| 1062940 | DATA SHEET | LAPP |
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| 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

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| Design | acc. to UL 758 AWM Style 10107, CSA C22.2 No. 210<br>based on EN 50525-1 |
| Certification | AWM Style 10107 (File No. E63634)<br>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)<br>colour: black, similar RAL 9005 |

## Electrical properties at 20 °C

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| 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

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| Minimum bending radius | flexing: up from 10 x outer diameter<br>fixed installation: 4 x outer diameter |
| Temperature range | flexing (EN): 0 °C up to +70 °C max. conductor temperature<br>flexing (UL/CSA): 0 °C up to +90 °C max. conductor temperature<br>fixed installation (EN): -40 °C up to +80 °C max. conductor temperature<br>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<br>For use in power chains: Please comply with assembly guideline Appendix T3 |
| Torsional stress | Torsion movement in wind turbine generators<br>TW-0 (5000 cycles at ≥ +5 °C)<br>TW-1 (2000 cycles at ≥ -20 °C)<br>± 150 °/m at 1 revolution per minute |
| Flammability | flame retardant acc. to IEC 60332-1-2 resp. EN 60332-1-2<br>UL VW-1 acc. to UL 1581 § 1080<br>UL FT2 acc. to UL 1581 § 1100<br>CSA FT1 acc. to CSA C22.2 No. 2256 § 9.3 |

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| UV resistance | acc. to EN 50525-1 cables with black outer sheath are suitable for permanent outdoor use.<br>acc. to EN 50618<br>acc. to EN 50620<br>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<br>UL 1581 und CSA C22.2 No. 210 |
| **General requirements** | These cables are conform to the EU-Directive 2014/35/EU (Low Voltage Directive)<br><br>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). |