


1150465	DATA SHEET	
valid from: 01.01.2019	ÖLFLEX® TORSION multi core	

Application

ÖLFLEX® TORSION cables are cold flexible PVC-insulated power and control cables designed for the European, North American and Canadian market, for flexible use, fixed installation as well as for applications with torsional movements under light to medium mechanical load conditions. They are among others designed for use in dry, damp or wet areas. They are suitable for outdoor use if the indicated temperature range is observed. At room temperature they are widely resistant to acids, caustic solutions and certain oils. They are especially designed for use in wind turbines. 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:

Machinery, wind turbines, very suitable for installation in the loop, between the rotating nacelle and the stationary windmill tower, to connect the generator to the control units

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.

USE according to UL: PVC sheathed cables for external interconnection or internal wiring of electronic equipment.

USE according to cRU: AWM I A/B and II A/B. Cables for external interconnection or internal wiring with or without mechanical use.

Design

Design	acc. to UL AWM Style 20886, CSA C22.2 No. 210-15 and based on EN 50525-2-51 (VDE 0285-525-2-51) and VDE 0250-1
Certification	UL AWM Style 20886 (File No. E63634) cRU AWM I A/B, II A/B (File No. E63634)
Conductor	fine wire strands of bare copper, acc. to IEC 60228 resp. VDE 0295, Class 5
Insulation	PVC compound (UL/CSA 90° C rating)
Core identification code	acc. to VDE 0293-1, with or without GN/YE ground conductor up to 5 cores: acc. to VDE 0293-308 from 6 cores: black with white numbers acc. to DIN EN 50334 resp. VDE 0293-334
Outer sheath	PVC compound (UL/CSA 90° C rating) Colour: black, similar RAL 9005

Electrical properties at 20°C

Rated voltage	U ₀ /U: 600/1000 V UL/CSA: 1000 V
Test voltage	4000 V AC

Mechanical and thermal properties

Minimum bending radius	flexing: 10 x outer diameter fixed installation: 6 x outer diameter
Temperature range	for flexible application: -35 °C up to +90 °C max. conductor temp. (UL) fixed installation: -40 °C up to +90 °C max. conductor temp. (UL)
Torsional stress	TW-0 (5000 cycles at ≥ +5°C) TW-2 (2000 cycles at ≥ -40°C) ± 150 °/m at 1 revolution per minute
Flammability	flame retardant acc. to IEC 60332-1-2 resp. VDE 0482-332-1-2 UL: Vertical flame test VW-1; CSA: FT1
UV resistance	acc. to EN 50525-1 (VDE 0285-525-1) cable with black sheath are suitable for permanent outdoor use. acc. to EN ISO 4892-2-2013, method A (change of colour allowed)
Ozone resistance	acc. to EN 50396 resp. VDE 0473-396, method B
Oil resistance	acc. to IEC 60227-1 PVC/ST9
Water-resistance	Salt water resistance acc. to UL 1309
Tests	acc. to IEC 60811 resp. VDE 0473 part 811, EN 50395, EN 50396, UL 1581 and CSA C22.2
General requirements	These cables are conform to the EU-Directive 2014/35/EU (Low Voltage Directive)

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