

# SAC-4P-M12MST/1,5-PUR/FST SH - Power cable



1409255

<https://www.phoenixcontact.com/us/products/1409255>

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Power cable, 4-position, PUR halogen-free, black RAL 9005, shielded (Advanced Shielding Technology), Plug straight M12, coding: T, on Socket straight M12, coding: T, cable length: 1.5 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
- Shield power reliably – 360° shielding to reduce electromagnetic loads

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1409255                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | BF05                           |
| Product key                          | AF1CCQ                         |
| GTIN                                 | 4046356868037                  |
| Weight per piece (including packing) | 263.3 g                        |
| Weight per piece (excluding packing) | 253.49 g                       |
| Customs tariff number                | 85444290                       |
| Country of origin                    | DE                             |

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## Technical data

### Product properties

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

### Insulation characteristics

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

### Material specifications

|                                        |                              |
|----------------------------------------|------------------------------|
| 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

|                       |                            |
|-----------------------|----------------------------|
| Insulation resistance | $\geq 100 \text{ M}\Omega$ |
| Nominal voltage $U_N$ | 63 V DC                    |
| Nominal current $I_N$ | 12 A                       |

### Mechanical properties

#### Mechanical data

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

### Connector

#### Connection 1

|             |                   |
|-------------|-------------------|
| Type        | Plug straight M12 |
| Coding type | T (Power)         |

#### Connection 2

|             |                     |
|-------------|---------------------|
| Type        | Socket straight M12 |
| Coding type | T (Power)           |

### Cable/line

|              |       |
|--------------|-------|
| Cable length | 1.5 m |
|--------------|-------|

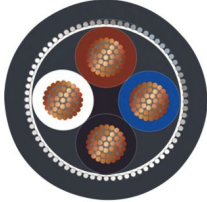
PUR halogen-free black [PUR]

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|                                               |                                                                                                                           |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Dimensional drawing                           |                                         |
| Cable weight                                  | 133 kg/km                                                                                                                 |
| UL AWM Style                                  | 20233 / 10493 (80°C/300 V)                                                                                                |
| Number of positions                           | 4                                                                                                                         |
| Shielded                                      | yes                                                                                                                       |
| Cable type                                    | PUR halogen-free black [PUR]                                                                                              |
| Conductor structure, voltage supply           | 78x 0.15 mm                                                                                                               |
| AWG power supply                              | 16                                                                                                                        |
| Conductor cross section                       | 4x 1.5 mm²                                                                                                                |
| Wire diameter incl. insulation                | 2.4 mm                                                                                                                    |
| External cable diameter                       | 9.70 mm ±0.3 mm                                                                                                           |
| Outer sheath, material                        | PUR                                                                                                                       |
| External sheath, color                        | black RAL 9005                                                                                                            |
| Conductor material                            | Bare Cu litz wires                                                                                                        |
| Material wire insulation                      | PP                                                                                                                        |
| Single wire, color                            | brown, white, blue, black                                                                                                 |
| Thickness, insulation                         | 1.20 mm (Outer cable sheath)                                                                                              |
| Overall twist                                 | 4 wires optimally twisted                                                                                                 |
| Max. conductor resistance                     | ≤ 13.3 Ω/km (at 20 °C)                                                                                                    |
| Insulation resistance                         | ≥ 10 MΩ*km (at 20 °C)                                                                                                     |
| Nominal voltage, cable                        | 300 V AC                                                                                                                  |
| Test voltage                                  | 1500 V AC (5 min.)                                                                                                        |
| Smallest bending radius, fixed installation   | 49 mm                                                                                                                     |
| Smallest bending radius, movable installation | 73 mm                                                                                                                     |
| Dynamic load capacity (bending)               | Max. bending cycles: 4000000, Bending radius: 97 mm, Traversing path: 10 m, Traversing rate: 3 m/s, Acceleration: 10 m/s² |
| Dynamic load capacity (torsion)               | Torsion: ±25 °/m                                                                                                          |
| Halogen-free                                  | in accordance with DIN VDE 0472 part 815<br>according to IEC 60754-1                                                      |
| Flame resistance                              | in accordance with EN 60332-1-2<br>in acc. to UL 1581 VW1                                                                 |
| Resistance to oil                             | in accordance with DIN EN 60811-2-1<br>According to DIN EN 50363-10-2                                                     |
| Ambient temperature (operation)               | -40 °C ... 90 °C (cable, fixed installation)<br>-30 °C ... 90 °C (Cable, flexible installation)                           |

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## Environmental and real-life conditions

