

## Power cable - SAC-5P-M12MRL/ 1,5-280 FE - 1414850

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Power cable, 5-position, PUR halogen-free, gray RAL 7001, Plug angled M12, coding: L, on free cable end, cable length: 1.5 m, for direct current up to 16 A/63 V

### Your advantages

- ✓ Easy and safe: 100% electrically tested plug-in components
- ✓ High-performance: DC connectors for up to 16 A and 63 V DC
- ✓ Protection against mismatching, thanks to special L-coding
- ✓ Our standard: robust halogen-free PUR cable

### Key Commercial Data

|              |   |
|--------------|---|
| Packing unit | 1 pc  |
| GTIN         | <br>4 055626 034829 |
| GTIN         | 4055626034829   |

### 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                             |

#### General

|                       |          |
|-----------------------|----------|
| Rated current at 40°C | 16 A     |
| Rated voltage         | 63 V DC  |
| Number of positions   | 5        |
| Color handle area     | black    |
| Insulation resistance | ≥ 100 MΩ |

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## Technical data

### General

|                              |                               |
|------------------------------|-------------------------------|
| 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                       | CuZn                         |
| Contact surface material               | Ni/Au                        |
| Contact carrier material               | PA                           |
| Material of grip body                  | PP                           |
| Material, knurls                       | Zinc die-cast, nickel-plated |

### Standards and Regulations

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

### Cable

|   |                                 |
|---|---------------------------------|
| Cable type                                      | PUR halogen-free gray           |
| Cable type (abbreviation)                       | 280                             |
| UL AWM style                                    | 20233 / 10493 (80°C/300 V)      |
| Conductor cross section                         | 5x 2.5 mm <sup>2</sup>          |
| AWG power supply                                | 14                              |
| Conductor structure, voltage supply             | 141x 0.15 mm                    |
| Core diameter including insulation              | 2.85 mm ±0.1 mm                 |
| Thickness, insulation                           | ≥ 0.31 mm                       |
| Wire colors                                     | Brown, white, blue, black, gray |
| External sheath, color                          | gray RAL 7001                   |
| Outer sheath thickness                          | approx. 0.76 mm                 |
| External cable diameter D                       | 9.65 mm ±0.25 mm                |
| Minimum bending radius, fixed installation      | 5 x D                           |
| Minimum bending radius, flexible installation   | 10 x D                          |
| Number of bending cycles                        | 4000000                         |
| Minimum bending radius, drag chain applications | 10 x D                          |
| Traversing path                                 | 10 m                            |
| Traversing rate                                 | 3 m/s                           |
| Acceleration                                    | 10 m/s <sup>2</sup>             |
| Cable weight                                    | 185 kg/km                       |

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### Technical data

#### Cable

|                                 |   |
|---------------------------------|---|
| Outer sheath, material          | PUR   |
| Material conductor insulation   | PP  |
| Conductor material              | Bare Cu litz wires  |
| Insulation resistance           | $\geq 1 \text{ G}\Omega \cdot \text{km}$ (at 20 °C)         |
| Conductor resistance            | $\leq 8 \text{ }\Omega/\text{km}$ (at 20 °C)                |
| Nominal voltage, cable          | $\leq 300 \text{ V AC}$                                     |
| Test voltage, cable             | $\geq 3000 \text{ V AC}$ (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 60811-404, 168 h at 100 °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)             |

