

**M12 male 0° A-cod. with cable F&B Pro**

TPE-S 4x0.34 bu UL robot+drag ch. 3m

Art.No.: 7024-12021-3210300

Weight: 0.099 kg

Country of origin: DE

Model designation: MSAL0-T321\_3.0-S24

Plug Connectors for Food &amp; Beverage

Male straight

M12 F&amp;B Pro

4-pole

Screw, Stainless Steel 1.4404 (V4A)

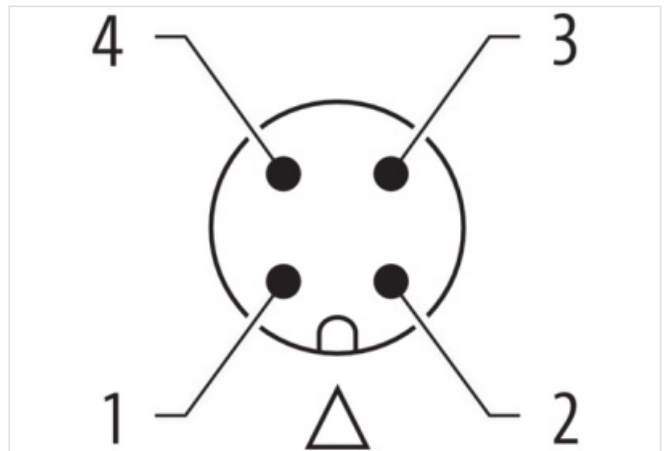
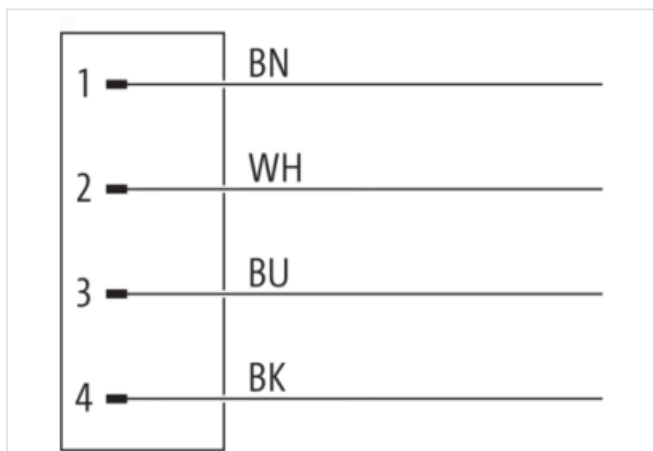
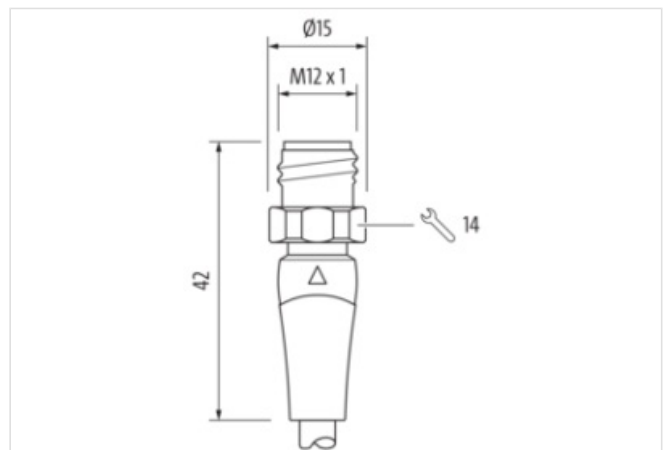
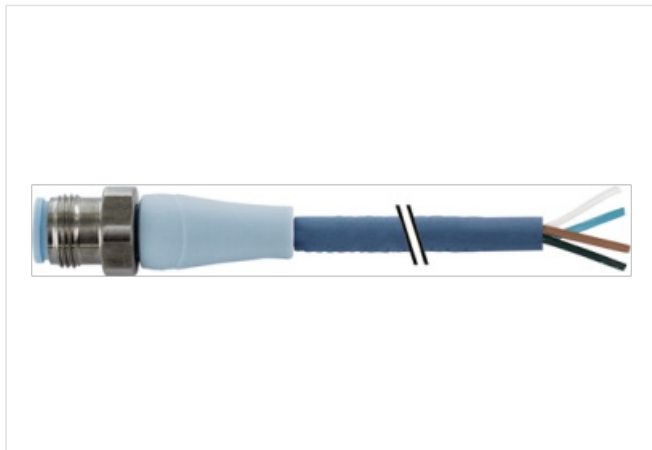
without cable sleeves

