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|--|---------------------------|-------------------|---|
|  | 1119752                   | <b>DATA SHEET</b> |  |
|  | <b>ÖLFLEX CLASSIC 110</b> |                   |   |

## Application

ÖLFLEX® CLASSIC 110 cables are VDE approved power and control cables for occasional flexible use and fixed installation for 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.

ÖLFLEX® CLASSIC 110 cables are limited suitable for free and continuously recurring 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.

### Application range:

As power- and connecting cable for control systems in machine tools, plant engineering and construction, industrial machinery, conveyor systems, production and assembly lines as well as in measuring and control technology and data processing systems. This cable is suitable for torsion application in wind turbines. The torsional load is limited to applications, which are typical for the loop in wind turbine generators (WTG).

## Design

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|--------------------------|---|
| Design                   | based on<br>EN 50525-2-51   |
| Certification            | < VDE-REG 7030 ><br>limited to following dimension range:<br>0.5 mm <sup>2</sup> - 2.5 mm <sup>2</sup> 2 - 65 cores<br>4 mm <sup>2</sup> - 16 mm <sup>2</sup> 2 - 7 cores<br>25 mm <sup>2</sup> - 120 mm <sup>2</sup> 2 - 5 cores<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               | LAPP special PVC compound P8/1<br>TI2 acc. to EN 50363-3 rwith increased requirements acc. to LAPP specification  |
| 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   |
| Stranding                | cores are stranded in layers  |
| Outer sheath             | PVC compound TM2 acc. to EN 50363-4-1<br>with increased requirements acc. to LAPP specification<br>colour: Silver Grey, similar RAL 7001  |

## Electrical properties at 20 °C


|                 |                                 |
|-----------------|---------------------------------|
| Nominal voltage | U <sub>0</sub> / U: 300 / 500 V |
| Test voltage    | core / core: 4000 V AC          |

## Mechanical and thermal properties

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| Minimum bending radius                              | occasional flexing: 10 x outer diameter<br>fixed installation: 4 x outer diameter  |
| Temperature range                                   | occasional flexing: - 15 °C up to +70 °C max. conductor temp.<br>Fixed installation: - 40 °C up to +80 °C max. conductor temp.   |
| Bending cycles and power chain operation parameters | Power chain<br>limited to 2-7 cores and 0.5 - 2.5 mm <sup>2</sup><br>Min. bending radius: 15 x outer diameter<br>temperature range: -5 °C up to +70 °C max. conductor temp.<br>Travelling distance up to 5 m: 0.2 ... 1 million bending cycles |
| Torsional stress                                    | in WTG:<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   |
| Oil resistance                                      | acc. to EN 50290-2-22 TM54   |

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| <b>Tests</b> | acc. to IEC 60811 resp. EN 60811, EN 50395, EN 50396 |
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|  | va <b>ÖLFLEX CLASSIC®110</b> |                   |   |

**General requirements**

These cables are conform to the EU-Directive 2014/35/EU (Low Voltage Directive).

A part of these cables (see [www.lappkabel.com/cpr](http://www.lappkabel.com/cpr)) are classified in accordance with the EU-Regulation no. 305/2011 (CPR).

**Environmental information**

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

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