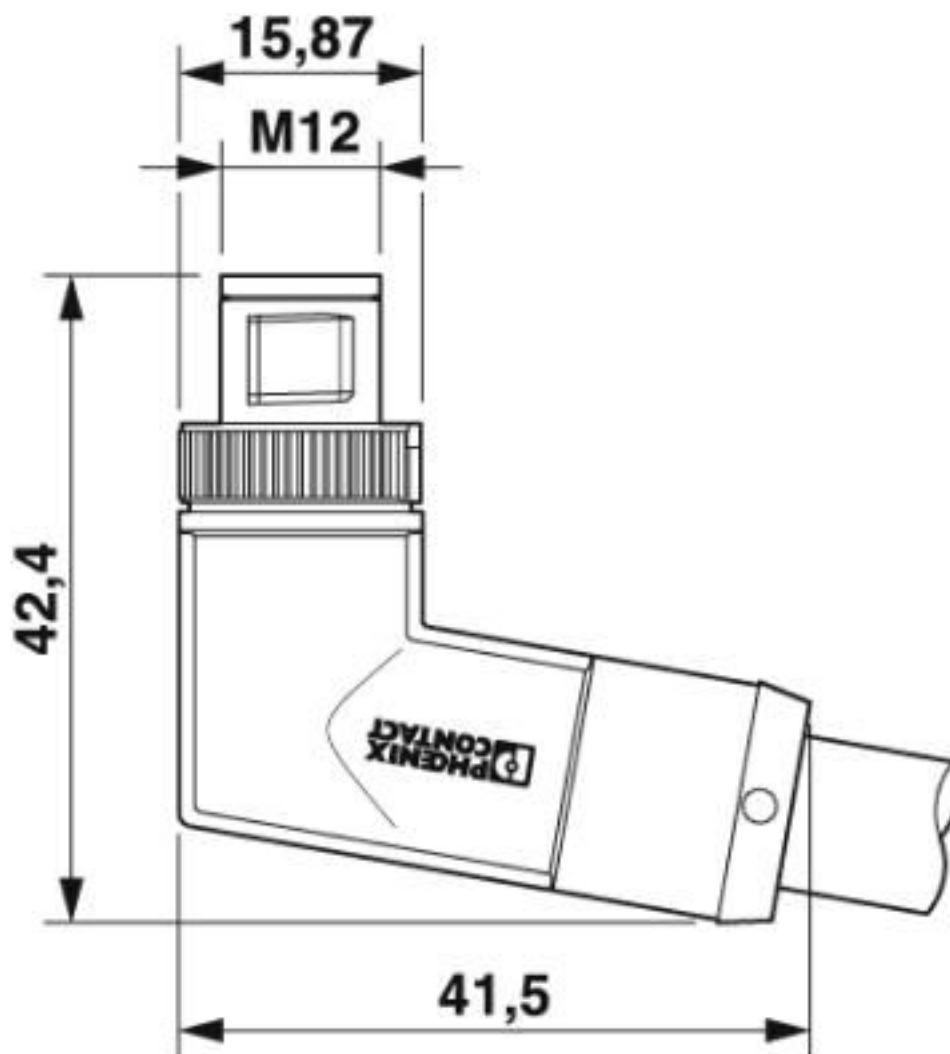
#### Environmental Product Compliance

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

#### Drawings

# Power cable - SAC-5P-M12MRL/ 1,5-280 FE - 1414850

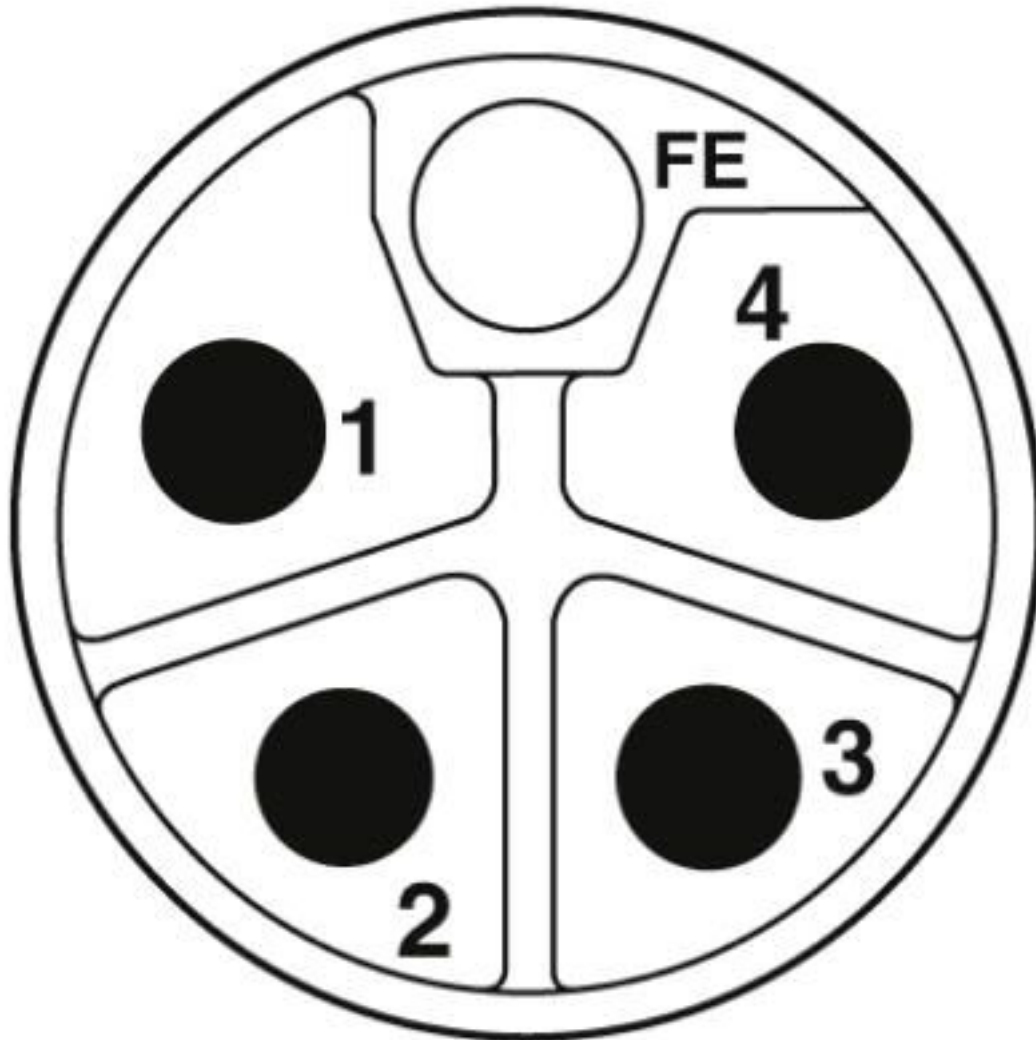
Dimensional drawing



M12 x 1 male plug, angled

# Power cable - SAC-5P-M12MRL/ 1,5-280 FE - 1414850

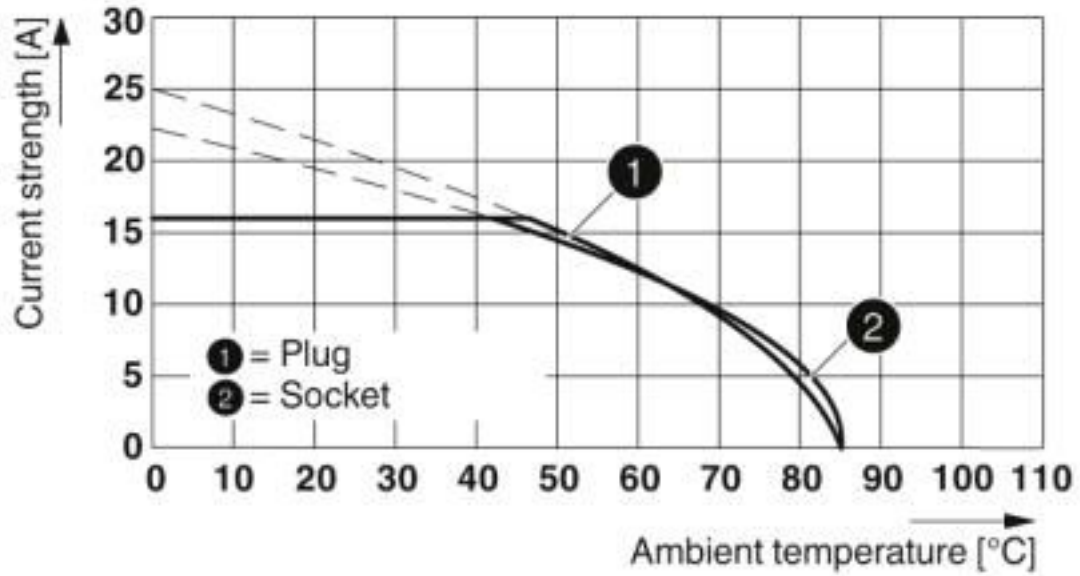
