

1023950	<b>DATA SHEET</b>	 <b>LAPP</b>
Valid from: 2025-08-27	<b>ÖLFLEX® SERVO zeroCM</b>	

## Application

ÖLFLEX® SERVO zeroCM cables are screened, oil-resistant, low capacitance servo motor cables with an outer sheath of PVC for the European, North American and Canadian market.

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 zeroCM cables are increased resistant to oils and at room temperature largely resistant to acids and alkalis.

They are suitable for occasional, non-automated movements. The maximum tensile load is 15 N/mm<sup>2</sup> of conductor cross-section during installation and operation. Compulsory guidance is not permitted.

The zeroCM®-Technology is based on a special stranding-concept, which eliminates magnetic coupling and reduces capacitance coupling to its minimum. By using this cable, low- and high-frequency leakage currents will be proven reduced at the location of the frequency drive but also in the system surroundings.

Cable-charging-currents which occur when a cable is driven by power-electronics are reduced as well due to optimized capacitances. This results often in better EMI-values emitted by the related active component; this usually allows the use of higher cable-length. The zeroCM®-technology provides full electro-magnetically symmetry of the cable, this keeps the ground-potential clean, without any disturbances even by high load or higher cable length.

The earthing concept is composed of the defined cross-section of the protective conductor and the braided shield (see table).

### Application range:

The intended use of these cables is the connecting between frequency converter and motor, connecting between servo controller and motor, mechanical and plant engineering and construction, machine tools

Use acc. to : External interconnection or internal wiring of electronic equipment.

Use acc. to : External interconnection of electronic equipment with or without mechanical load conditions.

## Design

Design	acc. to UL AWM Style 21179, UL 758, CSA 22.2 No. 210-15 based on EN 50525-2-51
Certification	 AWM Style 21179, UL 758 (File No. E63634) AWM I A/B II A/B (File No. E63634) EN 13501-6 and EN 50575 Classification of fire behaviour (article/dimension range see <a href="http://www.lappkabel.com/cpr">www.lappkabel.com/cpr</a> )
Conductor	fine wire strands of bare copper acc. to IEC 60228 resp. EN IEC 60228, Class 5
Core insulation	Polypropylene based compound
Core identification	Black cores with white alphanumeric labelling U/L1/C/L+; V/L2; W/L3/D/L-; GN/YE ground conductor
Cable assembly	Special stranding Foil wrapping
Screen	aluminium laminated foil braid of tinned copper wires
Outer sheath	PVC (UL/CSA 90°Rating) colour: black similar RAL 9005

AbN  
automation

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## Electrical properties at 20 °C

Nominal voltage	IEC: U <sub>0</sub> / U: 600 / 1000 V AC
Rated voltage	UL/CSA: 1000V
Test voltage	core / core: 4000 V AC core / screen: 4000 V AC
Transfer impedance at 30 MHz	max. 250 mΩ/m

## Mechanical and thermal properties

Min. bending radius	occasional flexing: 15 x outer diameter fixed installation: 6 x outer diameter
Temperature range	occasional flexing (IEC): -5 °C up to +70 °C (max. conductor temp.) occasional flexing (UL/CSA): up to +90 °C (max. conductor temp.) fixed installation (IEC): -40 °C up to +80 °C (max. conductor temp.) fixed installation (UL/CSA): up to +90 °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, Section 1080 CSA: FT1 acc. to CSA C22.2 No. 2556 § 9.3
UV-resistance	Acc. to EN 50525-1 cables with black sheath are suitable for a permanent outdoor use (change of colour allowed).
Oil resistance	acc. to EN 50363-4-2, TM5 UL: 80 °C rating acc. to UL 758
Tests	acc. to IEC 60811, EN 50395, EN 50396, UL 1581 and CSA C22.2
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).

Article No.	Dimension	Braid cross section [mm <sup>2</sup> ]
1023950	3x1.5+1G1	2.5
1023951	3x2.5+1G1.5	4
1023952	3x4+1G2.5	4
1023953	3x6+1G4	6
1023954	3x10+1G6	6
1023955	3x16+1G10	10

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