

## Overview

- M12, male, X-coded, 8-poles; PUR, 2000 cm, shielded; RJ45, male, X-coded, 8-poles
- Dragchain capable; suitable for robotics  $\pm 180^\circ/\text{m}$ , CAT6A, 10Gbit/s
- Head A: IP66K, IP67; Head B: IP20
- Cable: good resistance against flames, oils
- Halogen free



## Technical data

### Side A

|                              |                                       |
|------------------------------|---------------------------------------|
| Head A: Connection           | M12                                   |
| Head A: Angle cable outlet   | 0°                                    |
| Head A: Gender               | Female                                |
| Head A: Coding               | X                                     |
| Head A: No. of poles         | 8                                     |
| Head A: LED                  | No                                    |
| Head A: Width across flats   | AF13                                  |
| Head A: Tightening torque    | 0.6 Nm                                |
| Head A: Knurled nut material | Zinc-pressure die casting, surface Ni |
| Head A: Body color           | Black                                 |
| Head A: Gasket material      | FKM                                   |
| Labeling sleeve side A       | Yes                                   |

### Side B

|                            |       |
|----------------------------|-------|
| Head B: Connection         | RJ45  |
| Head B: Angle cable outlet | 0°    |
| Head B: Gender             | Male  |
| Head B: No. of poles       | 8     |
| Head B: LED                | No    |
| Head B: Body color         | Black |
| Labeling sleeve side B     | Yes   |

### Cables

|                           |                       |
|---------------------------|-----------------------|
| Cable length              | 2000 cm               |
| Length tolerance          | $\pm 30$ cm           |
| Shielded                  | Yes                   |
| Conductor structure       | 7 $\times$ 0.203 mm   |
| AWG                       | 24                    |
| External sheath: Material | PUR                   |
| External sheath: Color    | Green                 |
| Cable diameter            | 8.9 mm $\pm$ 5%       |
| Wire cross section        | 0.227 mm <sup>2</sup> |

### Cable

|                                   |                   |
|-----------------------------------|-------------------|
| Cable: Temperature range (mobile) | - 30 ...+ 70 °C   |
| Cable: Temperature range (fixed)  | - 40 ...+ 80 °C   |
| Shielded                          | Yes               |
| Shielding: Covering               | approx. 85 %      |
| Characteristic impedance          | 100 Ohm $\pm$ 15% |

### Cable

|                                 |                                                                   |
|---------------------------------|-------------------------------------------------------------------|
| Signal delay                    | 5.2 ns/m                                                          |
| Transmission rate               | 10 Gbit/s                                                         |
| Bending radius (fixed)          | 71.2 mm                                                           |
| Number of wires                 | 8                                                                 |
| Number and diameter of wires    | 8x0,227                                                           |
| Length tolerance                | $\pm 30$ cm                                                       |
| Cable length                    | 2000 cm                                                           |
| Acceleration (C-track)          | max. 4 m/s <sup>2</sup>                                           |
| AWG                             | 24                                                                |
| Bending radius (fixed)          | min. 8 $\times$ outer diameter                                    |
| Bending radius (mobile)         | min. 15 $\times$ outer diameter                                   |
| Cable weight                    | approx. 116.6 g/m                                                 |
| Wire 1: Color                   | OGWH                                                              |
| Wire 2: Color                   | OG                                                                |
| Wire 3: Color                   | GNWH                                                              |
| Wire 4: Color                   | GN                                                                |
| Wire 5: Color                   | BNWH                                                              |
| Wire 6: Color                   | BN                                                                |
| Wire 7: Color                   | BUWH                                                              |
| Wire 8: Color                   | BU                                                                |
| Conductor structure             | 7 $\times$ 0.203 mm                                               |
| Cable diameter                  | 8.9 mm $\pm$ 5%                                                   |
| Insulation resistance           | min. 5 MOhm x m                                                   |
| Conductor: Material             | Copper, bare                                                      |
| External sheath: Material       | PUR                                                               |
| Insulation: Material            | PE                                                                |
| Shielding: Material             | Copper, tinned; PET aluminium coated                              |
| No. of bending cycles (C-track) | approx. 2000000 Cycles                                            |
| Nominal voltage                 | 300 V                                                             |
| Paired stranding                | Yes                                                               |
| Single wire diameter            | 0.203 mm                                                          |
| Cable: Test voltage             | 1.5 kV AC core-core ; 1 kV AC core-shield                         |
| Total stranding                 | 4 x 2 wires strand to pair, pairs strand around central separator |
| Travel speed (C-track)          | max. 3 m/s                                                        |
| Traversing path (horizontal)    | max. 5 m                                                          |
| Wire cross section              | 0.227 mm <sup>2</sup>                                             |

