

SAC-5P-M12MRL-FRLFESH/.../... - Power cable



1276570

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Power cable, 5-position, Variable cable type, shielded (Advanced Shielding Technology), Plug angled M12, coding: L, on Socket angled M12, coding: L, cable length: Free input (0.3 ... 40 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
- Shield power reliably – 360° shielding to reduce electromagnetic loads

Commercial data

Item number	1276570
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Sales key	BF17
Product key	AF1CDP
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	yes
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	≥ 100
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Connector

Connection 1

Type	Plug angled M12
Coding type	L (Power)

Connection 2

Type	Socket angled M12
Coding type	L (Power)

Cable/line

Cable length	Free input (0.3 ... 40 m)
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PUR halogen-free gray [280]

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Cable weight	185 kg/km
UL AWM Style	80°C/300 V
Number of positions	5
Shielded	yes
Cable type	PUR halogen-free gray [280] PUR halogen-free gray 280
Conductor structure, voltage supply	80x 0.20 mm
AWG power supply	14
Conductor cross-section	5x 2.5 mm ²
Wire diameter incl. insulation	2.65 mm ±0.1 mm
External cable diameter	9.50 mm ±0.3 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. 0.75 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	48 mm
Smallest bending radius, movable installation	95 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 ²
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	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 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)

PVC gray [500]

Cable weight	231 kg/km
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UL AWM Style	20233 / 10493 (80°C/300 V)
Number of positions	5
Shielded	yes
Cable type	PVC gray [500] PVC gray 500
Conductor structure, voltage supply	141x 0.15 mm
AWG power supply	14
Conductor cross-section	5x 2.5 mm ²
Wire diameter incl. insulation	3 mm ±0.1 mm
External cable diameter	10.80 mm ±0.3 mm
Outer sheath, material	PVC
External sheath, color	gray RAL 7001
Conductor material	Bare Cu litz wires
Material wire insulation	PVC
Single wire, color	brown, white, blue, black, gray
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	≤ 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	54 mm
Smallest bending radius, movable installation	108 mm
Dynamic load capacity (bending)	Max. bending cycles: 1000000, Bending radius: 10 x D, Traversing path: 10 m, Traversing rate: 3 m/s, Acceleration: 10 m/s ²
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

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
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Standards/specifications

