

# SAC-4P-M12MRT/ 2,0-110 - Power cable



1089961

<https://www.phoenixcontact.com/us/products/1089961>

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Power cable, 4-position, PVC, black-gray RAL 7021, Plug angled M12, coding: T, on free cable end, cable length: 2 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

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1089961                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | BF05                           |
| Product key                          | BF1CCQ                         |
| Catalog page                         | Page 291 (C-2-2019)            |
| GTIN                                 | 4055626898537                  |
| Weight per piece (including packing) | 241 g                          |
| Weight per piece (excluding packing) | 22.22 g                        |
| Customs tariff number                | 85444290                       |
| Country of origin                    | PL                             |

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## Technical data

### Product properties

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

### Data management status

|                  |    |
|------------------|----|
| Article revision | 03 |
|------------------|----|

### 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 | 2 m |
|--------------|-----|

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PVC 1.5 mm² black [110]

|                                               |                                                                                                                            |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Dimensional drawing                           |                                          |
| Cable weight                                  | 108 kg/km                                                                                                                  |
| UL AWM Style                                  | 20233 / 10493 (80°C/300 V)                                                                                                 |
| Number of positions                           | 4                                                                                                                          |
| Shielded                                      | no                                                                                                                         |
| Cable type                                    | PVC 1.5 mm² black [110]                                                                                                    |
| Conductor cross section                       | 4x 1.5 mm²                                                                                                                 |
| Wire diameter incl. insulation                | 2.35 mm ±0.05 mm                                                                                                           |
| External cable diameter                       | 7.55 mm ±0.25 mm                                                                                                           |
| Outer sheath, material                        | PVC                                                                                                                        |
| External sheath, color                        | black-gray RAL 7021                                                                                                        |
| Conductor material                            | Bare Cu litz wires                                                                                                         |
| Material wire insulation                      | PVC                                                                                                                        |
| Single wire, color                            | brown, white, blue, black                                                                                                  |
| Thickness, insulation                         | ≥ 0.25 mm                                                                                                                  |
| Thickness, outer sheath                       | approx. 1.30 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                                                                                                                     |
| Smallest bending radius, fixed installation   | 38 mm                                                                                                                      |
| Smallest bending radius, movable installation | 76 mm                                                                                                                      |
| Dynamic load capacity (bending)               | Max. bending cycles: 2000000, Bending radius: 10 x D, Traversing path: 10 m, Traversing rate: 3 m/s, Acceleration: 10 m/s² |
| 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 60811-404, 168 h at 60 °C                                                                              |
| Ambient temperature (operation)               | -40 °C ... 80 °C (cable, fixed installation)<br>-20 °C ... 80 °C (Cable, flexible installation)                            |

## Environmental and real-life conditions

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## 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 |

