halogen-free wind turbine torsion & tower cable

FDEH 1.8/3 kV

(0.6/1 kV) GB/T 29631 & NB/T 31034 HEPR / LSZH Elastomer

GB/T 29631 / NB/T 31034 · 1.8/3 kV (0.6/1 kV) · Halogen-free wind turbine torsion &



GB/T 29631 / NB/T 31034 | 1.8/3 kV (0.6/1 kV) (-40 to +105 °C) | LSZH Thermoset Elastomer Outer Sheat

Application

FDEH 1.8/3 kV (0.6/1 kV) GB/T 29631 & NB/T 31034 HEPR / LSZH Elastomer Wind Torsion Cable (GB/T 29631 / NB/T 31034) engineered for 1.8/3 kV (0.6/1 kV) wind turbine service across -40 to +105 °C (min. bend radius 6 × OD).

Typical uses: Onshore & Offshore Wind Turbine Nacelle Drip Loops, Wind Turbine Generator-to-Converter Main Power Drops, Halogen-Free Wind Tower Vertical Power Distribution, Cold-Climate (−40 °C) Renewable Energy Installations

Construction





Cross-section, not to scale

1. GB/T 3956 Class 5 Flexible Copper (1.5-4
2. 90 °C / 105 °C High-Strength EPR/HEPR (C
3. LSZH Thermoset Elastomer Outer Sheath (C

Technical data

Typical values

Rated voltage / operating system	1.8/3 kV (0.6/1 kV) (GB/T 29631 & NB/T 31034 FDEH (±1080°/10m) LSZH Wind Torsion Cable Standard)	**Core / conductor construction**	GB/T 3956 Class 5 Flexible Copper (1.5-400 mm²) — Finely stranded plain or tinned copper conductor
Primary dielectric / insulation	90 °C / 105 °C High-Strength EPR/HEPR (Code E) — Cross-linked ethylene-propylene rubber dielectric	**Continuous operating temperature**	−40…+105 °C (wind turbine nacelle, hub & tower duty)
Low-temperature torsion & cold bend	Verified cold-flex and torsion endurance across −40…+105 °C per GB/T 29631 & NB/T 31034 FDEH (±1080°/10m) LSZH Wind Torsion Cable Standard	**Storage & transport temperature**	−40…+80 °C on export wooden/steel cable drum
Outer jacket / sheath protection	LSZH Thermoset Elastomer Outer Sheath (Code H) — Low-smoke zero-halogen XL-EVA/EVM jacket passing ±1080°/10m torsion	**Minimum bending radius**	6 × OD
Intermediate screen / separator / core layer	90 °C / 105 °C High-Strength EPR/HEPR (Code E) — Cross-linked ethylene-propylene rubber dielectric	**Oil, grease, ozone & UV resistance**	Resistant to wind turbine gearbox oil, hydraulic fluid, ozone and UV weathering per GB/T 29631 & NB/T 31034 FDEH (±1080°/10m) LSZH Wind Torsion Cable Standard
Flame retardancy & smoke/halogen emission	Flame-retardant and environmental performance verified per GB/T 29631 & NB/T 31034 FDEH (±1080°/10m) LSZH Wind Torsion Cable Standard	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	GB/T 29631 & NB/T 31034 FDEH (±1080°/10m) LSZH Wind Torsion 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
FDEH 1.8/3 kV Construction Schedule (−40…+105 °C) 3 sizes						
☐ **FDEH 1.8 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**
☐ **FDEH 1.8 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**
☐ **FDEH 1.8 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 GB/T 29631 & NB/T 31034 FDEH (±1080°/10m) LSZH Wind Torsion Cable Standard.

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**	**1.8/3 kV (0.6/1 kV) (320 A Cu)**	**−40…+105 °C**
1 × 185 mm² (or 4G50 mm² / 373 kcmil)	**0.11**	**1.8/3 kV (0.6/1 kV) (495 A Cu)**	**−40…+105 °C**
1 × 300 mm² (or 1×535/777 kcmil)	**0.06**	**1.8/3 kV (0.6/1 kV) (680 A Cu)**	**−40…+105 °C**

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

Standards and approvals

- GB/T 29631 / NB/T 31034 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/fdeh-1-8-3kv-epr-elastomer-torsion-wind-cable

Typical values for this cable type, based on GB/T 29631 & NB/T 31034 FDEH (±1080°/10m) LSZH Wind Torsion 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.