

### M12 female 90° A-cod. with cable LED V2A

PVC 3x0.34 gy UL/CSA 10m

Art.No.: 7002-12381-2131000

Weight: 0.363 kg

Country of origin: DE

Model designation: MSDL1-R213\_10.0-S02

#### Advantages of our connectors:

Our connectors are versatile and specially optimised for industrial environments. All connectors are 100% tested during the manufacturing process to ensure the highest quality and reliability.

The contacts are gold-plated, which ensures optimum conductivity. Thanks to the high degree of protection, the connectors are ideal for demanding industrial environments. They are also vibration-resistant - this is ensured by the union nut with vibration protection.

Our connectors are resistant to oils and cooling lubricants, but resistance to aggressive media should be tested for each specific application. Different cable lengths available [on request](#)

If you are missing technical information? Please feel free to use our [dictionary](#) to find more technical details.

#### Product details:

Female 90°

M12, 3-pole

2x LED (PNP)

Art-No. 7005 - M12 Lite - (plastic hexagonal screw) on request

Stainless steel 1.4305 (V2A)

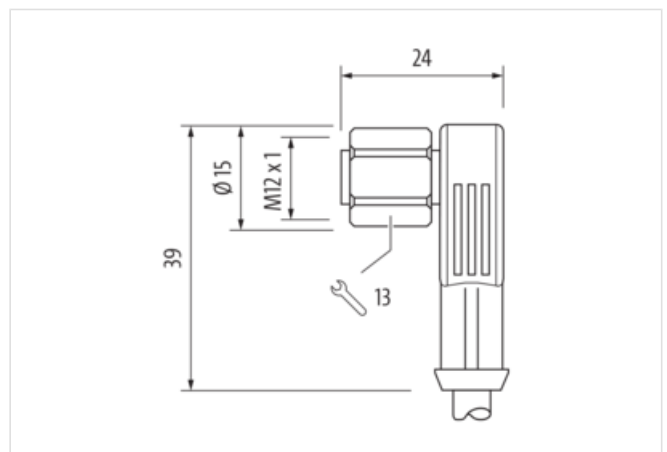
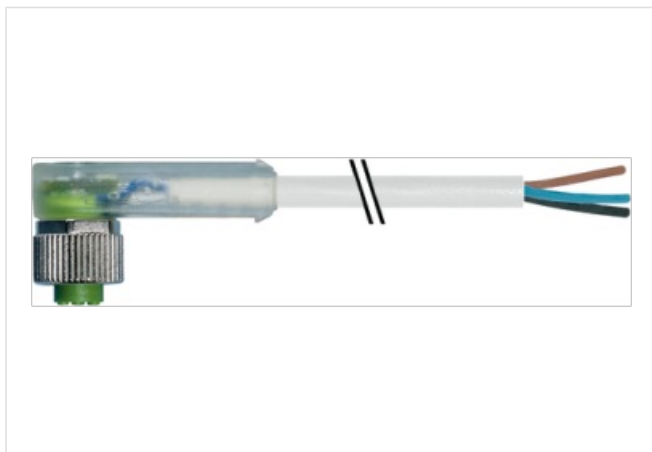
Plastic housings with good resistance against chemicals and oils.

