

## Overview

- M12, male, D-coded; 4-poles; TPE-S, 2500 cm, shielded, free cable end
- Dragchain capable; suitable for robotics  $\pm 180^\circ/\text{m}$ ; suitable for food & beverage
- Head A: IP65, IP68, IP69K
- Halogen free



## Technical data

| Side A                            |                       | Cable                              |                                   |
|-----------------------------------|-----------------------|------------------------------------|-----------------------------------|
| Head A: Connection                | M12                   | Operating voltage (only UL listed) | 30 V AC/DC                        |
| Head A: Angle cable outlet        | 0°                    | Shielded                           | Yes                               |
| Head A: Gender                    | Male                  | Shielding: Covering                | approx. 85 %                      |
| Head A: Coding                    | D                     | Bending radius (fixed)             | 32.5 mm                           |
| Head A: No. of poles              | 4                     | Number of wires                    | 4                                 |
| Head A: LED                       | No                    | Number and diameter of wires       | 4x0.34                            |
| Head A: Width across flats        | AF14                  | Length tolerance                   | $\pm 37.5$ cm                     |
| Head A: Tightening torque         | 0.6 Nm                | Cable length                       | 2500 cm                           |
| Head A: Knurled nut material      | Stainless steel (V4A) | Acceleration (C-track)             | max. 2 m/s <sup>2</sup>           |
| Head A: Body color                | Blue                  | AWG                                | 22                                |
| Labeling sleeve side A            | No                    | Bending radius (fixed)             | min. 5 × outer diameter           |
| Head A: Contact layout pin 1      | YE                    | Torsion speed                      | max. 35 cycles/min                |
| Head A: Contact layout pin 2      | WH                    | Bending radius (mobile)            | min. 15 × outer diameter          |
| Head A: Contact layout pin 3      | OG                    | Cable weight                       | approx. 61.6 g/m                  |
| Head A: Contact layout pin 4      | BU                    | Conductor structure                | 7 × 0.25 mm                       |
| Side B                            |                       | Cable diameter                     | 6.5 mm $\pm 5\%$                  |
| Head B: Connection                | Open-ended wires      | Conductor: Material                | Copper, bare                      |
| Labeling sleeve side B            | No                    | External sheath: Material          | TPE-S                             |
| Cables                            |                       | Insulation: Material               | PP                                |
| Cable length                      | 2500 cm               | Shielding: Material                | Copper, tinned                    |
| Length tolerance                  | $\pm 37.5$ cm         | No. of bending cycles (C-track)    | approx. 2000000 Cycles            |
| Stripping length                  | 20 mm                 | Nominal voltage                    | 300 V AC                          |
| Shielded                          | Yes                   | No. of torsion cycles              | approx. 2000000 Cycles            |
| Conductor structure               | 7 × 0.25 mm           | Paired stranding                   | No                                |
| AWG                               | 22                    | Single wire diameter               | 0.25 mm                           |
| External sheath: Material         | TPE-S                 | Cable: Test voltage                | 3 kV AC                           |
| External sheath: Color            | Blue                  | Torsion stress in °                | $\pm 180^\circ/\text{m}$          |
| Cable diameter                    | 6.5 mm $\pm 5\%$      | Total stranding                    | 4 wires strand around core-filler |
| Wire cross section                | 0.34 mm <sup>2</sup>  | Travel speed (C-track)             | max. 3.3 m/s                      |
| Cable: Halogen free               | Yes                   | Traversing path (horizontal)       | max. 5 m                          |
| Cable                             |                       | Wire cross section                 | 0.34 mm <sup>2</sup>              |
| Cable: Temperature range (mobile) | 0 0                   | Wire processing                    | No                                |
| Cable: Temperature range (fixed)  | - 40 ...+ 80 °C       | Wire diameter incl. isolation      | 1.55 mm $\pm 5\%$                 |
|                                   |                       | External sheath: Color             | Blue                              |
|                                   |                       | Protocols                          | CAT5e                             |

