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Power cable, 4-position, PUR halogen-free, black RAL 9005, shielded (Tinned copper-braided shield, approx. 85% covering), Advanced Shielding Technology, Plug angled M12, coding: T, on free cable end, 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
- Shield power reliably – 360° shielding to reduce electromagnetic loads
- Our standard: robust halogen-free PUR cable

Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 1424124             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Sales key                            | BF05                |
| Product key                          | BF1CCQ              |
| Catalog page                         | Page 290 (C-2-2019) |
| GTIN                                 | 4046356693288       |
| Weight per piece (including packing) | 250.7 g             |
| Weight per piece (excluding packing) | 22.22 g             |
| Customs tariff number                | 85444290            |
| Country of origin                    | US                  |

# SAC-4P-M12MRT/ 1,5-PUR SH - Power cable



1424124

<https://www.phoenixcontact.com/us/products/1424124>

## Technical data

### Product properties

|                      |              |
|----------------------|--------------|
| Product type         | Power cable  |
| Application          | Power 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 angled M12 |
| Coding type | T (Power)       |

#### Connection 2

|      |                |
|------|----------------|
| Type | free cable end |
|------|----------------|

### Cable/line

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

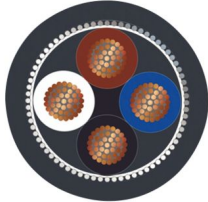
PUR halogen-free black [PUR]

# SAC-4P-M12MRT/ 1,5-PUR SH - Power cable



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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 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   |
| Max. bending cycles                           | 4000000   |
| Torsion force                                 | ± 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) |

## Environmental and real-life conditions

### Ambient conditions

|                      |      |
|----------------------|------|
| Degree of protection | IP65 |
|----------------------|------|

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

Standards and regulations

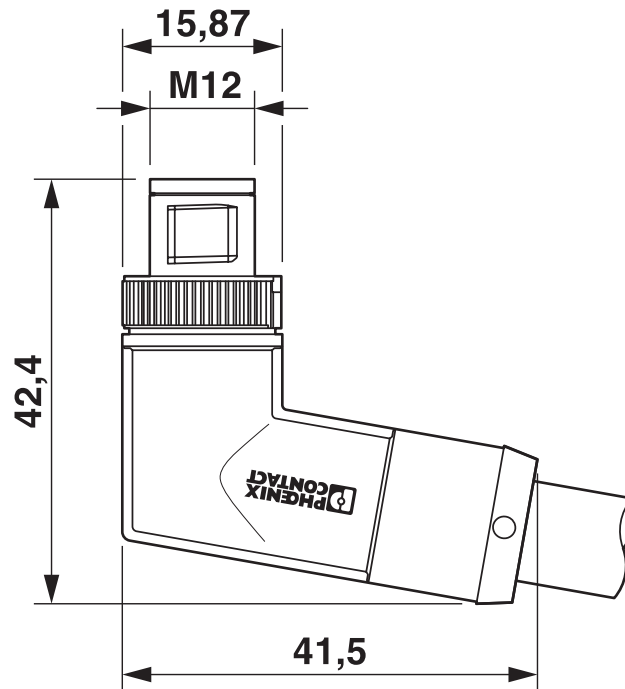
|                          |                 |
|--------------------------|-----------------|
| Standard designation     | M12 connector   |
| Standards/specifications | IEC 61076-2-111 |

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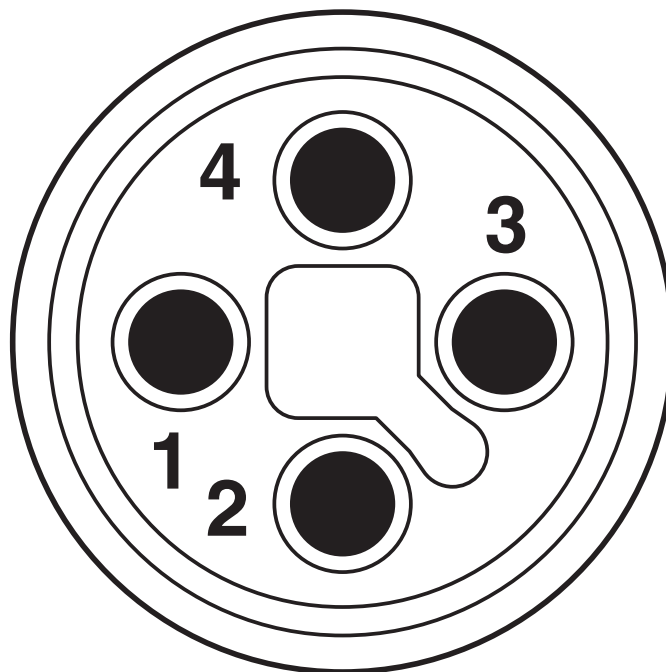
## Drawings

