

IO-LINK DEVICES

Expanded diagnostic

– IO-Link V1.1

– Single channel diagnostic

 IO-Link

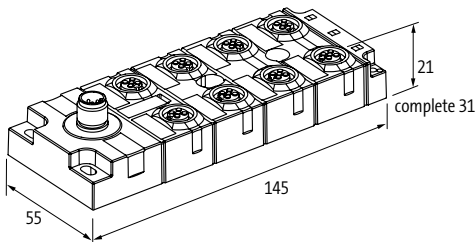
IO-Link Hub

Galvanic isolation

IO-Link Hub



Order Data	Art-No.	Art-No.
DI8 DO8 IOL - K3	55518	
DI16 IOL		55519
Internal communication		
Current consumption	max. 35 mA	
LED display	US: sensor supply (green: OK); IOL: (green: OK); UA: actuator supply (green: OK)	US: sensor supply (green: OK); IOL: (green: OK)
IO-Link		
IO-Link	Device	
Operating modes	COM2 (38.4 kBaud)	
Transfer parameters	1 Byte (Inputs), 1 Byte (Outputs), 2 Byte (Diagnostic)	2 Byte (Inputs), 1 Byte (Diagnostic)
Port class	B	A
Specification	IO-Link V1.1	
Cycle time	2.3 ms	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 100 mA (M12 female), short-circuit and overload protected	
Type	PNP (EN 61131-2) Type 3	
Input filter	1 ms	
Input delay time	max. 8 ms (incl. IO-Link cycle time)	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 4 A	–
Switching current per output	max. 0.4 A (short-circuit and overload protected)	–
Parameterization		
PIN 2	Input (port 0...3); Output (port 4...7)	Input
PIN 4	Input (port 0...3); Output (port 4...7)	Input
General data		
Protection	IP67	
Mounting method	4 hole screw mounting	
Temperature range	-25...+70 °C (storage temperature -40...+70 °C)	
Dimension drawing		



Notes

IO-LINK DEVICES

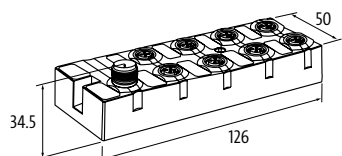
IO-Link V1.1



IO-Link Hub



Order Data	Art-No.	Art-No.
DI8 DO8 IOL	59402	
DI16 IOL		59401
Internal communication		
Current consumption	max. 35 mA	
LED display	US-IOL: sensor supply-IOL (green: OK); UA: actuator supply (green: OK)	US: sensor supply (green: OK); IOL: (green: OK)
IO-Link		
IO-Link	Device	
Operating modes	COM2 (38.4 kBaud)	
Transfer parameters	1 Byte (Inputs), 1 Byte (Outputs), 2 Byte (Diagnostic)	2 Byte (Inputs), 1 Byte (Diagnostic)
Port class	B	A
Specification	IO-Link V1.1	
Cycle time	2.3 ms	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 100 mA (M12 female), short-circuit and overload protected	
Type	PNP (EN 61131-2) Type 3	
Input filter	1 ms	
Input delay time	max. 8 ms (incl. IO-Link cycle time)	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 4 A	–
Switching current per output	max. 0.4 A (short-circuit and overload protected)	–
Parameterization		
PIN 2	Input (port 0...3); Output (port 4...7)	Input
PIN 4	Input (port 0...3); Output (port 4...7)	Input
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	-25...+70 °C (storage temperature -40...+70 °C)	
Dimension drawing		



Notes

IO-LINK DEVICES

Accessories			Art-No.
	Label plates 20 × 8 mm	(20 pieces per plate)	55318
	Screw plug M12 × 1 mm (for female) Plastic, hex without gasket	Quantity: 10 pcs.	58627
	M30 holder		59452
	Holding plate for T-couplers M12 (SlimLine)	without mounting set	7000-99061-0000000
	Holding plate for T-couplers M12 (SlimLine)	with mounting set	7000-99062-0000000
	T-coupler (Slim Line) IO-Link IO-Link supply power		7000-42771-0000000



MA SI FOR THE CONTROL CABINET

- High signal density in a minimum amount of space
- Pluggable insulation displacement or spring clamp connections
- Sensor power supply from AS-Interface or 24 V DC

MA SI – THE CLEVER AS-INTERFACE SYSTEM FROM MURRELEKTRONIK

The modules are designed in a way that the wiring method with single strands is optimally supported in order to offer the user the best possible benefit during installation, commissioning and maintenance.

The design according to the latest AS-Interface specification 3.0 and the AS-Interface certificate with worldwide validity guarantee the user interoperability and a high investment security. Furthermore, safety shutdowns according to EN 13849-1 up to PL d can be realized using a special K3 module.



➤ MASI

I/O modules, accessories and accompanying information material regarding MASI can be found in the **online shop:**

➤ shop.murrelektronik.com

Gateway



Gateway Singlemaster



Page 4.8.1



Gateway Doublemaster



Page 4.8.1

MAS100/MAS120



MAS100

- Digital inputs/outputs
- Degree of protection IP00

Page 4.8.2



MAS120

- Digital inputs/outputs
- Passively safe outputs
- Degree of protection IP20

Page 4.8.3

Power Supply Units



Primary switched power supply

- Single-phase, three-phase

Page 4.8.4

MASI CONTROL CABINET

PROFIBUS DP			Art-No.
	Gateway-Singlemaster		
	AS-Interface/PROFIBUS DP No. of slaves ASI-Power 24 Serial interface/diagnostic AS-Interface data decoupling integrated	Protection IP20 max. 62 Specification 3.0 - Protection AS-i side, 4 A	56471
PROFINET			Art-No.
	Gateway-Singlemaster		
	AS-Interface/PROFINET No. of slaves ASI-Power 24 Serial interface/diagnostic AS-Interface data decoupling integrated	Protection IP20 max. 62 Specification 3.0 RJ45/Fieldbus Protection AS-i side, 4 A	56470
EtherNet/IP			Art-No.
	Gateway-Singlemaster		
	AS-Interface/EtherNet/IP No. of slaves ASI-Power 24 Serial interface/diagnostic AS-Interface data decoupling integrated	Protection IP20 max. 62 Specification 3.0 RJ45/Fieldbus Protection AS-i side, 4 A	56469
CC-Link			Art-No.
	Gateway-Singlemaster		
	AS-Interface/CC-Link No. of slaves ASI-Power 24 Serial interface/diagnostic AS-Interface data decoupling integrated	Protection IP20 max. 62 Specification 3.0 - Protection AS-i side, 4 A	56473
EtherCAT			Art-No.
	Gateway-Doublemaster		
	AS-Interface/EtherCAT No. of slaves AS-Interface data decoupling integrated Serial interface/diagnostic	Protection IP20 max. 2 × 62 Specification 3.0 RJ45/Ethernet Protection AS-i side, 4 A	56458

MA SI CONTROL CABINET

MASI00			Art-No.
	Digital inputs/outputs DI4/DO4 - 0.2 A Sensor supply US Switching current per output Profile (IO/ID/ID2 code) Address range Standard-Slave	Protection IP00 max. 200 mA (AS-Interface) max. 30 mA S-7.F.F 1...31 via plug terminals Specification 3.0	55700
	DI4/DO4 - 0.2 A (AB) Sensor supply US Switching current per output Profile (IO/ID/ID2 code) Address range AB-Slave	Protection IP00 max. 200 mA (AS-Interface) max. 30 mA S-7.A.7 1...62 (1...31 A or B) via plug-in terminal Specification 3.0	55701
	Digital inputs/outputs DI4/DO4 - 0.2 A Sensor supply US Switching current per output Connection cable for pin cable lug Profile (IO/ID/ID2 code) Address range Standard-Slave	Protection IP00 max. 200 mA (AS-Interface) max. 30 mA 250 mm S-7.F.F 1...31 via plug terminals Specification 3.0	556625
	DI4/DO4 - 0.2 A (AB) Sensor supply US Switching current per output Connection cable for pin cable lug Profile (IO/ID/ID2 code) Address range AB-Slave	Protection IP00 max. 200 mA (AS-Interface) max. 30 mA 250 mm S-7.A.7 1...62 (1...31 A or B) via plug-in terminal Specification 3.0	556639
	Connection cable MASI00 with open ended wires	1 000 mm	556510
	Connection cable MASI00 with cable fork	150 mm	556511

MASI20			Art-No.
	Digital inputs/outputs DI4 - 0.2 A DO4 - 0.5 A (AB) K3 Sensor supply US Switching current per output Profile (IO/ID/ID2 code) Address range AB-Slave passive safe outputs	Protection IP20 from AS-Interface or 24 V DC (EN 61131-2) max. 0.5 A S-7.A.7 1...62 (1...31 A or B) Specification 3.0 can be switched off via safety relays	56440
	Digital inputs/outputs DI4 - 0.15 A DO4 - 2 A K3 Sensor supply US Switching current per output Profile (IO/ID/ID2 code) Address range Standard-Slave passive safe outputs	Protection IP20 from AS-Interface or 24 V DC (EN 61131-2) max. 2 A S-7.0.E 1...31 Specification 3.0 can be switched off via safety relays	56475
	Digital inputs/outputs DI4 - 0.15 A DO4 - 2 A (AB) K3 Sensor supply US Switching current per output Profile (IO/ID/ID2 code) Address range AB-Slave passive safe outputs	Protection IP20 from AS-Interface or 24 V DC (EN 61131-2) max. 2 A S-7.A.7 1...62 (1...31 A or B) Specification 3.0 can be switched off via safety relays	56476
	Digital inputs/relay outputs DI4 - 0.15 A DO4R - 2 A Sensor supply US Switching current per output Relay outputs Profile (IO/ID/ID2 code) Address range Standard-Slave	Protection IP20 from AS-Interface or 24 V DC (EN 61131-2) 2 A - S-7.0.E 1...31 Specification 3.0	56477
	Digital inputs/relay outputs DI4 - 0.15 A DO4R - 2 A (AB) Sensor supply US Switching current per output Relay outputs Profile (IO/ID/ID2 code) Address range AB-Slave	Protection IP20 from AS-Interface or 24 V DC (EN 61131-2) 2 A - S-7.A.7 1...62 (1...31 A or B) Specification 3.0	56478

MASI CONTROL CABINET

Power Supply Units			Art-No.
	Switch mode power supplies Single-phase, primary switched Input voltage Output voltage Efficiency Output current	Protection IP20 95...265 V AC 30.5 V DC (SELV), $\pm 2\%$ 83% (110 V AC); 85% (240 V AC) max. 4.0 A (+40 °C); 3.4 A (+55 °C)	85381
	Switch mode power supplies Single-phase, primary switched Input voltage Output voltage with EFD (earth fault detection) Efficiency Output current	Protection IP20 95...265 V AC 30.5 V DC (SELV), $\pm 2\%$ - 83% (110 V AC); 85% (240 V AC) max. 4.0 A (+40 °C); 3.4 A (+55 °C)	85382
	Switch mode power supplies 3-phase, primary switched Input voltage Output voltage Efficiency Output current	Protection IP20 3×324...572 V AC/2×340...572 V AC/450...745 V DC 30.5 V DC (SELV), $\pm 1\%$; 30...32 V adjustable 92.5% (3 × 400 V AC); 91.8% (3 × 480 V AC) 4.8 A (45 °C); 4.0 A (60 °C); 2.9 A (70 °C)	85383



MASI FOR FIELD INSTALLATION

- Flexible use
- Quick installation
- Efficient technology

APPLICATION VARIETY – FOR EFFICIENT AND DECENTRALIZED INSTALLATION

MASI, the AS-Interface product series by Murrelektronik, is the simple solution for cost-efficient integration of I/O signals from machine tools or storage and logistics systems to superordinate control systems. MASI allows the user to build highly flexible I/O systems without being tied to rigid topologies.

Who wants to wire control cabinets or set up complex bus solutions when this can be also done in a more simple, flexible, efficient, and robust way? The MASI I/O system allows you to install all the components at the place where they are needed. This allows a clearly arranged wiring and reduces the installation effort to a minimum.



➤ MASI

I/O modules, accessories and accompanying information material regarding MASI can be found in the **online shop**:

➤ shop.murrelektronik.com

MASI65



Valve plug (form A)

- M12
- Degree of protection IP67

Page 4.9.1

MASI67



I/O modules

- Digital inputs
- Digital inputs/outputs
- Degree of protection IP67

Page 4.9.1

MASI68



I/O modules

- Digital inputs
- Digital inputs/outputs
- Analog outputs
- Analog inputs
- Degree of protection IP67

Page 4.9.3

MASI65			Art-No.
	Digital inputs/outputs DO1 - 2A, DO1 - 2 A, DI2 Sensor supply US Switching current per output Valve Plug (Form A), M12, M12 Profile (IO/ID/ID2 code) Address range Standard-Slave	Protection IP67 max. 200 mA (AS-Interface) max. 2 A - S-3.FE 1...31 Specification 2.1	55680
	Digital outputs DO1 - 2A, DO1 - 2 A Switching current per output Standard-Slave Valve Plug (Form A), M12 Profile (IO/ID/ID2 code) Address range	Protection IP67 max. 2 A Specification 2.1 - S-3.FE 1...31	55681
	DO1 - 2A Switching current per output Standard-Slave Valve plug (form A) Profile (IO/ID/ID2 code) Address range	Protection IP67 max. 2 A Specification 2.1 - S-3.FE 1...31	55682
	Digital inputs/outputs DO1 - 2A, DO1 - 2 A, DI2 Sensor supply US Switching current per output Ventilstecker (Form B), M12, M12 Profile (IO/ID/ID2 code) Address range Standard-Slave	Protection IP67 max. 200 mA (AS-Interface) max. 2 A - S-3.FE 1...31 Specification 2.1	556613
	Digital outputs DO1 - 2A Switching current per output Standard-Slave Valve plug (form B) Profile (IO/ID/ID2 code) Address range	Protection IP67 max. 2 A Specification 2.1 - S-3.FE 1...31	556614
MASI67			Art-No.
	Digital inputs DI4 - 0.2 A (AB) 4xM8 Sensor supply US AB-Slave Profile (IO/ID/ID2 code) Address range	Protection IP67 max. 170 mA (AS-Interface) Specification 3.0 S-0.A.0 1...62 (1...31 A or B)	56405

MASI FIELD INSTALLATION

MA SI67			Art-No.
	Digital inputs DI8 - 0.24 A (AB) 8×M8 Sensor supply US AB-Slave Profile (IO/ID/ID2 code) Address range	Protection IP67 max. 180 mA (AS-Interface) Specification 3.0 2 × S-0.A.0 1...62 (2 × 1...31 A or B)	56406
	Digital inputs/outputs DI4 - 0.2 A DO4 - 0.5 A 8×M8 Sensor supply US Standard-Slave Profile (IO/ID/ID2 code) Address range	Protection IP67 max. 180 mA (AS-Interface) Specification 3.0 S-7.0.E 1...31	56408
	Digital inputs DI4 - 0.2 A (AB) 4×M12 Sensor supply US AB-Slave Configuration Profile (IO/ID/ID2 code) Address range	Protection IP67 max. 170 mA (AS-Interface) Specification 3.0 PIN 2 = 4 S-0.A.0 1...62 (1...31 A or B)	56400
	DI4 - 0.2 A (AB) 4×M12 Sensor supply US AB-Slave Configuration Profile (IO/ID/ID2 code) Address range	Protection IP67 max. 170 mA (AS-Interface) Specification 3.0 Y-wiring S-0.A.2 1...62 (1...31 A or B)	56413
	DI8 - 0.24 A (AB) 4×M12 Sensor supply US AB-Slave Configuration Profile (IO/ID/ID2 code) Address range	Protection IP67 max. 180 mA (AS-Interface) Specification 3.0 PIN 2 + 4 2 × S-0.A.2 1...62 (2 × 1...31 A or B)	56401
	Digital inputs/outputs DI4 - 1.6 A DO4 - 2 A 4×M12 Sensor supply US Switching current per output Configuration Profile (IO/ID/ID2 code) Address range Standard-Slave	Protection IP67 max. 1.6 A external max. 2 A PIN 2 + 4 S-7.F.E 1...31 Specification 3.0	56404
	DI4 - 0.2 A DO4 - 1.6 A (C) 4×M12 (AB) K3 Sensor supply US Switching current per output Configuration Profile (IO/ID/ID2 code) Address range AB-Slave passive safe outputs	Protection IP67 max. 200 mA (AS-Interface) max. 1.6 A PIN 2 + 4 S-7.A.7 1...62 (1...31 A or B) Specification 3.0 can be switched off via safety relays	56414

MASI67			Art-No.
	Digital inputs/outputs DI8 - 0.34 A DO8 - 1.6 A (AB) 8×M12 (K3) Sensor supply US Switching current per output Configuration Profile (IO/ID/ID2 code) Address range AB-Slave passive safe outputs	Protection IP67 max. 340 mA (AS-Interface) max. 1.6 A PIN 2 + 4 2 × S-7.A.7 1...62 (2 × 1...31 A or B) Specification 3.0 can be switched off via safety relays	56415
	Digital outputs DO8 - 1.6 A (AB) 8×M12 (K3) Safety Switching current per output passive safe outputs Configuration Profile (IO/ID/ID2 code) Address range AB-Slave	Protection IP67 max. 1.6 A can be switched off via safety relays Y-wiring S-7.A.7 1...62 (1...31 A or B) Specification 3.0	56445
MASI68			Art-No.
	Digital inputs DI4 - 0.18 A (C) 4×M8 (AB) Sensor supply US AB-Slave Compact module Profile (IO/ID/ID2 code) Address range	Protection IP68 max. 180 mA (AS-Interface) Specification 3.0 - S-0.A.2 1...62 (1...31 A or B)	56434
	DI4 - 0.18 A (C) 4×M8 Sensor supply US Standard-Slave Compact module Profile (IO/ID/ID2 code) Address range	Protection IP68 max. 180 mA (AS-Interface) Specification 3.0 - S-0.0.0 1...31	56435
	Digital inputs/outputs DI2 - 0.1 A DO2 - 0.5 A (C) 4×M8 (AB) Sensor supply US Switching current per output Compact module Profile (IO/ID/ID2 code) Address range AB-Slave	Protection IP68 max. 100 mA (AS-Interface) max. 0.5 A - S-7.A.E 1...62 (1...31 A or B) Specification 3.0	56446

