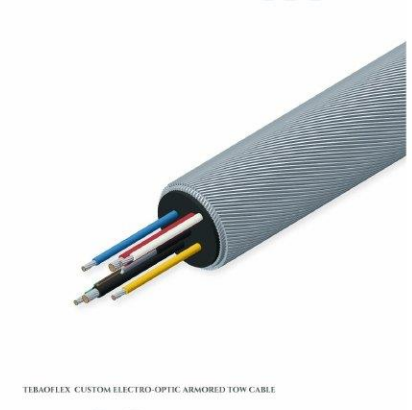
subsea ROV umbilical, AUV tether & sonar tow cable

Custom Electro-Optic Armored Tow

Cable

DNV-ST-E402 / MIL-DTL-24643 · 1.8/3 kV · Subsea rov umbilical, auv tether & sonar tow



DNV-ST-E402 / MIL-DTL-24643 | **1.8/3 kV (-40 to +85 °C)** | **Double Torque-Balanced Steel Wire Ar**

Application

Custom Electro-Optic Armored Tow Cable featuring optical fiber & 75-ohm coaxial units and double torque-balanced steel wire armour (DNV-ST-E402 / MIL-DTL-24643, 1.8/3 kV, -40 to +85 °C, min. bend radius 12 × OD).

Typical uses: Work-Class & Observation ROV Umbilicals and TMS Tethers, Offshore Aquaculture Net Cleaners & Subsea Cage Inspection, AUV, Ocean Glider & Expendable Spool-Payoff Micro-Tethers, USV Towed Sonar Arrays, Seabed Crawlers & Subsea Trenchers

Construction



TEBAOFLEX CUSTOM ELECTRO-OPTIC ARMORED TOW CABLE



Cross-section, not to scale

1. Optical Fiber & 75-Ohm Coaxial Units
2. Flexible Copper Power & Control Cores
3. Double Torque-Balanced Steel Wire Armour

Technical data

Typical values

Rated voltage / operating system	1.8/3 kV (DNV-ST-E402 Custom Electro-Optic Double-Armored Subsea Tow Specification)	**Core / conductor construction**	Optical Fiber & 75-Ohm Coaxial Units — Central stainless-steel optical tube + shielded coaxial video core
Primary dielectric / optical buffer	Flexible Copper Power & Control Cores — Stranded copper conductors with High-stiffness polypropylene (PP) core insulation	**Continuous operating temperature**	−40…+85 °C (submerged seawater & topside deck service)
Hydrostatic & thermal cycling endurance	Verified cold-bend and wet dielectric stability across −40…+85 °C per DNV-ST-E402 Custom Electro-Optic Double-Armored Subsea Tow Specification	**Storage & transport temperature**	−40…+80 °C on export wooden/steel cable drum
Outer jacket / sheath protection	Double Torque-Balanced Steel Wire Armour — Contra-helical high-tensile galvanized steel wire armour	**Minimum bending radius**	12 × OD
Reinforcement / screen / bedding layer	Flexible Copper Power & Control Cores — Stranded copper conductors with High-stiffness polypropylene (PP) core insulation	**Seawater, hydrolysis & oil resistance**	Resistant to permanent seawater immersion, hydrolysis, hydraulic oil and bio-fouling per DNV-ST-E402 Custom Electro-Optic Double-Armored Subsea Tow Specification
Hydrostatic pressure & water blocking	Radial and longitudinal water-blocking integrity verified per DNV-ST-E402 Custom Electro-Optic Double-Armored Subsea Tow Specification	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	DNV-ST-E402 Custom Electro-Optic Double-Armored Subsea Tow 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	Max. pulling kN ≈	Min. bend R mm
Custom Electro-Optic Armored Tow Construction Schedule (−40…+85 °C) 3 sizes						
☐ Custom Electro-Optic Armored Tow 3×6 + 4×SM + 2T	3×6 mm² Power + 4×SM Fiber + 2×2×0.75	SnCu + Gel Tube + Contra-Helical GSWA	20.8	1,280	115.0	250
☐ Custom Electro-Optic Armored Tow 3×10 + 6×SM + 4	3×10 mm² Power + 6×SM Fiber + 4×2×0.75	SnCu + SS Tube + Double Steel Armour	25.4	1,890	185.0	305
☐ Custom Electro-Optic Armored Tow 3×16 + 8×SM/MM	3×16 mm² Power + 8×SM/MM + 3×2×1.0	SnCu + SS Tube + Heavy GSWA Pack	30.2	2,680	260.0	365

– Custom core counts, optical fiber channels, wet-mate terminations and continuous winch lengths available per DNV-ST-E402 Custom Electro-Optic Double-Armored Subsea Tow Specification.

Electrical, optical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} Ω/km	Rating / Impedance / Load	Operating temp.
3×6 mm² Power + 4×SM Fiber + 2×2×0.75	3.30	1.8/3 kV · 115 kN MBS	−40…+85 °C
3×10 mm² Power + 6×SM Fiber + 4×2×0.75	1.91	1.8/3 kV · 185 kN MBS	−40…+85 °C
3×16 mm² Power + 8×SM/MM + 3×2×1.0	1.21	1.8/3 kV · 260 kN MBS	−40…+85 °C

– Every production length undergoes routine conductor DC resistance / OTDR optical attenuation, AC dielectric and dimensional verification.

Standards and approvals

- DNV-ST-E402 / MIL-DTL-24643 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/custom-electro-optic-armored-tow-cable

Typical values for this cable type, based on DNV-ST-E402 Custom Electro-Optic Double-Armored Subsea Tow Specification. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.