

## Sensor/Actuator cable - SAC-5P-M12MS/10,0-28X SH OD - 1407265

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Sensor/Actuator cable, 5-position, PE-X/PE-X halogen-free, black-gray RAL 7021, shielded, Plug straight M12, A-coded, on free cable end, Cable length: 10 m, for outdoor applications, With high-grade steel knurl

### Why buy this product

- ✓ 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 773836
Weight per Piece (excluding packing)	877.0 g
Custom tariff number	85444290
Country of origin	Poland
Note	Made to Order (non-returnable)

### Technical data

#### Dimensions

Length of cable	10 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	4 A
Rated voltage	60 V
Number of positions	5
Contact resistance	≤ 5 mΩ
Insulation resistance	≥ 100 MΩ
Coding	A - standard
Standards/regulations	M12 connector IEC 61076-2-101
Status display	No
Protective circuit/component	Unwired
Pollution degree	3
Insertion/withdrawal cycles	≥ 100
Torque	0.4 Nm (M12 connector)

#### Material

Inflammability class according to UL 94	V0
Contact material	CuSn
Contact surface material	Ni/Au
Contact carrier material	PP
Material of grip body	PP
Material, knurls	High-grade steel

#### Cable

Cable type	PE-X black
Cable type (abbreviation)	28X
Cable abbreviation	Li2X2X-C-V1-2X
Conductor cross section	5x 0.5 mm <sup>2</sup>
AWG signal line	20
Conductor structure signal line	28x 0.15 mm
Core diameter including insulation	1.6 mm ±0.5 mm
Thickness, insulation	approx. 0.3 mm (Core insulation)
Wire colors	Brown, white, blue, black, gray
Overall twist	5 wires around filler to the core
Length of twist, overall twist	68 mm
Shielding	Braided copper wires
Optical shield covering	85 %
External sheath, color	black-gray RAL 7021
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

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### Technical data

#### Cable

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	85 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	≤ 39 Ω/m (at 20 °C)
Working capacitance	≤ 110 pF (core-core) ≤ 200 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
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)

### Classifications

#### eCl@ss

eCl@ss 4.0	27060306
eCl@ss 4.1	27060306
eCl@ss 5.0	27061801
eCl@ss 5.1	27061801
eCl@ss 6.0	27061801
eCl@ss 7.0	27061801
eCl@ss 8.0	27279218

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## Classifications

### ETIM

ETIM 3.0	EC001855
ETIM 4.0	EC001855
ETIM 5.0	EC001855

### UNSPSC

UNSPSC 6.01	31251501
UNSPSC 7.0901	31251501
UNSPSC 11	31251501
UNSPSC 12.01	31251501
UNSPSC 13.2	31251501

## Approvals

### Approvals

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Approvals

GL

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Ex Approvals

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Approvals submitted

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### Approval details

GL
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## Accessories

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#### 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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## Accessories

Adapter - SAC BIT M12-W14 - 1212513



SAC nut, for assembling M12 connectors with hexagonal high-grade steel knurl, 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

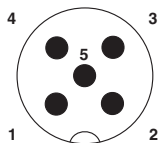


Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm

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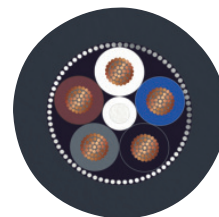
## Drawings

Schematic diagram



Pin assignment M12 male connector, 5-pos., A-coded, male side

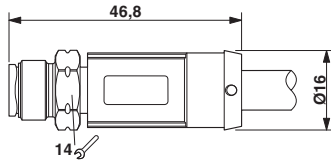
Cable cross section



PE-X black [28X]

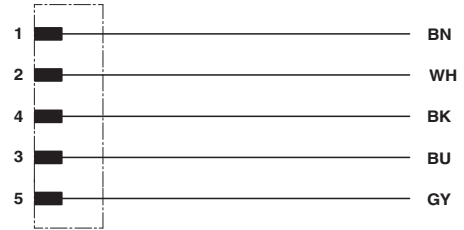
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Dimensioned drawing



M12 x 1 plug, straight

Circuit diagram



Contact assignment of the M12 plug