flexible elastomer wind turbine torsion cable

IEC 0.6/1 kV & UL WTTC 1000V Shielded

IEC 0.6/1 kV & UL 2277 Type WTTC 1,000 V Copper-Braid Shielded Wind Tu

UL 2277 WTTC / IEC 60502-1 · 0.6/1 kV / 1,000 V · Flexible elastomer wind turbine



UL 2277 WTTC / IEC 60502-1 | **0.6/1 kV / 1,000 V (-40 to +90 °C)** | **Cold & Oil-Resistant Elastomer Jacke**

Application

IEC 0.6/1 kV & UL 2277 Type WTTC 1,000 V Copper-Braid Shielded Wind Turbine Torsion Cable (UL 2277 WTTC / IEC 60502-1) engineered for 0.6/1 kV / 1,000 V wind turbine service across -40 to +90 °C (min. bend radius 6 × OD).

Typical uses: Onshore & Offshore Wind Turbine Yaw Drip Loops, Ultra-Cold (−55 °C) Arctic & High-Altitude Wind Farms, GB/T 29631 & NB/T 31034 Utility Wind Generators, Nacelle Auxiliary Power, Yaw & Pitch Motor Circuits

Construction





Cross-section, not to scale

1. IEC 60228 Class 5 Flexible Copper (4G10
2. EPR Dual-Standard Core Insulation
3. Copper Wire Braid EMC Shield
4. Cold & Oil-Resistant Elastomer Jacket (-

Technical data

Typical values

Rated voltage / operating system	0.6/1 kV / 1,000 V (UL Subject 2277 Type WTTC 1,000 V & IEC 60502-1 0.6/1 kV Shielded Wind Specification)
Primary dielectric / insulation	EPR Dual-Standard Core Insulation — Ethylene-propylene rubber rated 0.6/1 kV IEC and 1,000 V UL WTTC
Low-temperature torsion & cold bend	Verified cold-flex and torsion endurance across −40…+90 °C per UL Subject 2277 Type WTTC 1,000 V & IEC 60502-1 0.6/1 kV Shielded Wind Specification
Outer jacket / sheath protection	Cold & Oil-Resistant Elastomer Jacket (-40 °C) — Black flame-retardant thermoset elastomer outer sheath
Intermediate screen / separator / core layer	Copper Wire Braid EMC Shield — Braided copper wire screen suppressing auxiliary VFD interference
Flame retardancy & smoke/halogen emission	Flame-retardant and environmental performance verified per UL Subject 2277 Type WTTC 1,000 V & IEC 60502-1 0.6/1 kV Shielded Wind Specification
Standards	UL Subject 2277 Type WTTC 1,000 V & IEC 60502-1 0.6/1 kV Shielded Wind Specification
Core / conductor construction	IEC 60228 Class 5 Flexible Copper (4G10 mm²) — Four flexible plain copper cores (3 phases + 1 green/yellow PE)
Continuous operating temperature	−40…+90 °C (wind turbine nacelle, hub & tower duty)
Storage & transport temperature	−40…+80 °C on export wooden/steel cable drum
Minimum bending radius	6 × OD
Oil, grease, ozone & UV resistance	Resistant to wind turbine gearbox oil, hydraulic fluid, ozone and UV weathering per UL Subject 2277 Type WTTC 1,000 V & IEC 60502-1 0.6/1 kV Shielded Wind Specification
RoHS & REACH compliance	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant

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
IEC 0.6/1 kV & UL WTTC 1000V Shielded Construction Schedule (−40…+90 °C) 3 sizes						
☐ IEC 0.6 4G16 / 3×16+3G2.5	4G16 mm² (or 3×6 AWG + 3G10 AWG)	IEC 60228 Class 5 / Class K Cu	21.8	790	9.5	130
☐ IEC 0.6 4G50 / 3×50+3G10	4G50 mm² (or 3×1 AWG + 3G6 AWG)	IEC 60228 Class 5 / Class K Cu	31.4	2,140	22.5	190
☐ IEC 0.6 3×150+3G25 VFD	3×150 + 3G25 mm² (or 3×350 kcmil)	IEC 60228 Class 5 / Class K Cu	47.2	5,480	58.0	285

– Custom conductor cross-sections, core counts, pre-lugged tower kits and drum lengths available per UL Subject 2277 Type WTTC 1,000 V & IEC 60502-1 0.6/1 kV Shielded Wind Specification.

Electrical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} Ω/km	Rating / Impedance	Operating temp.
4G16 mm² (or 3×6 AWG + 3G10 AWG)	1.15	0.6/1 kV / 1,000 V (98 A VFD)	−40…+90 °C
4G50 mm² (or 3×1 AWG + 3G6 AWG)	0.39	0.6/1 kV / 1,000 V (195 A VFD)	−40…+90 °C
3×150 + 3G25 mm² (or 3×350 kcmil)	0.13	0.6/1 kV / 1,000 V (395 A VFD)	−40…+90 °C

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

Standards and approvals

- UL 2277 WTTC / IEC 60502-1 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/iec-0-6-1kv-ul-wttc-1000v-shielded-wind-cable

Typical values for this cable type, based on UL Subject 2277 Type WTTC 1,000 V & IEC 60502-1 0.6/1 kV Shielded Wind Specification. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.