### Ambient conditions

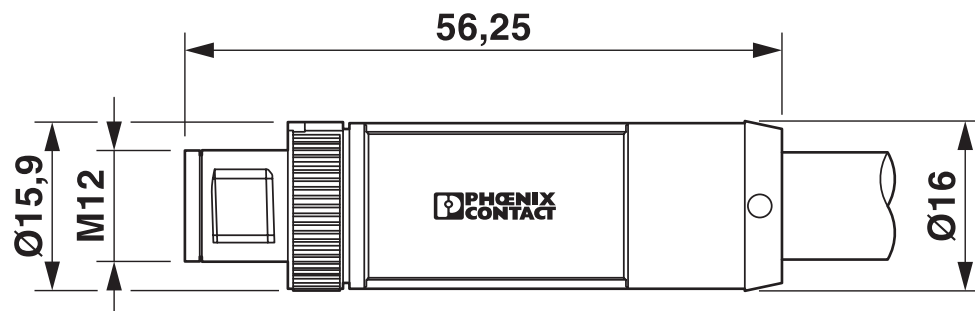
|                                                                   |                                  |
|-------------------------------------------------------------------|----------------------------------|
| Degree of protection                                              | IP65                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

## Standards and regulations

|                          |                 |
|--------------------------|-----------------|
| Standard designation     | M12 connector   |
| Standards/specifications | IEC 61076-2-111 |

