

M12 male 0° / M8 female 0° A-cod. LED

PUR 3x0.25 bk UL/CSA+robot+drag ch. 4.5m

Art.No.: 7000-40571-6500450

Weight: 0.134

Country of origin: DE

Model designation: MSFL1-A-R650_4.5-DS

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:

Male straight – female straight

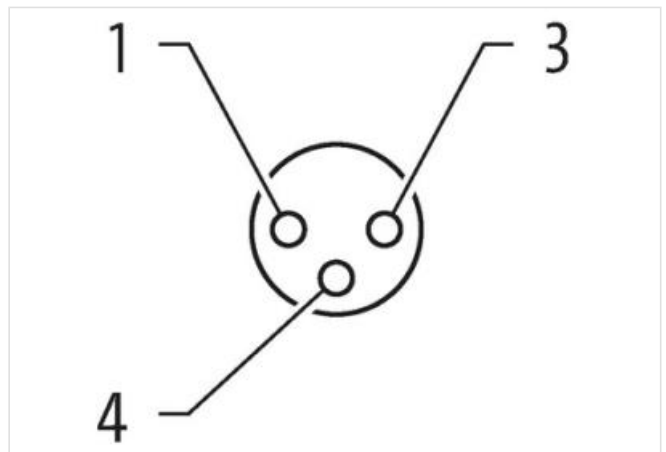
M12 – M8, 3-pole

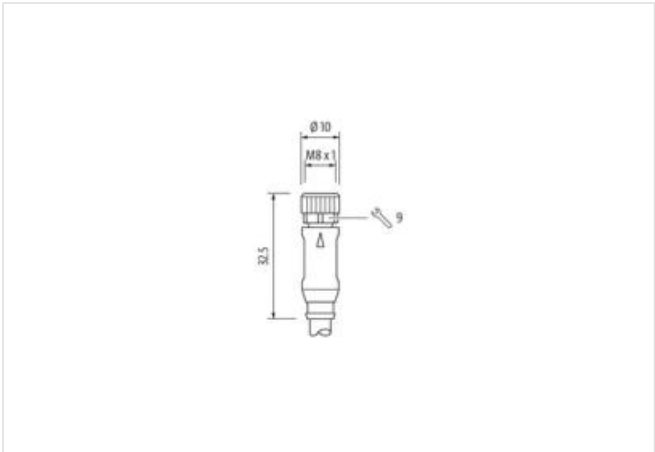
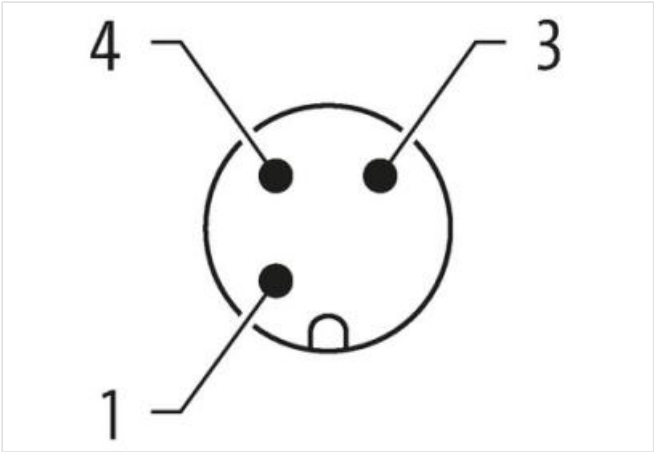
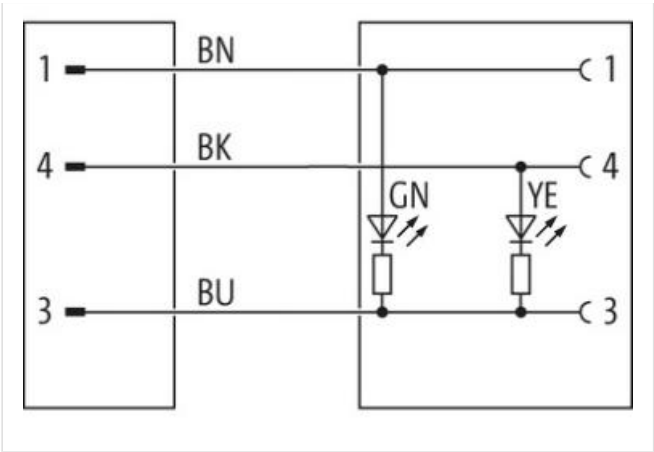
2x LED (PNP), (NPN) on request

