

# SAC-5P-MS/1,5-500/M12FR-3L FB - Sensor/actuator cable



1421020

<https://www.phoenixcontact.com/us/products/1421020>

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Sensor/actuator cable, 5-position, Plug straight M12, coding: A, with 3 LEDs, on Socket angled M12, coding: A, with 3 LEDs, cable length: 1.5 m, with high-grade steel knurl

## Your advantages

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

## Commercial data

Item number	1421020
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Sales key	BF03
Product key	BF1CDA
GTIN	4055626250502
Weight per piece (including packing)	97.6 g
Weight per piece (excluding packing)	88.56 g
Customs tariff number	85444290
Country of origin	PL

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## Technical data

### Product properties

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

### Insulation characteristics

Overvoltage category	II
Degree of pollution	3

### Material specifications

Material of grip body	PP
Contact material	CuSn
Contact surface material	Ni/Au
Contact carrier material	PP
Material for screw connection	Stainless steel

### Electrical properties

Contact resistance	$\leq 5 \text{ m}\Omega$
Insulation resistance	$\geq 100 \text{ M}\Omega$
Nominal voltage $U_N$	24 V DC
Nominal current $I_N$	4 A
Protective circuit	unwired

### Mechanical properties

#### Mechanical data

Insertion/withdrawal cycles	$\geq 100$
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### Signaling

Status display	3 LEDs
Status display present	Yes

### Connector

#### Connection 1

Type	Plug straight M12
Number of positions	5
Coding type	A
Number of positions	5

#### Connection 2

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Type	Socket angled M12
Number of positions	5
Coding type	A
Number of positions	5

## Cable/line

Cable length	1.5 m
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### PVC gray [500]

Dimensional drawing	
Cable weight	51 kg/km
UL AWM Style	2464 / 1729 (80°C/300 V)
Number of positions	5
Shielded	no
Cable type	PVC gray [500]
Conductor structure signal line	19x 0.15 mm
AWG signal line	22
Conductor cross section	5x 0.34 mm <sup>2</sup> (Signal line)
Wire diameter incl. insulation	1.26 mm ±0.05 mm
External cable diameter	5 mm ±0.15 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, green-yellow
Thickness, insulation	≥ 0.23 mm (Core insulation)
Thickness, outer sheath	≥ 0.76 mm
Overall twist	5 wires around filler to the core
Max. conductor resistance	max. 57 Ω/km (at 20 °C)
Insulation resistance	≥ 200 MΩ*km (at 20 °C)
Nominal voltage, cable	≤ 300 V
Test voltage	≥ 3000 V
Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	10 x D
Flame resistance	As per UL-Style 2464
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation) -25 °C ... 80 °C (Cable, flexible installation)

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## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP65
	IP67
	IP68
	IP69K
Ambient temperature (operation)	-25 °C ... 90 °C (Plug / socket)

