

# SAC-4P-M12MSS/3,0-PUR/FSS PE - Power cable



1417581

<https://www.phoenixcontact.com/us/products/1417581>

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Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12, coding: S, on Socket straight M12, coding: S, cable length: 3 m, for AC current up to 12 A/690 V

## Your advantages

- Easy and safe: 100 % electrically tested plug-in components
- Protection against incorrect connection using special S-coding
- Our standard: robust halogen-free PUR cable

## Commercial data

Item number	1417581
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Sales key	BF05
Product key	AF1CCP
GTIN	4055626119007
Weight per piece (including packing)	317 g
Weight per piece (excluding packing)	360 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	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 $I_N$	12 A

### Mechanical properties

#### Mechanical data

Insertion/withdrawal cycles	> 100
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### Connector

#### Connection 1

Type	Plug straight M12
Coding type	S (Power)

#### Connection 2

Type	Socket straight M12
Coding type	S (Power)

### Cable/line

Cable length	3 m
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PUR halogen-free black [PUR]

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Cable weight	92 kg/km
UL AWM Style	80°C/1000 V
Number of positions	4
Shielded	no
Cable type	PUR halogen-free black [PUR]
Conductor structure, voltage supply	44x 0.20 mm
AWG power supply	16
Conductor cross section	4x 1.5 mm²
Wire diameter incl. insulation	2.35 mm ±0.05 mm
External cable diameter	7.40 mm ±0.25 mm
Outer sheath, material	PUR
External sheath, color	black-gray RAL 7021
Conductor material	Bare Cu litz wires
Material wire insulation	PP
Single wire, color	black 1, black 2, black 3, green/yellow
Thickness, insulation	≥ 0.31 mm
Thickness, outer sheath	approx. 0.85 mm
Overall twist	4 wires, twisted
Max. conductor resistance	≤ 14.1 Ω/km (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	37 mm
Smallest bending radius, movable installation	74 mm
Dynamic load capacity (bending)	Max. bending cycles: 5000000, Bending radius: 10 x D, Traversing path: 10 m, Traversing rate: 3 m/s, Acceleration: 10 m/s²
Dynamic load capacity (torsion)	Torsion: ±180 °/m, Torsion cycles: 500000, Torsional frequency: 35 cycles/min.
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) in accordance with UL 758/1581 FT2 according to DIN EN 60332-2-2
Resistance to oil	according to DIN EN 60811-404, 168 h at 100 °C according to UL 758, 168 h at 60 °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 ... 85 °C (cable, fixed installation) -30 °C ... 85 °C (Cable, flexible installation)

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## 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) (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



Plug, M12 x 1, straight

Dimensional drawing

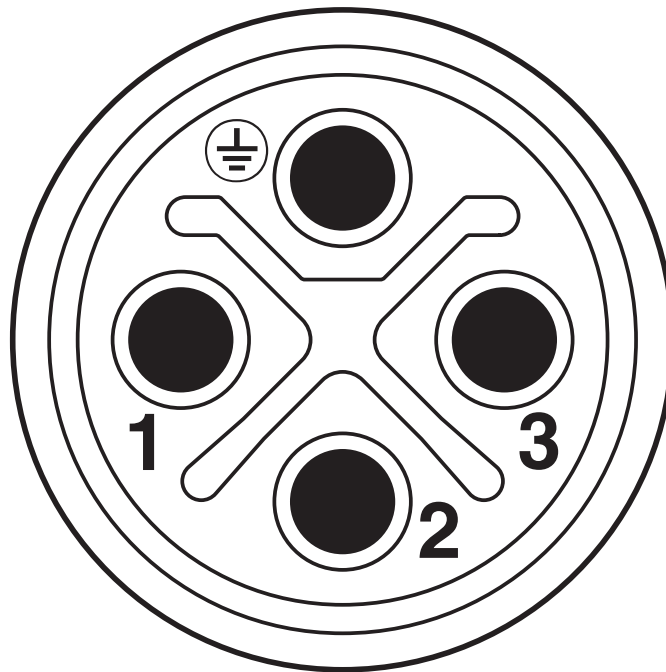


M12 x 1 socket, straight

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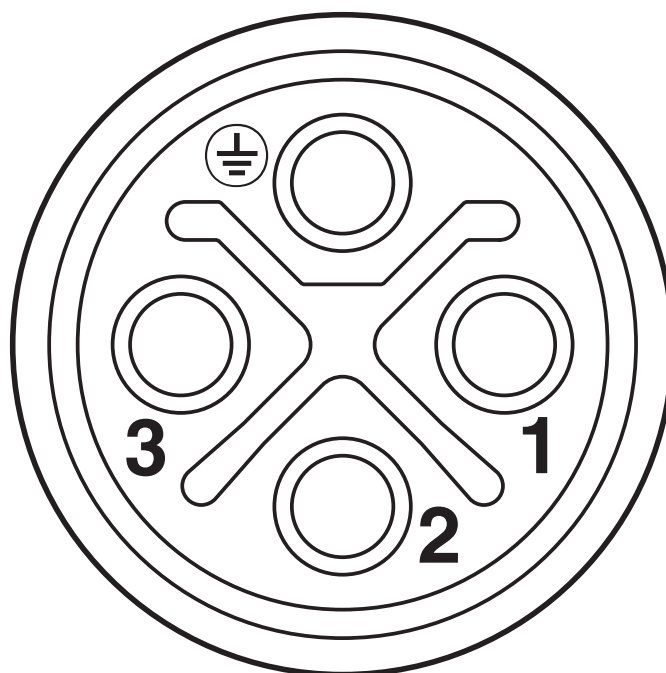
<https://www.phoenixcontact.com/us/products/1417581>

