chanhvinh.com

0027950	DATA SHEET	LAPP
Valid from: 01.09.2023	ÖLFLEX® SERVO FD 796 CP	

Application

ÖLFLEX® SERVO FD 796 CP cables are high-flexible, screened, oil-resistant, halogen free, low capacitance servo motor cables with an outer sheath of Polyurethane for the European, North American and Canadian market.
They are designed for use in high-dynamic applications with acceleration up to 50 m/s² in power chains 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® SERVO FD 796 CP cables 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 especially suitable for increased requirements (Extended Line) in power chains and in permanently moved machine parts. 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 screening braid protects against interference from electrical fields, the data pairs resp. triplet are additionally screened.

Application range:
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 cULus: External interconnection of electronic equipment.
Use acc. to cULus: Internal or external interconnection with or without mechanical load conditions.

Design

Design	acc. to UL AWM Style 20234, UL 758, CSA 22.2 No. 210 based on EN 50525-2-21
Certification	cULus: AWM Style 20234, UL 758 (File No. E63634) AWM I/II A/B (File No. E63634) ◁ VDE-REG 8591 ▷ EN 13501-6 and EN 50575 Classification of fire behaviour (article/dimension range see www.lappkabel.com/cpr)
Conductor	extra fine wire strands of bare copper acc. to IEC 60228 resp. EN 60228, Class 6
Core insulation	Polypropylen- 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: white, black white, brown for following art.: 0027925, 0027926, 0027927, 0027981, 0027982, 0027983, 0027984 with 2 control pairs: black cores with white numbers 5-8 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 acc. to EN 50334 Triplet + pair: triplet: black cores with white numbers 1-3 acc. to EN 50334 pair: black cores with white numbers 4-5 acc. to EN 50334 Star quad: black, white, red, yellow

We reserve all rights according to DIN ISO 16016.

chanhvinh.com

Pair /triplet / quad shield	with 1 control pair: braid of tinned copper wires, coverage = 85% (nominal value) aluminium-laminated foil, drain wire, braid of tinned copper wires, coverage = 85% (nominal value) for art. 0027925 - 0027927 and 0027981 - 0027984 with 2 control pairs: aluminium-laminated foil, drain wire, braid of tinned copper wires, coverage = 85% (nominal value) with triplet and triplet + pair: aluminium-laminated foil, drain wire, braid of tinned copper wires, coverage = 85% (nominal value) with star quad: braid of tinned copper wires, coverage = 85% (nominal value)
Stranding	4 power cores (optionally with 1 resp. 2 control pairs, triplet, star quad) stranded together with filler cords
Screen	braid of tinned copper wires, coverage = 85% (nominal value)
Outer sheath	TPU, Polyurethane-compound TMPU acc. to EN 50363-10-2 UL 758, CSA AWM C22.2 No.210 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 **control cores** UL/CSA: 1000V
Test voltage	core / core: 4000 V AC core / screen: 4000 V AC bundle screen / overal screen: 500 V AC
Transfer impedance at 30 MHz	max. 250 mΩ/m

Mechanical and thermal properties

Min. bending radius	flexing: up from 7.5 x outer diameter (up to 16 mm²) up from 10 x outer diameter (from 25 mm²) 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 +80 °C (max. conductor temp.) fixed installation (EN): -50 °C up to +90 °C (max. conductor temp.) fixed installation (UL/CSA): up to +80 °C (max. conductor temp.)
Flammability	flame retardant acc. to IEC 60332-1-2 resp. EN 60332-1-2 UL: Vertical flame test VW-1 acc. to UL 1581 § 1080 CSA: FT1 acc. to CSA C22.2 No. 2556, § 9.3
Halogen-free	acc. to IEC 60754-1 resp. EN 60754-1

We reserve all rights according to DIN ISO 16016.

chanhvinh.com

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 method B
Oil resistance	acc. to EN 50363-10-2
MUD resistance	acc. to IEC 60092-360, Annex C+D
Tests	acc. to IEC 60811, EN 50395, EN 50396, UL 1581and CSA C22.2 No 210
General requirements	These cables are conform to the EU-Directive 2014/35/EU (Low Voltage Directive). These cables (see www.lappkabel.com/cpr) are classified in accordance with the EU-Regulation no. 305/2011 (CPR).
Environmental information	These cables meet the substance-specific requirements of the EU Directive 2011/65/EU (RoHS).

We reserve all rights according to DIN ISO 16016.