

# Sensor/actuator cable - SAC-8P-M12MS/5,0-28X/ M12FSSHOD - 1407286

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Sensor/actuator cable, 8-position, PE-X/PE-X halogen-free, black-gray RAL 7021, shielded, 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
- ✓ Corrosion protection for all exposed metal parts, thanks to the use of stainless steel type 1.4404
- ✓ Robust throughout: resistant to oil, UV, and ozone, withstands temperatures from -40°C to +105°C
- ✓ Reliable signal transmission – 360° shielding in environments with electromagnetic interference



## Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 774048
GTIN	4046356774048

## Technical data

### Dimensions

Length of cable	5 m
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### Ambient conditions

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

### General

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## Technical data

### General

Rated current at 40°C	2 A
Rated voltage	30 V AC
	30 V DC
Number of positions	8
Insulation resistance	≥ 100 MΩ
Coding	A - standard
Standards/regulations	M12 connector IEC 61076-2-101
Status display	No
Protective circuit/component	unwired
Degree of pollution	3
Insertion/withdrawal cycles	≥ 100
Torque	0.4 Nm (M12 connector)

### Material

Flammability rating according to UL 94	V0
Contact material	CuSn
Contact surface material	Ni/Au
Contact carrier material	PP
Material of grip body	PP
Material, knurls	Stainless steel
Sealing material	FPM

### Standards and Regulations

Standards/specifications	M12 connector IEC 61076-2-101
Flammability rating according to UL 94	V0

### Cable

Cable type	PE-X black
Cable type (abbreviation)	28X
Cable abbreviation	Li2X2X-C-V1-2X
Conductor cross section	8x 0.25 mm <sup>2</sup>
AWG signal line	24
Conductor structure signal line	32x 0.10 mm
Core diameter including insulation	1.17 mm ±0.02 mm
Thickness, insulation	approx. 0.25 mm (Core insulation)
Wire colors	white, brown, green, yellow, gray, pink, blue, red
Overall twist	8 wires around filler to the core
Length of twist, overall twist	67 mm
Shielding	Braided copper wires
Optical shield covering	85 %
External sheath, color	black-gray RAL 7021

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## Technical data

### Cable

Inner sheath thickness	approx. 0.5 mm
Outer sheath thickness	approx. 0.7 mm
External cable diameter D	7.25 mm ±0.3 mm
Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	10 x D
Number of bending cycles	1000000
Minimum bending radius, drag chain applications	10 x D
Traversing path	10 m
Traversing rate	3 m/s
Acceleration	10 m/s <sup>2</sup>
Cable weight	81 kg/km
Outer sheath, material	PE-X
Material, inner sheath	PE-X
Material, filler	PP yarn
Material conductor insulation	PE-X
Conductor material	Bare Cu litz wires
Insulation resistance	≥ 100 MΩ*km (at 20 °C)
Conductor resistance	≤ 78 Ω/km (at 20 °C)
Working capacitance	approx. 80 pF (core-core) approx. 125 pF (core-shield)
Nominal voltage, cable	≤ 300 V AC
Test voltage, cable	≥ 3000 V AC (Spark test)
Test voltage Core/Shield	≥ 1000 V AC (for 10 s)
Special properties	Inductance approx. 0.48 mH/km Irradiated
Flame resistance	According to DIN EN 60332-1-2 according to DIN EN 50266-2-5
Halogen-free	in accordance with DIN VDE 0472 part 815 in accordance with DIN EN 50267-2-1
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
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)

### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years

# Sensor/actuator cable - SAC-8P-M12MS/5,0-28X/ M12FSSHOD - 1407286

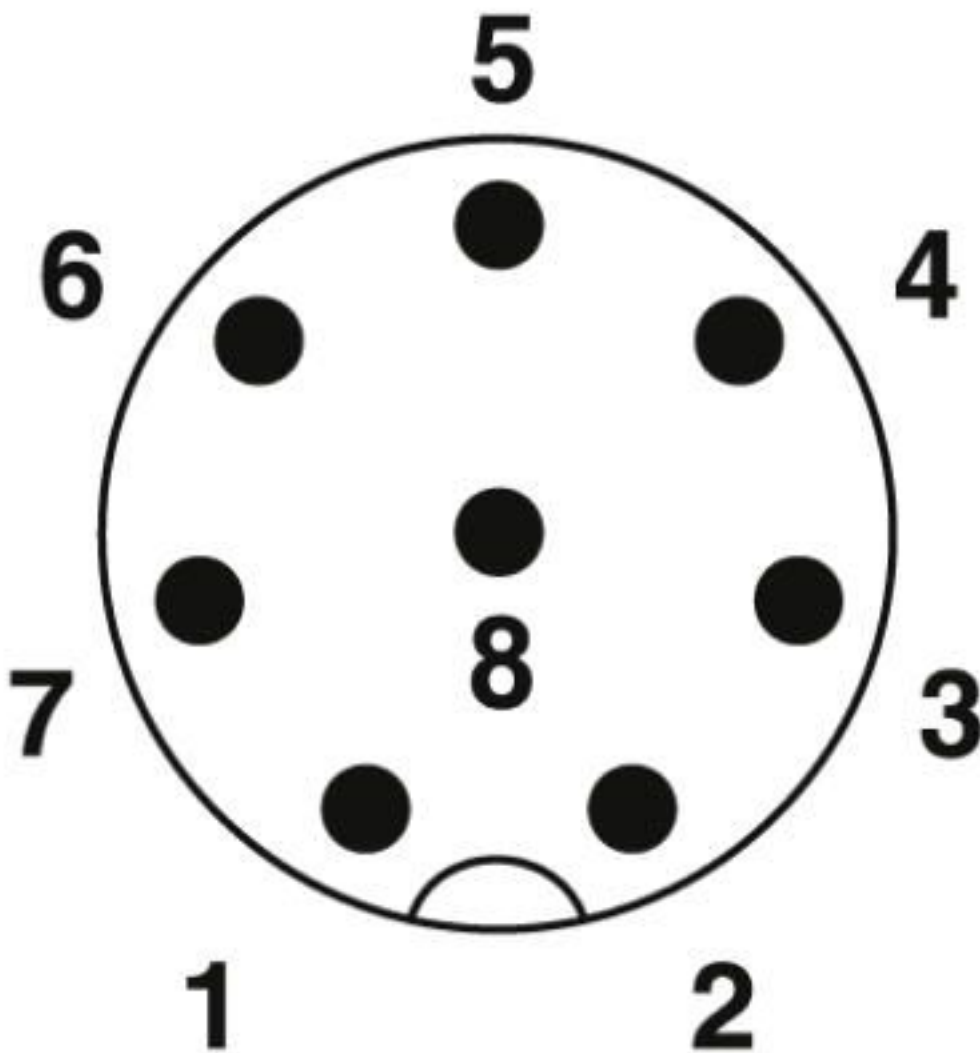
Technical data

Environmental Product Compliance

	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"
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Drawings