Dimensional drawing



M12 x 1 male plug, angled

Schematic diagram



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

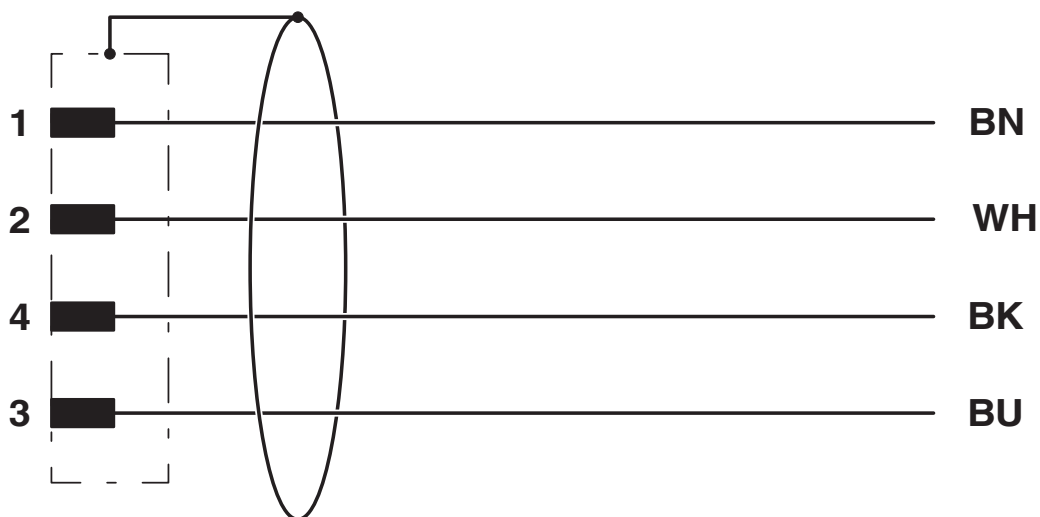
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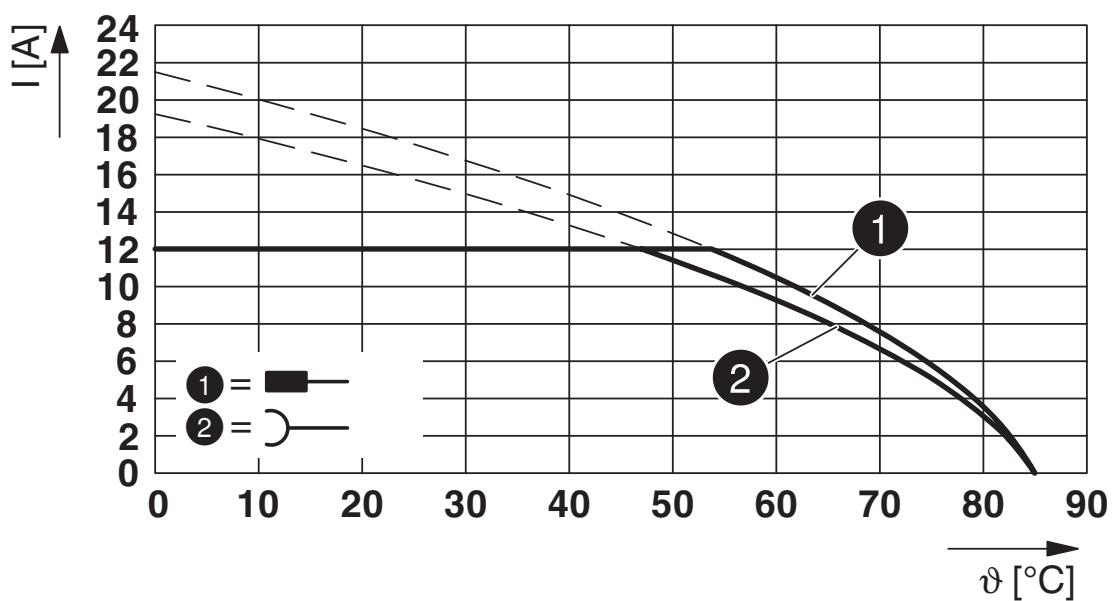
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Circuit diagram



Diagram



Base curve

# SAC-4P-M12MRT/ 1,5-PUR SH - Power cable



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1424124>

|  |  |                                |                   |                               |
|--|--|--------------------------------|-------------------|-------------------------------|
|  | <b>UL Listed</b><br>Approval ID: E468743 |                                |                   |                               |
|  | Nominal voltage U <sub>N</sub>           | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
|  | 63 V                                     | 12 A                           | -                 | - 16                          |

|  |   |                                |                   |                               |
|--|---|--------------------------------|-------------------|-------------------------------|
|  | <b>cUL Listed</b><br>Approval ID: E468743 |                                |                   |                               |
|  | Nominal voltage U <sub>N</sub>            | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
|  | 63 V                                      | 12 A                           | - 16              | -                             |

|  |  |  |  |  |
|--|--|--|--|--|
|  | <b>EAC-RoHS</b><br>Approval ID: RU D-DE.HB35.B.00387 |  |  |  |
|  |  |  |  |  |

|                     |  |  |  |  |
|---------------------|--|--|--|--|
| <b>cULus Listed</b> |  |  |  |  |
|---------------------|--|--|--|--|

