

# Sensor/actuator cable - SAC-8P- 5,0-28X/M12FS OD



1407275

<https://www.phoenixcontact.com/pc/products/1407275>

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Sensor/actuator cable, 8-position, PE-X halogen-free, black-gray RAL 7021, free cable end, on Socket straight M12, coding: A, cable length: 5 m, for outdoor applications, with high-grade steel knurl

## Your advantages

- Easy and safe: 100% electrically tested plug-in components
- Robust throughout: resistant to oil, UV, and ozone, withstands temperatures from -40°C ... +105°C

## Commercial Data

Item number	1407275
Packing unit	1 pc
Minimum order quantity	1 pc
Product Key	BF1CFA
Catalog Page	Page 157 (C-4-2013)
GTIN	4046356773935
Weight per Piece (including packing)	319.8 g
Weight per Piece (excluding packing)	319.8 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	8
Application	External areas
No. of cable outlets	1
Shielded	no
Coding	A - standard

### Insulation characteristics

Degree of pollution	3
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### Material specifications

Color	black
Flammability rating according to UL 94	V0
Sealing material	FPM
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 $U_N$	30 V AC
	30 V DC
Nominal current $I_N$	2 A
Protective circuit	unwired

### Mechanical properties

#### Mechanical data

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

### 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	5 m
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### PE-X black [28X]

Dimensional drawing	
Cable weight	65 kg/km
Number of positions	8
Shielded	no
Cable type	PE-X black [28X]
Conductor structure signal line	32x 0.10 mm
AWG signal line	24
Conductor cross section	8x 0.25 mm <sup>2</sup>
Wire diameter incl. insulation	1.17 mm ±0.02 mm
External cable diameter	6.8 mm ±0.2 mm
Outer sheath, material	PE-X
External sheath, color	black-gray RAL 7021
Conductor material	Bare Cu litz wires
Material wire insulation	PE-X
Single wire, color	white, brown, green, yellow, gray, pink, blue, red
Thickness, insulation	approx. 0.25 mm (Core insulation)
Thickness, outer sheath	approx. 1.3 mm
Overall twist	8 wires around filler to the core
Length of twist, overall twist	67 mm
Max. conductor resistance	≤ 78 Ω/km (at 20 °C)
Insulation resistance	≥ 100 MΩ*km (at 20 °C)
Nominal voltage, cable	≤ 300 V AC

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Test voltage	≥ 3000 V AC (Spark test)
Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	10 x D
Max. bending cycles	2000000
Halogen-free	in accordance with DIN VDE 0472 part 815 in accordance with DIN EN 50267-2-1
Flame resistance	According to DIN EN 60332-1-2 according to DIN EN 50266-2-5
Resistance to oil	According to DIN EN 60811-2-1, 168 h at 100°C According to DIN EN 50306
Other resistance	Resistance to fuels according to IEC 60811, 168 h at 70°C UV resistant according to DIN VDE 0276-605
Special properties	Irradiated
Ambient temperature (operation)	-40 °C ... 105 °C (cable, fixed installation) -15 °C ... 105 °C (Cable, flexible installation) 20 °C ±5 °C (cable, drag chain applications)

## Ambient conditions

Degree of protection	IP65 IP67 IP68 IP69K
Ambient temperature (operation)	-40 °C ... 105 °C (Plug / socket) -40 °C ... 85 °C (On sudden changes in temperature (according to IEC 60512-11-4))

## Standards and regulations

M12

Standards/specifications	IEC 61076-2-101
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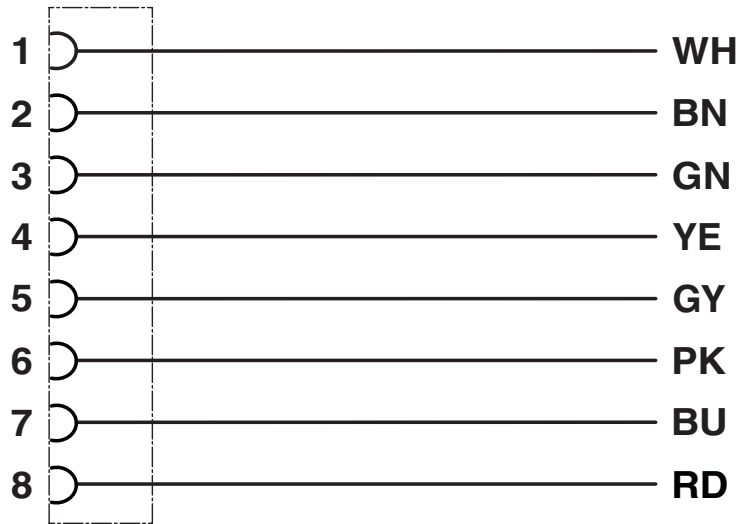


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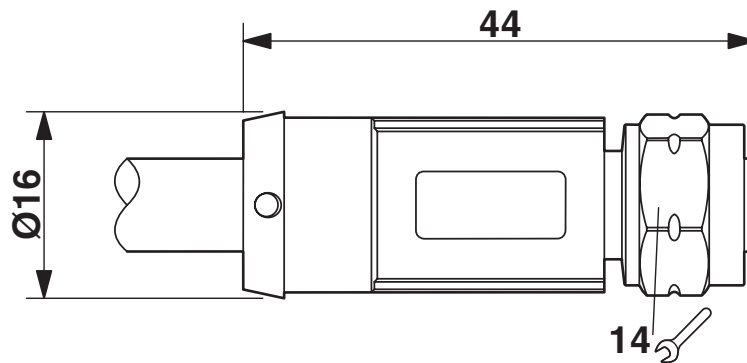
<https://www.phoenixcontact.com/pc/products/1407275>

## Drawings

Circuit diagram



Dimensional drawing



M12 x 1 socket, straight

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Schematic diagram



Pin assignment M12 socket, 8-pos., A-coded, view female side

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## Approvals

**DNV**

Approval ID: TAE00002K4

**ERC**

**EAC**

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

**ERC**

**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

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

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## Accessories

### Torque screwdriver

Torque screwdriver - TSD 04 SAC - 1208429

<https://www.phoenixcontact.com/pc/products/1208429>



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

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### Torque screwdriver

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

<https://www.phoenixcontact.com/pc/products/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/pc/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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## Tool

Tool - SAC BIT M12-W14 - 1212513

<https://www.phoenixcontact.com/pc/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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