

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



1414850

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

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



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

1414850

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

## 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	$\geq 100$
-----------------------------	------------

### 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

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



1414850

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

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

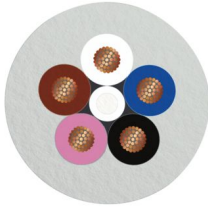
## Connection 2

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

## Cable/line

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

## 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

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



1414850

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

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

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

1414850

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

## Drawings



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

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



1414850

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

## 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

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



1414850

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

## Classifications

### ECLASS

ECLASS-13.0	27060327
ECLASS-15.0	27060327

### ETIM

ETIM 10.0	EC001855
-----------	----------

### UNSPSC

UNSPSC 21.0	26121600
-------------	----------

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



1414850

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

## 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	2.439 kg CO2e
---------	---------------

Phoenix Contact 2026 © - all rights reserved  
<https://www.phoenixcontact.com>

Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)