

## Sensor/actuator cable - SAC-8P-M12MS/ 5,0-28X OD - 1407272

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

RoHS

### Key Commercial Data

|                        |                                                                                                         |
|------------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit           | 1 pc                                                                                                    |
| Minimum order quantity | 10 pc                                                                                                   |
| GTIN                   | <br>4 046356 773904 |
| GTIN                   | 4046356773904                                                                                           |

### Technical data

#### Dimensions

|                 |     |
|-----------------|-----|
| Length of cable | 5 m |
|-----------------|-----|

#### 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

|                       |         |
|-----------------------|---------|
| Rated current at 40°C | 2 A     |
| Rated voltage         | 30 V AC |

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### Technical data

#### General

|                              |                               |
|------------------------------|-------------------------------|
|                              | 30 V DC                       |
| Number of positions          | 8                             |
| Insulation resistance        | $\geq 100 \text{ M}\Omega$    |
| 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  | $\geq 100$                    |
| 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 |

#### 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                                             |
| 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 $\pm$ 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                                              |
| External sheath, color                          | black-gray RAL 7021                                |
| Outer sheath thickness                          | approx. 1.3 mm                                     |
| External cable diameter D                       | 6.8 mm $\pm$ 0.2 mm                                |
| Minimum bending radius, fixed installation      | 5 x D                                              |
| Minimum bending radius, flexible installation   | 10 x D                                             |
| Number of bending cycles                        | 2000000                                            |
| Minimum bending radius, drag chain applications | 10 x D                                             |

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#### Cable

|                                 |                                                           |
|---------------------------------|-----------------------------------------------------------|
| Traversing path                 | 10 m                                                      |
| Traversing rate                 | 3 m/s                                                     |
| Acceleration                    | 10 m/s <sup>2</sup>                                       |
| Cable weight                    | 65 kg/km                                                  |
| Outer sheath, material          | 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)                                      |
| Nominal voltage, cable          | ≤ 300 V AC                                                |
| Test voltage, cable             | ≥ 3000 V AC (Spark test)                                  |
| Special properties              | 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)              |

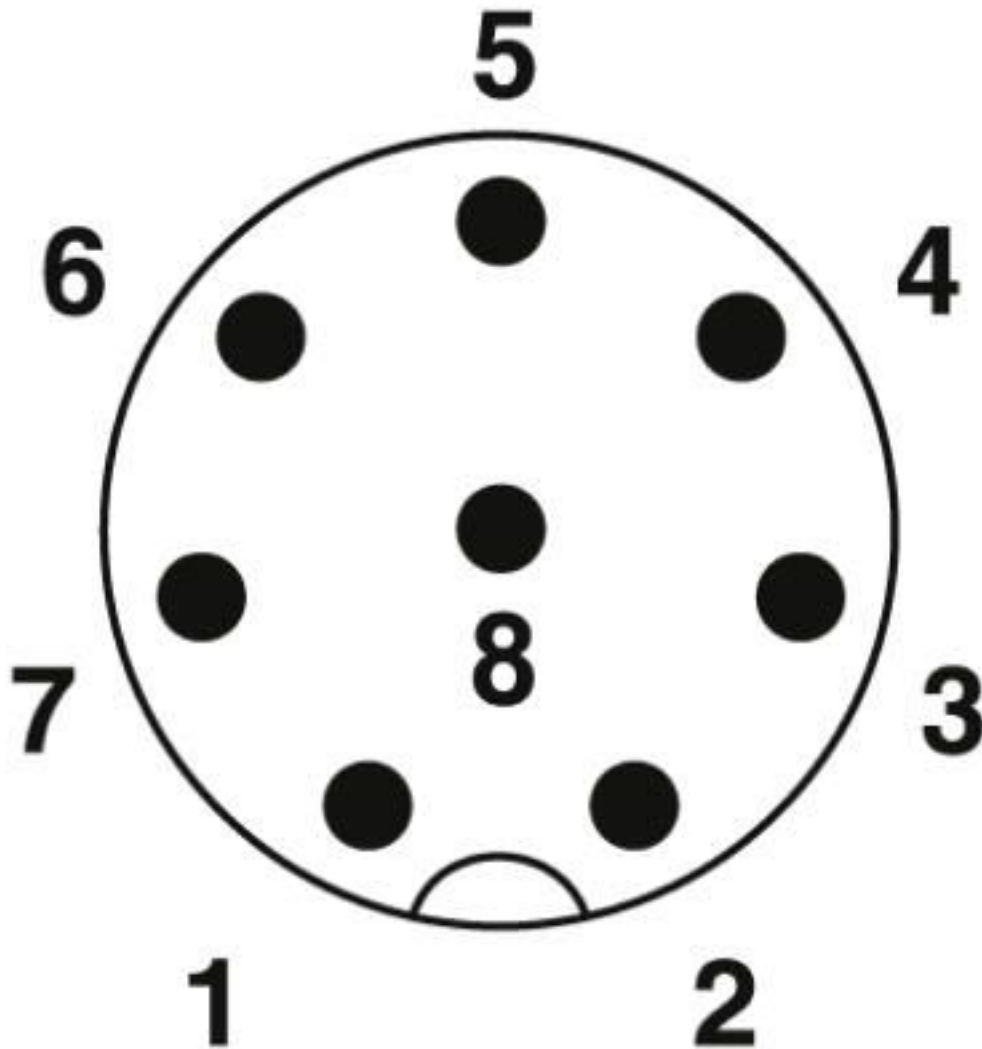
#### Environmental Product Compliance

|            |                                                                                                     |
|------------|-----------------------------------------------------------------------------------------------------|
| REACH SVHC | Lead 7439-92-1                                                                                      |
| China RoHS | Environmentally Friendly Use Period = 50 years                                                      |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

