| 1321852 | DATA SHEET | LAPP |
|---|---|---|
| valid from: 04.08.2025 | ÖLFLEX® 409 CP | |

## Application

ÖLFLEX® 409 CP cables are screened control cables for the European and North American market for occasional flexible use and fixed installation subject 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.
ÖLFLEX® 409 CP are increased resistant to oils and at room temperature largely resistant to acids and alkalis.
The outer sheath withstands high mechanical stresses, in particular abrasion and dragging. It is also cut proof and resists microbes and hydrolysis. They are suitable for occasional, non-automated movements. The maximum tensile load is 15 N/mm² of conductor cross-section during installation and operation. Compulsory guidance is not permitted.

Application range:
Appliance and apparatus construction, industrial machinery and machine tools, measurement, control and electrical applica-tions, very suitable for oily wet areas within machinery and production lines

USE acc. to : External interconnection of electronic equipment
USE acc. to : Cables for internal and external interconnection with or without mechanical use

## Design

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| Design | acc. to UL AWM 20234, UL 758<br>acc. to CSA AWM C22.2 No. 210-15<br>based on EN 50525-2-51 |
| Certification | : AWM 20234, UL 758 (File-Nr. E63634)<br>: AWM I A/B, II A/B, C22.2 No. 210-15 (File-Nr. E63634) |
| Conductor | fine wire strands of bare copper acc. to IEC 60228 resp. EN IEC 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 |
| Cable assembly | cores are stranded in layers |
| Screen | braid of tinned copper, coverage = 85 % (nominal value) |
| Outer sheath | TPU Polyurethane compound (UL/CSA 80 °C rating)<br>colour: black, similar RAL 9005 |

## Electrical properties at 20 °C

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| Specific volume resistivity | > 20 G Ω x cm |
| Nominal voltage | IEC $U_0$/U: 300/500 V |
| Rated voltage | : 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 | occasional flexing: 15 x outer diameter<br>fixed installation: 4 x outer diameter |
| Temperature range | flexing (IEC): -5 °C up to +70 °C max. conductor temperature<br>flexing ( ): -5 °C up to +80 °C max. conductor temperature<br>fixed installation (IEC): -40 °C up to +80 °C max. conductor temperature<br>fixed installation ( ): up to +80 °C max. conductor temperature |
| Flammability | flame retardant acc. to IEC 60332-1-2 resp. EN 60332-1-2<br>UL: Cable flame test acc. to UL 1581, section 1061.2<br>Vertical flame test VW-1 acc. to UL 1581, section 1080<br>CSA: FT1 acc. to CSA C22.2 No. 2556 § 9.3 |
| UV resistance | acc. to EN 50618<br>acc. to EN 50620<br>acc. to EN ISO 4892-2-2013, method A (change of colour allowed) |
| Ozone resistance | acc. to EN 50396, method B |
| Oil resistance | acc. to EN 50363-10-2 |

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| **Tests** | acc. to IEC 60811 resp. EN 60811, EN 50395, EN 50396, UL AWM 758, UL 1581 and CSA C22.2 |
| **General requirements** | These cables are conform to the EU Directive 2014/35/EU (Low Voltage Directive) |
| **Environmental information** | These cables meet the substance-specific requirements of the EU Directive 2011/65/EU (RoHS). |