subsea ROV umbilical, AUV tether & sonar tow cable

Subsea-LED Power + DMX

Subsea-LED Submersible LED Lighting Power & DMX Cable

IEC 60598-2-18 / ANSI E1.11 · 600/1,000 V · Subsea rov umbilical, auv tether & sonar



IEC 60598-2-18 / ANSI E1.11 | 600/1,000 V (-40 to +80 °C) | Subsea / Marine Outer Protective She

Application

Subsea-LED Submersible LED Lighting Power & DMX Cable featuring power supply conductors (4 cores) and subsea / marine outer protective sheath (IEC 60598-2-18 / ANSI E1.11, 600/1,000 V, -40 to +80 °C, min. bend radius 6 × 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





Cross-section, not to scale

1. Power Supply Conductors (4 Cores)
2. Shielded Data Twisted Pairs (4×2)
3. Subsea / Marine Outer Protective Sheath

Technical data

Typical values

Rated voltage / operating system	600/1,000 V (IEC 60598-2-18 & ANSI E1.11 DMX512 Submersible LED Aquaculture Cable Standard)	**Core / conductor construction**	Power Supply Conductors (4 Cores) — Stranded copper power cores with Ethylene-propylene rubber (EPR/EPDM) insulation
Primary dielectric / optical buffer	Shielded Data Twisted Pairs (4×2) — Impedance-controlled twisted pairs for Ethernet / RS-485 / DMX	**Continuous operating temperature**	−40…+80 °C (submerged seawater & topside deck service)
Hydrostatic & thermal cycling endurance	Verified cold-bend and wet dielectric stability across −40…+80 °C per IEC 60598-2-18 & ANSI E1.11 DMX512 Submersible LED Aquaculture Cable Standard	**Storage & transport temperature**	−40…+80 °C on export wooden/steel cable drum
Outer jacket / sheath protection	Subsea / Marine Outer Protective Sheath — Black hydrolysis- & abrasion-resistant marine Polyurethane (PUR) outer sheath	**Minimum bending radius**	6 × OD
Reinforcement / screen / bedding layer	Shielded Data Twisted Pairs (4×2) — Impedance-controlled twisted pairs for Ethernet / RS-485 / DMX	**Seawater, hydrolysis & oil resistance**	Resistant to permanent seawater immersion, hydrolysis, hydraulic oil and bio-fouling per IEC 60598-2-18 & ANSI E1.11 DMX512 Submersible LED Aquaculture Cable Standard
Hydrostatic pressure & water blocking	Radial and longitudinal water-blocking integrity verified per IEC 60598-2-18 & ANSI E1.11 DMX512 Submersible LED Aquaculture Cable Standard	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	IEC 60598-2-18 & ANSI E1.11 DMX512 Submersible LED Aquaculture Cable 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	Max. pulling kN ≈	Min. bend R mm
Subsea-LED Power + DMX Construction Schedule (−40…+80 °C) 3 sizes						
☐ **Subsea-LED Power + DMX 2×2×0.50 mm²**	**2 × 2 × 0.50 mm² (20 AWG) + Vent/Drain**	**Stranded SnCu + Foil/TCWB + Subsea PUR**	**8.4**	**98**	**2.5**	**50**
☐ **Subsea-LED Power + DMX 4×2×0.50 + 2×1.5**	**4 × 2 × 0.50 + 2 × 1.5 mm² Hybrid**	**Stranded SnCu + Individual/Overall Shield**	**11.8**	**195**	**5.2**	**70**
☐ **Subsea-LED Power + DMX 4×2×0.75 + 4×2.5**	**4 × 2 × 0.75 + 4 × 2.5 mm² Subsea**	**Stranded SnCu + Aramid/Armour + PUR**	**15.2**	**360**	**12.0**	**95**

– Custom core counts, optical fiber channels, wet-mate terminations and continuous winch lengths available per IEC 60598-2-18 & ANSI E1.11 DMX512 Submersible LED Aquaculture Cable Standard.

Electrical, optical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} Ω/km	Rating / Impedance / Load	Operating temp.
2 × 2 × 0.50 mm² (20 AWG) + Vent/Drain	**39.00**	**600/1,000 V (4–20 mA / DO)**	**−40…+80 °C**
4 × 2 × 0.50 + 2 × 1.5 mm² Hybrid	**39.00**	**600/1,000 V (CTD / Multi-Sensor)**	**−40…+80 °C**
4 × 2 × 0.75 + 4 × 2.5 mm² Subsea	**26.00**	**600/1,000 V (ROV / Camera / LED)**	**−40…+80 °C**

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

Standards and approvals

- IEC 60598-2-18 / ANSI E1.11 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/subsea-led-submersible-led-lighting-power-dmx-cable

Typical values for this cable type, based on IEC 60598-2-18 & ANSI E1.11 DMX512 Submersible LED Aquaculture Cable Standard. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.