

### M12 male 0° / RJ45 male 0° D-cod. shielded V2A

PUR 1x4xAWG22 shielded gn UL/CSA+drag ch. 15m

Art.No.: 7002-44711-7961500

Weight: 1.011 kg

Country of origin: DE

Model designation: MSRAL0-DA-T796\_15.0-ZS-S02

#### Advantages of our connectors:

Our connectors are versatile and specially optimised for industrial environments. All connectors are 100% tested during the manufacturing process to ensure the highest quality and reliability.

The contacts are gold-plated, which ensures optimum conductivity. Thanks to the high degree of protection, the connectors are ideal for demanding industrial environments. They are also vibration-resistant - this is ensured by the union nut with vibration protection.

Our connectors are resistant to oils and cooling lubricants, but resistance to aggressive media should be tested for each specific application. Different cable lengths available [on request](#)

If you are missing technical information? Please feel free to use our [dictionary](#) to find more technical details.

#### Product details:

Product fulfills requirements according to UN/ECE R118

Ethernet CAT5

Male straight – male straight

M12 – RJ45, 4-pole

D-coded

Shielded

8-pole partly used

Stainless steel 1.4305 (V2A)

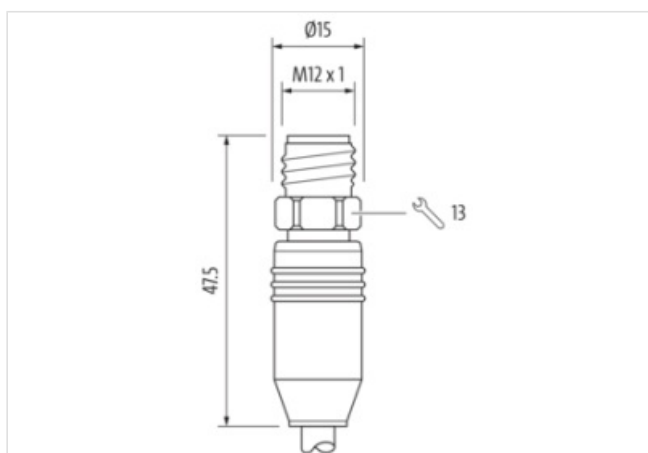
Further cable lengths on request.

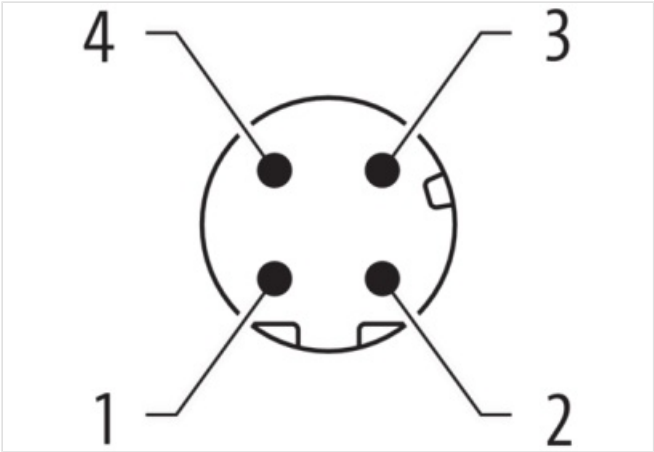
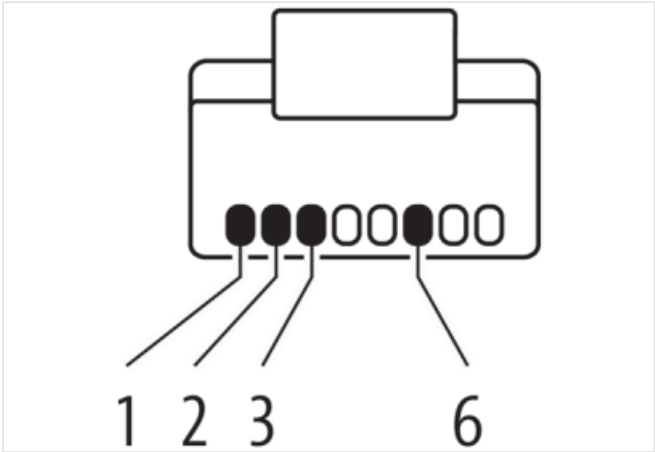
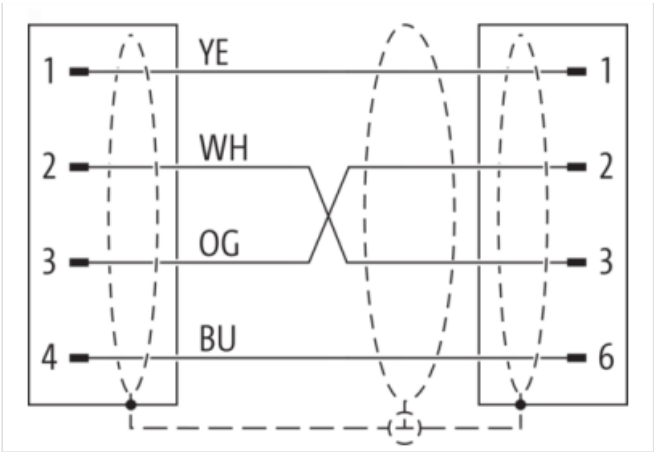
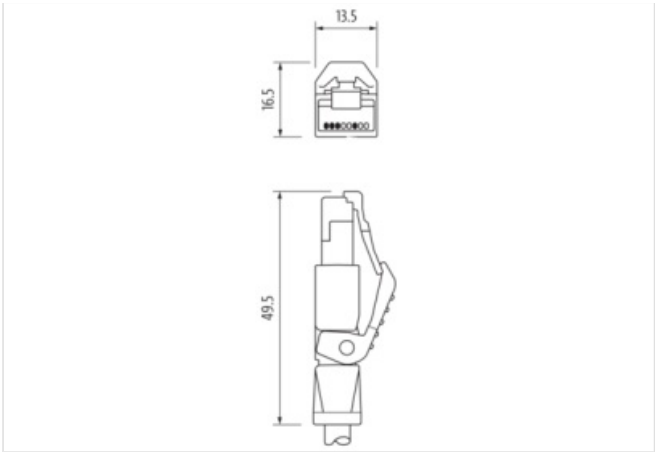
Plastic housings with good resistance against chemicals and oils.

