

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

PVC 3x0.34 bk UL/CSA 3m

Art.No.: 7000-12381-6130300

Weight: 0.12

Country of origin: DE

Model designation: MSDL1-R613\_3.0

#### 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**

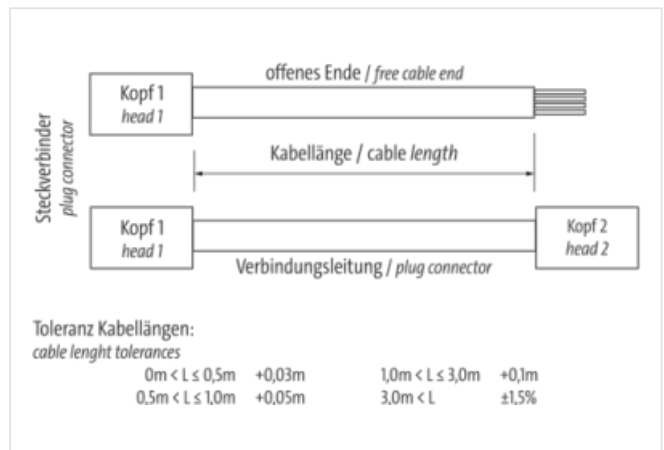
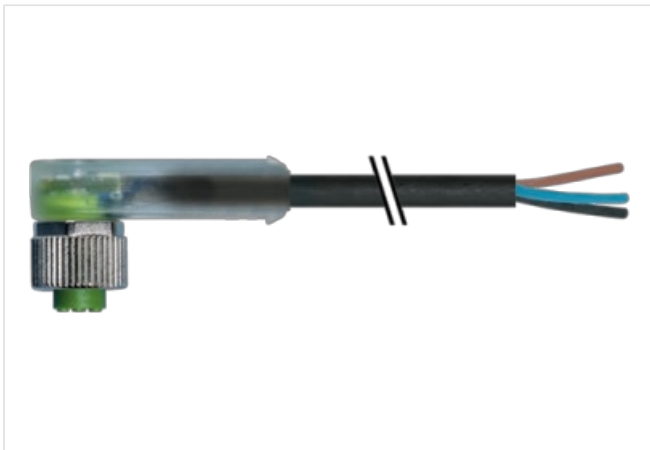
**Plastic housings with good resistance against chemicals and oils.**

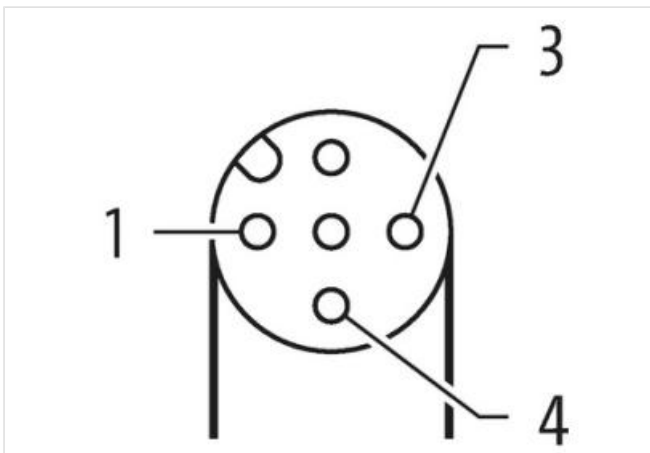
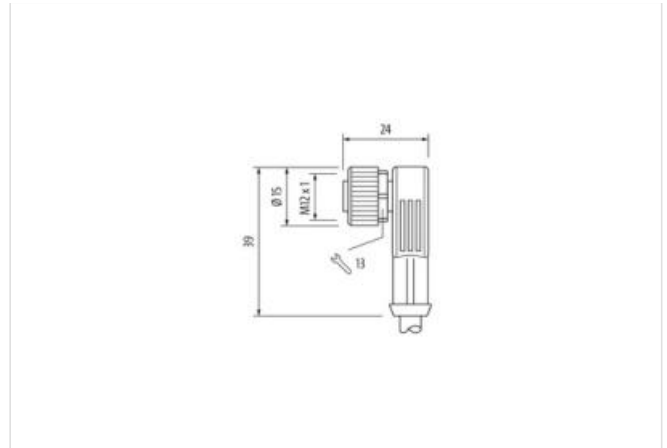
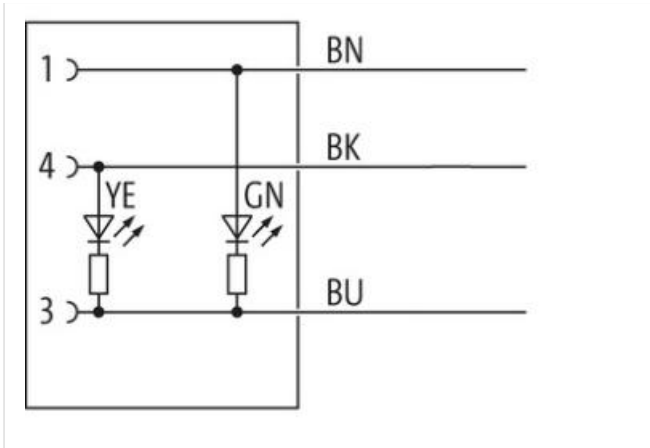
**The resistance to aggressive media should be individually tested for your application. Further details on request.**

