

# SAC-6P-M12MRM/ 5,0-PUR PE SH - Power cable



1414942

<https://www.phoenixcontact.com/gb/products/1414942>

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Power cable, 6-position, PUR halogen-free, orange RAL 2003, shielded (Advanced Shielding Technology), Plug angled M12, coding: M, on free cable end, cable length: 5 m, for AC current up to 8 A/690 V

## Your advantages

- Easy and safe: 100 % electrically tested plug-in components
- Protection against mismatching, thanks to special M-coding
- Shield power reliably – 360° shielding to reduce electromagnetic loads
- Our standard: robust halogen-free PUR cable

## Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 1414942             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Sales key                            | BF1CGP              |
| Product key                          | BF1CGP              |
| Catalog page                         | Page 298 (C-2-2019) |
| GTIN                                 | 4055626035697       |
| Weight per piece (including packing) | 886.21 g            |
| Weight per piece (excluding packing) | 886.21 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  | 6            |
| No. of cable outlets | 1            |
| Shielded             | yes          |
| Coding               | M            |

### Data management status

|                  |    |
|------------------|----|
| Article revision | 05 |
|------------------|----|

### 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 $U_N$ | 690 V AC                   |
| Nominal current $I_N$ | 8 A                        |

### Connector

#### Connection 1

|             |                 |
|-------------|-----------------|
| Type        | Plug angled M12 |
| Coding type | M (Power)       |

#### Connection 2

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

### Cable/line

|              |     |
|--------------|-----|
| Cable length | 5 m |
|--------------|-----|

PUR halogen-free orange shielded [PUR]

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|                                               |                                                                                                                                        |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Dimensional drawing                           |                                                                                                                                        |
| Cable weight                                  | 144 kg/km                                                                                                                              |
| UL AWM Style                                  | 20234 / 10492 (80°C/1000 V)                                                                                                            |
| Number of positions                           | 6                                                                                                                                      |
| Shielded                                      | yes                                                                                                                                    |
| Cable type                                    | PUR halogen-free orange shielded [PUR]                                                                                                 |
| Conductor cross section                       | 6x 1.5 mm <sup>2</sup>                                                                                                                 |
| Wire diameter incl. insulation                | 2.35 mm ±0.05 mm                                                                                                                       |
| External cable diameter                       | 10.40 mm ±0.3 mm                                                                                                                       |
| Outer sheath, material                        | PUR                                                                                                                                    |
| External sheath, color                        | orange RAL 2003                                                                                                                        |
| Conductor material                            | Bare Cu litz wires                                                                                                                     |
| Material wire insulation                      | PP                                                                                                                                     |
| Single wire, color                            | black 1, black 2, black 3, black 4, black 5, green/yellow                                                                              |
| Thickness, insulation                         | ≥ 0.36 mm                                                                                                                              |
| Thickness, outer sheath                       | approx. 1.15 mm                                                                                                                        |
| Max. conductor resistance                     | ≤ 15 Ω/m (at 20 °C)                                                                                                                    |
| Insulation resistance                         | ≥ 1 GΩ*km (at 20 °C)                                                                                                                   |
| Nominal voltage, cable                        | ≤ 1000 V AC                                                                                                                            |
| Test voltage                                  | ≥ 10000 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   | 52 mm                                                                                                                                  |
| Smallest bending radius, movable installation | 104 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> |
| Halogen-free                                  | in accordance with DIN VDE 0472 part 815<br>in accordance with DIN EN 50267-2-1                                                        |
| 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 100 °C                                                                                         |
| Other resistance                              | Hydrolysis and microbe resistant as per VDE 0282 section 10<br>Low adhesion<br>abrasion-resistant<br>Resistant to salt water           |

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|                                 |                                                 |
|---------------------------------|-------------------------------------------------|
| Ambient temperature (operation) | -50 °C ... 80 °C (cable, fixed installation)    |
|                                 | -30 °C ... 80 °C (Cable, flexible installation) |

