

M8 male 0° / M12 female 90° A-cod. LED

PUR 3x0.25 gy UL/CSA+drag ch. 2m

Art.No.: 7000-88281-2300200

Weight: 0.074

Country of origin: DE

Model designation: MSD11-H-R230_2.0

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:

Male straight – female 90°

M8 – M12, 3-pole

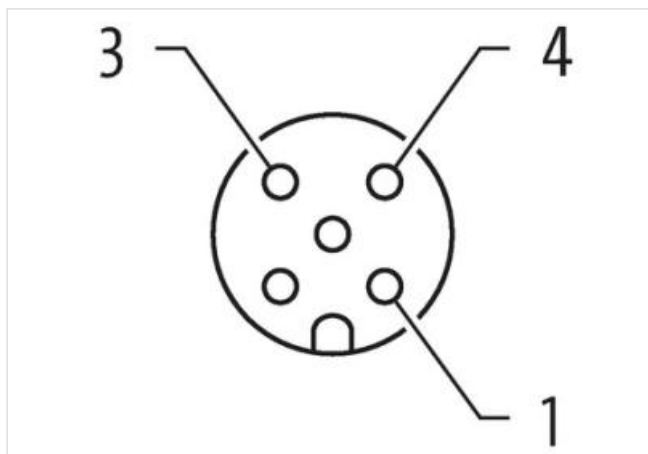
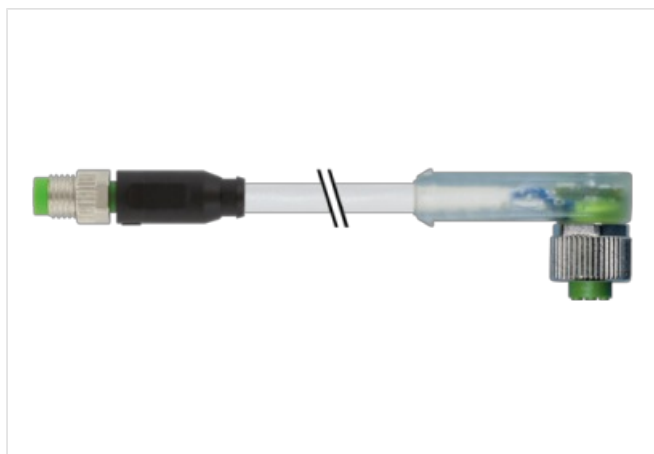
2x LED (PNP), (NPN) on request

