

SAC-5P- 3,0-PVC/M12FR - Sensor/actuator cable



1415687

<https://www.phoenixcontact.com/us/products/1415687>

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Sensor/actuator cable, 5-position, PVC, black RAL 9005, free cable end, on Socket angled M12, coding: A, cable length: 3 m

Your advantages

- Easy and safe: 100 % electrically tested plug-in components

Commercial data

Item number	1415687
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF03
Product key	BF1CDA
Catalog page	Page 202 (C-2-2019)
GTIN	4055626050485
Weight per piece (including packing)	130 g
Weight per piece (excluding packing)	102.18 g
Customs tariff number	85444290
Country of origin	DE

Technical data

Product properties

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

Insulation characteristics

Overvoltage category	II
Degree of pollution	3

Material specifications

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

Electrical properties

Insulation resistance	$\geq 100 \text{ M}\Omega$
Nominal voltage U_N	48 V AC
	60 V DC
Nominal current I_N	4 A

Mechanical properties

Mechanical data

Insertion/withdrawal cycles	≥ 100
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Signaling

Status display	No
Status display present	No

Connector

Connection 1

Type	free cable end
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Connection 2

Type	Socket angled M12
Number of positions	5

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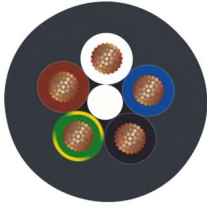
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Coding type	A
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Cable/line

Cable length	3 m
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PVC black [PVC]

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 black [PVC]	
Conductor structure signal line	19x 0.15 mm	
AWG signal line	22	
Conductor cross section	5x 0.34 mm ² (Signal line)	
Wire diameter incl. insulation	1.26 mm ±0.05 mm	
External cable diameter	5.00 mm ±0.15 mm	
Outer sheath, material	PVC	
External sheath, color	black RAL 9005	
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	
Smallest bending radius, fixed installation	25 mm	
Smallest bending radius, movable installation	50 mm	
Flame resistance	As per UL-Style 2464	
Resistance to oil	in accordance with DIN EN 60811-2-1	
Ambient temperature (operation)	-25 °C ... 80 °C (cable, fixed installation)	
	-10 °C ... 80 °C (Cable, flexible installation)	

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Environmental and real-life conditions

Ambient conditions

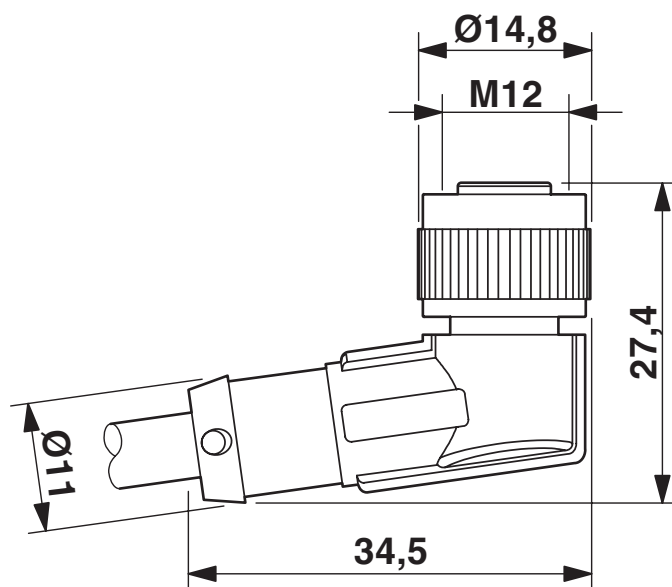
Degree of protection	IP65
	IP67
	IP68
Ambient temperature (operation)	-25 °C ... 90 °C (Plug / socket)