Schematic diagram



Pin assignment of M12 connector, 5-pos., L-coded, pin side view

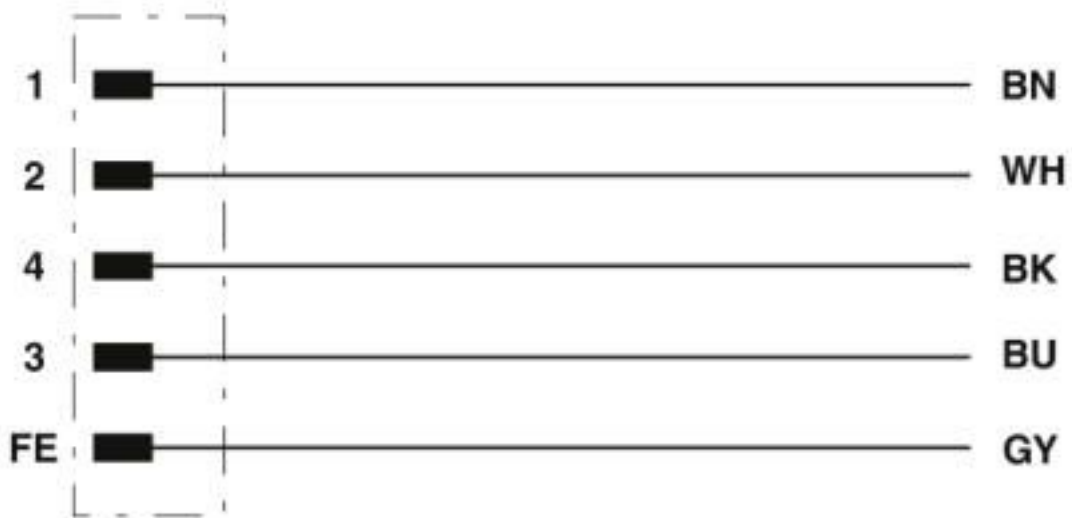
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Diagram