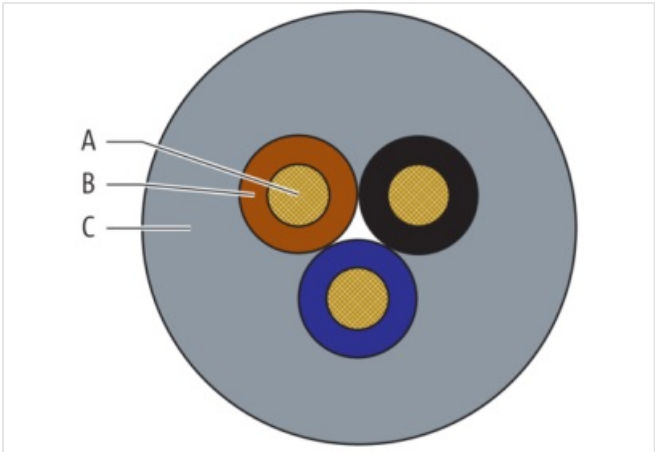
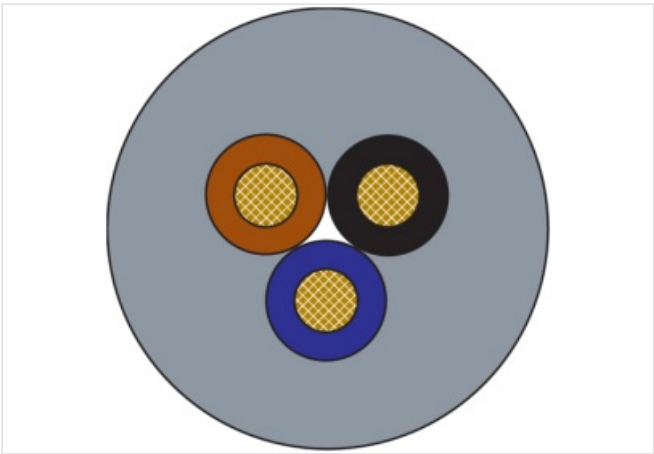
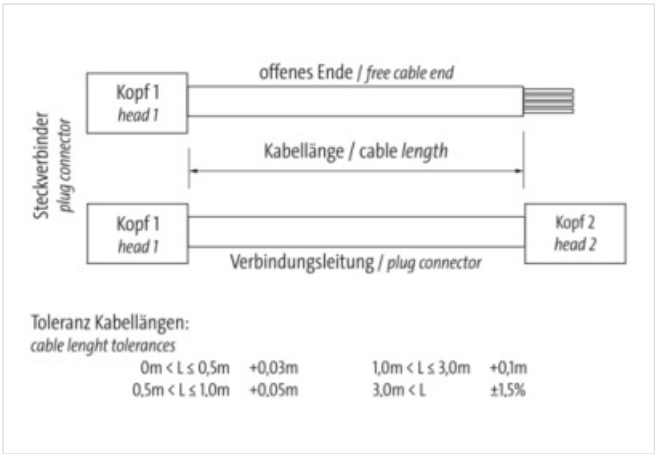
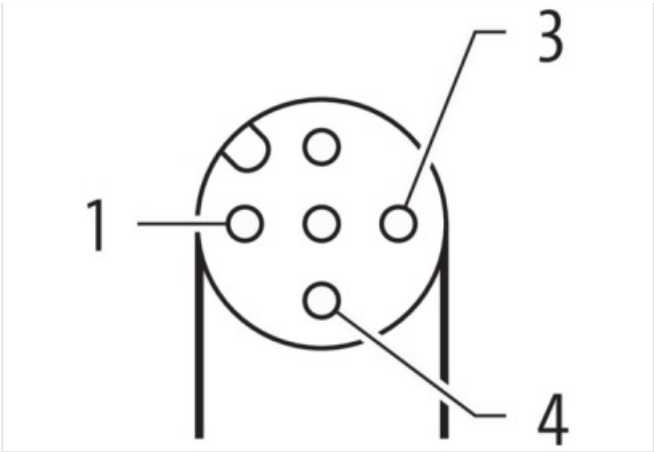
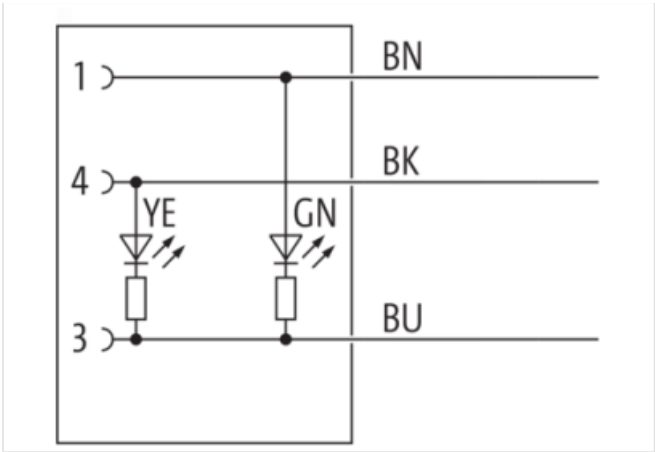
The resistance to aggressive media should be individually tested for your application. Further details on request.

Further cable lengths on request.

