EMC-shielded wind turbine converter & VFD drive cable

Symmetrical-Ground 1kV WTTC / 2kV VFD

Symmetrical-Ground 1,000 V UL WTTC / 2,000 V UL RHW-2 (3 Phase + 3 Spl



UL 2277 WTTC / UL 44 RHW-2 · 1,000 V WTTC / 2,000 V RHW-2 · Emc-shielded wind turbine

UL 2277 WTTC / UL 44 RHW-2 | 1,000 V WTTC / 2,000 V RHW-2 (-40 to | Cold & Sunlight-Resistant Heavy Poly

Application

Symmetrical-Ground 1,000 V UL WTTC / 2,000 V UL RHW-2 (3 Phase + 3 Split Grounds) Dual Copper-Tape Wind VFD Cable (UL 2277 WTTC / UL 44 RHW-2, 1,000 V WTTC / 2,000 V RHW-2, -40 to +90 °C, min. bend radius 8 × OD).

Typical uses: Wind Turbine Main Power Converter & Generator Drives, Electric Yaw Drive & Blade Pitch Servo VFD Motors, Nacelle Hydraulic Pump, Cooling Fan & Auxiliary VFDs, UL 2277 WTTC 1,000 V & 2,000 V Renewable Drive Systems

Construction





Cross-section, not to scale

1. XHHW-2 / RHW-2 Phase Conductors (3 Cores
2. Symmetrical Tri-Sectional Grounds (3 Cor
3. Dual Helical Copper Tape EMC Shield (100
4. Cold & Sunlight-Resistant Heavy Polymer

Technical data

Typical values

Rated voltage / operating system	1,000 V WTTC / 2,000 V RHW-2 (UL Subject 2277 WTTC 1,000 V & UL 44 RHW-2 2,000 V Symmetrical 3+3 Dual Cu-Tape VFD Specification)
Primary dielectric / insulation	Symmetrical Tri-Sectional Grounds (3 Cores) — Three balanced interstitial ground cores canceling common-mode voltage
Low-temperature torsion & cold bend	Verified cold-flex and torsion endurance across −40…+90 °C per UL Subject 2277 WTTC 1,000 V & UL 44 RHW-2 2,000 V Symmetrical 3+3 Dual Cu-Tape VFD Specification
Outer jacket / sheath protection	Cold & Sunlight-Resistant Heavy Polymer Jacket — UL WTTC 1,000 V & RHW-2 2,000 V wind converter drive sheath
Intermediate screen / separator / core layer	Dual Helical Copper Tape EMC Shield (100%) — Two overlapping copper tapes providing low-impedance EMI return path
Flame retardancy & smoke/halogen emission	Flame-retardant and environmental performance verified per UL Subject 2277 WTTC 1,000 V & UL 44 RHW-2 2,000 V Symmetrical 3+3 Dual Cu-Tape VFD Specification
Standards	UL Subject 2277 WTTC 1,000 V & UL 44 RHW-2 2,000 V Symmetrical 3+3 Dual Cu-Tape VFD Specification
Core / conductor construction	XHHW-2 / RHW-2 Phase Conductors (3 Cores) — Flexible stranded copper phase cores (14 AWG to 500 kcmil)
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	8 × OD
Oil, grease, ozone & UV resistance	Resistant to wind turbine gearbox oil, hydraulic fluid, ozone and UV weathering per UL Subject 2277 WTTC 1,000 V & UL 44 RHW-2 2,000 V Symmetrical 3+3 Dual Cu-Tape VFD 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
Symmetrical-Ground 1kV WTTC / 2kV VFD Construction Schedule (−40…+90 °C) 3 sizes						
☐ **Symmetrical-Ground 1kV WTTC 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**
☐ **Symmetrical-Ground 1kV WTTC 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**
☐ **Symmetrical-Ground 1kV WTTC 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 WTTC 1,000 V & UL 44 RHW-2 2,000 V Symmetrical 3+3 Dual Cu-Tape VFD 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**	**1,000 V WTTC / 2,000 V RHW-2 (98 A VFD)**	**−40…+90 °C**
4G50 mm² (or 3×1 AWG + 3G6 AWG)	**0.39**	**1,000 V WTTC / 2,000 V RHW-2 (195 A VFD)**	**−40…+90 °C**
3×150 + 3G25 mm² (or 3×350 kcmil)	**0.13**	**1,000 V WTTC / 2,000 V RHW-2 (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 / UL 44 RHW-2 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/symmetrical-ground-1kv-wttc-2kv-cu-tape-vfd-cable

Typical values for this cable type, based on UL Subject 2277 WTTC 1,000 V & UL 44 RHW-2 2,000 V Symmetrical 3+3 Dual Cu-Tape VFD Specification. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.