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Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Socket straight M12, L-coded, on free cable end, cable length: 1.5 m

#### Your advantages

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# **Key Commercial Data**

| Packing unit                         | 1 pc                           |
|--------------------------------------|--------------------------------|
| GTIN                                 | 4 055626 383712                |
| GTIN                                 | 4055626383712                  |
| Weight per Piece (excluding packing) | 198.070 g                      |
| Custom tariff number                 | 85444290                       |
| Country of origin                    | Poland                         |
| Note                                 | Made to Order (non-returnable) |

### Technical data

#### **Dimensions**

| Length of cable | 1.5 m |
|-----------------|-------|
|                 |       |

### Ambient conditions

| Ambient temperature (operation) | -25 °C 85 °C (Plug / socket) |
|---------------------------------|------------------------------|
| Degree of protection            | IP65                         |
|                                 | IP67                         |
|                                 | IP68                         |

#### General



## Technical data

### General

| Rated current at 40°C        | 12 A                          |
|------------------------------|-------------------------------|
| Rated voltage                | 63 V DC                       |
| Number of positions          | 4                             |
| Color handle area            | black                         |
| Insulation resistance        | ≥ 100 MΩ                      |
| Coding                       | L - Power                     |
| Standards/regulations        | M12 connector IEC 61076-2-111 |
| Status display               | No                            |
| Protective circuit/component | unwired                       |
| Overvoltage category         | III                           |
| Degree of pollution          | 3                             |
| Insertion/withdrawal cycles  | ≥ 100                         |
| Torque                       | 0.4 Nm (M12 connector)        |

### Material

| Flammability rating according to UL 94 | V0                           |
|----------------------------------------|------------------------------|
| Contact material                       | CuSn                         |
| Contact surface material               | Ni/Au                        |
| Contact carrier material               | PA                           |
| Material of grip body                  | PA                           |
| Material, knurls                       | Zinc die-cast, nickel-plated |

## Standards and Regulations

| Standard designation                   | M12 connector   |
|----------------------------------------|-----------------|
| Standards/regulations                  | IEC 61076-2-111 |
| Flammability rating according to UL 94 | V0              |

## Cable

| Cable type                          | PUR halogen-free black     |
|-------------------------------------|----------------------------|
| Cable type (abbreviation)           | PUR                        |
| Cable abbreviation                  | Li9YV1-11Y                 |
| UL AWM style                        | 20233 / 10493 (80°C/300 V) |
| Conductor cross section             | 4x 1.5 mm²                 |
| AWG power supply                    | 16                         |
| Conductor structure, voltage supply | 78x 0.15 mm                |
| Core diameter including insulation  | 2.35 mm ±0.05 mm           |
| Thickness, insulation               | ≥ 0.25 mm                  |
| Wire colors                         | brown, white, blue, black  |
| Overall twist                       | 4 wires, twisted           |
| Length of twist, overall twist      | 90 mm                      |
| External sheath, color              | black-gray RAL 7021        |
| Outer sheath thickness              | approx. 1.3 mm             |



## Technical data

### Cable

| External cable diameter D                       | 8.4 mm ±0.25 mm                                             |
|-------------------------------------------------|-------------------------------------------------------------|
| Minimum bending radius, fixed installation      | 5 x D                                                       |
| Minimum bending radius, flexible installation   | 10 x D                                                      |
| Number of bending cycles                        | 400000                                                      |
| Minimum bending radius, drag chain applications | 10 x D                                                      |
| Traversing path                                 | 10 m                                                        |
| Traversing rate                                 | 3 m/s                                                       |
| Acceleration                                    | 10 m/s²                                                     |
| Cable weight                                    | 109 kg/km                                                   |
| Outer sheath, material                          | PUR                                                         |
| Material conductor insulation                   | PP                                                          |
| Conductor material                              | Bare Cu litz wires                                          |
| Insulation resistance                           | ≥ 1 GΩ*km (at 20 °C)                                        |
| Conductor resistance                            | ≤ 13 Ω/km (at 20 °C)                                        |
| Nominal voltage, cable                          | ≤ 300 V AC                                                  |
| Test voltage, cable                             | ≥ 3000 V AC (Spark test)                                    |
| Flame resistance                                | According to UL 758/1581 (Cable Flame)                      |
|                                                 | according to UL 758/1581 FT1                                |
|                                                 | According to DIN EN 60332-1-2                               |
| Halogen-free                                    | in accordance with DIN VDE 0472 part 815                    |
|                                                 | in accordance with DIN EN 50267-2-1                         |
| Resistance to oil                               | According to DIN EN 60811-2-1, 168 h at 100°C               |
|                                                 | According to UL 758, 168 h at 60°C                          |
| Other resistance                                | Hydrolysis and microbe resistant as per VDE 0282 section 10 |
|                                                 | Low adhesion                                                |
|                                                 | abrasion-resistant                                          |
|                                                 | Resistant to salt water                                     |
| Ambient temperature (operation)                 | -50 °C 80 °C (cable, fixed installation)                    |
|                                                 | -30 °C 80 °C (cable, flexible installation)                 |

### **Environmental Product Compliance**

| REACh SVHC | Lead 7439-92-1                                                                                         |
|------------|--------------------------------------------------------------------------------------------------------|
| China RoHS | Environmentally Friendly Use Period = 50                                                               |
|            | For details about hazardous substances go to tab "Downloads",<br>Category "Manufacturer's declaration" |

# Drawings



Schematic diagram



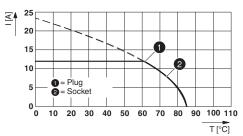
Pin assignment of M12 socket, 4-pos.

Cable cross section

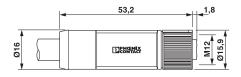


PUR halogen-free black [PUR]

Diagram

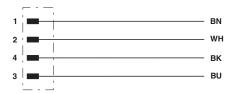


Dimensional drawing



M12 x 1 socket, straight

Circuit diagram



Contact assignment of the M12 plug

### Classifications

#### eCl@ss

| eCl@ss 5.1 | 27061801 |
|------------|----------|
| eCl@ss 6.0 | 27279200 |
| eCI@ss 7.0 | 27279218 |
| eCl@ss 9.0 | 27060311 |

#### **ETIM**

| ETIM 6.0 | EC001855 |
|----------|----------|

### Approvals

### Approvals

Approvals

UL Listed / cUL Listed / EAC / cULus Listed



## Approvals

Ex Approvals

#### Approval details

| UL Listed          | UL | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm |      | E468743 |
|--------------------|----|---------------------------------------------------------------------|------|---------|
|                    |    |                                                                     |      |         |
| Nominal voltage UN |    |                                                                     | 63 V |         |
| Nominal current IN |    |                                                                     | 16 A |         |
| mm²/AWG/kcmil      |    |                                                                     | 14   |         |

| cUL Listed         | CUL | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm |      | E468743 |
|--------------------|-----|---------------------------------------------------------------------|------|---------|
|                    |     |                                                                     |      |         |
| Nominal voltage UN |     |                                                                     | 63 V |         |
| Nominal current IN |     |                                                                     | 16 A |         |
| mm²/AWG/kcmil      |     |                                                                     | 14   |         |

| EAC RU C-DE.AI30.B.01 | 102 |  |
|-----------------------|-----|--|
|-----------------------|-----|--|

cULus Listed

#### Accessories

Accessories

Screwdriver tools

Tool - SAC BIT M12-D16 - 1200305



Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, knurl diameter: 16 mm, for 4 mm hexagonal drive



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