# SAC-4P-M12MRT/ 2,0-110 - Power cable

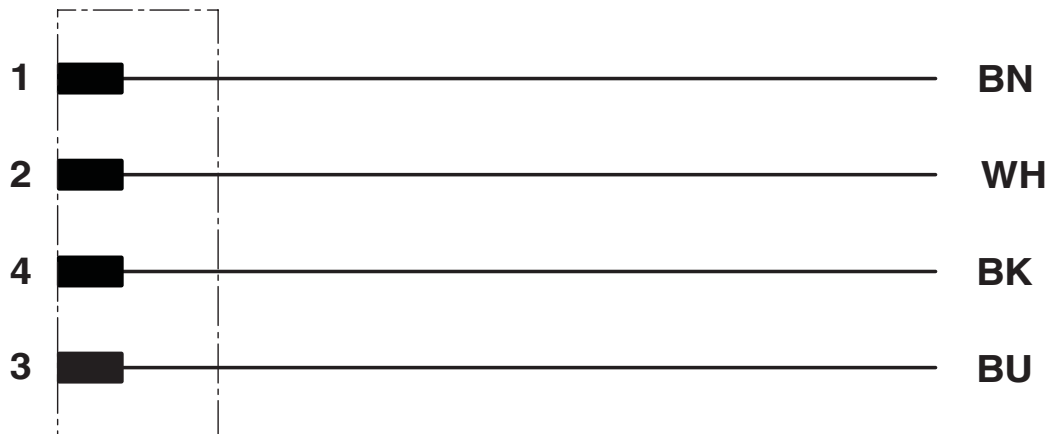


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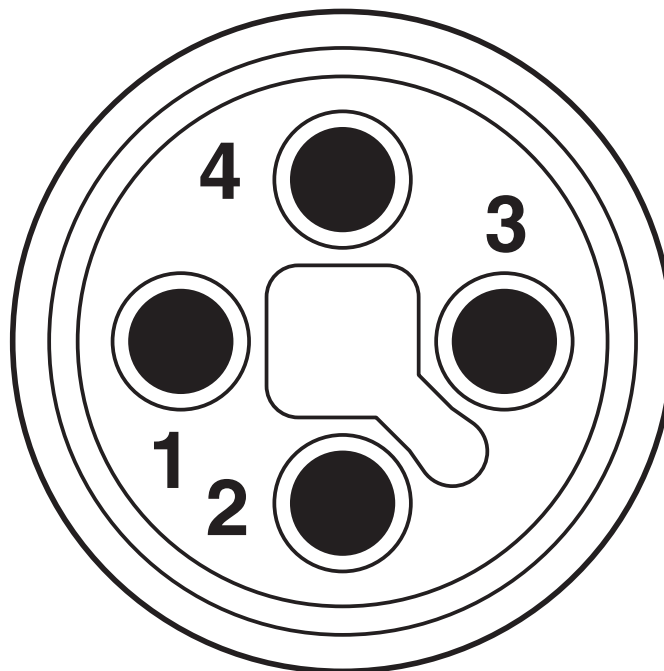
## Drawings

Circuit diagram



Contact assignment of the M12 plug

Schematic diagram



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

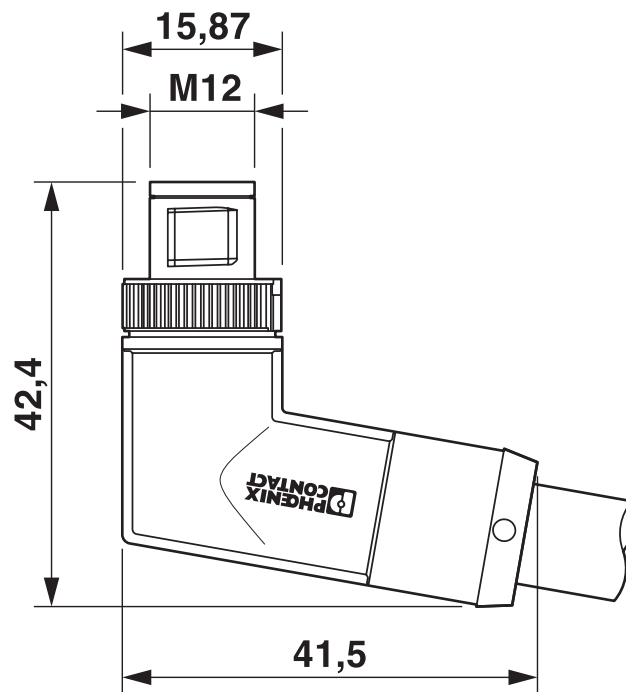
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Dimensional drawing



M12 x 1 male plug, angled

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1089961>

|  |                                          |                                |                   |                               |
|--|------------------------------------------|--------------------------------|-------------------|-------------------------------|
|  | <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                          |

|  |                                           |                                |                   |                               |
|--|-------------------------------------------|--------------------------------|-------------------|-------------------------------|
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|  | 63 V                                      | 12 A                           | - 16              | -                             |

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

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

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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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