

Sensor/actuator cable - SAC-5P- 1,5-PUR/M12FS SH



1682935

<https://www.phoenixcontact.com/de/produkte/1682935>

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Sensor/actuator cable, 5-position, PUR halogen-free, black-gray RAL 7021, shielded, free cable end, on Socket straight M12, coding: A, cable length: 1.5 m

Your advantages

- Easy and safe: 100% electrically tested plug-in components
- Reliable signal transmission – 360° shielding in environments with electromagnetic interference

Commercial Data

Item number	1682935
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	C1 - Sensor-Aktor-Kabel
Product Key	BF1CKA
Catalog Page	Page 204 (C-2-2019)
GTIN	4017918169213
Weight per Piece (including packing)	78,8 g
Weight per Piece (excluding packing)	78,8 g
Customs tariff number	85444290
Country of origin	PL

Technical Data

Product properties

Product type	Sensor/actuator cable
Number of positions	5
Application	Standard
No. of cable outlets	1
Shielded	yes
Coding	A - standard

Insulation characteristics

Overvoltage category	II
Degree of pollution	3

Material specifications

Flammability rating according to UL 94	HB
Sealing material	NBR
Material of grip body	TPU, hardly inflammable, self-extinguishing
Contact material	CuSn
Contact surface material	Ni/Au
Contact carrier material	TPU GF
Cable gland material	Zinc die-cast, nickel-plated

Electrical properties

Contact resistance	$\leq 5 \text{ m}\Omega$
Insulation resistance	$\geq 100 \text{ M}\Omega$
Nominal voltage U_N	48 V AC
	60 V DC
Nominal current I_N	4 A
Protective circuit	unwired

LED signaling

Status display	No
Status display present	No

Connection data

Conductor connection

Tightening torque	0.4 Nm (M12 connector)
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Connector

Insertion/withdrawal cycles	≥ 100
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Connection 1

Head design	free cable end
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Connection 2

Head design	Socket
Head cable outlet	straight
Head thread type	M12
Coding	A

Cable / line

Cable length	1.5 m
Cable weight	43 kg/km
UL AWM Style	20549 / 10493 (80°C/300 V)
Number of positions	5
Shielded	yes
Cable type	PUR halogen-free black [PUR]
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	5.25 mm ±0.2 mm
Outer sheath, material	PUR
External sheath, color	black-gray RAL 7021
Conductor material	Bare Cu litz wires
Material wire insulation	PP
Single wire, color	Brown, white, blue, black, gray
Thickness, insulation	≥ 0.21 mm
Thickness, outer sheath	approx. 0.5 mm
Overall twist	5 wires around filler to the core
Optical shield covering	80 %
Max. conductor resistance	max. 57 Ω/km (at 20 °C)
Insulation resistance	70 GΩ*km (at 20 °C)
Nominal voltage, cable	300 V (at 20 °C)
Test voltage Core/Core	3000 V (at 20 °C)
Smallest bending radius, fixed installation	26 mm
Smallest bending radius, movable installation	52 mm (up to +60 °C)
Max. bending cycles	10000000
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 DIN EN 60332-2-2 (20 s)
Resistance to oil	in accordance with DIN EN 60811-2-1
Other resistance	Highly resistant to acids, alkaline solutions and solvents hydrolysis and microbe resistant Resistant to salt water partly UV-resistant in accordance with DIN EN ISO 4892-2-A

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	abrasion-resistant
Special properties	Flexible cable conduit capable
	Silicone-free
	Free of substances which would hinder coating with paint or varnish
	Low adhesion surface
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)
	-25 °C ... 80 °C (Cable, flexible installation)

