

### M12 Power male 90° L-cod. with cable

PUR 5x1.5 bk UL/CSA+drag ch. 1.5m

Art.No.: 7000-P4211-P040150

Weight: 0.229

Country of origin: DE

Model designation: MSWCLL0-UP04\_1.5

### Advantages of our M12 power connectors:

Our M12 power connectors are ideal for supplying power to your industrial applications and are specially optimised for harsh environments.

The L-coded connectors are available in 4- and 5-pin versions and offer a current carrying capacity of 16A per pin at 63V DC. They are ideal for supplying power to decentralised devices such as I/O & fieldbus modules, power supply units, fuses, engines and motors. The Profinet User Organisation (PNO) has also described the L-coding as the future standard for the low-voltage supply of automation components, which ensures compatibility across different systems.

All Murrelektronik connectors are 100% tested during the manufacturing process to ensure the highest quality and reliability. The contacts are gold-plated, which ensures excellent conductivity. Thanks to the high IP67 protection rating and the integrated protective conduit connection, they are ideal for demanding industrial environments. They are also vibration-resistant - this is guaranteed by the integrated vibration protection.

The M12 power connectors are designed in accordance with the IEC 61076-2-111 standard and UL-approved in accordance with 2237 (PVVA - E492831). Our connectors are resistant to oils and cooling lubricants. However, resistance to aggressive media should be tested for each specific application.

Different cable lengths are possible [on request](#). Are you missing technical information? Feel free to use our technical [dictionary](#), where you will find explanations of coding and other technical details.

### Product details:

Power

Male 90°

M12, 5-pole

L-coded

with cable sleeves

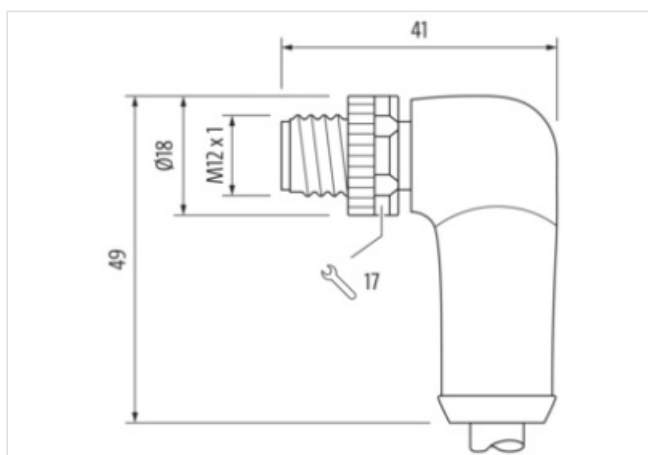
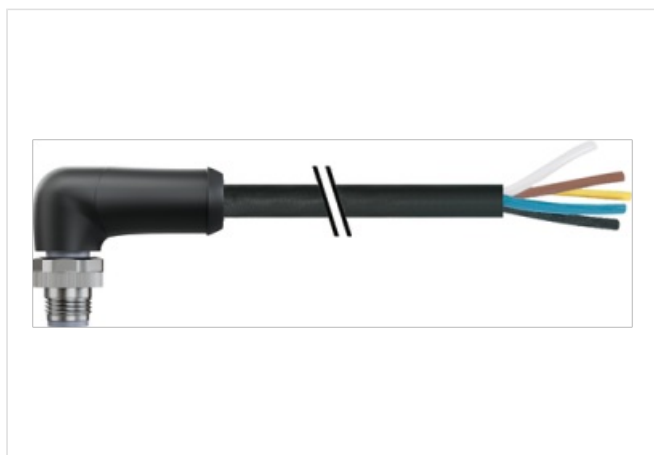
Plastic housings with good resistance against chemicals and oils.

