

# SAC-4P-M12MST/ 1,0-110 - Power cable



1089952

<https://www.phoenixcontact.com/us/products/1089952>

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Power cable, 4-position, PVC, 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

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1089952       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | BF05          |
| Product key                          | AF1CCQ        |
| GTIN                                 | 4055626897387 |
| Weight per piece (including packing) | 129 g         |
| Weight per piece (excluding packing) | 129 g         |
| Customs tariff number                | 85444290      |
| Country of origin                    | PL            |

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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             | no            |
| 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 | free cable end |
|------|----------------|

### Cable/line

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

PVC 1.5 mm<sup>2</sup> black [110]

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|   |  |
|---|--|
| 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 mm <sup>2</sup> black [110]  |
| Conductor structure, voltage supply           | 78x 0.15 mm  |
| AWG power supply                              | 16   |
| Conductor cross-section                       | 4x 1.5 mm <sup>2</sup>   |
| 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/s <sup>2</sup> |
| 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) (male connector/female connector) | -25 °C ... 85 °C (Plug / socket) |

## Standards and regulations

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

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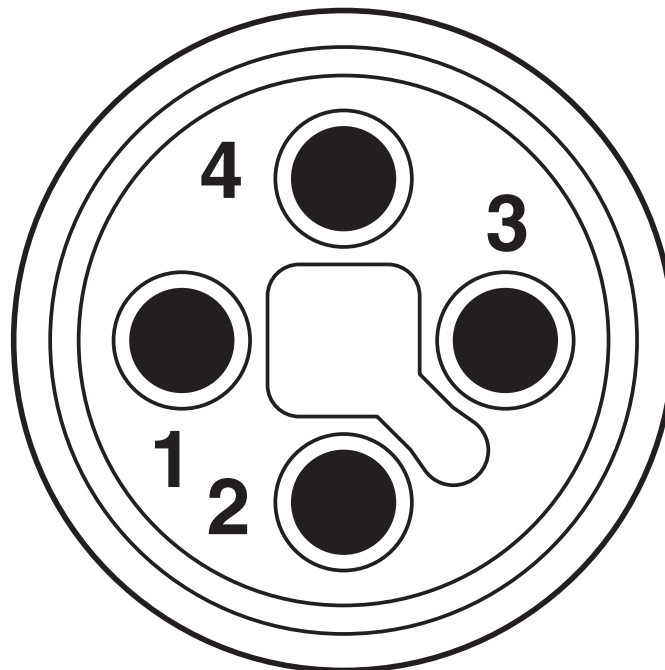
<https://www.phoenixcontact.com/us/products/1089952>

## Drawings



Plug, M12 x 1, straight

Schematic diagram



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

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Circuit diagram



Contact assignment of the M12 plug

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## Approvals

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|  <b>UL Listed</b><br>Approval ID: E468743 |                       |                       |                   |                             |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine  |                       |                       |                   |                             |
|  | 63 V                  | 12 A                  | - 16              | - 16                        |

|  <b>cUL Listed</b><br>Approval ID: E468743 |                       |                       |                   |                             |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
|   | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine   |                       |                       |                   |                             |
|   | 63 V                  | 12 A                  | - 16              | -                           |

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## Classifications

### ECLASS

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

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | 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% |
|-------------------------------------|----------------------------|

### EF3.1 Climate Change

|         |              |
|---------|--------------|
| CO2e kg | 1.81 kg CO2e |
|---------|--------------|

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