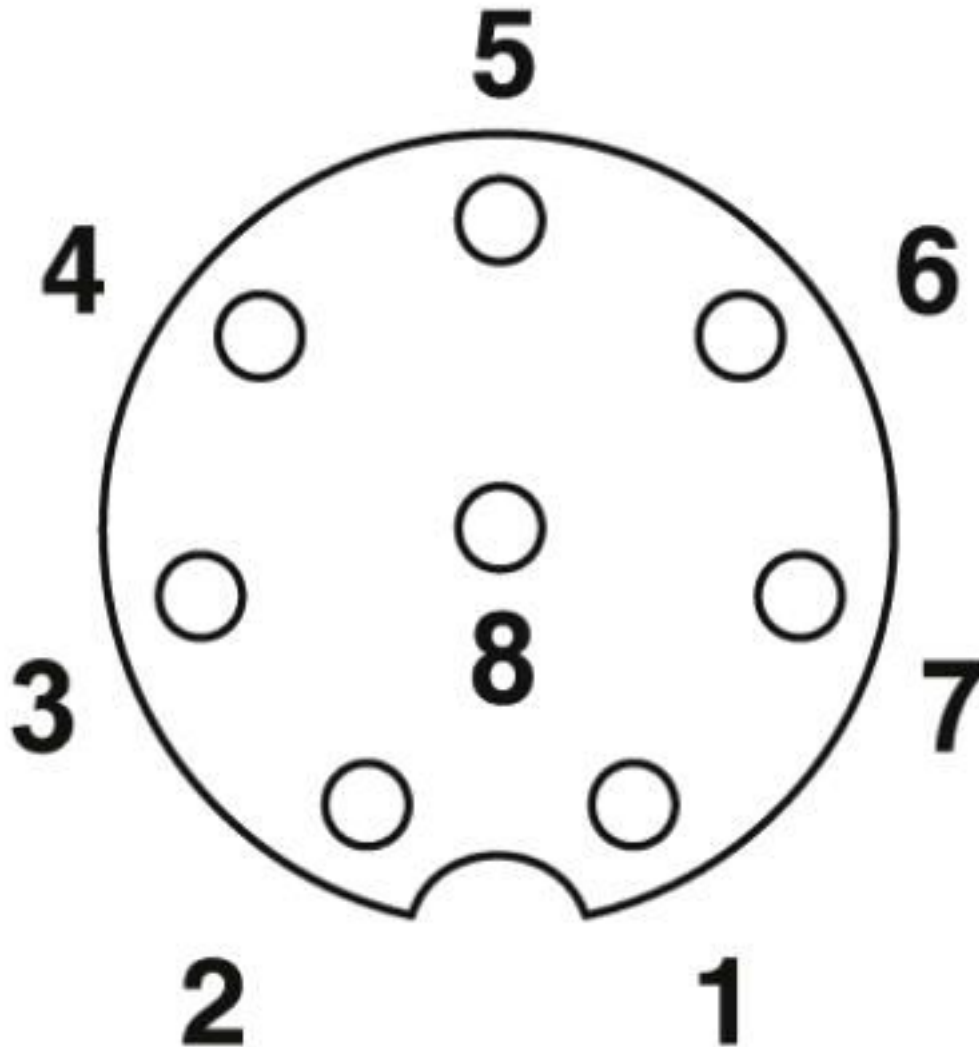
Schematic diagram



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

Sensor/actuator cable - SAC-8P-M12MS/5,0-28X/  
M12FSSHOD - 1407286

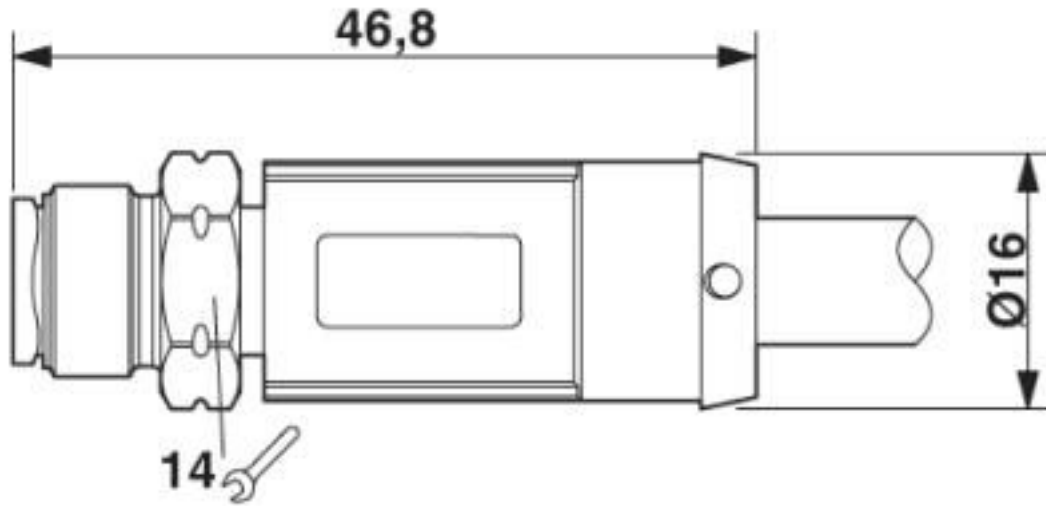
Schematic diagram



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

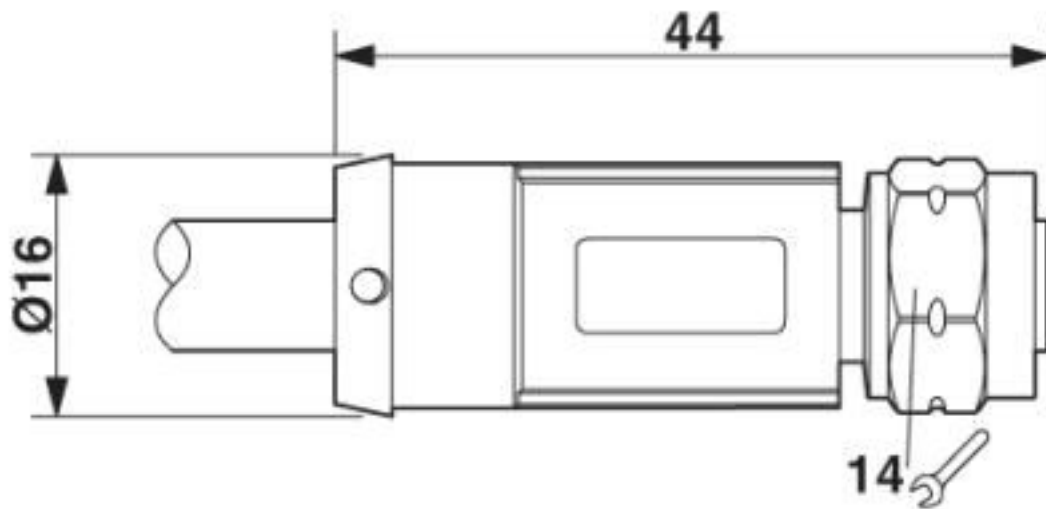
# Sensor/actuator cable - SAC-8P-M12MS/5,0-28X/ M12FSSHOD - 1407286

