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Sensor/actuator cable, 4-position, PUR halogen-free, black-gray RAL 7021, shielded, Plug straight M12, A-coded, on Socket straight M8, A-coded, cable length: 7.5 m



## **Key Commercial Data**

| Packing unit           | 1 pc            |
|------------------------|-----------------|
| Minimum order quantity | 50 pc           |
| GTIN                   | 4 055626 067568 |
| GTIN                   | 4055626067568   |

### Technical data

#### **Dimensions**

| Length of cable                            | 7.5 m |
|--|-------|
| Stripping length of the free conductor end | 50 mm |

### Ambient conditions

| Ambient temperature (operation) | -25 °C 90 °C (Plug / socket) |
|---------------------------------|------------------------------|
|---------------------------------|------------------------------|

#### General

| Rated current at 40°C        | 4 A                   |
|------------------------------|-----------------------|
| Rated voltage                | 48 V AC               |
|                              | 60 V DC               |
| Number of positions          | 4                     |
| Insulation resistance        | $\geq$ 100 M $\Omega$ |
| Coding                       | A - standard          |
| Status display               | No                    |
| Protective circuit/component | unwired               |
| Overvoltage category         | II                    |
| Degree of pollution          | 3                     |
| Insertion/withdrawal cycles  | ≥ 100                 |

#### Material

| Flammability rating according to UL 94 | НВ    |
|--|-------|
| Contact material                       | CuSn  |
| Contact surface material               | Ni/Au |



## Technical data

### Material

| 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

| Flammability rating according to UL 94 | НВ |
|--|----|
|--|----|

#### Cable

| Cabic   |                                     |
|---|-------------------------------------|
| Cable type                                    | PUR halogen-free black              |
| Cable type (abbreviation)                     | PUR                                 |
| Cable abbreviation                            | LiF9YC11Y                           |
| UL AWM style                                  | 20549                               |
| Conductor cross section                       | 4x 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)      |
| Thickness, insulation                         | ≥ 0.21 mm (Core insulation)         |
|   | approx. 0.5 mm (Outer cable sheath) |
| Wire colors                                   | brown, white, blue, black           |
| Overall twist                                 | 4 wires, twisted                    |
| Shielding                                     | Braided copper wires                |
| Optical shield covering                       | 80 %                                |
| External sheath, color                        | black-gray RAL 7021                 |
| External cable diameter D                     | 4.7 mm ±0.15 mm                     |
| Smallest bending radius, fixed installation   | 24 mm                               |
| Smallest bending radius, movable installation | 48 mm                               |
| Number of bending cycles                      | 10000000                            |
| Bending radius                                | 48 mm                               |
| Traversing path                               | 10 m                                |
| Traversing rate                               | 3 m/s                               |
| Acceleration                                  | 10 m/s <sup>2</sup>                 |
| Cable weight                                  | 31 kg/km                            |
| Outer sheath, material                        | PUR                                 |
| Material conductor insulation                 | PP                                  |
| Conductor material                            | Bare Cu litz wires                  |
| Insulation resistance                         | ≥ 100 GΩ*km (at 20 °C)              |
| Conductor resistance                          | max. 78 Ω/km (at 20 °C)             |
| Nominal voltage, cable                        | ≤ 300 V                             |
| Test voltage, cable                           | ≥ 3000 V                            |
| Special properties                            | Flexible cable conduit capable      |
|   | Silicone-free                       |
|   |                                     |



### Technical data

### Cable

|                                 | Free of substances which would hinder coating with paint or varnish |  |  |
|---------------------------------|---|--|--|
| Flame resistance                | in accordance with UL 758/1581 FT2                                  |  |  |
|                                 | DIN EN 60332-2-2 (20 s)   |  |  |
| Halogen-free                    | in accordance with DIN VDE 0472 part 815                            |  |  |
| Resistance to oil               | in accordance with DIN EN 60811-2-1                                 |  |  |
| 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          |  |  |
| Ambient temperature (operation) | -40 °C 80 °C (cable, fixed installation)                            |  |  |
|                                 | -25 °C 80 °C (cable, flexible installation)                         |  |  |

### **Environmental Product Compliance**

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

## **Drawings**

Schematic diagram



Schematic diagram



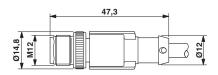
Pin assignment M12 plug, 4-pos., A-coded, view plug side

Cable cross section



Pin assignment M8 socket, 4-pos.

### Dimensional drawing

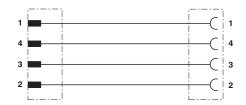


PUR halogen-free black [PUR]

Plug, M12 x 1, straight, shielded



### Circuit diagram



Contact assignment of the M12 plug and the M12 socket

| Α   | n      | n      | r | O. | v | a | ls |
|-----|--------|--------|---|----|---|---|----|
| , v | $\sim$ | $\sim$ |   | J  | v | u |    |

| Αı | nr | ì۲ | n۱ | ıal | S |  |
|----|----|----|----|-----|---|--|

Approvals

UL Listed / cUL Listed / cULus Listed

Ex Approvals

### Approval details

| UL Listed          | UL | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm |      | FILE E 221474 |
|--------------------|----|---|------|---------------|
|                    |    |   |      |               |
| Nominal voltage UN |    |   | 30 V |               |
| Nominal current IN |    |   | 4 A  |               |

| cUL Listed         | CUL | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm |      | FILE E 221474 |
|--------------------|-----|---|------|---------------|
|                    |     |   |      |               |
| Nominal voltage UN |     |   | 30 V |               |
| Nominal current IN |     |   | 4 A  |               |

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