## Standards and regulations

Standard designation	M12 connector
Standards/specifications	IEC 61076-2-101

# SAC-5P-MS/1,5-500/M12FR-3L FB - Sensor/actuator cable

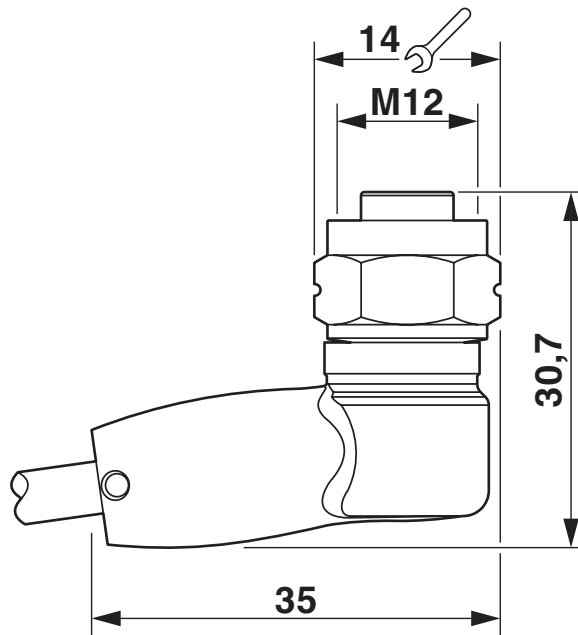


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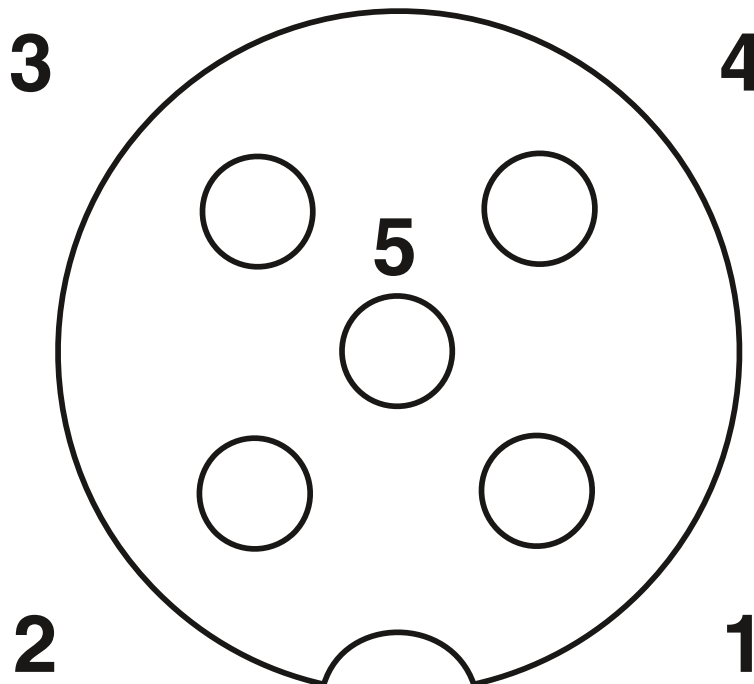
## Drawings

Dimensional drawing



M12 x 1 socket, angled

Schematic diagram



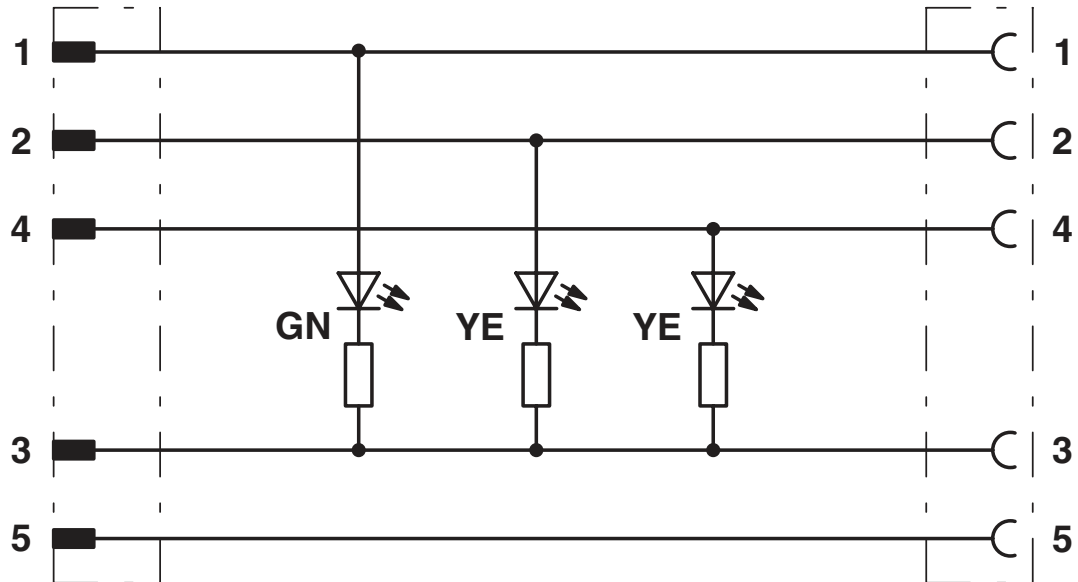
Pin assignment M12 socket, 5-pos., A-coded, socket side view

