



ÖLFLEX® ROBOT F1 (C)

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

Info

- Simultaneous bending and torsion
- Torsion angle up to $\pm 180^\circ/\text{m}$
- AWM certification for USA and Canada



Benefits

- 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
- Copper shielding protects against electromagnetic interference
- 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 torsional motions
- 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, $0.14 \text{ mm}^2 - 0.5 \text{ mm}^2$ 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, black (similar RAL 9005)

Technical data

- Classification ETIM 5/6**
ETIM 5.0/6.0 Class-ID: EC000104
ETIM 5.0/6.0 Class-Description: Control cable
- Core identification code**
Up to 0.34 mm^2 : DIN 47100 cores
From 0.5 mm^2 : white cores with black numbers, cores of screened pair (2 x 1.0) are marked with no. 5 + 6
- Conductor stranding**
Extra-fine wire
- 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^2 250 Vss.
 $0.5 - 2.5 \text{ mm}^2$ U_0/U 300/500 V
UL/CSA: up to 1.5 mm^2 600 V, from 2.5 mm^2 1000 V
- Test voltage**
Up to 0.34 mm^2 : 1500 V
From 0.5 mm^2 : 2000 V
- Protective conductor**
G = with GN-YE protective conductor
X = without protective conductor
- Temperature range**
Flexing: -40°C to $+80^\circ\text{C}$
Fixed installation: -50°C to $+80^\circ\text{C}$

Article number	Number of cores and mm^2 per conductor	Outer diameter [mm]	Copper index (kg/km)	Weight (kg/km)
ÖLFLEX® ROBOT F1 (C)				
Core colours according to DIN 47100				
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

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

Packaging size: coil $\leq 30 \text{ kg}$ or $\leq 250 \text{ m}$, 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.

Accessories

- SILVYN® RILL PA 12 refer to page 848