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| 1027900                   | <b>DATA SHEET</b>           |  |
| valid from:<br>27.01.2020 | <b>ÖLFLEX® CHAIN 819 CP</b> |   |

## Application

ÖLFLEX® CHAIN 819 CP cables are high flexible control cables for power chains for the European, Northern American and Canadian market, for flexible use and fixed installation under light to medium mechanical load conditions.

ÖLFLEX® CHAIN 819 CP cables are increased resistant to oils and at room temperature largely resistant to acids and alkalis.

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.

USE according to UL: PUR sheathed cables for internal wiring of electronic equipment and appliances.

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

## Design

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| Design                   | acc. to UL AWM Style 21576, CSA C22.2 No. 210-15<br>based on EN 50525-2-21 resp. VDE 0285-525-2-21 and<br>EN 50525-2-51 resp. VDE 0285-525-2-51 |
| Certification            | UL AWM Style 21576 (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   |
| 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 DIN EN 50334 resp. VDE 0293-334            |
| Taping                   | soft fleece tape  |
| Screen                   | braid of tinned copper wires, coverage = 85% (nominal value)  |
| Outer sheath             | LAPP PU-Special Blend<br>Colour: black, similar RAL 9005  |


## Electrical properties at 20°C

|                             |  |
|-----------------------------|--|
| Specific volume resistivity | > 20 GΩ x cm                                       |
| Transfer impedance          | max. 250 mΩ/m (at 30 MHz)                          |
| Nominal voltage             | U <sub>0</sub> / U: 300 / 500 V<br>UL/CSA: 1000 V  |
| Test voltage                | core / core: 4000 V AC<br>core / screen: 3000 V AC |

## Mechanical and thermal properties

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| Minimum bending radius                              | flexing: up from 10 x cable diameter<br>fixed installation: 4 x cable diameter  |
| Temperature range                                   | flexing: VDE: -5°C up to +70°C max. conductor temp.<br>UL: -5°C up to +80°C max. conductor temp.<br>fixed installation: VDE: -40°C up to +80°C max. conductor temp.<br>UL: up to +80°C max. conductor temp. |
| 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                                    | 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 retardand acc. to IEC 60332-1-2 resp. VDE 0482-332-1-2<br>UL: horizontal flame<br>CSA: FT2  |
| UV resistance                                       | acc. to EN 50620 (VDE 0285-620)<br>EN ISO 4892-2-2013, method A (change of colour allowed)  |
| Oil resistance                                      | acc. to EN 50363-4-1 resp. VDE 0207-363-4-1, TM5  |
| Tests   | acc. to IEC 60811 resp. VDE 0473 part 811, EN 50395, EN 50396, UL 1581 and CSA C22.2  |
| General requirements                                | These cables are conform to the EU-Directive 2014/35/EU (Low Voltage Directive)   |

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Environmental information

These cables meet the substance-specific requirements of the EU Directive 2011/65/EU (RoHS).

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