

1019901  
<https://www.phoenixcontact.com/us/products/1019901>

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Power cable, 4-position, PUR halogen-free, black RAL 9005, shielded (Advanced Shielding Technology), free cable end, on Socket angled M12, coding: T, cable length: 15 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                          | 1019901                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | BF05                           |
| Product key                          | BF1CCQ                         |
| GTIN                                 | 4055626507484                  |
| Weight per piece (including packing) | 2,180 g                        |
| Weight per piece (excluding packing) | 2,098.6 g                      |
| Customs tariff number                | 85444290                       |
| Country of origin                    | PL                             |

# SAC-4P-15,0-PUR/M12FRT SH - Power cable



1019901

<https://www.phoenixcontact.com/us/products/1019901>

## 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 | free cable end |
|------|----------------|

#### Connection 2

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

### Cable/line

|              |      |
|--------------|------|
| Cable length | 15 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 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                                                                                         |
| Bending radius                                | 97 mm                                                                                           |
| Traversing path                               | 10 m                                                                                            |
| Traversing rate                               | 3 m/s                                                                                           |
| Acceleration                                  | 10 m/s²                                                                                         |
| 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) |

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## Environmental and real-life conditions

### Ambient conditions

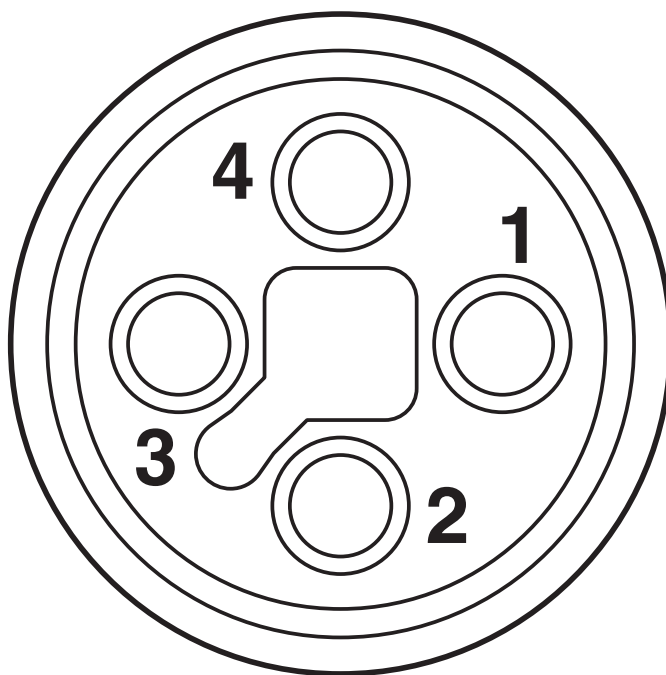
|                                 |                                  |
|---------------------------------|----------------------------------|
| Degree of protection            | IP65                             |
|                                 | IP67                             |
| Ambient temperature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

