

# SAC-5P-M12MRL/ 1,5-280 FE - Power cable



1414850

<https://www.phoenixcontact.com/us/products/1414850>

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Power cable, 5-position, PUR halogen-free, gray RAL 7001, Plug angled M12, coding: L, on free cable end, 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
- Our standard: robust halogen-free PUR cable

## Commercial data

Item number	1414850
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF05
Product key	AF1CDP
GTIN	4055626034829
Weight per piece (including packing)	296.6 g
Weight per piece (excluding packing)	309.19 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	5
No. of cable outlets	1
Shielded	no
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	$\geq 100$
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### Connector

#### Connection 1

Type	M12 Plug, angled, 5-position, Keying: L
Number of positions	5
Shielded	no
Insertion/withdrawal cycles	$\geq 100$
Material Contact	CuZn
Material Contact surface	Ni/Au
Material Contact carrier	PA
Material Screw connection	Die-cast zinc, nickel-plated
Material Grip body	PP
Flammability rating according to UL 94	V0

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Degree of protection	IP65
	IP67
Ambient temperature (operation)	-25 °C ... 85 °C
Standard designation	M12 connector
Standards/regulations	IEC 61076-2-111

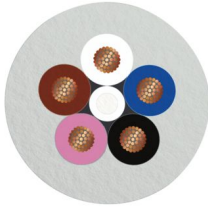
## Connection 2

Type	free cable end
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## Cable/line

Cable length	1.5 m
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## PUR halogen-free gray [280]

Dimensional drawing	
Cable weight	159 kg/km
UL AWM Style	80°C/300 V
Number of positions	5
Shielded	no
Cable type	PUR halogen-free gray [280]
Conductor structure, voltage supply	80x 0.20 mm
AWG power supply	14
Conductor cross-section	5x 2.5 mm <sup>2</sup>
Wire diameter incl. insulation	2.65 mm ±0.1 mm
External cable diameter	8.60 mm ±0.25 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	≥ 0.14 mm
Thickness, outer sheath	approx. 0.70 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	4 mm

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Smallest bending radius, movable installation	86 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 (20 s)
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 ... 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

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## Drawings

Dimensional drawing



M12 x 1 male plug, angled

Schematic diagram



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



Base curve

Circuit diagram



Contact assignment of the M12 plug

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1414850>



**EAC-RoHS**

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	2.439 kg CO2e
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