# SAC-4P-M12MRT/ 1,5-PUR SH - Power cable



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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27060311 |
| ECLASS-12.0 | 27060311 |
| ECLASS-13.0 | 27060327 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC001855 |
|----------|----------|

### UNSPSC

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



# SAC-4P-M12MRT/ 1,5-PUR SH - Power cable



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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%               |

# SAC-4P-M12MRT/ 1,5-PUR SH - Power cable



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## Accessories

### PROT-M12 FS - Sealing cap

1560251

<https://www.phoenixcontact.com/us/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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### PROT-M12 FS-PA-CHAIN - Sealing cap

1430873

<https://www.phoenixcontact.com/us/products/1430873>



M12 sealing cap made of plastic with fixing band, for sensor cables, for free M12 plugs

# SAC-4P-M12MRT/ 1,5-PUR SH - Power cable

1424124

<https://www.phoenixcontact.com/us/products/1424124>



## WP-EC TPE HF 13,0 BK - Transition sleeve from hose to cable

3240975

<https://www.phoenixcontact.com/us/products/3240975>



Transition sleeve from hose to cable, material: TPE, color: black, flammability rating in acc. with UL 94: HB

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## WP-PA HF 13,0 BK - Protective hose

3240681

<https://www.phoenixcontact.com/us/products/3240681>



Protective hose, material: PA 6, UV-resistant: yes, flexible, degree of protection: IP68, color: black, flammability rating in acc. with UL 94: V0, inner diameter: 10 mm, Total length: 50 m

## SAC-4P-M12MRT/ 1,5-PUR SH - Power cable

1424124

<https://www.phoenixcontact.com/us/products/1424124>



## WP-PA HF-HB 13,0 BK - Protective hose

3240839

<https://www.phoenixcontact.com/us/products/3240839>



Protective hose, material: PA 6, UV-resistant: yes, flexible, degree of protection: IP68, color: black, flammability rating in acc. with UL 94: HB, inner diameter: 10 mm, Total length: 50 m

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## SAC BIT M12-D16 - Tool

1200305

<https://www.phoenixcontact.com/us/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

# SAC-4P-M12MRT/ 1,5-PUR SH - Power cable



1424124

<https://www.phoenixcontact.com/us/products/1424124>

## TSD 04 SAC - Torque screwdriver

1208429

<https://www.phoenixcontact.com/us/products/1208429>



Torque screwdriver, with preset torque of 0.4 Nm and 4 mm hexagonal drive for M12 connectors

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## TSD-M 1,2NM - Torque screwdriver

1212224

<https://www.phoenixcontact.com/us/products/1212224>



Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm

# SAC-4P-M12MRT/ 1,5-PUR SH - Power cable



1424124

<https://www.phoenixcontact.com/us/products/1424124>

## TSD-M SAC-BIT ADAPTER - Adapter insert

1212600

<https://www.phoenixcontact.com/us/products/1212600>



Adapter bit for TSD-M...torque tools, E6.3-1/4" drive with 4 mm hexagon to accommodate SAC bits

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## B-STIFT - Marker pen

1051993

<https://www.phoenixcontact.com/us/products/1051993>



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

# SAC-4P-M12MRT/ 1,5-PUR SH - Power cable



1424124

<https://www.phoenixcontact.com/us/products/1424124>

## CUTFOX-S VDE - Diagonal cutter

1212207

<https://www.phoenixcontact.com/us/products/1212207>



Diagonal cutter for hard (piano wire) and soft wires, VDE 1000 V AC/1500 V DC tested

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## WIREFOX-D 16 - Stripping tool

1212173

<https://www.phoenixcontact.com/us/products/1212173>



Stripping tool, for stripping lines (specially for fiber optics lines) of Ø 4 - 16 mm

# SAC-4P-M12MRT/ 1,5-PUR SH - Power cable



1424124

<https://www.phoenixcontact.com/us/products/1424124>

## WIREFOX-D 40 - Stripping tool

1212161

<https://www.phoenixcontact.com/us/products/1212161>



Stripping tool, for stripping cables of 4.5 mm - 40 mm-Ø, insulation thickness of up to 4.5 mm, pivoting blade for round, lengthwise, and spiral cuts

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## WIREFOX 10 - Stripping tool

1212150

<https://www.phoenixcontact.com/us/products/1212150>



Stripping tool, for cables and conductors from 0.02 - 10 mm<sup>2</sup>, self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm<sup>2</sup> stranded/1.5 mm<sup>2</sup> solid, replaceable stripping blade

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