

# SAC-4P-M12MST/ 1,0-PUR - Power cable



1408812

<https://www.phoenixcontact.com/in/products/1408812>

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Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12, coding: T, on free cable end, cable length: 1 m, For direct current up to 12 A/63 V

## Your advantages

- Easy and safe: 100% electrically tested plug-in components
- Protection against incorrect connection using special T-coding
- Our standard: robust halogen-free PUR cable

## Commercial Data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 1408812             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Sales Key                            | BF1                 |
| Product Key                          | BF1CCQ              |
| Catalog Page                         | Page 185 (C-6-2019) |
| GTIN                                 | 4046356838764       |
| Weight per Piece (including packing) | 123.4 g             |
| Weight per Piece (excluding packing) | 124 g               |
| Customs tariff number                | 85444290            |
| Country of origin                    | PL                  |

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## Technical Data

### Product properties

|                      |              |
|----------------------|--------------|
| Product type         | Power cable  |
| Number of positions  | 4            |
| Application          | Power supply |
| No. of cable outlets | 1            |
| Shielded             | no           |
| Coding               | T            |

### Insulation characteristics

|                      |     |
|----------------------|-----|
| Overvoltage category | III |
| Degree of pollution  | 3   |

### Material specifications

|  |                              |
|--|------------------------------|
| Color Handle area                      | black                        |
| Flammability rating according to UL 94 | V0                           |
| Material of grip body                  | PP                           |
| Contact material                       | CuZn                         |
| Contact surface material               | Ni/Au                        |
| Contact carrier material               | PA                           |
| Material for screw connection          | Zinc die-cast, nickel-plated |

### Electrical properties

|                       |                            |
|-----------------------|----------------------------|
| Contact resistance    | $\leq 5 \text{ m}\Omega$   |
| Insulation resistance | $\geq 100 \text{ M}\Omega$ |
| Nominal voltage $U_N$ | 63 V DC                    |
| Nominal current $I_N$ | 12 A                       |
| Protective circuit    | unwired                    |

### Mechanical properties

#### Mechanical data

|                             |       |
|-----------------------------|-------|
| Insertion/withdrawal cycles | > 100 |
|-----------------------------|-------|

### Connector

#### Connection 1

|             |           |
|-------------|-----------|
| Coding type | T (Power) |
|-------------|-----------|

### Cable/line

|              |     |
|--------------|-----|
| Cable length | 1 m |
|--------------|-----|

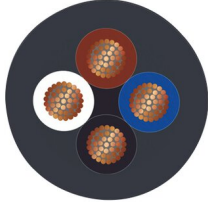
PUR halogen-free black [PUR]

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|   |  |
|---|--|
| Dimensional drawing                           |    |
| Cable weight                                  | 109 kg/km  |
| UL AWM Style                                  | 20233 / 10493 (80°C/300 V)   |
| Number of positions                           | 4  |
| Shielded                                      | no   |
| Cable type                                    | PUR halogen-free black [PUR]   |
| Conductor cross section                       | 4x 1.5 mm <sup>2</sup>   |
| Wire diameter incl. insulation                | 2.35 mm ±0.05 mm   |
| External cable diameter                       | 8.4 mm ±0.25 mm  |
| Outer sheath, material                        | PUR  |
| External sheath, color                        | black-gray RAL 7021  |
| Conductor material                            | Bare Cu litz wires   |
| Material wire insulation                      | PP   |
| Single wire, color                            | brown, white, blue, black  |
| Thickness, insulation                         | ≥ 0.25 mm  |
| Thickness, outer sheath                       | approx. 1.3 mm   |
| Overall twist                                 | 4 wires, twisted   |
| Length of twist, overall twist                | 90 mm  |
| Max. conductor resistance                     | ≤ 13 Ω/km (at 20 °C)   |
| Insulation resistance                         | ≥ 1 GΩ*km (at 20 °C)   |
| Nominal voltage, cable                        | ≤ 300 V AC   |
| Test voltage                                  | ≥ 3000 V AC (Spark test)   |
| Minimum bending radius, fixed installation    | 5 x D  |
| Minimum bending radius, flexible installation | 10 x D   |
| Max. bending cycles                           | 4000000  |
| Halogen-free                                  | in accordance with DIN VDE 0472 part 815<br>in accordance with DIN EN 50267-2-1  |
| Flame resistance                              | According to UL 758/1581 (Cable Flame)<br>according to UL 758/1581 FT1<br>According to DIN EN 60332-1-2                      |
| Resistance to oil                             | According to DIN EN 60811-2-1, 168 h at 100°C<br>According to UL 758, 168 h at 60°C  |
| Other resistance                              | Hydrolysis and microbe resistant as per VDE 0282 section 10<br>Low adhesion<br>abrasion-resistant<br>Resistant to salt water |
| Ambient temperature (operation)               | -50 °C ... 80 °C (cable, fixed installation)   |

