

## ÖLFLEX® SERVO 3D 7DSL

Low capacitive hybrid servo cable with PUR outer sheath for three-dimensional robotic application - certified

ÖLFLEX® SERVO 3D 7DSL - hybrid cable for three-dimensionally moved robotic applications, UL/cUL AWM.

### Info

One cable solution for servo drives

Suitable for Hiperface DSL® and SCS open link interfaces

3D - Simultaneous bending and torsion



Supplementary automation components from Lapp



Suitable for outdoor use



Cold-resistant



Mechanical resistance



Oil-resistant



Power chain



Interference signals



Torsion-resistant

Last Update (24.04.2024)

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Product Management [www.lappkabel.de](http://www.lappkabel.de)

You can find the current technical data in the corresponding data sheet.

PN 0456 / 02\_03.16

# ÖLFLEX® SERVO 3D 7DSL



UV-resistant

## Benefits

Allows much faster speed and accelerations which increases the economic efficiency of the machines

Only one connection line between drive and motor-feedback system. Instead of the encoder cable a specific integrated data pair takes over the signalling.

Less cables and reduced connection costs

Space and weight savings thanks to hybrid cable design

Increased durability under harsh conditions thanks to robust PUR outer sheath

Resistant to contact with many mineral oil-based lubricants, diluted acids, aqueous alkaline solutions and other chemical media

## Application range

Connecting cable between servo controller and motor

In industrial robots, moving machine parts or drag chains

Automated handling equipment

Particularly in wet areas of machine tools and transfer lines

Inside of dresspacks of buckling arm robots and for use for gantry robots

For indoor and outdoor use

## Product features

High oil-resistance

Abrasion and notch-resistant

Flammability:

UL/CSA: VW-1, FT1

IEC/EN: 60332-1-2

Flexible at low temperatures

Low-capacitance design

## Norm references / Approvals

UL AWM Style 21223

cRU AWM I/II A/B FT1

UL File No. E63634

Designed for up to 5 million torsion cycles

For use in power chains: Please comply with assembly guideline Appendix T3

## Product Make-up

Extra-fine-wire, bare copper conductor (power cores and control pair) and 19-wire, tinned copper conductor (data pair)

Core insulation: Polypropylene (PP) respectively fluorinated ethylene propylene (FEP)

Power cores with screened control pair and data pair twisted together

Special tape wrapping

Spiral shield made of tinned copper wires

Wrapping of PTFE tape

PUR outer sheath, black (similar RAL 9005)

## Technical Data

Classification ETIM 5:

ETIM 5.0 Class-ID: EC000104

ETIM 5.0 Class-Description: Control cable

Classification ETIM 6:

ETIM 6.0 Class-ID: EC000104

ETIM 6.0 Class-Description: Control cable

Core identification code:

Power cores: black with marking U/L1/C/L+; V/L2; W/L3/D/L-;

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## ÖLFLEX® SERVO 3D 7DSL

	GN/YE protective conductor Data pair: white, blue Control pair: black, white
Conductor stranding:	Extra-fine wire according to VDE 0295, class 6/IEC 60228 class 6 DSL data pair: 19-wired
Torsion:	Torsion load max. $\pm 180^\circ/\text{m}$
Minimum bending radius:	Moved: 10 x outer diameter Fixed installation: 5 x outer diameter
Nominal voltage:	Power and control cores: IEC: U0/U: 600/1000 V UL: 600 V Data pair UL: 600 V
Test voltage:	Power and control: 4 kV Data pair: 1 kV
Protective conductor:	G = with GN-YE protective conductor
Temperature range:	Flexing: $-40^\circ\text{C}$ to $+80^\circ\text{C}$ Fixed installation: $-50^\circ\text{C}$ to $+80^\circ\text{C}$

### Note

Unless specified otherwise, the shown product values are nominal values at room temperature. Detailed values (e.g. tolerances) are available upon request.

Please find our standard lengths at: [www.lappkabel.de/en/cable-standardlengths](http://www.lappkabel.de/en/cable-standardlengths)

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Prices are net prices without VAT and surcharges. Sale to business customers only.

**ÖLFLEX® SERVO 3D 7DSL**

Article number	Number of cores and mm <sup>2</sup> per conductor	Outer diameter [mm]	Copper index (kg/km)	Weight (kg/km)
1023351	4 G 0,5 + (2 x 0,25) + (2 x 26AWG)	9.4	70	130
1023352	4 G 1,5 + (2 x 1,0) + (2 x 22AWG)	13.3	152	276
1023353	4 G 2,5 + (2 x 1,0) + (2 x 22AWG)	14.4	195	326

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