Application

ÖLFLEX® CLASSIC 110 [black] 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 [black] 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 typical 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: black, similar RAL 9005

Electrical properties at 20°C

Rated voltage	U_0 / 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
UV resistance	acc. to EN 50525-1 (VDE 0285-525-1) cable with black sheath are suitable for permanent outdoor use. UV-resistant acc. to EN ISO 4892-2-2013, method A (change of colour allowed)
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)

We reserve all rights according to DIN ISO 16016.
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