## Application

ÖLFLEX® CHAIN 809 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 also suitable 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. 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$^2$ of conductor cross-section during installation and operation. Compulsory guidance is not permitted.

Application range:
Power chains or moving machine parts, measuring, control and regulation circuits, wiring of machines, tools, devices, appliances and control cabinets.
USE acc. to UL: PVC sheathed cable for external interconnection or internal wiring of electronic equipment.
USE acc. to cRU: Cables for internal wiring or external interconnection with or without mechanical abuse.

## Design

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|---|---|
| Design | acc. to UL AWM Style 20886, CSA C22.2 No. 210-15 and<br>based on EN 50525-2-51 resp. VDE 0285-525-2-51 |
| Approvals | UL AWM Style 20886 (File No. E63634)<br>cRU AWM I A/B, II A/B (File No. E63634) |
| Conductor | fine wire strands of bare copper acc. to IEC 60228 resp. VDE 0295, Class 5 |
| Core insulation | PVC compound (UL/CSA 80° C rating) |
| Core identification | acc. to VDE 0293-1, with or without GN/YE ground conductor<br>black cores with white numbers acc. to DIN EN 50334 resp. VDE 0293-334 |
| Outer sheath | PVC compound (UL/CSA 80° C rating)<br>colour: Grey, similar RAL 7001 |

## Electrical properties

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| Nominal voltage | $U_0$ / U: | 300/500 V |
| | UL/CSA: | 1000 V |
| Test voltage | core / core: | 4000 V AC |

## Mechanical and thermal properties

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|---|---|---|
| Min. bending radius | flexing up to 3m travel distance (horizontal, self supporting): | |
| | | up from10 x cable diameter |
| | flexing up to 10m travel distance (horizontal, sliding): | |
| | | up from 12 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<br>For use in power chains: Please comply with assembly guideline Appendix T3 | |
| Temperature range | flexing (VDE): | 0 °C up to +70 °C max. conductor temp. |
| | flexing (UL/CSA): | 0 °C up to +80 °C max. conductor temp. |
| | fixed installation (VDE): | -40 °C up to +70 °C max. conductor temp. |
| | fixed installation(UL/CSA): | up to +80 °C max. conductor temp. |

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| Flammability | flame retardant in acc. to IEC 60332-1-2 resp. VDE 0482-332-1-2<br>UL: Vertical flame test VW-1;<br>CSA: FT1 |
| Oil resistance | TM54 acc. to DIN EN 50290-2-22 |
| Tests | acc. to IEC 60811 resp. VDE 0473 part 811, EN 50395, EN 50396<br>UL 1581 und CSA C22.2 |
| EU Directives | These cables are conform to the EC-Directives 2014/35/EU (Low Voltage Directive) |