

Sensor/actuator cable - SAC-12P- 5,0-PUR/FS SCO



1430637

<https://www.phoenixcontact.com/de/produkte/1430637>

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Sensor/actuator cable, 12-position, PUR halogen-free, black RAL 9005, free cable end, on Socket straight M12 SPEEDCON, coding: A, cable length: 5 m

Your advantages

- Easy and safe: 100% electrically tested plug-in components
- Save time, thanks to installation with SPEEDCON fast locking system
- Our standard: robust halogen-free PUR cable
- Save space – with high-pos. connectors

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Commercial Data

Item number	1430637
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	C1 - Sensor-Aktor-Kabel
Product Key	BF1CGA
Catalog Page	Page 212 (C-2-2019)
GTIN	4046356456449
Weight per Piece (including packing)	328,4 g
Weight per Piece (excluding packing)	314 g
Customs tariff number	85444290
Country of origin	DE

Technical Data

Product properties

Product type	Sensor/actuator cable
Number of positions	12
Application	Standard
No. of cable outlets	1
Shielded	no
Coding	A - standard

Insulation characteristics

Overvoltage category	II
Degree of pollution	3

Material specifications

Flammability rating according to UL 94	V0
Sealing material	NBR
Material of grip body	TPU, hardly inflammable, self-extinguishing
Contact material	CuZn
Contact surface material	Ni/Au
Contact carrier material	PA 6.6
Cable gland material	Zinc die-cast, nickel-plated

Electrical properties

Contact resistance	≤ 5 mΩ
Insulation resistance	≥ 100 MΩ
Nominal voltage U _N	30 V AC
	30 V DC
Nominal current I _N	1.5 A
Protective circuit	unwired

Connection data

Conductor connection

Tightening torque	0.4 NmM12 connector
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Connector

Header 1

Head design	free cable end
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Header 2

Head design	Socket
Head cable outlet	straight
Head thread type	M12
Head locking type	SPEEDCON

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Coding	A
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LED signaling

Status display	No
Status display present	No

Cable / line

Cable length	5 m
Cable weight	17 kg/km
Number of positions	12
Shielded	no
Cable type	PUR halogen-free black [PUR]
Conductor structure signal line	18x 0.10 mm
AWG signal line	26
Conductor cross section	12x 0.14 mm ² (Signal line)
Wire diameter incl. insulation	1 mm ±0.05 mm (Signal line)
External cable diameter	7.2 mm
Outer sheath, material	PUR
External sheath, color	black RAL 9005
Conductor material	Tin-plated Cu litz wires
Material wire insulation	PP
Single wire, color	white, brown, green, yellow, gray, pink, blue, red, black, violet, gray/pink, red/blue
Overall twist	12 wires twisted in layers
Max. conductor resistance	142 Ω/km
Nominal voltage, cable	≤ 300 V
Test voltage	≥ 1500 V
Max. bending cycles	4000000
Halogen-free	in accordance with DIN EN 50267-2-1
Flame resistance	in acc. to UL VW1 DIN EN 60332-1-2
Resistance to oil	EN 60811-2-1
Other resistance	EN 50525-2-21:2012-01 partly UV-resistant in accordance with DIN EN ISO 4892-2-A
Special properties	Low adhesion surface
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation) -5 °C ... 80 °C (Cable, flexible installation)

Cable structure

Cable type	PUR halogen-free black
Short symbol	PUR
External cable diameter	7.20 mm
Outer sheath, material	PUR
External sheath, color	black RAL 9005
Conductor material	Tin-plated Cu litz wires

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Conductor structure signal line	18x 0.10 mm
AWG signal line	26
Material wire insulation	PP
Wire diameter incl. insulation	1 mm ±0.05 mm
Single wire, color	White-brown, green-yellow, gray-pink, blue-red, black-violet, gray/pink-red/blue
Overall twist	12 wires twisted in layers

