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| 0025319 | DATA SHEET |  |
| Valid from: 01.09.2023 | ÖLFLEX® SERVO FD 796 P | |

Application

ÖLFLEX® SERVO FD 796 P cables are high-flexible, 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 P 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 control pairs are shielded.


Application range:

Power drive systems in automation engineering, 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.

Use acc. to : External interconnection of electronic equipment.

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

Design

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| Design | acc. to UL AWM Style 20234, UL 758, CSA 22.2 No.210 based on EN 50525-2-21 |
| Approvals |  : AWM Style 20234, UL 758 (File No. E63634) AWM I/II A/B (File No. E63634) ◁ VDE-REG 8591 ▷ (≥ 1,5 mm ²) 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 with 2 control pairs: 0.34 mm ² : WH; BN; GN; YE, ≥ 0.75mm ² : black cores with white numbers 5-8 acc. to EN 50334 control pairs with different conductor cross-section: 1 mm ² : black cores with white numbers 5-6 1.5 mm ² : black cores with white numbers 7-8 |
| Pair shield | with 1 control pair: braid of tinned copper wires, coverage = 85% (nominal value) with 2 control pairs: aluminium-laminated foil, drain wire, braid of tinned copper wires, coverage = 85% (nominal value) |
| Cable make-up | 4 power conductors (optionally with 1 resp. 2 control pairs) stranded together with filler cords |
| Outer sheath | TPU, Polyurethane-compound TPU acc. to EN 50363-10-2 UL AWM 758, CSA AWM C22.2 No.210 colour: Black, similar RAL 9005 |

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Electrical properties

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| 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 |

Mechanical and thermal properties

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| Min. bending radius | flexing: up from 7.5 x cable diameter (up to 16 mm ²) fixed installation: 4 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 (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 |
| UV-resistance | acc. to EN 50618 EN 50620 EN ISO 4892-2-2013, method A (change of colour allowed) |
| Ozon resistance | acc. to EN 50396, met. 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 1581 and CSA C22.2 No 210 |
| General requirements | 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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