

SAC-5P-MS/3,0-600/M12FR-3L FB - Sensor/actuator cable

1404109
<https://www.phoenixcontact.com/us/products/1404109>

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Sensor/actuator cable, 5-position, PP-EPDM halogen-free, gray RAL 7035, Plug straight M12, coding: A, with 3 LEDs, on Socket angled M12, coding: A, with 3 LEDs, cable length: 3 m, Hygienic design, with plastic knurl

Your advantages

- Easy and safe: 100 % electrically tested plug-in components
- Contamination can be detected quickly – thanks to the light color
- Convenient: increased machine availability thanks to quick and easy diagnostics

Commercial data

Item number	1404109
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF03
Product key	BF1CDA
Catalog page	Page 145 (C-4-2013)
GTIN	4046356676618
Weight per piece (including packing)	111 g
Weight per piece (excluding packing)	111 g
Customs tariff number	85444290
Country of origin	PL

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Technical data

Product properties

Product type	Sensor/actuator cable
Application	Food processing industry
Number of positions	5
No. of cable outlets	1
Shielded	no
Coding	A

Insulation characteristics

Overvoltage category	II
Degree of pollution	3

Material specifications

Seal material	FKM
Material of grip body	PP
Contact material	CuSn
Contact surface material	Ni/Au
Contact carrier material	PP
Material for screw connection	Polypropylene

Electrical properties

Insulation resistance	$\geq 100 \text{ M}\Omega$
Nominal voltage U_N	24 V DC
Nominal current I_N	4 A

Mechanical properties

Mechanical data

Insertion/withdrawal cycles	≥ 100
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Signaling

Status display	3 LEDs
Status display present	Yes

Connection data

Conductor connection

Tightening torque	0.4 Nm (M12 connector)
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Connector

Connection 1

Type	Plug straight M12
Number of positions	5

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Coding type	A
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Connection 2

Type	Socket angled M12
Number of positions	5
Coding type	A

Cable/line

Cable length	3 m
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Halogen-free PP gray [600]

Dimensional drawing	
Cable weight	34 kg/km
Number of positions	5
Shielded	no
Cable type	Halogen-free PP gray [600]
Conductor structure signal line	42x 0.10 mm
AWG signal line	22
Conductor cross section	5x 0.34 mm ² (Signal line)
Wire diameter incl. insulation	1.27 mm ±0.02 mm (Signal line)
External cable diameter	5.00 mm ±0.15 mm
Outer sheath, material	PP-EPDM
External sheath, color	gray RAL 7035
Conductor material	Bare Cu litz wires
Material wire insulation	PP
Single wire, color	brown, white, blue, black, gray
Thickness, insulation	≥ 0.21 mm (Core insulation)
Thickness, outer sheath	approx. 0.70 mm
Overall twist	5 cores, twisted
Length of twist, overall twist	55 mm
Max. conductor resistance	58 Ω/km (at 20 °C)
Nominal voltage, cable	≤ 300 V AC
Test voltage	≥ 3000 V AC
Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	10 x D
Smallest bending radius, fixed installation	25 mm
Smallest bending radius, movable installation	50 mm
Max. bending cycles	4000000

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Minimum bending radius, drag chain applications	10 x D
Traversing path	10 m
Traversing rate	3 m/s
Acceleration	10 m/s ²
Torsion force	± 270 °/m
Torsion cycles	≥ 4000000
Torsional frequency	max. 25 (Torsion cycles/min)
Halogen-free	in accordance with DIN VDE 0472 part 815
Other resistance	Resistant to cold bending and cold impacts (according to DIN EN 60811-1-4 (-40 °C))
Special properties	FDA compliant according to FDA 21 CFR 177.2600
	highly flexible
	Flexible cable conduit capable
Ambient temperature (operation)	-40 °C ... 105 °C (cable, fixed installation)
	-25 °C ... 105 °C (Cable, flexible installation)

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP65
	IP67
	IP68
	IP69K
Ambient temperature (operation)	-40 °C ... 105 °C (Plug / socket)

Standards and regulations

Standard designation	M12 connector
Standards/specifications	IEC 61076-2-101
Standard designation	Material conformance
Standards/specifications	FDA 21 CFR 177.2600

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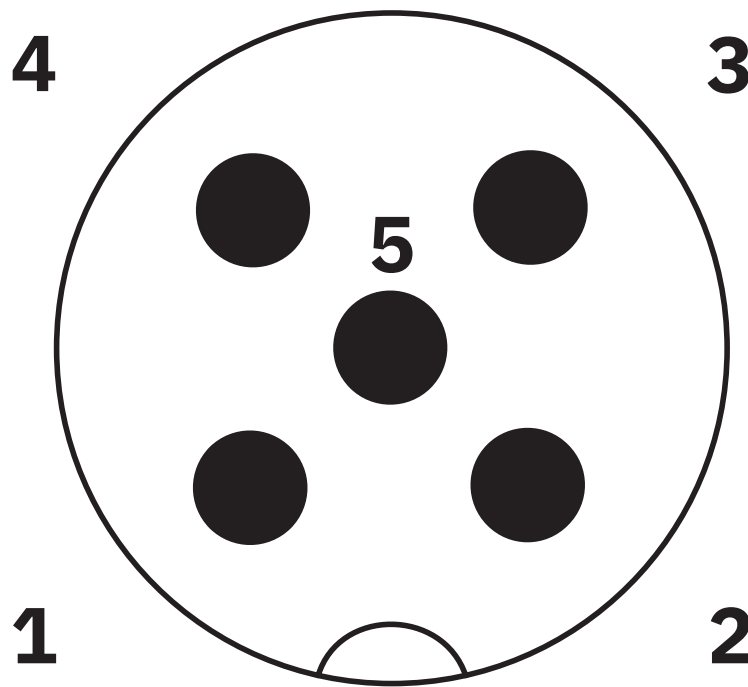