Current carrying capacity

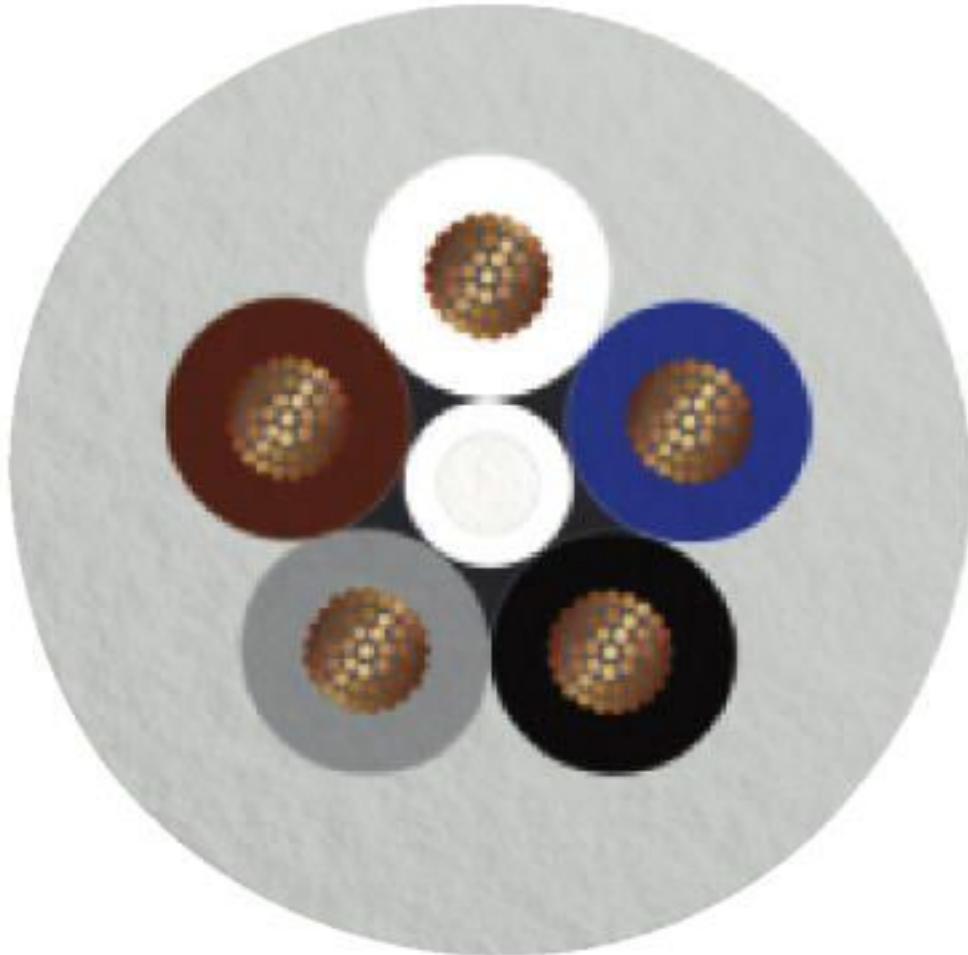
Circuit diagram



Contact assignment of the M12 plug

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Cable cross section



PUR halogen-free gray [280]

## Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27440203 |
| eCl@ss 4.0    | 24010400 |
| eCl@ss 4.1    | 24010400 |
| eCl@ss 5.0    | 19030300 |
| eCl@ss 5.1    | 19030300 |
| eCl@ss 6.0    | 27279200 |
| eCl@ss 7.0    | 27279218 |
| eCl@ss 8.0    | 27440203 |
| eCl@ss 9.0    | 27440203 |

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## Classifications

### ETIM

|          |          |
|----------|----------|
| ETIM 5.0 | EC002311 |
| ETIM 6.0 | EC002311 |
| ETIM 7.0 | EC002311 |

## Approvals


### Approvals


#### Approvals


UL Listed / cUL Listed / EAC-RoHS / EAC / cULus Listed


#### Ex Approvals

### Approval details

|                            |   |   |         |
|----------------------------|---|---|---------|
| UL Listed                  |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | E468743 |
| Nominal voltage UN         |   | 63 V  |         |
| Nominal current IN         |   | 16 A  |         |
| mm <sup>2</sup> /AWG/kcmil |   | 14  |         |

|                            |   |   |         |
|----------------------------|---|---|---------|
| cUL Listed                 |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | E468743 |
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| mm <sup>2</sup> /AWG/kcmil |   | 14  |         |

|          |   |                          |
|----------|---|--------------------------|
| EAC-RoHS |  | RU D-<br>DE.HB35.B.00387 |
|----------|---|--------------------------|

|     |   |                          |
|-----|---|--------------------------|
| EAC |  | RU C-<br>DE.BL08.B.00286 |
|-----|---|--------------------------|



## Power cable - SAC-5P-M12MRL/ 1,5-280 FE - 1414850

### Approvals

cULus Listed



### Accessories

#### Accessories

##### Protective cap

Sealing cap - PROT-M12 FS - 1560251



M12 sealing cap for unoccupied M12 plugs of the sensor/actuator cable, flush-type plugs and I/O devices in the field

### 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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