

Sensor/actuator cable - SAC-8P-M12MS/ 5,0-28X/M12FS OD



1407278

<https://www.phoenixcontact.com/de/produkte/1407278>

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Sensor/actuator cable, 8-position, PE-X halogen-free, black-gray RAL 7021, Plug straight M12, coding: A, 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

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Commercial Data

Item number	1407278
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to Order (non-returnable)
Sales Key	C1 - Sensor-Aktor-Kabel
Product Key	BF1CFA
Catalog Page	Page 157 (C-4-2013)
GTIN	4046356773966
Weight per Piece (including packing)	335,8 g
Weight per Piece (excluding packing)	335,8 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
Cable gland material	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

Connection data

Conductor connection

Tightening torque	0.4 NmM12 connector
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Connector

Insertion/withdrawal cycles	≥ 100
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Header 1

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

Header 2

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

LED signaling

Status display	No
Status display present	No

Cable / line

Cable length	5 m
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 ²
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
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

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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)

Cable structure

Cable type	PE-X black
Outer sheath, material	PE-X
External sheath, color	black-gray RAL 7021

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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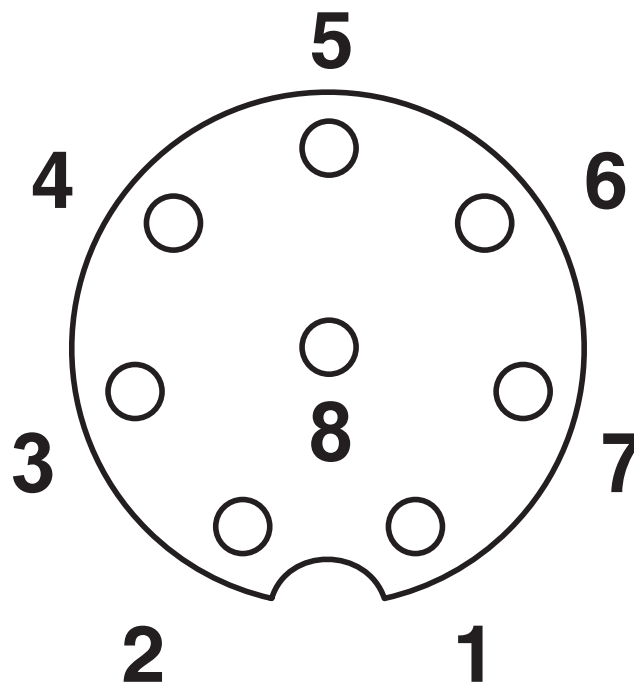
Drawings

Circuit diagram



Contact assignment of the M12 connector and the M12 socket

Schematic diagram



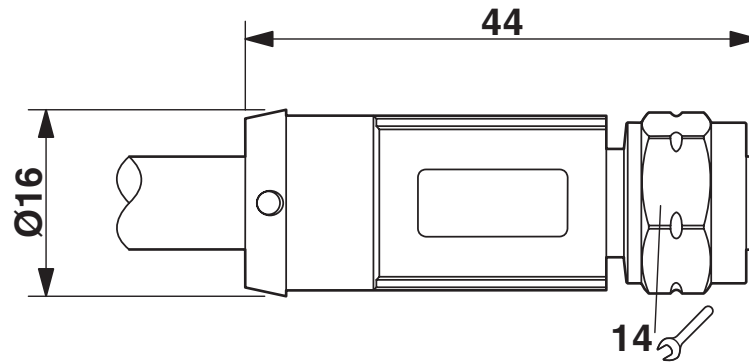
Pin assignment M12 socket, 8-pos., A-coded, view female side

Sensor/actuator cable - SAC-8P-M12MS/ 5,0-28X/M12FS OD

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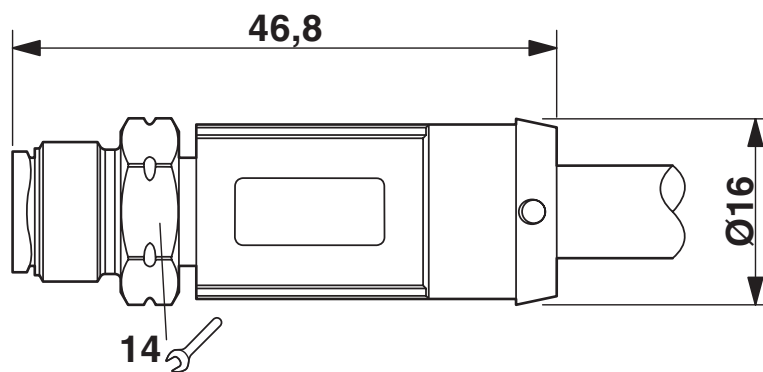
<https://www.phoenixcontact.com/de/produkte/1407278>

Dimensional drawing



M12 x 1 socket, straight

Dimensional drawing



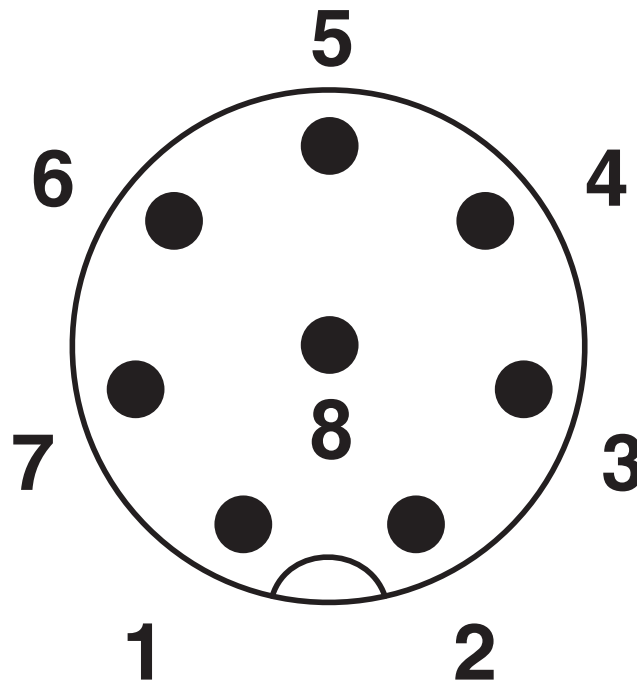
Plug, M12 x 1, straight, shielded

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Schematic diagram



Pin assignment M12 plug, 8-pos., A-coded, view plug 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

REACH SVHC	Lead 7439-92-1
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/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-W14 - 1212513

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