

**M12 male 90° D-cod. with cable shielded**

PUR 1x4xAWG22 shielded gn UL/CSA+drag ch. 3m

Ethernet CAT5

Male 90°

M12, 4-pole

D-coded

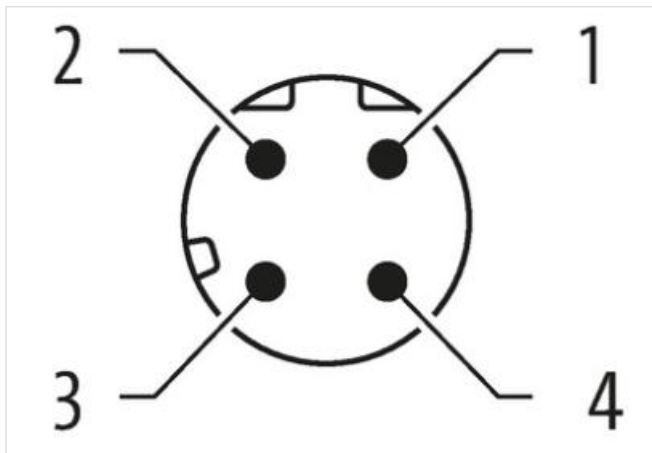
shielded

Transmission properties with channel transmission up to 100 m

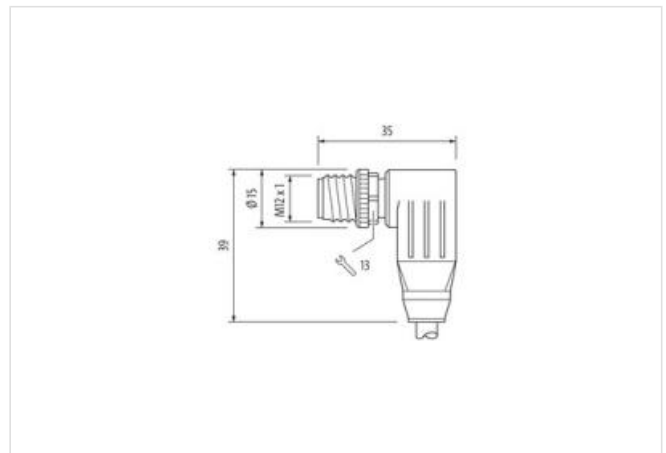
Further cable lengths on request.

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.

[Link to Product](#)**Illustration**

Product may differ from Image



Cable length

3 m

**Side 1**

|                                     |                   |
|-------------------------------------|-------------------|
| Tightening torque                   | 0,6 Nm            |
| Mounting method                     | inserted, screwed |
| Family construction form            | M12               |
| Thread                              | M12 x 1           |
| Coding                              | D                 |
| Material                            | PUR               |
| Width across flats                  | SW13              |
| Degree of protection (EN IEC 60529) | IP65, IP66K, IP67 |

**Side 2**

|                           |       |
|---------------------------|-------|
| Stripping length (jacket) | 20 mm |
|---------------------------|-------|

**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                  | 4048879860482 |
| Packaging unit        | 1             |

**Electrical data | Supply**

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

**Industrial communication**

|                             |                                                  |
|-----------------------------|--------------------------------------------------|
| Transfer parameters         | CAT5, Class D (ISO/IEC 11801:2002), (EN 50173-1) |
| Data transmission rate max. | 100 MBit/s                                       |

**Industrial communication | Ethernet functionality**

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

**Installation | Connection**

|                           |         |
|---------------------------|---------|
| Stripping length (jacket) | 20 mm   |
| Mounting set              | M12 x 1 |

**Device protection | Electrical**

|                                        |                   |
|----------------------------------------|-------------------|
| 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           | Nickel           |
| Coating of fitting        | nickel plated    |
| Locking material          | Zinc die-casting |
| Material screw connection | 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                              |

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|                          |                                                      |
|--------------------------|------------------------------------------------------|
| 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.                                               |