wind turbine drip-loop, tray & pitch control cable

UL WTTC 1000V Unshielded Tray

UL Type WTTC 1,000 V / UL 1277 TC-ER 600 V Class K Unshielded Torsion

UL 2277 WTTC / UL 1277 TC-ER · 1,000 V WTTC / 600 V TC-ER · Wind turbine drip-loop,



UL 2277 WTTC / UL 1277 TC-ER | **1,000 V WTTC / 600 V TC-ER (-40 to +** | **Cold & Oil-Resistant Torsion PVC Jac**

Application

UL Type WTTC 1,000 V / UL 1277 TC-ER 600 V Class K Unshielded Torsion 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 Rotor Hub Pitch Control & Slip-Rings, Nacelle-to-Tower Multi-Core Drip-Loop Control Bundles, UL 2277 WTTC / TC-ER Nacelle & Tower Cable Trays, Blade De-Icing, Trace Heating & Aviation Obstruction Lights

Construction





Cross-section, not to scale

1. Class K (30 AWG) Bare Copper Conductors
2. PVC / Nylon (THHN/THWN) Core Insulation
3. Cold & Oil-Resistant Torsion PVC Jacket

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 600 V Class K Tray Specification)
Primary dielectric / insulation	PVC / Nylon (THHN/THWN) Core Insulation — 1,000 V WTTC & 600 V TC-ER numbered core insulation
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 600 V Class K Tray Specification
Outer jacket / sheath protection	Cold & Oil-Resistant Torsion PVC Jacket (-40 °C) — Exposed-Run (ER) rated jacket for nacelle trays & drip loops
Intermediate screen / separator / core layer	PVC / Nylon (THHN/THWN) Core Insulation — 1,000 V WTTC & 600 V TC-ER numbered core insulation
Flame retardancy & smoke/halogen emission	Flame-retardant and environmental performance verified per UL Subject 2277 Type WTTC 1,000 V & UL 1277 TC-ER 600 V Class K Tray Specification
Standards	UL Subject 2277 Type WTTC 1,000 V & UL 1277 TC-ER 600 V Class K Tray Specification
Core / conductor construction	Class K (30 AWG) Bare Copper Conductors (3–12 Cores) — Extra-flexible rope-stranded plain copper (14 AWG to 10 AWG)
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 & UL 1277 TC-ER 600 V Class K Tray 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
UL WTTC 1000V Unshielded Tray Construction Schedule (−40…+90 °C) 3 sizes						
☐ **UL WTTC 1000V Unshielded Tray 7G1.5 mm²**	**7G1.5 mm² (or 7C × 16 AWG)**	**IEC 60228 Class 5/6 / Class K Cu**	**11.4**	**215**	**2.4**	**70**
☐ **UL WTTC 1000V Unshielded Tray 12G1.5 mm²**	**12G1.5 mm² (or 12C × 16 AWG)**	**IEC 60228 Class 5/6 / Class K Cu**	**14.8**	**345**	**4.1**	**90**
☐ **UL WTTC 1000V Unshielded Tray 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 UL Subject 2277 Type WTTC 1,000 V & UL 1277 TC-ER 600 V Class K Tray 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**	**1,000 V WTTC / 600 V TC-ER (18 A)**	**−40…+90 °C**
12G1.5 mm² (or 12C × 16 AWG)	**13.30**	**1,000 V WTTC / 600 V TC-ER (16 A)**	**−40…+90 °C**
18G2.5 mm² (or 18C × 14 AWG)	**7.98**	**1,000 V WTTC / 600 V TC-ER (24 A)**	**−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-wttc-1000v-unshielded-torsion-tray-cable

Typical values for this cable type, based on UL Subject 2277 Type WTTC 1,000 V & UL 1277 TC-ER 600 V Class K Tray Specification. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.