# SAC-5P-MS/1,5-500/M12FR-3L FB - Sensor/actuator cable

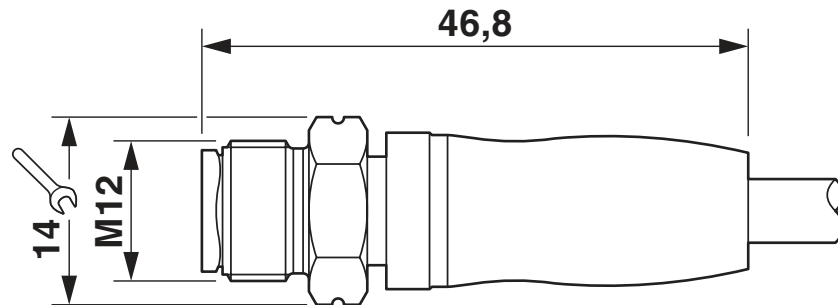
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Circuit diagram



Dimensional drawing



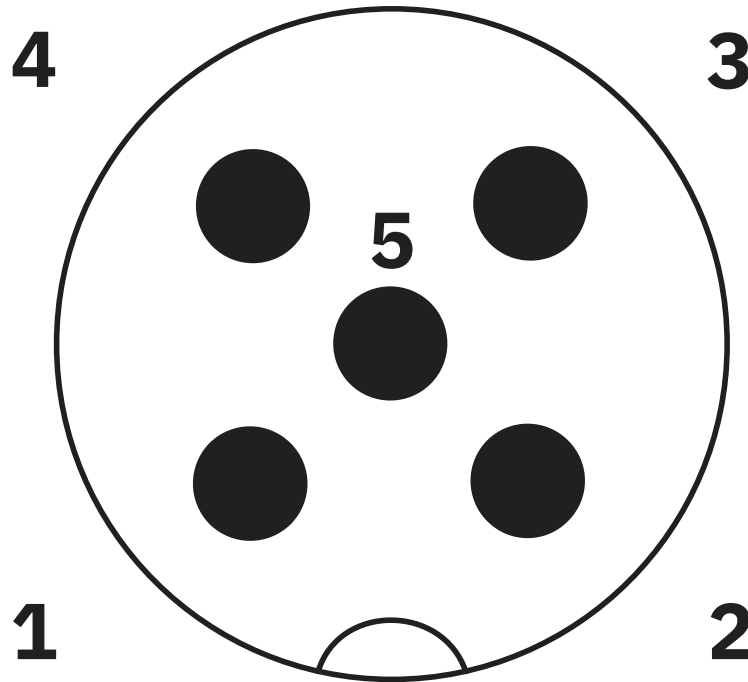
Plug, M12 x 1, straight

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Schematic diagram



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

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1421020>

 <b>UL Listed</b> Approval ID: FILE E 221474	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	48 V	4 A	-	-

 <b>cUL Listed</b> Approval ID: FILE E 221474	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	48 V	4 A	-	-

 <b>EAC-RoHS</b> Approval ID: RU D-DE.HB35.B.00385
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<b>cULus Listed</b>
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## Classifications

### ECLASS

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

### ETIM

ETIM 8.0	EC001855
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### UNSPSC

UNSPSC 21.0	26121600
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## Environmental product compliance

REACH SVHC	Dechlorane Plus
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

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## Accessories

### 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

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### 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

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## SAC BIT M12-W14 - Tool

1212513

<https://www.phoenixcontact.com/us/products/1212513>



Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a hexagonal knurl wrench size of 14 mm, with 4 mm hexagonal drive

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