subsea umbilical, ROV tether & oceanographic tow cable

RT0127 ROV Tether

RT0127 1.0–3.0 kV (Ø 24.5 mm) Aramid-Reinforced Neutrally Buoyant Elec

RT0127 Buoyant EO Tether · 1.0 kV – 3.0 kV · Subsea umbilical, rov tether &



RT0127 Buoyant EO Tether | **1.0 kV – 3.0 kV (-30 to +80 °C)** | **Yellow Polyurethane (PUR) Outer Jack**

Application

RT0127 1.0–3.0 kV (Ø 24.5 mm) Aramid-Reinforced Neutrally Buoyant Electro-Optical ROV Tether (RT0127 Buoyant EO Tether) engineered for 1.0 kV – 3.0 kV service across -30 to +80 °C (min. bend radius 8 × OD).

Typical uses: Oceanographic CTD, ADCP & Deep-Tow Surveys, Work-Class & Observation ROV / AUV Systems, Side-Scan Sonar, SAS & Towed Hydrophone Arrays, Marine 2D/3D/UHR Seismic Streamers & OBC

Construction





Cross-section, not to scale

1. 2-Fiber Single-Mode FIST Optical Tube
2. Power (2×2.0 mm²) & Signal (2×0.5 mm²) C
3. Composite Foamed Buoyancy & Aramid Braid
4. Yellow Polyurethane (PUR) Outer Jacket

Technical data

Typical values

Rated voltage / transmission duty	1.0 kV – 3.0 kV (RT0127 (Ø 24.5 mm) 1.0–3.0 kV FIST Optical + Aramid Neutrally Buoyant ROV Tether Specification)	**Core / conductor construction**	2-Fiber Single-Mode FIST Optical Tube — Central laser-welded stainless-steel tube with 2 single-mode fibers
Primary dielectric / buffering	Power (2×2.0 mm²) & Signal (2×0.5 mm²) Cores — Four copper conductors with polyolefin insulation	**Continuous operating temperature**	−30…+80 °C (subsea & offshore duty)
Hydrostatic & thermal stability	Verified thermal and hydrostatic stability per RT0127 (Ø 24.5 mm) 1.0–3.0 kV FIST Optical + Aramid Neutrally Buoyant ROV Tether Specification	**Storage & transport temperature**	−40…+80 °C on export wooden/steel winch reel
Outer protection / armouring	Yellow Polyurethane (PUR) Outer Jacket — High-visibility PUR sheath (Ø 24.5 mm, 20 kg/km weight in seawater)	**Minimum bending radius**	8 × OD
Armour, strength member & mechanical duty	Composite Foamed Buoyancy & Aramid Braid — Syntactic foam buoyancy layer + braided aramid strength member	**Seawater, hydrostatic & hydrolysis resistance**	Engineered for continuous seawater immersion, pressure cycling and hydrolysis resistance per RT0127 (Ø 24.5 mm) 1.0–3.0 kV FIST Optical + Aramid Neutrally Buoyant ROV Tether Specification
Oil, drilling mud & abrasion resistance	Resistant to marine hydraulic oils, salt mist, winch sheave wear and seabed abrasion per RT0127 (Ø 24.5 mm) 1.0–3.0 kV FIST Optical + Aramid Neutrally Buoyant ROV Tether Specification	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	RT0127 (Ø 24.5 mm) 1.0–3.0 kV FIST Optical + Aramid Neutrally Buoyant ROV Tether 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
RT0127 ROV Tether Construction Schedule (−30…+80 °C) 3 sizes						
☐ **RT0127 ROV Tether Config A**	**3×25–50 mm² (or 3P+FO Composite)**	**Compacted / Class 5 Cu/SnCu + FO**	**32.0**	**1,850**	**85.0**	**380**
☐ **RT0127 ROV Tether Config B**	**3×95–150 mm² (or Heavy EOM)**	**Compacted / Class 5 Cu/SnCu + FO**	**48.5**	**4,280**	**130.0**	**580**
☐ **RT0127 ROV Tether 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 RT0127 (Ø 24.5 mm) 1.0–3.0 kV FIST Optical + Aramid Neutrally Buoyant ROV Tether 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**	**1.0 kV – 3.0 kV (Subsea/MV)**	**−30…+80 °C**
3×95–150 mm² (or Heavy EOM)	**0.19**	**1.0 kV – 3.0 kV (Subsea/MV)**	**−30…+80 °C**
3×240–400 mm² (or Trunk HV/MV)	**0.07**	**1.0 kV – 3.0 kV (Trunk/HV)**	**−30…+80 °C**

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

Standards and approvals

- RT0127 Buoyant EO Tether 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/rt0127-buoyant-eo-rov-tether-24-5mm

Typical values for this cable type, based on RT0127 (Ø 24.5 mm) 1.0–3.0 kV FIST Optical + Aramid Neutrally Buoyant ROV Tether Specification. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.