

SAC-5P- 1,5-280/M12FRL FE SH - Power cable



1414769

<https://www.phoenixcontact.com/us/products/1414769>

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Power cable, 5-position, PUR halogen-free, gray RAL 7001, shielded, Advanced Shielding Technology, free cable end, on Socket angled M12, coding: L, cable length: 1.5 m, for direct current up to 16 A/63 V

Your advantages

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

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1414769 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | BF05 |
| Product key | BF1CDP |
| GTIN | 4055626034058 |
| Weight per piece (including packing) | 366.08 g |
| Weight per piece (excluding packing) | 366.08 g |
| Customs tariff number | 85444290 |
| Country of origin | US |

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Technical data

Product properties

| | |
|----------------------|--------------|
| Product type | Power cable |
| Application | Power supply |
| Number of positions | 5 |
| No. of cable outlets | 1 |
| Shielded | yes |
| Coding | L |

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 | 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 | L (Power) |

Cable/line

| | |
|--------------|-------|
| Cable length | 1.5 m |
|--------------|-------|

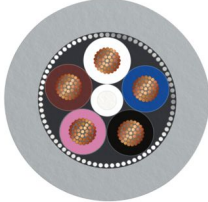
PUR halogen-free gray [280]

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| | |
|---|--|
| Dimensional drawing |  |
| Cable weight | 202 kg/km |
| UL AWM Style | 20233 / 10493 (80°C/300 V) |
| Number of positions | 5 |
| Shielded | yes |
| Cable type | PUR halogen-free gray [280] |
| Conductor cross section | 5x 2.5 mm ² |
| Wire diameter incl. insulation | 2.85 mm ±0.1 mm |
| External cable diameter | 10.40 mm ±0.3 mm |
| Outer sheath, material | PUR |
| External sheath, color | gray RAL 7001 |
| Conductor material | Bare Cu litz wires |
| Material wire insulation | PP |
| Single wire, color | brown, white, blue, black, pink |
| Thickness, insulation | ≥ 0.31 mm |
| Thickness, outer sheath | approx. 0.76 mm |
| Max. conductor resistance | ≤ 8 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 | 52 mm |
| Smallest bending radius, movable installation | 104 mm |
| Max. bending cycles | 5000000 |
| Halogen-free | in accordance with DIN VDE 0472 part 815 in accordance with DIN EN 50267-2-1 |
| Flame resistance | According to UL 758/1581 (Cable Flame) according to UL 758/1581 FT1 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 Low adhesion abrasion-resistant Resistant to salt water |
| Ambient temperature (operation) | -50 °C ... 80 °C (cable, fixed installation) -30 °C ... 80 °C (Cable, flexible installation) |

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Environmental and real-life conditions

Ambient conditions

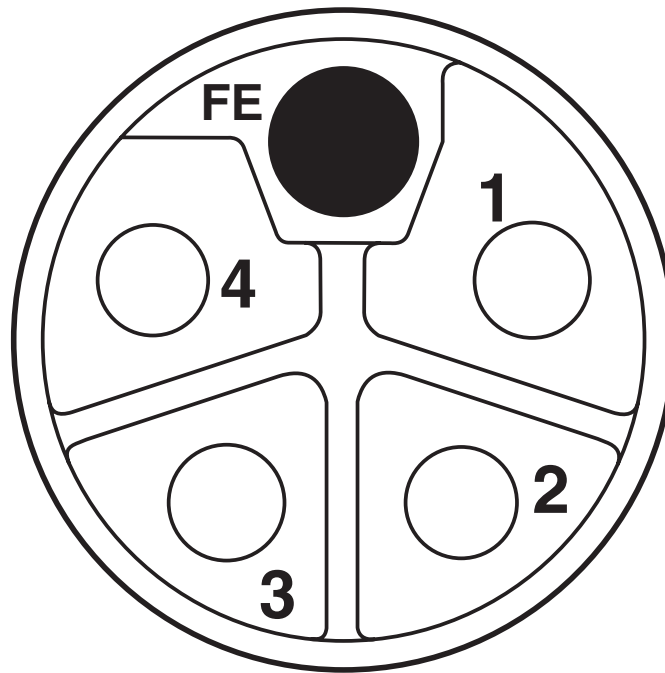
| | |
|---------------------------------|----------------------------------|
| Degree of protection | IP65 |
| | IP67 |
| Ambient temperature (operation) | -25 °C ... 85 °C (Plug / socket) |