**Further cable lengths on request.**

#### [Link to Product](#)

##### Illustration





Product may differ from Image



<b>Cable length</b>	3 m
<b>Side 1</b>	
<b>Tightening torque</b>	0,6 Nm
<b>Mounting method</b>	inserted, screwed
<b>Coating contact</b>	gold plated
<b>Family construction form</b>	M12
<b>Thread</b>	M12 x 1
<b>suitable for corrugated tube (internal Ø)</b>	10 mm
<b>Cable outlet</b>	angled
<b>Coding</b>	A
<b>Material contact</b>	Copper alloy
<b>Material</b>	PUR
<b>No. of poles</b>	3
<b>Width across flats</b>	SW13
<b>Degree of protection (EN IEC 60529)</b>	IP65, IP66K, IP67
<b>Side 2</b>	
<b>Stripping length (jacket)</b>	20 mm
<b>Family construction form</b>	free cable end

Commercial data	
ECLASS-6.0	27279218
ECLASS-6.1	27279218
ECLASS-7.0	27279218
ECLASS-8.0	27279218
ECLASS-9.0	27060311
ECLASS-10.1	27060311
ECLASS-11.1	27060311
ECLASS-12.0	27060311
ETIM-5.0	EC001855
ETIM-6.0	EC001855
ETIM-7.0	EC001855
ETIM-8.0	EC001855
customs tariff number	85444290
customs tariff number	85444290
EAN	4048879204590
EAN	4048879204590
Packaging unit	1
Packaging unit	1
Electrical data   Supply	
Operating voltage DC	24 V
Operating voltage DC min.	18 V
Operating voltage DC max.	30 V
Operating voltage DC max. (UL-listed)	30 V
Current operating per contact max.	4 A
Diagnostics	
Status indication LED	green, yellow
Installation   Connection	
Stripping length (jacket)	20 mm
Mounting set	M12 x 1
Gender	female
Device protection   Electrical	
Degree of protection (EN IEC 60529)	IP65, IP67, IP66K
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	Nickeled
Coating of fitting	nickel plated
Material gasket	FKM
Locking material	Zinc die-casting
Material screw connection	Zinc die-casting
Mechanical data   Mounting data	
Mounting method	inserted, screwed, Shaking protection
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)
Installation   Cable	
wire arrangement	brown, black, blue
Cable identification	613
Cable Type	1
Jacket Color	black
Type of Certificate	cURus
Amount stranding	1
Stranding	3 wires twisted
wire arrangement	brown, black, blue
Cable weight	34,1 g/m
Material jacket	PVC
Shore hardness jacket	85 ± 5 Shore A
Freedom from ingredients (jacket)	lead-free, cadmium-free, CFC-free, silicone-free
Outer-diameter (jacket)	4,6 mm
Tolerance outer diameter (sheath)	± 5 %
Material wire insulation	PVC
Amount wires	3
Outer diameter insulation	1,25 mm
Outer diameter tolerance core insulation	± 5 %
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 mm <sup>2</sup>
Material conductor wire	Stranded copper wire, bare
Conductor type (wire)	Strand class 5
Nominal voltage AC max.	300 V
Current load capacity (standard)	to DIN VDE 0298-4
Current load capacity min. wire	6 A
Electrical resistance line constant wire	57 Ω/km @ 20 °C
AC withstand voltage (wire - wire)	2 kV @ 60 s
Power frequency withstand voltage (wire - jacket)	2 kV @ 60 s
Min. operating temperature (static)	-30 °C
Max. operating temperature (fixed)	80 °C
Operating temperature min. (dynamic)	-5 °C
Operating temperature max. (dynamic)	80 °C
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	Good, application-related testing   DIN EN 60811-404
Bending radius (fixed)	5 x Outer diameter
Bending radius (dynamic)	10 x Outer diameter