### Drawings

## Sensor/actuator cable - SAC-8P-M12MS/ 5,0-28X OD - 1407272

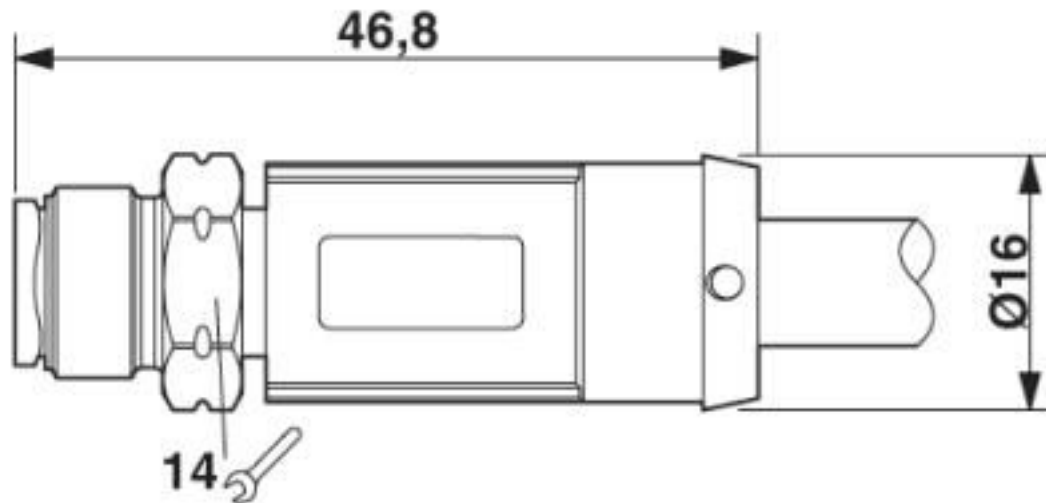
Schematic diagram



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

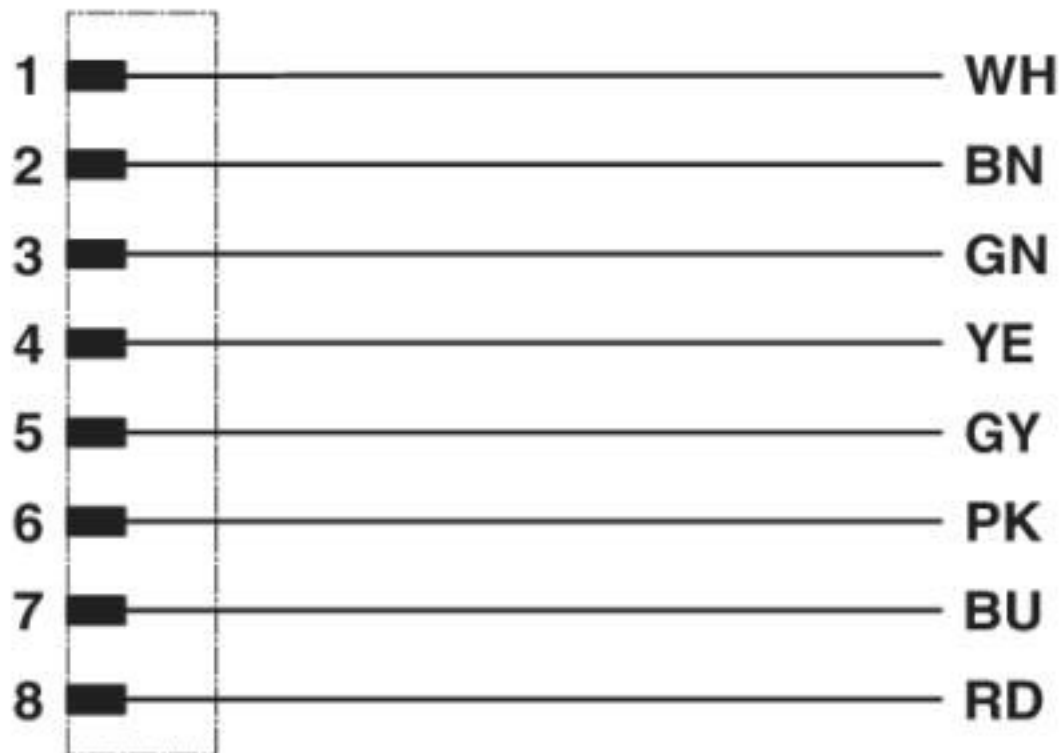
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Dimensional drawing



Plug, M12 x 1, straight, shielded

Circuit diagram



Contact assignment of the M12 plug

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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

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DNV GL / EAC-RoHS / EAC

#### Ex Approvals

#### Approval details

|        |                                                                                     |                                                                                   |            |
|--------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------|
| DNV GL |  | <a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a> | TAE00002K4 |
|--------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------|

|          |                                                                                     |                          |
|----------|-------------------------------------------------------------------------------------|--------------------------|
| EAC-RoHS |  | RU D-<br>DE.HB35.B.00387 |
|----------|-------------------------------------------------------------------------------------|--------------------------|

|     |                                                                                     |                          |
|-----|-------------------------------------------------------------------------------------|--------------------------|
| EAC |  | RU C-<br>DE.BL08.B.00286 |
|-----|-------------------------------------------------------------------------------------|--------------------------|

## Sensor/actuator cable - SAC-8P-M12MS/ 5,0-28X OD - 1407272

### 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

# Mouser Electronics

Authorized Distributor

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