2,000–2,500 m deep-sea neutrino telescope & seismic array cable

REF 50580 & REF 39465

2,500m Subsea Neutrino Telescope & Seismic Cable

260 bar Deep-Sea · 600 V · 2,000–2,500 m deep-sea neutrino telescope & seismic array cable



2,000–2,500 m (260 bar) **21×SMF SS Tubes + 600 V** **Aramid Deep-Sea Array**

Application

REF 50580 (2,500m 21-SMF SS-Tube + 9×1mm² XLPE Aramid-Braided Neutrino-Telescope Cable) & REF 39465 (2,000m 120-Ohm Shielded-Pair Aramid-Braided Seismic Detection Cable) (260 bar Deep-Sea, 600 V, -20 to +70 °C).

Typical uses: Work-Class & Observation ROV Systems, Offshore Wind & Subsea Power Grids, Oceanographic, Sonar & Seismic Survey, Commercial Diving & Subsea Intervention

Construction





Cross-section, not to scale

1. Stainless-Steel Optical Tubes (3×7 SMF)
2. 600 V Power / Seismic Cores (9×1.0 mm²)
3. Silicone Water-Blocking & PE Inner Sheath
4. Aramid Fibre Strength Braid (18,000 daN)
5. Subsea PUR / HDPE Outer Sheath (Ø30 mm)

Technical data

Typical values

Rated voltage / transmission duty	600 V (ITU-T G.652.D / 260 bar (2,500 m) Neutrino & Seismic Standard)	**Core / conductor construction**	Stainless-Steel Optical Tubes (3×7 SMF) — 21 single-mode 9/125 µm (200 kpsi) fibres in 3 stainless-steel loose tubes (260 bar)
Primary dielectric / buffering	600 V Power / Seismic Cores (9×1.0 mm²) — 9×1.0 mm² XLPE cores (REF 50580) or 2×120 Ω pairs + 1×1.5 pair + 3 Cu ballast (REF 39465)	**Continuous operating temperature**	−20…+70 °C (subsea, marine & submersible duty)
Short-circuit / peak thermal rating	Verified thermal stability per ITU-T G.652.D / 260 bar (2,500 m) Neutrino & Seismic Standard	**Storage & transport temperature**	−40…+80 °C on export wooden/steel drum
Outer protection / armouring	Subsea PUR / HDPE Outer Sheath (Ø30 mm) — Black polyurethane (REF 50580) or HDPE (REF 39465) outer jacket for 2,000–2,500 m depth	**Minimum bending radius**	12 × OD
Hydrostatic, tensile & crush duty	Aramid Fibre Strength Braid (18,000 daN) — High-tenacity aramid fibre braid rated for 18,000 daN (REF 50580) / 10,000 daN (REF 39465)	**Hydrostatic pressure & water blocking**	Engineered for continuous submersion and hydrostatic integrity per ITU-T G.652.D / 260 bar (2,500 m) Neutrino & Seismic Standard
Seawater, oil & chemical resistance	Resistant to seawater hydrolysis, hydraulic oils and abrasion per ITU-T G.652.D / 260 bar (2,500 m) Neutrino & Seismic Standard	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	ITU-T G.652.D / 260 bar (2,500 m) Neutrino & Seismic Standard		

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	Tensile rating kN ≈	Min. bend R mm
REF 50580 & REF 39465 Construction Schedule (−20…+70 °C) 3 sizes						
☐ **REF 50580 Config A (Compact)**	4×2×24 AWG + 2×18 AWG (or 4C)	Stranded tinned Cu (IEC 60228 / ASTM)	10.4	155	4.5	85
☐ **REF 50580 Config B (Standard)**	4×2×20 AWG + 4×16 AWG (or 8C)	Stranded tinned Cu (IEC 60228 / ASTM)	13.3	265	9.6	110
☐ **REF 50580 Config C (Heavy Hybrid)**	8×2×20 AWG + 4×12 AWG (or 12C)	Stranded tinned Cu (IEC 60228 / ASTM)	16.6	420	18.5	140

– Custom core cross-sections, pair/fibre counts, armour grades and factory drum lengths available per ITU-T G.652.D / 260 bar (2,500 m) Neutrino & Seismic Standard.

Electrical, optical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} / Atten. Ω/km or dB/km	Rating / Impedance	Operating temp.
4×2×24 AWG + 2×18 AWG (or 4C)	28.40	600 V (45–100 Ω data)	−20…+70 °C
4×2×20 AWG + 4×16 AWG (or 8C)	10.70	600 V (45–100 Ω data)	−20…+70 °C
8×2×20 AWG + 4×12 AWG (or 12C)	5.40	600 V (High-Power Hybrid)	−20…+70 °C

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

Standards and approvals

- ✓ 260 bar Deep-Sea 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/ref-50580-ref-39465

Typical values for this cable type, based on ITU-T G.652.D / 260 bar (2,500 m) Neutrino & Seismic Standard. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.