

# SAC-6P-M12MRM/ 3,0-PVC PE SH - Power cable



1414940

<https://www.phoenixcontact.com/us/products/1414940>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Power cable, 6-position, PVC, orange RAL 2003, shielded (Advanced Shielding Technology), Plug angled M12, coding: M, on free cable end, cable length: 3 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

## Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 1414940             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Sales key                            | BF05                |
| Product key                          | BF1CGP              |
| Catalog page                         | Page 299 (C-2-2019) |
| GTIN                                 | 4055626035673       |
| Weight per piece (including packing) | 644.45 g            |
| Weight per piece (excluding packing) | 644.45 g            |
| Customs tariff number                | 85444290            |
| Country of origin                    | PL                  |

# SAC-6P-M12MRM/ 3,0-PVC PE SH - Power cable



1414940

<https://www.phoenixcontact.com/us/products/1414940>

## Technical data

### Product properties

|                      |              |
|----------------------|--------------|
| Product type         | Power cable  |
| Application          | Power supply |
| Number of positions  | 6            |
| No. of cable outlets | 1            |
| Shielded             | yes          |
| Coding               | M            |

### 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 | 3 m |
|--------------|-----|

PVC orange [PVC]

# SAC-6P-M12MRM/ 3,0-PVC PE SH - Power cable



1414940

<https://www.phoenixcontact.com/us/products/1414940>

|                                                 |                                                                                                         |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| Dimensional drawing                             |                                                                                                         |
| Cable weight                                    | 192 kg/km                                                                                               |
| UL AWM Style                                    | 2570 / 10914 (80°C/1000 V)                                                                              |
| Number of positions                             | 6                                                                                                       |
| Shielded                                        | yes                                                                                                     |
| Cable type                                      | PVC orange [PVC]                                                                                        |
| Conductor cross section                         | 6x 1.5 mm²                                                                                              |
| Wire diameter incl. insulation                  | 2.4 mm ±0.05 mm                                                                                         |
| External cable diameter                         | 10.40 mm ±0.25 mm                                                                                       |
| Outer sheath, material                          | PVC                                                                                                     |
| External sheath, color                          | orange RAL 2003                                                                                         |
| Conductor material                              | Bare Cu litz wires                                                                                      |
| Material wire insulation                        | PVC                                                                                                     |
| Single wire, color                              | black 1, black 2, black 3, black 4, black 5, green/yellow                                               |
| Thickness, insulation                           | ≥ 0.36 mm                                                                                               |
| Thickness, outer sheath                         | approx. 0.76 mm                                                                                         |
| Max. conductor resistance                       | ≤ 15 Ω/m (at 20 °C)                                                                                     |
| Insulation resistance                           | ≥ 100 MΩ*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                                                                                                  |
| Max. bending cycles                             | 1000000                                                                                                 |
| Minimum bending radius, drag chain applications | 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

