

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

TPE-S 4x0.34 bu UL robot+drag ch. 5m

Art.No.: 7024-12341-3210500

Weight: 0.161

Country of origin: DE

Model designation: MSDL0-T321\_5.0-S24

Plug Connectors for Food &amp; Beverage

Further cable lengths on request.

Female 90°

M12 F&amp;B Pro

4-pole

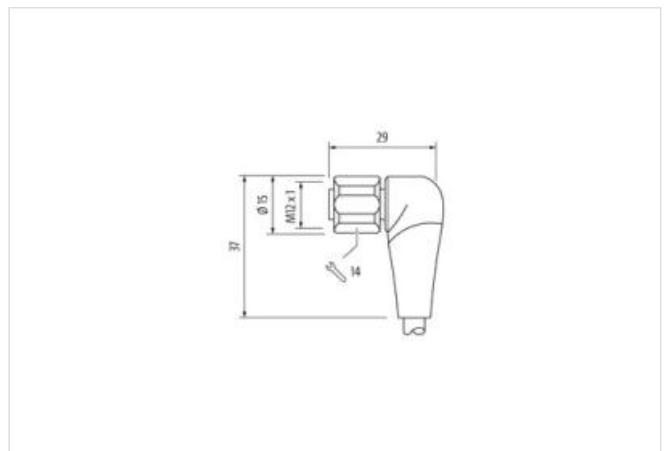
Stainless steel 1.4404 (V4A)

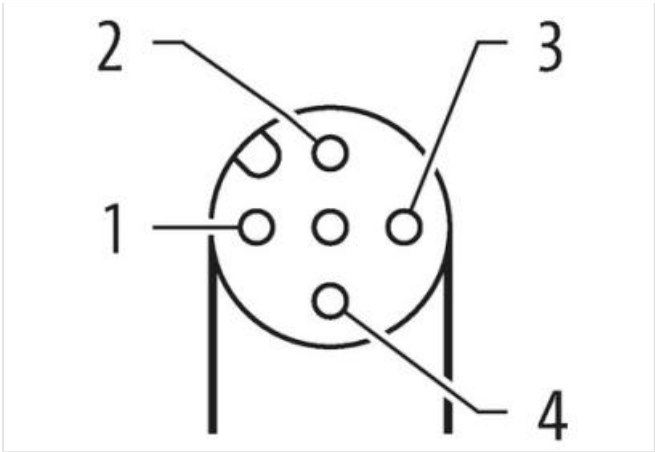
without cable sleeves

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.

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



Product may differ from Image



|                                     |                   |
|-------------------------------------|-------------------|
| Cable length                        | 5 m               |
| Side 1                              |                   |
| Tightening torque                   | 0,6 Nm            |
| Mounting method                     | inserted, screwed |
| Coating contact                     | gold plated       |
| Family construction form            | M12               |
| Thread                              | M12 x 1           |
| Coding                              | A                 |
| Material contact                    | Copper alloy      |
| No. of poles                        | 4                 |
| Width across flats                  | SW14              |
| Degree of protection (EN IEC 60529) | IP65, IP68, IP69K |
| Side 2                              |                   |
| Stripping length (jacket)           | 20 mm             |
| Commercial data                     |                   |
| ECLASS-6.0                          | 27279218          |
| ECLASS-6.1                          | 27279218          |
| ECLASS-7.0                          | 27279218          |
| ECLASS-8.0                          | 27279218          |
| ECLASS-9.0                          | 27060311          |
| ECLASS-10.1                         | 27060311          |
| ECLASS-11.1                         | 27060311          |
| ECLASS-12.0                         | 27060311          |
| ETIM-5.0                            | EC001855          |
| customs tariff number               | 85444290          |
| customs tariff number               | 85444290          |
| EAN                                 | 4048879736367     |
| EAN                                 | 4048879736367     |
| Packaging unit                      | 1                 |
| Packaging unit                      | 1                 |
| Electrical data   Supply            |                   |
| Operating voltage AC max.           | 250 V             |

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

#### Diagnostics

|                       |    |
|-----------------------|----|
| Status indication LED | no |
|-----------------------|----|

#### Installation | Connection

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

#### 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

|                          |                              |
|--------------------------|------------------------------|
| Material housing         | PP                           |
| Color contact carrier    | ice blue                     |
| Material gasket          | EPDM                         |
| Material contact carrier | PP                           |
| 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 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), FDA conform |
|------------------|---------------------------------------|

#### Installation | Cable

|                                          |                                                                |
|------------------------------------------|----------------------------------------------------------------|
| wire arrangement                         | brown, black, blue, white                                      |
| Cable identification                     | 321                                                            |
| Jacket Color                             | blue                                                           |
| Amount stranding                         | 1                                                              |
| Stranding                                | 4 wires twisted                                                |
| wire arrangement                         | brown, black, blue, white                                      |
| Cable weight                             | 29,7 g/m                                                       |
| Material jacket                          | TPE-S                                                          |
| Shore hardness jacket                    | 47 ± 5 Shore D                                                 |
| Freedom from ingredients (jacket)        | lead-free, cadmium-free, CFC-free, halogen-free, silicone-free |
| Outer-diameter (jacket)                  | 4,7 mm                                                         |
| Tolerance outer diameter (sheath)        | ± 5 %                                                          |
| Material wire insulation                 | PP                                                             |
| Amount wires                             | 4                                                              |
| Outer diameter insulation                | 1,27 mm                                                        |
| Outer diameter tolerance core insulation | ± 5 %                                                          |
| Shore hardness wire insulation           | 64 ± 3 Shore D                                                 |

|                                          |                                                                |
|------------------------------------------|----------------------------------------------------------------|
| Ingredient freeness wire insulation      | lead-free, cadmium-free, CFC-free, halogen-free, silicone-free |
| Amount strands (wire)                    | 42                                                             |
| Diameter of single wires                 | 0,1 mm                                                         |
| Conductor crosssection (wire)            | 0,34 mm <sup>2</sup>                                           |
| Material conductor wire                  | Stranded copper wire, bare                                     |
| Conductor type (wire)                    | strand class 6                                                 |
| Nominal voltage AC max.                  | 300 V                                                          |
| Current load capacity (standard)         | to DIN VDE 0298-4                                              |
| Current load capacity min. wire          | 4,8 A                                                          |
| Electrical resistance line constant wire | 58 Ω/km @ 20 °C                                                |
| AC withstand voltage (wire - wire)       | 3 kV @ 60 s                                                    |
| Min. operating temperature (static)      | -40 °C                                                         |
| Max. operating temperature (fixed)       | 105 °C                                                         |
| Operating temperature min. (dynamic)     | -25 °C                                                         |
| Operating temperature max. (dynamic)     | 105 °C                                                         |
| Flame resistance                         | UL 1581 § 1100 FT2   UL 1581 § 1090   IEC 60332-2-2            |
| 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)                 | 10 x 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                                                  |
| No. of torsion cycles                    | 2 Mio.                                                         |
| Torsion stress                           | ± 180 °/m                                                      |
| Torsion speed                            | 35 cycles/min                                                  |