

M12 male 0° A-cod. with cable F&B Pro

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

Art.No.: 7024-12021-3211000

Weight: 0.307 kg

Country of origin: DE

Model designation: MSAL0-T321_10.0-S24

Plug Connectors for Food & Beverage

Male straight

M12 F&B Pro

4-pole

Screw, Stainless Steel 1.4404 (V4A)

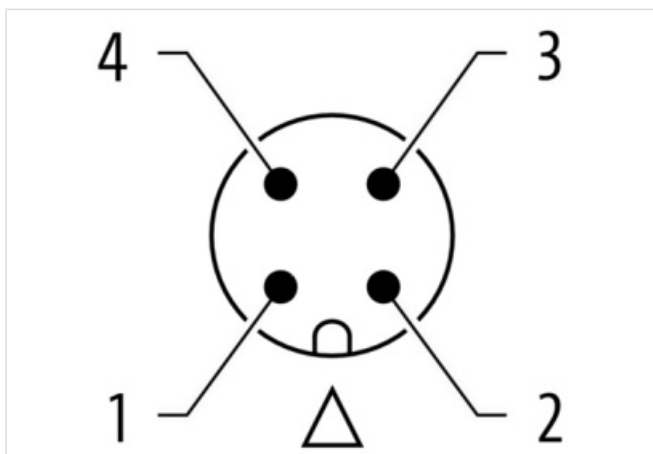
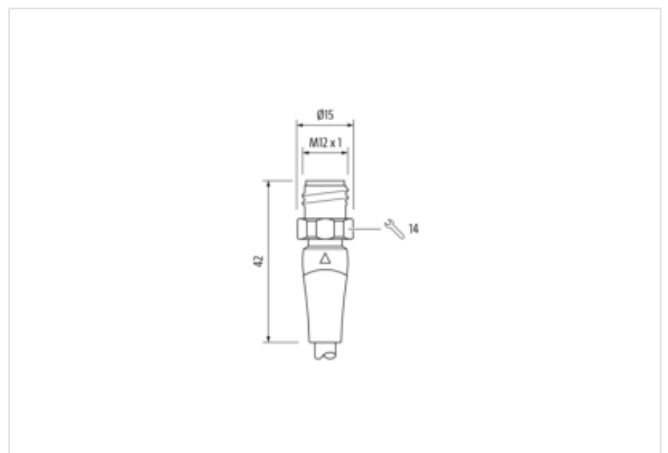
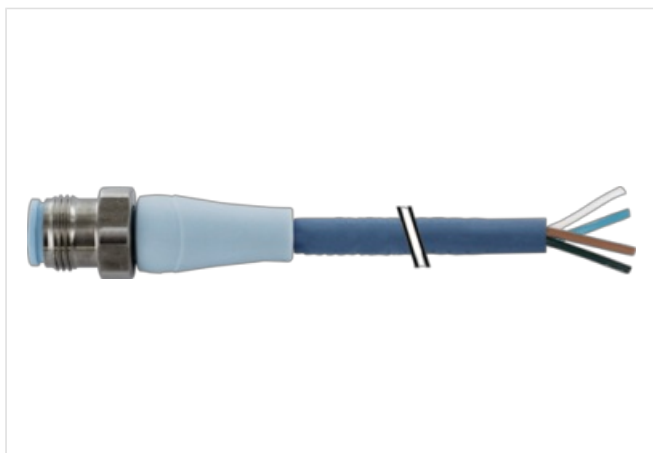
without cable sleeves

IP69K

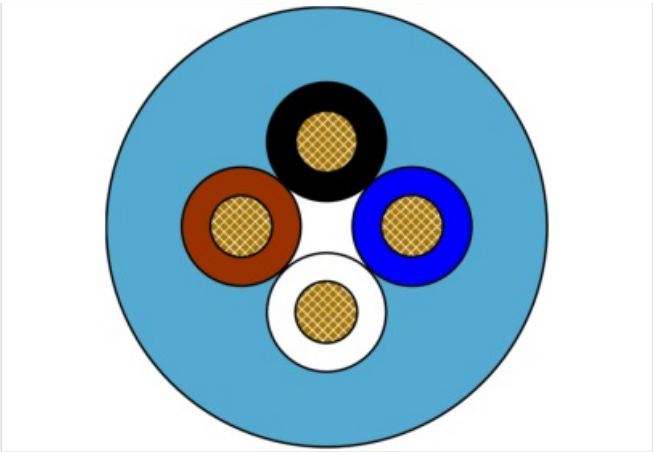
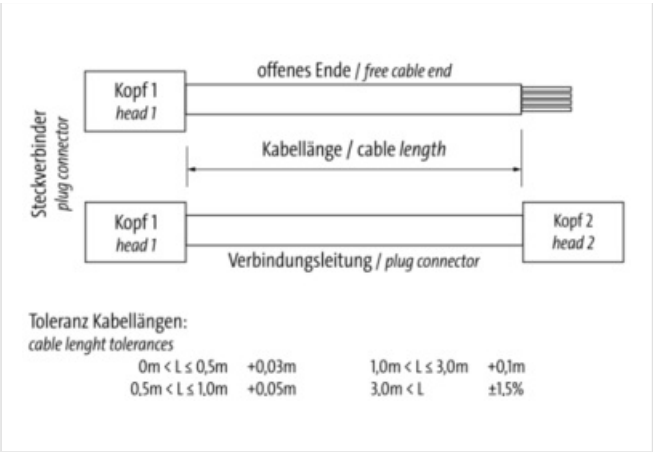
Plastic housings with good resistance against chemicals and oils.

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**

1	BN
2	WH
3	BU
4	BK



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	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	https://shop.murrelektronik.com/7024-12021-3211000
GTIN	4048879739160
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	4048879739160
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

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.	-40 °C
Operating temperature max.	105 °C
Additional condition temperature range	depending on cable quality

Important installation notes

Note on bending radius	Attention: 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
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