

## ÖLFLEX® SERVO FD 7DSL

DB 1023275

valid from: 01.12.2015

### Application

ÖLFLEX® SERVO FD 7DSL - the one cable solution for power and feedback circuits - are highly flexible and screened servo cables with an outer sheath of Polyurethane suitable for Europe and North-America. All of the motor's feedback signals are transmitted by just one control pair of the servo cable. An optionally additional control pair can be used to connect the electro-magnetic break. They are designed for use in high-dynamic applications in power chains as well as for fixed installation subject to medium mechanical load conditions. They are among others designed for use in dry, damp and wet conditions. Outdoor use: They may only be installed considering the indicated temperature range. The outer sheath is resistant to high mechanical load, particularly to abrasion and scouring, is cut resistant, microbe-proof and hydrolysis resistant. Usage on cable drums or pulleys or under tensile strain of more than 15 N/mm<sup>2</sup> conductor cross-section is not allowed.

Application range: Connecting cable between servo controller and motor, in power chains or moving machine parts

### Design

Design	according to UL AWM 758, style 21223, CSA C22.2 No. 210-11
Approvals	UL AWM: Style 21223 (80°C, 1000 V) cRU AWM I/II A/B, 80°C, 1000 V
Conductor	Extra fine wire strands of bare copper acc. to IEC 60228 resp. VDE 0295, Class 6 Signal pair: Tinned copper conductor (19-wires)
Core insulation	Polyolefine (based on PP)
Core identification	Power conductors: Black with white imprint U/L1/C/L+; V/L2; W/L3/D/L- and GN/YE Control pair: Black with white numbers 5, 6 Signal pair: White; Blue
Cable make-up	Power conductors Control pair (optionally) <ul style="list-style-type: none"> <li>- Polyester tape wrapping</li> <li>- Braid of tinned copper wires</li> </ul> Signal pair <ul style="list-style-type: none"> <li>- Polyester tape wrapping</li> <li>- Textile fleece tape</li> <li>- Stranded tinned drain wire + tinned copper braiding</li> <li>- Aluminium metallized textile tape</li> <li>- Double polyester tape wrapping</li> </ul> Stranding: <ul style="list-style-type: none"> <li>- Soft fleece tape</li> <li>- Braid of tinned copper wires</li> </ul>
Outer sheath	PUR, orange (similar RAL 2003)

### Electrical properties

Nominal voltage	IEC/VDE: Power and control cores: 0,6/1 kV; Signal pair: max. 300 V UL/CSA: Power and control cores: 1 kV; Signal pair: 300 V
Test voltage	Power and control cores: 4 kV Signal pair: 1 kV
Characteristic impedance	Signal pair: 100-120 Ω (1MHz)
Transfer impedance at 30 MHz	max. 250 mΩ/m

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**Mechanical and thermal properties**

Min. bending radius	flexing:	7,5 x cable diameter
	fixed installation:	5 x cable diameter
Cycles		5.000.000
Acceleration		max. 50 m/s <sup>2</sup>
Speed		5 m/s
Travel length		max. 20 m
Maximum length		100 m
Torsion		+/- 30°/m
Temperature range	flexing (VDE):	-40°C up to +90°C max. conductor temp.
	flexing (UL):	-40°C up to +80°C max. conductor temp.
	fixed installation (VDE):	-50°C up to +90°C max. conductor temp.
	fixed installation (UL):	-50°C up to +80°C max. conductor temp.
Flammability		flame retardant in acc. with IEC 60332-1-2 resp. VDE 0482-332-1-2 UL: VW-1, CSA: FT1
Oil resistance		acc. to EN 50363-10-2 resp. VDE 0207-363-10-2
MUD		MUD resistant acc. to IEC 61892-4 Annex D
UV resistance		acc. to EN ISO 4892-2-2006, method A (change of colour allowed)
Ozone resistance		acc. to EN 50396 resp. VDE 0473-396, method B
Halogen-free		acc. to VDE 0472 part 815
Tests		acc. to IEC 60811 resp. VDE 0473 part 811, VDE 0472, EN 50395, UL 1581
EC Directives		These cables are conform to the EC-Directives 2006/95/EC (Low Voltage Directive) and 2002/95/EC and 2011/65/EU (RoHS, Restriction of the use of certain hazardous substances).