

**M12 male 0° / M12 female 90° A-cod. LED F&B Pro**

TPE-S 4x0.34 bu UL robot+drag ch. 1m

## Plug Connectors for Food &amp; Beverage

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

Further cable lengths on request.

Male straight

Female 90° with LED

M12 F&amp;B Pro

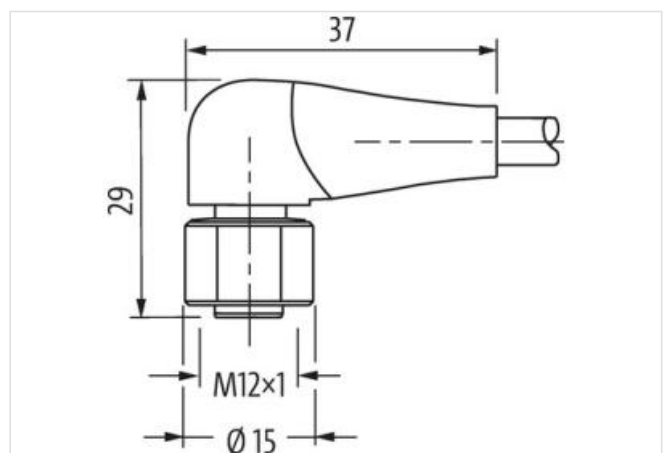
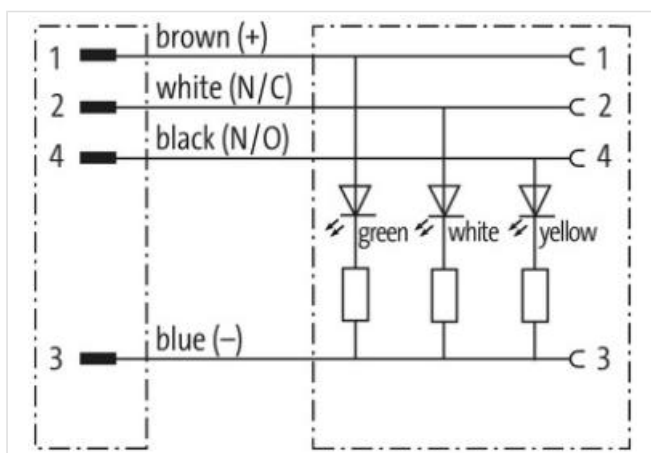
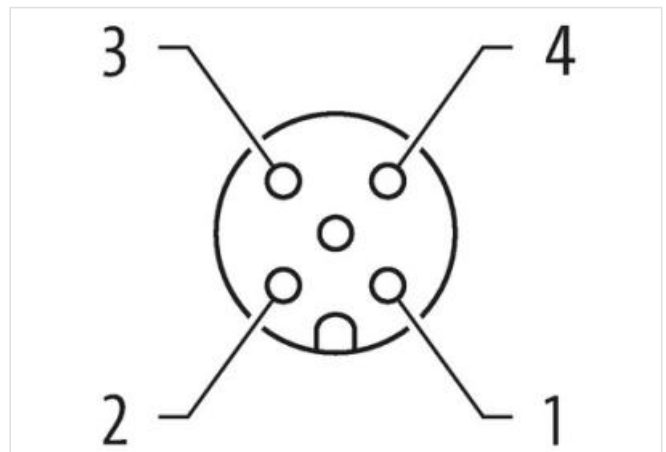
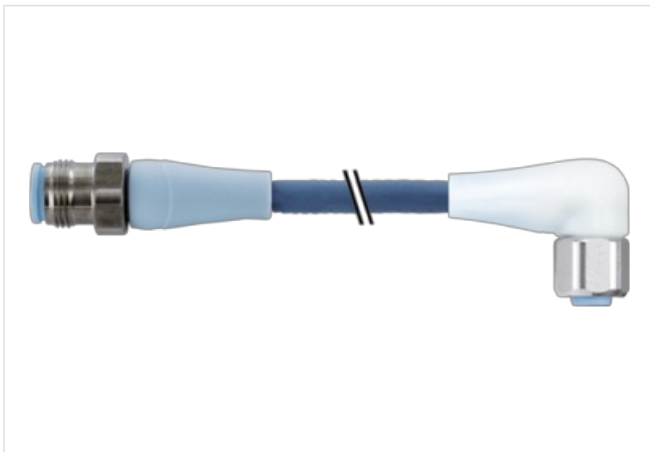
4-pole

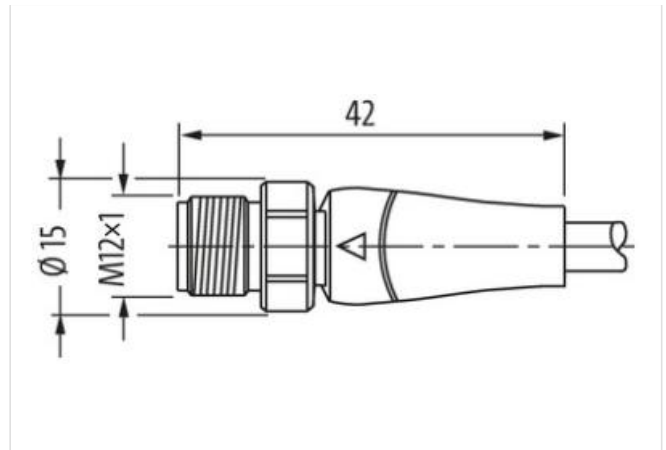
Stainless steel 1.4404 (V4A)

without cable sleeves

IP69K

Plastic housings with good resistance against chemicals and oils.

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



Product may differ from Image

|                                     |                   |
|-------------------------------------|-------------------|
| Cable length                        | 1 m               |
| <b>Side 1</b>                       |                   |
| 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 |
| <b>Side 2</b>                       |                   |
| 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                 |
| Degree of protection (EN IEC 60529) | IP65, IP68, IP69K |
| <b>Commercial data</b>              |                   |
| 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          |
| GTIN                                | 4048879768290     |
| Packaging unit                      | 1                 |
| <b>Electrical data   Supply</b>     |                   |

|                                    |      |
|------------------------------------|------|
| Operating voltage DC               | 24 V |
| Operating voltage DC min.          | 18 V |
| Operating voltage DC max.          | 30 V |
| Current operating per contact max. | 4 A  |

#### Diagnostics

|                       |                      |
|-----------------------|----------------------|
| Status indication LED | green, white, yellow |
|-----------------------|----------------------|

#### Device protection | Electrical

|                                        |                   |
|----------------------------------------|-------------------|
| Additional condition protection degree | inserted, screwed |
| Pollution Degree                       | 3                 |
| Rated surge voltage                    | 0,8 kV            |
| Material group (IEC 60664-1)           | I                 |

#### Mechanical data

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

#### Mechanical data | Material data

|                          |                              |
|--------------------------|------------------------------|
| Color contact carrier    | ice blue                     |
| Material gasket          | EPDM                         |
| Material housing         | PP                           |
| 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.             | 85 °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                                        |