Application

ÖLFLEX® CLASSIC 110 cables are VDE approved power and control cables for occasional flexible use and fixed installation for medium mechanical stresses. They are among others designed for use in dry, damp and wet conditions. 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/mm² 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 (WTG). The torsional load is limited to applications, as they typically occur in the loop of a wind turbine.

Design

Design

Based on EN 50525-2-51 resp. VDE 0285-525-2-51

Certification

< VDE-REG 7030 >

limited to following dimension range:

0.5 mm² - 2.5 mm² 2 - 65 cores
4 mm² - 16 mm² 2 - 7 cores
25 mm² - 120 mm² 2 - 5 cores

Conductor

Fine wire strands of bare copper, acc. to IEC 60228 resp. VDE 0295, Class 5

Insulation

LAPP special PVC compound P8/1
TI2 acc. to EN 50363-3 resp. VDE 0207-363-3 with increased requirements acc. to LAPP specification

Core identification code

acc. to VDE 0293-1, with or without GN/YE ground conductor
black cores with white numbers acc. to DIN EN 50334 resp. VDE 0293-334

Stranding

cores are stranded in layers

Outer sheath

PVC compound TM2 acc. to EN 50363-4-1 resp. VDE 0207-363-4-1 with increased requirements acc. to LAPP specification
colour: Silver Grey, similar RAL 7001

Electrical properties at 20°C

Rated voltage

U₀ / U: 300 / 500 V

Test voltage

core / core: 4000 V AC

Mechanical and thermal properties

Minimum bending radius

occasional flexing: 10 x cable diameter
fixed installation: 4 x cable diameter

Temperature range

occasional flexing: -15°C up to +70°C max. conductor temp.
fixed installation: -40°C up to +80°C max. conductor temp.

Bending cycles and power chain operation parameters

Power chain

limited to 2-7 cores and 0.5 - 2.5 mm²
Min. bending radius: 15 x outer diameter
temperature range: -5°C up to +70°C max. conductor temp.
Travelling distance up to 5 m: 0.2 ... 1 million bending cycles

Torsional stress

in WTG:
TW-0 (5000 cycles at ≥ +5°C)
TW-1 (2000 cycles at ≥ -20°C)
± 150° / m at 1 revolution per minute

Flammability

flame retardant acc. to IEC 60332-1-2 resp. VDE 0482-332-1-2

Oil resistance

acc. to DIN EN 50290-2-22 bzw. VDE 0819-102, TM54

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)