Dimensional drawing



Plug, M12 x 1, straight, shielded

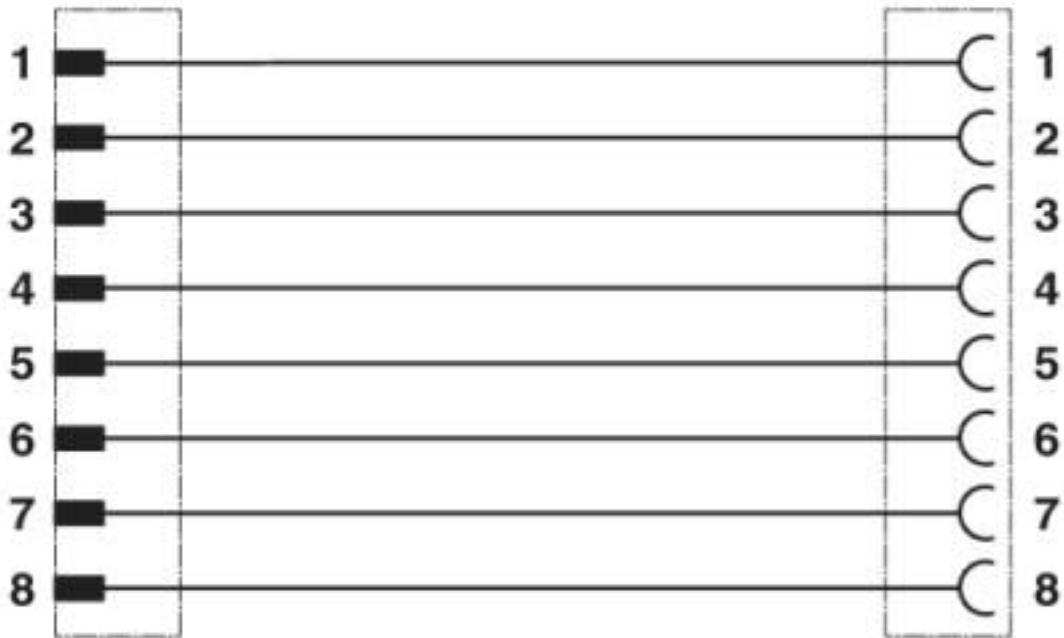
Dimensional drawing



M12 x 1 socket, straight

# Sensor/actuator cable - SAC-8P-M12MS/5,0-28X/ M12FSSHOD - 1407286

Circuit diagram



Contact assignment of the M12 connector and the M12 socket

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Cable cross section



PE-X black [28X]

## Classifications

eCl@ss

eCl@ss 10.0.1	27060311
eCl@ss 4.0	27060300
eCl@ss 4.1	27060300
eCl@ss 5.0	27061800
eCl@ss 5.1	27061800
eCl@ss 6.0	27279200
eCl@ss 7.0	27279218
eCl@ss 8.0	27279218
eCl@ss 9.0	27060311



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## Classifications

### ETIM

ETIM 3.0	EC001855
ETIM 4.0	EC001855
ETIM 5.0	EC001855
ETIM 6.0	EC001855
ETIM 7.0	EC001855

### UNSPSC

UNSPSC 6.01	31251501
UNSPSC 7.0901	31251501
UNSPSC 11	31251501
UNSPSC 12.01	31251501
UNSPSC 13.2	31251501
UNSPSC 19.0	31251501
UNSPSC 20.0	31251501
UNSPSC 21.0	31251501

## Approvals

### Approvals

Approvals

DNV GL / EAC-RoHS / EAC

Ex Approvals

### Approval details

DNV GL		<a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a>	TAE00002K4
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EAC-RoHS			RU D- DE.HB35.B.00387
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EAC			RU C- DE.BL08.B.00286
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## Sensor/actuator cable - SAC-8P-M12MS/5,0-28X/ M12FSSHOD - 1407286

### Accessories

#### Accessories

#### Screwdriver tools

Adapter insert - TSD-M SAC-BIT ADAPTER - 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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Adapter - SAC BIT M12-W14 - 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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#### Torque tool

Torque screwdriver - TSD 04 SAC - 1208429



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

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



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

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