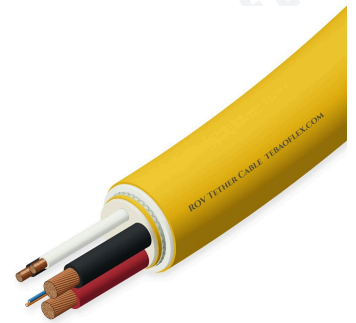




Neutrally buoyant ROV excursion tether

ROV Tether Cable

Neutrally buoyant polyaramid-reinforced electro-optical TMS-to-ROV excursion tether



ISO 13628-5

Neutrally Buoyant

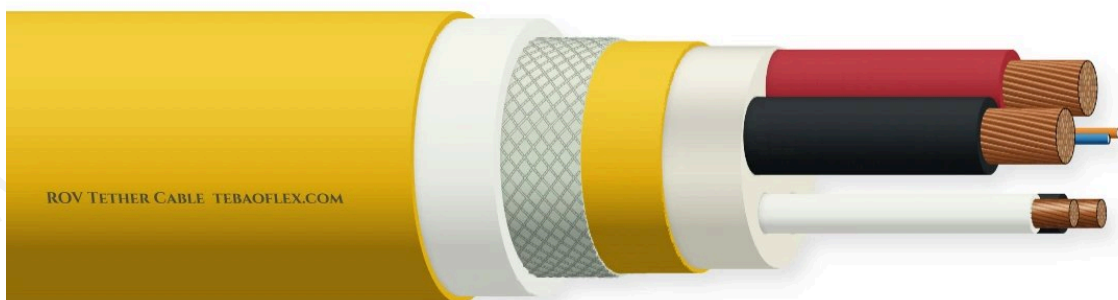
Up to 4,000 m

Application

Neutrally buoyant subsea tether engineered for Tether Management System (TMS) drums and free-swimming ROVs to 4,000 m depth, combining 1.0–3.3 kV power cores, bend-insensitive G.657.A2 fibres and torque-free polyaramid braid.

Typical uses: Work-Class TMS Excursion, Observation & Inspection ROVs, Subsea Pipeline & Platform NDT, Offshore Wind Jacket Inspection, Scientific Deep-Submergence

Construction



Cross-section, not to scale

- 1 Flexible power & signal cores
- 2 Optical fibre sub-units
- 3 Low-density dielectric
- 4 Syntactic buoyancy layer
- 5 Polyaramid tensile member
- 6 High-visibility outer jacket

Technical data

Typical values

Rated voltage	600/1000 V (Observation) · 1.8/3.0–3.3 kV (Work-Class)	AC routine test voltage	3.5 kV AC (LV) / 6.5 kV AC (3 kV grade)
Insulation resistance	≥ 500 MΩ·km at 20 °C	Conductor stranding	IEC 60228 Class 5 / Class 6 tinned copper
Telemetry impedance	100 Ω / 120 Ω screened twisted pairs	Subsea operating temperature	–5 °C to +50 °C (immersed)
Deck & TMS storage range	–30 °C to +70 °C	Max. conductor temperature	+90 °C
Specific gravity in seawater	1.00 to 1.03 (neutral to slightly negative/positive)	Design water depth	1,000 m (OBS) · 3,000 m to 4,000 m (Work-Class TMS)
Min. breaking load (MBL)	15 kN to 120 kN (polyaramid braid)	Safe working load (SWL)	3 kN to 30 kN
Min. bend radius (dynamic)	10 × OD over TMS pinch wheels & sheaves	Min. bend radius (static)	6 × OD
Fibre specification	ITU-T G.657.A2 bend-insensitive SM & OM3 MM	Fibre count	2 to 12 fibres
Attenuation (1310 / 1550 nm)	≤ 0.38 dB/km / ≤ 0.25 dB/km	Hydrostatic buoyancy retention	≤ 3 % buoyancy loss at rated depth (syntactic matrix)
Abrasion & tear resistance	DIN ISO 4649 ≤ 35 mm ³ polyether TPU skin	Water blocking	Silicone/polyisobutylene water-blocked interstices
Seawater & UV	Continuous immersion and tropical deck exposure	Standards	ISO 13628-5 / API Spec 17E

Sizes

12 standard constructions

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

Order designation	Electrical + Optical Core	Voltage kV	Nominal OD mm	Weight in air kg/km	Weight in sea kg/km	SWL kN	MBL kN	Min. bend R mm
Observation & Light Inspection ROV Tethers (0.6/1 kV) 5 sizes								
☐ RTC-OBS-2X1.5-2FO	2×1.5 + 2×2×0.34 + 2FO	1.0	9.8	76	-2	3.5	15	98
☐ RTC-OBS-2X2.5-4FO	2×2.5 + 2×2×0.5 + 4FO	1.0	12.2	118	-3	5.0	22	122
☐ RTC-OBS-3X2.5-4FO	3×2.5 + 3×2×0.5 + 4FO	1.0	14.5	166	-4	7.0	30	145
☐ RTC-OBS-3X4.0-6FO	3×4.0 + 4×2×0.5 + 6FO	1.0	16.8	224	-3	9.0	38	168
☐ RTC-OBS-4X4.0-6FO	4×4.0 + 4×2×0.75 + 6FO	1.0	18.6	276	2	11.0	45	186
Work-Class TMS Excursion Tethers (3.0–3.3 kV) 7 sizes								
☐ RTC-TMS-3X4.0-6FO	3×4.0 + 1G4.0 + 2×2×0.75 + 6FO	3.0	21.5	368	4	14.0	60	215
☐ RTC-TMS-3X6.0-8FO	3×6.0 + 1G6.0 + 3×2×0.75 + 8FO	3.0	24.8	490	5	18.0	75	248
☐ RTC-TMS-3X10-8FO	3×10 + 1G10 + 3×2×1.0 + 8FO	3.0	28.4	642	8	22.0	90	284
☐ RTC-TMS-3X10-12FO-33	3×10 + 3×4.0G + 2×2×1.0 + 12FO	3.3	30.2	725	10	24.0	100	302
☐ RTC-TMS-3X16-12FO	3×16 + 3×6.0G + 3×2×1.0 + 12FO	3.3	33.6	895	12	26.0	110	336
☐ RTC-TMS-3X25-12FO	3×25 + 3×6.0G + 4×2×1.0 + 12FO	3.3	37.2	1,105	18	30.0	125	372
☐ RTC-TMS-6X6.0-12FO	6×6.0 + 1G6.0 + 2×2×1.0 + 12FO	3.0	31.8	802	9	25.0	105	318

– Negative Weight in sea (kg/km) indicates slight positive buoyancy in 1,025 kg/m³ seawater; custom trim available for fresh water or high-salinity basins.

Standards and approvals

- ✓ ISO 13628-5 Subsea Tether Compliant
- ✓ ITU-T G.657.A2 Bend-Insensitive Optical Core

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/rov-tether-cable



Typical values for this cable type, based on ISO 13628-5 / IEC 60794-3 / IMCA R 004. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.