## Environmental and real-life conditions

### Ambient conditions

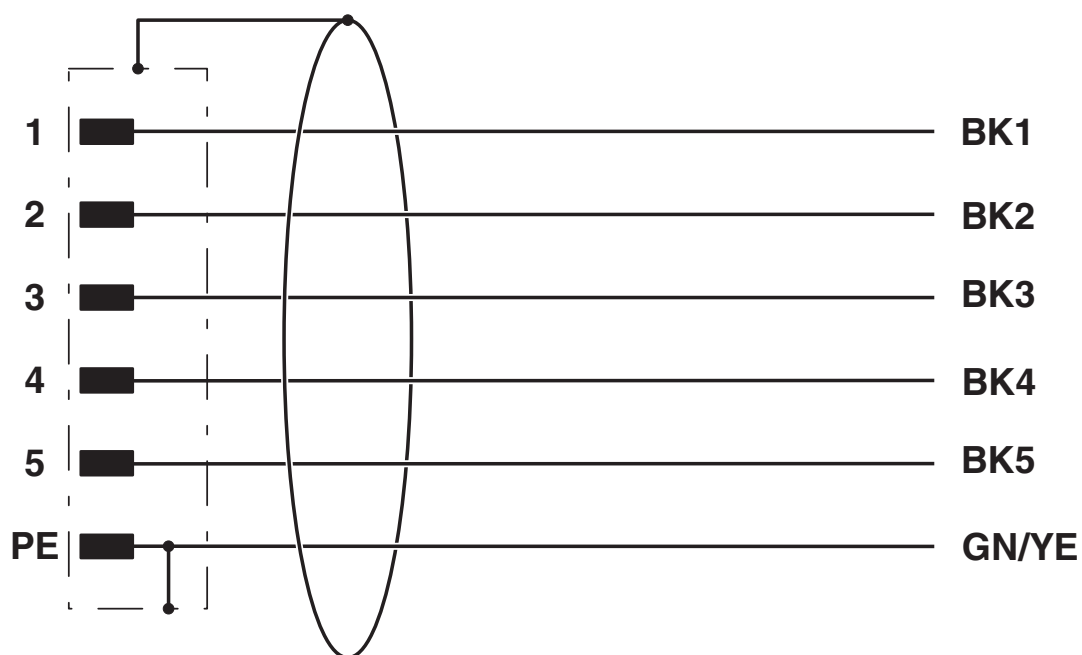
|                                 |                                                                            |
|---------------------------------|----------------------------------------------------------------------------|
| Degree of protection            | IP65                                                                       |
|                                 | IP67 (without preloading, as additional test in accordance with IEC 60529) |
| Ambient temperature (operation) | -25 °C ... 85 °C (Plug / socket)                                           |

## Standards and regulations

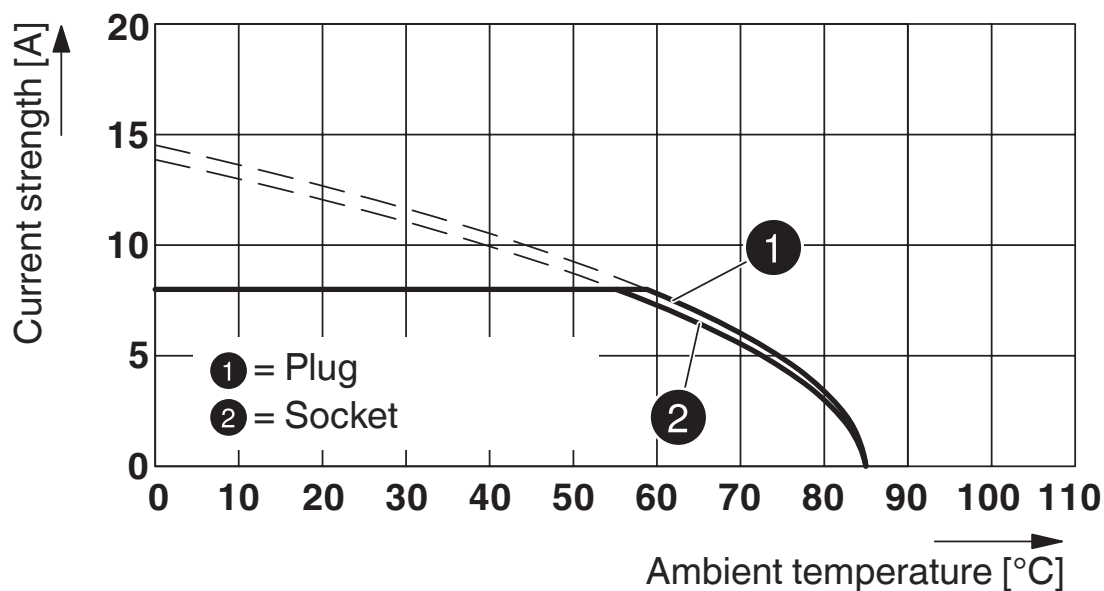
|                          |                 |
|--------------------------|-----------------|
| Standard designation     | M12 connector   |
| Standards/specifications | IEC 61076-2-111 |

