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Sensor/actuator cable, 3-position, PUR halogen-free, black-gray RAL 7021, shielded, Plug straight M8, on Socket straight M8, cable length: 1.5 m

#### Your advantages

- Reliable signal transmission 360° shielding in environments with electromagnetic interference



### **Key Commercial Data**

| Packing unit                         | 1 pc            |
|--------------------------------------|-----------------|
| GTIN                                 | 4 046356 576109 |
| GTIN                                 | 4046356576109   |
| Weight per Piece (excluding packing) | 408.000 g       |
| Custom tariff number                 | 85444290        |
| Country of origin                    | Poland          |

#### Technical data

#### **Dimensions**

| Length of cable                            | 1.5 m |
|--|-------|
| Stripping length of the free conductor end | 50 mm |

#### Ambient conditions

| Ambient temperature (operation) | -25 °C 90 °C (Plug / socket) |
|---------------------------------|------------------------------|
|                                 | -25 °C 90 °C (Plug / socket) |
| Degree of protection            | IP65                         |

## Technical data

#### Ambient conditions

|                              | IP67                         |  |
|------------------------------|------------------------------|--|
| General                      | General                      |  |
| Rated current at 40°C        | 4 A                          |  |
| Rated voltage                | 48 V AC                      |  |
|                              | 60 V DC                      |  |
| Number of positions          | 3                            |  |
| Insulation resistance        | $\geq 100 \text{ M}\Omega$   |  |
| Coding                       | A - standard                 |  |
| Standards/regulations        | M8 connector IEC 61076-2-104 |  |
| Status display               | No                           |  |
| Protective circuit/component | unwired                      |  |
| Overvoltage category         | II                           |  |
| Degree of pollution          | 3                            |  |
| Insertion/withdrawal cycles  | ≥ 100                        |  |
| Torque                       | 0.2 Nm (M8 connectors)       |  |

#### Material

| Flammability rating according to UL 94 | НВ  |
|--|---|
| Contact material                       | CuSn  |
| Contact surface material               | Ni/Au                                       |
| Contact carrier material               | TPU GF                                      |
| Material of grip body                  | TPU, hardly inflammable, self-extinguishing |
| Material, knurls                       | Zinc die-cast, nickel-plated                |
| Sealing material                       | NBR   |

#### Standards and Regulations

| Standards/specifications               | M8 connector IEC 61076-2-104 |
|--|------------------------------|
| Flammability rating according to UL 94 | НВ                           |

#### Cable

| Cable type                         | PUR halogen-free black         |
|------------------------------------|--------------------------------|
| Cable type (abbreviation)          | PUR                            |
| Cable abbreviation                 | Li9Y-V1-C-V1-11Y               |
| UL AWM style                       | 20549                          |
| Conductor cross section            | 3x 0.25 mm² (Signal line)      |
| AWG signal line                    | 24                             |
| Conductor structure signal line    | 32x 0.10 mm                    |
| Core diameter including insulation | 1.17 mm ±0.02 mm (Signal line) |

## Technical data

#### Cable

| Thickness, insulation                             | ≥ 0.21 mm (Core insulation)   |
|---|---|
|   | ≥ 0.5 mm (Outer cable sheath)                                       |
| Wire colors                                       | brown, blue, black  |
| Overall twist                                     | 3 wires, twisted  |
| Shielding   | Braided copper wires  |
| Optical shield covering                           | 80 %  |
| External sheath, color                            | black-gray RAL 7021   |
| External cable diameter D                         | 4.35 mm ±0.2 mm   |
| Smallest bending radius, fixed installation       | 22 mm   |
| Smallest bending radius, movable installation     | 44 mm   |
| Number of bending cycles                          | 10000000  |
| Bending radius                                    | 50 mm   |
| Traversing path                                   | 10 m  |
| Traversing rate                                   | 3 m/s   |
| Acceleration                                      | 10 m/s <sup>2</sup>   |
| Cable weight                                      | 26 kg/km  |
| Outer sheath, material                            | PUR   |
| Material conductor insulation                     | PP  |
| Conductor material                                | Bare Cu litz wires  |
| Insulation resistance                             | $\geq 100~G\Omega^{\star} km$                                       |
| Conductor resistance                              | max. 79 Ω/km  |
| Nominal voltage, cable                            | 300 V   |
| Test voltage, cable                               | 3000 V  |
| Special properties                                | Flexible cable conduit capable                                      |
|   | Silicone-free   |
|   | Free of substances which would hinder coating with paint or varnish |
| Other resistance                                  | Highly resistant to acids, alkaline solutions and solvents          |
|   | hydrolysis and microbe resistant                                    |
|   | partly UV-resistant in accordance with DIN EN ISO 4892-2-A          |
| Flame resistance                                  | in accordance with UL 758/1581 FT2                                  |
|   |   |
| Halogen-free                                      | DIN EN 60332-2-2 (20 s)   |
|   | DIN EN 60332-2-2 (20 s) in accordance with DIN VDE 0472 part 815    |
| Resistance to oil                                 |   |
| Resistance to oil Ambient temperature (operation) | in accordance with DIN VDE 0472 part 815                            |

