

# SAC-3P- 2,0-PVC/M12FRS PE - Power cable



1411649

<https://www.phoenixcontact.com/us/products/1411649>

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Power cable, 3-position, PVC, black, free cable end, on Socket angled M12, coding: S, cable length: 2 m, For alternating current up to 16 A/690 V

## Your advantages

- Easy and safe: 100 % electrically tested plug-in components
- Protection against incorrect connection using special S-coding

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1411649       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | BF05          |
| Product key                          | AF1CBB        |
| GTIN                                 | 4046356936750 |
| Weight per piece (including packing) | 192.4 g       |
| Weight per piece (excluding packing) | 192.4 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  | 3             |
| No. of cable outlets | 1             |
| Shielded             | no            |
| Coding               | S             |

### 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 $I_N$ | 16 A                       |

### Mechanical properties

#### Mechanical data

|                             |       |
|-----------------------------|-------|
| Insertion/withdrawal cycles | > 100 |
|-----------------------------|-------|

### Connector

#### Connection 1

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

#### Connection 2

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

### Cable/line

|              |     |
|--------------|-----|
| Cable length | 2 m |
|--------------|-----|

PVC black [PVC]

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|   |  |
|---|--|
| Dimensional drawing                           |                  |
| Cable weight                                  | 80 kg/km   |
| UL AWM Style                                  | 2517 (105 °C / 300 V)  |
| Number of positions                           | 3  |
| Shielded                                      | no   |
| Cable type                                    | PVC black [PVC]  |
| Conductor structure, voltage supply           | 30x 0.25 mm  |
| AWG power supply                              | 16   |
| Conductor cross-section                       | 3x 1.5 mm <sup>2</sup>   |
| Wire diameter incl. insulation                | 2.4 mm ±0.1 mm   |
| External cable diameter                       | 6.80 mm ±0.2 mm  |
| Outer sheath, material                        | PVC  |
| External sheath, color                        | black  |
| Conductor material                            | Bare Cu litz wires   |
| Material wire insulation                      | PVC  |
| Single wire, color                            | black 1, black 2, green/yellow   |
| Overall twist                                 | 3 wires, 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                                  | 2000 V AC  |
| Minimum bending radius, fixed installation    | 5 x D  |
| Minimum bending radius, flexible installation | 12 x D   |
| Smallest bending radius, fixed installation   | 34 mm  |
| Smallest bending radius, movable installation | 82 mm  |
| Flame resistance                              | according to IEC 60332-1<br>According to DIN EN 60332-1-2<br>According to VW-1<br>According to FT1 |
| Ambient temperature (operation)               | -40 °C ... 90 °C (cable, fixed installation)<br>-5 °C ... 90 °C (Cable, flexible installation)     |

## Environmental and real-life conditions

### Ambient conditions

|                      |  |
|----------------------|--|
| Degree of protection | IP65<br>IP67 (without preloading, as additional test in accordance with IEC 60529) |
|----------------------|--|

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|   |                                  |
|---|----------------------------------|
| 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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## Drawings

Dimensional drawing



M12 x 1 socket, angled

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Schematic diagram



Pin assignment of M12 socket, 3-pos., S-coded, socket side view

Circuit diagram



Contact assignment of the M12 socket

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## Approvals

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|  <b>UL Listed</b><br>Approval ID: FILE E 468743 |                       |                       |                   |                             |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine  |                       |                       |                   |                             |
|  | 300 V                 | 12 A                  | - 16              | - 16                        |

|  <b>cUL Listed</b><br>Approval ID: FILE E 468743 |                       |                       |                   |                             |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
|   | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine   |                       |                       |                   |                             |
|   | 300 V                 | 12 A                  | - 16              | -                           |

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

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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 | 1.304 kg CO2e |
|---------|---------------|

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