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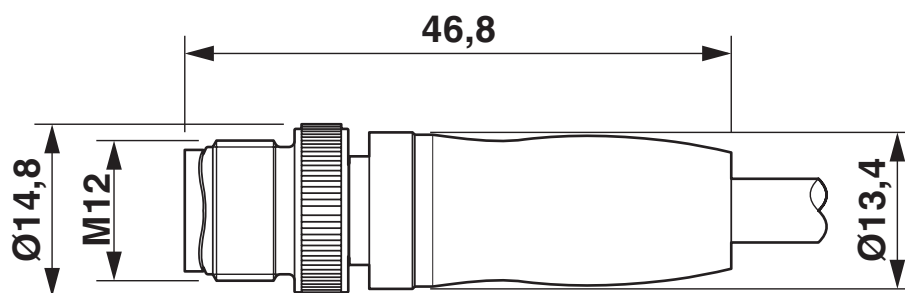
Drawings

Schematic diagram



Pin assignment M12 male connector, 5-pos., A-coded, male side

Dimensional drawing



Plug, M12 x 1, straight, shielded

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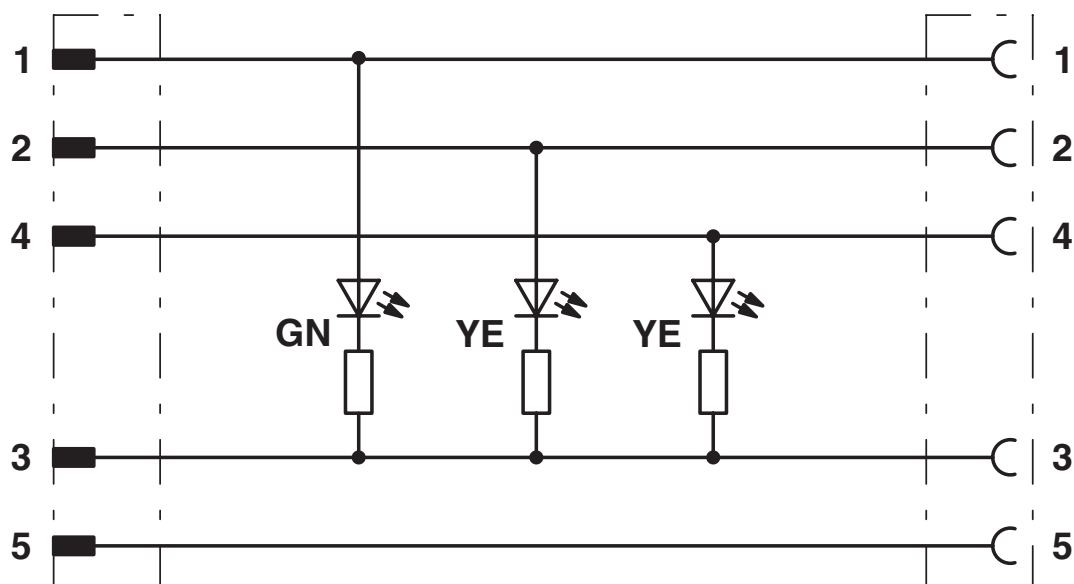
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Schematic diagram



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

Circuit diagram

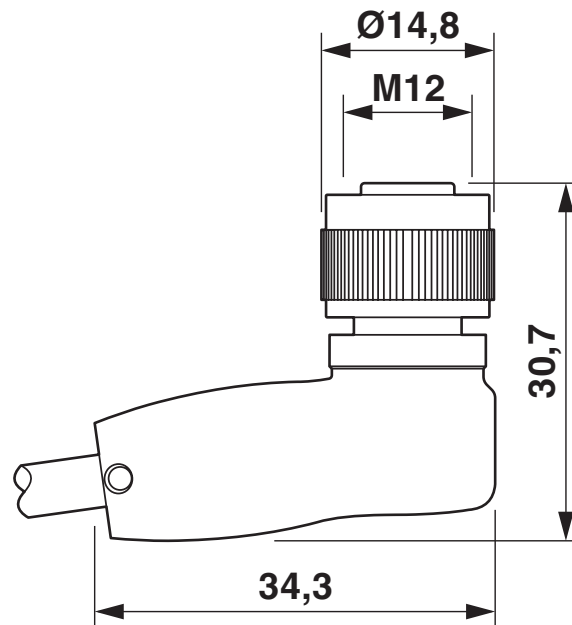


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Dimensional drawing



Socket M12 x 1, angled, with LED

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Approvals

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EAC-RoHS

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

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Classifications

ECLASS

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

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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