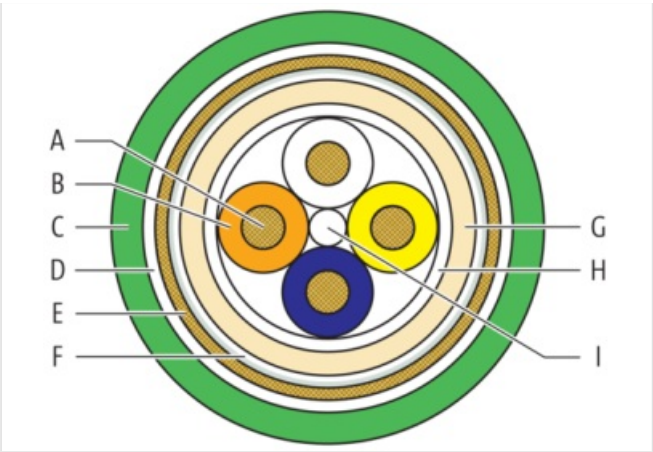
The resistance to aggressive media should be individually tested for your application. Further details on request.

#### Link to Product

##### Illustration







Product may differ from Image



| Header                              |   |
|-------------------------------------|---|
| Material short text                 | MSRAL0-DA-T796_15.0-ZS-S02  |
| Cable length                        | 15,00 m   |
| Side 1                              |   |
| Family construction form            | M12   |
| No. of poles                        | 4   |
| Coding                              | D   |
| Gender                              | male  |
| Threaded hole                       | M12 x 1   |
| Tightening torque                   | 0,6 Nm  |
| Width across flats                  | SW13  |
| Cable outlet                        | straight  |
| Material                            | PUR   |
| Material contact                    | Copper alloy  |
| Coating contact                     | gold plated   |
| Degree of protection (EN IEC 60529) | IP67, IP66K, IP65   |
| Side 2                              |   |
| Family construction form            | RJ45  |
| No. of poles                        | 4   |
| Gender                              | male  |
| Mounting method                     | pluggable   |
| Cable outlet                        | straight  |
| Material                            | PUR   |
| Degree of protection (EN IEC 60529) | IP20  |
| Commercial data                     |   |
| URL Webshop                         | <a href="https://shop.murrelektronik.com/7002-44711-7961500">https://shop.murrelektronik.com/7002-44711-7961500</a> |
| GTIN                                | 4048879286824   |
| ECLASS-6.0                          | 27061801  |
| ECLASS-6.1                          | 27060307  |
| ECLASS-7.0                          | 27060307  |
| ECLASS-7.1                          | 27060307  |
| ECLASS-8.0                          | 27060307  |

|                       |               |
|-----------------------|---------------|
| ECLASS-8.1            | 27060307      |
| ECLASS-9.0            | 27060307      |
| ECLASS-9.1            | 27060307      |
| ECLASS-10.0.1         | 27060307      |
| ECLASS-10.1           | 27060307      |
| ECLASS-11.0           | 27060307      |
| ECLASS-11.1           | 27060307      |
| ECLASS-12.0           | 27060307      |
| ECLASS-13.0           | 27060307      |
| ECLASS-14.0           | 27060307      |
| ETIM-5.0              | EC002599      |
| ETIM-6.0              | EC002599      |
| ETIM-7.0              | EC002599      |
| ETIM-8.0              | EC002599      |
| customs tariff number | 85444290      |
| EAN                   | 4048879286824 |
| Packaging unit        | 1             |