#### Technical data

##### Electrical data

|                                    |              |
|------------------------------------|--------------|
| Operating voltage                  | max. 60 V DC |
| Operating voltage (only UL listed) | 30 V AC/DC   |
| Nominal voltage                    | 300 V AC     |
| Contact resistance                 | max. 30 mOhm |
| Operating current per contact      | max. 4 A     |

##### Mechanical data

|                                 |                          |
|---------------------------------|--------------------------|
| Head A: Degree of protection    | IP65, IP68, IP69K        |
| Bending radius (mobile)         | min. 15 × outer diameter |
| Bending radius (fixed)          | min. 5 × outer diameter  |
| No. of bending cycles (C-track) | approx. 2000000 Cycles   |
| Torsion speed                   | max. 35 cycles/min       |
| Torsion stress in °             | ± 180 °/m                |
| No. of torsion cycles           | approx. 2000000 Cycles   |
| Acceleration (C-track)          | max. 2 m/s <sup>2</sup>  |
| Travel speed (C-track)          | max. 3.3 m/s             |

##### Environmental conditions

|                            |                 |
|----------------------------|-----------------|
| Temperature range (mobile) | - 20 ...+ 80 °C |
|----------------------------|-----------------|

##### Environmental conditions

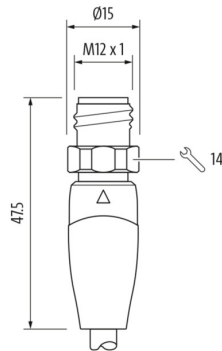
|                                   |                                                                                                                                               |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Temperature range (fixed)         | - 25 ...+ 85 °C                                                                                                                               |
| Cable: Temperature range (fixed)  | - 40 ...+ 80 °C                                                                                                                               |
| Dragchain capable                 | Yes                                                                                                                                           |
| Head A: Chemical resistance       | Chemical resistance tested according to ECOLAB. If other media are used, the material resistance must be tested according to the application. |
| Head A: Flame resistance          | HB (UL 94)                                                                                                                                    |
| Head A: Oil resistance            | ASTM 1 oil, mineral oils, limited to hydraulic oils                                                                                           |
| Head A: Acid and alkali resistant | ECOLAB tested                                                                                                                                 |
| Head A: Pollution degree          | 3                                                                                                                                             |
| Cable: Acid and alkali resistant  | Good (FDA 21 178.3620, 178.3297, 177.1520, EU 10/2011)                                                                                        |
| Cable: Silicone-free              | Yes                                                                                                                                           |
| Cable: UV resistance              | Yes                                                                                                                                           |

##### Commercial data

|        |          |
|--------|----------|
| Eclass | 27061801 |
|--------|----------|

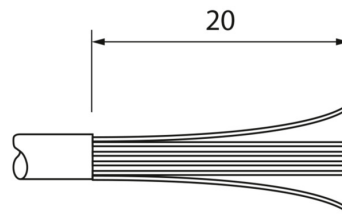
#### Side A

##### Technical drawing

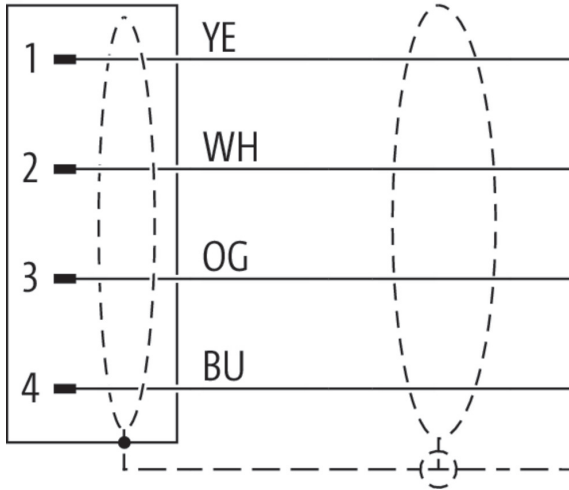


#### Side B

##### Technical drawing



#### Connection diagram



#### Dimension drawing

