

## Sensor/Actuator cable - SAC-4P- 2,0-28X/M12FR OD - 1407968

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Sensor/Actuator cable, 4-position, PE-X halogen-free, black-gray RAL 7021, free cable end, on Socket angled M12, A-coded, Cable length: 2 m, for outdoor applications, with high-grade steel knurl

### Key Commercial Data

|                                      |                                                                                                       |
|--------------------------------------|-------------------------------------------------------------------------------------------------------|
| Packing unit                         | 1 STK                                                                                                 |
| GTIN                                 | <br>4 046356 783484 |
| Weight per Piece (excluding packing) | 104.2 g                                                                                               |
| Weight per piece (including packing) | 105.9 g                                                                                               |
| Country of origin                    | Poland                                                                                                |
| Note                                 | Made to Order (non-returnable)                                                                        |

### Technical data

#### Dimensions

|                 |     |
|-----------------|-----|
| Length of cable | 2 m |
|-----------------|-----|

#### Ambient conditions

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Ambient temperature (operation) | -40 °C ... 105 °C (Plug / socket) |
| Degree of protection            | IP65                              |
|                                 | IP67                              |
|                                 | IP68                              |
|                                 | IP69K                             |

#### General

|                              |                               |
|------------------------------|-------------------------------|
| Rated current at 40°C        | 4 A                           |
| Rated voltage                | 250 V                         |
| Number of positions          | 4                             |
| 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                             |

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## Technical data

### General

|                             |                        |
|-----------------------------|------------------------|
| 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

|                                        |                 |
|----------------------------------------|-----------------|
| Standard designation                   | M12 connector   |
| Standards/regulations                  | 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                       | 4x 0.5 mm <sup>2</sup> (Signal line) |
| AWG signal line                               | 20                                   |
| Conductor structure signal line               | 28x 0.15 mm                          |
| Core diameter including insulation            | 1.6 mm ±0.05 mm (Signal line)        |
| Thickness, insulation                         | approx. 0.3 mm (Core insulation)     |
|                                               | approx. 0.6 mm (Outer cable sheath)  |
| Wire colors                                   | brown, white, blue, black            |
| Overall twist                                 | 4 wires, twisted                     |
| Length of twist, overall twist                | 61.6 mm                              |
| External sheath, color                        | black-gray RAL 7021                  |
| External cable diameter D                     | 5.2 mm ±0.2 mm                       |
| Smallest bending radius, fixed installation   | 26 mm                                |
| Smallest bending radius, movable installation | 52 mm                                |
| Number of bending cycles                      | 2000000                              |
| Bending radius                                | 52 mm                                |
| Traversing path                               | 10 m                                 |
| Traversing rate                               | 3 m/s                                |
| Acceleration                                  | 10 m/s <sup>2</sup>                  |
| Cable weight                                  | 44 kg/km                             |
| Outer sheath, material                        | PE-X                                 |
| Material conductor insulation                 | PE-X                                 |

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## Technical data

### Cable

|                                 |                                                       |
|---------------------------------|-------------------------------------------------------|
| Conductor material              | Bare Cu litz wires                                    |
| Insulation resistance           | $\geq 100 \text{ M}\Omega \cdot \text{km}$ (at 20 °C) |
| Conductor resistance            | $\leq 39 \text{ }\Omega/\text{km}$ (at 20 °C)         |
| Nominal voltage, cable          | $\leq 300 \text{ V AC}$                               |
| Test voltage, cable             | $\geq 3000 \text{ V AC}$                              |
| Flame resistance                | According to DIN 60332-1-2                            |
|                                 | According to DIN EN 50266-2-5                         |
|                                 | according to IEC 60332-3-25 (bunched fire test)       |
| Halogen-free                    | in accordance with DIN VDE 0472 part 815              |
| Resistance to oil               | in accordance with DIN EN 60811-2-1                   |
| Other resistance                | 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)      |

## 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 |
| eCl@ss 9.0 | 27060311 |

### 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

## Sensor/Actuator cable - SAC-4P- 2,0-28X/M12FR OD - 1407968

### Approvals

Approvals

GL

Ex Approvals

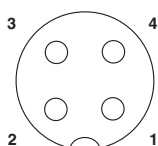
Approvals submitted

### Approval details

GL

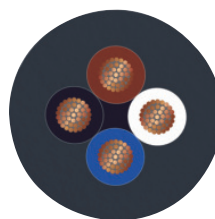
### Drawings

Schematic diagram



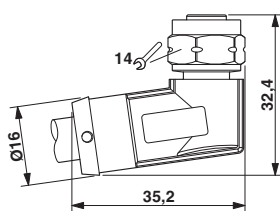
Pin assignment M12 socket, 4-pos., A-coded, view female side

Cable cross section



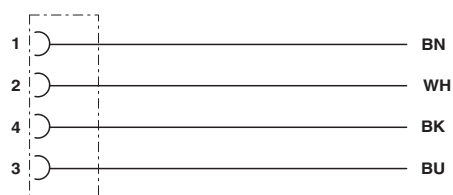
PE-X black [28X]

Dimensional drawing



M12 x 1 socket, angled

Circuit diagram



Contact assignment of the M12 socket

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