Ambient conditions

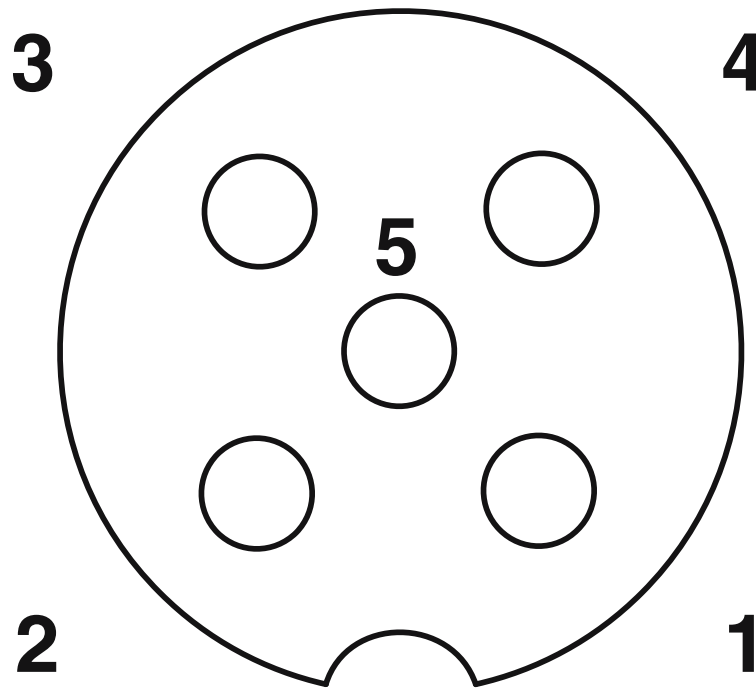
Degree of protection	IP65
	IP67
Ambient temperature (operation)	-25 °C ... 90 °C (Plug / socket)

Standards and regulations

Standards/specifications	IEC 61076-2-101
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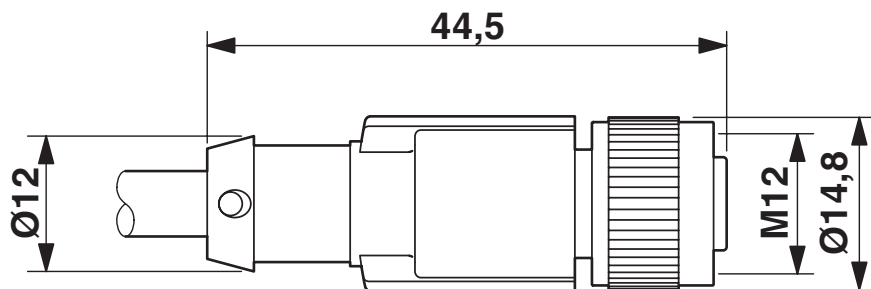
Drawings

Schematic diagram



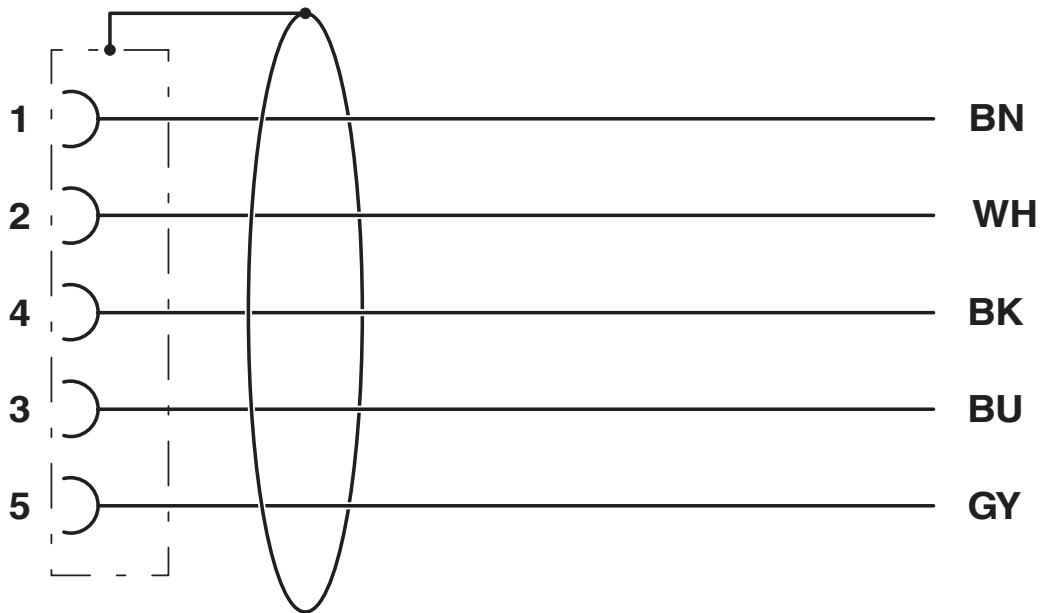
Pin assignment M12 socket, 5-pos., A-coded, socket side view

Dimensional drawing



M12 x 1 socket, straight, shielded

Circuit diagram



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Approvals

 UL Listed Approval ID: FILE E 221474				
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	125 V	4 A	-	-

 cUL Listed Approval ID: FILE E 221474				
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	125 V	4 A	-	-