MA SI FIELD INSTALLATION

MASI68			Art-No.
	Digital inputs DI8 - 0.2 A (C) 8×M8 (AB) Sensor supply US AB-Slave Compact module Profile (IO/ID/ID2 code) Address range	Protection IP68 max. 200 mA (AS-Interface) Specification 3.0 - 2 × S-0.A.0 1...62 (2 × 1...31 A or B)	56420
	DI8 - 0.2 A (C) 8×M8 (AB) Sensor supply US AB-Slave Compact module Profile (IO/ID/ID2 code) Address range	Protection IP68 max. 200 mA (AS-Interface) Specification 3.0 Slave 1: 1 A; Slave2: 2 A 2 × S-0.A.0 1...62 (1...31 A or B)	564201
	Digital inputs/outputs DI4 - 0.19 A DO3 - 0.5 A (C) 7×M8 (AB) Sensor supply US Switching current per output Compact module Profile (IO/ID/ID2 code) Address range AB-Slave	Protection IP68 max. 190 mA (AS-Interface) max. 0.5 A - S-7.A.0 1...62 (1...31 A or B) Specification 2.1	56418
	DI4 - 0.19 A DO4 - 0.5 A (C) 8×M8 Sensor supply US Switching current per output Compact module Profile (IO/ID/ID2 code) Address range Standard-Slave	Protection IP68 max. 190 mA (AS-Interface) max. 0.5 A - S-7.0.0 1...31 Specification 3.0	56419
	DI4 - 0.2 A DO4 - 0.5 A (C) 8×M8 (AB) Sensor supply US Switching current per output Compact module Profile (IO/ID/ID2 code) Address range AB-Slave	Protection IP68 max. 190 mA (AS-Interface) max. 0.5 A - S-7.A.7 1...62 (1...31 A or B) Specification 3.0	56462
	Digital inputs DI8 - 0.19 A (E) 8×M8 (AB) Sensor supply US AB-Slave Expansion module Profile (IO/ID/ID2 code) Address range	Protection IP68 max. 190 mA (AS-Interface) Specification 3.0 - 2 × S-0.A.E 1...62 (1...31 A or B)	56436

MASI68			Art-No.
	Digital inputs DI4 - 0.19 A (C) 4×M12 (AB) (Y) Sensor supply US AB-Slave Compact module Profile (IO/ID/ID2 code) Address range	Protection IP68 max. 190 mA (AS-Interface) Specification 3.0 Y-wiring S-0.A.2 1...62 (1...31 A or B)	56421
	DI8 - 0.19 A (C) 4×M12 (AB) Sensor supply US AB-Slave Compact module Profile (IO/ID/ID2 code) Address range	Protection IP68 max. 190 mA (AS-Interface) Specification 3.0 PIN 2 + 4 2 × S-0.A.2 1...62 (2 × 1...31 A or B)	56424
	Digital inputs DI4 - 0.2 A (E) 4×M12 (AB) (Y) Sensor supply US AB-Slave Expansion module Profile (IO/ID/ID2 code) Address range	Protection IP68 max. 200 mA (AS-Interface) Specification 3.0 Y-wiring S-0.A.2 1...62 (1...31 A or B)	56425
	DI4 - 0.19 A (E) 4×M12 (AB) (Y) AUX Sensor supply US AB-Slave Expansion module Profile (IO/ID/ID2 code) Address range	Protection IP68 max. 190 mA (AUX Power) Specification 3.0 Y-wiring S-0.A.2 1...62 (1...31 A or B)	56443
	DI8 - 0.19 A (E) 4×M12 (AB) Sensor supply US AB-Slave Expansion module Profile (IO/ID/ID2 code) Address range	Protection IP68 max. 190 mA (AS-Interface) Specification 3.0 PIN 2 + 4 2 × S-0.A.2 1...62 (2 × 1...31 A or B)	56426
	DI8 - 0.19 A (E) 4×M12 (AB) AUX Sensor supply US AB-Slave Expansion module Profile (IO/ID/ID2 code) Address range	Protection IP68 max. 190 mA (AUX Power) Specification 3.0 PIN 2 + 4 2 × S-0.A.2 1...62 (2 × 1...31 A or B)	56444
	Digital inputs/outputs DI4 - 0.19 A DO4 - 1 A (E) 4×M12 (AB) Sensor supply US Switching current per output Expansion module Profile (IO/ID/ID2 code) Address range AB-Slave	Protection IP68 max. 190 mA (AS-Interface) max. 1 A PIN 2 + 4 S-7.A.7 1...62 (1...31 A or B) Specification 3.0	56439

MA SI FIELD INSTALLATION

MASI68			Art-No.
	Digital outputs DO8 - 0.5 A (AB) 4×M12 (K3) Switching current per output passive safe outputs Expansion module Profile (IO/ID/ID2 code) Address range AB-Slave	Protection IP68 max. 0.5 A can be switched off via safety relays PIN 2 + 4 S-7.A.7 1...62 (1...31 A or B) Specification 3.0	56447
	Digital inputs/outputs DI4 - 0.19 A DO4 - 2 A (C) 8×M12 (Y) Sensor supply US Switching current per output Compact module Profile (IO/ID/ID2 code) Address range Standard-Slave	Protection IP68 max. 190 mA (AS-Interface) max. 2 A Y-wiring S-7.FE 1...31 Specification 3.0	56422
	DI4 - 0.19 A DO4 - 2 A (C) 8×M12 Sensor supply US Switching current per output Compact module Profile (IO/ID/ID2 code) Address range Standard-Slave	Protection IP68 max. 190 mA (AS-Interface) max. 2 A PIN 4 S-7.0.7 1...31 Specification 3.0	56438
	DI4 - 0.2 A DO4 - 1.6 A (C) 8×M12 (AB) (Y) (K3) Sensor supply US Switching current per output Compact module Profile (IO/ID/ID2 code) Address range AB-Slave passive safe outputs	Protection IP68 max. 200 mA (AS-Interface) max. 1.6 A Y-wiring S-7.A.7 1...62 (1...31 A or B) Specification 3.0 can be switched off via safety relays	56423
	Digital inputs/outputs DI4 - 0.2 A DO4 - 2 A (E) 8×M12 (Y) Sensor supply US Switching current per output Expansion module Profile (IO/ID/ID2 code) Address range Standard-Slave	Protection IP68 max. 200 mA (AS-Interface) max. 2 A Y-wiring S-7.FE 1...31 Specification 3.0	56427
	Digital inputs/outputs DI4 - 0.2 A DO4 - 1.6 A (E) 8×M12 (AB) (Y) (K3) Sensor supply US Switching current per output Expansion module Profile (IO/ID/ID2 code) Address range AB-Slave passive safe outputs	Protection IP68 max. 200 mA (AS-Interface) max. 1.6 A Y-wiring S-7.A.7 1...62 (1...31 A or B) Specification 3.0 can be switched off via safety relays	56428

MASI68			Art-No.
	Analog inputs AI4 - (E) RTD Measuring current Standard-Slave Expansion module Profile (IO/ID/ID2 code) Address range	Protection IP68 Pt100 - 1.25 mA Specification 3.0 - S-7.3.E 1...31	56442
	AI4 - (E) 4×M12 (UI) Input range (current) Input range (voltage) Expansion module Profile (IO/ID/ID2 code) Address range Standard-Slave	Protection IP68 -22...22 mA -10...+10 V - S-7.3.E 1...31 Specification 3.0	56448
	Analog outputs AO2 - (E) 2×M12 (UI) Output current Output voltage Expansion module Profile (IO/ID/ID2 code) Address range Standard-Slave	Protection IP68 0...22 mA -10...+10 V - S-7.3.5 1...31 Specification 3.0	56474



MASI INSTALLATION TECHNOLOGY

- Versatile
- Leak-proof for industrial use
- Simplest installation

AS-INTERFACE SYSTEM

In connection with the installation technology, the AS-Interface system from Murrelektronik provides consistent solutions from the operating panel through the control cabinet to the field - from IP00 to IP68.

Due to the application-oriented optimization of the modules, a safe installation and extension of the system can be realized very easily.

- **Easy** – Connection using the cable penetration technology, plug-in connectors or M12
- **Consistent** – products adapted to the fields of application from IP00 to IP68
- **Up-to-date** – latest technology according to the AS-interface specification 3.0



➤ MASI

I/O modules, accessories and accompanying information material regarding MASI can be found in the **online shop**:

➤ shop.murrelektronik.com

MASI20/67/68



- Distributor
- Converter
- Adapter

Page 4.10.1

System/Torque wrenches



- Programming device
- Z-plug
- T-coupler
- Mounting plates

Page 4.10.3



- Torque wrench M8
- Torque wrench M12
- Torque wrench 7/8"

Page 4.10.3

Cables



- Profile cables
- Coding elements
- Adapter, terminals

Page 4.10.4



- Round plug connector
- T-coupler
- DIN-rail adapter
- Connecting cables

Page 4.10.6

MASI20			Art-No.
	Bus or Power distributor 2 AS-Interface + 3 power ports potentially separated	5 plug terminals included	55575
	3 AS-Interface + 2 power ports potentially separated	5 plug terminals included	55606
	Bus or Power distributor 1 x 3 AS-Interface + 2 x 1 power ports 5 ports, universal potentially separated	5 plug terminals included	55605
	1 x 5 AS-Interface/power ports 5 ports, universal not potentially separated	5 plug terminals included	55611
	Bus or Power distributor 1 x 3 AS-Interface + 2 x 1 power ports 5 ports, universal potentially separated	without plug terminals	55607
	Plug terminal for bus or power distributor	AS-Interface profile cable	55604
MASI67			Art-No.
	MASI67 connection 2 x on 2 x profile cable Total current: max. 8 A		55033
	1 x on 3 x profile cable Total current: max. 8 A		55034
	MASI67 converter 2 x profile cable to 7/8" (female) Total current: max. 8 A	5-pole	55035
	MASI67 converter 2 x profile cable to 7/8" (male) Total current: max. 8 A	5-pole	55036
	MASI67 converter 2 x profile cable to M12 (female) Total current: max. 4 A	M12, 4-pole, A-coded	55037

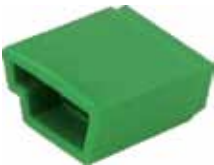
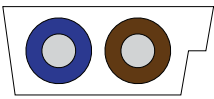
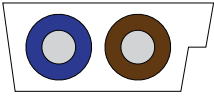
MA SI INSTALLATION TECHNOLOGY

MASI67			Art-No.
	MASI67 converter 2 × profile cable to M12 (male) Total current: max. 4 A	M12, 4-pole, A-coded	55038
	AS-Interface distributor from profile to profile cable Operating current: max. 3 A		55749
	AS-Interface breakout from profile cable to M12 Operating current: max. 2 A	M12, 2-pole, A-coded	55741
MASI67/68			Art-No.
	MASI67 passive distribution box 2 × profile cable to 4 × M12 (female) Current (M12): max. 4 A Total current: max. 8 A Ext. supply: 1 × aux power	M12, 4-pole, A-coded	56412
	2 × profile cable to 4 × M12 (female) Current (M12): max. 4 A Total current: max. 2 × 8 A Ext. supply: 2 × separately aux power	M12, 4-pole, A-coded	56416
MASI68			Art-No.
	MASI68 passive distribution box 1×7/8 AUX + 1×M12 AS-Interface to 3×M12 (female) Current (M12): max. 4 A Total current: max. 2 × 8 A	M12, 4-pole, A-coded 2 separate circuits	56454
	T-coupler (SlimLine) M12 - M12 Male straight - female straight Parallel circuit	5-pole	7000-41151-0000000
	T-coupler M12 – M12 Male straight - female straight Parallel circuit	5-pole	7000-41141-0000000
	Holding plate for T-couplers M12 (SlimLine) for T-couplers M12 (SlimLine)	without mounting set with mounting set	7000-99061-0000000 7000-99062-0000000

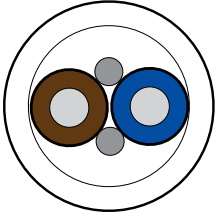
System			Art-No.
	Programming device AS-Interface programming device	AS-Interface addressing cable	55696
	Addressing cable Spare cable	for AS-Interface programming device	55727
	MASI Z-Plug Passive bus terminator		55779
	T-coupler (SlimLine) M12 - M12 Male straight - female straight Distribution function (NO)	5-pole - 4-pole	7000-41131-0000000
	T-coupler M12 - M12 Male straight - female straight Distribution function (NO)	5-pole - 4-pole	7000-41121-0000000
	Holding plate for T-couplers M12 (SlimLine) for T-couplers M12 (SlimLine)	without mounting set with mounting set	7000-99061-0000000 7000-99062-0000000
Torque wrench			Art-No.
	Torque wrench set M12 (0.6 Nm, SW13)	M12 data connenctor molded (standard)	7000-99102-0000000
	Torque wrench M12 (0.6 Nm, SW13) M12 (0.6 Nm, SW14)	M12 data connenctor molded (standard) M12 data connenctor moulded (Xtreme)	7000-99109-0000000 7000-99108-0000000
	Torque wrench M12 (0.6 Nm, SW17)	M12 field-wireable (IDC terminal)	7000-99094-0000000
	Torque wrench M12 (0.6 Nm, SW18)	M12 field-wireable via (screw terminals)	7000-99103-0000000
	Torque wrench set M8 (0.4 Nm, SW9)	M8 data connectors	7000-99101-0000000

MA SI INSTALLATION TECHNOLOGY

Torque wrench			Art-No.
	Torque wrench M8 (0.4 Nm, SW9)	M8 data connectors	7000-99091-0000000
	Torque wrench set 7/8" (1.5 Nm, SW22)	7/8" data connenctor moulded (IDC terminal)	7000-99104-0000000
	Torque wrench 7/8" (1.5 Nm, SW22)	7/8" data connenctor moulded (IDC terminal)	7000-99096-0000000
	7/8" (1.5 Nm, SW24)	7700-XXXXX - 7/8" data connenctor moulded (screw terminals)	7000-99097-0000000
For profile cable			Art-No.
	Coding element - short for MASI67 AS-i	Quantity: 2 pcs.	55059
	Coding element - long for MASI67 AUX	Quantity: 2 pcs.	55060
	Mounting bracket for AS-Interface profile cable	Quantity: 50 pcs.	55742
	Adapter from profile cable to M16		56453
	Plug terminal for bus or power distributor	AS-Interface profile cable	55604
	AS-Interface distributor from profile to profile cable Operating current: max. 3 A		55749
	AS-Interface breakout from profile cable to M12 Operating current: max. 2 A	M12, 2-pole, A-coded	55741

For profile cable			Art-No.
	Middle gasket for profile cable	Quantity: 2 pcs.	55062
	End gasket for Profile cable left/right	Quantity: 2 pieces right + 2 pieces left	55061
	End gasket for profile cable right	Quantity: 100 pcs.	56432
	End gasket for Profile cable left	Quantity: 100 pcs.	56433
	End gasket for Profile cable left/right	Quantity: 5 pcs. right + 5 pcs. left	55746
	Bulk cable Profile cable yellow, 2 × 1.5 mm² PUR (UL/CSA), C-tracks	1 m	55743
	Bulk cable Profile cable yellow, 2 × 1.5 mm² PUR (UL/CSA), C-tracks	Cable ring: 100 m Other versions on request.	7000-C9901-1660000
	Profile cable yellow, 2 × 2.5 mm² PUR (UL/CSA), C-tracks	Cable ring: 100 m Other versions on request.	7000-C9901-1780000
	Bulk cable Profile cable black, 2 × 1.5 mm² PUR (UL/CSA), C-tracks	1 m	55744
	Bulk cable Profile cable black, 2 × 1.5 mm² PUR (UL/CSA), C-tracks	Cable ring: 100 m Other versions on request.	7000-C9901-7840000
	Profile cable black, 2 × 2.5 mm² PUR (UL/CSA), C-tracks	Cable ring: 100 m Other versions on request.	7000-C9901-7790000

MAI INSTALLATION TECHNOLOGY

Round cable MASI68			Art-No.
	T-coupler M12 – M12		
	Female straight - male/male straight A-coded, 4-pole	MAI68 additional actuator power supply	7060-42701-0000000
	Female straight - male/male straight Distribution function (NO) MAI68 additional actuator power supply MVK Metall Safety	4-pole	7060-42703-0000000
	DIN-rail adapter for extension modules	30 mm	56963
	DIN-rail adapter for extension modules	50 mm	56962
	Cable drum (100 m) 2 × 1.5 mm ² , gray Suitable for C-tracks	AS-Interface, MAI68	7000-C0201-5880000
Round plug connectors MASI68			Art-No.
	Connection cable Male straight - female straight 2 × 1.5 mm ² , gray PUR (UL/CSA) 1.0 m	M12 - M12 2-pole Suitable for C-tracks Other versions on request.	7060-40005-5880100
	Male straight - female straight 4 × 0.75 mm ² , gray PUR (UL/CSA) 1.0 m	M12 - M12 4-pole Suitable for C-tracks Other versions on request.	7060-40021-8620100
	Connection cable Male 90° - female 90° 2 × 1.5 mm ² , gray PUR (UL/CSA) 1.0 m	M12 - M12 2-pole Suitable for C-tracks Other versions on request.	7060-40245-5880100
	Male 90° - female 90° 4 × 0.75 mm ² , gray PUR (UL/CSA) 1.0 m	M12 - M12 4-pole Suitable for C-tracks Other versions on request.	7060-40261-8620100

Round plug connectors MASI68			Art-No.
	Connection cable		
	Male straight - female straight 2 × 1.0 mm ² , gray PUR (UL/CSA) 1.0 m	M12 - M12 2-pole, shielded Suitable for C-tracks Other versions on request.	7060-40485-5420100
	Male straight - female straight 2 × 0.75 mm ² + 2 × 0.75 mm ² , gray PUR (UL/CSA) 1.0 m	M12 - M12 4-pole, shielded Suitable for C-tracks Other versions on request.	7060-40505-4940100
	With open ended wires		
	Female straight 4 × 0.75 mm ² , gray PUR (UL/CSA) 1.0 m	M12 4-pole Suitable for C-tracks Other versions on request.	7060-12221-8620100
Labeling accessories			Art-No.
	Label plates		
	20 × 8 mm	(20 pieces per plate)	55318
Blind plug/caps			Art-No.
	Screw plug M12 × 1 mm		
	Plastic, hex with gasket	Quantity: 4 pcs.	55468
	Plastic, hex with gasket	Quantity: 100 pcs.	56455
	Plastic, hex without gasket	Quantity: 4 pcs.	56952
	Plastic, hex without gasket	Quantity: 10 pcs.	58627
	Screw plug M8 × 1 mm (for female)		
	Plastic, hex without gasket	Quantity: 10 pcs.	3858627



