

**M12 male 0° / M12 male 0° D-cod. shielded**

PUR 1x4xAWG22 shielded gn UL/CSA+drag ch. 2m

Ethernet CAT5e

Transmission properties with channel transmission up to 100 m

Male straight – male straight

Cable is approved for 600 V

M12 – M12, 4-pole

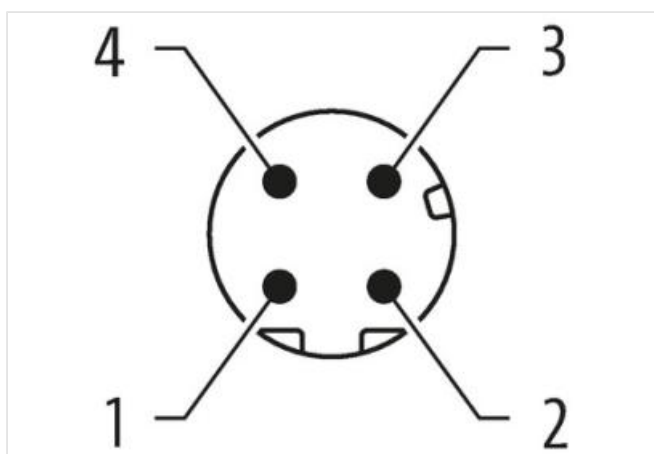
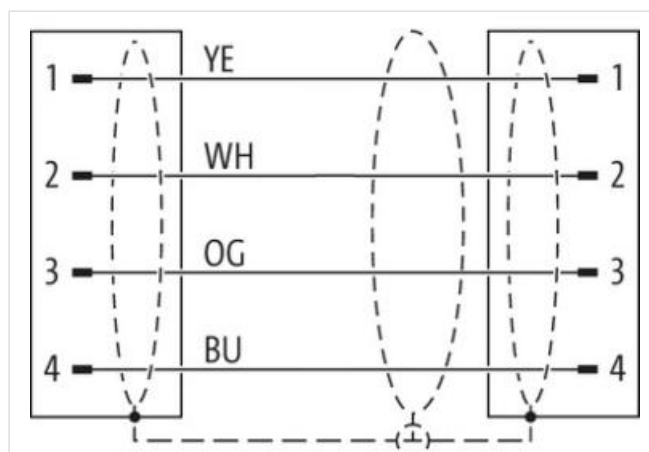
D-coded

shielded

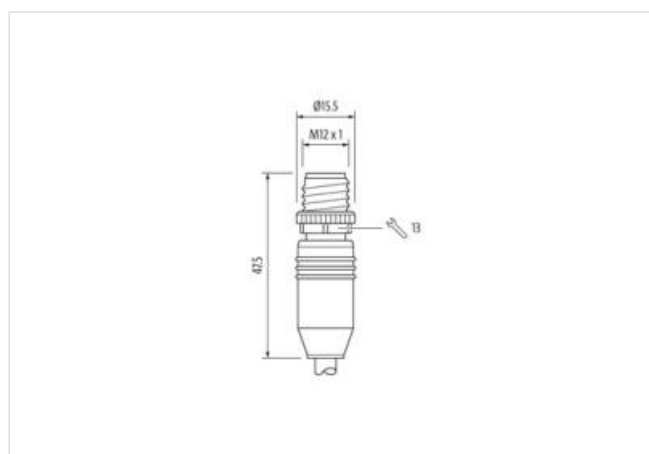
Further cable lengths on request.

Plastic housings with good resistance against chemicals and oils.

The resistance to aggressive media should be individually tested for your application. Further details on request.

**Odkaz k produktu****Obrázky**

Výrobok sa môže líšiť od zobrazenia



Cable length 2 m

**Side 1**

|                                     |                   |
|-------------------------------------|-------------------|
| Tightening torque                   | 0,6 Nm            |
| Mounting method                     | inserted, screwed |
| Family construction form            | M12               |
| Thread                              | M12 x 1           |
| Cable outlet                        | straight          |
| Coding                              | D                 |
| Material                            | PUR               |
| No. of poles                        | 4                 |
| Width across flats                  | SW13              |
| Degree of protection (EN IEC 60529) | IP65, IP66K, IP67 |

**Side 2**

|                                     |                   |
|-------------------------------------|-------------------|
| Tightening torque                   | 0,6 Nm            |
| Mounting method                     | inserted, screwed |
| Family construction form            | M12               |
| Thread                              | M12 x 1           |
| Cable outlet                        | straight          |
| Coding                              | D                 |
| Material                            | PUR               |
| No. of poles                        | 4                 |
| Width across flats                  | SW13              |
| Degree of protection (EN IEC 60529) | IP65, IP66K, IP67 |

**Commercial data**

|                       |               |
|-----------------------|---------------|
| ECLASS-6.0            | 27061801      |
| ECLASS-6.1            | 27060307      |
| ECLASS-7.0            | 27060307      |
| ECLASS-8.0            | 27060307      |
| ECLASS-9.0            | 27060307      |
| ECLASS-10.1           | 27060307      |
| ECLASS-11.1           | 27060307      |
| ECLASS-12.0           | 27060307      |
| ETIM-5.0              | EC002599      |
| customs tariff number | 85444290      |
| GTIN                  | 4048879677080 |
| Packaging unit        | 1             |