# SAC-6P-M12MRM/ 3,0-PVC PE SH - Power cable



1414940

<https://www.phoenixcontact.com/us/products/1414940>

## 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 |

# SAC-6P-M12MRM/ 3,0-PVC PE SH - Power cable

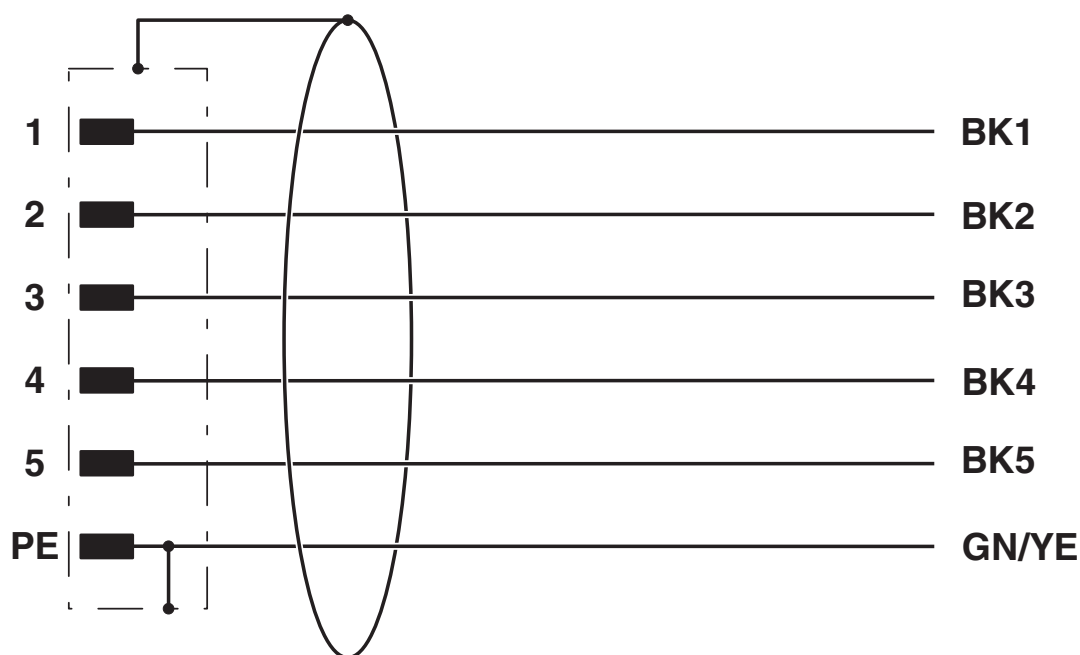
1414940

<https://www.phoenixcontact.com/us/products/1414940>

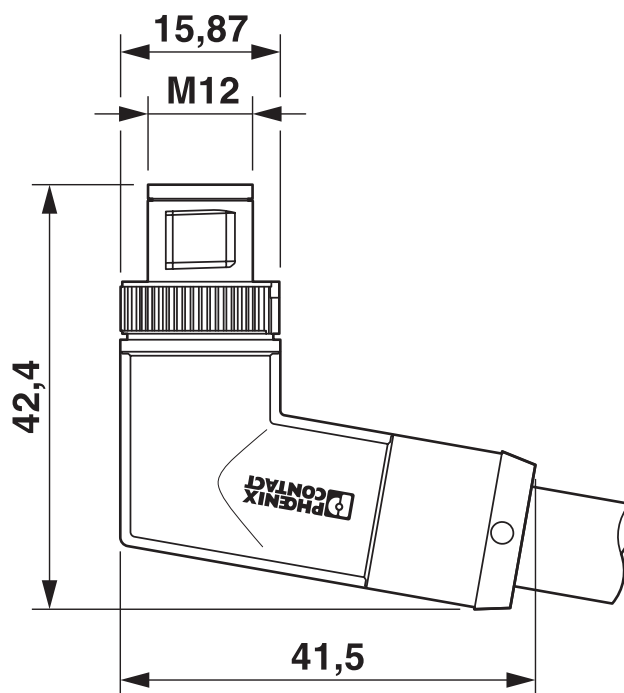


## Drawings

Circuit diagram

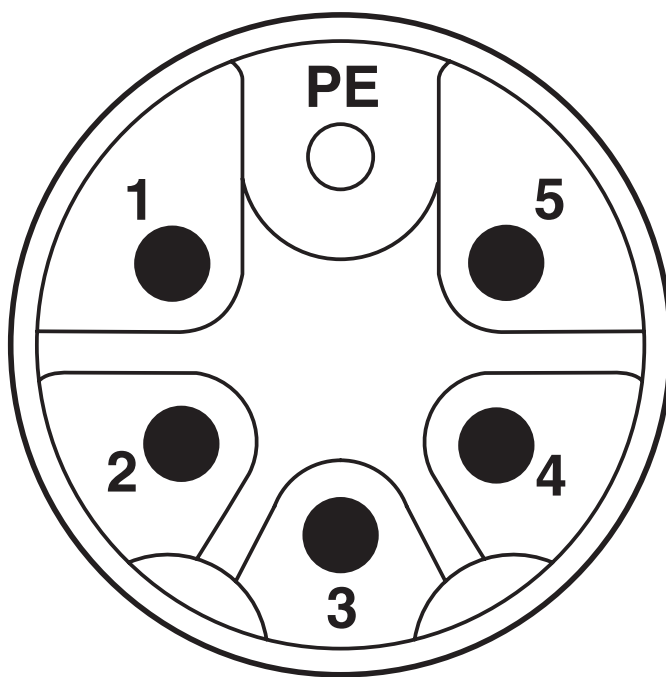


Dimensional drawing



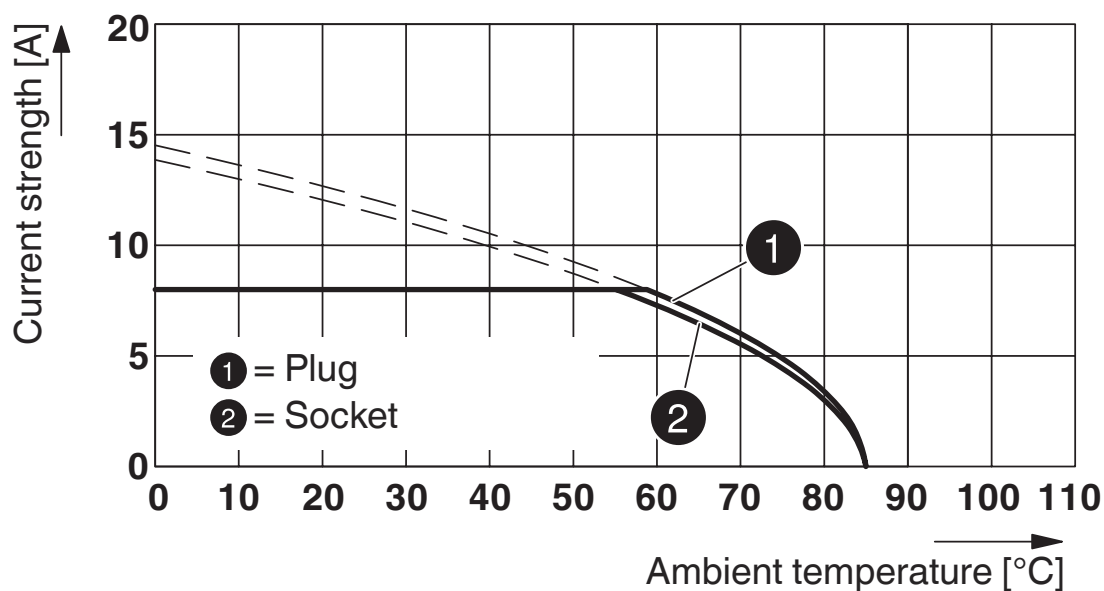
M12 x 1 male plug, angled

Schematic diagram



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

Diagram



Current carrying capacity

# SAC-6P-M12MRM/ 3,0-PVC PE SH - Power cable



1414940

<https://www.phoenixcontact.com/us/products/1414940>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1414940>

|  |                                          |                       |                   |                             |
|--|------------------------------------------|-----------------------|-------------------|-----------------------------|
|  | <b>UL Listed</b><br>Approval ID: E468743 |                       |                   |                             |
|  | Nominal voltage $U_N$                    | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|  | 600 V                                    | 10 A                  | -                 | - 16                        |

|  |                                           |                       |                   |                             |
|--|-------------------------------------------|-----------------------|-------------------|-----------------------------|
|  | <b>cUL Listed</b><br>Approval ID: E468743 |                       |                   |                             |
|  | Nominal voltage $U_N$                     | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|  | 600 V                                     | 10 A                  | - 16              | -                           |

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

# SAC-6P-M12MRM/ 3,0-PVC PE SH - Power cable



1414940

<https://www.phoenixcontact.com/us/products/1414940>

## 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-6P-M12MRM/ 3,0-PVC PE SH - Power cable



1414940