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|  |   |
|--|---|
|  | -30 °C ... 80 °C (Cable, flexible installation) |
|--|---|

## Environmental and real-life conditions

### Ambient conditions

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

## Standards and regulations

|                          |                 |
|--------------------------|-----------------|
| Standards/specifications | IEC 61076-2-111 |
|--------------------------|-----------------|

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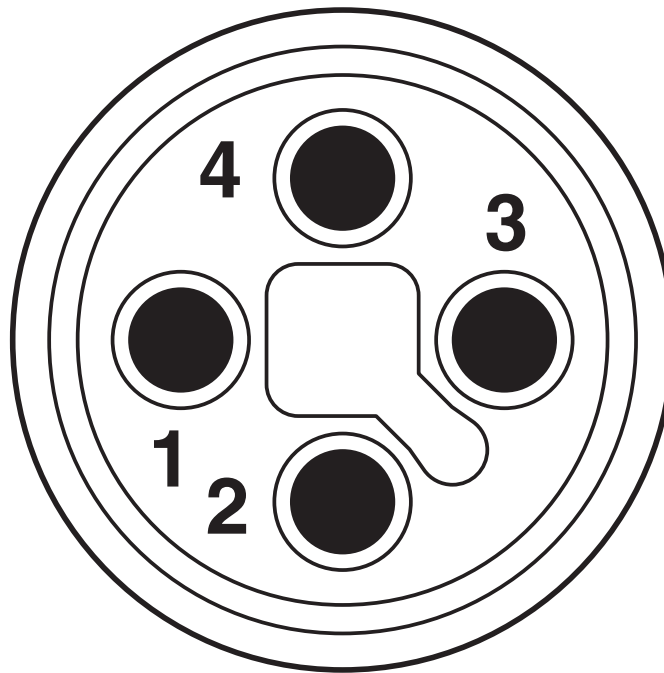


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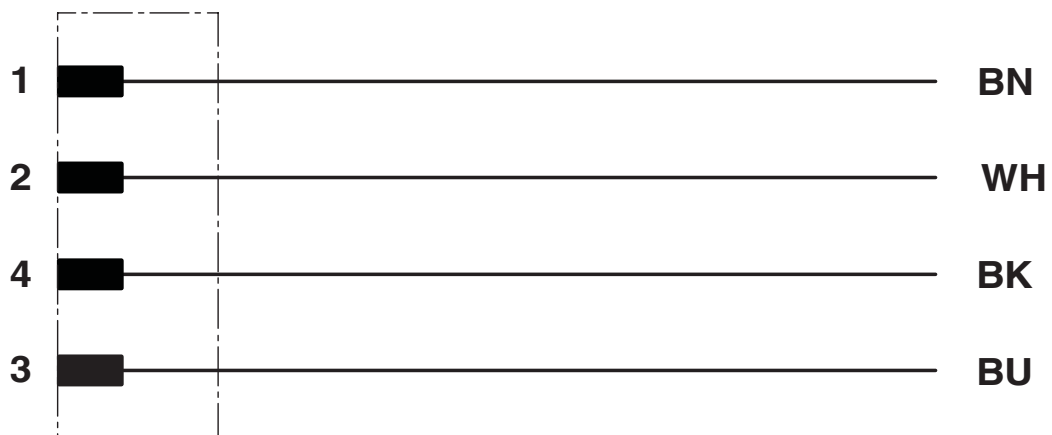
## Drawings

