

1414868

<https://www.phoenixcontact.com/us/products/1414868>

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Power cable, 5-position, PVC, black-gray RAL 7021, Plug straight M12, coding: K, on free cable end, cable length: 1.5 m, for AC current up to 16 A/690 V

Your advantages

- Easy and safe: 100 % electrically tested plug-in components
- Protection against mismatching, thanks to special K-coding

Commercial data

Item number	1414868
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF05
Product key	BF1CDQ
Catalog page	Page 293 (C-2-2019)
GTIN	4055626035000
Weight per piece (including packing)	365 g
Weight per piece (excluding packing)	353.6 g
Customs tariff number	85444290
Country of origin	PL

SAC-5P-M12MSK/ 1,5-PVC PE - Power cable



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Technical data

Product properties

Product type	Power cable
Application	Power supply
Number of positions	5
No. of cable outlets	1
Shielded	no
Coding	K

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	16 A

Mechanical properties

Mechanical data

Insertion/withdrawal cycles	≥ 100
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Connector

Connection 1

Type	Plug straight M12
Coding type	K (Power)

Connection 2

Type	free cable end
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Cable/line

Cable length	1.5 m
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PVC black [PVC]

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Dimensional drawing	
Cable weight	220 kg/km
UL AWM Style	2570 / 10914 (80°C/1000 V)
Number of positions	5
Shielded	no
Cable type	PVC black [PVC]
Conductor cross section	5x 2.5 mm²
Wire diameter incl. insulation	3 mm ±0.1 mm
External cable diameter	10.75 mm ±0.3 mm
Outer sheath, material	PVC
External sheath, color	black-gray RAL 7021
Conductor material	Bare Cu litz wires
Material wire insulation	PVC
Single wire, color	black 1, black 2, black 3, black 4, green/yellow
Thickness, insulation	≥ 0.36 mm
Thickness, outer sheath	approx. 0.76 mm
Max. conductor resistance	≤ 8 Ω/km (at 20 °C)
Insulation resistance	≥ 100 MΩ*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	54 mm
Smallest bending radius, movable installation	108 mm
Max. bending cycles	2000000
Minimum bending radius, drag chain applications	10 x D
Traversing path	10 m
Traversing rate	3 m/s
Acceleration	10 m/s²
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 60 °C
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation) -20 °C ... 80 °C (Cable, flexible installation)

Environmental and real-life conditions

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Ambient conditions

Degree of protection	IP65
	IP67 (without preloading, as additional test in accordance with IEC 60529)
Ambient temperature (operation)	-25 °C ... 85 °C (Plug / socket)

Standards and regulations

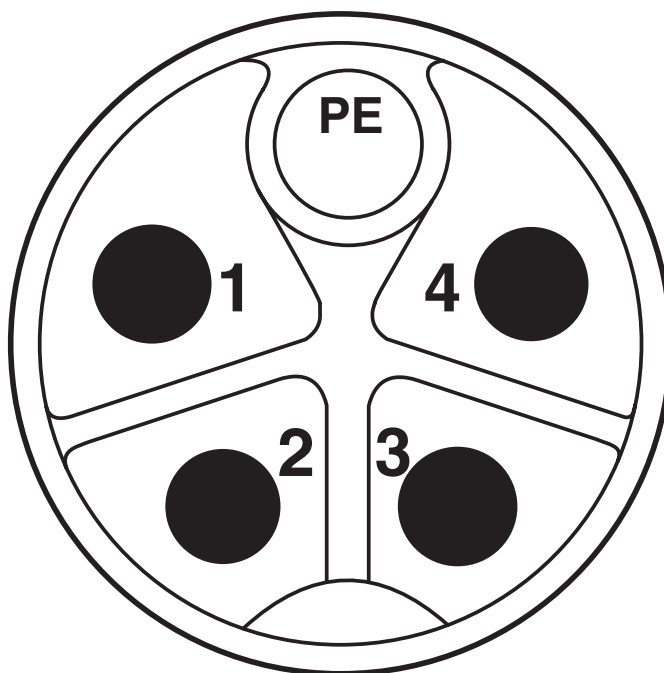
Standard designation	M12 connector
Standards/specifications	IEC 61076-2-111