### **Environmental Product Compliance**

| REACh SVHC | Lead 7439-92-1 |
|------------|----------------|
|            |                |

#### Technical data

#### **Environmental Product Compliance**

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

### **Drawings**

Schematic diagram

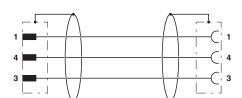


Schematic diagram



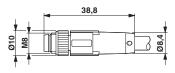
Pin assignment M8 plug, 3-pos., view male side

Circuit diagram



Pin assignment M8 socket, 3-pos., view female side

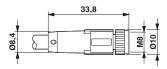
#### Dimensional drawing



Contact assignment of M8 plugs/sockets

Plug M8 x 1, straight, shielded

#### Dimensional drawing



Socket M8 x 1, straight, shielded

#### Classifications

#### eCl@ss

| eCl@ss 10.0.1 | 27060311 |
|---------------|----------|

### Classifications

### eCl@ss

| eCl@ss 11.0 | 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 9.0  | 27060311 |

#### **ETIM**

| ETIM 2.0 | EC000830 |
|----------|----------|
| ETIM 3.0 | EC001855 |
| ETIM 4.0 | 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

UL Listed / cUL Listed / EAC-RoHS / EAC / cULus Listed

Ex Approvals

Approval details

## Approvals

| UL Listed          | LISTED  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 221474            |
|--------------------|---------|---|--------------------------|
|                    |         |   |                          |
| Nominal voltage UN |         | 60 V  |                          |
| Nominal current IN |         | 4 A   |                          |
| cUL Listed         | C.UL    | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 221474            |
| Nominal voltage UN |         | 60 V  |                          |
| Nominal current IN |         | 4 A   |                          |
| EAC-RoHS           | EAC     |   | RU D-<br>DE.HB35.B.00387 |
|                    | LIIL    |   |                          |
| EAC                | EAC     |   | RU C-<br>DE.BL08.B.00286 |
| cULus Listed       | C UL US |   |                          |

#### Accessories

Accessories

Conductor marking

Insert label - PABA WH/23 - 1013779



Insert label, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, mounting type: thread on, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 20

#### Accessories

Insert label - PABA YE/23 - 1013782



Insert label, Strip, yellow, unlabeled, can be labeled with: CMS-P1-PLOTTER, mounting type: thread on, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 20

#### Marker pen

Marker pen - B-STIFT - 1051993



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

#### Plug for cable screw gland

Screw plug - PROT-M 8 MS-PA-CHAIN - 1430860

M8 sealing cap made of plastic with fixing band for sensor cables, for M8 sockets



#### Protective cap

Sealing cap - PROT-M 8 FS-PA-CHAIN - 1430857

M8 sealing cap made of plastic with fixing band for sensor cables, for M8 plugs



Screwdriver tools

#### Accessories

Tool - SAC BIT M8-D10 - 1208461



Nut for assembling M8 connectors with longitudinal knurl and a knurl diameter of 10 mm, for 4 mm hexagonal drive

#### Torque tool

Torque screwdriver - TSD 02 SAC - 1208487



Torque screwdriver, with preset torque of 0.2 Nm and 4 mm hexagonal drive for M8 connectors