flexible elastomer wind turbine torsion cable

FDGG / FDGU 1.8/3 kV Ultra-Cold

FDGG / FDGU 1.8/3 kV (0.6/1 kV) Ultra-Cold (-55 °C to +125 °C) Silicon

TICW/01 / GB/T 29631 · 1.8/3 kV (0.6/1 kV) · Flexible elastomer wind turbine torsion cable



TICW/01 / GB/T 29631 | 1.8/3 kV (0.6/1 kV) (-55 to +125 °C) | Silicone (FDGG) / Ultra-Cold PUR (FD

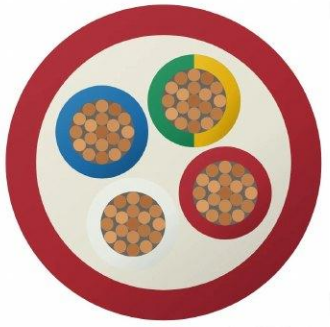
Application

FDGG / FDGU 1.8/3 kV (0.6/1 kV) Ultra-Cold (-55 °C to +125 °C) Silicone / PUR Wind Turbine Torsion Cable (TICW/01 / GB/T 29631) engineered for 1.8/3 kV (0.6/1 kV) wind turbine service across -55 to +125 °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. Class 5 Tinned Flexible Copper Conductor
2. High-Tear Silicone Rubber Insulation (Co
3. Silicone (FDGG) / Ultra-Cold PUR (FDGU)

Technical data

Typical values

Rated voltage / operating system	1.8/3 kV (0.6/1 kV) (TICW/01 & GB/T 29631 FDGG (Silicone/Silicone) & FDGU (Silicone/PUR) -55 °C Wind Specification)
Primary dielectric / insulation	High-Tear Silicone Rubber Insulation (Code G) — Flexible down to -55 °C and heat-resistant up to +125 °C
Low-temperature torsion & cold bend	Verified cold-flex and torsion endurance across −55…+125 °C per TICW/01 & GB/T 29631 FDGG (Silicone/Silicone) & FDGU (Silicone/PUR) -55 °C Wind Specification
Outer jacket / sheath protection	Silicone (FDGG) / Ultra-Cold PUR (FDGU) Jacket — Extreme-arctic (-55 °C) torsion-resistant outer sheath
Intermediate screen / separator / core layer	High-Tear Silicone Rubber Insulation (Code G) — Flexible down to -55 °C and heat-resistant up to +125 °C
Flame retardancy & smoke/halogen emission	Flame-retardant and environmental performance verified per TICW/01 & GB/T 29631 FDGG (Silicone/Silicone) & FDGU (Silicone/PUR) -55 °C Wind Specification
Standards	TICW/01 & GB/T 29631 FDGG (Silicone/Silicone) & FDGU (Silicone/PUR) -55 °C Wind Specification

Core / conductor construction	Class 5 Tinned Flexible Copper Conductors — Stranded tinned copper cores for single- and multi-core circuits
Continuous operating temperature	−55…+125 °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 TICW/01 & GB/T 29631 FDGG (Silicone/Silicone) & FDGU (Silicone/PUR) -55 °C Wind 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
FDGG / FDGU 1.8/3 kV Ultra-Cold Construction Schedule (−55…+125 °C) 3 sizes						
☐ **FDGG 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**
☐ **FDGG 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**
☐ **FDGG 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 TICW/01 & GB/T 29631 FDGG (Silicone/Silicone) & FDGU (Silicone/PUR) -55 °C Wind 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 kV (0.6/1 kV) (320 A Cu)**	**−55…+125 °C**
1 × 185 mm² (or 4G50 mm² / 373 kcmil)	**0.11**	**1.8/3 kV (0.6/1 kV) (495 A Cu)**	**−55…+125 °C**
1 × 300 mm² (or 1×535/777 kcmil)	**0.06**	**1.8/3 kV (0.6/1 kV) (680 A Cu)**	**−55…+125 °C**

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

Standards and approvals

- TICW/01 / GB/T 29631 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/fdgg-fdgu-1-8-3kv-silicone-pur-ultra-cold-cable

Typical values for this cable type, based on TICW/01 & GB/T 29631 FDGG (Silicone/Silicone) & FDGU (Silicone/PUR) -55 °C Wind Specification. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.