Application

ÖLFLEX® SERVO FD 797 CP cables are high-flexible, screened, oil-resistant, halogen free, low capacitance servo motor cables designed for the European, North American and Canadian market. They are designed for flexible use and fixed installation under medium mechanical load conditions. They are also suitable for use in dry, damp or wet areas.
They are suitable for permanent outdoor use if the indicated temperature range is observed.
ÖLFLEX® SERVO FD 797 CP 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. The maximum tensile load is 15 N/mm² of conductor cross-section during installation and operation. Compulsory guidance is not permitted.
The screen is a protection against electrical interference, the data pairs are additionally screened.

Application range:
Automated connector assembly, connecting cable between servo controller and motor, in power chains or moving machine parts, for use in assembling- & pick-and –place machines, machine tools and transfer lines, for assembly lines, production lines in all kind of machines.

Use acc. to : Internal or external wiring.
Use acc. to : Internal or external interconnection with or without mechanical load conditions.

Design

Design	acc. to UL AWM Style 21209, UL 758, CSA 22.2 No. 210 based on: EN 50525-2-21
Certification	AWM Style 21209, UL 758 (File No. E63634) AWM I/II A/B, C22.2 No. 210 (File No. E63634)
Conductor	Extra fine wire strands of bare copper acc. to IEC 60228 resp. EN IEC 60228, Class 6
Core insulation	Insulation of PP based compound
Core identification	**power cores:** Black cores with white alphanumeric labelling U/L1/C/L+; V/L2; W/L3/D/L-; GN/YE ground conductor **control cores:** with 1 control pair (2x0.5) and (2x1): white; brown with 1 control pair (2x1.5): white; black with 2 control pairs: black cores with white numbers acc. to EN 50334 control pairs with different conductor cross section: 1 mm²: black cores with white numbers 5-6 1.5 mm²: black cores with white numbers 7-8 Triplet: black cores with white numbers 1-3
Pair shield/ triplet shield	1 control pair: braid of tinned copper wires, coverage = 85% (nominal value) 2 control pairs and triplet: Aluminium-laminated foil, tinned drain wire, braid of tinned copper wires, coverage = 85% (nominal value)
Core stranding	Cores stranded in layers 4 power conductors (optionally with 1 resp. 2 signal pair, resp. triplet) stranded together
Inner sheath	Bedding compound flame retardant, halogen-free colour: nature
Screen	Braid of tinned copper wires, coverage = 85% (nominal value)
Outer sheath	Special TPU-based compound, flame retardant, halogen free, oil resistant colour: orange, similar RAL 2003

Electrical properties

Nominal voltage	**power cores** EN: U_0/U: 600/1000V **control cores** EN: U_0/U: 600/1000V
Rated voltage	**power cores** UL/CSA: 1000V

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	control cores UL/CSA: 1000V
Test voltage	**power cores:** core/core; core/overall screen; core/pair screen: 4000 V AC **control cores:** core/core; core/pair screen: 4000 V AC pair screen/overall screen: 500 V AC
Surface transfer impedance	≤ 250 mΩ/m

Mechanical and thermal properties

Min. bending radius	flexible application: 7.5 x outer diameter fixed installation: 4 x outer 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 (EN): -40 °C up to +90 °C (max. conductor temp.) flexing (UL/CSA): up to +90 °C (max. conductor temp.) fixed installation (EN): -50 °C up to +90 °C (max. conductor temp.) fixed installation (UL/CSA): up to +90 °C (max. conductor temp.)
Flammability	acc. to IEC 60332-1-2 resp. EN 60332-1-2 UL: Vertical flame test VW-1 acc. to UL 1581, Section 1080 Cable flame test acc. to UL 1581, Section 1061 CSA: FT1 acc. to CSA C22.2 No. 2556 § 9.3
Oil resistance	EN 50363-10-2
MUD	acc. to IEC 60092-360, Annex C+D
UV resistance	acc. to EN 50618 EN 50620 EN ISO 4892-2-2013, method A (change of colour allowed)
Ozone resistance	acc. to EN 50396 met. B
Halogen-free	IEC 60754-1 resp. EN 60754-1

Tests	acc. to IEC 60811 resp. EN 60811, EN 50395, EN 50396, UL 1581and CSA C22.2 No. 210
EU Directives	These cables are conform to the EU Directive 2014/35/EU (Low Voltage Directive)
Environmental information	These cables meet the substance-specific requirements of the EU Directive 2011/65/EU (RoHS).

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