Application

ÖLFLEX® ROBOT 900 P is a special cable for torsion and bending stresses. They can be used for the transmission of control and monitoring signals or as supply cables. They are also suitable for use in dry, damp or wet areas. They are suitable for outdoor use if the indicated temperature range is observed.
ÖLFLEX® ROBOT 900 P are increased resistant to oils and at room temperature largely resistant to acids and alkalis.
The outer sheath withstands high mechanical stresses, in particular abrasion and dragging. It is also cut proof and resists microbes and hydrolysis.
They are suitable for linear, automated movements, as well as torsional applications in robots and automated handling machines. The maximum tensile load is 15 N/mm² of conductor cross-section during installation and operation. Compulsory guidance is not permitted.
Application range:
Inside of dresspacks of buckling arm robots and for use for gantry robots, industrial machinery and machine tools, automated handling equipment, automotive industry, in power chains or moving machine parts

Design

Design	based on EN 50525-2-21 resp. VDE 0285-525-2-21
Conductor	fine resp. extra fine wire strands of bare copper, acc. to IEC 60228 resp. VDE 0295, class 5 resp. class 6
Insulation	TPE (Thermoplastic Elastomer)
Core identification code	with up to 0.34 mm²: acc. to DIN 47100 more than 0.5 mm²: acc. to. VDE 0293-1, with or without GN/YE protective conductor black cores with white numbers acc. to DIN EN 50334 resp. VDE 0293-334 Cores from screened pair (2x1): no. 1 and 2
Stranding	cores are stranded in layers version with additional pair: 2 cores twisted to a pair, PTFE foil wrapping, layer of tinned copper wires, sheath
Taping	PTFE foil wrapping
Outer sheath	Polyurethane compound TMPU in acc. to EN 50363-10-2 resp. VDE 0207-363-10-2, flame retardant colour: black, similar RAL 9005

Electrical properties at 20°C

Rated voltage	with up to 0.34 mm²: 48 V AC peak working voltage: 350 V (not for power applications) more than 0.5 mm²: U_0/ U: 300 / 500 V
Test voltage	with up to 0.34 mm²: 1500 V AC more than 0.5 mm²: 3000 V AC

Mechanical and thermal properties

Minimum bending radius	flexing: 15 x cable diameter fixed installation: 4 x cable diameter
Temperature range	flexing: -40 °C up to +80 °C max. conductor temp. fixed installation: - 50 °C up to +80 °C max. conductor temp.
Torsional stress	max. torsion angle: ± 360 °/m
Flammability	flame retardant acc. to IEC 60332-1-2 resp. VDE 0482-332-1-2
Oil resistance	acc. to EN 50363-10-2 resp. VDE 0207-363-10-2
Tests	acc. to IEC 60811, EN 50395, EN 50396
General requirements	with up to 0.34 mm²: These cables are conform to the EU-Directive 2011/65/EU (RoHS, Restriction of the use of certain hazardous substances). more than 0.5 mm²: These cables are conform to the EU-Directive 2014/35/EU (Low Voltage Directive)