

## ÖLFLEX® ROBOT F1 ( C )

Shielded, abrasion- and oil-resistant PUR robot cable for high dynamic bending and torsion motions, UL/cUL AWM certified

ÖLFLEX® ROBOT F1 (C) - Screened power and control cable für bending and torsional load in harsh environmental conditions with UL/cUL AWM certification

### Info

Simultaneous bending and torsion

Torsion angle up to +/- 180 °/m

AWM certification for USA and Canada



Supplementary automation components from Lapp



Suitable for outdoor use



Cold-resistant



Mechanical resistance



Oil-resistant



Power chain



Interference signals



Torsion-resistant

Last Update (25.04.2024)

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Product Management [www.lappkabel.de](http://www.lappkabel.de)

You can find the current technical data in the corresponding data sheet.

PN 0456 / 02\_03.16

# ÖLFLEX® ROBOT F1 ( C )



UV-resistant

## Benefits

Allows much faster speed and accelerations which increases the economic efficiency of the machines

Increased durability under harsh conditions thanks to robust PUR outer sheath

Resistant to contact with many mineral oil-based lubricants, diluted acids, aqueous alkaline solutions and other chemical media

Wide temperature range for applications in harsh climatic environments

Certified for the USA and Canada for export-oriented machine, appliance and apparatus manufacturers

## Application range

Industrial machinery and machine tools

Automated handling equipment

Automotive industry

In power chains or moving machine parts

Inside of dresspacks of buckling arm robots and for use for gantry robots

## Product features

Abrasion and notch-resistant

Flame-retardant

High oil-resistance

Flexible at low temperatures

Low-adhesive surface

## Norm references / Approvals

UL AWM Style 20940

cUL AWM I/II A/B

UL File No. E213974

Designed for up to 10 million torsion cycles

For use in power chains: Please comply with assembly guideline Appendix T3

For travel distances up to 10 m

## Product Make-up

Extra-fine strands, 0.14 mm<sup>2</sup> - 0.5 mm<sup>2</sup> made of tinned copper wires, bare above

Core insulation: TPE

Cores (or core pairs) twisted in layers or bundles

Wrapping made of tinned copper wires for versions with individually screened pairs

Wrapping of PTFE tape

Spiral shield of tinned copper wires, version 12 G 1,5 and 18 G 1,5 with screen braiding

PUR outer sheath, colour anthracite

## Technical Data

Classification ETIM 5:

ETIM 5.0 Class-ID: EC000104

ETIM 5.0 Class-Description: Control cable

Classification ETIM 6:

ETIM 6.0 Class-ID: EC000104

ETIM 6.0 Class-Description: Control cable

Core identification code:

Up to 0.34 mm<sup>2</sup>: DIN 47100 cores

From 0.5 mm<sup>2</sup>: white cores with black numbers, cores of screened pair (2 x 1.0) are marked with no. 5 + 6

Conductor stranding:

Extra-fine wire

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## ÖLFLEX® ROBOT F1 ( C )

Torsion:	Torsion load max. $\pm 180^\circ/\text{m}$
Minimum bending radius:	Flexible use: 10 x outer diameter Fixed installation: 4 x outer diameter
Nominal voltage:	IEC: up to 0.34 mm <sup>2</sup> 250 Vss. 0.5 - 2.5 mm <sup>2</sup> U <sub>0</sub> /U 300/500 V UL/CSA: up to 1.5 mm <sup>2</sup> 600 V, from 2.5 mm <sup>2</sup> 1000 V
Test voltage:	Up to 0.34 mm <sup>2</sup> : 1500 V From 0.5 mm <sup>2</sup> : 2000 V
Protective conductor:	G = with GN-YE protective conductor X = without protective conductor
Temperature range:	Flexing: -40 °C to +80 °C Fixed installation: -50 °C to +80 °C

### Note

Unless specified otherwise, the shown product values are nominal values at room temperature. Detailed values (e.g. tolerances) are available upon request.

Copper price basis: EUR 150/100 kg. Refer to catalogue appendix T17 for the definition and calculation of copper-related surcharges.

Please find our standard lengths at: [www.lappkabel.de/en/cable-standardlengths](http://www.lappkabel.de/en/cable-standardlengths)

Packaging size: coil  $\leq 30$  kg or  $\leq 250$  m, otherwise drum

Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).

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

Prices are net prices without VAT and surcharges. Sale to business customers only.

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Article number	Number of cores and mm <sup>2</sup> per conductor	Outer diameter [mm]	Copper index (kg/km)	Weight (kg/km)
0029653	3 x 2 x 0,25	8.0	38	100
0029654	25 x 0,25	13.8	115	280
0029655	2 x 0,34	5.2	18	54
0029656	3 x 0,34	5.4	20	56
0029657	4 x 0,34	6.6	28	72
0029658	5 x 2 x 0,34	10.2	69	158
Numbered Cores				
0029689	12 G 1,5	15.4	230	380
0029690	18 G 1,5	18.5	340	550
0029664	4 G 1,5	8.8	75.1	120
0029665	4 G 2,5	10.3	116	200
0029691	4 G 1,5 + (2 x 1,0)	11.0	116	213
0029692	4 G 2,5 + (2 x 1,0)	12.0	150	270