Standards and regulations

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

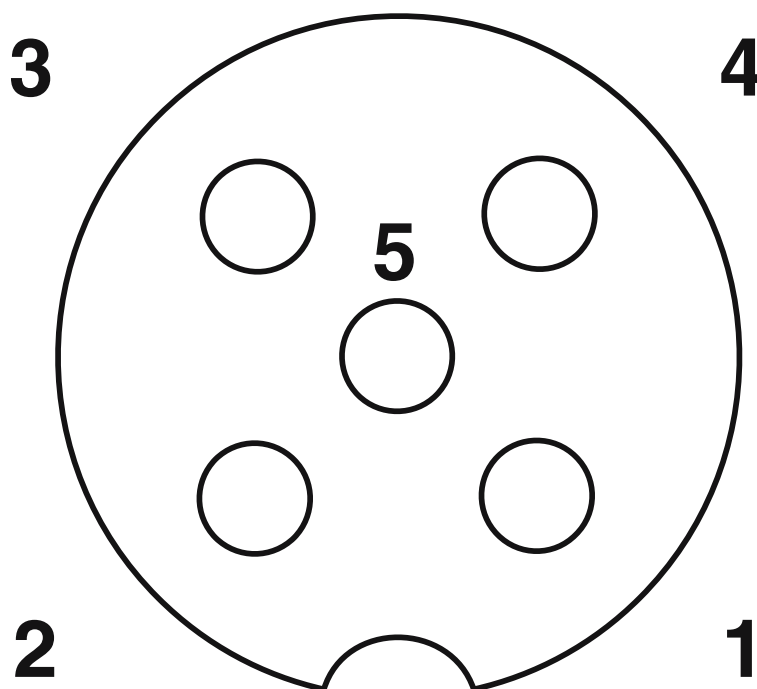
Drawings

Dimensional drawing



M12 x 1 socket, angled

Schematic diagram



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

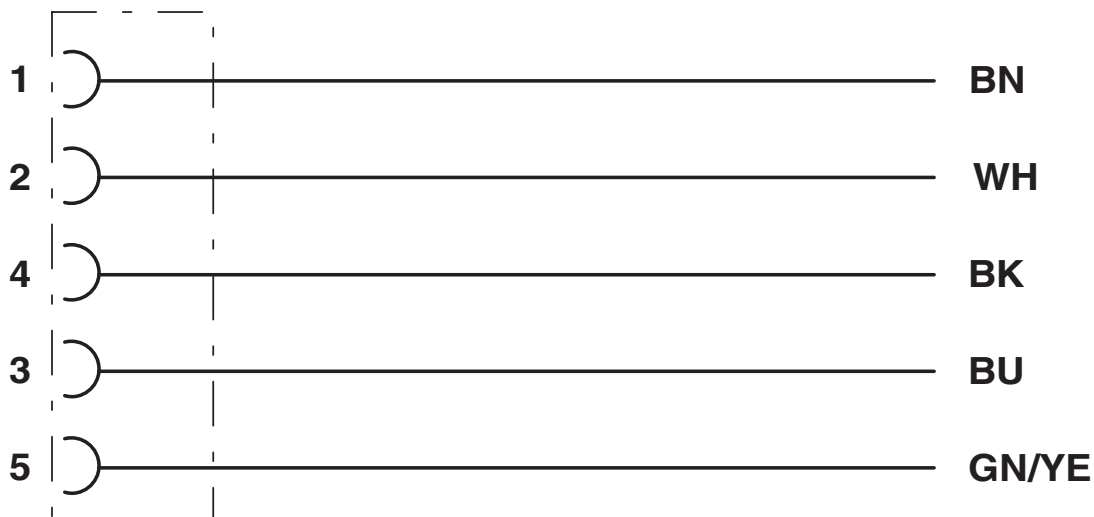
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Circuit diagram



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1415687>

	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-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	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
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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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Accessories

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

1422884

<https://www.phoenixcontact.com/us/products/1422884>



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

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

PROT-M12 MS-PA-CHAIN - Screw plug

1430899

<https://www.phoenixcontact.com/us/products/1430899>

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



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SAC-M12-EXCLIP-F - Locking clip

1558991

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

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 SAC-1 - Stripping tool

1212757

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

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WIREFOX SAC - Stripping tool

1212623

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

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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TSD 04 SAC - Torque screwdriver

1208429

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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

SAC BIT M12-D15 - Tool

1208432

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