Drawings

Circuit diagram



Schematic diagram



Connector pin assignment of M12 plug, 5-pos., K-coded, pin side view

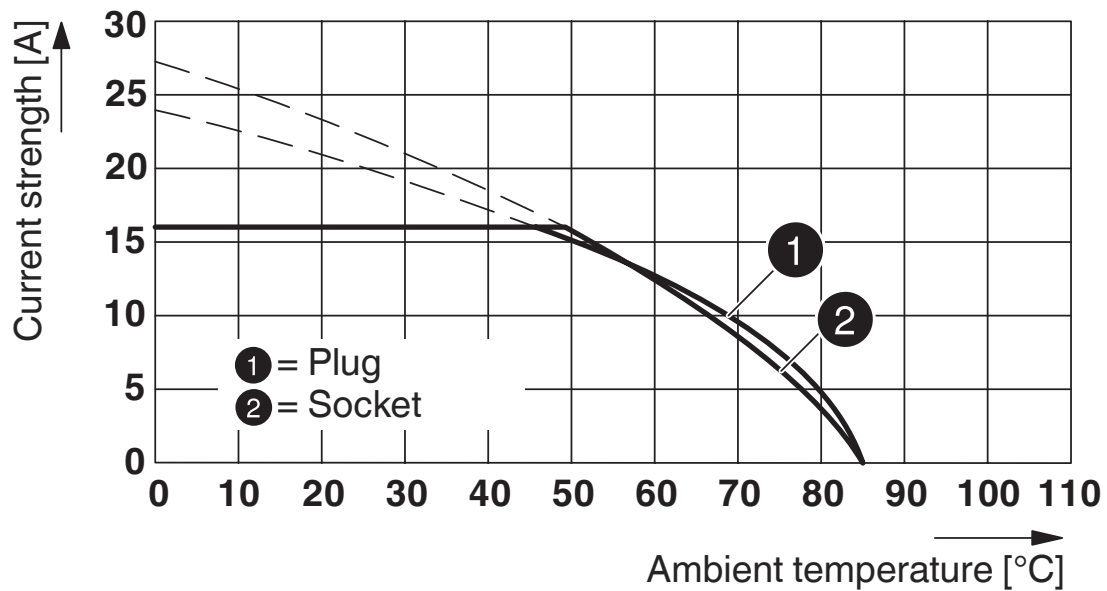
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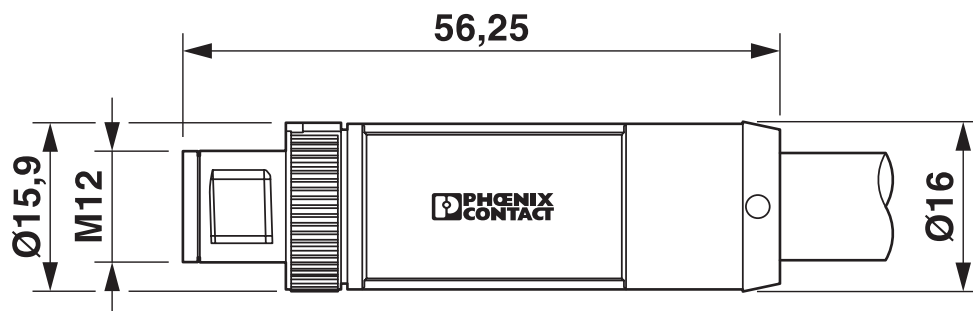
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Diagram



Dimensional drawing



Plug, M12 x 1, straight, shielded

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1414868>

	UL Listed Approval ID: E468743			
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	600 V	16 A	-	- 14

	cUL Listed Approval ID: E468743			
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	600 V	16 A	- 14	-

	EAC-RoHS Approval ID: RU D-DE.HB35.B.00387			

cULus Listed				
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Classifications

ECLASS

ECLASS-11.0	27060311
ECLASS-12.0	27060311
ECLASS-13.0	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
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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Accessories