#### Electrical data | Supply

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

#### Industrial Communication

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

#### Industrial communication | Ethernet functionality

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

#### Device protection | Electrical

|                              |      |
|------------------------------|------|
| Pollution Degree             | 3    |
| Rated surge voltage          | 1 kV |
| Material group (IEC 60664-1) | I    |

#### Mechanical data

|                             |         |
|-----------------------------|---------|
| Contour for corrugated hose | without |
|-----------------------------|---------|

#### Mechanical data | Material data

|                           |                              |
|---------------------------|------------------------------|
| Color housing             | black                        |
| Material screw connection | Stainless steel 1.4305 (V2A) |
| Locking material          | PA                           |
| Locking material screw    | Stainless steel 1.4305 (V2A) |

#### Environmental characteristics | Climatic

|  |                            |
|--|----------------------------|
| Operating temperature min.             | -30 °C                     |
| Operating temperature max.             | 85 °C                      |
| Additional condition temperature range | depending on cable quality |

#### Important installation notes

|                        |   |
|------------------------|---|
| 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. |
| Note on strain relief  | Protect the connectors by suitable measures from mechanical loads, e.g. by the usage of cable ties.   |

#### Conformity

|                  |   |
|------------------|---|
| Product standard | EN IEC 61076-2-101 (M12), EN IEC 60603-7 (RJ45) |
|------------------|---|

#### Installation | Cable

|                      |  |
|----------------------|--|
| Cable identification | 796  |
| Function cable       | Data   |
| Amount stranding     | 1  |
| Stranding            | 4 wires around core filler star-shaped twisted |

|   |   |
|---|---|
| Cable shielding (type)                          | copper braid, tinned  |
| Cable shielding (coverage)                      | 85 %  |
| Banding   | Foil, Fleece  |
| Filler  | Yes   |
| Cable weight                                    | 63 g/m  |
| Material wire insulation                        | PE  |
| Amount wires                                    | 4   |
| Outer diameter insulation                       | 1,4 mm  |
| Outer diameter tolerance core insulation        | ± 0,05 mm   |
| Shore hardness wire insulation                  | 65 ± 5 Shore D  |
| Ingredient freeness wire insulation             | lead-free, CFC-free, halogen-free                                       |
| Amount strands (wire)                           | 7   |
| Diameter of single wires                        | 30 AWG  |
| Conductor crosssection (wire)                   | 22 AWG  |
| Material conductor wire                         | Stranded copper wire, bare  |
| Outer-diameter (jacket)                         | 6,7 mm  |
| Tolerance outer diameter (sheath)               | ± 5 %   |
| Material jacket                                 | PUR   |
| Shore hardness jacket                           | 89 ± 5 Shore A  |
| Freedom from ingredients (jacket)               | lead-free, cadmium-free, CFC-free, halogen-free, silicone-free          |
| Material property (jacket)                      | abrasion-resistant, low adhesion, good machinability, matte             |
| Material inner jacket                           | FRNC  |
| Color (inner jacket)                            | natural   |
| Conductor resistance (wire)                     | 55.4 Ω/km @ 20 °C   |
| Electrical capacity line constant (wire - wire) | 50.000 pF/km  |
| Isolation resistance                            | 5.000 MΩ × km   |
| Nominal voltage max.                            | 300 V   |
| Withstand voltage (wire - wire)                 | 2 kV @ 60 s   |
| Withstand voltage (wire - jacket)               | 2 kV @ 60 s   |
| Withstand voltage (wire - shield)               | 2 kV @ 60 s   |
| Current load capacity (standard)                | to DIN VDE 0298-4   |
| Current load capacity max. (wire)               | 4,8 A   |
| Characteristic impedance                        | 100 Ω ± 15 %  |
| Operating temperature min. (static)             | -40 °C  |
| Operating temperature max. (static)             | 80 °C   |
| Operating temperature min. (dynamic)            | -30 °C  |
| Operating temperature max. (dynamic)            | 70 °C   |
| Operating temperature min. (drag chain)         | -30 °C  |
| Operating temperature max. (drag chain)         | 70 °C   |
| Flame resistance                                | IEC 60332-1-2, UL 1581 § 1090, UL 1581 § 1100                           |
| Oil resistance                                  | IEC 60811-404, IRM 901, NEMA WC55                                       |
| Ozone resistance                                | IEC 60811-403   |
| UV resistance                                   | UL 1581 § 1200  |
| Other resistances                               | resistant to hydrolysis, resistant to microbes, MUD-resistant (NEK 606) |
| Bending radius (fixed)                          | 5 × Outer diameter  |
| Bending radius (dynamic)                        | 12 × Outer diameter   |
| No. of bending cycles (C-track)                 | 3 Mio. @ 25 °C  |
| Traversing distance (C-track)                   | 5 m @ 25 °C   |
| Travel speed (C-track)                          | 3.3 m/s @ 25 °C   |
| Acceleration (C-track)                          | 2 m/s² @ 25 °C  |
| No. of torsion cycles                           | 1 Mio. @ 25 °C  |
| Torsion stress                                  | ± 180 °/m   |
| Torsion speed                                   | 35 cycles/min   |