wind turbine tower, DLO & blade grounding power cable

Blade Lightning Grounding 600V–2kV

IEC 61400-24 LPL I (600 V – 2,000 V) Extra-Fine Tinned Copper Wind Tur

IEC 61400-24 LPL I / UL · 600 V – 2,000 V · Wind turbine tower, dlo & blade grounding



IEC 61400-24 LPL I / UL | 600 V – 2,000 V (-40 to +90 °C) | Weather & Oil-Resistant CPE Outer Sh

Application

IEC 61400-24 LPL I (600 V – 2,000 V) Extra-Fine Tinned Copper Wind Turbine Blade Lightning Down-Conductor Cable (IEC 61400-24 LPL I / UL) engineered for 600 V – 2,000 V wind turbine service across -40 to +90 °C (min. bend radius 5 × 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. Extra-Fine Tinned/Bare Copper Conductor
2. 600 V – 2,000 V EPR / XLPE Insulation
3. Weather & Oil-Resistant CPE Outer Sheath

Technical data

Typical values

Rated voltage / operating system	600 V – 2,000 V (IEC 61400-24 Lightning Protection Level I (200 kA Impulse) Blade Grounding Specification)
Primary dielectric / insulation	600 V – 2,000 V EPR / XLPE Insulation — High-impulse dielectric withstanding lightning surge voltages
Low-temperature torsion & cold bend	Verified cold-flex and torsion endurance across −40…+90 °C per IEC 61400-24 Lightning Protection Level I (200 kA Impulse) Blade Grounding Specification
Outer jacket / sheath protection	Weather & Oil-Resistant CPE Outer Sheath — Durable chlorinated polyethylene jacket for blade-to-hub routing
Intermediate screen / separator / core layer	600 V – 2,000 V EPR / XLPE Insulation — High-impulse dielectric withstanding lightning surge voltages
Flame retardancy & smoke/halogen emission	Flame-retardant and environmental performance verified per IEC 61400-24 Lightning Protection Level I (200 kA Impulse) Blade Grounding Specification
Standards	IEC 61400-24 Lightning Protection Level I (200 kA Impulse) Blade Grounding Specification
Core / conductor construction	Extra-Fine Tinned/Bare Copper Conductor (1/C) — Ultra-flexible rope-lay stranded copper resisting blade flexing
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	5 × OD
Oil, grease, ozone & UV resistance	Resistant to wind turbine gearbox oil, hydraulic fluid, ozone and UV weathering per IEC 61400-24 Lightning Protection Level I (200 kA Impulse) Blade Grounding 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
Blade Lightning Grounding 600V–2kV Construction Schedule (−40…+90 °C) 3 sizes						
☐ **Blade Lightning Grounding 600V–2kV 1×95 / 4G25 C**	**1 × 95 mm² (or 4G25 mm² / 3/0 AWG)**	**IEC 60228 Class 5 Flexible Cu/SnCu**	**21.6**	**1,080**	**14.2**	**110**
☐ **Blade Lightning Grounding 600V–2kV 1×185 / 4G50**	**1 × 185 mm² (or 4G50 mm² / 373 kcmil)**	**IEC 60228 Class 5 Flexible Cu/SnCu**	**27.8**	**1,960**	**27.5**	**140**
☐ **Blade Lightning Grounding 600V–2kV 1×300 / 4G95**	**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 IEC 61400-24 Lightning Protection Level I (200 kA Impulse) Blade Grounding 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**	**600 V – 2,000 V (320 A Cu)**	**−40…+90 °C**
1 × 185 mm² (or 4G50 mm² / 373 kcmil)	**0.11**	**600 V – 2,000 V (495 A Cu)**	**−40…+90 °C**
1 × 300 mm² (or 1×535/777 kcmil)	**0.06**	**600 V – 2,000 V (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

- IEC 61400-24 LPL I / UL 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/blade-lightning-grounding-cable-600v-2kv

Typical values for this cable type, based on IEC 61400-24 Lightning Protection Level I (200 kA Impulse) Blade Grounding Specification. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.