<https://www.phoenixcontact.com/us/products/1414940>

## 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-6P-M12MRM/ 3,0-PVC PE SH - Power cable



1414940

<https://www.phoenixcontact.com/us/products/1414940>

## 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

---

### 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-6P-M12MRM/ 3,0-PVC PE SH - Power cable



1414940

<https://www.phoenixcontact.com/us/products/1414940>

## 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

---

## 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-6P-M12MRM/ 3,0-PVC PE SH - Power cable

1414940

<https://www.phoenixcontact.com/us/products/1414940>



## 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

---

## 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-6P-M12MRM/ 3,0-PVC PE SH - Power cable

1414940

<https://www.phoenixcontact.com/us/products/1414940>



## 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

---

## 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-6P-M12MRM/ 3,0-PVC PE SH - Power cable

1414940

<https://www.phoenixcontact.com/us/products/1414940>



## 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 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-6P-M12MRM/ 3,0-PVC PE SH - Power cable



1414940

<https://www.phoenixcontact.com/us/products/1414940>

## 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

---

## 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-6P-M12MRM/ 3,0-PVC PE SH - Power cable

1414940

<https://www.phoenixcontact.com/us/products/1414940>



## 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

---

## 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-6P-M12MRM/ 3,0-PVC PE SH - Power cable

1414940

<https://www.phoenixcontact.com/us/products/1414940>



## 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

---

## 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-6P-M12MRM/ 3,0-PVC PE SH - Power cable



1414940

<https://www.phoenixcontact.com/us/products/1414940>

## 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

---

## 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

---

Phoenix Contact 2024 © - all rights reserved  
<https://www.phoenixcontact.com>

Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)