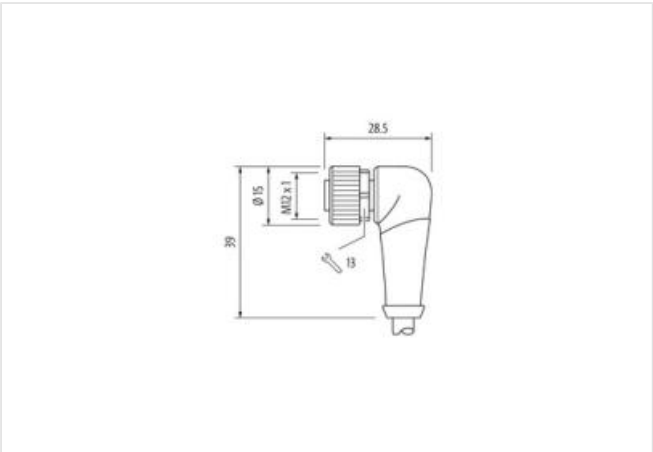
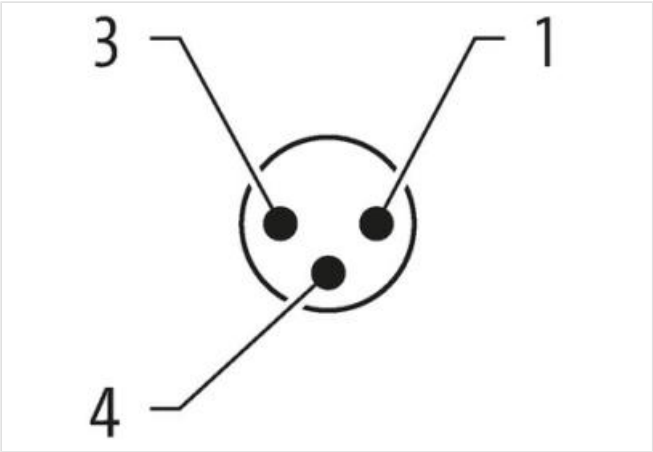
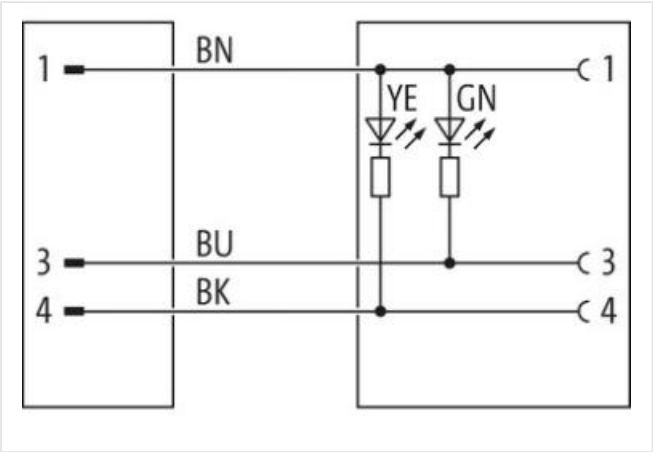
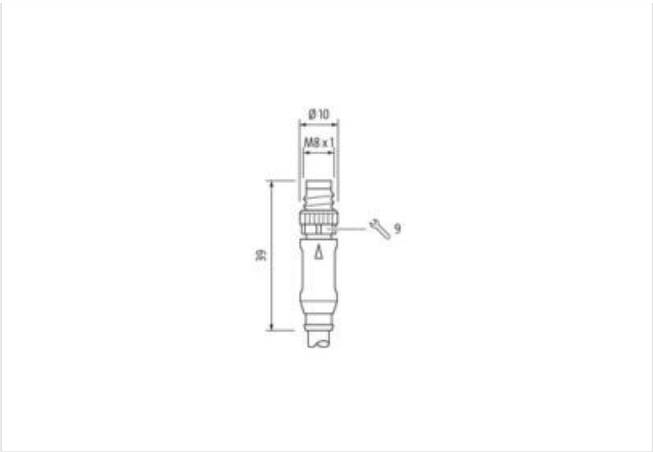
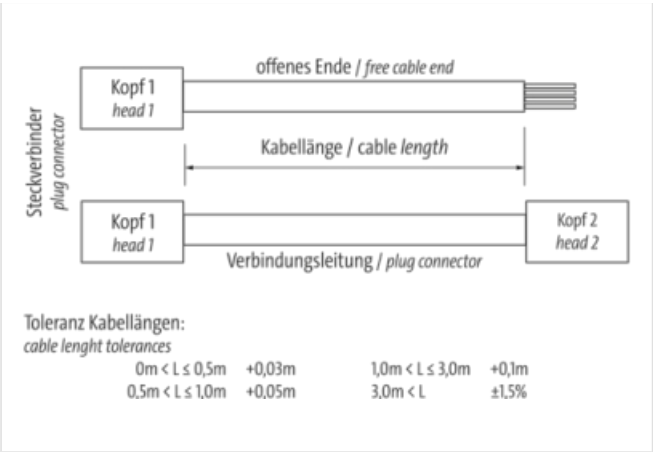
Art-No. 7005 - M12/M8 Lite - (plastic hexagonal screw) on request

Further cable lengths 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.

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



Product may differ from Image



Cable length	2 m
Side 1	
Tightening torque	0,4 Nm

Mounting method	inserted, screwed
Coating contact	gold plated
Family construction form	M8
Thread	M8 x 1
suitable for corrugated tube (internal Ø)	6,5 mm
Coding	A
Material contact	Copper alloy
No. of poles	3
Width across flats	SW9

Side 2

Tightening torque	0,6 Nm
Mounting method	inserted, screwed
Coating contact	gold plated
Family construction form	M12
Thread	M12 x 1
suitable for corrugated tube (internal Ø)	10 mm
Coding	A
Material contact	Copper alloy
No. of poles	3
Width across flats	SW13

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
customs tariff number	85444290
customs tariff number	85444290
EAN	4048879121972
EAN	4048879121972
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
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Device protection | Electrical

Degree of protection (EN IEC 60529)	IP65, IP67, IP68, 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

Material housing	PUR
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Coating locking	Nickeled
Material gasket	FKM
Locking material	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), DIN EN 61076-2-114 (M8)
Installation Cable	
wire arrangement	brown, black, blue
Cable identification	230
Cable Type	3
Jacket Color	gray
Type of Certificate	cURus
Amount stranding	1
Stranding	3 wires twisted
wire arrangement	brown, black, blue
Cable weight	26,4 g/m
Material jacket	PUR
Shore hardness jacket	90 ± 5 Shore A
Freedom from ingredients (jacket)	lead-free, cadmium-free, CFC-free, halogen-free, silicone-free
Outer-diameter (jacket)	4,1 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	70 ± 5 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
Flame resistance	IEC 60332-2-2 UL 1581 § 1090 UL 1581 § 1100 FT2

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
No. of bending cycles (C-track)	10 Mio. @ 25 °C
Traversing distance (C-track)	10 m @ 25 °C horizontal
Travel speed (C-track)	3 m/s @ 25 °C
No. of torsion cycles	2 Mio.
Torsion stress	± 180 °/m
Torsion speed	35 cycles/min