

1026751

**DATA SHEET**valid from:  
24.05.2024**ÖLFLEX® CHAIN 809 CY****LAPP****Application**

ÖLFLEX® CHAIN 809 CY cables are high-flexible PVC power and control cables designed for the European, North American and Canadian market, for flexible use and fixed installation under light or medium mechanical load conditions.

They are among others designed for use in dry, damp or wet areas.

If using outdoors, observe the indicated temperature range and use with UV protection. 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/mm<sup>2</sup> 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, measuring, control and regulation circuits, wiring of machines, tools, devices, appliances and control cabinets. 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 : External interconnection or internal wiring 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 20886, CSA C22.2 No. 210<br>based on EN 50525-2-51   |
| Certification            | AWM Style 20886 (File No. E63634)<br>AWM I/II A/B (File No. E63634)<br>EN 13501-6 and EN 50575<br>Classification of fire behaviour<br>(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 60228, Class 5   |
| Insulation               | PVC compound (UL/CSA 80 °C rating)  |
| Core identification code | acc. to VDE 0293-1, with or without GN/YE ground conductor<br>black cores with white numbers acc. to EN 50334   |
| Wrapping                 | non-woven wrapping  |
| Screen                   | braid of tinned copper wires, coverage = 85 % (nominal value)   |
| Outer sheath             | PVC compound (UL/CSA 80 °C rating)<br>colour: grey, similar RAL 7001  |

**Electrical properties at 20 °C**

|                    |  |
|--------------------|--|
| Transfer impedance | max. 250 mΩ/m (at 30 MHz)                      |
| Nominal voltage    | EN: U <sub>0</sub> /U: 300/500 V               |
| Rated voltage      | UL/CSA: 1000 V                                 |
| Test voltage       | core/core: 4000 V AC<br>core/screen: 3000 V AC |

**Mechanical and thermal properties**

|   |   |
|---|---|
| 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 +80 °C max. conductor temperature<br>fixed installation (EN): -40 °C up to +80 °C max. conductor temperature<br>fixed installation (UL/CSA): up to +80 °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 $\geq +5$ °C)<br>TW-1 (2000 cycles at $\geq -20$ °C)<br>$\pm 150$ °/m at 1 revolution per minute  |

**AbN**  
automation

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LAPP

|                           |  |
|---------------------------|--|
| Flammability              | flame retardant acc. to IEC 60332-1-2 resp. EN 60332-1-2<br>UL Cable Flame Test acc. to UL 1581 §1061<br>UL VW-1 acc. to UL 1581 § 1080<br>CSA FT1 acc. to CSA C22.2 No. 2556, § 9.3   |
| 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)  |
| Environmental information | A part of these cables (see <a href="http://www.lappkabel.com/cpr">www.lappkabel.com/cpr</a> ) are classified acc. to the EU-Regulation no. 305/2011 (CPR)<br>These cables meet the substance-specific requirements of the EU Directive 2011/65/EU (RoHS). |