wind turbine tower, DLO & blade grounding power cable

UL 2277 Type WTTC 1000V XHHW-2/CPE

UL Subject 2277 Type WTTC 1,000 V & UL 1277 TC-ER 600 V XHHW-2/RHW-2 C



UL 2277 WTTC / UL 1277 TC-ER · 1,000 V WTTC / 600 V TC-ER · Wind turbine tower, dlo &

UL 2277 WTTC / UL 1277 TC-ER | 1,000 V WTTC / 600 V TC-ER (-40 to + | -40 °C Oil & Sunlight-Resistant CPE/

Application

UL Subject 2277 Type WTTC 1,000 V & UL 1277 TC-ER 600 V XHHW-2/RHW-2 CPE Wind Turbine Tray Cable (UL 2277 WTTC / UL 1277 TC-ER) engineered for 1,000 V WTTC / 600 V TC-ER wind turbine service across -40 to +90 °C (min. bend radius 6 × OD).

Typical uses: Wind Turbine Tower Vertical Power Feeders (Cu & Al), North American UL 2277 WTTC & 2 kV DLO Wind Turbines, IEC 61400-24 Wind Blade Lightning Down-Conductors, Nacelle Converter Busbars & Transformer Interconnects

Construction





Cross-section, not to scale

1. Class K / Class 5 Flexible Copper (18 AW
2. XHHW-2 (XLPE) / RHW-2 (EPR) Core Insulat
3. -40 °C Oil & Sunlight-Resistant CPE/PVC

Technical data

Typical values

Rated voltage / operating system	1,000 V WTTC / 600 V TC-ER (UL Subject 2277 Type WTTC 1,000 V & UL 1277 TC-ER XHHW-2/RHW-2 CPE Specification)	**Core / conductor construction**	Class K / Class 5 Flexible Copper (18 AWG–500 kcmil) — High-flexibility stranded copper conductors (2 to 37 cores)
Primary dielectric / insulation	XHHW-2 (XLPE) / RHW-2 (EPR) Core Insulation — 90 °C wet/dry 1,000 V WTTC & 600 V TC-ER insulation	**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 UL Subject 2277 Type WTTC 1,000 V & UL 1277 TC-ER XHHW-2/RHW-2 CPE Specification	**Storage & transport temperature**	−40…+80 °C on export wooden/steel cable drum
Outer jacket / sheath protection	-40 °C Oil & Sunlight-Resistant CPE/PVC Jacket — UL 2277 Wind Turbine Tray Cable outer sheath	**Minimum bending radius**	6 × OD
Intermediate screen / separator / core layer	XHHW-2 (XLPE) / RHW-2 (EPR) Core Insulation — 90 °C wet/dry 1,000 V WTTC & 600 V TC-ER insulation	**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 & UL 1277 TC-ER XHHW-2/RHW-2 CPE Specification
Flame retardancy & smoke/halogen emission	Flame-retardant and environmental performance verified per UL Subject 2277 Type WTTC 1,000 V & UL 1277 TC-ER XHHW-2/RHW-2 CPE Specification	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	UL Subject 2277 Type WTTC 1,000 V & UL 1277 TC-ER XHHW-2/RHW-2 CPE 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
UL 2277 Type WTTC 1000V XHHW-2/CPE Construction Schedule (−40…+90 °C) 3 sizes						
☐ UL 2277 Type WTTC 1000V XHHW-2 1×95 / 4G25 Cu	1 × 95 mm² (or 4G25 mm² / 3/0 AWG)	IEC 60228 Class 5 Flexible Cu/SnCu	21.6	1,080	14.2	110
☐ UL 2277 Type WTTC 1000V XHHW-2 1×185 / 4G50 Cu	1 × 185 mm² (or 4G50 mm² / 373 kcmil)	IEC 60228 Class 5 Flexible Cu/SnCu	27.8	1,960	27.5	140
☐ UL 2277 Type WTTC 1000V XHHW-2 1×300 / 4G95 Cu	1 × 300 mm² (or 1×535/777 kcmil)	IEC 60228 Class 5 Flexible Cu/SnCu	34.6	3,120	45.0	175

– Custom conductor cross-sections, core counts, pre-lugged tower kits and drum lengths available per UL Subject 2277 Type WTTC 1,000 V & UL 1277 TC-ER XHHW-2/RHW-2 CPE Specification.

Electrical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} Ω/km	Rating / Impedance	Operating temp.
1 × 95 mm² (or 4G25 mm² / 3/0 AWG)	0.21	1,000 V WTTC / 600 V TC-ER (320 A Cu)	−40…+90 °C
1 × 185 mm² (or 4G50 mm² / 373 kcmil)	0.11	1,000 V WTTC / 600 V TC-ER (495 A Cu)	−40…+90 °C
1 × 300 mm² (or 1×535/777 kcmil)	0.06	1,000 V WTTC / 600 V TC-ER (680 A Cu)	−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 / UL 1277 TC-ER 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/ul-2277-type-wttc-1000v-wind-turbine-tray-cable

Typical values for this cable type, based on UL Subject 2277 Type WTTC 1,000 V & UL 1277 TC-ER XHHW-2/RHW-2 CPE Specification. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.