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



Cable length 4,5 m

Side 1

Tightening torque 0,6 Nm

Mounting method	inserted, screwed
Family construction form	M12
Thread	M12 x 1
suitable for corrugated tube (internal Ø)	10 mm
Material	PUR
Width across flats	SW13
Degree of protection (EN IEC 60529)	IP67

Side 2

Tightening torque	0,4 Nm
Mounting method	inserted, screwed
Family construction form	M8
Thread	M8 x 1
suitable for corrugated tube (internal Ø)	6,5 mm
Material	PUR
Width across flats	SW9
Degree of protection (EN IEC 60529)	IP67

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

Diagnostics

Status indication LED	green, yellow
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Device protection | Electrical

Additional condition protection degree	inserted, screwed
Pollution Degree	3
Rated surge voltage	0,8 kV
Material group (IEC 60664-1)	I

Mechanical data | Material data

Coating locking	safe-cover coated
Coating of fitting	nickel plated
Locking material	Zinc die-casting
Material screw connection	Zinc die-casting

Mechanical data | Mounting data

Mounting method	inserted, screwed, Shaking protection
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Environmental characteristics | Climatic

Operating temperature min.	-30 °C
Operating temperature max.	85 °C
Additional condition temperature range	depending on cable quality

Important installation notes

Note on strain relief	Protect the connectors by suitable measures from mechanical loads, e.g. by the usage of cable ties.
Note on bending radius	Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces.

Conformity

Product standard	DIN EN 61076-2-101 (M12), DIN EN 61076-2-114 (M8)
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Installation | Cable

wire arrangement	brown, black, blue
Cable identification	650
Cable Type	5
Jacket Color	black

Type of Certificate	cURus
Amount stranding	1
Stranding	3 wires twisted
wire arrangement	brown, black, blue
Cable weighth	26,4 g/m
Material jacket	PUR
Shore hardness jacket	58 ± 3 Shore D
Freedom from ingredients (jacket)	lead-free, cadmium-free, CFC-free, halogen-free, silicone-free
Outer-diameter (jacket)	4,3 mm
Tolerance outer diameter (sheath)	± 5 %
Material wire insulation	PP
Amount wires	3
Outer diameter insulation	1,25 mm
Outer diameter tolerance core insulation	± 5 %
Shore hardness wire insulation	74 ± 3 Shore D
Ingredient freeness wire insulation	lead-free, cadmium-free, CFC-free, halogen-free, silicone-free
Amount strands (wire)	32
Diameter of single wires	0,1 mm
Conductor crosssection (wire)	0,25 mm²
Material conductor wire	Stranded copper wire, bare
Conductor type (wire)	strand class 6
Nominal voltage AC max.	300 V
Current load capacity (standard)	to DIN VDE 0298-4
Current load capacity min. wire	4,5 A
Electrical resistance line constant wire	79 Ω/km @ 20 °C
AC withstand voltage (wire - wire)	2,5 kV @ 60 s
Power frequency withstand voltage (wire - jacket)	2,5 kV @ 60 s
Min. operating temperature (static)	-40 °C
Max. operating temperature (fixed)	80 °C / 90 °C @ 10000 h Operation
Operating temperature min. (dynamic)	-25 °C
Operating temperature max. (dynamic)	80 °C / 90 °C @ 10000 h Operation
UV resistance	DIN EN ISO 4892-2 A
Flame resistance	IEC 60332-2-2 UL 1581 § 1100 FT2 UL 1581 § 1090
chemical resistance	Good, application-related testing
Gasoline resistance	Good, application-related testing
Oil resistance	DIN EN 60811-404 Good, application-related testing
Welding spark resistance	Good, application-related testing
Bending radius (fixed)	5 x Outer diameter
Bending radius (dynamic)	10 x Outer diameter
No. of bending cycles (C-track)	10 Mio. @ 25 °C
Traversing distance (C-track)	5 m @ 25 °C horizontal
Travel speed (C-track)	3,3 m/s @ 25 °C
No. of torsion cycles	1 Mio.
Torsion stress	± 360 °/m
Torsion speed	35 cycles/min
Commercial data	
customs tariff number	85444290
EAN	4048879823746
Packaging unit	1