subsea umbilical, ROV tether & oceanographic tow cable

Dipping Sonar EO

600 V Helicopter & USV Dipping Sonar Aramid-Braided High-Cycle Electro

MIL-DTL / Dipping Sonar EO · 600 V · Subsea umbilical, rov tether & oceanographic tow



MIL-DTL / Dipping Sonar EO | 600 V (-40 to +85 °C) | Abrasion-Resistant PUR Outer Sheath

Application

600 V Helicopter & USV Dipping Sonar Aramid-Braided High-Cycle Electro-Optical Reeling Cable featuring bend-insensitive optical unit (4×fiber) and abrasion-resistant pur outer sheath (MIL-DTL / Dipping Sonar EO, 600 V, -40 to +85 °C).

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. Bend-Insensitive Optical Unit (4×Fiber)
2. High-Flex Copper-Alloy Conductors (6 Cor
3. High-Density Aramid Braid Strength Layer
4. Abrasion-Resistant PUR Outer Sheath

Technical data

Typical values

Rated voltage / transmission duty	600 V (Airborne & USV Dipping Sonar High-Cycle Aramid Electro-Optical Reeling Specification)
Primary dielectric / buffering	High-Flex Copper-Alloy Conductors (6 Cores) — Fine-stranded copper-alloy cores with thin-wall FEP/polyolefin insulation
Hydrostatic & thermal stability	Verified thermal and hydrostatic stability per Airborne & USV Dipping Sonar High-Cycle Aramid Electro-Optical Reeling Specification
Outer protection / armouring	Abrasion-Resistant PUR Outer Sheath — Smooth low-drag polyurethane jacket for dipping sonar deployment
Armour, strength member & mechanical duty	High-Density Aramid Braid Strength Layer — Non-metallic high-modulus aramid braid for high-cycle winch reeling
Oil, drilling mud & abrasion resistance	Resistant to marine hydraulic oils, salt mist, winch sheave wear and seabed abrasion per Airborne & USV Dipping Sonar High-Cycle Aramid Electro-Optical Reeling Specification
Standards	Airborne & USV Dipping Sonar High-Cycle Aramid Electro-Optical Reeling Specification
Core / conductor construction	Bend-Insensitive Optical Unit (4×Fiber) — Central tight-buffered optical unit for high-speed acoustic telemetry
Continuous operating temperature	−40…+85 °C (subsea & offshore duty)
Storage & transport temperature	−40…+80 °C on export wooden/steel winch reel
Minimum bending radius	8 × OD
Seawater, hydrostatic & hydrolysis resistance	Engineered for continuous seawater immersion, pressure cycling and hydrolysis resistance per Airborne & USV Dipping Sonar High-Cycle Aramid Electro-Optical Reeling Specification
RoHS & REACH compliance	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant

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
Dipping Sonar EO Construction Schedule (−40…+85 °C) 3 sizes						
☐ **Dipping Sonar EO 4–12F EOM/Sub**	4–12 × ITU-T G.652D / G.654E SM (+ Power)	Laser-welded SS FIMT + Steel/Aramid Armour	8.2	260	48.0	125
☐ **Dipping Sonar EO 24–48F EOM/Sub**	24–48 × ITU-T G.652D / G.654E SM (+ Power)	Laser-welded SS FIMT + Contra-Helical Steel	17.5	680	120.0	260
☐ **Dipping Sonar EO 96–192F Trunk**	96–192 × ITU-T G.654E / G.652D Submarine	SS Tube + Steel Vault + Cu Tube + DA Armour	28.0	1,650	300.0	420

– Custom core cross-sections, pair/fibre counts, armour breaking loads and continuous winch/seabed lengths available per Airborne & USV Dipping Sonar High-Cycle Aramid Electro-Optical Reeling Specification.

Electrical, optical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} / Atten. Ω/km or dB/km	Rating / Impedance	Operating temp.
4–12 × ITU-T G.652D / G.654E SM (+ Power)	0.35	≤0.35 dB/km @ 1310 nm	−40…+85 °C
24–48 × ITU-T G.652D / G.654E SM (+ Power)	0.21	≤0.21 dB/km @ 1550 nm	−40…+85 °C
96–192 × ITU-T G.654E / G.652D Submarine	0.18	≤0.18 dB/km @ 1550 nm	−40…+85 °C

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

Standards and approvals

- MIL-DTL / Dipping Sonar EO 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/dipping-sonar-aramid-eo-cable

Typical values for this cable type, based on Airborne & USV Dipping Sonar High-Cycle Aramid Electro-Optical Reeling Specification. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.