



power connection cable series

(N)TSCGEHXOEU

Three-Core Torsion-Resistant Wind-Turbine MV/HV

DIN VDE 0250-813 6/10–20/35 kV (38/66 kV) $\pm 100^\circ/\text{m}$ torsion-resistant wind MV/HV cable



(N)TSCGEHXOEU Wind MV/HV

 $\pm 100^\circ/\text{m}$ Nacelle Loop Torsion

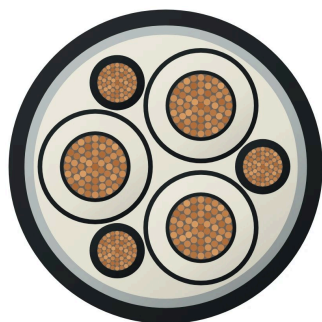
12/20 kV · 18/30 kV · 38/66 kV

Application

(N)TSCGEHXOEU Three-Core Torsion-Resistant Wind-Turbine MV/HV Cable (6/10 kV, 12/20 kV, 18/30 kV, 20/35 kV & 38/66 kV; $3 \times 25 \text{ mm}^2$ to $3 \times 185 \text{ mm}^2$) engineered per DIN VDE 0250-813 and IEC 61400 for onshore and offshore wind-turbine.

Typical uses: Offshore Wind Turbines (8–18 MW · 33 kV & 66 kV Array), Onshore Wind Turbine Nacelle-to-Tower MV Drip Loops, Floating Offshore Wind Dynamic Tower Risers, Tidal Stream & Wave Energy Nacelle Yaw Loops, Vertical Shaft & Swivel-Boom Medium-Voltage Drops

Construction



Cross-section, not to scale

- 1 3 × Torsion-optimized Class 5 / Class 6 tinned copper conductors
- 2 Triple-extruded inner & outer semiconducting elastomer screens ('G')
- 3 3G13 Ethylene Propylene Rubber (EPR) MV/HV dielectric
- 4 3 × Split tinned copper interstitial earth cores ('E')
- 5 HX-OEU Halogen-Free, Oil- & Flame-Resistant double sheath

Technical data

Typical values

Rated voltage tiers (U ₀ /U)	6/10 kV · 12/20 kV · 18/30 kV · 20/35 kV · 38/66 kV (U _{max} up to 72.5 kV)	Routine AC test & PD	29 kV (12/20) · 43 kV (18/30) · 50 kV (20/35) · 95 kV (38/66) + PD ≤ 5 pC
Max. DC resistance @ 20 °C	0.393 Ω/km (50) · 0.277 Ω/km (70) · 0.206 Ω/km (95) · 0.132 Ω/km (150)	Free-air ampacity (30 °C)	215 A (3×50) · 265 A (3×70) · 320 A (3×95) · 415 A (3×150)
Continuous conductor temp.	+90 °C continuous operation	Short-circuit temperature	+250 °C (up to 5 s)
Operating ambient range	-40 °C to +80 °C (qualified for -40 °C cold torsion)	Torsion capability	±100° / m (up to ±150° / m) over free loop for ≥ 10,000 cycles
Min. bend radius	6 × OD (fixed tower clamping) · 10 × OD (dynamic nacelle loop)	Max. vertical tensile load	20 N / mm ² of total copper cross-section (self-supporting drop)
Tower fire & smoke safety	IEC 60332-3-24 Cat C bunched flame · IEC 60754-1/2 LSZH · IEC 61034-2	Hydraulic oil & grease	EN 60811-404 resistant to turbine gearbox & yaw hydraulic oils ('OEU')
Offshore salt fog & ozone	ISO 9227 salt-spray, UV and high-voltage ozone resistant	Standards	DIN VDE 0250-813 · IEC 60502-2 · IEC 61400 wind turbine series

Sizes

6 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

VDE designation	3 Phase + 3 Split Earth	Outer Ø ≈ mm	Weight ≈ kg/km	Max. pull kN	Air 30°C A
18/30 kV (U _{max} 36 kV) 3-Core Wind Loop 4 sizes					
☐ (N)TSCGEHXOEU 3×35+3×25/3E 18/30kV	3 × 35 mm ² + 3 × 8.3 mm ² E	58.5	4,150	2.1	175
☐ (N)TSCGEHXOEU 3×50+3×25/3E 18/30kV	3 × 50 mm ² + 3 × 8.3 mm ² E	61.8	4,780	3.0	215
☐ (N)TSCGEHXOEU 3×70+3×35/3E 18/30kV	3 × 70 mm ² + 3 × 11.7 mm ² E	65.8	5,690	4.2	265
☐ (N)TSCGEHXOEU 3×95+3×50/3E 18/30kV	3 × 95 mm ² + 3 × 16.7 mm ² E	70.2	6,780	5.7	320
20/35 kV (U _{max} 42 kV) 3-Core Offshore Wind 2 sizes					
☐ (N)TSCGEHXOEU 3×120+3×70/3E 20/35kV	3 × 120 mm ² + 3 × 23.3 mm ² E	76.5	8,240	7.2	370
☐ (N)TSCGEHXOEU 3×150+3×70/3E 20/35kV	3 × 150 mm ² + 3 × 23.3 mm ² E	80.8	9,480	9.0	415

– Also available in 6/10 kV, 12/20 kV and 38/66 kV (offshore 66 kV array voltage) configurations.

Standards and approvals

- ✓ DIN VDE 0250-813 Compliant
- ✓ IEC 60332-3-24 & IEC 60754-2
- ✓ Offshore Wind Qualified

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/three-core-torsion-resistant-wind-turbine-mv-hv-cable



Typical values for this cable type, based on DIN VDE 0250-813 / IEC 60502-2 / IEC 61400. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.