submarine & offshore power composite cable

6–170kV Submarine Power

6–170 kV AC XLPE/EPR Lead Water-Barrier Steel/Copper-Armoured Submarin

IEC 60502-2 / IEC 60840 Submarine · 6 kV – 170 kV · Submarine & offshore power



IEC 60502-2 / IEC 60840 Submarine | **6 kV – 170 kV (-20 to +90 °C)** | **PP / Jute Protective Outer Serving**

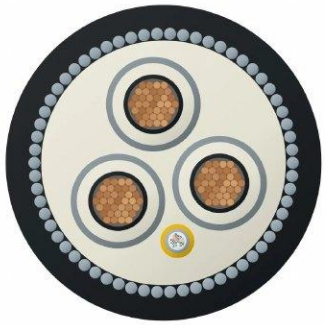
Application

6–170 kV AC XLPE/EPR Lead Water-Barrier Steel/Copper-Armoured Submarine Power Transmission Cable (IEC 60502-2 / IEC 60840 Submarine) engineered for 6 kV – 170 kV service across -20 to +90 °C (min. bend radius 15 × OD).

Typical uses: Offshore Wind Inter-Array & Export Submarine Links, Subsea Island & Platform HV/MV Power Interconnects, Offshore Oil & Gas Drilling Rigs & FPSOs, Commercial Vessels, Polar Ships & Marine Propulsion

Construction





Cross-section, not to scale

1. 6-170 kV XLPE / EPR Power Cores
2. Lead Water-Blocking Sheath & Optical Uni
3. PE Inner Bedding & Steel Wire Armour
4. PP / Jute Protective Outer Serving

Technical data

Typical values

Rated voltage / transmission duty	6 kV – 170 kV (IEC 60502-2 & IEC 60840 6–170 kV XLPE/EPR Lead-Sheathed Submarine Power Specification)	**Core / conductor construction**	6-170 kV XLPE / EPR Power Cores — Stranded copper/aluminum conductors with triple-extruded dielectric
Primary dielectric / buffering	Lead Water-Blocking Sheath & Optical Unit — Extruded lead moisture barrier + interstitial fiber-optic unit	**Continuous operating temperature**	−20...+90 °C (subsea & offshore duty)
Hydrostatic & thermal stability	Verified thermal and hydrostatic stability per IEC 60502-2 & IEC 60840 6–170 kV XLPE/EPR Lead-Sheathed Submarine Power Specification	**Storage & transport temperature**	−40...+80 °C on export wooden/steel winch reel
Outer protection / armouring	PP / Jute Protective Outer Serving — Abrasion-resistant polypropylene yarn outer serving	**Minimum bending radius**	15 × OD
Armour, strength member & mechanical duty	PE Inner Bedding & Steel Wire Armour — Polyethylene inner sheath + galvanized steel wire armour	**Seawater, hydrostatic & hydrolysis resistance**	Engineered for continuous seawater immersion, pressure cycling and hydrolysis resistance per IEC 60502-2 & IEC 60840 6–170 kV XLPE/EPR Lead-Sheathed Submarine Power Specification
Oil, drilling mud & abrasion resistance	Resistant to marine hydraulic oils, salt mist, winch sheave wear and seabed abrasion per IEC 60502-2 & IEC 60840 6–170 kV XLPE/EPR Lead-Sheathed Submarine Power Specification	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	IEC 60502-2 & IEC 60840 6–170 kV XLPE/EPR Lead-Sheathed Submarine Power 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	Breaking / tensile kN ≈	Min. bend R mm
6–170kV Submarine Power Construction Schedule (−20...+90 °C) 3 sizes						
☐ 6–170kV Submarine Power Config A	3×25–50 mm² (or 3P+FO Composite)	Compacted / Class 5 Cu/SnCu + FO	32.0	1,850	85.0	380
☐ 6–170kV Submarine Power Config B	3×95–150 mm² (or Heavy EOM)	Compacted / Class 5 Cu/SnCu + FO	48.5	4,280	130.0	580
☐ 6–170kV Submarine Power Config C	3×240–400 mm² (or Trunk HV/MV)	Compacted Cu + Lead/Armour + FO	78.0	9,650	210.0	950

– Custom core cross-sections, pair/fibre counts, armour breaking loads and continuous winch/seabed lengths available per IEC 60502-2 & IEC 60840 6–170 kV XLPE/EPR Lead-Sheathed Submarine Power Specification.

Electrical, optical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} / Atten. Ω/km or dB/km	Rating / Impedance	Operating temp.
3×25–50 mm² (or 3P+FO Composite)	0.49	6 kV – 170 kV (Subsea/MV)	−20...+90 °C
3×95–150 mm² (or Heavy EOM)	0.19	6 kV – 170 kV (Subsea/MV)	−20...+90 °C
3×240–400 mm² (or Trunk HV/MV)	0.07	6 kV – 170 kV (Trunk/HV)	−20...+90 °C

– Every production length undergoes routine conductor DC resistance, high-voltage dielectric or OTDR continuity and dimensional verification.

Standards and approvals

- IEC 60502-2 / IEC 60840 Submarine 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/mv-hv-xlpe-submarine-power-cable-6-170kv

Typical values for this cable type, based on IEC 60502-2 & IEC 60840 6–170 kV XLPE/EPR Lead-Sheathed Submarine Power Specification. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.