

**M12 male 90° A-cod. with cable F&B Pro**

TPE-S 4x0.34 bu UL robot+drag ch. 10m

Art.No.: 7024-12101-3211000

Weight: 0.309 kg

Country of origin: DE

Model designation: MSCL0-T321\_10.0-S24

Plug Connectors for Food &amp; Beverage

Male 90°

M12 F&amp;B Pro

4-pole

Screw, Stainless Steel 1.4404 (V4A)

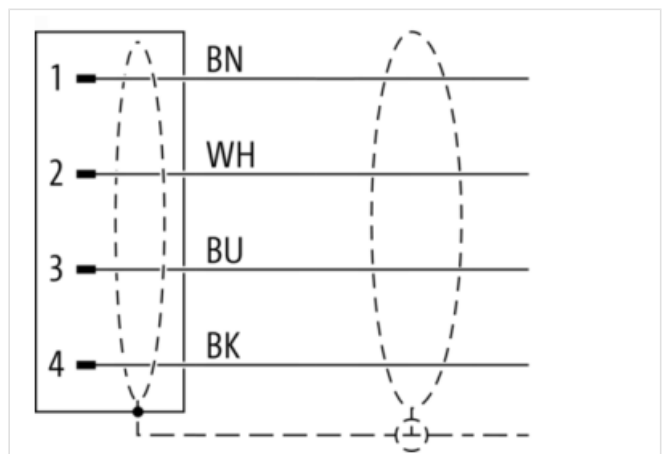
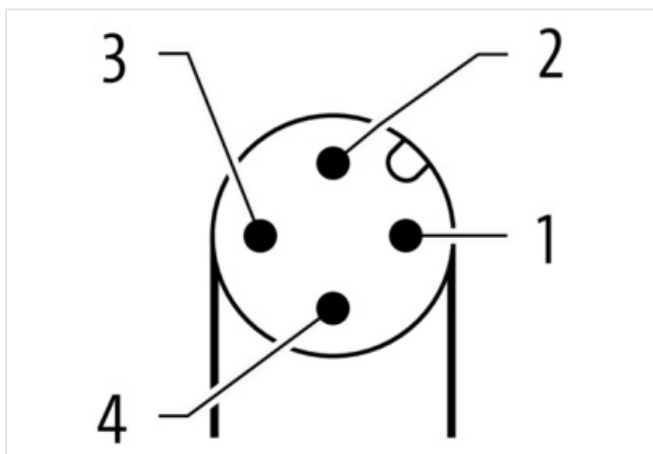
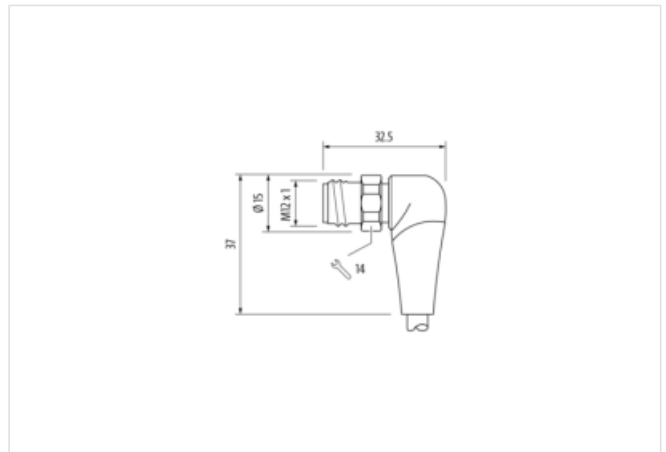
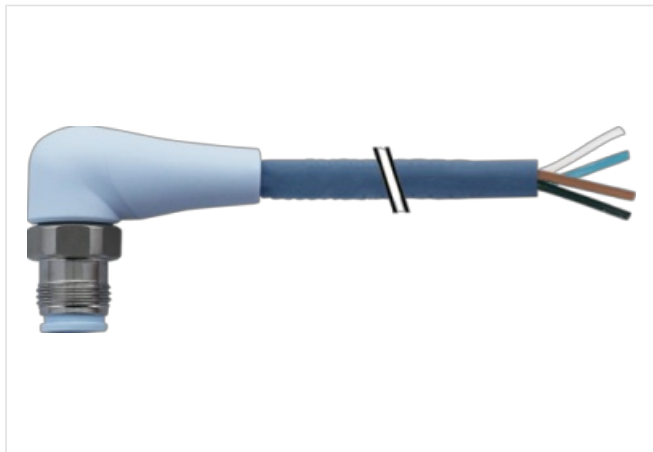
without cable sleeves