Standards and regulations

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

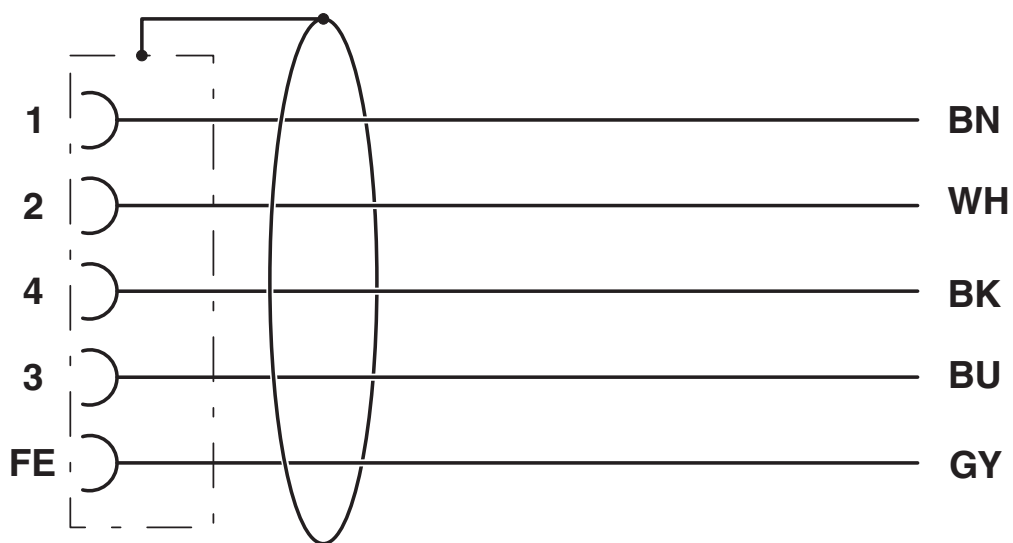
Drawings

Schematic diagram



Pin assignment of M12 socket, 5-pos., L-coded, socket side view

Circuit diagram



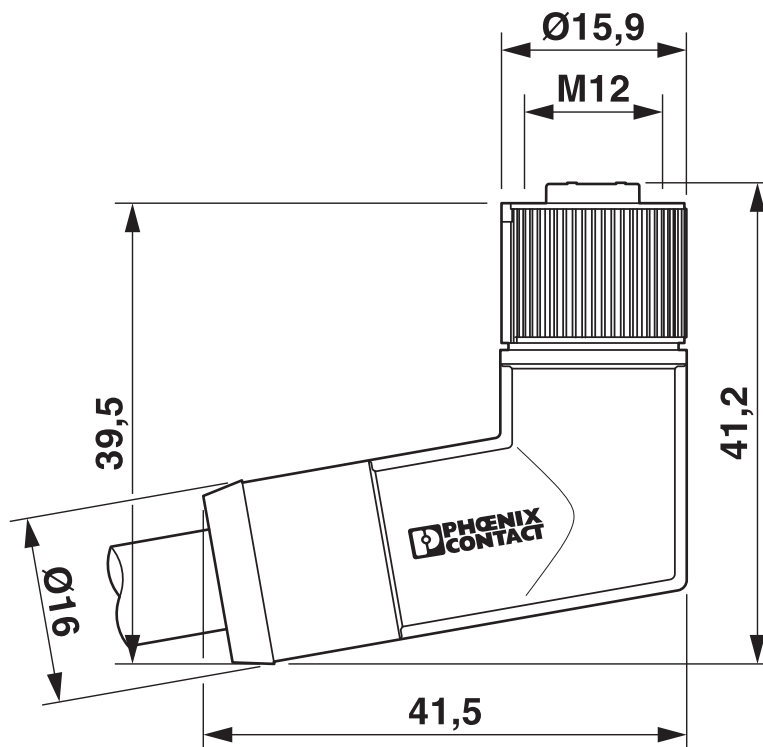
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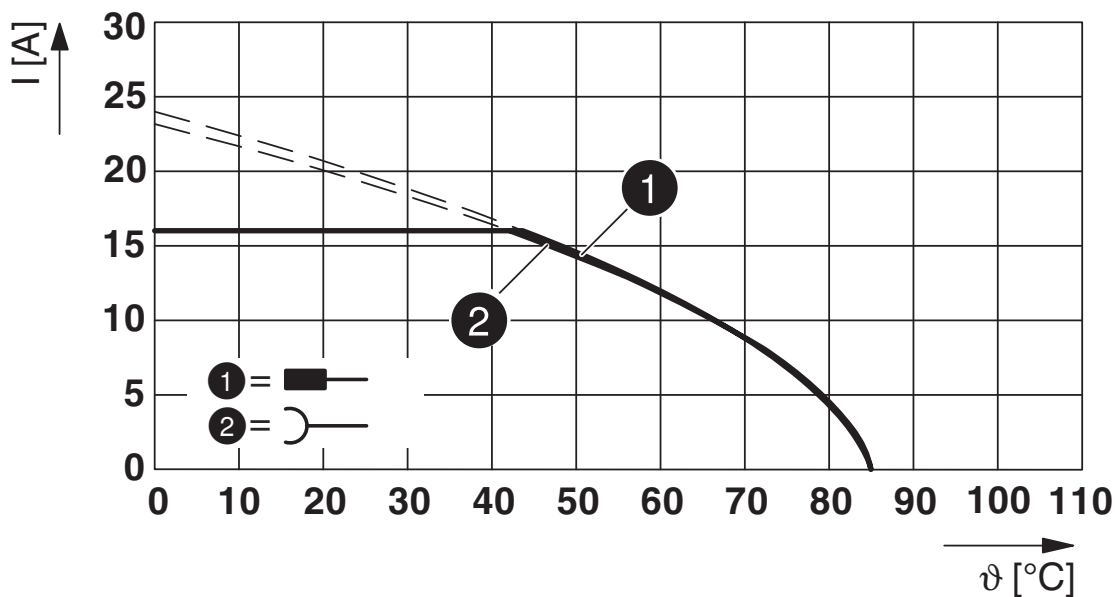
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Dimensional drawing



M12 x 1 socket, angled

Diagram



Base curve

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Approvals

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 **UL Listed**
Approval ID: E468743

 **cUL Listed**
Approval ID: E468743

 **EAC-RoHS**
Approval ID: RU D-DE.HB35.B.00387

cULus Listed

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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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Accessories

PROT M12 MS PWR - Screw plug

1092802

<https://www.phoenixcontact.com/us/products/1092802>



An M12 screw plug for the unoccupied M12 females of the M12 POWER connectors, boxes, and flush-type connectors

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

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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

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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

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

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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

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

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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



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



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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

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

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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

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

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WIREFOX-D 16 - Stripping tool

1212173

<https://www.phoenixcontact.com/us/products/1212173>



Stripping tool, for stripping lines (specially for fiber optics lines) of \varnothing 4 - 16 mm

WIREFOX-D 40 - Stripping tool

1212161

<https://www.phoenixcontact.com/us/products/1212161>



Stripping tool, for stripping cables of 4.5 mm - 40 mm- \varnothing , insulation thickness of up to 4.5 mm, pivoting blade for round, lengthwise, and spiral cuts

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WIREFOX 10 - Stripping tool

1212150

<https://www.phoenixcontact.com/us/products/1212150>



Stripping tool, for cables and conductors from 0.02 - 10 mm², self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm² stranded/1.5 mm² solid, replaceable stripping blade

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