

SAC-5P- 3,0-290/M12FRL FE - Power cable



1424606

<https://www.phoenixcontact.com/us/products/1424606>

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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	1424606
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF05
Product key	AF1CDP
GTIN	4055626375311
Weight per piece (including packing)	390 g
Weight per piece (excluding packing)	390 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	12 A

Mechanical properties

Mechanical data

Insertion/withdrawal cycles	≥ 100
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Connector

Connection 1

Type	free cable end
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Connection 2

Type	Socket angled M12
Coding type	L (Power)

Cable/line

Cable length	3 m
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PUR halogen-free gray [290]

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Dimensional drawing			
Cable weight	127 kg/km		
UL AWM Style	20233 / 10493 (80°C/300 V)		
Number of positions	5		
Shielded	no		
Cable type	PUR halogen-free gray [290]		
Conductor structure, voltage supply	78x 0.15 mm		
AWG power supply	16		
Conductor cross section	5x 1.5 mm²		
Wire diameter incl. insulation	2.35 mm ±0.05 mm		
External cable diameter	9.10 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	≥ 0.25 mm		
Thickness, outer sheath	approx. 1.30 mm		
Max. conductor resistance	≤ 13 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	46 mm		
Smallest bending radius, movable installation	91 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		
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		

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Ambient temperature (operation)	abrasion-resistant
	Resistant to salt water
	-50 °C ... 80 °C (cable, fixed installation)
	-30 °C ... 80 °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



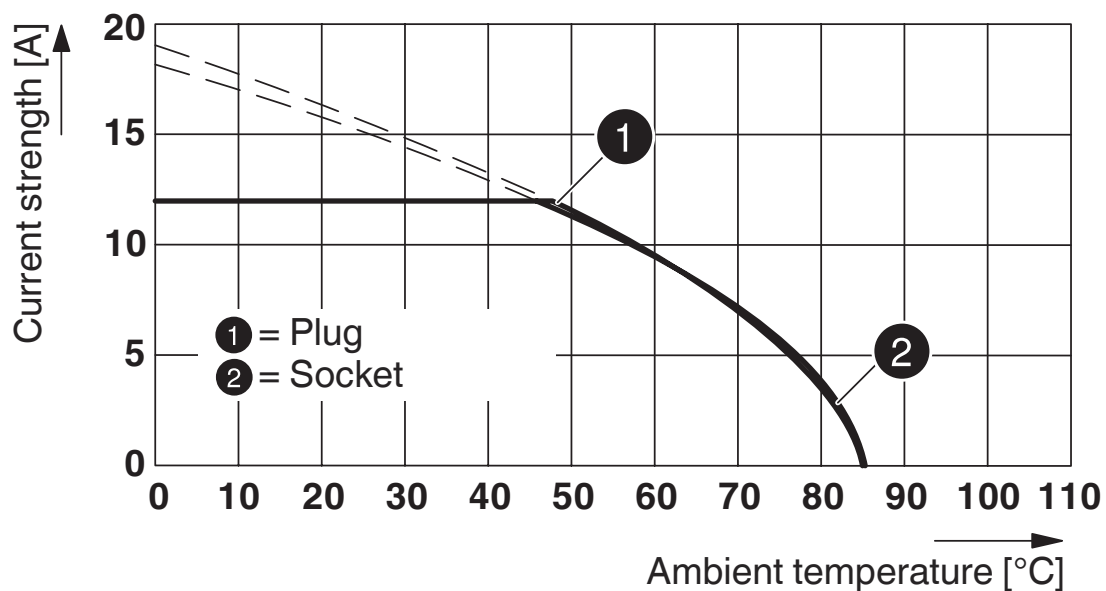
M12 x 1 socket, angled

Schematic diagram



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

Diagram



Base curve

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Circuit diagram



Contact assignment of the M12 socket

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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

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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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EF3.0 Climate Change

CO2e kg	2.926 kg CO2e
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