M8 DISTRIBUTION SYSTEMS EXACT8

- Saves space
- Versatile
- Application oriented

EXACT8 – THE NEW GENERATION OF MURRELEKTRONIK'S M8 DISTRIBUTION BOXES

- Small dimensions (30 mm width)
- PUR/PVC cable for flexible and fixed assembly
- High-quality, halogen-free PUR cable suitable for C-tracks, UL/CSA approved
- Standard or side mounting for limited space
- Quick and easy replacement of connection cables

For Sensors and Actuators – Molded Homerun Cables or Connection Caps

 Exact8 • 4-, 6-, 8-, 10-way • PUR or PUR/PVC homerun cable <i>Page 4.11.1</i>	 Exact8 basic modules • 4-, 6-, 8-, 10-way <i>Page 4.11.5</i>
 Exact8 connection caps • Pre-wired • PUR or PUR/PVC homerun cable <i>Page 4.11.8</i>	 Exact8 set • 4-, 6-, 8-, 10-way • Field-wireable <i>Page 4.11.11</i>

For Sensors – with M12 Connection

 Exact8 • 4-, 6-, 8-, 10-way • With 8- or 12-pole M12 connection <i>Page 4.11.12</i>
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M8 DISTRIBUTION SYSTEMS

For sensors and actuators

– with molded homerun cable

– Inline face or side mounting

Approvals:  **UL** US
Listed

Exact8

4-way



Exact8

6-way



Exact8

8-way



Exact8

10-way



1 Form		84010	86010	88010	80010
Type		PNP, 3-pole	PNP, 3-pole	PNP, 3-pole	PNP, 3-pole
Contact layout		M8-Females 3-pole 4 (N/O) 3 (-) 1 (+) for 1 signal per port 1 2			
2 Cable Type		Jacket Color – No./diameter of wires			
		gray	gray	gray	gray
PUR/PVC		337 – 4 × 0.34 + 2 × 0.75 mm ²	350 – 6 × 0.34 + 2 × 0.75 mm ²	357 – 8 × 0.34 + 2 × 0.75 mm ²	385 – 10 × 0.34 + 2 × 0.75 mm ²
PUR (UL/CSA), robots/C-tracks		334 – 4 × 0.34 + 2 × 0.75 mm ²	356 – 6 × 0.34 + 2 × 0.75 mm ²	359 – 8 × 0.34 + 2 × 0.75 mm ²	384 – 10 × 0.34 + 2 × 0.75 mm ²
3 Cable Length					
3.0 m		0300			
5.0 m		0500			
10.0 m		1000			
15.0 m		1500			
Technical Data					
Operating voltage		24 V DC			
Total current		max. 8 A			
Protection		IP65/IP67			
Temperature range		-20...+80 °C, depending on cable quality			
Contact Layout					
LED display		LED (green): Power / LED (yellow): (S1)			
PIN 1		(+)			
PIN 3		(-)			
PIN 4		(NO)/(S1)			
Article No.					
The composition of your article number is explained on page 3.1.i		8 0 0 0	-	-	-
			1 Form	2 Cable Type	3 Cable Length
Notes					

M8 DISTRIBUTION SYSTEMS

For sensors and actuators

– with molded homerun cable

– Inline face or side mounting

Approvals:  US
Listed

Exact8

4-way



Exact8

6-way



Exact8

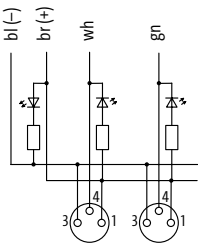
8-way



Exact8

10-way



1	Form	84 011				86 011				88 011				80 011															
	Type	NPN, 3-pole				NPN, 3-pole				NPN, 3-pole				NPN, 3-pole															
	Contact layout	M8-Females 3-pole   for 1 signal per port																											
2	Cable Type	Jacket Color – No./diameter of wires																											
		gray				gray				gray				gray															
	PUR/PVC	337 – 4 × 0.34 + 2 × 0.75 mm²				350 – 6 × 0.34 + 2 × 0.75 mm²				357 – 8 × 0.34 + 2 × 0.75 mm²				385 – 10 × 0.34 + 2 × 0.75 mm²															
	PUR (UL/CSA), robots/C-tracks	334 – 4 × 0.34 + 2 × 0.75 mm²				356 – 6 × 0.34 + 2 × 0.75 mm²				359 – 8 × 0.34 + 2 × 0.75 mm²				384 – 10 × 0.34 + 2 × 0.75 mm²															
3	Cable Length																												
	5.0 m	0500																											
	10.0 m	1000																											
Technical Data																													
Operating voltage		24 V DC																											
Total current		max. 8 A																											
Protection		IP65/IP67																											
Temperature range		-20...+80 °C, depending on cable quality																											
Contact Layout																													
LED display		LED (green): Power / LED (yellow): (S1)																											
PIN 1		(+)																											
PIN 3		(-)																											
PIN 4		(NO)/(S1)																											
Article No.																													
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						1				Form				2				Cable Type				3				Cable Length			
Notes																													

M8 DISTRIBUTION SYSTEMS

For sensors and actuators

– with molded homerun cable

– Inline face or side mounting

Approvals: Listed

Exact8

4-way



Exact8

6-way



Exact8

8-way



Exact8

10-way



1 Form	84110	86110	88110	80110
Type	PNP, 4-pole	PNP, 4-pole	PNP, 4-pole	PNP, 4-pole
Contact layout	M8-Females 4-pole 4 (S1) 2 (S2) 3 (-) 1 (+) for 2 signals per port			
2 Cable Type	Jacket Color – No./diameter of wires			
	gray	gray	gray	gray
PUR/PVC	358 – 8 × 0.34 + 2 × 0.75 mm ²	386 – 12 × 0.34 + 2 × 0.75 mm ²	395 – 16 × 0.34 + 2 × 0.75 mm ²	412 – 20 × 0.34 + 2 × 0.75 mm ²
PUR (UL/CSA), robots/C-tracks	360 – 8 × 0.34 + 2 × 0.75 mm ²	389 – 12 × 0.34 + 2 × 0.75 mm ²	396 – 16 × 0.34 + 2 × 0.75 mm ²	411 – 20 × 0.34 + 2 × 0.75 mm ²
3 Cable Length				
3.0 m	0300			
5.0 m	0500			
10.0 m	1000			
15.0 m	1500			
Technical Data				
Operating voltage	24 V DC			
Total current	max. 8 A			
Protection	IP65/IP67			
Temperature range	-20...+80 °C, depending on cable quality			
Contact Layout				
LED display	LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)			
PIN 1	(+)			
PIN 2	(NC)/(S2)			
PIN 3	(-)			
PIN 4	(NO)/(S1)			
Article No.				
The composition of your article number is explained on page 3.1.i	8000 – – –			
	1 Form	2 Cable Type	3 Cable Length	
Notes				

M8 DISTRIBUTION SYSTEMS

For sensors and actuators

– with molded homerun cable

– Inline face or side mounting

Approvals:  US
Listed

Exact8

4-way



Exact8

6-way



Exact8

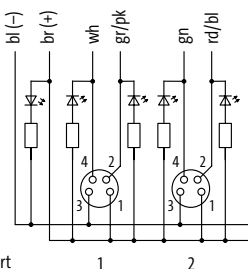
8-way



Exact8

10-way



1 Form		84111	86111	88111	80111
Type		NPN, 4-pole	NPN, 4-pole	NPN, 4-pole	NPN, 4-pole
Contact layout		M8-Females 4-pole 4 (S1) 2 (S2) 3 (-) 1 (+)  for 2 signals per port			
2 Cable Type		Jacket Color – No./diameter of wires			
		gray	gray	gray	gray
PUR/PVC		358 – 8 × 0.34 + 2 × 0.75 mm ²	386 – 12 × 0.34 + 2 × 0.75 mm ²	395 – 16 × 0.34 + 2 × 0.75 mm ²	412 – 20 × 0.34 + 2 × 0.75 mm ²
PUR (UL/CSA), robots/C-tracks		360 – 8 × 0.34 + 2 × 0.75 mm ²	389 – 12 × 0.34 + 2 × 0.75 mm ²	396 – 16 × 0.34 + 2 × 0.75 mm ²	411 – 20 × 0.34 + 2 × 0.75 mm ²
3 Cable Length					
5.0 m		0500			
10.0 m		1000			
Technical Data					
Operating voltage		24 V DC			
Total current		max. 8 A			
Protection		IP65/IP67			
Temperature range		-20...+80 °C, depending on cable quality			
Contact Layout					
LED display		LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)			
PIN 1		(+)			
PIN 2		(NC)/(S2)			
PIN 3		(-)			
PIN 4		(NO)/(S1)			
Article No.					
The composition of your article number is explained on page 3.1.i		8 0 0 0 - -			
		1 Form	2 Cable Type	3 Cable Length	
Notes					

M8 DISTRIBUTION SYSTEMS

For sensors and actuators

– Base modules

– Inline face or side mounting

Approvals: Listed

Exact8

4-way



Exact8

6-way



Exact8

8-way



Exact8

10-way



1 Form

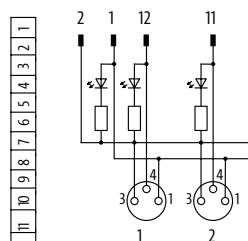
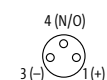
Type

Contact layout

84000

PNP, 3-pole

M8-Females 3-pole



for 1 signal per port

86000

PNP, 3-pole

88000

PNP, 3-pole

80000

PNP, 3-pole

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 2 A
Total current	max. 8 A
Protection	IP65/IP67
Temperature range	-20...+70 °C, depending on cable quality

Contact Layout

LED display	LED (green): Power / LED (yellow): (S1)
PIN 1	(+)
PIN 3	(-)
PIN 4	(NO)/(S1)

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0 - - - - - - 0 0 0 0 0 0

1 Form

Notes

M8 DISTRIBUTION SYSTEMS

For sensors and actuators

– Base modules

– Inline face or side mounting

Approvals:  US
Listed

Exact8

4-way



Exact8

6-way



Exact8

8-way



Exact8

10-way



1

Form

84001

86001

88001

80001

Type

NPN, 3-pole

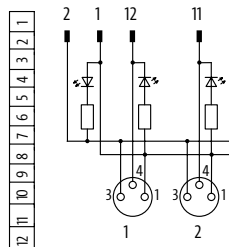
NPN, 3-pole

NPN, 3-pole

NPN, 3-pole

Contact layout

M8-Females 3-pole



for 1 signal per port

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 2 A
Total current	max. 8 A
Protection	IP65/IP67
Temperature range	-20...+70 °C, depending on cable quality

Contact Layout

LED display	LED (green): Power / LED (yellow): (S1)
PIN 1	(+)
PIN 3	(-)
PIN 4	(NO)/(S1)

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0

- - - - -

0 0 0

0 0 0 0

1 Form

Notes

M8 DISTRIBUTION SYSTEMS

For sensors and actuators

- Base modules
- Inline face or side mounting

Approvals:  **UL** US Listed

Exact8
4-way



Exact8
6-way



Exact8
8-way



1 Form		84100	86100	88100
Type		PNP, 4-pole	PNP, 4-pole	PNP, 4-pole
Contact layout		M8 Females 4-pole 4 (S1) 2 (S2) 3 (-) 1 (+) for 2 signals per port	M8-Females 4-pole 4 (S1) 2 (S2) 3 (-) 1 (+) for 2 signals per port	
Technical Data				
Operating voltage		24 V DC		
Operating current per contact		max. 2 A		
Total current		max. 8 A		
Protection		IP65/IP67		
Temperature range		-20...+70 °C, depending on cable quality		
Contact Layout				
LED display		LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)		
PIN 1		(+)		
PIN 2		(NC)/(S2)		
PIN 3		(-)		
PIN 4		(NO)/(S1)		
Article No.				
The composition of your article number is explained on page 3.1.i		8000 - - - - - 000 0000		
		1 Form		
Notes				

M8 DISTRIBUTION SYSTEMS

For sensors and actuators

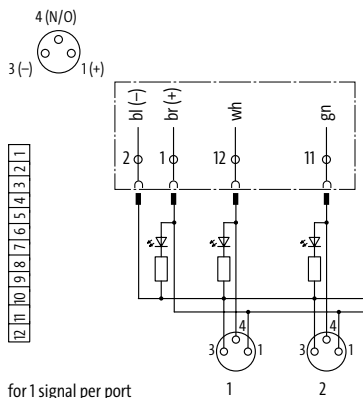
– Connection cap with homerun cable

Approvals:  **UL** US
Listed

Exact8

Connection cap short



1 Form	84049	86049	88049	80049
	for 4-way distribution box, 3-pole	for 6-way distribution box, 3-pole	for 8-way distribution box, 3-pole	for 10-way distribution box, 3-pole
	Spring clamp plug-in terminals	Spring clamp plug-in terminals	Spring clamp plug-in terminals	Spring clamp plug-in terminals
				Spring clamp plug-in terminals
Contact layout	M8-Females 3-pole  for 1 signal per port			
2 Cable Type	Jacket Color – No./diameter of wires			
	gray	gray	gray	gray
	PUR/PVC	337 – 4 × 0.34 + 2 × 0.75 mm ²	350 – 6 × 0.34 + 2 × 0.75 mm ²	357 – 8 × 0.34 + 2 × 0.75 mm ²
	PUR (UL/CSA), robots/C-tracks	334 – 4 × 0.34 + 2 × 0.75 mm ²	356 – 6 × 0.34 + 2 × 0.75 mm ²	359 – 8 × 0.34 + 2 × 0.75 mm ²
3 Cable Length				
	3.0 m	0300		
	5.0 m	0500		
	10.0 m	1000		
	15.0 m	1500		
Technical Data				
	Total current	max. 8 A		
	Temperature range	-20...+80 °C, depending on cable quality		
	Article No.			
The composition of your article number is explained on page 3.1.i				
	8	0	0	0
	–	–	–	–
	–	–	–	–
	1 Form	2 Cable Type	3 Cable Length	
Notes				

M8 DISTRIBUTION SYSTEMS

For sensors and actuators

– Connection cap with homerun cable

Approvals:  **UL** US
Listed

Exact8

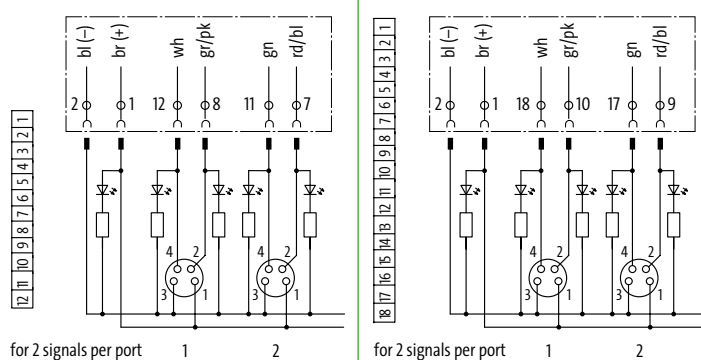
Connection cap short



Exact8

Connection cap long



1 Form		84149	86149	88149
Type		for 4-way distribution box, 4-pole	for 6-way distribution box, 4-pole	for 8-way distribution box, 4-pole
		Spring clamp plug-in terminals	Spring clamp plug-in terminals	Spring clamp plug-in terminals
Contact layout		M8-Females 4-pole 4 (S1) 2 (S2) 3 (-) 1 (+)  for 2 signals per port 1 2		
2 Cable Type		Jacket Color – No./diameter of wires		
		gray	gray	gray
PUR/PVC		358 – 8 × 0.34 + 2 × 0.75 mm ²	386 – 12 × 0.34 + 2 × 0.75 mm ²	395 – 16 × 0.34 + 2 × 0.75 mm ²
PUR (UL/CSA), robots/C-tracks		360 – 8 × 0.34 + 2 × 0.75 mm ²	389 – 12 × 0.34 + 2 × 0.75 mm ²	396 – 16 × 0.34 + 2 × 0.75 mm ²
3 Cable Length				
3.0 m		0300		
5.0 m		0500		
10.0 m		1000		
15.0 m		1500		
Technical Data				
Total current		max. 8 A		
Temperature range		-20...+80 °C, depending on cable quality		
Article No.				
The composition of your article number is explained on page 3.1.i		8 0 0 0	-	-
		1 Form	2 Cable Type	3 Cable Length
Notes				

M8 DISTRIBUTION SYSTEMS

For sensors and actuators

- Connection cap without homerun cable
- Field-wireable

Exact8

Connection cap short



Exact8

Connection cap long



1	Form	84949	80949
	Type	for 4-way distribution box, 3/4-pole, for 4...10-way, 3-pole	6-, and 8-way distribution box, 4-pole
	Contact layout	Spring clamp plug-in terminals 3-pole M8-Females 4-pole 4 (N/O) 3 (-) 1 (+) 4 (S1) 3 (-) 1 (+) 2 (S2) 1 (+) 1 2 3 4 5 6 7 8 9 10 11 12	Spring clamp plug-in terminals M8-Females 4-pole 4 (S1) 3 (-) 1 (+) 2 (S2) 1 (+)

1

2

3

4

5

6

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8

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10

11

12

13

14

15

16

17

18

M8 DISTRIBUTION SYSTEMS

For sensors and actuators

– Sets (basic module and cap)

