

1023211	DATA SHEET	
Valid from: 22.08.2018	ÖLFLEX® CHAIN 896 P	

Application

ÖLFLEX® SERVO FD 896 P cables are high-flexible, oil-resistant, halogen free, low capacitance control cables with an outer sheath of Polyurethane for the European, North American and Canadian market.

They are among others designed for use in dry, damp and wet conditions. Outdoor use: They may only be installed considering the indicated temperature range.

ÖLFLEX® SERVO FD 896 P cables are increased oil resistant and at room temperature widely resistant to acids and caustic solutions. The outer sheath is resistant to high mechanical load, particularly to abrasion and scouring, is cut resistant, microbe-proof and hydrolysis resistant. 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.

Application range:

Applications in automation engineering, power circuits in industrial machines, in power chains or moving machine parts, for use in assembling & pick-and-place machinery, particularly in wet areas of machine tools and transfer lines.

Use acc. to UL: PUR sheathed cable for external interconnection of electronic equipment.

Use acc. to cRUus: PUR sheathed cable for external interconnection of electronic equipment, with or without mechanical load conditions.

Use acc. to CSA: PUR sheathed cable for external interconnection without mechanical load conditions.

Design

Design	according to UL AWM Style 20234 and based on EN 50525-2-21 resp. VDE 0285-2-21
Approvals	UL AWM 758, Style 20234 (File No. E63634) cRUus AWM I A/B II A/B (File No. E63634) CSA AWM I/II A ◁ VDE-REG 8661 ▷ (≥ 1.5 mm ²)
Conductor	extra fine wire strands of bare copper acc. to IEC 60228 resp. VDE 0295, Class 6
Core insulation	Polypropylen- based compound
Core identification	acc. to VDE 0293-1, with or without GN/YE ground conductor black cores with white numbers acc. to DIN EN 50334 resp. VDE 0293 part 334
Outer sheath	Polyurethane-compound TPU acc. to EN 50363-10-2 resp. VDE 0207-363-10-2 UL AWM 758, CSA AWM C22.2 No.210-15 colour: Black, similar RAL 9005

Electrical properties

Nominal voltage	VDE U ₀ / U:	600/1000 V
	UL/CSA:	1000 V
Test voltage	core / core:	4000 V AC

Mechanical and thermal properties

Min. bending radius	flexing ≤ 16 mm ² :	up from 7.5 x cable diameter
	flexing ≥ 25 mm ² :	up from 10 x cable diameter
	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	

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Temperature range	flexing (VDE): -40 °C up to +90 °C max. conductor temp. flexing (UL/CSA): up to +80 °C max. conductor temp. fixed installation (VDE): -50 °C up to +90 °C max. conductor temp. fixed installation(UL/CSA): up to +80 °C max. conductor temp.
Flammability	flame retardant in acc. with IEC 60332-1-2 resp. VDE 0482-332-1-2 UL: Vertical flame test VW-1 CSA: FT1
Halogen-free	acc. to VDE 0472 part 815
UV-resistance	acc. to EN 50525-1 (VDE 0285-525-1) cables with black sheath are suitable for permanent outdoor use. acc. to EN 50618 resp. VDE 0283-618 acc. to EN 50620 resp. VDE 0285-620 acc. to EN ISO 4892-2, method A (change of colour allowed)
Ozone resistance	acc. to EN 50396 resp. VDE 0473-396, method B
Oil resistance	acc. to EN 50363-10-2 resp. VDE 0207-363-10-2
MUD resistance	MUD resistant acc. to IEC 61892-4 Annex D
Tests	acc. to IEC 60811 resp. VDE 0473 part 811, VDE 0472, 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)

Dynamic performance

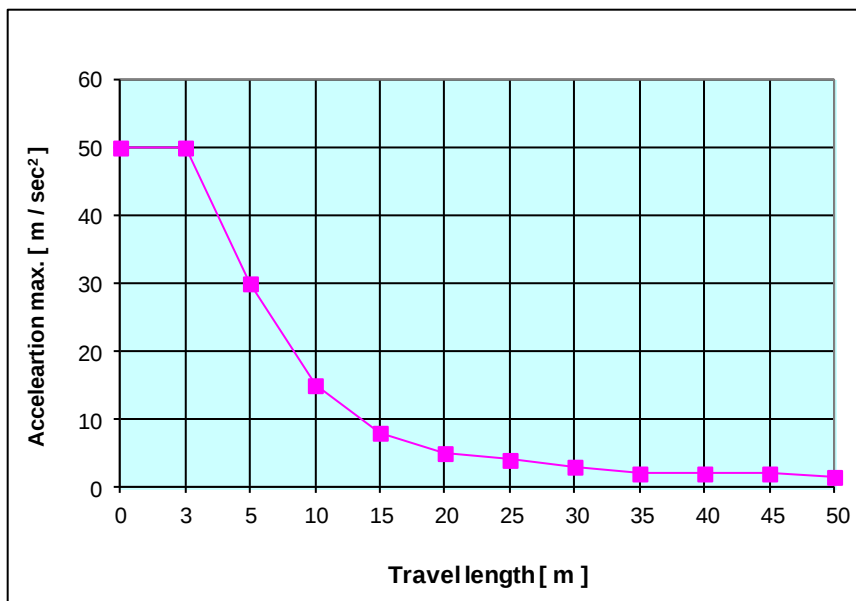
Pulling force (Dynamic):	≤ 20 N/mm ²
Pulling force (Static):	≤ 50 N/mm ²
Max. Acceleration:	see Table A
Max. Speed (sliding):	5 m/s resp. 300 m/min
Max. Length (horizontal):	see Table A (typically 50 m, max. 100 m)
Bending cycles and power chain operation parameters	See Selection Table A2-1 in the appendix of our online catalogue For use in power chains: Please comply with assembly guideline Appendix T3
Max. Torsion load:	+/- 30° /m

Please refer to the assembly guidelines listed in Appendix T3 in our catalogue.

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Table A $\leq 16 \text{ mm}^2$



Travel length	Acceleration
[m]	[m / sec ²]
0	50
3	50
5	30
10	15
15	8
20	5
25	4
30	3
35	2
40	2
45	2
50	1.5
100	1.0