

# SAC-4P-M12MRT/ 2,0-PUR/M12FRT - Power cable



1415197

<https://www.phoenixcontact.com/us/products/1415197>

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Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug angled M12, coding: T, on Socket angled M12, coding: T, cable length: 2 m, For direct current up to 12 A/63 V



## Your advantages

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

## Commercial data

Item number	1415197
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Sales key	BF05
Product key	AF1CCQ
GTIN	4055626041223
Weight per piece (including packing)	253.6 g
Weight per piece (excluding packing)	251.48 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	T

### 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 $I_N$	12 A

### Mechanical properties

#### Mechanical data

Insertion/withdrawal cycles	> 100
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### Connector

#### Connection 1

Type	Plug angled M12
Coding type	T (Power)

#### Connection 2

Type	Socket angled M12
Coding type	T (Power)

### Cable/line

Cable length	2 m
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PUR halogen-free black [PUR]

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Dimensional drawing	
Cable weight	83 kg/km
UL AWM Style	20549 / 10493 (80°C/300 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 mm <sup>2</sup>
Wire diameter incl. insulation	2.2 mm ±0.05 mm
External cable diameter	6.75 mm ±0.2 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	brown, white, blue, black
Thickness, insulation	≥ 0.26 mm
Thickness, outer sheath	approx. 0.70 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	≤ 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	34 mm
Smallest bending radius, movable installation	68 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/s <sup>2</sup>
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

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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
Special properties	Flexible cable conduit capable
Ambient temperature (operation)	-50 °C ... 85 °C (cable, fixed installation)
	-30 °C ... 85 °C (Cable, flexible installation)

## Environmental and real-life conditions

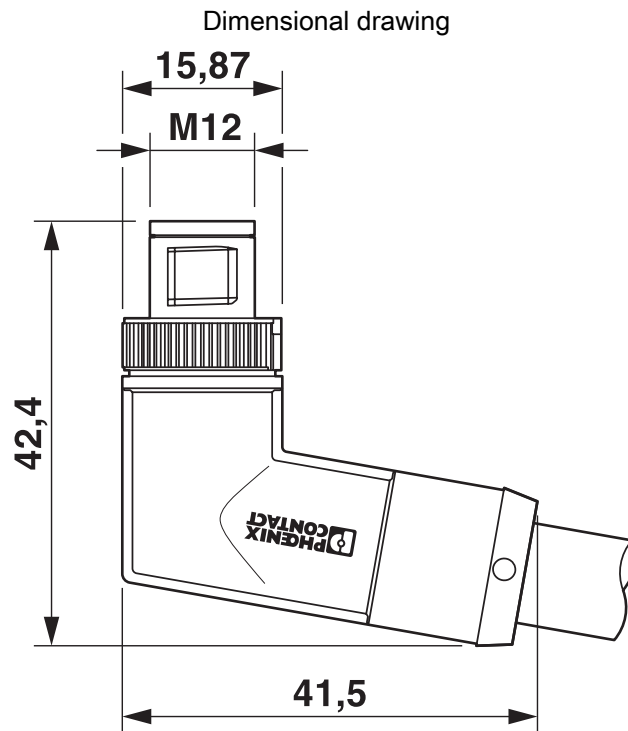
### Ambient conditions

Degree of protection	IP65
	IP67
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