## Drawings

Circuit diagram



Diagram



Current carrying capacity

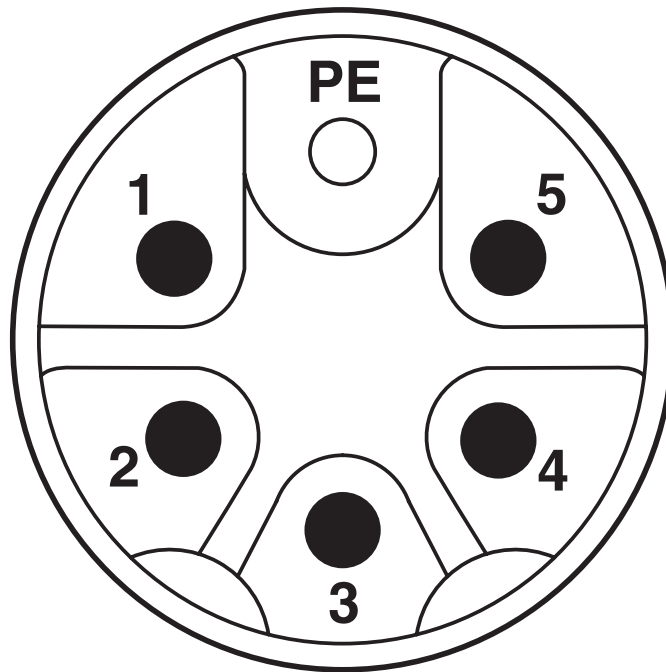
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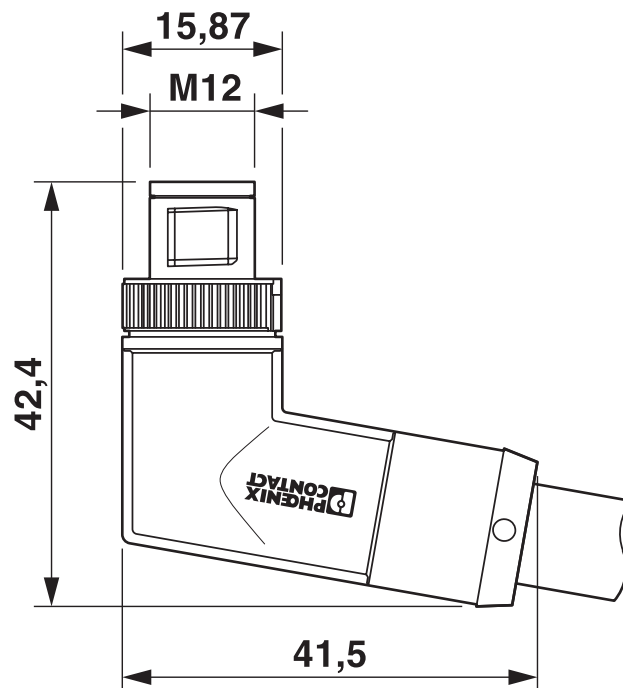


Schematic diagram



Pin assignment of M12 connector, 6-pos., M-coded, pin side view

Dimensional drawing



M12 x 1 male plug, angled

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## Approvals

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|  |                                          |                                |                   |                               |
|--|------------------------------------------|--------------------------------|-------------------|-------------------------------|
|  | <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> |
|  | 600 V                                    | 10 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> |
|  | 600 V                                     | 10 A                           | - 16              | -                             |

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

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