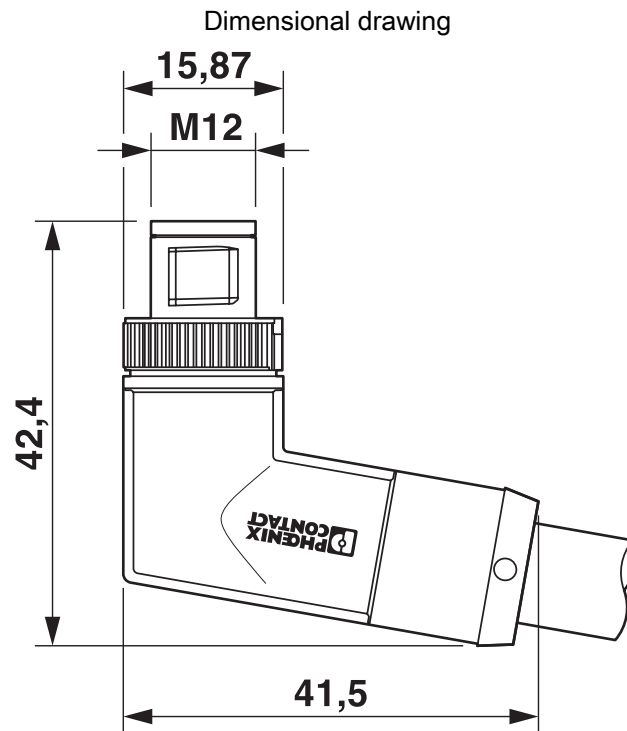
IEC 61076-2-111

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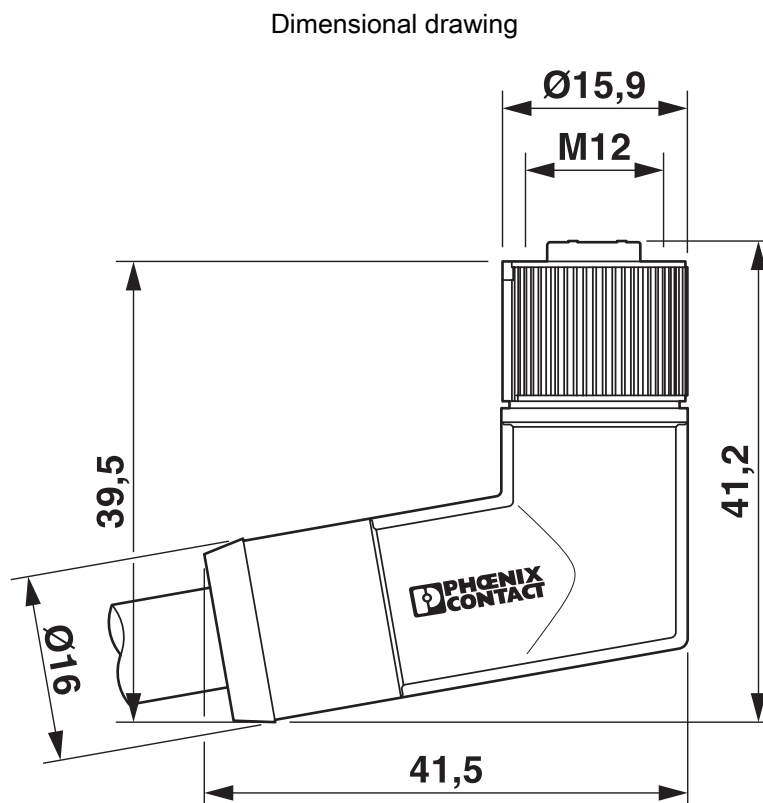
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Drawings



M12 x 1 male plug, angled

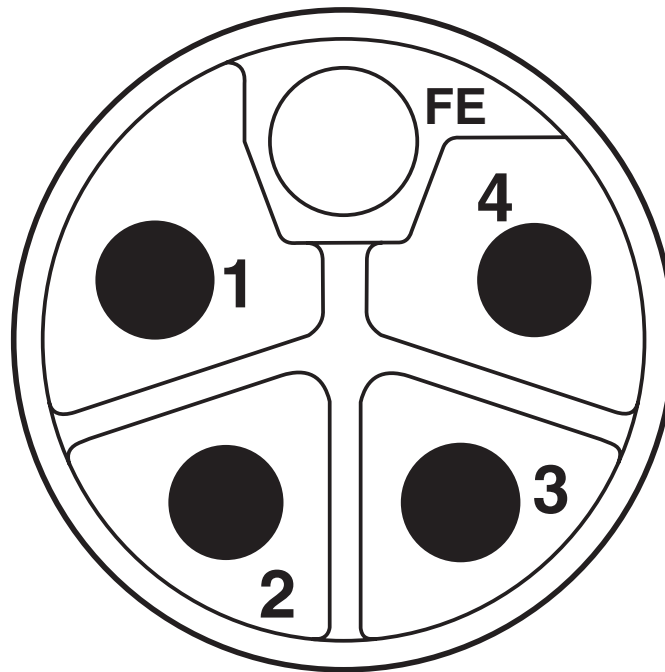


M12 x 1 socket, angled

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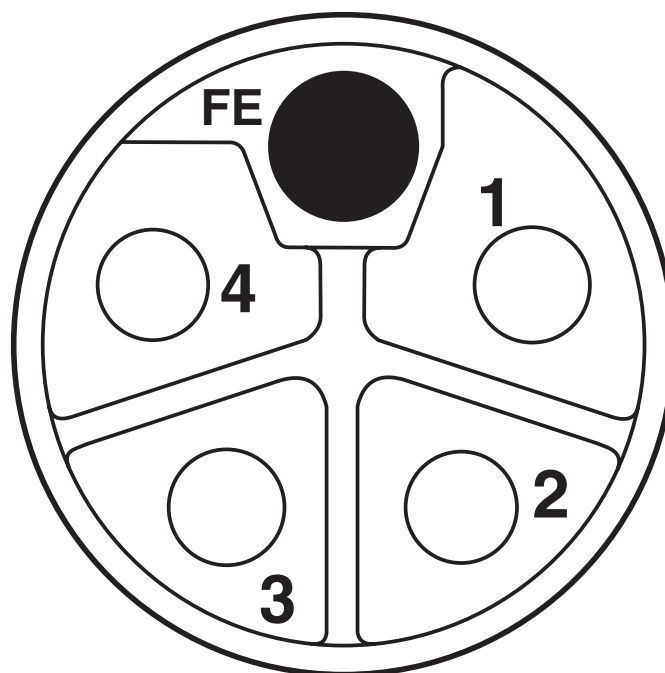
<https://www.phoenixcontact.com/us/products/1276570>