Schematic diagram



Pin assignment for M12 plug, 4-pos., T-coded, view of plug side

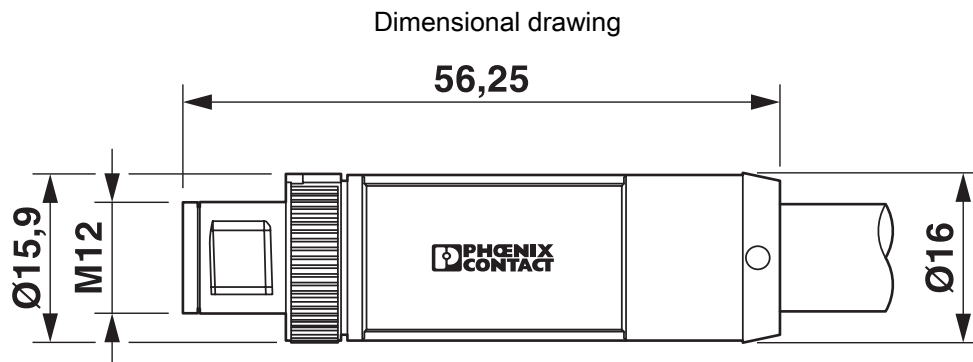
Circuit diagram



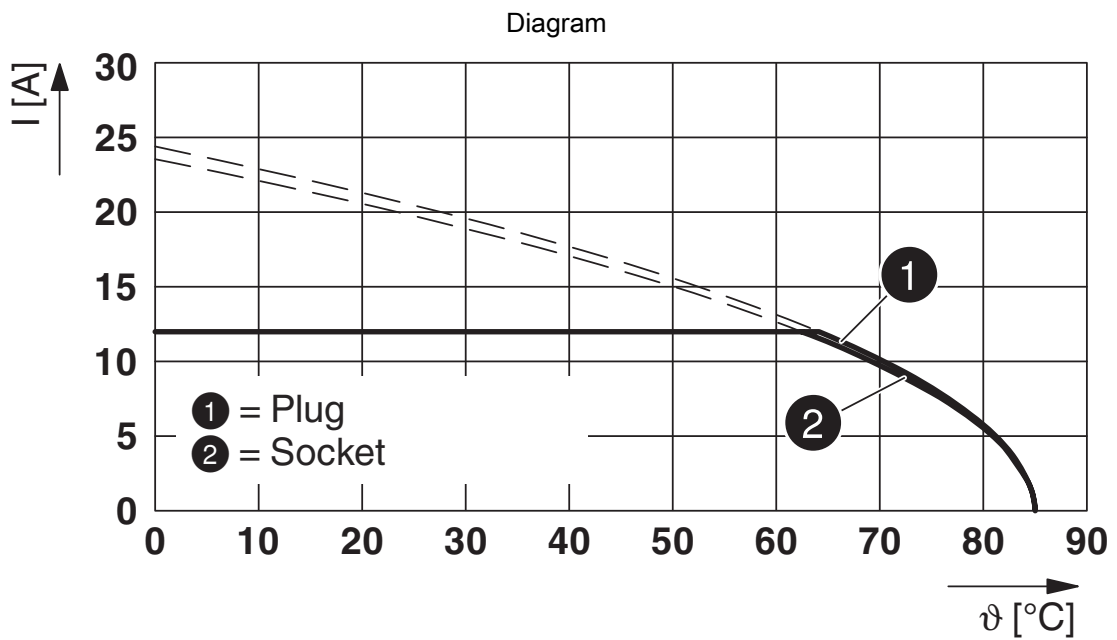
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Plug, M12 x 1, straight



Base curve

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## Approvals



**EAC**

Approval ID: RU C-DE.BL08.B.00286



**UL Listed**

Approval ID: E468743

|  | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $\text{mm}^2$ |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | 63 V                  | 12 A                  | -                 | - 16                        |



**cUL Listed**

Approval ID: E468743

|  | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $\text{mm}^2$ |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | 63 V                  | 12 A                  | - 16              | -                           |



**EAC**

Approval ID: RU D-DE.HB35.B.00387

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27060311 |
| ECLASS-12.0 | 27060311 |
| ECLASS-13.0 | 27060311 |

### ETIM

|          |          |
|----------|----------|
| ETIM 8.0 | EC001855 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 26121600 |
|-------------|----------|



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## Environmental Product Compliance

|            |   |
|------------|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
|            | No hazardous substances above threshold values          |

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## Accessories

### SAC BIT M12-D16 - Tool

1200305

<https://www.phoenixcontact.com/in/products/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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### PROT-M12 FS - Sealing cap

1560251

<https://www.phoenixcontact.com/in/products/1560251>

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



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