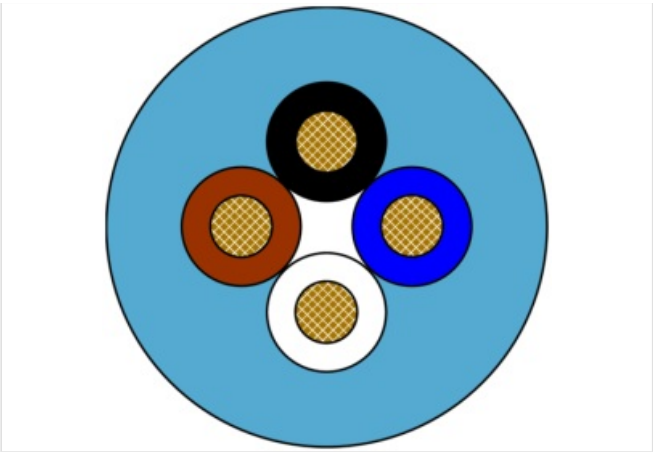
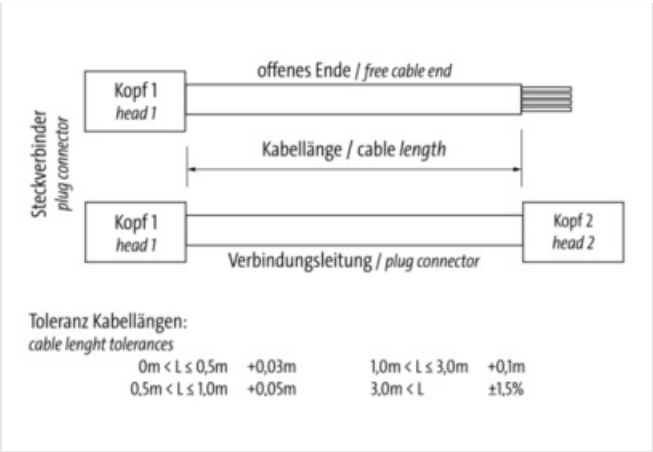
IP69K

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.

Further cable lengths on request.

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



Product may differ from Image



|                                     |                                                                                                                     |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Cable length                        | 10,00 m                                                                                                             |
| Side 1                              |                                                                                                                     |
| Family construction form            | M12                                                                                                                 |
| No. of poles                        | 4                                                                                                                   |
| Coding                              | A                                                                                                                   |
| Gender                              | male                                                                                                                |
| Mounting method                     | inserted, screwed                                                                                                   |
| Threaded hole                       | M12 x 1                                                                                                             |
| Tightening torque                   | 0,6 Nm                                                                                                              |
| Width across flats                  | SW14                                                                                                                |
| Cable outlet                        | angled                                                                                                              |
| Material contact                    | Copper alloy                                                                                                        |
| Coating contact                     | gold plated                                                                                                         |
| Degree of protection (EN IEC 60529) | IP69K, IP68, IP65                                                                                                   |
| Side 2                              |                                                                                                                     |
| Family construction form            | free cable end                                                                                                      |
| Stripping length (jacket)           | 20 mm                                                                                                               |
| Commercial data                     |                                                                                                                     |
| URL Webshop                         | <a href="https://shop.murrelektronik.com/7024-12101-3211000">https://shop.murrelektronik.com/7024-12101-3211000</a> |
| GTIN                                | 4048879739122                                                                                                       |
| EU-Customs tariff number            | 85444290                                                                                                            |
| US-Customs tariff number            | 8544429090                                                                                                          |
| ECLASS-6.0                          | 27279218                                                                                                            |
| ECLASS-6.1                          | 27279218                                                                                                            |
| ECLASS-7.0                          | 27279218                                                                                                            |
| ECLASS-7.1                          | 27279218                                                                                                            |
| ECLASS-8.0                          | 27279218                                                                                                            |
| ECLASS-8.1                          | 27279218                                                                                                            |
| ECLASS-9.0                          | 27060311                                                                                                            |
| ECLASS-9.1                          | 27060311                                                                                                            |
| ECLASS-10.0.1                       | 27060311                                                                                                            |
| ECLASS-10.1                         | 27060311                                                                                                            |
| ECLASS-11.0                         | 27060311                                                                                                            |

|                       |               |
|-----------------------|---------------|
| ECLASS-11.1           | 27060311      |
| ECLASS-12.0           | 27060311      |
| ECLASS-13.0           | 27060311      |
| ECLASS-14.0           | 27060311      |
| ETIM-5.0              | EC001855      |
| ETIM-6.0              | EC001855      |
| ETIM-7.0              | EC001855      |
| ETIM-8.0              | EC001855      |
| ETIM-9.0              | EC001855      |
| ETIM-10.0             | EC001855      |
| customs tariff number | 85444290      |
| EAN                   | 4048879739122 |
| Packaging unit        | 1             |