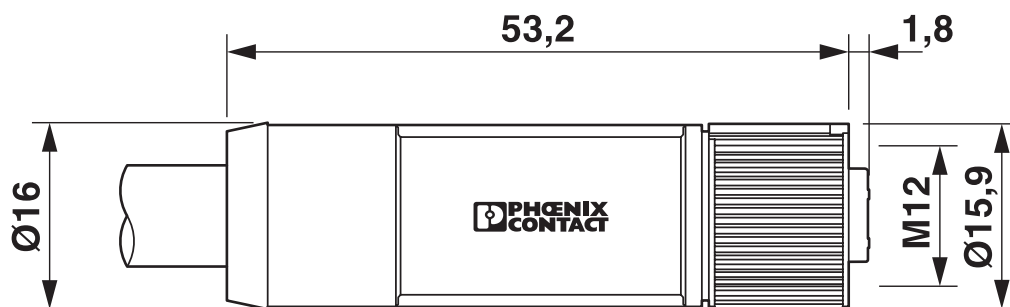
## Drawings

Dimensional drawing



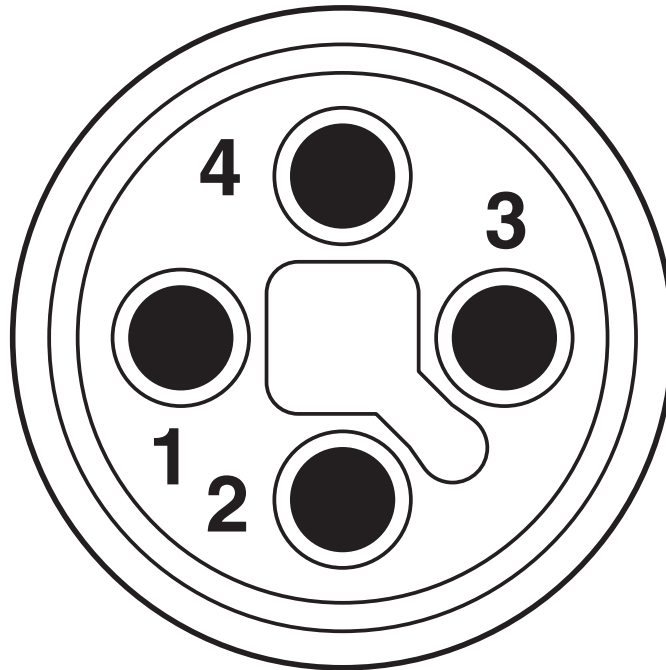
Plug, M12 x 1, straight

Dimensional drawing



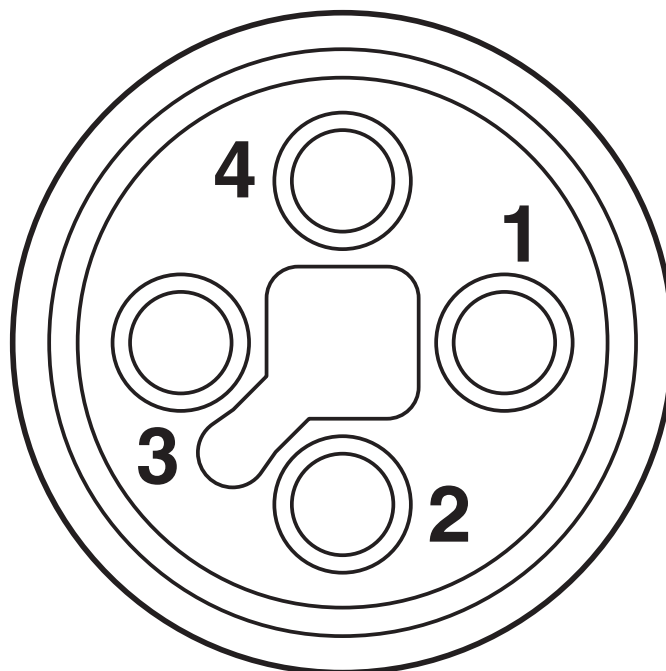
M12 x 1 socket, straight

Schematic diagram

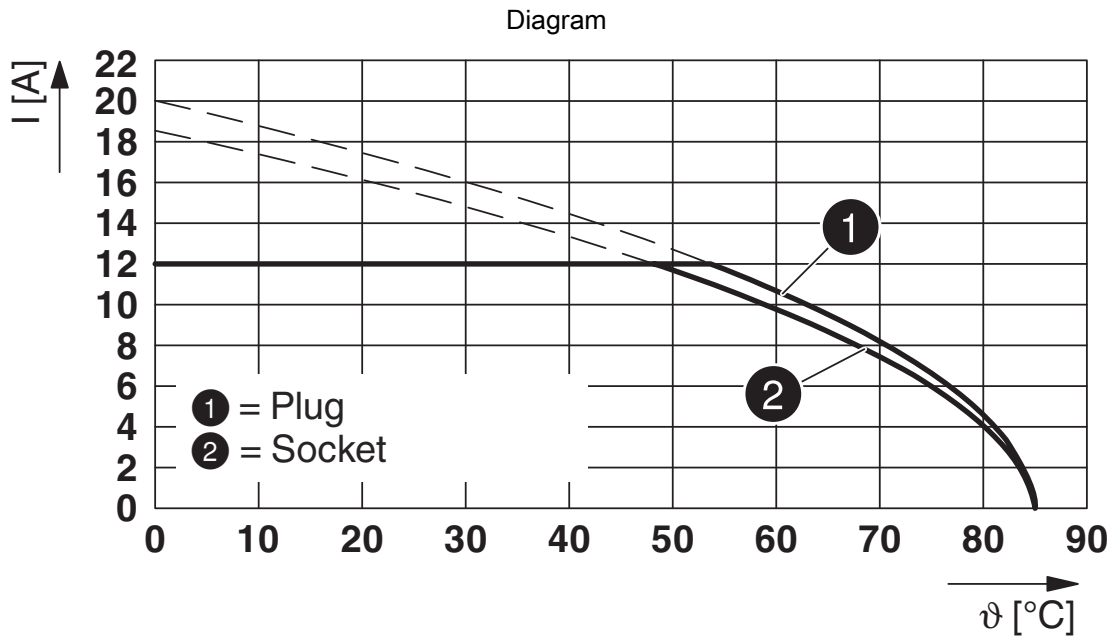


Pin assignment for M12 plug, 4-pos., T-coded, view of plug side

Schematic diagram

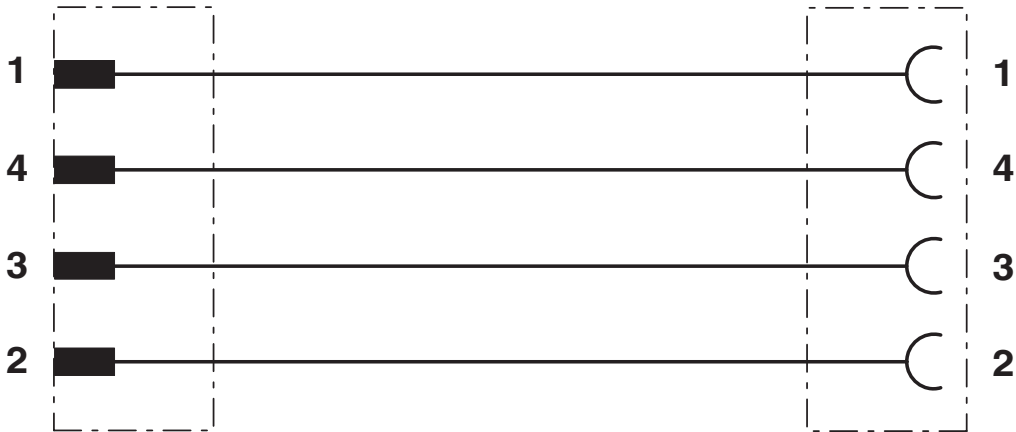


Pin assignment of M12 socket, 4-pos., T-coded, socket side view



Base curve

Circuit diagram



Contact assignment of the M12 connector and the M12 socket

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27060327 |
| ECLASS-15.0 | 27060327 |

### ETIM

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

### UNSPSC

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

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## Environmental product compliance

### EU RoHS

|                                         |                    |
|-----------------------------------------|--------------------|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
|-----------------------------------------|--------------------|

### China RoHS

|                                        |                                          |
|----------------------------------------|------------------------------------------|
| Environment friendly use period (EFUP) | EFUP-E                                   |
|                                        | No hazardous substances above the limits |

### EU REACH SVHC

|                                     |                            |
|-------------------------------------|----------------------------|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

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