– Inline face or side mounting

Approvals:  US Listed

Exact8

4-way



Exact8

6-way



Exact8

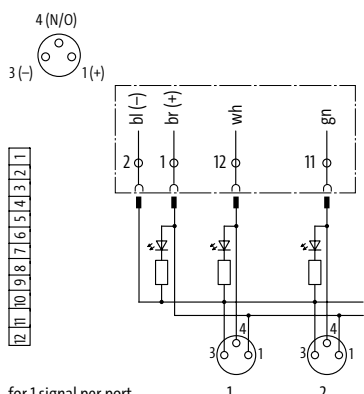
8-way



Exact8

10-way



1 Form	84040	86040	88040	80040
Type	3-pole	3-pole	3-pole	3-pole
Contact layout	M8-Females 3-pole  for 1 signal per port			
2 Cable Type	Jacket Color – No./diameter of wires			
PUR (UL/CSA), robots/C-tracks	gray 334 – 4 × 0.34 + 2 × 0.75 mm ²	gray 356 – 6 × 0.34 + 2 × 0.75 mm ²	gray 359 – 8 × 0.34 + 2 × 0.75 mm ²	gray 384 – 10 × 0.34 + 2 × 0.75 mm ²
3 Cable Length				
3.0 m	0300			
5.0 m	0500			
10.0 m	1000			
15.0 m	1500			
Technical Data				
Operating voltage	24 V DC			
Total current	max. 8 A			
Protection	IP67 inserted and tightened (EN 60529)			
Temperature range	-20...+80 °C, depending on cable quality			
Contact Layout				
LED display	LED (green): Power / LED (yellow): (S1)			
PIN 1	(+)			
PIN 3	(-)			
PIN 4	(NO)/(S1)			
Article No.				
The composition of your article number is explained on page 3.1.i	8 0 0 0 - -			
	1 Form	2 Cable Type	3 Cable Length	
Notes				

M8 DISTRIBUTION SYSTEMS

- For sensors
- M12 plug connection
 - 8-pole
 - Inline face or side mounting

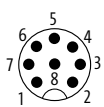
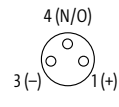
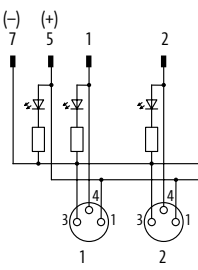
Approvals:  US Listed

Exact8
4-way



Exact8
6-way



1	Form	84070	86070
	Type	3-pole	3-pole
Contact layout		M8-Females 3-pole M12-Plug 8-pole   for 1 signal per port	
Technical Data			
Operating voltage		24 V DC	
Operating current per contact		max. 2 A	
Protection		IP65/IP67	
Housing		Plastic, flame retardant	
Temperature range		-20...+70 °C, depending on cable quality	
Contact Layout			
LED display		LED (green): Power / LED (yellow): (S1)	
PIN 1		(+)	
PIN 3		(-)	
PIN 4		(NO)/(S1)	
Article No.			
The composition of your article number is explained on page 3.1.i		8000 - - 000 0000	
		1 Form	
Notes			

M8 DISTRIBUTION SYSTEMS

For sensors

- M12 plug connection
- 12-pole
- Inline face or side mounting

Approvals: UL US Listed

Exact8

4-way



Exact8

6-way



Exact8

8-way



Exact8

10-way



1 Form

Type

Contact layout

84060

3-pole

86060

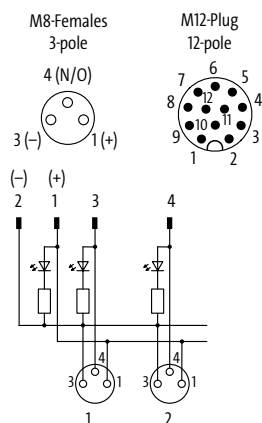
3-pole

88060

3-pole

80060

3-pole



for 1 signal per port

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 1.5 A
Protection	IP67 inserted and tightened (EN 60529)
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C, depending on cable quality

Contact Layout

LED display	LED (green): Power / LED (yellow): (S1)
PIN 1	(+)
PIN 3	(-)
PIN 4	(NO)/(S1)

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0

1 Form

0 0 0

0 0 0 0

Notes

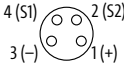
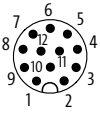
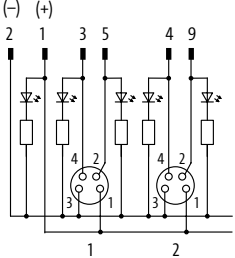
M8 DISTRIBUTION SYSTEMS

- For sensors
- M12 plug connection
 - 12-pole
 - Inline face or side mounting

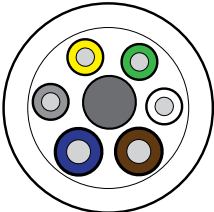
Approvals:  US
Listed

Exact8
4-way

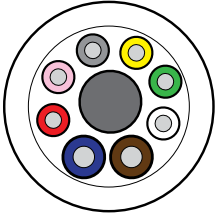
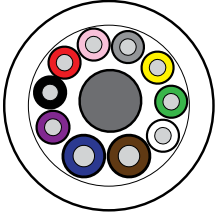
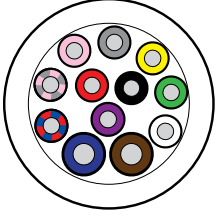
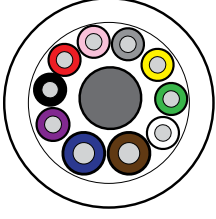
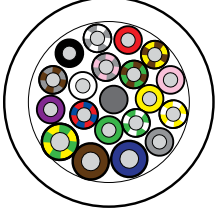
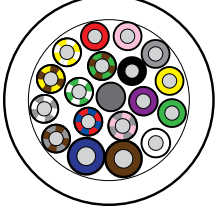
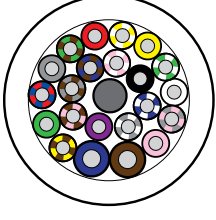


1	Form	84160			
	Type	4-pole			
	Contact layout	M8-Females 4-pole M12-Plug 12-pole    for 2 signals per port			
	Technical Data				
	Operating voltage	24 V DC			
	Operating current per contact	max. 1.5 A			
	Protection	IP67 inserted and tightened (EN 60529)			
	Housing	Plastic, flame retardant			
	Temperature range	-20...+70 °C, depending on cable quality			
	Contact Layout				
	LED display	LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)			
	PIN 1	(+)			
	PIN 2	(NC)/(S2)			
	PIN 3	(-)			
	Article No.				
	The composition of your article number is explained on page 3.1.i	8000 - 84160 - 000 0000			
		1Form			
	Notes				

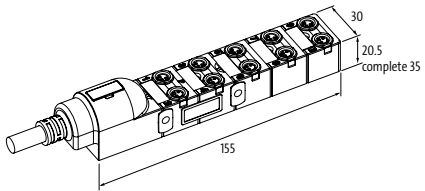
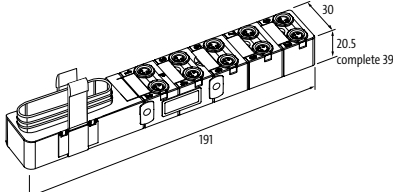
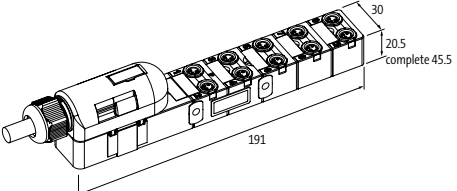
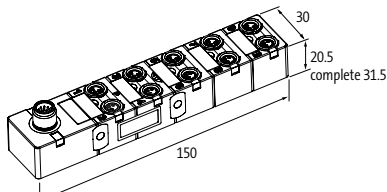
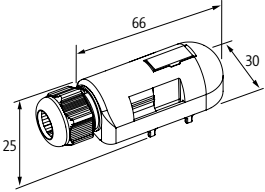
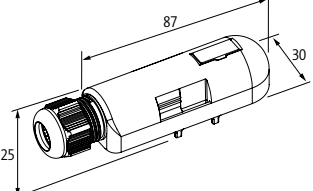
M8 DISTRIBUTION SYSTEMS

Plug accessories			Art-No.
	Torque wrench set M8 (0.4 Nm, SW9)	M8 data connectors	7000-99101-0000000
	Screw plug M8 x 1 mm (for female) Plastic, hex without gasket	Quantity: 10 pcs.	3858627
	Adapter M8/M12 3-pole 4-pole	M8 Distribution Systems M8 Distribution Systems	7000-88521-0000000 7000-88531-0000000
	Label plates KES 20 x 8 (white)	(10 pieces/2 plates)	996067
	T-coupler (Nano) Distribution function (NO)	M8 distribution systems, 4-pole	7000-88602-0000000
	Screw plug M12 x 1 mm (for male) Plastic	Quantity: 4 pcs.	56951
Homerun cable accessories			Art-No.
	Connection cap short Spring clamp terminals, 12-pole	4-way distribution box, 3/4-pole, 4...10-way, 3-pole Cable diameter (7.4...13 mm)	8000-84949-0000000
	Connection cap long Spring clamp terminals, 18-pole	6-, and 8-way distribution box, 4-pole Cable diameter (7.4...13 mm)	8000-80949-0000000
	Cable rings (50 m), 3-pole, PUR/PVC 4x0.34 + 2x0.75 mm ² 4x0.34 + 2x0.75 mm ²	4-way distribution boxes M8 4-way distribution boxes M8	8000-00000-3375000 8000-00000-3345000

M8 DISTRIBUTION SYSTEMS

Homerun cable accessories			Art-No.
	Cable rings (50 m), 3-pole, PUR/PVC $6 \times 0.34 + 2 \times 0.75 \text{ mm}^2$	6-way distribution boxes M8	8000-00000-3505000
	$6 \times 0.34 + 2 \times 0.75 \text{ mm}^2$	6-way distribution boxes M8	8000-00000-3565000
	Cable rings (50 m), 3-pole, PUR/PVC $8 \times 0.34 + 2 \times 0.75 \text{ mm}^2$	8-way distribution boxes M8	8000-00000-3575000
	$8 \times 0.34 + 2 \times 0.75 \text{ mm}^2$	8-way distribution boxes M8	8000-00000-3595000
	Cable rings (50 m), 3-pole, PUR/PVC $10 \times 0.34 + 2 \times 0.75 \text{ mm}^2$	10-way distribution boxes M8	8000-00000-3855000
	$10 \times 0.34 + 2 \times 0.75 \text{ mm}^2$	10-way distribution boxes M8	8000-00000-3845000
	Cable rings (50 m), 4-pole, PUR/PVC $8 \times 0.34 + 2 \times 0.75 \text{ mm}^2$	4-way distribution boxes M8	8000-00000-3585000
	$8 \times 0.34 + 2 \times 0.75 \text{ mm}^2$	4-way distribution boxes M8	8000-00000-3605000
	Cable rings (50 m), 4-pole, PUR/PVC $12 \times 0.34 + 2 \times 0.75 \text{ mm}^2$	6-way distribution boxes M8	8000-00000-3865000
	$12 \times 0.34 + 2 \times 0.75 \text{ mm}^2$	6-way distribution boxes M8	8000-00000-3895000
	Cable rings (50 m), 4-pole, PUR/PVC $16 \times 0.34 + 2 \times 0.75 \text{ mm}^2$	8-way distribution boxes M8	8000-00000-3955000
	$16 \times 0.34 + 2 \times 0.75 \text{ mm}^2$	8-way distribution boxes M8	8000-00000-3965000
	Cable rings (50 m), 4-pole, PUR (UL/CSA), halogen free $20 \times 0.34 + 2 \times 0.75 \text{ mm}^2$	10-way distribution boxes M8	8000-00000-4115000
	$20 \times 0.34 + 2 \times 0.75 \text{ mm}^2$	10-way distribution boxes M8	8000-00000-4125000

M8 Distribution Systems Technical Data

	Description Exact8 Molded homerun cable	4-way 96 mm	6-way 109 mm	8-way 132 mm	10-way 155 mm
	Description Exact8 Basic module 3-pole Basic module 4-pole	4-way 132 mm 132 mm	6-way 145 mm 166 mm	8-way 168 mm 189 mm	10-way 191 mm –
	Description Exact8 Sets 3-pole Sets 4-pole	4-way 132 mm 132 mm	6-way 145 mm 166 mm	8-way 168 mm 189 mm	10-way 191 mm –
	Description Exact8 M12 plug connection	4-way 91.5 mm	6-way 104 mm	8-way 127 mm	10-way 150 mm
	Description Exact8 Short connection cap				
	Description Exact8 Long connection cap				



M12 DISTRIBUTION SYSTEMS METAL

- Rugged
- Resistant to media
- Sealed

POTTED FORMS FOR HARSH ENVIRONMENTS

- Metal housing withstands mechanical and thermal stress, with molded cable or maintenance-friendly M23 plug connection
- High quality PUR cable: suitable for C-tracks, halogen-free, wider wire cross sections for higher current capacity
- Shielded models for sensitive digital or analog signals for an EMC compatible installation
- Universal configuration - contacts designed 1:1
- Fully potted

With molded homerun cable or M23 plug connection



MVP12 Metal

- 4-, 8-way
- With LED for PNP or NPN signals
- Without LED for analog signals and voltages up to 125 VAC/DC
- With PUR homerun cable or M23 connection

Page 4.12.1



MVP12 Metal UNIVERSAL

- 4-way
- M12 Pin 1, 2, 3, and 4 freely configurable

Page 4.12.8

M12 DISTRIBUTION SYSTEMS (METAL)

For sensors and actuators

– with molded homerun cable

– unshielded

Approvals:

MVP12 Metal

4-way
for PNP signals 24 V DC



MVP12 Metal

8-way
for PNP signals 24 V DC



1 Form		54510	58510
Type		PNP, 5-pole	PNP, 5-pole
Contact layout		for 2 signals per port	
2 Cable Type		Jacket Color – No./diameter of wires	
PUR (UL/CSA), robots/C-tracks		gray	gray
		448 – 8 × 0.5 + 3 × 1.0 mm ²	452 – 16 × 0.5 + 3 × 1.0 mm ²
3 Cable Length			
3.0 m		0300	
5.0 m		0500	
10.0 m		1000	
15.0 m		1500	
Technical Data			
Operating voltage		24 V DC	
Total current		max. 7.5 A	
Protection		IP65, IP67, IP68	
Temperature range		-20...+90 °C, depending on cable quality	
Contact Layout			
LED display		LED (green): Power / LED (yellow): (S1/S2)	
PIN 1		(+) (NC)/(S2)	
PIN 2		(-)	
PIN 3		(NO)/(S1)	
PIN 4		(Earth)	
PIN 5			
Article No.			
The composition of your article number is explained on page 3.1.i		8 0 0 0	
		1 Form	2 Cable Type 3 Cable Length
Notes			

M12 DISTRIBUTION SYSTEMS (METAL)

For sensors and actuators

– with molded homerun cable

– unshielded

Approvals:  US Listed

MVP12 Metal

8-way
with potential separation



MVP12 Metal

4-way
without LED

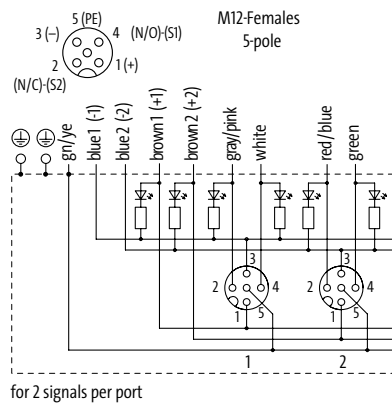


1 Form

58 610

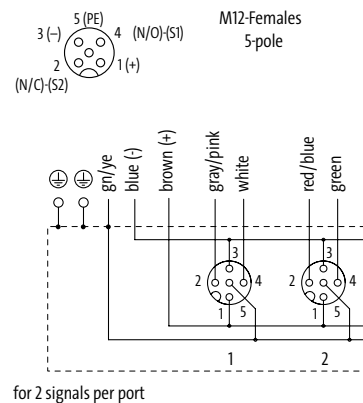
PNP, 5-pole

Type
Contact layout



54 512

without LED, 5-pole (for analog signals)



2 Cable Type

Jacket Color – No./diameter of wires

PUR (UL/CSA), robots/C-tracks

gray

403 – 16 × 0.34 + 5 × 0.75 mm²

gray

448 – 8 × 0.5 + 3 × 1.0 mm²

3 Cable Length

3.0 m	0300
5.0 m	0500
10.0 m	1000
15.0 m	1500

Technical Data

Operating voltage	24 V DC	max. 125 V AC/DC
Total current	max. 7.5 A	
Protection	IP65, IP67, IP68	
Temperature range	-20...+90 °C, depending on cable quality	

Contact Layout

LED display	LED (green): Power / LED (yellow): (S1/S2)	–
PIN 1	(+)	
PIN 2	(N/C)/(S2)	
PIN 3	(-)	
PIN 4	(N/O)/(S1)	
PIN 5	(Earth)	

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0

1 Form

2 Cable Type

3 Cable Length

Notes

M12 DISTRIBUTION SYSTEMS (METAL)

For sensors and actuators

– with molded homerun cable

– shielded

Approvals: 

MVP12 Metal

4-way



MVP12 Metal

8-way



1 Form

54515

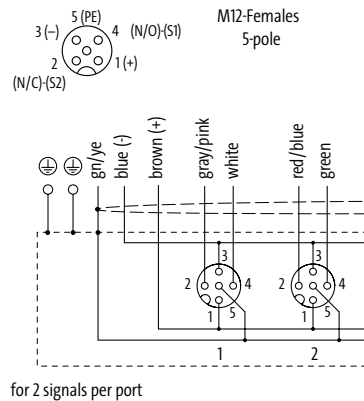
58515

Type

without LED, 5-pole (for analog signals)

without LED, 5-pole (for analog signals)

Contact layout



2 Cable Type

Jacket Color – No./diameter of wires

PUR (UL/CSA), robots/C-tracks

gray
373 – 8 × 0.34 + 3 × 0.75 mm²

gray
401 – 16 × 0.34 + 3 × 0.75 mm²

3 Cable Length

3.0 m 0300
5.0 m 0500
10.0 m 1000
15.0 m 1500

Technical Data

Operating voltage max. 125 V AC/DC
Total current max. 7.5 A
Protection IP65, IP67, IP68
Temperature range -20...+90 °C, depending on cable quality

Contact Layout

PIN 1 (+)
PIN 2 (NC)/(S2)
PIN 3 (-)
PIN 4 (NO)/(S1)
PIN 5 (Earth)
Shield via M12 thread

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0

-

-

1 Form

2 Cable Type

3 Cable Length

Notes

M12 DISTRIBUTION SYSTEMS (METAL)

For sensors and actuators

– with molded homerun cable

– shielded

Approvals: 

