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| 0010086                   | <b>DATA SHEET</b>                   |  |
| valid from:<br>01.01.2019 | <b>ÖLFLEX® CLASSIC 100 450/750V</b> |   |

## Application

ÖLFLEX® CLASSIC 100 450/750V cables are connecting- and control cables for occasional flexible use and fixed installation for medium mechanical use. 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 100 450/750V cables are suitable for occasional, non-automated movements. They meet the requirements for slow rotational movements, such as in the loop of a wind turbine. 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: ÖLFLEX® CLASSIC 100 450/750V cables are used as supply and flexible connecting cable in machine tool manufacture, plant engineering, in power stations, in heating and air conditioning installations, etc.

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.

## Design

|                          |  |
|--------------------------|--|
| Design                   | based on<br>EN 50525-2-11 resp. VDE 0285-525-2-11<br>EN 50525-2-51 resp. VDE 0285-525-2-51   |
| Conductor                | bare copper, fine wire strand in acc. with IEC 60228 resp. VDE 0295, Class 5   |
| Insulation               | PVC compound T12 acc. to EN 50363-3 resp. VDE 0207-363-3<br>with increased requirements acc. to Lapp specification   |
| Core identification code | acc. to VDE 0293-1, with or without GN/YE protective conductor<br>with up to 5 cores: acc. to VDE 0293-308 / HD 308 S2<br>more than 6 cores: acc. to LAPP-ÖLFLEX® color code |
| Stranding                | cores are stranded in layers   |
| Outer sheath             | PVC compound TM2 acc. to EN 50363-4-1 resp. VDE 0207-363-4-1<br>with increased requirements acc. to LAPP specification<br>colour: Silver Grey, similar RAL 7001              |

## Electrical properties at 20°C

|                             |  |
|-----------------------------|--|
| Specific volume resistivity | > 20 G Ω x cm  |
| Rated voltage               | U <sub>0</sub> / U : 450 / 750 V<br>fixed and protected installation: 600 / 1000 V |
| Test voltage                | core/core: 4000 V AC   |

## Mechanical and thermal properties

|                        |   |
|------------------------|---|
| Minimum bending radius | occasional flexing: 15 x cable diameter<br>fixed installation: 4 x cable diameter   |
| Temperature range      | occasional flexing: - 5 °C up to +70 °C max. conductor temp.<br>fixed installation: - 40 °C up to +80 °C max. conductor temp. |
| 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. VDE 0482-332-1-2  |
| Tests                  | acc. to IEC 60811, EN 50395, EN 50396   |
| General requirements   | These cables are conform to the EU-Directive 2014/35/EU (Low Voltage Directive)   |

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