 EAC Approval ID: RU D-DE.HB35.B.00387				
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cULus Listed				
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Classifications

ECLASS

ECLASS-9.0	27060311
ECLASS-10.0.1	27060311
ECLASS-11.0	27060311

ETIM

ETIM 8.0	EC001855
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UNSPSC

UNSPSC 21.0	26121600
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Environmental Product Compliance

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

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Accessories

Insert label

Insert label - PABA WH/23 - 1013779

<https://www.phoenixcontact.com/de/produkte/1013779>



Insert label, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, mounting type: slide-on, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 20

Insert label

Insert label - PABA YE/23 - 1013782

<https://www.phoenixcontact.com/de/produkte/1013782>



Insert label, Strip, yellow, unlabeled, can be labeled with: CMS-P1-PLOTTER, mounting type: slide-on, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 20

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Marker pen

Marker pen - B-STIFT - 1051993

<https://www.phoenixcontact.com/de/produkte/1051993>



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

Diagonal cutter

Diagonal cutter - CUTFOX-S VDE - 1212207

<https://www.phoenixcontact.com/de/produkte/1212207>



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

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Stripping tool

Stripping tool - WIREFOX SAC-1 - 1212757

<https://www.phoenixcontact.com/de/produkte/1212757>



Stripping pliers, for halogen-free sensor/actuator cables (SAC cables), with PUR and PVC insulation, from Ø of 3.2 to 4.4 mm, any stripping length

Stripping tool

Stripping tool - WIREFOX SAC - 1212623

<https://www.phoenixcontact.com/de/produkte/1212623>



Stripping pliers, for halogen-free sensor/actuator cables (SAC cables), with PUR and PVC insulation, from Ø of 4.4 to 7 mm, any stripping length

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Stripping tool

Stripping tool - WIREFOX 10 - 1212150

<https://www.phoenixcontact.com/de/produkte/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

Protective hose adapter

Protective hose adapter - WP-CTA POM 13,0 BK - 1422884

<https://www.phoenixcontact.com/de/produkte/1422884>



Protective hose adapter, for corrugated hoses with a nominal size of 13 (10 x 13), corrugated in parallel

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Protective hose

Protective hose - WP-PA HF 13,0 BK - 3240681

<https://www.phoenixcontact.com/de/produkte/3240681>



Protective hose, material: PA 6, filament: without, UV-resistant: yes, flexible, degree of protection: IP68, color: black, inflammability class in acc. with UL 94: V0, inner diameter: 10 mm, Total length: 50 m

Protective hose

Protective hose - WP-PA HF-HB 13,0 BK - 3240839

<https://www.phoenixcontact.com/de/produkte/3240839>



Protective hose, material: PA 6, filament: without, UV-resistant: yes, flexible, degree of protection: IP68, color: black, inflammability class in acc. with UL 94: HB, inner diameter: 10 mm, Total length: 50 m

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Screw plug

Screw plug - PROT-M12 MS-PA-CHAIN - 1430899

<https://www.phoenixcontact.com/de/produkte/1430899>

M12 sealing cap with fixing band, for sensor cables, for free M12 sockets



Locking clip

Locking clip - SAC-M12-EXCLIP-F - 1558991

<https://www.phoenixcontact.com/de/produkte/1558991>

Locking clip for the socket side of sensor/actuator cables with M12 connector and M12 connectors for assembly, for knurl diameter: 15 mm or for Allen key with a wrench size of 14 mm, prevents the disconnection of plug-in connections without tools



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Torque screwdriver

Torque screwdriver - TSD 04 SAC - 1208429

<https://www.phoenixcontact.com/de/produkte/1208429>



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

Torque screwdriver

Torque screwdriver - TSD-M 1,2NM - 1212224

<https://www.phoenixcontact.com/de/produkte/1212224>



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

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Adapter insert

Adapter insert - TSD-M SAC-BIT ADAPTER - 1212600

<https://www.phoenixcontact.com/de/produkte/1212600>



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

Tool

Tool - SAC BIT M12-D15 - 1208432

<https://www.phoenixcontact.com/de/produkte/1208432>



Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive

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PHOENIX CONTACT Deutschland GmbH
Flachsmarktstraße 8
D-32825 Blomberg
+49 52 35/3-1 20 00
info@phoenixcontact.de