

1062940	DATA SHEET	
valid from: 14.04.2025	ÖLFLEX® CHAIN 809 SC CY	

Application

ÖLFLEX® CHAIN 809 SC CY are screened high-flexible PVC single-core cables designed for the European, North American and Canadian market, for flexible use and fixed installation under light 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. They are largely resistant to acids, alkalis and certain oils at room temperature. They are especially suitable for basic requirements (Basic 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.

Application range:

Power chains or moving machine parts, for wiring of electric and electronic equipment in switch cabinets, specially designed for power circuits of servo motors driven by frequency converters, test systems in the automotive industry, vehicles and stationary fuel cell systems. This cable is suitable for torsion application in wind turbines (WTG). The torsional load is limited to applications, as they typically occur in the loop of a wind turbine.

USE acc. to : Internal wiring or external interconnection of electronic equipment.

USE acc. to : Cables for internal or external interconnection with or without mechanical abuse.

Design

Design	acc. to UL 758 AWM Style 10107, CSA C22.2 No. 210 based on EN 50525-1
Certification	 AWM Style 10107 (File No. E63634) AWM I/II A/B (File No. E63634)
Conductor	fine wire strands of bare copper, acc. to IEC 60228 resp. EN IEC 60228, Class 5
Insulation	PVC compound (UL/CSA 90 °C rating)
Core identification code	black
Screen	braid of tinned copper wires, coverage = 85 % (nominal value)
Outer sheath	PVC compound (UL/CSA 90 °C rating) colour: black, similar RAL 9005

Electrical properties at 20 °C

Transfer impedance	max. 250 mΩ/m (at 30 MHz)
Nominal voltage	EN: U ₀ /U: 600/1000 V
Rated voltage	UL/CSA: 600 V
Test voltage	4000 V AC

Mechanical and thermal properties

Minimum bending radius	flexing: up from 10 x outer diameter fixed installation: 4 x outer diameter
Temperature range	flexing (EN): 0 °C up to +70 °C max. conductor temperature flexing (UL/CSA): 0 °C up to +90 °C max. conductor temperature fixed installation (EN): -40 °C up to +80 °C max. conductor temperature fixed installation(UL/CSA): up to +90 °C max. conductor temperature
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
Torsional stress	Torsion movement in wind turbine generators TW-0 (5000 cycles at ≥ +5 °C) TW-1 (2000 cycles at ≥ -20 °C) ± 150 °/m at 1 revolution per minute
Flammability	flame retardant acc. to IEC 60332-1-2 resp. EN 60332-1-2 UL VW-1 acc. to UL 1581 § 1080 UL FT2 acc. to UL 1581 § 1100 CSA FT1 acc. to CSA C22.2 No. 2256 § 9.3

AbN
automation

Creator: ALTE / PDC	Document: DB1062940EN	Page 1 of 2
Released: HESC / PDC	Version: 05	

1062940	DATA SHEET	
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UV resistance	acc. to EN 50525-1 cables with black outer sheath are suitable for permanent outdoor use. acc. to EN 50618 acc. to EN 50620 acc. to EN ISO 4892-2-2013, method A (change of colour allowed)
Oil resistance	TM54 acc. to EN 50290-2-22
Tests	acc. to IEC 60811 resp. EN 60811, EN 50395, EN 50396 UL 1581 und CSA C22.2 No. 210
General requirements	These cables are conform to the EU-Directive 2014/35/EU (Low Voltage Directive) A part of these cables (see www.lappkabel.com/cpr) are classified acc. to the EU-Regulation no. 305/2011 (CPR)
Environmental information	These cables meet the substance-specific requirements of the EU Directive 2011/65/EU (RoHS).

Creator: ALTE / PDC	Document: DB1062940EN	Page 2 of 2
Released: HESC / PDC	Version: 05	