## Technical data

### Cable

|                               |              |
|-------------------------------|--------------|
| Wire processing               | No           |
| Wire diameter incl. isolation | 1.05 mm ± 5% |
| External sheath: Color        | Green        |
| Protocols                     | CAT6A        |

### Electrical data

|                               |              |
|-------------------------------|--------------|
| Operating voltage             | max. 60 V DC |
| Nominal voltage               | 300 V        |
| Contact resistance            | max. 30 mOhm |
| Operating current per contact | max. 0.5 A   |

### Mechanical data

|                                 |                          |
|---------------------------------|--------------------------|
| Head A: Degree of protection    | IP66K, IP67              |
| Head B: Degree of protection    | IP20                     |
| Bending radius (mobile)         | min. 15 × outer diameter |
| Bending radius (fixed)          | min. 8 × outer diameter  |
| No. of bending cycles (C-track) | approx. 2000000 Cycles   |
| Acceleration (C-track)          | max. 4 m/s <sup>2</sup>  |
| Travel speed (C-track)          | max. 3 m/s               |

### Environmental conditions

|                            |                 |
|----------------------------|-----------------|
| Temperature range (mobile) | - 25 ...+ 70 °C |
|----------------------------|-----------------|

### Environmental conditions

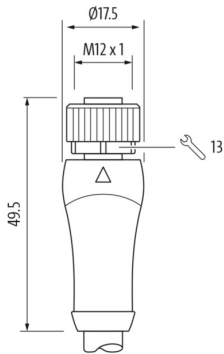
|                                   |                                                         |
|-----------------------------------|---------------------------------------------------------|
| Temperature range (fixed)         | - 25 ...+ 80 °C                                         |
| Cable: Temperature range (fixed)  | - 40 ...+ 80 °C                                         |
| Dragchain capable                 | Yes                                                     |
| Head A: Chemical resistance       | No                                                      |
| 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 | No                                                      |
| Head A: Pollution degree          | 3                                                       |
| Head B: Chemical resistance       | No                                                      |
| Head B: Flame resistance          | HB (UL 94)                                              |
| Head B: Pollution degree          | 3                                                       |
| Cable: Flame resistance           | Conform UL 1581 §1090, §1100 (FT2), IEC 60332-1-2 Std.  |
| Cable: Oil resistance             | Conform IEC 60811-2-1, ASTM IRM 901, ICEA S-82-552 Std. |
| Cable: Silicone-free              | Yes                                                     |

### Commercial data

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

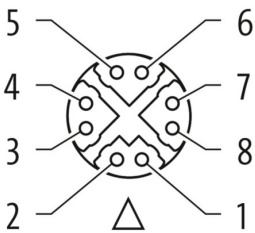
## Side A

### Technical drawing



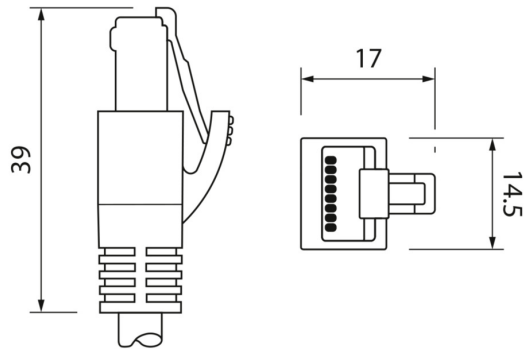
## Side A

### Coding



## Side B

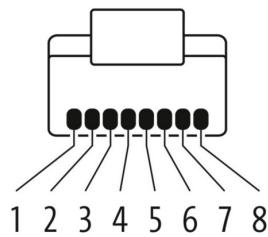
### Technical drawing



## Dimension drawing



## Coding



## Connection diagram