Schematic diagram



M12 plug pin assignment, 4-pos., S-coded, plug side view

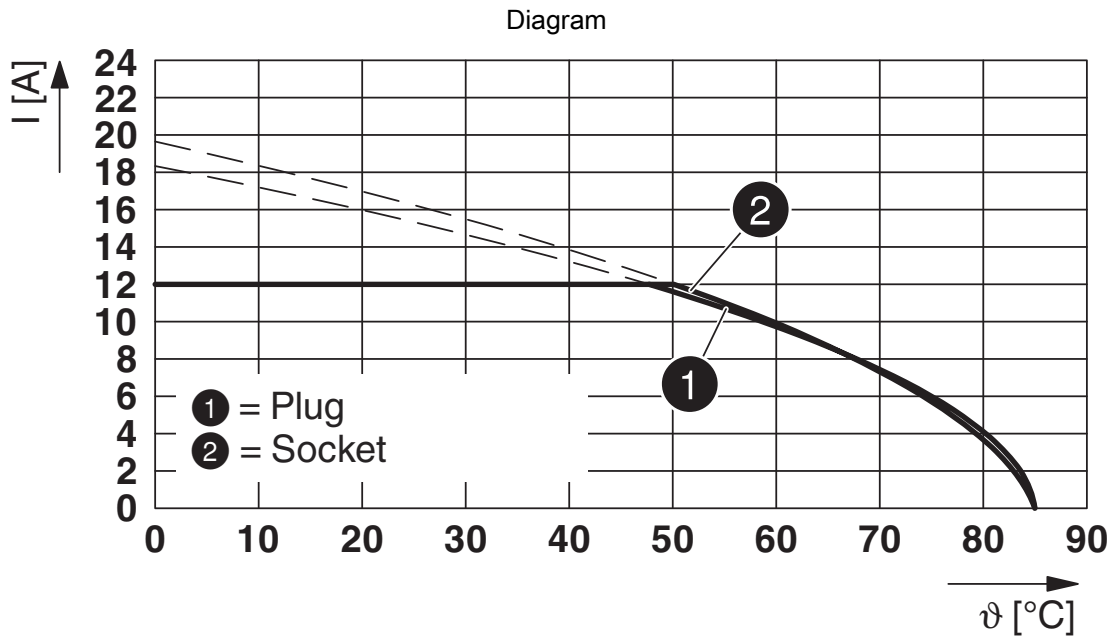
Schematic diagram



Pin assignment of M12 socket, 4-pos., S-coded, socket side view

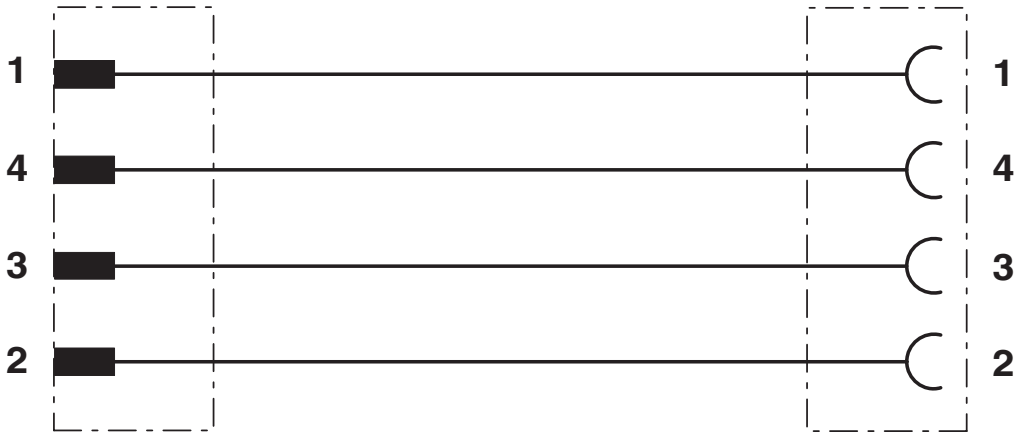
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Base curve

Circuit diagram



Contact assignment of the M12 connector and the M12 socket

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1417581>

 <b>UL Listed</b> Approval ID: FILE E 468743				
	Nominal voltage U <sub>N</sub>	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>
keine				
	600 V	12 A	-	- 16

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## Classifications

### ECLASS

ECLASS-13.0	27060327
ECLASS-15.0	27060327

### ETIM

ETIM 9.0	EC001855
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### UNSPSC

UNSPSC 21.0	26121600
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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### 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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