PROT-M12 FS - Sealing cap

1560251

<https://www.phoenixcontact.com/us/products/1560251>



M12 sealing cap for unoccupied M12 plugs of the sensor/actuator cable, flush-type plugs and I/O devices in the field

UCT-WMT (23X4) - Conductor marker

0801453

<https://www.phoenixcontact.com/us/products/0801453>



Conductor marker, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: insert, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 30

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UC-WMT (23X4) - Conductor marker

0819411

<https://www.phoenixcontact.com/us/products/0819411>



Conductor marker, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: insert, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 24

US-WMT (23X4) - Cable marker

0828769

<https://www.phoenixcontact.com/us/products/0828769>



Cable marker, Card, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: slide-on, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 56

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WMTW (23X4)R - Cable marker

0831004

<https://www.phoenixcontact.com/us/products/0831004>



Cable marker, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMaster 300/600, THERMOMARK X1.2, mounting type: insert, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 3000

PROT-M12 FS-PA-CHAIN - Sealing cap

1430873

<https://www.phoenixcontact.com/us/products/1430873>



M12 sealing cap made of plastic with fixing band, for sensor cables, for free M12 plugs

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WP-EC TPE HF 13,0 BK - Transition sleeve from hose to cable

3240975

<https://www.phoenixcontact.com/us/products/3240975>



Transition sleeve from hose to cable, material: TPE, color: black, flammability rating in acc. with UL 94: HB

WP-PA HF 13,0 BK - Protective hose

3240681

<https://www.phoenixcontact.com/us/products/3240681>



Protective hose, material: PA 6, UV-resistant: yes, flexible, degree of protection: IP68, color: black, flammability rating in acc. with UL 94: V0, inner diameter: 10 mm, Total length: 50 m

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WP-PA HF-HB 13,0 BK - Protective hose

3240839

<https://www.phoenixcontact.com/us/products/3240839>



Protective hose, material: PA 6, UV-resistant: yes, flexible, degree of protection: IP68, color: black, flammability rating in acc. with UL 94: HB, inner diameter: 10 mm, Total length: 50 m

SAC BIT M12-D16 - Tool

1200305

<https://www.phoenixcontact.com/us/products/1200305>



Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, knurl diameter: 16 mm, for 4 mm hexagonal drive

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TSD 04 SAC - Torque screwdriver

1208429

<https://www.phoenixcontact.com/us/products/1208429>



Torque screwdriver, with preset torque of 0.4 Nm and 4 mm hexagonal drive for M12 connectors

TSD-M 1,2NM - Torque screwdriver

1212224

<https://www.phoenixcontact.com/us/products/1212224>



Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm

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TSD-M SAC-BIT ADAPTER - Adapter insert

1212600

<https://www.phoenixcontact.com/us/products/1212600>



Adapter bit for TSD-M...torque tools, E6.3-1/4" drive with 4 mm hexagon to accommodate SAC bits

B-STIFT - Marker pen

1051993

<https://www.phoenixcontact.com/us/products/1051993>



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

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CUTFOX-S VDE - Diagonal cutter

1212207

<https://www.phoenixcontact.com/us/products/1212207>



Diagonal cutter for hard (piano wire) and soft wires, VDE 1000 V AC/1500 V DC tested

WIREFOX-D 16 - Stripping tool

1212173

<https://www.phoenixcontact.com/us/products/1212173>



Stripping tool, for stripping lines (specially for fiber optics lines) of Ø 4 - 16 mm

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WIREFOX-D 40 - Stripping tool

1212161

<https://www.phoenixcontact.com/us/products/1212161>



Stripping tool, for stripping cables of 4.5 mm - 40 mm-Ø, insulation thickness of up to 4.5 mm, pivoting blade for round, lengthwise, and spiral cuts

WIREFOX 10 - Stripping tool

1212150

<https://www.phoenixcontact.com/us/products/1212150>



Stripping tool, for cables and conductors from 0.02 - 10 mm², self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm² stranded/1.5 mm² solid, replaceable stripping blade

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