#### Electrical data | Supply

|                                    |       |
|------------------------------------|-------|
| Operating voltage AC max.          | 250 V |
| Operating voltage DC max.          | 250 V |
| Current operating per contact max. | 4 A   |
| Operating voltage AC (UL-listed)   | 30 V  |
| Operating voltage DC (UL-listed)   | 30 V  |

#### Diagnostics

|                       |    |
|-----------------------|----|
| Status indication LED | No |
|-----------------------|----|

#### Device protection | Electrical

|                                        |                   |
|----------------------------------------|-------------------|
| Additional condition protection degree | inserted, screwed |
| Pollution Degree                       | 3                 |
| Rated surge voltage                    | 2,5 kV            |
| Material group (IEC 60664-1)           | I                 |

#### Mechanical data

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

#### Mechanical data | Material data

|                          |                              |
|--------------------------|------------------------------|
| housing                  | PP                           |
| Material contact carrier | PP                           |
| Color contact carrier    | ice blue                     |
| Locking material         | Stainless steel 1.4404 (V4A) |

#### Mechanical data | Mounting data

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

#### Environmental characteristics | Climatic

|                                        |                            |
|----------------------------------------|----------------------------|
| Operating temperature min.             | -40 °C                     |
| Operating temperature max.             | 105 °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), FDA conform |
|------------------|---------------------------------------|

#### Installation | Cable

|                      |                      |
|----------------------|----------------------|
| Cable identification | 321                  |
| Cable Type           | Food & Beverage      |
| Cable weight         | 27 g/m               |
| UL AWM Style         | 22126 / 11558        |
| Stranding            | 1 × 4 wires stranded |

|                                     |                                                                                                                                     |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Wire arrangement                    | BN, BK, BU, WH                                                                                                                      |
| Material wire insulation            | PP                                                                                                                                  |
| Amount wires                        | 4                                                                                                                                   |
| Outer diameter insulation           | 1.27 mm ± 0.02 mm                                                                                                                   |
| Conductor crosssection (wire)       | 0,34 mm²                                                                                                                            |
| Material conductor wire             | Stranded copper wire, bare                                                                                                          |
| Core construction (wire)            | 42 × 0.1 mm                                                                                                                         |
| Ingredient freeness wire insulation | lead-free, cadmium-free, CFC-free, halogen-free, silicone-free                                                                      |
| Material jacket                     | TPE-S                                                                                                                               |
| Outer-diameter (jacket)             | 4.7 mm ± 5 %                                                                                                                        |
| Jacket Color                        | pastel blue / RAL 5024                                                                                                              |
| Freedom from ingredients (jacket)   | lead-free, cadmium-free, CFC-free, halogen-free, silicone-free                                                                      |
| Material property (jacket)          | abrasion-resistant, low adhesion, good machinability, matte                                                                         |
| Conductor resistance (wire)         | 58 Ω/km @ 20 °C                                                                                                                     |
| Nominal voltage max.                | 300 V                                                                                                                               |
| Withstand voltage (wire - wire)     | 3 kV @ 60 s                                                                                                                         |
| Withstand voltage (wire - jacket)   | 3 kV @ 60 s                                                                                                                         |
| Current load capacity max. (wire)   | 4,8 A                                                                                                                               |
| Current load capacity (standard)    | to DIN VDE 0298-4                                                                                                                   |
| Electric inductivity line constant  | 0,54 mH/km                                                                                                                          |
| Electric capacitance                | 58 pF/m                                                                                                                             |
| Operating temperature (static)      | -40 °C ... 105 °C                                                                                                                   |
| Operating temperature (dynamic)     | -25 °C ... 105 °C                                                                                                                   |
| Operating temperature (drag chain)  | -25 °C ... 105 °C                                                                                                                   |
| Chemical resistance                 | ECOLAB®, FDA 21 178.3620, 178.3297, 177.1520, EU 10/2011                                                                            |
| Other resistances                   | autoclavable ≥ 4000 cycles @ 135°C, flat jet nozzle resistant 8000 kPa @ 80°C, 30 s, resistant to hydrolysis, resistant to microbes |
| Notes                               | application-related testing                                                                                                         |
| Bending radius (fixed)              | 5 × Outer diameter                                                                                                                  |
| Bending radius (dynamic)            | 10 × Outer diameter                                                                                                                 |
| No. of bending cycles (C-track)     | 4 Mio. @ 25 °C                                                                                                                      |
| Traversing distance (C-track)       | 10 m @ 25 °C   horizontal                                                                                                           |
| Travel speed (C-track)              | 3 m/s @ 25 °C                                                                                                                       |
| Acceleration (C-track)              | 10 m/s² @ 25 °C                                                                                                                     |
| No. of torsion cycles               | 2 Mio.                                                                                                                              |
| Torsion stress                      | ± 180 °/m                                                                                                                           |
| Torsion speed                       | 35 cycles/min                                                                                                                       |