MVP12 Metal

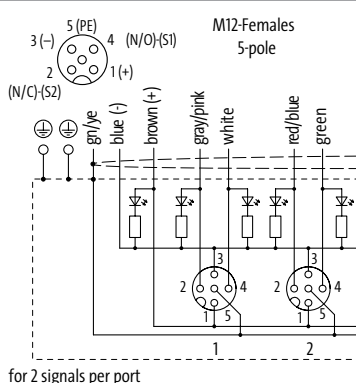
4-way
for PNP signals 24 V DC



MVP12 Metal

8-way
for PNP signals 24 V DC



1 Form		54513	58513
Type		PNP, 5-pole	
Contact layout			
2 Cable Type		Jacket Color – No./diameter of wires	
PUR (UL/CSA), robots/C-tracks		gray 373 – 8 × 0.34 + 3 × 0.75 mm ²	gray 401 – 16 × 0.34 + 3 × 0.75 mm ²
3 Cable Length			
3.0 m		0300	
5.0 m		0500	
10.0 m		1000	
15.0 m		1500	
Technical Data			
Operating voltage		24 V DC	
Total current		max. 7.5 A	
Protection		IP65, IP67, IP68	
Temperature range		-20...+90 °C, depending on cable quality	
Contact Layout			
LED display		LED (green): Power / LED (yellow): (S1/S2)	
PIN 1		(+) / (NC)/(S2)	
PIN 2		(-)	
PIN 3		(NO)/(S1)	
PIN 4		(Earth)	
Shield		via M12 thread	
Article No.			
The composition of your article number is explained on page 3.1.i		8 0 0 0 - - - - -	
		1 Form	2 Cable Type
		3 Cable Length	
Notes			

M12 DISTRIBUTION SYSTEMS (METAL)

For sensors and actuators

- M23 plug connection, 19-pole
- for unshielded or shielded use

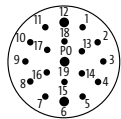
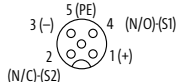
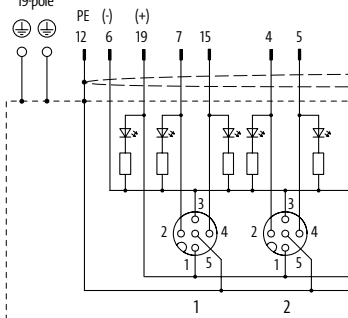
Approvals:  US Listed

MVP12 Metal
4-way
for PNP signals 24 V DC



MVP12 Metal
8-way
for PNP signals 24 V DC



1	Form	54520	58520
	Type	PNP, 5-pole	PNP, 5-pole
	Contact layout	M12-Females 5-pole M23-Plug 19-pole  M23-Plug 19-pole  for 2 signals per port	
	Technical Data		
	Operating voltage	24 V DC	
	Operating current per contact	max. 4 A	
	Total current	max. 7.5 A	
	Protection	IP65, IP67, IP68	
	Housing	Zinc die casting, matte nickel plated	
	Temperature range	-25...+90 °C	
	Contact Layout		
	LED display	LED (green): Power / LED (yellow): (S1/S2)	
	PIN 1	(+)	
	PIN 2	(NC)/(S2)	
	PIN 3	(-)	
	PIN 4	(NO)/(S1)	
	PIN 5	(Earth)	
	Shield	via M12 outer thread and M23 outer thread	
	Article No.		
	The composition of your article number is explained on page 3.1.i	8000 - - 000 0000	
		1	Form
	Notes		

M12 DISTRIBUTION SYSTEMS (METAL)

For sensors and actuators

- M23 plug connection, 19-pole
- for unshielded or shielded use

Approvals:  **UL** US
Listed

MVP12 Metal

4-way



MVP12 Metal

8-way



1 Form

54522

without LED, 5-pole (for analog signals)

58522

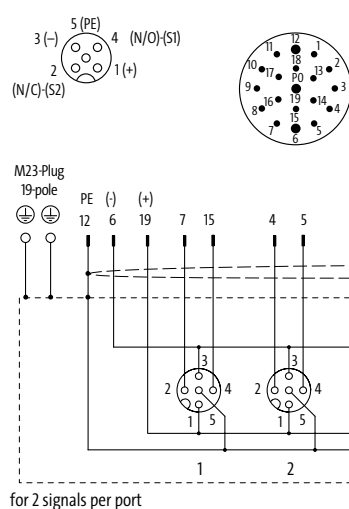
without LED, 5-pole (for analog signals)

Type

Contact layout

M12-Females 5-pole

M23-Plug 19-pole



Technical Data

Operating voltage	max. 125 V AC/DC
Operating current per contact	max. 4 A
Total current	max. 7.5 A
Protection	IP65, IP67, IP68
Housing	Zinc die casting, matte nickel plated
Temperature range	-25...+80 °C

Contact Layout

PIN 1	(+)
PIN 2	(NC)/(S2)
PIN 3	(-)
PIN 4	(NO)/(S1)
PIN 5	(Earth)
Shield	via M12 outer thread and M23 outer thread

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0 - - - - - **0 0 0** **0 0 0 0**

1 Form

Notes

M12 DISTRIBUTION SYSTEMS (METAL)

For harsh environments
– for unshielded or shielded use

MVP12 Metal UNIVERSAL
with molded homerun cable
4-way



1	Form	54712					
	Type	without LED, 5-pole (for analog signals)					
	Contact layout	M12-Females 5-pole for 4 signals per port free arrangeable, PE bridged					
2	Cable Type	Jacket Color – No./diameter of wires					
		gray					
	PUR (UL/CSA), robots/C-tracks	401 – 16 × 0.34 + 3 × 0.75 mm²					
3	Cable Length						
	3.0 m	0300					
	5.0 m	0500					
	10.0 m	1000					
	15.0 m	1500					
Technical Data							
	Operating voltage	max. 42 V AC/DC					
	Total current	max. 10 A					
	Protection	IP65, IP67, IP68					
	Temperature range	-20...+90 °C, depending on cable quality					
Contact Layout							
	PIN 1	(S1)					
	PIN 2	(S2)					
	PIN 3	(S3)					
	PIN 4	(S4)					
	PIN 5	(Earth)					
	Shield	via M12 thread					
Article No.							
	The composition of your article number is explained on page 3.1.i	8 0 0 0 – 5 4 7 1 2 – – – – – – – – –					
		1	Form	2	Cable Type	3	Cable Length
Notes							

M12 DISTRIBUTION SYSTEMS (METAL)

For harsh environments

– for unshielded or shielded use

Approvals:  **UL**
Listed

MVP12 Metal UNIVERSAL

M23 plug connection, 19-pole
4-way



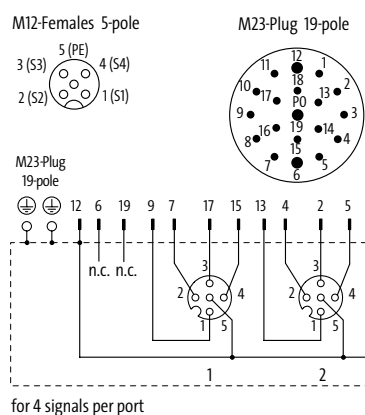
1 Form

54722

Type

without LED, 5-pole (for analog signals)

Contact layout



Technical Data

Operating voltage	max. 125 V AC/DC
Operating current per contact	max. 4 A
Total current	max. 7.5 A
Protection	IP65, IP67, IP68
Housing	Zinc die casting, matte nickel plated
Locking of ports	Screw thread M12 × 1 mm
Temperature range	-25...+90 °C

Contact Layout

PIN 1	(S1)
PIN 2	(S2)
PIN 3	(S3)
PIN 4	(S4)
PIN 5	(S5)/(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0 - 5 4 7 2 2 - 0 0 0 0

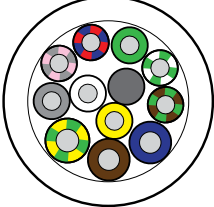
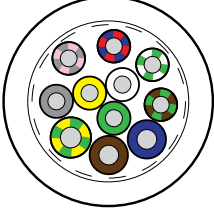
1 Form

Notes

M12 DISTRIBUTION SYSTEMS (METAL)

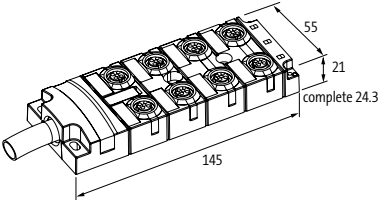
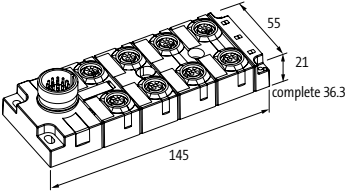
Mounting accessories			Art-No.
	Torque wrench set M12 (0.6 Nm, SW13)	M12 data connenctor molded (standard)	7000-99102-0000000
	Torque wrench M12 (0.6 Nm, SW13)	M12 data connenctor molded (standard)	7000-99109-0000000
	Torque wrench M12 (0.6 Nm, SW14)	M12 data connenctor moulded (Xtreme)	7000-99108-0000000
	Torque wrench M12 (0.6 Nm, SW17)	M12 field-wireable (IDC terminal)	7000-99094-0000000
	Torque wrench M12 (0.6 Nm, SW18)	M12 field-wireable via (screw terminals)	7000-99103-0000000
	DIN-rail adapter with fixing screws, plastic		27905
	Earth connection set		996064
	V2A-base plate	MVP12 Metal, 4-way	996065
		MVP12 Metal, 8-way	996066
	Ground strap 4 mm² 100 mm for hole (M3)		4000-71001-0410003
	End fitting set M3	Ground straps	4000-71003-0101403
Plug accessories			Art-No.
	Torque wrench set M12 (0.6 Nm, SW13)	M12 data connenctor molded (standard)	7000-99102-0000000
	Screw plug M12 × 1 mm Metal, hex, 1 piece		996049

M12 DISTRIBUTION SYSTEMS (METAL)

Plug accessories			Art-No.
	Label plates		
	KES 20 × 8 (white)	(10 pieces/2 plates)	996067
	Adapter M8/M12		
	3-pole	M12 Distribution Systems	7000-42201-0000000
	4-pole	M12 Distribution Systems	7000-42211-0000000
Homerun cable accessories			Art-No.
	Screw plug M23		
	Metal		55352
	Cable rings (50 m), 5-pole, PUR (UL/CSA), halogen free		
	8×0.5 + 3×1.0 mm ²	4-way distribution boxes M12	8000-00000-4485000
	16×0.5 + 3×1.0 mm ²	8-way distribution boxes M12	8000-00000-4525000
	16×0.34 + 5×0.75 mm ²	8-way distribution boxes M12, potentially separated	8000-00000-4035000
	Cable rings (50 m), 5-pole, PUR (UL/CSA), halogen free		
	8×0.34 + 3×0.75 mm ²	4-way distribution boxes M12, shielded	8000-00000-3735000
	16×0.34 + 3×0.75 mm ²	8-way distribution boxes M12, shielded	8000-00000-4015000

M12 DISTRIBUTION SYSTEMS (METAL)

M12 Distribution Systems Technical Data

	Description	4-way	8-way
	MVP Metal and MVP Metal UNIVERSAL Molded homerun cable	95 mm	145 mm
	Description	4-way	8-way
	MVP Metal and MVP Metal UNIVERSAL M23 plug connection	95 mm	145 mm

M12 DISTRIBUTION SYSTEMS PLASTIC

- Fully potted, sealed
- Highly resistant
- Application oriented

PLUGGABLE CONNECTIONS FROM THE PROCESS TO THE CONTROL

- Quick installation with pre-wired and tested cables
- Easy to separate during transportation and simple when redesigning your system, rapid replacement of damaged cables
- Double assignment of M12 ports saves space
- Safety models for inputs and outputs according to EN ISO 13849-2
- Universal configuration – contacts designed 1:1

Pluggable or pre-wired homerun cable

 Exact12 • 4-, 8-way • With LED for PNP or NPN signals • Without LED for voltages up to 125 V AC/DC • Analog signals • ATEX <i>Page 4.13.1</i>	 Exact12 • 4-, 8-way • With pluggable 8- or 12-pole M12 connection • With pluggable 12- or 19-pole M23 connection <i>Page 4.13.27</i>
 Exact12 basic modules • 4-, 8-way • With LED for PNP or NPN signals • Without LED for voltages up to 125 V AC/DC • Analog signals <i>Page 4.13.8</i>	 Exact12/MVP12 connection caps • Field-wireable with screw or spring clamp terminals • With pre-wired homerun cable and screw plug terminals <i>Page 4.13.14</i>
 Exact12 set • 4-, 8-way • With pluggable cap and screw plug terminals or spring clamp terminals <i>Page 4.13.17</i>	 Exact12 with connection on the back • 8-way • With pluggable connection on the back • Potential separation optional <i>Page 4.13.25</i>
 Exact12 UNIVERSAL • 4-way • M12 pin 1, 2, 3, and 4 freely configurable <i>Page 4.13.30</i>	 Exact12 – safety distribution system • 8-way • Potential separation optional <i>Page 4.13.31</i>

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– with molded homerun cable

Approvals:

Exact12

4-way
for PNP signals 24 V DC



Exact12

8-way
for PNP signals 24 V DC



1 Form		84410	88410
Type		PNP, 4-pole	PNP, 4-pole
Contact layout		M12-Females 4-pole for 1 signal per port	M12-Females 4-pole for 1 signal per port
2 Cable Type		Jacket Color – No./diameter of wires	
		gray	gray
PUR/PVC		333 – 4 × 0.34 + 3 × 0.75 mm ²	
PUR/PVC (UL/CSA), C-tracks			362 – 8 × 0.34 + 3 × 0.75 mm ²
PUR (UL/CSA), robots/C-tracks			447 – 8 × 0.5 + 3 × 1.0 mm ²
3 Cable Length			
3.0 m		0300	
5.0 m		0500	
10.0 m		1000	
15.0 m		1500	
Technical Data			
Operating voltage		24 V DC	
Total current		max. 8 A	
Protection		IP65/IP67	
Temperature range		-20...+70 °C, depending on cable quality	
Contact Layout			
LED display		LED (green): Power / LED (yellow): (S1)	
PIN 1		(+)	
PIN 3		(-)	
PIN 4		(NO)/(S1)	
PIN 5		(Earth)	
Article No.			
The composition of your article number is explained on page 3.1.i		8 0 0 0 - -	
		1 Form	2 Cable Type
		3 Cable Length	
Notes		Further cable lengths on request.	

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– with molded homerun cable

Approvals:  **UL** US
Listed

Exact12

4-way
for NPN signals 24 V DC



Exact12

8-way
for NPN signals 24 V DC



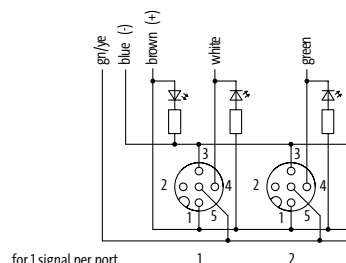
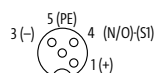
1 Form

Type
Contact layout

84411

NPN, 4-pole

M12-Females 4-pole

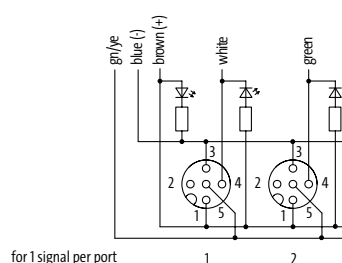
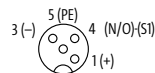


for 1 signal per port

88411

NPN, 4-pole

M12-Females 4-pole



for 1 signal per port

2 Cable Type

Jacket Color – No./diameter of wires

gray

333 – 4 × 0.34 + 3 × 0.75 mm²

gray

362 – 8 × 0.34 + 3 × 0.75 mm²

447 – 8 × 0.5 + 3 × 1.0 mm²

3 Cable Length

5.0 m

0500

10.0 m

1000

Technical Data

Operating voltage

24 V DC

Total current

max. 8 A

max. 10 A

Protection

IP65/IP67

Temperature range

-20...+70 °C, depending on cable quality

Contact Layout

LED display

LED (green): Power / LED (yellow): (S1)

PIN 1

(+)

PIN 3

(-)

PIN 4

(NO)/(S1)

PIN 5

(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0

-

-

1 Form

2 Cable Type

3 Cable Length

Notes

Further cable lengths on request.

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– with molded homerun cable

Approvals: 

Exact12

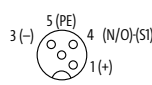
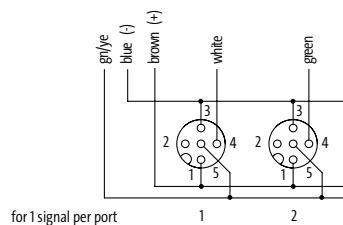
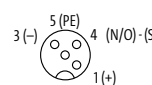
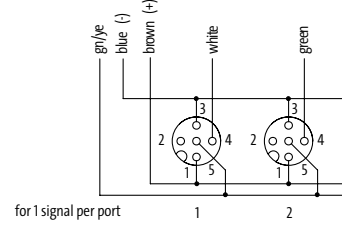
4-way
without LED



Exact12

8-way
without LED



1 Form		84412	88412
Type		without LED, 4-pole	without LED, 4-pole
Contact layout		M12-Females 4-pole   for 1 signal per port	M12-Females 4-pole   for 1 signal per port
2 Cable Type		Jacket Color – No./diameter of wires	
PUR/PVC		gray	gray
PUR/PVC (UL/CSA), C-tracks		333 – 4 × 0.34 + 3 × 0.75 mm ²	362 – 8 × 0.34 + 3 × 0.75 mm ²
PUR (UL/CSA), robots/C-tracks			447 – 8 × 0.5 + 3 × 1.0 mm ²
3 Cable Length			
5.0 m		0500	
10.0 m		1000	
Technical Data			
Operating voltage		125 V AC/DC	
Total current		max. 8 A	
Protection		IP65/IP67	
Temperature range		-20...+70 °C, depending on cable quality	
Contact Layout			
PIN 1		(+)	
PIN 3		(-)	
PIN 4		(NO)/(S1)	
PIN 5		(Earth)	
Article No.			
The composition of your article number is explained on page 3.1.i		8 0 0 0 – – – – –	– – – – –
		1 Form	2 Cable Type 3 Cable Length
Notes		Further cable lengths on request.	

