# ÖLFLEX® ROBOT F1 ( C )

**Screened TPE-PUR robot cable for bending and torsion loads, approved**


**Info**
- **Simultaneous bending and torsion**
- **AWM approvals for USA and Canada**

## Benefits
- Space-saving installation due to small cable diameters
- Hightech robot cable
- Protection against water and dirt
- Wear-resistant

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

## Product features
- Abrasion and cut-resistant
- Hydrolysis-resistant
- Oil-resistant
- Low-adhesive surface
- Flame-retardant

## Norm references / Approvals
- UL appr AWM style 20940 VW1
  cUL appr AWM I/II A/B FT 1
- For travel distances up to 100 m (horizontal)
- For use in power chains: Please comply with the assembly guidelines listed in Appendix T3
- UL File Nr. E213974

## Product make-up
- Fine or extra-fine strands, 0.14 mm² - 0.5 mm², 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)

## Technical data

**Classification**
ETIM 5.0 Class-ID: EC000104
ETIM 5.0 Class-Description: Control cable

**Core identification code**
Up to 0.34 mm²: DIN 47100 cores
From 0.5 mm²: white cores with black printed numbers

**Specific insulation resistance**
> 20 GOhm x cm

**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 mm² 250 Vss.
0.5 - 2.5 mm² 300/500 V
UL/CSA up to 1.5 mm² 600 V, from 2.5 mm² 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

| Article number | Number of cores and mm² per conductor | Outer diameter (mm) | Copper index (kg/km) | Weight (kg/km) |
|---|---|---|---|---|
| 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 |

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. 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 ≤ 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.

## Accessories
- SILVYN® RILL PA 12 refer to page 790