#### Link to Product

##### Illustration





Product may differ from Image



Header

Material short text MSDL1-R213\_10.0-S02

Cable length 10,00 m

Side 1

Family construction form	M12
No. of poles	3
Coding	A
Gender	female
Mounting method	pluggable, screwed
Threaded hole	M12 x 1
Tightening torque	0,6 Nm
Width across flats	SW13
Cable outlet	angled
suitable for corrugated tube (internal Ø)	10 mm
Material contact	Copper alloy
Coating contact	gold plated
Degree of protection (EN IEC 60529)	IP67, IP66K, IP65

#### Side 2

Family construction form	free cable end
Stripping length (jacket)	20 mm

#### Commercial data

URL Webshop	<a href="https://shop.murrelektronik.com/7002-12381-2131000">https://shop.murrelektronik.com/7002-12381-2131000</a>
GTIN	4048879112277
ECLASS-6.0	27279218
ECLASS-6.1	27279218
ECLASS-7.0	27279218
ECLASS-7.1	27279218
ECLASS-8.0	27279218
ECLASS-8.1	27279218
ECLASS-9.0	27060311
ECLASS-9.1	27060311
ECLASS-10.0.1	27060311
ECLASS-10.1	27060311
ECLASS-11.0	27060311
ECLASS-11.1	27060311
ECLASS-12.0	27060311
ECLASS-13.0	27060311
ECLASS-14.0	27060311
ETIM-5.0	EC001855
ETIM-6.0	EC001855
ETIM-7.0	EC001855
ETIM-8.0	EC001855
customs tariff number	85444290
EAN	4048879112277
Packaging unit	1

#### Electrical data | Supply

Operating voltage DC	24 V
Operating voltage DC min.	18 V
Operating voltage DC max.	30 V
Current operating per contact max.	4 A
Operating voltage DC max. (UL-listed)	30 V

#### Diagnostics

Status indication LED	green, yellow
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#### Device protection | Electrical

Pollution Degree	3
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Rated surge voltage	0,8 kV
Material group (IEC 60664-1)	I
<b>Mechanical data   Material data</b>	
Material housing	PUR
Material screw connection	Stainless steel 1.4305 (V2A)
<b>Mechanical data   Mounting data</b>	
Mounting method	inserted, screwed, Shaking protection
<b>Environmental characteristics   Climatic</b>	
Operating temperature min.	-30 °C
Operating temperature max.	85 °C
Additional condition temperature range	depending on cable quality
<b>Important installation notes</b>	
Note on bending radius	<b>Attention:</b> Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces.
Note on strain relief	Protect the connectors by suitable measures from mechanical loads, e.g. by the usage of cable ties.
<b>Conformity</b>	
Product standard	EN IEC 61076-2-101 (M12)
<b>Installation   Cable</b>	
Cable identification	213
Cable Type	1
Amount stranding	1
Stranding	3 wires stranded
Wire arrangement	brown, black, blue
Cable weight	31 g/m
Material wire insulation	PVC
Amount wires	3
Outer diameter insulation	1,25 mm
Outer diameter tolerance core insulation	± 0,05 mm
Shore hardness wire insulation	45 ± 5 Shore D
Material properties wire insulation	good machinability
Ingredient freeness wire insulation	lead-free, cadmium-free, CFC-free, silicone-free
Amount strands (wire)	19
Diameter of single wires	0,15 mm
Conductor crosssection (wire)	0,34 mm²
Material conductor wire	Stranded copper wire, bare
Conductor type (wire)	Strand class 5
Outer-diameter (jacket)	4,6 mm
Tolerance outer diameter (sheath)	± 5 %
Material jacket	PVC
Shore hardness jacket	85 ± 5 Shore A
Freedom from ingredients (jacket)	lead-free, cadmium-free, CFC-free, silicone-free
Material property (jacket)	good machinability
Conductor resistance (wire)	57 Ω/km @ 20 °C
Nominal voltage AC max.	300 V
Withstand voltage (wire - wire)	2 kV @ 60 s
Withstand voltage (wire - jacket)	2 kV @ 60 s
Current load capacity (standard)	to DIN VDE 0298-4
Current load capacity min. wire	6 A
Operating temperature min. (static)	-30 °C
Operating temperature max. (static)	80 °C
Operating temperature min. (dynamic)	-5 °C
Operating temperature max. (dynamic)	80 °C

Flame resistance	UL 1581 § 1080, CSA FT1, IEC 60332-1-2
Oil resistance	good
Chemical resistance	good
Other resistances	good resistance to gasoline
Bending radius (fixed)	5 × Outer diameter
Bending radius (dynamic)	10 × Outer diameter