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– with molded homerun cable

Approvals:  US Listed

Exact12

4-way
for PNP signals 24 V DC



Exact12

8-way
for PNP signals 24 V DC



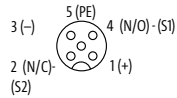
1 Form

84510

PNP, 5-pole

Type
Contact layout

M12-Females 5-pole

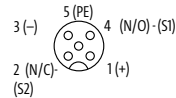


for 2 signals per port

88510

PNP, 5-pole

M12-Females 5-pole



for 2 signals per port

2 Cable Type

Jacket Color – No./diameter of wires

PUR/PVC
PUR (UL/CSA), robots/Ctracks
PUR/PVC (UL/CSA), Ctracks

gray
363 – 8 × 0.34 + 3 × 0.75 mm²
448 – 8 × 0.5 + 3 × 1.0 mm²

gray
452 – 16 × 0.5 + 3 × 1.0 mm²
398 – 16 × 0.34 + 3 × 0.75 mm²

3 Cable Length

3.0 m **0300**
5.0 m **0500**
10.0 m **1000**
15.0 m **1500**

Technical Data

Operating voltage 24 V DC
Total current max. 8 A
Protection IP65/IP67
Temperature range -20...+70 °C, depending on cable quality

Contact Layout

LED display LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)
PIN 1 (+)
PIN 2 (NC)/(S2)
PIN 3 (-)
PIN 4 (NO)/(S1)
PIN 5 (Earth)

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0

1 Form

2 Cable Type

3 Cable Length

Notes

Further cable lengths on request.

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– with molded homerun cable

Approvals:

Exact12

4-way
for PNP signals 24 V DC
ATEX Zone 2 and 22



Exact12

8-way
for PNP signals 24 V DC
ATEX Zone 2 and 22



1 Form		84510	88510
Type		PNP, 5-pole	PNP, 5-pole
Contact layout		M12-Females 5-pole for 2 signals per port	M12-Females 5-pole for 2 signals per port
2 Cable Type		Jacket Color – No./diameter of wires	
PUR (UL/CSA), robots/C-tracks		gray 448 – 8 × 0.5 + 3 × 1.0 mm ²	gray 452 – 16 × 0.5 + 3 × 1.0 mm ²
3 Cable Length			
3.0 m		0300	
5.0 m		0500	
10.0 m		1000	
15.0 m		1500	
Technical Data			
Operating voltage		24 V DC	
Total current		max. 8 A	
Protection		IP65/IP67	
Temperature range		-20...+70 °C, depending on cable quality	
Contact Layout			
LED display		LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)	
PIN 1		(+) (NC)/(S2)	
PIN 2		(-)	
PIN 3		(NO)/(S1)	
PIN 4		(Earth)	
PIN 5			
Article No.			
The composition of your article number is explained on page 3.1.i		8099 1 Form 2 Cable Type 3 Cable Length	
Notes		Further cable lengths on request.	

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– with molded homerun cable

Approvals:  US Listed

Exact12

4-way
for NPN signals 24 V DC



Exact12

8-way
for NPN signals 24 V DC



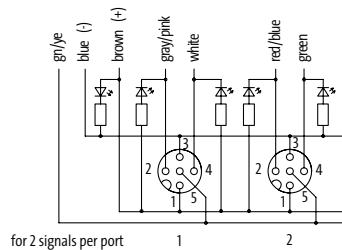
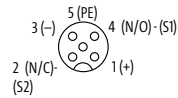
1 Form

84511

NPN, 5-pole

Type
Contact layout

M12-Females 5-pole



for 2 signals per port

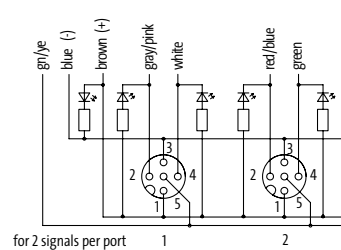
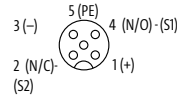
1

2

88511

NPN, 5-pole

M12-Females 5-pole



for 2 signals per port

1

2

2 Cable Type

Jacket Color – No./diameter of wires

PUR/PVC
PUR (UL/CSA), robots/C-tracks
PUR/PVC (UL/CSA), C-tracks

gray
363 – 8 × 0.34 + 3 × 0.75 mm²
448 – 8 × 0.5 + 3 × 1.0 mm²

gray
452 – 16 × 0.5 + 3 × 1.0 mm²
398 – 16 × 0.34 + 3 × 0.75 mm²

3 Cable Length

5.0 m
10.0 m

0500
1000

Technical Data

Operating voltage 24 V DC
Total current max. 8 A
Protection IP65/IP67
Temperature range -20...+70 °C, depending on cable quality

Contact Layout

LED display LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)
PIN 1 (+)
PIN 2 (NC)/(S2)
PIN 3 (-)
PIN 4 (NO)/(S1)
PIN 5 (Earth)

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0

–

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1 Form

2 Cable Type

3 Cable Length

Notes

Further cable lengths on request.

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

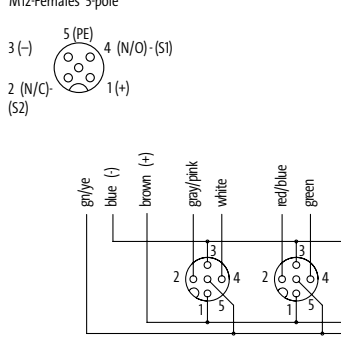
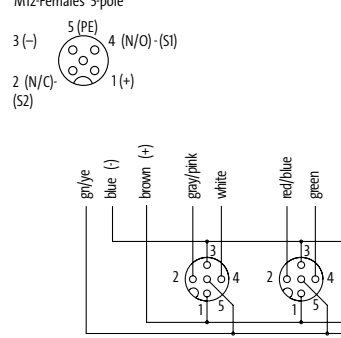
– with molded homerun cable

Approvals: 
Exact12

4-way
without LED

Exact12

8-way
without LED


1 Form		84512	88512
Type		without LED, 5-pole	without LED, 5-pole
Contact layout		M12-Females 5-pole 	M12-Females 5-pole 
2 Cable Type		Jacket Color – No./diameter of wires	
		gray	gray
PUR/PVC		363 – 8 × 0.34 + 3 × 0.75 mm ²	
PUR (UL/CSA), robots/C-tracks		448 – 8 × 0.5 + 3 × 1.0 mm ²	452 – 16 × 0.5 + 3 × 1.0 mm ²
PUR/PVC (UL/CSA), C-tracks			398 – 16 × 0.34 + 3 × 0.75 mm ²
3 Cable Length			
5.0 m		0500	
10.0 m		1000	
Technical Data			
Operating voltage		125 V AC/DC	
Total current		max. 8 A	
Protection		IP65/IP67	
Temperature range		-20...+70 °C, depending on cable quality	
Contact Layout			
PIN 1		(+) (NC)/(S2)	
PIN 2		(-) (NO)/(S1)	
PIN 3		(+) (NC)/(S2)	
PIN 4		(-) (NO)/(S1)	
PIN 5		(Earth)	
Article No.			
The composition of your article number is explained on page 3.1.i		8000 1 Form 2 Cable Type 3 Cable Length	
Notes		Further cable lengths on request.	

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Base modules



Exact12

4-way
for PNP signals 24 V DC



Exact12

8-way
for PNP signals 24 V DC



1	Form	84400	88400
	Type	PNP, 4-pole	PNP, 4-pole
	Contact layout	M12-Females 4-pole 3 (-) 5 (PE) 4 (N/O)-(S1) 1 (+) -1 +1 1 3 PE 4 2 +2 -2 for 1 signal per port 12	M12-Females 4-pole 3 (-) 5 (PE) 4 (N/O)-(S1) 1 (+) 5 7 15 8 6 for 1 signal per port 12
Technical Data			
Operating voltage		24 V DC	
Operating current per contact		max. 4 A	
Total current		max. 8 A	
Protection		IP65/IP67	
Housing		Plastic, flame retardant	
Temperature range		-20...+70 °C	
Contact Layout			
LED display		LED (green): Power / LED (yellow): (S1)	
PIN 1		(+)	
PIN 3		(-)	
PIN 4		(NO)/(S1)	
PIN 5		(Earth)	
Article No.			
The composition of your article number is explained on page 3.1.i		8000 - - 000 0000	
		1 Form	
Notes			

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Base modules

Approvals:  **UL**
Listed

Exact12

4-way
for NPN signals 24 V DC



Exact12

8-way
for NPN signals 24 V DC

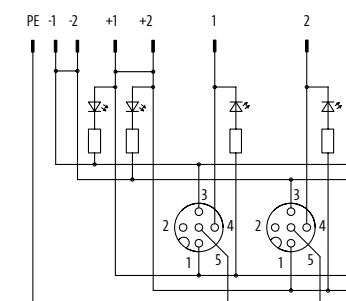
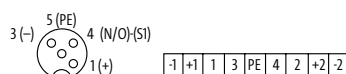


1 Form

84401

NPN, 4-pole

M12-Females 4-pole

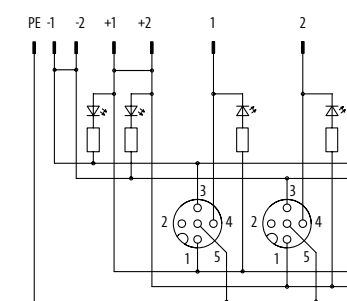


for 1 signal per port

88401

NPN, 4-pole

M12-Females 4-pole



for 1 signal per port

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Protection	IP65/IP67
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C

Contact Layout

LED display	LED (green): Power / LED (yellow): (S1)
PIN 1	(+)
PIN 3	(-)
PIN 4	(NO)/(S1)
PIN 5	(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0 - - - - - **0 0 0** **0 0 0 0**

1 Form

Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

- Base modules

Approvals:  **UL US
Listed**

Exact12

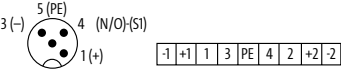
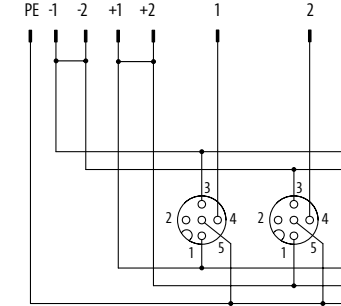
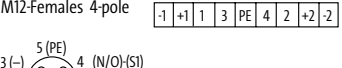
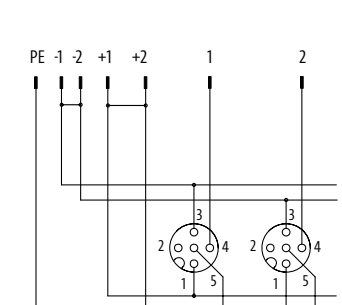
4-way
without LED



Exact12

8-way
without LED



1	Form	84402
Type	without LED, 4-pole	without LED, 4-pole
Contact layout	M12 Females 4-pole   for 1 signal per port 1 2	M12-Females 4-pole   for 1 signal per port 1 2
Technical Data		
Operating voltage	125 V AC/DC	
Operating current per contact	max. 4 A	
Total current	max. 8 A	
Protection	IP65/IP67	
Housing	Plastic, flame retardant	
Temperature range	-20...+70 °C	
Contact Layout		
PIN 1	(+)	
PIN 3	(-)	
PIN 4	(NO)/(SI)	
PIN 5	(Earth)	
Article No.		
The composition of your article number is explained on page 3.1.i	8000 - - 000 0000	
	1	Form
Notes		

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Base modules

Approvals: **UL** US Listed

Exact12

4-way
for PNP signals 24 V DC



Exact12

8-way
for PNP signals 24 V DC

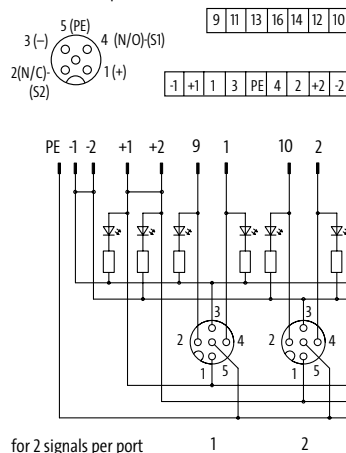


1 Form

84500

PNP, 5-pole

M12-Females 5-pole

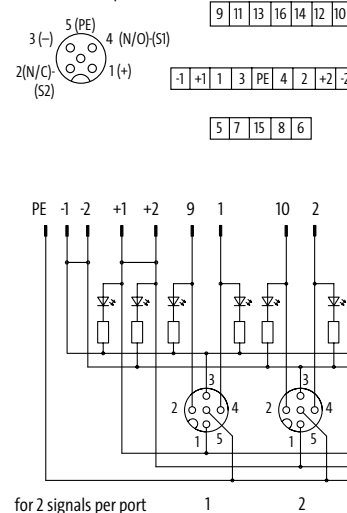


for 2 signals per port

88500

PNP, 5-pole

M12-Females 5-pole



for 2 signals per port

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Protection	IP65/IP67
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C

Contact Layout

LED display	LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)
PIN 1	(+)
PIN 2	(NC)/(S2)
PIN 3	(-)
PIN 4	(NO)/(S1)
PIN 5	(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0 - **0 0 0** **0 0 0 0**

1 Form

Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Base modules

Approvals:  **UL** US
Listed

Exact12

4-way
for NPN signals 24 V DC



Exact12

8-way
for NPN signals 24 V DC



1	Form	84501	88501
	Type	NPN, 5-pole	NPN, 5-pole
	Contact layout	M12-Females 5-pole 3 (-) 5 (PE) 4 (N/O) - (S1) 1 (+) 2 (N/C) - (S2) 9 11 13 16 14 12 10 -1 +1 1 3 PE 4 2 +2 -2 PE -1 -2 +1 +2 9 1 10 2 for 2 signals per port 1 2 M12-Females 5-pole 3 (-) 5 (PE) 4 (N/O) - (S1) 1 (+) 2 (N/C) - (S2) 9 11 13 16 14 12 10 -1 +1 1 3 PE 4 2 +2 -2 PE -1 -2 +1 +2 9 1 10 2 for 2 signals per port 1 2	
Technical Data			
Operating voltage		24 V DC	
Operating current per contact		max. 4 A	
Total current		max. 8 A	
Protection		IP65/IP67	
Housing		Plastic, flame retardant	
Temperature range		-20...+70 °C	
Contact Layout			
LED display		LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)	
PIN 1		(+)	
PIN 2		(NC)/(S2)	
PIN 3		(-)	
PIN 4		(NO)/(S1)	
PIN 5		(Earth)	
Article No.			
The composition of your article number is explained on page 3.1.i		8 0 0 0 - - 0 0 0 0 0 0 0	
		1 Form	
Notes			

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Base modules

Approvals:  UL Listed

Exact12

4-way
without LED



Exact12

8-way
without LED



1 Form

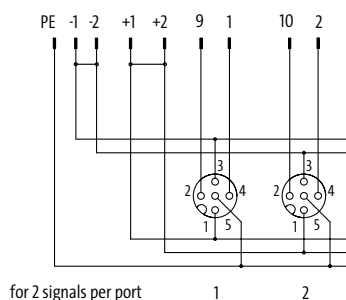
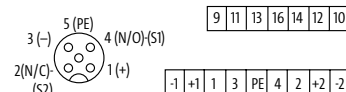
84502

without LED, 5-pole

Type

Contact layout

M12-Females 5-pole

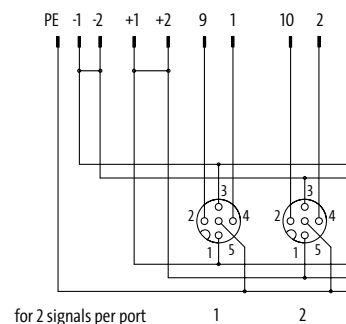
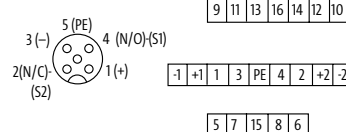


for 2 signals per port

88502

without LED, 5-pole

M12-Females 5-pole



for 2 signals per port

Technical Data

Operating voltage	125 V AC/DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Protection	IP65/IP67
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C

Contact Layout

PIN 1	(+)
PIN 2	(NC)/(S2)
PIN 3	(-)
PIN 4	(NO)/(S1)
PIN 5	(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0

1 Form

0 0 0

0 0 0 0

Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

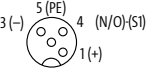
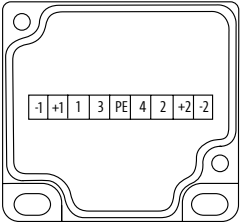
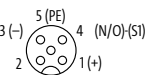
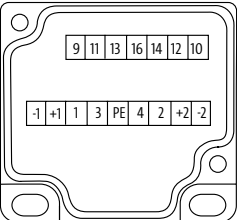
For sensors and actuators

– Connection cap with homerun cable

Exact12

for 4-way distribution boxes



1	Form	84459		84559		84659	
	Type	4-pole Screw plug-in terminals		5-pole Screw plug-in terminals		5-pole Screw plug-in terminals with potential separation	
	Contact layout	M12-Females 4-pole   for 1 signal per port		M12-Females 5-pole  Exact12  for 2 signals per port			
2	Cable Type	Jacket Color – No./diameter of wires					
		gray		gray		gray	
	PUR/PVC	333 – 4 × 0.34 + 3 × 0.75 mm ²		363 – 8 × 0.34 + 3 × 0.75 mm ²		374 – 8 × 0.34 + 5 × 0.75 mm ²	
	PUR (UL/CSA), robots/C-tracks			448 – 8 × 0.5 + 3 × 1.0 mm ²			
3	Cable Length						
	3.0 m	0300					
	5.0 m	0500					
	10.0 m	1000					
	15.0 m	1500					
	20.0 m	2000					
	25.0 m	2500					
	30.0 m	3000					
Technical Data							
Total current		max. 8 A					
Temperature range		-20...+80 °C, depending on cable quality					
Article No.							
The composition of your article number is explained on page 3.1.i		8 0 0 0 - -					
		1 Form		2 Cable Type		3 Cable Length	
Notes							

M12 DISTRIBUTION SYSTEMS (PLASTIC)

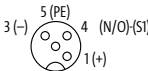
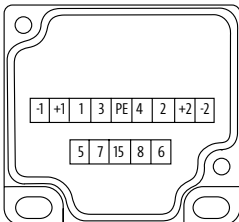
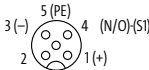
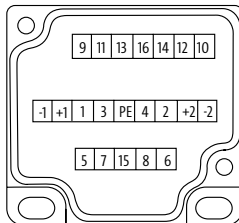
For sensors and actuators