Schematic diagram



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

Schematic diagram



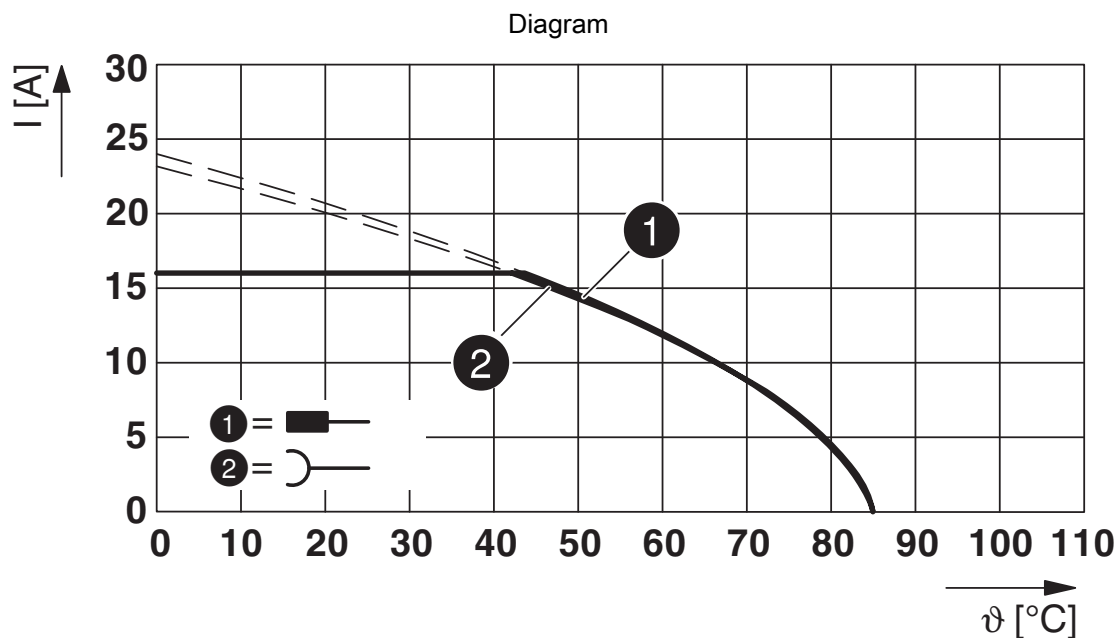
Pin assignment of M12 socket, 5-pos., L-coded, socket side view

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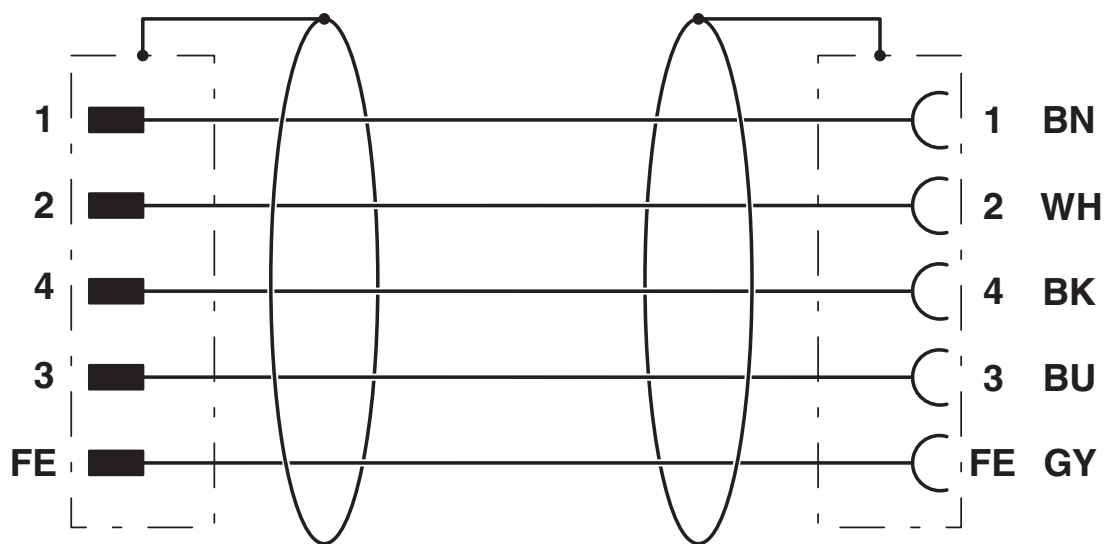
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Base curve

Circuit diagram



Contact assignment of the M12 connector and the M12 socket

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Approvals

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UL Listed

Approval ID: E468743



cUL Listed

Approval ID: E468743

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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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