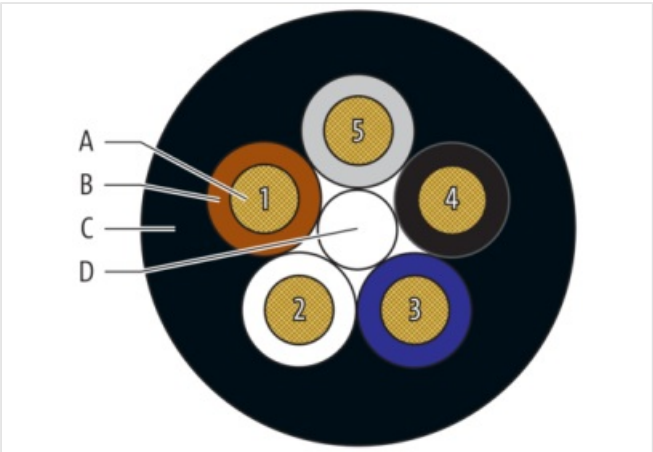
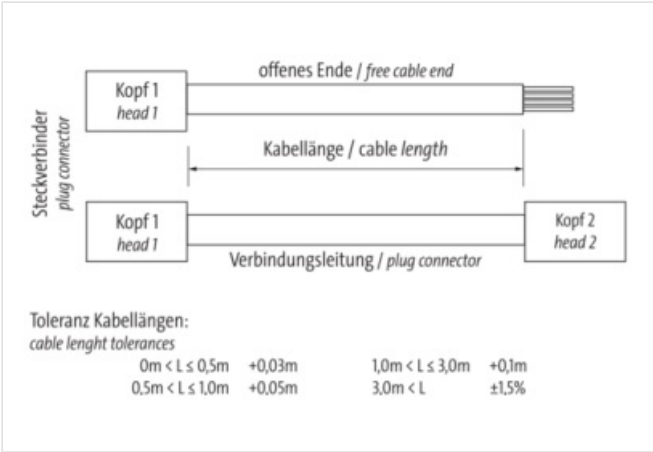
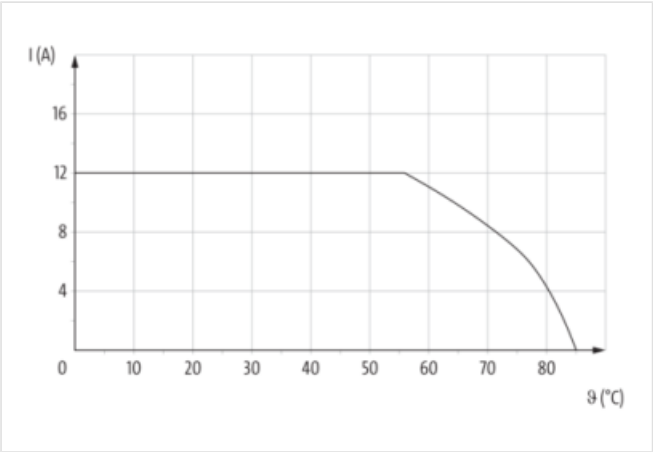
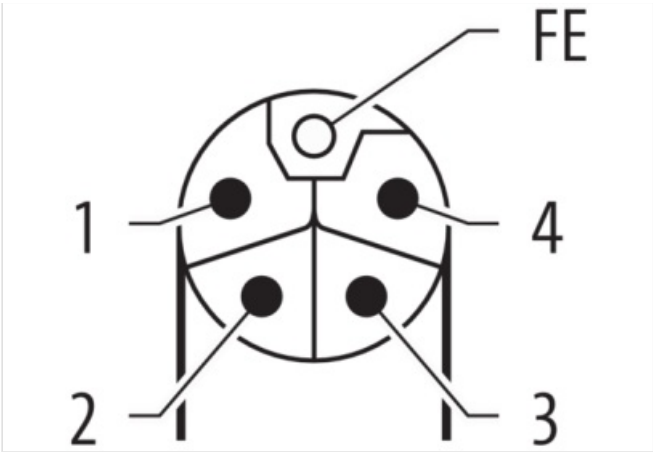
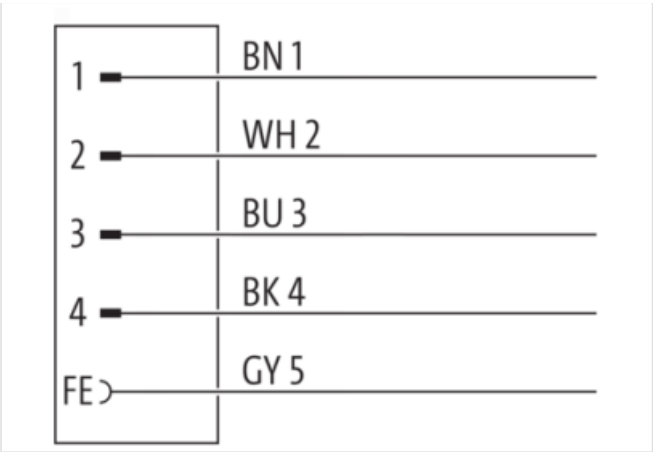
The resistance to aggressive media should be individually tested for your application. Further details on request.

Further cable lengths on request.