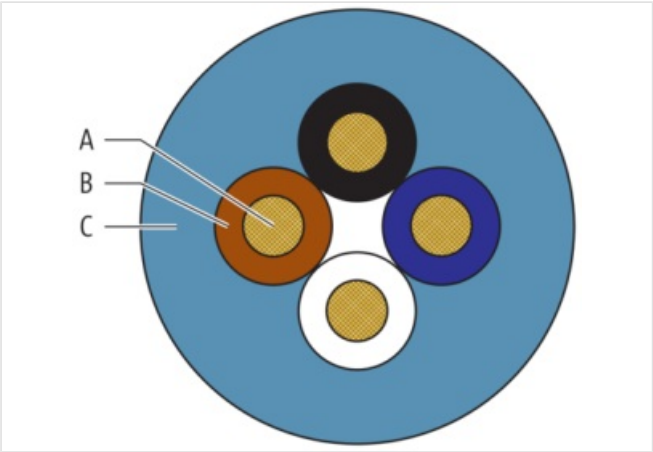
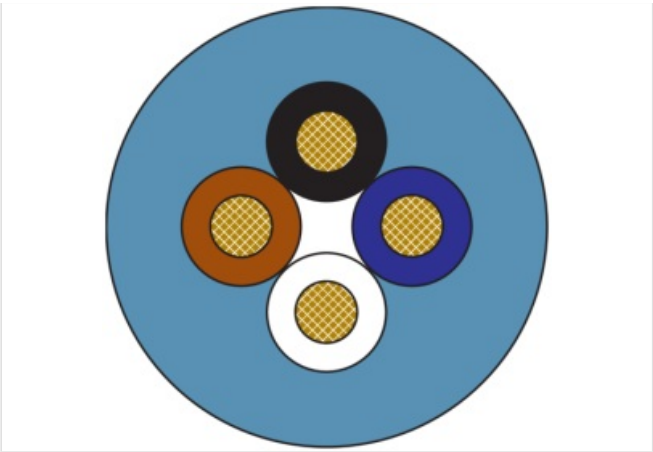
IP69K

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



Header	
Material short text	MSAL0-T321_3.0-S24
Cable length	3,00 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	straight
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/7024-12021-3210300">https://shop.murrelektronik.com/7024-12021-3210300</a>
GTIN	4048879739139
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
customs tariff number	85444290
EAN	4048879739139
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
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#### 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
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#### Mechanical data | Material data

Material 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
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#### Environmental characteristics | Climatic

Operating temperature min.	-30 °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
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#### Installation | Cable

Cable identification	321
Amount stranding	1
Stranding	Wires
Wire arrangement	brown, black, blue, white
Cable weight	27 g/m
Material wire insulation	PP
Amount wires	4
Outer diameter insulation	1,27 mm
Outer diameter tolerance core insulation	± 0,02 mm
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 mm²
Material conductor wire	Stranded copper wire, bare
Conductor type (wire)	strand class 6
Outer-diameter (jacket)	4,7 mm
Tolerance outer diameter (sheath)	± 5 %
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
Material property (jacket)	abrasion-resistant, low adhesion, good machinability, matte
Conductor resistance (wire)	58 Ω/km @ 20 °C
Nominal voltage AC max.	300 V
Withstand voltage (wire - wire)	3 kV @ 60 s
Current load capacity (standard)	to DIN VDE 0298-4
Current load capacity min. wire	4,8 A
Operating temperature min. (static)	-40 °C
Operating temperature max. (static)	105 °C
Operating temperature min. (dynamic)	-25 °C
Operating temperature max. (dynamic)	105 °C
Operating temperature min. (drag chain)	-25 °C
Operating temperature max. (drag chain)	105 °C
Other resistances	resistant to hydrolysis, resistant to microbes
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