## Standards and regulations

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

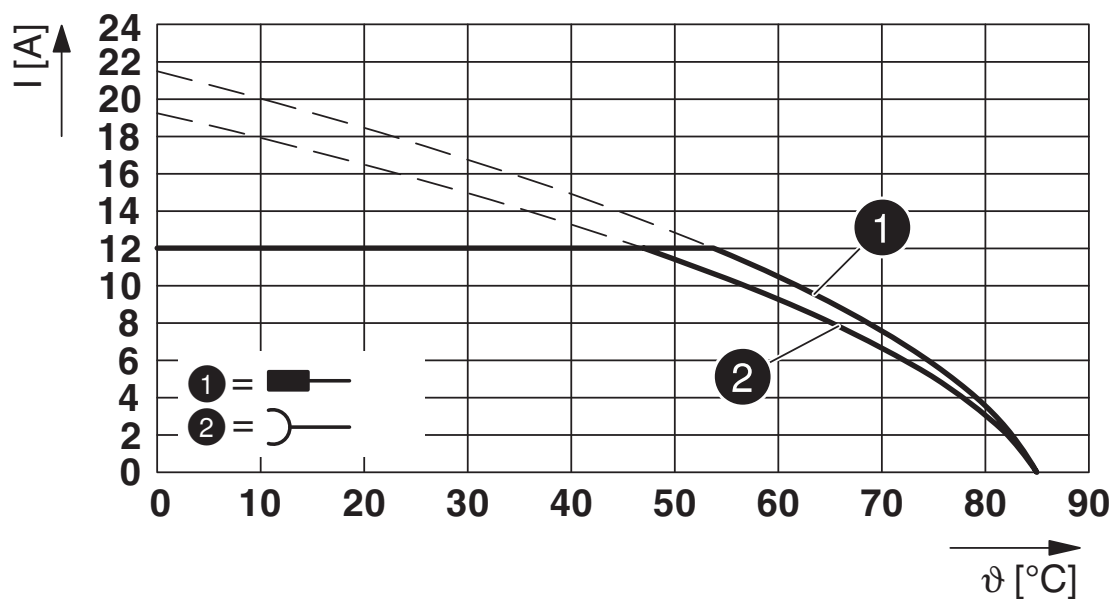
## Drawings

Schematic diagram



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

Diagram



Base curve

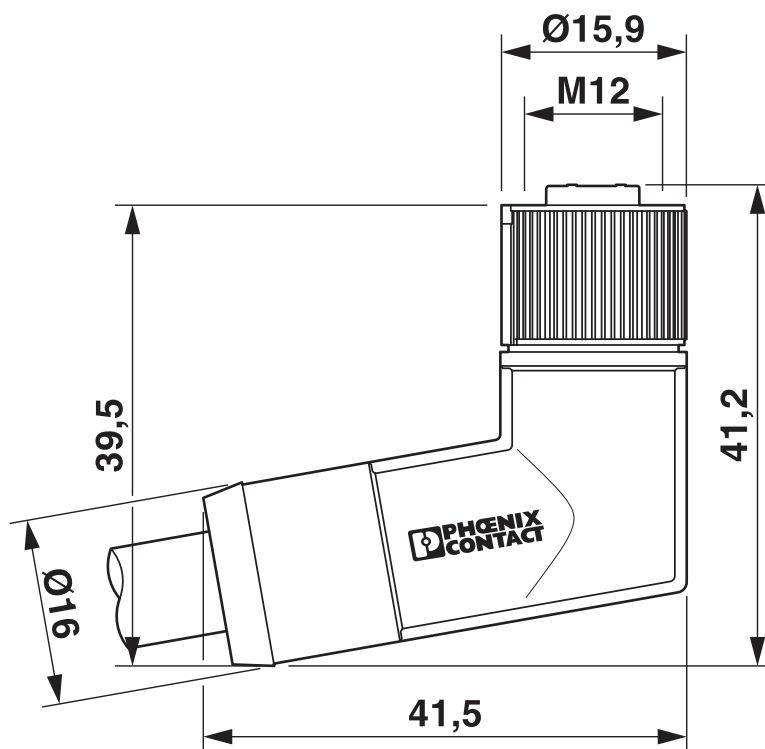
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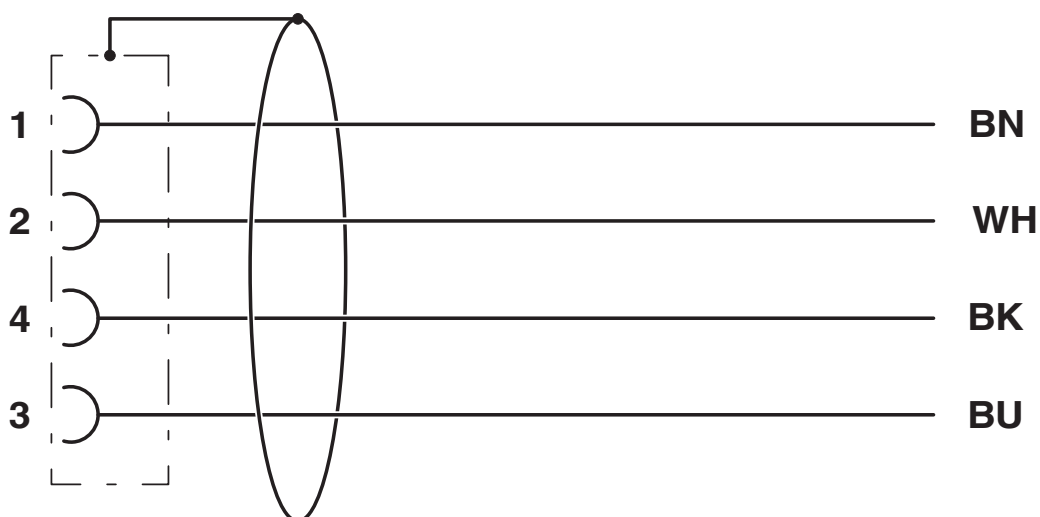


Dimensional drawing



M12 x 1 socket, angled

Circuit diagram



# SAC-4P-15,0-PUR/M12FRT SH - Power cable



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1019901>

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

# SAC-4P-15,0-PUR/M12FRT SH - Power cable



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## Classifications

### ECLASS

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

### ETIM

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

### UNSPSC

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

# SAC-4P-15,0-PUR/M12FRT 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% |
|-------------------------------------|----------------------------|

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## Accessories

### PROT-M12 MS-PA-CHAIN - Screw plug

1430899

<https://www.phoenixcontact.com/us/products/1430899>

M12 sealing cap with fixing band, for sensor cables, for free M12 sockets



### UCT-WMT (23X4) - Conductor marker

0801453

<https://www.phoenixcontact.com/us/products/0801453>



Conductor marker, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: insert, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 30

# SAC-4P-15,0-PUR/M12FRT SH - Power cable



1019901

<https://www.phoenixcontact.com/us/products/1019901>

## UC-WMT (23X4) - Conductor marker

0819411

<https://www.phoenixcontact.com/us/products/0819411>



Conductor marker, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: insert, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 24

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## US-WMT (23X4) - Cable marker

0828769

<https://www.phoenixcontact.com/us/products/0828769>



Cable marker, Card, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: slide-on, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 56

## SAC-4P-15,0-PUR/M12FRT SH - Power cable

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<https://www.phoenixcontact.com/us/products/1019901>



## WMTW (23X4)R - Cable marker

0831004

<https://www.phoenixcontact.com/us/products/0831004>



Cable marker, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: insert, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 3000

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## 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

## SAC-4P-15,0-PUR/M12FRT SH - Power cable

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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

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## 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

## SAC-4P-15,0-PUR/M12FRT SH - Power cable

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<https://www.phoenixcontact.com/us/products/1019901>



## 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

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## 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

# SAC-4P-15,0-PUR/M12FRT SH - Power cable



1019901

<https://www.phoenixcontact.com/us/products/1019901>

## 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

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## 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

## SAC-4P-15,0-PUR/M12FRT SH - Power cable

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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

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## 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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<https://www.phoenixcontact.com/us/products/1019901>

## 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

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## 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

# SAC-4P-15,0-PUR/M12FRT SH - Power cable



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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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