### Link to Product

#### Illustration





Product may differ from Image



Header

Material short text MSWCLL0-UP04\_1.5  
Cable length 1,50 m

Side 1

Family construction form	M12P
No. of poles	5
Coding	L
Gender	male
Mounting method	inserted, screwed
Thread	M12 x 1
Tightening torque	0.6 Nm
Width across flats	SW17
Cable outlet	angled
suitable for corrugated tube (internal Ø)	16.4 mm
Material	PUR
Material contact	Copper alloy
Coating contact	gold plated
Degree of protection (EN IEC 60529)	IP65, IP67, IP69K

**Side 2**

Family construction form	Free cable end
Stripping length (jacket)	100 mm

**Commercial data**

URL Webshop	<a href="https://shop.murrelektronik.com/7000-P4211-P040150">https://shop.murrelektronik.com/7000-P4211-P040150</a>
GTIN	4048879735261
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	27060327
ECLASS-9.1	27060311
ECLASS-10.0.1	27060311
ECLASS-10.1	27060311
ECLASS-11.0	27060311
ECLASS-11.1	27060311
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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	4048879735261
Packaging unit	1

**Electrical data | Supply**

Operating voltage DC max.	63 V
Current operating per contact max.	12 A

**Installation | Connection**

Width across flats	SW17
Mating cycles min.	100

**Device protection | Electrical**

Degree of protection (EN IEC 60529)	IP67, IP65, IP69K
Additional condition protection degree	inserted, screwed
Pollution Degree	3

Rated surge voltage	1.5 kV
Material group (IEC 60664-1)	I
<b>Mechanical data   Material data</b>	
Material housing	PUR
Material screw connection	Brass
Coating of fitting	nickel plated
<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 61076-2-111
<b>Installation   Cable</b>	
Cable identification	P04
Cable Type	3
Function cable	Power
Amount stranding	1
Stranding	5 wires around core filler twisted
Filler	yes
Cable weight	118 g/m
Material wire insulation	PP
Amount wires	5
Outer diameter insulation	2.3 mm
Outer diameter tolerance core insulation	± 0.1 mm
Shore hardness wire insulation	60 ± 5 Shore D
Ingredient freeness wire insulation	lead-free, cadmium-free, CFC-free, halogen-free, silicone-free
Printing color of wire insulation	white (isolation blue), white (isolation brown), white (isolation black), black (white isolation), white (gray isolation)
Amount strands (wire)	84
Diameter of single wires	0.15 mm
Conductor crosssection (wire)	1.5 mm <sup>2</sup>
Material conductor wire	Stranded copper wire, bare
Conductor type (wire)	strand class 6
Outer-diameter (jacket)	8.2 mm
Tolerance outer diameter (sheath)	± 5 %
Material jacket	PUR
Shore hardness jacket	90 ± 5 Shore A
Freedom from ingredients (jacket)	lead-free, cadmium-free, CFC-free, halogen-free, silicone-free
Material property (jacket)	abrasion-resistant, low adhesion, good machinability, matte
Conductor resistance (wire)	13.3 Ω/km @ 20 °C
Nominal voltage AC max.	1,000 V
Withstand voltage (wire - wire)	10 kV @ 60 s
Withstand voltage (wire - jacket)	10 kV @ 60 s
Current load capacity (standard)	to DIN VDE 0298-4
Current load capacity min. wire	13.5 A
Min. operating temperature (static)	-50 °C

Max. operating temperature (static)	80 °C / 90 °C @ 10000 h Operation
Operating temperature min. (dynamic)	-25 °C
Operating temperature max. (dynamic)	80 °C / 90 °C @ 10000 h Operation
Operating temperature min. (drag chain)	-25 °C
Operating temperature max. (drag chain)	80 °C / 90 °C @ 10000 h Operation
Flame resistance	UL 1581 § 1080, CSA FT2, IEC 60332-1-2, IEC 60332-2-2
Oil resistance	IEC 60811-404
Chemical resistance	good
Other resistances	resistant to hydrolysis, resistant to microbes, good resistance to gasoline
Bending radius (fixed)	5 × Outer diameter
Bending radius (dynamic)	10 × Outer diameter
No. of bending cycles (C-track)	5 Mio. @ 25 °C
Traversing distance (C-track)	5 m @ 25 °C
Travel speed (C-track)	3.3 m/s @ 25 °C
Acceleration (C-track)	5 m/s² @ 25 °C
No. of torsion cycles	5 Mio.
Torsion stress	± 180 °/m @ 180 °C
Torsion speed	35 cycles/min