Drawings



M12 x 1 male plug, angled



M12 x 1 socket, angled

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Schematic diagram



Pin assignment for M12 plug, 4-pos., T-coded, view of plug side

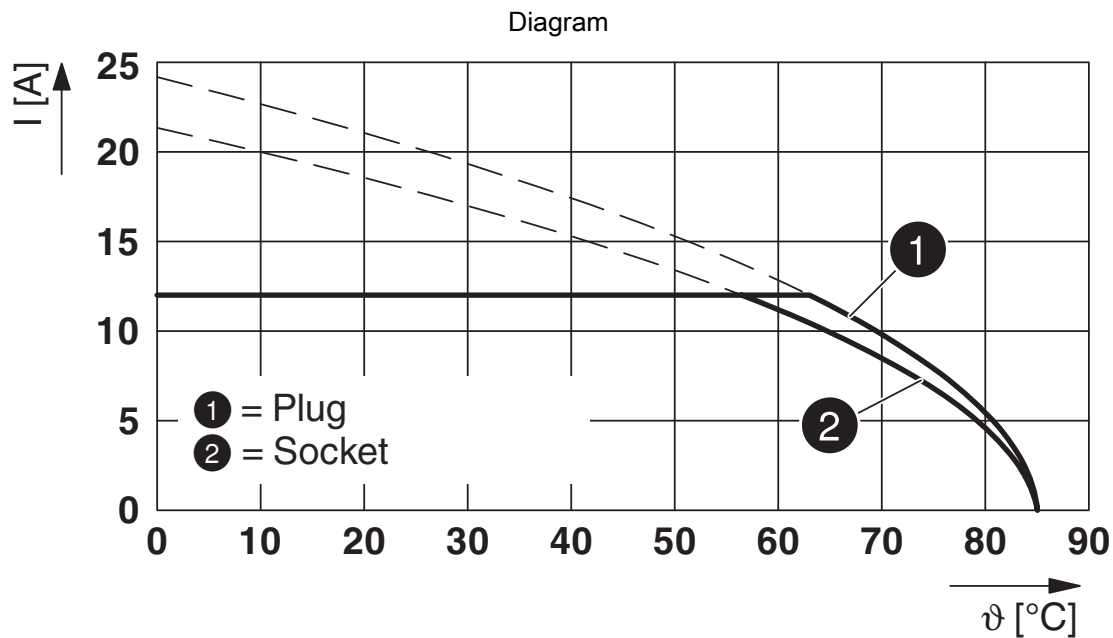
Schematic diagram



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

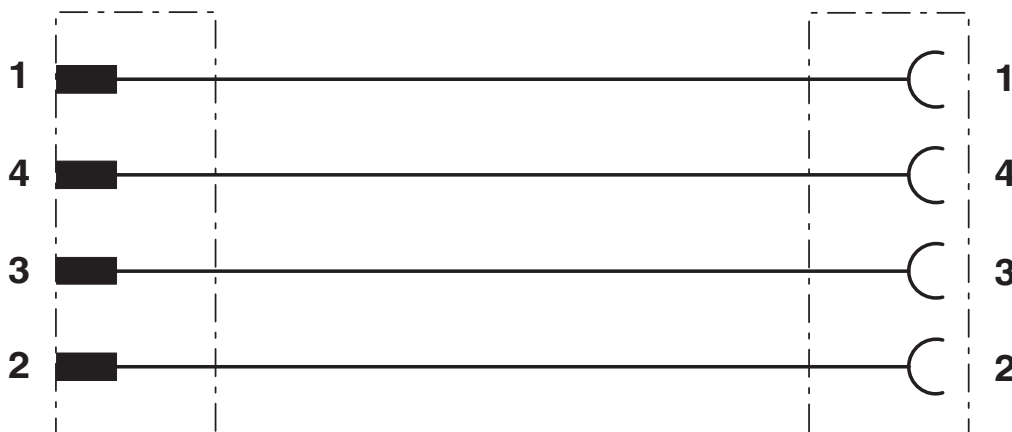
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Base curve

Circuit diagram



Contact assignment of M12 connector/socket

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1415197>

 <b>UL Listed</b> Approval ID: E468743				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine				
	63 V	12 A	- 16	- 16

 <b>cUL Listed</b> Approval ID: E468743				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine				
	63 V	12 A	- 16	-

 <b>EAC-RoHS</b> 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
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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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### EF3.1 Climate Change

CO2e kg	2.851 kg CO2e
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