flexible elastomer wind turbine torsion cable

1.8/3 (3.6) kV EPR/PCP Torsion

1.8/3 (3.6) kV 3GI3 EPR / LSOH & Polychloroprene Flexible Rubber Wind

IEC 60502-1 / VDE 0250 · 1.8/3 (3.6) kV · Flexible elastomer wind turbine torsion cable



IEC 60502-1 / VDE 0250 | 1.8/3 (3.6) kV (-40 to +90 °C) | LSOH / Polychloroprene (PCP) Torsion

Application

1.8/3 (3.6) kV 3GI3 EPR / LSOH & Polychloroprene Flexible Rubber Wind Turbine Torsion Cable (IEC 60502-1 / VDE 0250) engineered for 1.8/3 (3.6) kV wind turbine service across -40 to +90 °C (min. bend radius 5 × OD).

Typical uses: Onshore & Offshore Wind Turbine Yaw Drip Loops, Ultra-Cold (−55 °C) Arctic & High-Altitude Wind Farms, GB/T 29631 & NB/T 31034 Utility Wind Generators, Nacelle Auxiliary Power, Yaw & Pitch Motor Circuits

Construction





Cross-section, not to scale

1. IEC 60228 Class 5 Flexible Copper Conduc
2. 1.8/3 (3.6) kV 3GI3 EPR Core Insulation
3. LSOH / Polychloroprene (PCP) Torsion Jac

Technical data

Typical values

Rated voltage / operating system	1.8/3 (3.6) kV (IEC 60502-1 & VDE 0207 3GI3 EPR Dynamic Wind Torsion Specification)	**Core / conductor construction**	IEC 60228 Class 5 Flexible Copper Conductors — Plain or tinned flexible copper cores (25-400 mm²)
Primary dielectric / insulation	1.8/3 (3.6) kV 3GI3 EPR Core Insulation — Cross-linked ethylene-propylene rubber primary insulation	**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 IEC 60502-1 & VDE 0207 3GI3 EPR Dynamic Wind Torsion Specification	**Storage & transport temperature**	−40…+80 °C on export wooden/steel cable drum
Outer jacket / sheath protection	LSOH / Polychloroprene (PCP) Torsion Jacket — Cold-resistant (-40 °C to +90 °C) dynamic torsion outer sheath	**Minimum bending radius**	5 × OD
Intermediate screen / separator / core layer	1.8/3 (3.6) kV 3GI3 EPR Core Insulation — Cross-linked ethylene-propylene rubber primary insulation	**Oil, grease, ozone & UV resistance**	Resistant to wind turbine gearbox oil, hydraulic fluid, ozone and UV weathering per IEC 60502-1 & VDE 0207 3GI3 EPR Dynamic Wind Torsion Specification
Flame retardancy & smoke/halogen emission	Flame-retardant and environmental performance verified per IEC 60502-1 & VDE 0207 3GI3 EPR Dynamic Wind Torsion Specification	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	IEC 60502-1 & VDE 0207 3GI3 EPR Dynamic Wind Torsion Specification		

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
1.8/3 (3.6) kV EPR/PCP Torsion Construction Schedule (−40…+90 °C) 3 sizes						
☐ 1.8/3 (3.6) kV EPR/PCP 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
☐ 1.8/3 (3.6) kV EPR/PCP 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
☐ 1.8/3 (3.6) kV EPR/PCP 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 IEC 60502-1 & VDE 0207 3GI3 EPR Dynamic Wind Torsion 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	1.8/3 (3.6) kV (320 A Cu)	−40…+90 °C
1 × 185 mm² (or 4G50 mm² / 373 kcmil)	0.11	1.8/3 (3.6) kV (495 A Cu)	−40…+90 °C
1 × 300 mm² (or 1×535/777 kcmil)	0.06	1.8/3 (3.6) kV (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 60502-1 / VDE 0250 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/1-8-3-3-6-kv-flexible-rubber-torsion-wind-cable

Typical values for this cable type, based on IEC 60502-1 & VDE 0207 3GI3 EPR Dynamic Wind Torsion Specification. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.