


U.I. Lapp GmbH	<b>PRODUCT INFORMATION</b>	
	<b>ÖLFLEX® ROBOT F1 ( C )</b>	07.11.2014

Screened TPE-PUR robot cable for bending and torsion loads, approved  
Space-saving installation due to small cable diameters  
Hightech robot cable  
Protection against water and dirt  
Wear-resistant



Mechanical resistance



Oil-resistant



Power chain



Interference signals



Torsion-resistant



UV-resistant

### Info

Simultaneous bending and torsion  
AWM approvals for USA and Canada


### Application range

Plant engineering  
Multi-axis articulated robots  
Automated handling equipment  
In power chains or moving machine parts

### Product Make-up

Fine or extra-fine strands, 0.14 mm<sup>2</sup> - 0.5 mm<sup>2</sup>, made from tinned-copper wires, bare above.  
Core insulation: TPE  
Cores (or core pairs) twisted in layers or bundles  
PTFE tape wrapping  
Screening: wrapped with braided tinned-copper wires, or layers of tinned-copper wires. Refer to the respective data sheet for each article number.  
PUR outer sheath, black (RAL 9005)

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### Norm references / Approvals

UL AWM Style 20940 VW1

cUL AWM I/II A/B FT 1

For horizontal travel distances up to 100m

For use in power chains: Please comply with the assembly guidelines listed in Appendix T3

UL File No. E213974

### Product features

Abrasion and cut-resistant

Hydrolysis-resistant

Oil-resistant

Low-adhesive surface

Flame-retardant

### Remark

Unless specified otherwise, the shown product values are nominal values. 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 ≤ 30 kg or ≤ 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 are not to scale and do not represent detailed images of the respective products.

### Technical Data

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 printed numbers
Classification:	ETIM 5.0 Class-ID: EC000104 ETIM 5.0 Class-Description: Control cable
Conductor stranding:	Fine wire or extra-fine wire
Torsion:	Max. torsion load ± 180°/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> 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:	Cores: spark test 6 kV
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 Core insulation: capable of temporary overload to +120°C

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## ÖLFLEX® ROBOT F1 (C)

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Part number	Number of cores and mm <sup>2</sup> per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
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0029653	3 x 2 x 0,25	8,0	38,0	100
0029654	25 x 0,25	13,8	115,0	280
0029655	2 x 0,34	5,2	18,0	54
0029656	3 x 0,34	5,4	20,0	56
0029657	4 x 0,34	6,6	28,0	72
0029658	5 x 2 x 0,34	10,2	69,0	158
0029689	12 G 1,5	15,4	230,0	380
0029690	18 G 1,5	18,5	340,0	550
0029664	4 G 1,5	8,8	75,1	120
0029665	4 G 2,5	10,3	116,0	200
0029691	4 G 1,5 + (2 x 1,0)	11,0	116,0	213
0029692	4 G 2,5 + (2 x 1,0)	12,0	150,0	270