Electrical properties

Conductor resistance	142 Ω/km
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Mechanical properties

Number of bending cycles	4000000
Bending radius	54 mm
Traversing path	10 m
Traversing rate	3 m/s
Acceleration	10 m/s ²

Bending cycles

Number of bending cycles	4000000
Bending radius	54 mm
Traversing path	10 m
Traversing rate	3 m/s
Acceleration	10 m/s ²

Ambient conditions

Resistance to oil	DIN VDE 0472 Part 803, test type B
Other resistance	Hydrolysis and microbe resistant as per VDE 0282 section 10
Special properties	Low adhesion surface
Ambient temperature (operation)	-20 °C ... 80 °C (Cable, flexible installation) -40 °C ... 80 °C (cable, fixed installation)

Ambient conditions

Degree of protection	IP65 IP67 IP68
Ambient temperature (operation)	-25 °C ... 85 °C (Plug / socket) -40 °C ... 80 °C (cable, fixed installation) -20 °C ... 80 °C (Cable, flexible installation)
Resistance to oil	DIN VDE 0472 Part 803, test type B

Standards and regulations

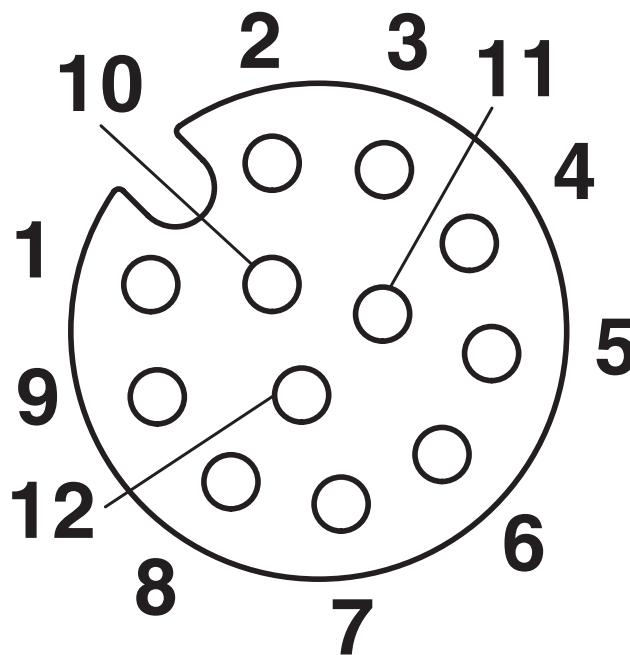
Resistance to oil	DIN VDE 0472 Part 803, test type B
Other resistance	Hydrolysis and microbe resistant as per VDE 0282 section 10
Standards/specifications	IEC 61076-2-101

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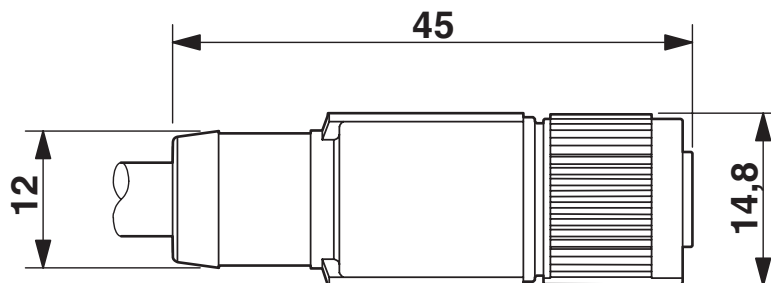
Drawings

Schematic diagram



Pin assignment M12, 12-pos., female side view

Dimensional drawing



M12-SPEEDCON socket, straight

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Circuit diagram



Contact assignment of the M12 socket

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Approvals



EAC

Approval ID: RU C-DE.BL08.B.00286



UL Listed

Approval ID: FILE E 221474

	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	30 V	1 A	-	-



EAC

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

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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

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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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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