

ÖLFLEX® ROBOT F1 (C) 4G2,5+(2X1)DP

Article No.: 0029692

Robotic cable; 4G2,5+(2X1); Core identification: Numbers; PUR; U_0/U : 300/500 V; Shielded; UL recognised; Torsion



Details

Benefits

- Premium product for the greatest possible application range.
- Special core stranding allows simultaneous bending and twisting (torsion angle up to $\pm 180^\circ/m$).
- Durable, resistant product thanks to the outer sheath PU material that is resistant to abrasions, notches and cuts.
- Extremely weather-resistant with a wide temperature range.
- Tried-and-tested cable, successfully tested for 10 million torsion cycles.
- UL/CSA certification according to technical data enables the product to be used in the North American market.
- Product with multiple certifications enables universal use and reduces the variety of parts, thus guaranteeing logistics savings.
- Ideal protection against electromagnetic interference due to copper stranded shielding (C) or wrapping made of tin-plated copper wires (D), adapted to torsional loads.

Application

- The cable design allows flexible, continuously flexing use under torsional stress in industrial robots and handling devices.

- The cable design allows highly flexible, continuously flexing use in moving machine parts and in the cable chain, with horizontal travel distances of up to 10 m.
- Can be used in dry, wet and especially in harsh and oily environments.
- The PUR outer sheath withstands high mechanical loads.
- The PUR outer sheath is resistant to mineral oil-based lubricants and highly resistant to chemicals.
- Suitable for outdoor use.
- Flexible use at temperatures down to -40°C.

Notes

Photographs and graphics are not to scale and do not represent detailed images of the respective products.

If applicable, the prices are solid metal prices without surcharges and VAT. Sales only to business customers.

Unless specified otherwise, the product values shown are rated values at room temperature. You can receive further values, such as tolerances, upon request if they are available and have been released for publication.

Technical Data

General information

Brand	ÖLFLEX®
Product type	Robotic cable
Copper index	150 kg/km
copper index (lb)	1,007.9 lb/10,000 ft

Electrical parameters

Nominal voltage	U_0/U : 300/500 V AC rms according to IEC
Rated voltage	1000 V AC rms according to cRU AWM 1000 V AC rms according to UL AWM
Test voltage	3 kV
Current rating according to	VDE 0298-4

Product design

Conductor count/size	4G2,5+(2X1)
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Conductor cross-section (mm ²)	2.5 mm ²
Nominal cross section conductor (AWG)	14 AWG
Leading conductor cross-section	mm ²
Conductor material	Bare Copper
Conductor design	extra-fine wire
Including protective conductor	Yes
Number of cores	4
Number of pairs	1
Pair screening type	Wrapped with braided tin-plated copper wires
Stranding type	Layered Stranding
Wrapping over stranding	PTFE film
Shielded	Yes
Type of overall screen	Wrapped with braided tin-plated copper wires
Nominal outer diameter	12 mm
Shape of cable	Round
Core insulation base material	Thermoplastic elastomers
Core insulation base material, shortname	TPE
Base material of outer sheath	Polyurethane
Base material of outer sheath, shortname	PUR
Cable insulation colour	anthracite
Cable insulation RAL colour	RAL 7016
Core identification	Numbers
Core colour code	EN 50334 VDE 0293-1

Product features

Application area	Torsion Flexible Cable chain
For continuous flexing	Yes
For torsional load	Yes
Minimum bending radius, fixed installation	4 x outer diameter

Minimum bending radius in mm, stationary	48 mm
Minimum bending radius, dynamic permanently moved	10 x outer diameter
Minimum bending radius in mm, dynamic continuously flexing	120 mm
Minimum bending radius, occasionally moved	10 x outer diameter
Minimum bending radius in mm, occasionally flexing	120 mm
Torsion	for +/- 180 °/m and min. -40 °C up to 10000000 Torsion cycles
temperature, fixed installation	-50 °C to 80 °C according to IEC to 80 °C according to UL AWM to 80 °C according to CSA AWM
Temperature, occasionally moved	to 80 °C according to CSA AWM to 80 °C according to UL AWM -40 °C to 80 °C according to IEC
Temperature, dynamic continuously flexing	-40 °C to 80 °C according to IEC to 80 °C according to UL AWM to 80 °C according to CSA AWM
Flame-retardant	Yes
Flame retardance according to	IEC 60332-1-2
UV-resistant	Yes
UV-resistant according to	EN ISO 4892-2, method A (colour change permitted)
weather resistant	Yes
Chemical resistant	Yes
Halogenfree	No
Oil-resistant	Yes
Oil resistance according to	EN 50363-10-2
PWIS-free	Yes
Low-adhesion sheath surface	Yes
Certifications and standards	
CE marked	Yes
UKCA marked	Yes

EAC certified	Yes
EAC certification number	EAЭC N RU Д-DE.АЮ64.В.00130/20
UL recognised	Yes
UL AWM certification	10258 according to UL 758 (e-file number: E213974) 20940 according to UL 758 (e-file number: E213974)
UL listed	No
cUR recognized	Yes
cUR certification	AWM II B according to CSA C22.2 No. 210 (e-file number: E213974) AWM I B according to CSA C22.2 No. 210 (e-file number: E213974) AWM I A according to CSA C22.2 No. 210 (e-file number: E213974) AWM II A according to CSA C22.2 No. 210 (e-file number: E213974)
cUL listed	No
CSA certified	No
Flame retardance tested according to UN /ECE-R118	No

ÖLFLEX® ROBOT F1 (C)

Article No.	Name	Conductor count/size	Core identification	Nominal core diameter	Copper index	Weight
0029653	ÖLFLEX® ROBOT F1 (C) 3X2X0,25	3X2X0,25	Colours		38 kg/km	
0029654	ÖLFLEX® ROBOT F1 (C) 25X0,25	25X0,25	Colours		115 kg/km	
0029655	ÖLFLEX® ROBOT F1 (C) 2X0,34	2X0,34	Colours		18 kg/km	
0029656	ÖLFLEX® ROBOT F1 (C) 3X0,34	3X0,34	Colours		20 kg/km	
0029657	ÖLFLEX® ROBOT F1 (C) 4X0,34	4X0,34	Colours		28 kg/km	
0029658	ÖLFLEX® ROBOT F1 (C) 5X2X0,34	5X2X0,34	Colours		69 kg/km	
0029664	ÖLFLEX® ROBOT F1 (C) 4G1,5	4G1,5	Numbers		75.1 kg/km	
0029665	ÖLFLEX® ROBOT F1 (C) 4G2,5	4G2,5	Numbers		116 kg/km	
0029689	ÖLFLEX® ROBOT F1 (C) 12G1,5	12G1,5	Numbers		230 kg/km	
0029690	ÖLFLEX® ROBOT F1 (C) 18G1,5	18G1,5	Numbers		340 kg/km	
0029691	ÖLFLEX® ROBOT F1 (C) 4G1,5+(2X1)DP	4G1,5+(2X1)	Numbers		116 kg/km	
0029692	ÖLFLEX® ROBOT F1 (C) 4G2,5+(2X1)DP	4G2,5+(2X1)	Numbers		150 kg/km	