wind turbine tower, DLO & blade grounding power cable

NB/T 31035 1.8/3 kV XLPE Tower

NB/T 31035 1.8/3 kV (0.6/1 kV) Copper / Al-Alloy XLPE (YJ) WDZ Low-Smo

NB/T 31035 / IEC 60502-1 · 1.8/3 kV (0.6/1 kV) · Wind turbine tower, dlo & blade



NB/T 31035 / IEC 60502-1 | 1.8/3 kV (0.6/1 kV) (-40 to +90 °C) | WDZ Low-Smoke Zero-Halogen Outer She

Application

NB/T 31035 1.8/3 kV (0.6/1 kV) Copper / Al-Alloy XLPE (YJ) WDZ Low-Smoke Zero-Halogen Fixed Wind Tower Cable (NB/T 31035 / IEC 60502-1) engineered for 1.8/3 kV (0.6/1 kV) wind turbine service across -40 to +90 °C (min. bend radius 10 × 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 2 / Class 5 Copper or Al-Alloy Con
2. 1.8/3 kV Cross-Linked Polyethylene (XLPE
3. WDZ Low-Smoke Zero-Halogen Outer Sheath

Technical data

Typical values

Rated voltage / operating system	1.8/3 kV (0.6/1 kV) (NB/T 31035 & IEC 60502-1 1.8/3 kV XLPE/WDZ Fixed Wind Turbine Tower Cable Standard)	**Core / conductor construction**	Class 2 / Class 5 Copper or Al-Alloy Conductors — Single-core or 3–5 core conductors per NB/T 31035
Primary dielectric / insulation	1.8/3 kV Cross-Linked Polyethylene (XLPE / YJ) — 90 °C XLPE insulation rated for wind turbine voltage systems	**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 NB/T 31035 & IEC 60502-1 1.8/3 kV XLPE/WDZ Fixed Wind Turbine Tower Cable Standard	**Storage & transport temperature**	−40…+80 °C on export wooden/steel cable drum
Outer jacket / sheath protection	WDZ Low-Smoke Zero-Halogen Outer Sheath — Flame-retardant halogen-free polyolefin or cold-resistant PVC jacket	**Minimum bending radius**	10 × OD
Intermediate screen / separator / core layer	1.8/3 kV Cross-Linked Polyethylene (XLPE / YJ) — 90 °C XLPE insulation rated for wind turbine voltage systems	**Oil, grease, ozone & UV resistance**	Resistant to wind turbine gearbox oil, hydraulic fluid, ozone and UV weathering per NB/T 31035 & IEC 60502-1 1.8/3 kV XLPE/WDZ Fixed Wind Turbine Tower Cable Standard
Flame retardancy & smoke/halogen emission	Flame-retardant and environmental performance verified per NB/T 31035 & IEC 60502-1 1.8/3 kV XLPE/WDZ Fixed Wind Turbine Tower Cable Standard	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	NB/T 31035 & IEC 60502-1 1.8/3 kV XLPE/WDZ Fixed Wind Turbine Tower Cable Standard		

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
NB/T 31035 1.8/3 kV XLPE Tower Construction Schedule (−40…+90 °C) 3 sizes						
☐ **NB/T 31035 1.8/3 kV XL 1×150 / 4×95 Al**	**1 × 150 mm² (or 4 × 95 mm² Al)**	**Class 2 Compacted Al / Class 5 AA8000**	**23.5**	**640**	**10.5**	**190**
☐ **NB/T 31035 1.8/3 kV XL 1×240 / 4×150 Al**	**1 × 240 mm² (or 4 × 150 mm² Al)**	**Class 2 Compacted Al / Class 5 AA8000**	**28.4**	**980**	**16.8**	**230**
☐ **NB/T 31035 1.8/3 kV XL 1×400 / 4×240 Al**	**1 × 400 mm² (or 4 × 240 mm² Al)**	**Class 2 Compacted Al / Class 5 AA8000**	**35.8**	**1,590**	**28.0**	**290**

– Custom conductor cross-sections, core counts, pre-lugged tower kits and drum lengths available per NB/T 31035 & IEC 60502-1 1.8/3 kV XLPE/WDZ Fixed Wind Turbine Tower Cable Standard.

Electrical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} Ω/km	Rating / Impedance	Operating temp.
1 × 150 mm² (or 4 × 95 mm² Al)	**0.21**	**1.8/3 kV (0.6/1 kV) (315 A Al)**	**−40…+90 °C**
1 × 240 mm² (or 4 × 150 mm² Al)	**0.12**	**1.8/3 kV (0.6/1 kV) (435 A Al)**	**−40…+90 °C**
1 × 400 mm² (or 4 × 240 mm² Al)	**0.08**	**1.8/3 kV (0.6/1 kV) (590 A Al)**	**−40…+90 °C**

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

Standards and approvals

- NB/T 31035 / 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/nb-t-31035-1-8-3kv-xlpe-fixed-wind-tower-cable

Typical values for this cable type, based on NB/T 31035 & IEC 60502-1 1.8/3 kV XLPE/WDZ Fixed Wind Turbine Tower Cable Standard. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.