



Dynamic MV inter-array submarine cable

Dynamic Inter-Array Cable

33 kV & 66 kV dynamic three-core submarine cable for floating offshore wind turbines

IEC 63026

33 kV / 66 kV

Floating Wind

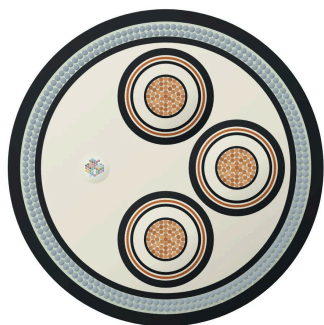
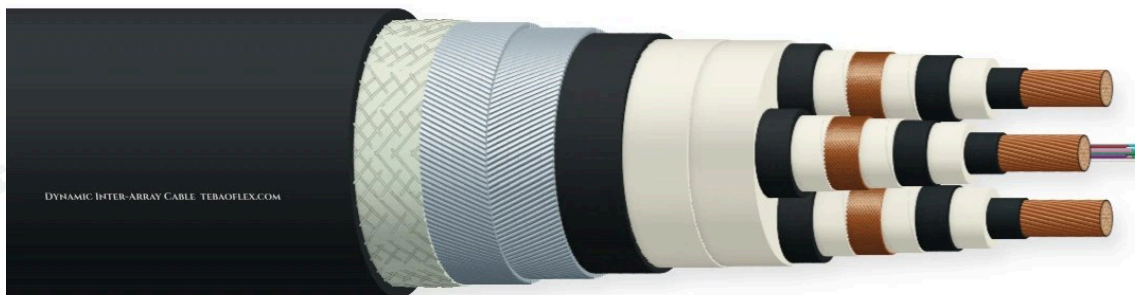


Application

Dynamic medium-voltage (18/30(36) kV and 36/66(72.5) kV) three-core submarine inter-array cable qualified to IEC 63026 and CIGRE TB 610/722 for floating offshore wind turbines (FOWT) in lazy-wave and tethered-wave water-column suspension.

Typical uses: Floating Offshore Wind (FOWT), Subsea Substation Tie-Backs, Floating Oil & Gas Electrification, Wave & Tidal Array Export, Deepwater Dynamic Risers

Construction



Cross-section, not to scale

- 1 Longitudinally water-blocked conductor
- 2 Triple-extruded WTR-XLPE / EPR system
- 3 Fatigue-resistant radial water barrier
- 4 Dual interstitial 316L FIMT optical units
- 5 Contra-helical dynamic wire armour
- 6 Extruded HDPE outer serving

Technical data

Typical values

Rated voltage U0/U (Um) 18/30 (36) kV & 36/66 (72.5) kV AC

Partial discharge at 2 × U0 ≤ 5 pC (no detectable discharge)

Current rating (3 cores) 285 A (95 mm²) to 920 A (800 mm²) in seawater

Short-circuit temperature +250 °C (up to 5 s)

Design water depth 50 m to 1,000 m (lazy-wave / tethered-wave)

Min. bend radius (dynamic) 20 × OD (guided by bend stiffener)

Max. installation tension 120 kN to 450 kN (per CIGRE TB 610)

Attenuation (1310 / 1550 nm) ≤ 0.35 dB/km / ≤ 0.21 dB/km

Longitudinal water block Swellable conductor & screen tapes (IEC 60840 Annex G)

Standards IEC 63026

AC routine test voltage 45 kV AC (33 kV) / 90 kV AC (66 kV) for 30 min

Impulse withstand (BIL) 170 kVp (33 kV) · 325 kVp (66 kV)

Max. conductor temperature +90 °C continuous

Seawater & seabed ambient −5 °C to +35 °C

Fatigue life qualification ≥ 10⁷ bending cycles (25–30 year metocean spectrum)

Min. bend radius (static) 12 × OD (seabed & carousel storage)

Fibre type & count 2 × 24 or 2 × 48 ITU-T G.652.D SM + MM DTS fibres

Radial water barrier Corrugated welded Cu/CuNi sheath (100 % impervious)

Marine growth & abrasion Extruded HDPE outer jacket for clamp/stiffener zones

Sizes

14 standard constructions

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

Order designation	Cores × mm ² + Optical	Voltage kV	Nominal OD mm	Copper kg/km	Weight in air kg/km	Weight in sea kg/km	Max pull kN	Dynamic MBR mm
33 kV (18/30(36) kV) Dynamic Three-Core Inter-Array Cables 7 sizes								
☐ DIAC-33-3X95-48FO	3 × 95 mm ² + 2×24FO	18/30	112.0	3,180	21,400	11,300	150	2,240
☐ DIAC-33-3X150-48FO	3 × 150 mm ² + 2×24FO	18/30	121.5	4,760	25,800	13,900	185	2,430
☐ DIAC-33-3X240-48FO	3 × 240 mm ² + 2×24FO	18/30	134.0	7,350	32,900	18,400	230	2,680
☐ DIAC-33-3X300-48FO	3 × 300 mm ² + 2×24FO	18/30	141.5	9,080	37,600	21,400	260	2,830
☐ DIAC-33-3X400-48FO	3 × 400 mm ² + 2×24FO	18/30	151.0	11,960	44,500	26,100	300	3,020
☐ DIAC-33-3X500-48FO	3 × 500 mm ² + 2×24FO	18/30	160.5	14,840	51,800	31,000	340	3,210
☐ DIAC-33-3X630-48FO	3 × 630 mm ² + 2×24FO	18/30	171.0	18,580	60,900	37,400	390	3,420
66 kV (36/66(72.5) kV) Dynamic Three-Core Inter-Array Cables 7 sizes								
☐ DIAC-66-3X150-48FO	3 × 150 mm ² + 2×24FO	36/66	142.0	4,920	31,800	15,600	210	2,840
☐ DIAC-66-3X240-48FO	3 × 240 mm ² + 2×24FO	36/66	154.5	7,520	39,400	20,200	255	3,090
☐ DIAC-66-3X300-48FO	3 × 300 mm ² + 2×24FO	36/66	162.0	9,260	44,600	23,500	285	3,240
☐ DIAC-66-3X400-48FO	3 × 400 mm ² + 2×24FO	36/66	172.5	12,150	52,400	28,600	330	3,450
☐ DIAC-66-3X500-48FO	3 × 500 mm ² + 2×24FO	36/66	182.0	15,040	60,200	33,800	370	3,640
☐ DIAC-66-3X630-48FO	3 × 630 mm ² + 2×24FO	36/66	193.5	18,800	70,100	40,500	415	3,870
☐ DIAC-66-3X800-48FO	3 × 800 mm ² + 2×24FO	36/66	206.0	23,680	82,400	48,900	460	4,120

– Max pull (kN) represents the allowable installation and extreme storm axial tension with contra-helical steel wire armour per CIGRE TB 610.

Standards and approvals

- ✓ IEC 63026 Floating Offshore Wind Qualification
- ✓ CIGRE TB 610 / TB 722 & DNV-RP-F401 Compliant

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

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Email

info@tebaoflex.com

Web

tebaoflex.com/cables/floating-offshore-wind-dynamic-medium-voltage-inter-array-subsea-cable



Typical values for this cable type, based on IEC 63026 / CIGRE TB 610 / CIGRE TB 722. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.