

# 1403993

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## Product Features

- Easy and safe: 100% electrically tested plug-in components
- Easy to clean, thanks to the special hygienic design
- Corrosion protection for all exposed metal parts, thanks to the use of stainless steel type 1.4404
- Contamination can be detected quickly – thanks to the light color
- Reliable signal transmission – 360° shielding in environments with electromagnetic interference

## Key Commercial Data

|              |   |
|--------------|---|
| Packing unit | 1 |
|--------------|---|

## Technical data

### Dimensions

|                 |     |
|-----------------|-----|
| Length of cable | 3 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            |
|                              | Material conformance FDA 21 CFR 177.2600 |
| Status display               | No                                       |
| Protective circuit/component | Unwired                                  |
| Overvoltage category         | II                                       |
| Degree of pollution          | 3  |
| Insertion/withdrawal cycles  | ≥ 100                                    |

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## Technical data

### General

|        |                        |
|--------|------------------------|
| Torque | 0.4 Nm (M12 connector) |
|--------|------------------------|

### Material

|                          |                 |
|--------------------------|-----------------|
| Contact material         | CuSn            |
| Contact surface material | Ni/Au           |
| Contact carrier material | PP              |
| Material of grip body    | PP              |
| Material, knurls         | Stainless steel |
| Sealing material         | FKM             |

### Standards and Regulations

|                       |                      |
|-----------------------|----------------------|
| Standard designation  | M12 connector        |
| Standards/regulations | IEC 61076-2-101      |
| Standard designation  | Material conformance |
| Standards/regulations | FDA 21 CFR 177.2600  |

### Cable

|   |                                       |
|---|---------------------------------------|
| Cable type                                      | Halogen-free PP gray shielded         |
| Cable type (abbreviation)                       | 600                                   |
| Cable abbreviation                              | Li9YV1-C-V1-9Y                        |
| Conductor cross section                         | 4x 0.34 mm <sup>2</sup> (Signal line) |
| AWG signal line                                 | 22                                    |
| Conductor structure signal line                 | 42x 0.10 mm                           |
| Core diameter including insulation              | 1.27 mm ±0.02 mm (Signal line)        |
| Thickness, insulation                           | ≥ 0.21 mm (Core insulation)           |
| Wire colors                                     | brown, white, blue, black             |
| Overall twist                                   | 4 wires, twisted                      |
| Length of twist, overall twist                  | 48 mm                                 |
| Shielding                                       | Braided copper wires                  |
| Optical shield covering                         | 85 %                                  |
| External sheath, color                          | gray RAL 7035                         |
| Outer sheath thickness                          | approx. 0.8 mm                        |
| External cable diameter D                       | 5.55 mm ±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                                |
| Traversing path                                 | 10 m                                  |
| Traversing rate                                 | 3 m/s                                 |

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## Technical data

### Cable

|                                 |   |
|---------------------------------|---|
| Acceleration                    | 10 m/s <sup>2</sup>   |
| Cable weight                    | 40 kg/km  |
| Outer sheath, material          | PP-EPDM   |
| Material conductor insulation   | PP  |
| Conductor material              | Bare Cu litz wires  |
| Conductor resistance            | 58 Ω/km (at 20 °C)  |
| Nominal voltage, cable          | ≤ 300 V AC  |
| Test voltage, cable             | ≥ 3000 V AC (Spark test)  |
| Test voltage Core/Shield        | ≥ 2000 V AC (for 60 s)  |
| Special properties              | FDA compliant according to FDA 21 CFR 177.2600                                    |
|                                 | Flexible  |
|                                 | Flexible cable conduit capable  |
| Halogen-free                    | in accordance with DIN VDE 0472 part 815  |
| Other resistance                | Resistant to cold bending and cold impacts According to DIN EN 60811-1-4 (-40 °C) |
| Ambient temperature (operation) | -40 °C ... 105 °C (cable, fixed installation)                                     |
|                                 | -25 °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 |

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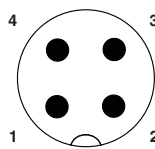
## Classifications

### UNSPSC

|              |          |
|--------------|----------|
| UNSPSC 11    | 31251501 |
| UNSPSC 12.01 | 31251501 |
| UNSPSC 13.2  | 31251501 |

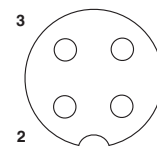
## Drawings

Schematic diagram



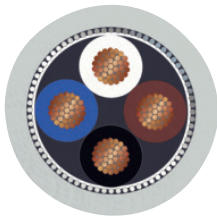
Pin assignment M12 plug, 4-pos., A-coded, view plug side

Schematic diagram



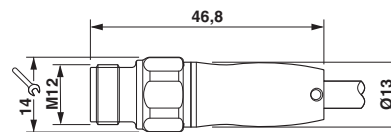
Pin assignment M12 socket, 4-pos., A-coded, view female side

Cable cross section



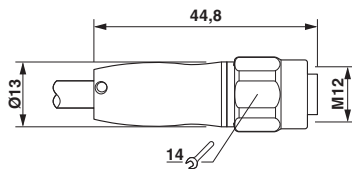
Halogen-free PP gray shielded [600]

Dimensional drawing



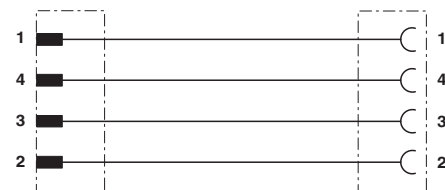
M12 x 1 plug, straight

Dimensional drawing



M12 x 1 socket, straight

Circuit diagram



Contact assignment of the M12 plug and the M12 socket