halogen-free wind turbine torsion & tower cable

CU/EPR/TCWB/HFEVA 0.6/1 kV

(Umax 1.2 kV) TCWB-Screened LSZH Wind Turbi

IEC 60502-1 / EN 50363 · 0.6/1 kV (Umax 1.2 kV) · Halogen-free wind turbine torsion &



IEC 60502-1 / EN 50363 | 0.6/1 kV (Umax 1.2 kV) (-40 to +90 ° | HF-EVA Cross-Linked LSZH Outer Jacke

Application

CU/EPR/TCWB/HFEVA 0.6/1 kV (Umax 1.2 kV) TCWB-Screened LSZH Wind Turbine Loop Torsion Cable (IEC 60502-1 / EN 50363) engineered for 0.6/1 kV (Umax 1.2 kV) wind turbine service across -40 to +90 °C (min. bend radius 6 × OD).

Typical uses: Onshore & Offshore Wind Turbine Nacelle Drip Loops, Wind Turbine Generator-to-Converter Main Power Drops, Halogen-Free Wind Tower Vertical Power Distribution, Cold-Climate (−40 °C) Renewable Energy Installations

Construction





Cross-section, not to scale

1. EN 60228 Class 5 Bare Copper Conductors
2. 3GI3 EPR Core Insulation (0.6/1 kV)
3. Tinned Copper Wire Braid Screen (TCWB)
4. HF-EVA Cross-Linked LSZH Outer Jacket (1

Technical data

Typical values

Rated voltage / operating system	0.6/1 kV (Umax 1.2 kV) (IEC 60502-1 & EN 50363 3GI3/TCWB/HF-EVA (±100°/m) Screened Wind Torsion Specification)	**Core / conductor construction**	EN 60228 Class 5 Bare Copper Conductors — Flexible plain copper cores (1C, 3-5C power or 7–25C control)
Primary dielectric / insulation	3GI3 EPR Core Insulation (0.6/1 kV) — Cross-linked ethylene-propylene rubber dielectric	**Continuous operating temperature**	−40…+90 °C (wind turbine nacelle, hub & tower duty)
Low-temperature torsion & cold bend	Verified cold-flex and torsion endurance across −40…+90 °C per IEC 60502-1 & EN 50363 3GI3/TCWB/HF-EVA (±100°/m) Screened Wind Torsion Specification	**Storage & transport temperature**	−40…+80 °C on export wooden/steel cable drum
Outer jacket / sheath protection	HF-EVA Cross-Linked LSZH Outer Jacket (100°/m) — Halogen-free low-smoke elastomer jacket for yaw loops	**Minimum bending radius**	6 × OD
Intermediate screen / separator / core layer	Tinned Copper Wire Braid Screen (TCWB) — Flexible braided tinned copper screen for EMC compliance	**Oil, grease, ozone & UV resistance**	Resistant to wind turbine gearbox oil, hydraulic fluid, ozone and UV weathering per IEC 60502-1 & EN 50363 3GI3/TCWB/HF-EVA (±100°/m) Screened Wind Torsion Specification
Flame retardancy & smoke/halogen emission	Flame-retardant and environmental performance verified per IEC 60502-1 & EN 50363 3GI3/TCWB/HF-EVA (±100°/m) Screened Wind Torsion Specification	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	IEC 60502-1 & EN 50363 3GI3/TCWB/HF-EVA (±100°/m) Screened Wind Torsion Specification		

Sizes

3 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

Order designation	Configuration	Core / stranding	Outer Ø ≈ mm	Net weight ≈ kg/km	Max. pulling kN ≈	Min. bend R mm
CU/EPR/TCWB/HFEVA 0.6/1 kV Construction Schedule (−40…+90 °C) 3 sizes						
☐ **CU/EPR/TCWB/HFEVA 0.6/ 7G1.5 mm²**	**7G1.5 mm² (or 7C × 16 AWG)**	**IEC 60228 Class 5/6 / Class K Cu**	**11.4**	**215**	**2.4**	**70**
☐ **CU/EPR/TCWB/HFEVA 0.6/ 12G1.5 mm²**	**12G1.5 mm² (or 12C × 16 AWG)**	**IEC 60228 Class 5/6 / Class K Cu**	**14.8**	**345**	**4.1**	**90**
☐ **CU/EPR/TCWB/HFEVA 0.6/ 18G2.5 mm²**	**18G2.5 mm² (or 18C × 14 AWG)**	**IEC 60228 Class 5/6 / Class K Cu**	**19.6**	**680**	**9.8**	**120**

– Custom conductor cross-sections, core counts, pre-lugged tower kits and drum lengths available per IEC 60502-1 & EN 50363 3GI3/TCWB/HF-EVA (±100°/m) Screened Wind Torsion Specification.

Electrical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} Ω/km	Rating / Impedance	Operating temp.
7G1.5 mm² (or 7C × 16 AWG)	**13.30**	**0.6/1 kV (Umax 1.2 kV) (18 A)**	**−40…+90 °C**
12G1.5 mm² (or 12C × 16 AWG)	**13.30**	**0.6/1 kV (Umax 1.2 kV) (16 A)**	**−40…+90 °C**
18G2.5 mm² (or 18C × 14 AWG)	**7.98**	**0.6/1 kV (Umax 1.2 kV) (24 A)**	**−40…+90 °C**

– Every production length undergoes routine conductor DC resistance, AC high-voltage spark/dielectric and dimensional verification.

Standards and approvals

- IEC 60502-1 / EN 50363 Compliant
- EN 10204 3.1 Factory Test Certificate
- CE, RoHS 2 (2011/65/EU) & REACH

Certifications

Management systems: ISO 9001, ISO 14001, ISO 45001

Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

WhatsApp / phone
+86 185 9591 3361

Email
info@tebaoflex.com

Web
tebaoflex.com/cables/cu-epr-tcwb-hfeva-0-6-1kv-screened-torsion-cable

Typical values for this cable type, based on IEC 60502-1 & EN 50363 3GI3/TCWB/HF-EVA (±100°/m) Screened Wind Torsion Specification. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.