– Connection cap with homerun cable

Exact12

for 8-way distribution boxes



1	Form	88459	88559	88659			
	Type	4-pole	5-pole	5-pole			
		Screw plug-in terminals	Screw plug-in terminals	Screw plug-in terminals with potential separation			
	Contact layout	M12 Females 4-pole   for 1 signal per port	M12-Females 5-pole   for 2 signals per port				
2	Cable Type	Jacket Color – No./diameter of wires					
		gray	gray	gray			
	PUR/PVC			404 – 16 × 0.34 + 5 × 0.75 mm ²			
	PUR/PVC (UL/CSA), C-tracks	362 – 8 × 0.34 + 3 × 0.75 mm ²	398 – 16 × 0.34 + 3 × 0.75 mm ²				
	PUR (UL/CSA), robots/C-tracks	447 – 8 × 0.5 + 3 × 1.0 mm ²	452 – 16 × 0.5 + 3 × 1.0 mm ²				
3	Cable Length						
	3.0 m	0300					
	5.0 m	0500					
	10.0 m	1000					
	15.0 m	1500					
	20.0 m	2000					
	25.0 m	2500					
	30.0 m	3000					
Technical Data							
	Total current	max. 8 A					
	Temperature range	-20...+80 °C, depending on cable quality					
Article No.							
	The composition of your article number is explained on page 3.1.i	8000 - -					
		1	Form	2	Cable Type	3	Cable Length
Notes							

M12 Distribution Systems (Plastic)

Exact12



- Field-wireable

4.13.16

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Sets (basic module and cap)

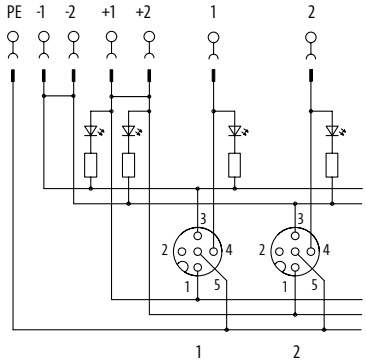
– Field-wireable

Approvals: 

Exact12

4-way



1 Form	84440	84450	84451
Type	PNP, 4-pole	PNP, 4-pole	NPN, 4-pole
	Spring clamp plug-in terminals	Screw plug-in terminals	Screw plug-in terminals
Contact layout	M12-Females 4-pole 3 (-) 5 (PE) 4 (N/O)(S1) 1 (+) [-1 +1 1 3 PE 4 2 +2 -2]  for 1 signal per port		
Technical Data	Operating voltage 24 V DC Operating current per contact max. 4 A Total current max. 8 A Connection Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16) Screw plug-in terminals: max. 1.5 mm² (AWG 16) Protection IP65/IP67 Housing Plastic, flame retardant Temperature range -20...+70 °C		
Contact Layout	LED display LED (green): Power / LED (yellow): (S1) PIN 1 (+) PIN 3 (-) PIN 4 (NO)/(S1) PIN 5 (Earth)		
Article No.	The composition of your article number is explained on page 3.1.i <u>8</u> <u>0</u> <u>0</u> <u>0</u> - - - - - - <u>0</u> <u>0</u> <u>0</u> <u>0</u> <u>0</u> <u>0</u>		
	1 Form		
Notes			

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

- Sets (basic module and cap)
- Field-wireable

Exact12
4-way



1	Form	84452			
	Type	without LED, 4-pole			
		Screw plug-in terminals			
	Contact layout	M12-Females 4-pole 5 (PE) 3 (-) 4 (N/O)/(S) 1 (+) -1 +1 1 3 PE 4 2 +2 -2			
		PE -1 -2 +1 +2 1 2 3 2 1 4 5 3 2 1 4 5			
		for 1 signal per port 12			
Technical Data					
Operating voltage		125 V AC/DC			
Operating current per contact		max. 4 A			
Total current		max. 8 A			
Connection		Screw plug-in terminals: max. 1.5 mm ² (AWG 16)			
Protection		IP65/IP67			
Housing		Plastic, flame retardant			
Temperature range		-20...+70 °C			
Contact Layout					
PIN 1		(+)			
PIN 3		(-)			
PIN 4		(NO)/(S)			
PIN 5		(Earth)			
Article No.					
The composition of your article number is explained on page 3.1.i		8 0 0 0 - 8 4 4 5 2 - 0 0 0 0 0 0 0			
		1 Form			
Notes					

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Sets (basic module and cap)

– Field-wireable

Approvals:  UL
Listed

Exact12

4-way



1 Form		84540		84550	
Type		PNP, 5-pole		PNP, 5-pole	
Contact layout		Spring clamp plug-in terminals		Screw plug-in terminals	
		M12-Females 5-pole 9 11 13 16 14 12 10 3 5 (PE) 4 (N/O)-(S1) 2 (N/C)-(S2) 1 (+) -1 +1 1 3 PE 4 2 +2 -2 PE -1 -2 +1 +2 9 1 10 2			

M12 DISTRIBUTION SYSTEMS (PLASTIC)

- For sensors and actuators
- Sets (basic module and cap)
 - Field-wireable

Exact12
4-way



1	Form	84551	84552
	Approvals	cULus	
	Type	NPN, 5-pole	without LED, 5-pole
		Screw plug-in terminals	Screw plug-in terminals
Contact layout		M12-Females 5-pole for 2 signals per port	M12-Females 5-pole for 2 signals per port
Technical Data			
Operating voltage		24 V DC	125 V AC/DC
Operating current per contact		max. 4 A	
Total current		max. 8 A	
Connection		Screw plug-in terminals: max. 1.5 mm ² (AWG 16)	
Protection		IP65/IP67	
Housing		Plastic, flame retardant	
Temperature range		-20...+70 °C	
Contact Layout			
LED display		LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)	–
PIN 1		(+)	
PIN 2		(NC)/(S2)	
PIN 3		(-)	
PIN 4		(NO)/(S1)	
PIN 5		(Earth)	
Article No.			
The composition of your article number is explained on page 3.1.i		<u>8</u> <u>0</u> <u>0</u> <u>0</u> – – – – – – – – – – <u>0</u> <u>0</u> <u>0</u> <u>0</u> <u>0</u> <u>0</u> <u>0</u> <u>0</u>	
		1 Form	
Notes			

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Sets (basic module and cap)

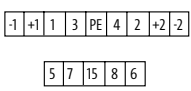
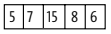
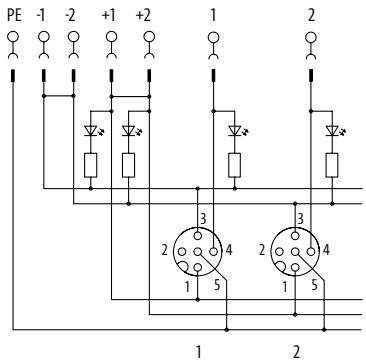
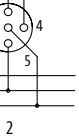
– Field-wireable

Approvals:  **UL** US Listed

Exact12

8-way



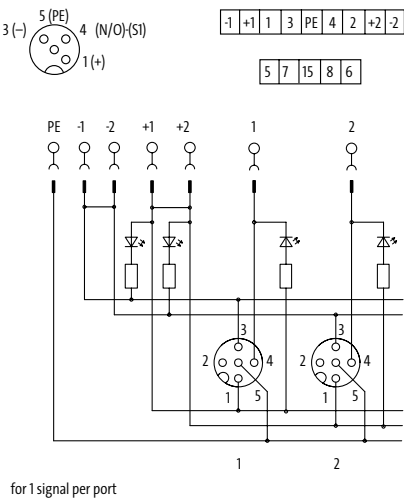
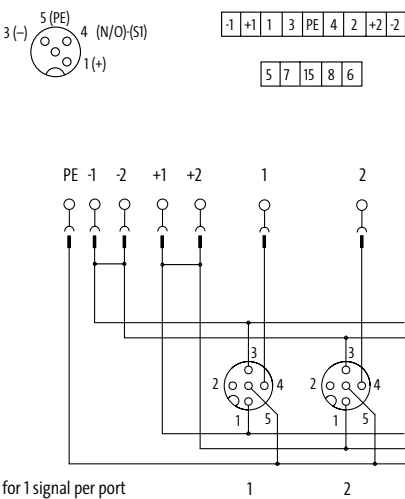
1 Form		88440	88450
Type		PNP, 4-pole Spring clamp plug-in terminals	PNP, 4-pole Screw plug-in terminals
Contact layout		M12-Females 4-pole         for 1 signal per port	
Technical Data			
Operating voltage		24 V DC	
Operating current per contact		max. 4 A	
Total current		max. 8 A	
Connection		Spring clamp plug-in terminals: max. 1.5 mm ² (AWG 16)	Screw plug-in terminals: max. 1.5 mm ² (AWG 16)
Protection		IP65/IP67	
Housing		Plastic, flame retardant	
Temperature range		-20...+70 °C	
Contact Layout			
LED display		LED (green): Power / LED (yellow): (S1)	
PIN 1		(+)	
PIN 3		(-)	
PIN 4		(NO)/(S1)	
PIN 5		(Earth)	
Article No.			
The composition of your article number is explained on page 3.1.i		8 0 0 0	0 0 0 0
		1 Form	
Notes			

M12 DISTRIBUTION SYSTEMS (PLASTIC)

- For sensors and actuators
- Sets (basic module and cap)
 - Field-wireable

Exact12
8-way



1	Form	88451	88452
	Approvals	cULus	
	Type	NPN, 4-pole	without LED, 4-pole
		Screw plug-in terminals	Screw plug-in terminals
	Contact layout	M12-Females 4-pole  for 1 signal per port	M12-Females 4-pole  for 1 signal per port
Technical Data			
Operating voltage		24 V DC	125 V AC/DC
Operating current per contact		max. 4 A	
Total current		max. 8 A	
Connection		Screw plug-in terminals: max. 1.5 mm² (AWG 16)	
Protection		IP65/IP67	
Housing		Plastic, flame retardant	
Temperature range		-20...+70 °C	
Contact Layout			
LED display		LED (green): Power / LED (yellow): (S1)	–
PIN 1		(+)	
PIN 3		(-)	
PIN 4		(NO)/(S1)	
PIN 5		(Earth)	
Article No.			
The composition of your article number is explained on page 3.1.i		8000 – 000 0000	
		1 Form	
Notes			

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Sets (basic module and cap)

– Field-wireable

Approvals:  **UL** US
Listed

Exact12

8-way



1	Form	88540	88550
	Type	PNP, 5-pole	PNP, 5-pole
	Spring clamp plug-in terminals		Screw plug-in terminals
	Contact layout		

M12 DISTRIBUTION SYSTEMS (PLASTIC)

- For sensors and actuators
- Sets (basic module and cap)
 - Field-wireable

Exact12
8-way



1	Form	88551	88552
	Approvals	cULus	
	Type	NPN, 5-pole	without LED, 5-pole
		Screw plug-in terminals	Screw plug-in terminals
	Contact layout	M12 Females 5-pole for 2 signals per port	M12 Females 5-pole for 2 signals per port
Technical Data			
Operating voltage		24 V DC	125 V AC/DC
Operating current per contact		max. 4 A	
Total current		max. 8 A	
Connection		Screw plug-in terminals: max. 1.5 mm ² (AWG 16)	
Protection		IP65/IP67	
Housing		Plastic, flame retardant	
Temperature range		-20...+70 °C	
Contact Layout			
LED display		LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)	–
PIN 1		(+)	
PIN 2		(NC)/(S2)	
PIN 3		(-)	
PIN 4		(NO)/(S1)	
PIN 5		(Earth)	
Article No.			
The composition of your article number is explained on page 3.1.i		8000	0000
		1 Form	
Notes			

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Rear connection

Approvals:

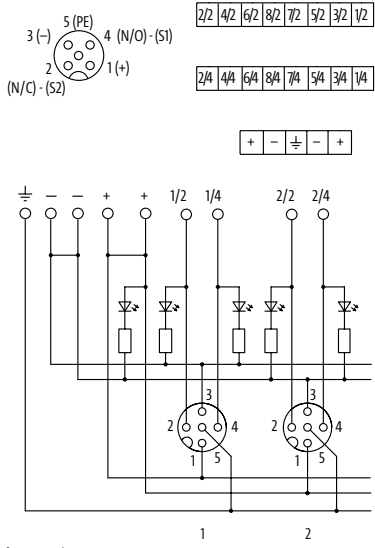
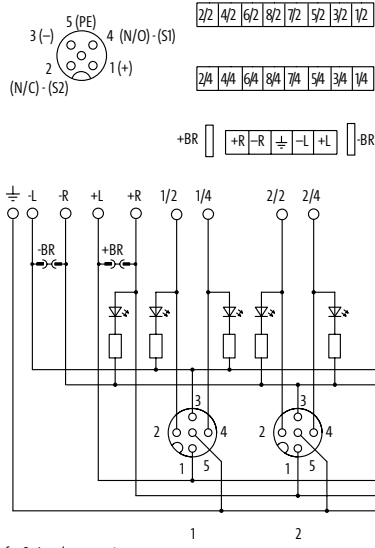
Exact12



Exact12

with potential separation



1	Form	88580	88680
	Type	PNP, 5-pole Spring clamp terminals	PNP, 5-pole Spring clamp terminals
Contact layout	M12-Females 5-pole Bottom view  for 2 signals per port	M12-Females 5-pole Bottom view  for 2 signals per port	
	Technical Data		
Operating voltage	24 V DC		
Operating current per contact	max. 4 A		
Total current	max. 2 × 8 A		
Protection	IP65/IP67		
Housing	Plastic, flame retardant		
Temperature range	-20...+70 °C		
Contact Layout			
LED display	LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)		
PIN 1	(+)		
PIN 2	(NC)/(S2)		
PIN 3	(-)		
PIN 4	(NO)/(S1)		
PIN 5	(Earth)		
Article No.			
The composition of your article number is explained on page 3.1.i	8000 - - 000 0000		
	1 Form		
Notes			

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

Approvals:  US
Listed

Exact12

Pluggable rear connection



Exact12

Pluggable rear connection
with potential separation



1	Form	88590	88690
Type	PNP, 5-pole	PNP, 5-pole	
Contact layout	Spring clamp plug-in terminals	Spring clamp plug-in terminals	
Technical Data			
Operating voltage	24 V DC		
Operating current per contact	max. 4 A		
Total current	max. 2 × 8 A		
Protection	IP65/IP67		
Housing	Plastic, flame retardant		
Temperature range	-20...+70 °C		
Contact Layout			
LED display	LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)		
PIN 1	(+)		
PIN 2	(NC)/(S2)		
PIN 3	(-)		
PIN 4	(NO)/(S1)		
PIN 5	(Earth)		
Article No.			
The composition of your article number is explained on page 3.1.i			
Notes			

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– M12 plug connection

Approvals:
 Listed

Exact12

4-way



Exact12

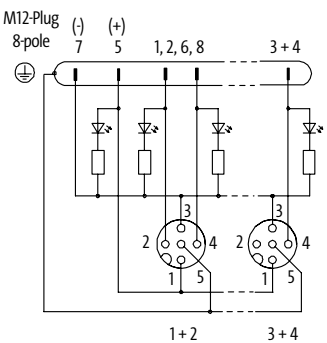
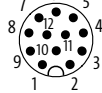
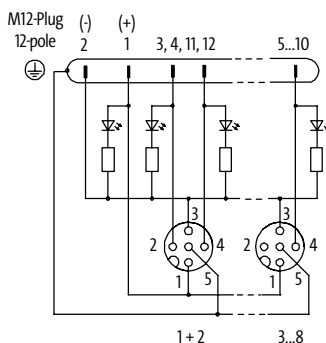
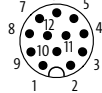
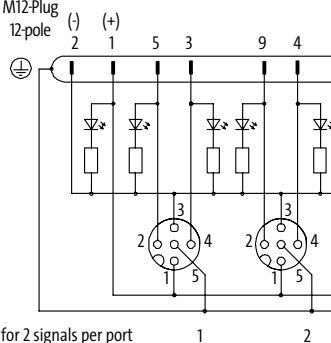
8-way



Exact12

4-way



1	Form	84470	88460	84560
Type		5-, 4-pole	5-, 4-pole	5-pole
		M12 plug connection, 8-pole	M12 plug connection, 12-pole	M12 plug connection, 12-pole
Contact layout		M12-Females 5-pole  M12-Females 4-pole  M12-Plug 8-pole  2 signals1 signal M12-Plug 8-pole  1 + 23 + 4	M12-Females 5-pole  M12-Females 4-pole  M12-Plug 12-pole  2 signals1 signal M12-Plug 12-pole  1 + 23...8	M12-Females 5-pole  M12-Plug 12-pole  for 2 signals per port M12-Plug 12-pole  12
Technical Data				
Operating voltage		24 V DC		
Operating current per contact		max. 2 A		max. 1.5 A
Total current		max. 2 A		max. 1.5 A
Protection		IP65/IP67		
Housing		Plastic, flame retardant		
Temperature range		-20...+70 °C		
Contact Layout				
LED display		LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)		
PIN 1		(+) / (S1)		
PIN 2		(NC)/(S2)		
PIN 3		(-)		
PIN 4		(NO)/(S1)		
PIN 5		(Earth)		
Article No.				
The composition of your article number is explained on page 3.1.i		8000 - - 000 0000		
		1 Form		
Notes				

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– M23 plug connection

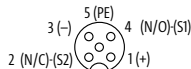
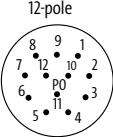
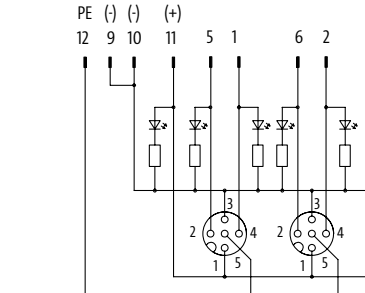
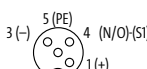
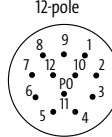
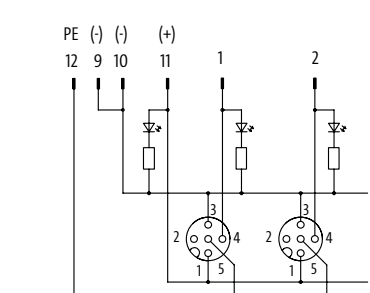
Approvals:  US Listed

