Application

ÖLFLEX® FD 90 cables are high-flexible, sheathed cables for the European, North American and Canadian market. They are designed for flexible use as well as for fixed installation subject to medium mechanical load conditions. 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® FD 90 cables are increased resistant to oils and at room temperature largely resistant to acids and alkalis. They are suitable for linear, automated movements. The maximum tensile load is 15 N/mm^2 of conductor cross-section during installation and operation. Compulsory guidance is not permitted.

Application range: power chains or moving machine parts, for internal wiring of electric and electronic equipment in switch cabinets, this cable can substitute multi-core power cables where space requirements or minimum bending radii cause problems, specially designed for power circuits of servomotors driven by frequency converters, test systems in the automotive industry, vehicles and stationary fuel cell systems

USE acc. to UL: PVC sheathed cable for internal wiring or external interconnection of electronic equipment. Appliances where exposed to oil at a temperature not exceeding 80° C.
USE acc. to CSA: Cables for internal wiring or external interconnection with or without mechanical abuse.

Design

Design	according to UL AWM Style 10107 based on VDE 0250
Approvals	UL AWM Style 10107 (File No. E63634) ≤120 mm² CSA AWM I A/B, II A/B ≥150 mm² cUL AWM I A/B, II A/B
Conductor	extra fine wire strands of bare copper, acc. to IEC 60228 resp. VDE 0295, min. Class 6
Core insulation	PVC compound (UL/CSA 90°C rating)
Core identification	BK or GN/YE
Outer sheath	PVC compound (UL/CSA 90°C rating) colour: Black, similar RAL 9005

Electrical properties

Specific insulation resistance (20°C)	> 20 G Ω x cm	
Nominal voltage	IEC U_0 / U:	600 / 1000 V
	UL/CSA	600 V
Test voltage		4000 V AC

Mechanical and thermal properties

Min. bending radius	flexing:	up from 7.5 x cable diameter
	fixed installation:	3 x cable diameter
Bending cycles and power chain operation parameters	See Selection Table A2-1 in the appendix of our online catalogue For use in power chains: Please comply with assembly guideline Appendix T3	
Temperature range	flexing (VDE):	-5 °C up to +70 °C max. conductor temp.
	flexing (UL/CSA):	-5 °C up to +90 °C max. conductor temp.
	fixed installation(VDE):	-40 °C up to +80 °C max. conductor temp.
	fixed installation (UL/CSA):	up to +90 °C max. conductor temp.

Flammability	flame retardant in acc. with IEC 60332-1-2 resp. VDE 0482-332-1-2 UL: Vertical flame test VW-1, FT2 CSA: FT1
Oil resistance	acc. to EN 50363-4-1 resp. VDE 0207-363-4-1, TM5 UL: 80°C rating acc. to UL 758 CSA: CSA C22.2 No. 210-15
UV-resistance	acc. to EN 50525-1 (VDE 0285-525-1) cable with black sheath are suitable for permanent outdoor use.
Tests	acc. to IEC 60811 resp. VDE 0473-811, VDE 0472, EN 50395, EN 50396 UL 1581 and CSA C22.2
EU Directives	These cables are conform to the EU-Directives 2014/35/EU (Low Voltage Directive)