**Electrical data | Supply**

|                                    |       |
|------------------------------------|-------|
| Operating voltage DC max.          | 60 V  |
| Current operating per contact max. | 1,5 A |

**Industrial communication**

|                             |                                                   |
|-----------------------------|---------------------------------------------------|
| Transfer parameters         | CAT5e, Class D (ISO/IEC 11801:2002), (EN 50173-1) |
| Data transmission rate max. | 100 MBit/s                                        |

**Industrial communication | Ethernet functionality**

|        |             |
|--------|-------------|
| duplex | Full duplex |
|--------|-------------|

**Device protection | Electrical**

|                                        |                   |
|----------------------------------------|-------------------|
| Degree of protection (EN IEC 60529)    | IP65, IP67, IP66K |
| Additional condition protection degree | inserted, screwed |
| Pollution Degree                       | 3                 |
| Rated surge voltage                    | 1,5 kV            |
| Material group (IEC 60664-1)           | I                 |

**Mechanical data**

Contour for corrugated hose without

#### Mechanical data | Material data

|                  |                  |
|------------------|------------------|
| Coating locking  | Nickeled         |
| Locking material | Zinc die-casting |

#### Mechanical data | Mounting data

|                 |                                       |
|-----------------|---------------------------------------|
| Mounting method | inserted, screwed, Shaking protection |
|-----------------|---------------------------------------|

#### Environmental characteristics | Climatic

|                                        |                            |
|----------------------------------------|----------------------------|
| Operating temperature min.             | -25 °C                     |
| Operating temperature max.             | 85 °C                      |
| Additional condition temperature range | depending on cable quality |

#### Important installation notes

|                        |                                                                                                                                                       |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Note on strain relief  | Protect the connectors by suitable measures from mechanical loads, e.g. by the usage of cable ties.                                                   |
| Note on bending radius | <b>Attention:</b> Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces. |

#### Conformity

|                  |                          |
|------------------|--------------------------|
| Product standard | DIN EN 61076-2-101 (M12) |
|------------------|--------------------------|

#### Installation | Cable

|                                          |                                    |
|------------------------------------------|------------------------------------|
| Cable identification                     | 659                                |
| Jacket Color                             | green                              |
| Type of Certificate                      | cURus                              |
| Amount stranding                         | 1                                  |
| Stranding                                | 4 wires around Core filler twisted |
| Cable shielding (type)                   | copper braid, tinned               |
| Cable shielding (coverage)               | 85 %                               |
| Banding                                  | Fleece, Foil                       |
| Filler                                   | yes                                |
| wire arrangement                         | white, yellow, blue, orange        |
| Cable weight                             | 89,1 g/m                           |
| Material jacket                          | PUR                                |
| Shore hardness jacket                    | 90 ± Shore A                       |
| Freedom from ingredients (jacket)        | lead-free, CFC-free, halogen-free  |
| Outer-diameter (jacket)                  | 7,4 mm                             |
| Tolerance outer diameter (sheath)        | ± 5 %                              |
| Material inner jacket                    | TPE-V                              |
| Color (inner jacket)                     | white                              |
| Material wire insulation                 | PE                                 |
| Amount wires                             | 4                                  |
| Outer diameter insulation                | 1,4 mm                             |
| Outer diameter tolerance core insulation | ± 5 %                              |
| Shore hardness wire insulation           | 65 Shore D                         |
| Ingredient freeness wire insulation      | lead-free, CFC-free, halogen-free  |
| Amount strands (wire)                    | 7                                  |
| Diameter of single wires                 | 22 AWG                             |
| Conductor crosssection (wire)            | 22 AWG                             |
| Material conductor wire                  | Stranded copper wire, bare         |
| Traversing distance (C-track)            | 5 m                                |
| Nominal voltage AC max.                  | 60 V                               |
| Current load capacity (standard)         | to DIN VDE 0298-4                  |
| Current load capacity min. wire          | 4,8 A                              |
| Characteristic impedance                 | 100 Ω ± 15 %                       |
| Electrical resistance line constant wire | 55 Ω/km @ 20 °C                    |
| AC withstand voltage (wire - wire)       | 2 kV @ 60 s                        |

|                                                   |                                                      |
|---------------------------------------------------|------------------------------------------------------|
| Electrical capacity line constant (wire - wire)   | 50000 pF/km                                          |
| Power frequency withstand voltage (wire - jacket) | 2 kV @ 60 s                                          |
| AC withstand voltage (wire - shield)              | 2 kV @ 60 s                                          |
| Loop resistance                                   | 5000 MΩ × km                                         |
| Min. operating temperature (static)               | -40 °C                                               |
| Max. operating temperature (fixed)                | 80 °C                                                |
| Operating temperature min. (dynamic)              | -30 °C                                               |
| Operating temperature max. (dynamic)              | 70 °C                                                |
| Flame resistance                                  | UL 1581 § 1100 FT2   IEC 60332-2-2   UL 1581 § 1090  |
| chemical resistance                               | Good, application-related testing                    |
| Gasoline resistance                               | Good, application-related testing                    |
| Oil resistance                                    | DIN EN 60811-404   Good, application-related testing |
| Bending radius (fixed)                            | 5 x Outer diameter                                   |
| Bending radius (dynamic)                          | 12 x Outer diameter                                  |
| Travel speed (C-track)                            | 2 Mio.                                               |