Exact12
4-way



Exact12
8-way



1	Form	84530	88430
Type		5-pole	4-pole
		M23 plug connection, 12-pole	M23 plug connection, 12-pole
Contact layout		M12-Females 5-pole  M23-Plug 12-pole   for 2 signals per port 1 2	M12-Females 4-pole  M23-Plug 12-pole   for 1 signal per port 1 2
Technical Data			
Operating voltage		24 V DC	
Operating current per contact		max. 4 A	
Total current		max. 8 A	
Protection		IP65/IP67	
Housing		Plastic, flame retardant	
Temperature range		-20...+75 °C	
Contact Layout			
LED display		LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)	
PIN 1		(+)	
PIN 2		(NC)/(S2) -	
PIN 3		(-)	
PIN 4		(NO)/(S1)	
PIN 5		(Earth)	
Article No.			
The composition of your article number is explained on page 3.1.i		8000 — — — — 000 0000	
		1 Form	
Notes			

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– M23 plug connection

Approvals: 

Exact12

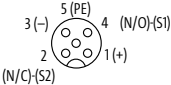
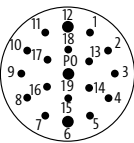
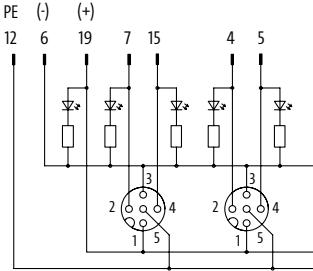
4-way



Exact12

8-way



1 Form	84520	88520
Type	5-pole	5-pole
	M23 plug connection, 19-pole	M23 plug connection, 19-pole
Contact layout	M12-Females 5-pole  M23-Plug 19-pole   for 2 signals per port 1 2	
Technical Data		
Operating voltage	24 V DC	
Operating current per contact	max. 4 A	
Total current	max. 8 A	
Protection	IP65/IP67	
Housing	Plastic, flame retardant	
Temperature range	-20...+80 °C	
Contact Layout		
LED display	LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)	
PIN 1	(+)	
PIN 2	(NC)/(S2)	
PIN 3	(-)	
PIN 4	(NO)/(S1)	
PIN 5	(Earth)	
Article No.		
The composition of your article number is explained on page 3.1.i	8000 - - 000 0000	
	1 Form	
Notes		

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For general applications
– with molded homerun cable



Exact12 UNIVERSAL
4-way



1 Form		8 4 7 1 2		
Type		without LED, 5-pole (for analog signals)		
Contact layout		M12-Females 5-pole free arrangeable, contact 1:1 on terminals for 4 signals per port, PINS bridged on terminals		
2 Cable Type		Jacket Color – No./diameter of wires		
		gray		
PUR/PVC (UL/CSA), Ctracks		398 – 16 × 0.34 + 3 × 0.75 mm ²		
3 Cable Length				
3.0 m		0300		
5.0 m		0500		
10.0 m		1000		
15.0 m		1500		
Technical Data				
Operating voltage		42 V AC/DC		
Total current		max. 10 A		
Protection		IP65/IP67		
Temperature range		-20...+70 °C, depending on cable quality		
Contact Layout				
PIN 1		(S1)		
PIN 2		(S2)		
PIN 3		(S3)		
PIN 4		(S4)		
PIN 5		(Earth)		
Article No.				
The composition of your article number is explained on page 3.1.i		8000 – 84712 – – –		
		1 Form	2 Cable Type	3 Cable Length
Notes				

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For safety wiring

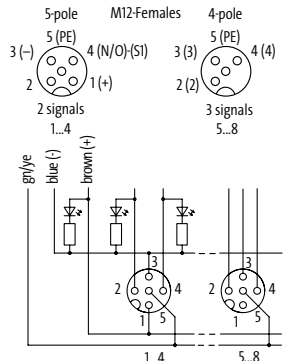
- with molded homerun cable
- Homerun cable with spring clamp terminals
- EN ISO 13849-2

Approvals:  **UL** US Listed

Exact12 Safety

8-way
for PNP signals 24 V DC



1 Form		98710
Type	PNP, 5-pole, 4/3-pole	
Contact layout		
2 Cable Type		Jacket Color – No./diameter of wires
PUR/PVC (UL/CSA)		gray 407 – 20 × 0.34 + 3 × 0.75 mm²
3 Cable Length		
3.0 m		0300
5.0 m		0500
10.0 m		1000
15.0 m		1500
Technical Data		
Operating voltage		24 V DC
Total current		max. 8 A
Protection		IP65/IP67
Temperature range		-20...+60 °C, depending on cable quality
Contact Layout		
LED display		LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2) port 1..4
PIN 1		(+) port 1..4
PIN 2		(NC)/(S2) port 1..4; (S1) port 5..8
PIN 3		(-) port 1..4; (S2) port 5..8
PIN 4		(NO)/(S1) port 1..4; (S3) port 5..8
PIN 5		(Earth)
Article No.		
The composition of your article number is explained on page 3.1.i		8000 – 98710 – – – – – – – –
		1 Form 2 Cable Type 3 Cable Length
Notes		

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For safety wiring

– Basic module

– EN ISO 13849-2

Approvals:  Listed

Exact12 Safety

8-way
for PNP signals 24 V DC



1 Form		98700	
Type		PNP, 5-pole, 4/3-pole	
Contact layout		5-pole M12-Females 4-pole 3 (-) 5 (PE) 4 (N/O)-(S1) 1 (+) 2 (N/C)-(S2) 2 signals 1...4 3 (S2) 5 (PE) 4 (S3) 2 (S1) 3 signals 5...8 15 21 20 19 29 22 24 5 14 13 6 4 2 18 17 16 8 7 9 1 11 3 10 11 9 10 1 2 13 14 15 3 2 4 1 5 3 2 4 1 5 1...4 5...8	
Technical Data			
Operating voltage		24 V DC	
Operating current per contact		max. 4 A	
Total current		max. 8 A	
Protection		IP65/IP67	
Housing		Plastic, flame retardant	
Locking of ports		Screw thread M12 × 1 mm	
Temperature range		-20...+60 °C	
Contact Layout			
LED display		LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2) port 1...4	
PIN 1		(+) port 1...4	
PIN 2		(NC)/(S2) port 1...4; (S1) port 5...8	
PIN 3		(-) port 1...4; (S2) port 5...8	
PIN 4		(NO)/(S1) port 1...4; (S3) port 5...8	
PIN 5		(Earth)	
Article No.			
The composition of your article number is explained on page 3.1.i		8 0 0 0 - 9 8 7 0 0 - 0 0 0 0 0 0 0	
		1 Form	
Notes			

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For safety wiring

- Connection cap
- Homerun cable with spring clamp terminals

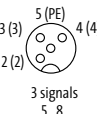
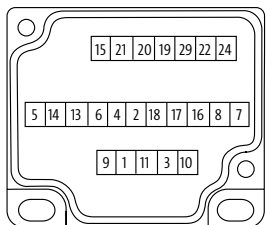
– EN ISO 13849-2

Approvals:  US
Listed

Exact12 Safety

for 8-way distribution boxes



1 Form		98749
Type	5-, 4-pole	
Contact layout	5-pole  2 signals 1...4 M12-Females 4-pole  3 signals 5...8 	
2 Cable Type		Jacket Color – No./diameter of wires
PUR (UL/CSA), robots/C-tracks		gray 408 – 20 × 0.34 + 3 × 0.75 mm²
3 Cable Length		
3.0 m		0300
5.0 m		0500
10.0 m		1000
15.0 m		1500
20.0 m		2000
Technical Data		
Total current		max. 8 A
Temperature range		-20...+80 °C, depending on cable quality
Article No.		
The composition of your article number is explained on page 3.1.i		8 0 0 0 – 9 8 7 4 9 – – – – – – – –
		1 Form 2 Cable Type 3 Cable Length
Notes		

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

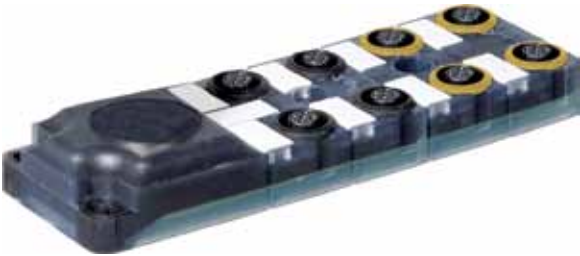
– Rear connection

– EN ISO 13849-2

Approvals:  **UL** US
Listed

Exact12 Safety

Rear connection
with potential separation

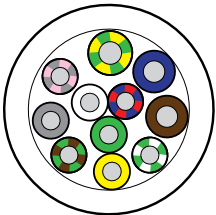


1	Form	98790		
	Type	PNP, 5-pole, 4/3-pole		
Contact layout		Spring clamp terminals		
		5-pole M12-Females 4-pole Bottom view		
Technical Data				
Operating voltage		24 V DC		
Operating current per contact		max. 4 A		
Total current		max. 8 A		
Protection		IP65/IP67		
Housing		Plastic, flame retardant		
Locking of ports		Screw thread M12 × 1 mm		
Temperature range		-20...+60 °C		
Contact Layout				
LED display		LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2) port 1...4		
PIN 1		(+) port 1...4		
PIN 2		(NC)/(S2) port 1...4; (S1) port 5...8		
PIN 3		(-) port 1...4; (S2) port 5...8		
PIN 4		(NO)/(S1) port 1...4; (S3) port 5...8		
PIN 5		(Earth)		
Article No.				
The composition of your article number is explained on page 3.1.i		8 0 0 0 - 9 8 7 9 0 - 0 0 0 0 0 0 0		
		1 Form		
Notes				

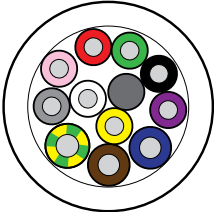
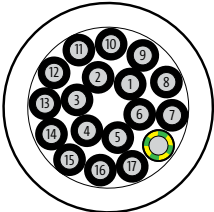
M12 DISTRIBUTION SYSTEMS (PLASTIC)

Mounting accessories			Art-No.
	Torque wrench set M12 (0.6 Nm, SW13)	M12 data connenctor molded (standard)	7000-99102-0000000
	Torque wrench M12 (0.6 Nm, SW13)	M12 data connenctor molded (standard)	7000-99109-0000000
	Torque wrench M12 (0.6 Nm, SW14)	M12 data connenctor moulded (Xtreme)	7000-99108-0000000
	Torque wrench M12 (0.6 Nm, SW17)	M12 field-wireable (IDC terminal)	7000-99094-0000000
	Torque wrench M12 (0.6 Nm, SW18)	M12 field-wireable via (screw terminals)	7000-99103-0000000
	DIN-rail adapter with fixing screws, plastic		27905
	V2A guard Exact12 ATEX, 4-way	for 8099-84510-448xxxx	996082
	V2A guard Exact12 ATEX, 8-way	for 8099-88510-452xxxx	996083
Plug accessories			Art-No.
	Transfer module for 1 × 11- and 1 × 12-pole spring clamp terminals		596154
	Service adapter with LED and SUB-D25	for transfer module Art-No. 596154	596153

M12 DISTRIBUTION SYSTEMS (PLASTIC)

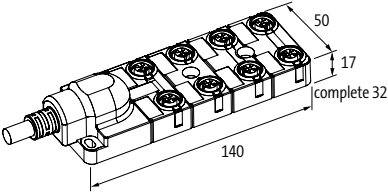
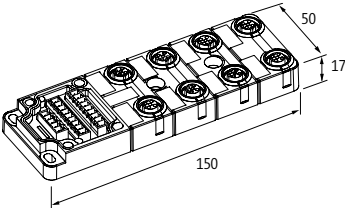
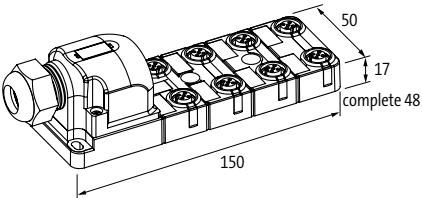
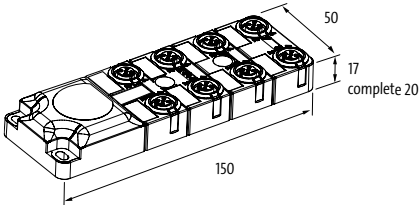
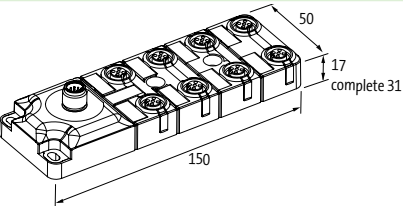
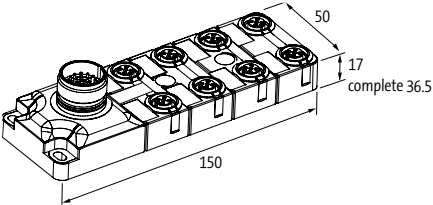
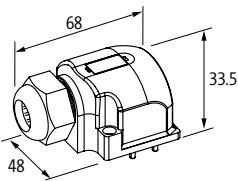
Plug accessories			Art-No.
	Screw plug M12 × 1 mm Metal, hex, 1 piece		996049
	Screw plug M12 × 1 mm (for female) Plastic, hex without gasket	Quantity: 10 pcs.	58627
	Label plates KES 20 × 8 (white)	(10 pieces/2 plates)	996067
	Label plates KES 17 × 9 (Type M) (12 pieces/2 plates)		996050
	Adapter M8/M12 3-pole	M12 Distribution Systems	7000-42201-0000000
	Adapter M8/M12 4-pole	M12 Distribution Systems	7000-42211-0000000
Homerun cable accessories			Art-No.
	Coding element for 6 codings		996054
	Screw plug M23 Metal		55352
	Screw plug M12 × 1 mm (for male) Plastic	Quantity: 4 pcs.	56951
	Cable rings (50 m), 5-pole, PUR/PVC 8×0.34 + 3×0.75 mm ²	4-way distribution boxes M12	8000-00000-3635000
	12×0.34 + 3×0.75 mm ²	6-way distribution boxes M12	8000-00000-3885000
	16×0.34 + 3×0.75 mm ²	8-way distribution boxes M12	8000-00000-3985000

M12 DISTRIBUTION SYSTEMS (PLASTIC)

Homerun cable accessories			Art-No.
	Cable rings (50 m), 4-pole, PUR (UL/CSA), halogen free		
	8×0.5 + 3×1.0 mm ²	8-way distribution boxes M12	8000-00000-4475000
	8×0.5 + 3×1.0 mm ²	4-way distribution boxes M12	8000-00000-4485000
	16×0.5 + 3×1.0 mm ²	8-way distribution boxes M12	8000-00000-4525000
	16×0.34 + 5×0.75 mm ²	8-way distribution boxes M12, potentially separated	8000-00000-4035000
	Cable rings (50 m), PUR/PVC		
	18 × 0.75 mm ²	4-way distribution box M12, UNIVERSAL	8000-00000-5335000
	4×0.34 + 3×0.75 mm ²	4-way distribution boxes M12	8000-00000-3335000
	8×0.34 + 3×0.75 mm ²	8-way distribution boxes M12	8000-00000-3625000
	8×0.34 + 5×0.75 mm ²	4-way distribution boxes M12, potentially separated	8000-00000-3745000
	16×0.34 + 5×0.75 mm ²	8-way distribution boxes M12, potentially separated	8000-00000-4045000

M12 DISTRIBUTION SYSTEMS (PLASTIC)

M12 Distribution Systems Technical Data

	Description	4-way	8-way
	Exact12 Molded homerun cable	90 mm	140 mm
	Description	4-way	8-way
	Exact12 Basic module	100 mm	150 mm
	Description	4-way	8-way
	Exact12 and MSD58 Sets: basic module and cap Field-wireable	100 mm	150 mm
	Description	4-way	8-way
	Exact12 Rear connection	100 mm	150 mm
	Description	4-way	8-way
	Exact12 M12 plug connection	100 mm	150 mm
	Description	4-way	8-way
	Exact12 M23 plug connection	100 mm	150 mm
	Description		
	Exact12 Caps		

Art.-No., page	Art.-No., page	Art.-No., page	Art.-No., page	Art.-No., page
5-digit Art.-No.				
10415, 1.7.2	20103, 1.8.11	23163, 1.8.16	26619, 1.8.11	52003, 1.9.6
10416, 1.7.2	20680, 1.8.10	23164, 1.8.16	26720, 1.8.10	52004, 1.9.7
10460, 1.7.3	20682, 1.8.10	23170, 1.8.13	26722, 1.8.10	52005, 1.9.6
10461, 1.7.3	20683, 1.8.10	23171, 1.8.13	26723, 1.8.10	52015, 1.9.4
10462, 1.7.3	20687, 1.8.10	23172, 1.8.13	26724, 1.8.10	52030, 1.9.5
10463, 1.7.3	20688, 1.8.10	23173, 1.8.13	27905, 4.12.10, 4.13.35	52031, 1.9.8
10464, 1.7.3	21054, 1.8.4	23174, 1.8.13	50010, 1.10.13	52040, 1.9.5
10466, 1.7.3	21060, 1.8.7	23175, 1.8.13	50015, 1.10.16	52041, 1.9.8
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11061-6360190	7000-11081-2160100	7000-12021-2140700	7000-12001-6330850	7000-12021-0140060	7000-
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12001-2130600	7000-12021-2140160	7000-11041-2160030	7000-12001-0130060	7000-12021-2140250	7000-
12041-1260400	7000-12041-2150150	7000-12041-6350750	7000-12041-7320060	7000-12081-2330070	7000-
12081-2330100	7000-12081-6130140	7000-12101-2340750	7000-12121-0150750	7000-12181-0130030	7000-
12181-0330050	7000-12181-0330260	7000-12181-2135000	7000-12181-6333100	7000-12221-0140300	7000-
12221-0340300	7000-12221-2140030	7000-12221-2340300	7000-12221-3242000	7000-12221-6140700	7000-
12221-6144500	7000-12221-6340250	7000-12221-6341700	7000-12221-6610300	7000-12221-6611000	7000-
12241-2192000	7000-12241-2351200	7000-12241-6153500	7000-12241-6190600	7000-12241-6351500	7000-
12261-2330500	7000-12261-6130750	7000-12041-7321100	7000-12241-1260800	7000-12241-6350060	7000-
12261-6330800	7000-12041-0150100	7000-12041-0150150	7000-12041-0350050	7000-12041-0350060	7000-
12041-1262500	7000-12041-2192500	7000-12041-6150100	7000-12041-6350200	7000-12041-7321000	7000-
12081-6130750	7000-12081-6131000	7000-12081-6330200	7000-12101-0140750	7000-12101-2140060	