Subsea electro-optical FIMT/FIPT ROV hybrid cable

# 18XM522 & 14XM523

## 1,000 V Subsea Electro-Optical ROV Cable

IEC 60794 / 60228 · 0.6/1 kV · Subsea electro-optical fimt/fipt rov hybrid cable

1,000 V Hybrid ROV | 4SM + 4MM FIMT/FIPT | Water-Blocked PUR

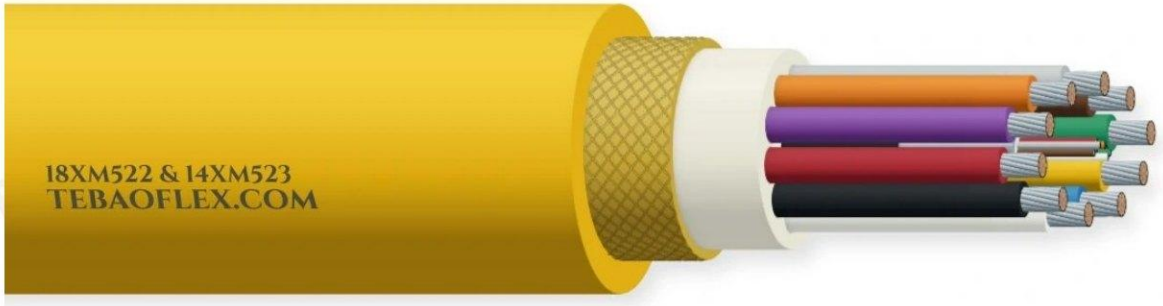



## Application

18XM522 & 14XM523 1,000 V 10-Core HDPE Power & FIMT/FIPT Singlemode/Multimode Optical Fiber Water-Blocked PUR Subsea Hybrid Cable (IEC 60794 / 60228, 0.6/1 kV, -30 to +80 °C, min. bend radius 10 × OD).

**Typical uses:** Work-Class & Observation ROV Systems, Offshore Wind & Subsea Power Grids, Oceanographic, Sonar & Seismic Survey, Commercial Diving & Subsea Intervention

## Construction






Cross-section, not to scale

1. FIMT / FIPT Optical Core (4SM + 4MM)
2. 1,000 V HDPE Power Cores (10×0.50 / 0.34)
3. SIWB / SWWB Water-Blocking System
4. Aramid Braided Strength Member (480 kg)
5. Subsea Polyurethane Jacket (Ø11.2 mm)

## Technical data

Typical values

| | | | |
|---|---|---|---|
| **Rated voltage / transmission duty** | 0.6/1 kV (IEC 60794-1-2 / IEC 60228 Subsea Hybrid Standard) | **Core / conductor construction** | FIMT / FIPT Optical Core (4SM + 4MM) — Central stainless-steel tube FIMT (18XM522) or plastic tube FIPT (14XM523) optical unit |
| **Primary dielectric / buffering** | 1,000 V HDPE Power Cores (10×0.50 / 0.34) — Ten stranded tinned copper conductors with 1,000 V high-density polyethylene insulation | **Continuous operating temperature** | −30…+80 °C (subsea, marine & submersible duty) |
| **Short-circuit / peak thermal rating** | Verified thermal stability per IEC 60794-1-2 / IEC 60228 Subsea Hybrid Standard | **Storage & transport temperature** | −40…+80 °C on export wooden/steel drum |
| **Outer protection / armouring** | Subsea Polyurethane Jacket (Ø11.2 mm) — Hydrolysis-, UV- and cut-resistant marine polyurethane (PUR) outer sheath | **Minimum bending radius** | 10 × OD |
| **Hydrostatic, tensile & crush duty** | Aramid Braided Strength Member (480 kg) — High-modulus synthetic fiber braid rated for 480 kg (18XM522) / 320 kg (14XM523) | **Hydrostatic pressure & water blocking** | Engineered for continuous submersion and hydrostatic integrity per IEC 60794-1-2 / IEC 60228 Subsea Hybrid Standard |
| **Seawater, oil & chemical resistance** | Resistant to seawater hydrolysis, hydraulic oils and abrasion per IEC 60794-1-2 / IEC 60228 Subsea Hybrid Standard | **RoHS & REACH compliance** | RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant |
| **Standards** | IEC 60794-1-2 / IEC 60228 Subsea Hybrid 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 | Tensile rating kN ≈ | Min. bend R mm |
|---|---|---|---|---|---|---|
| **18XM522 & 14XM523 Construction Schedule (−30…+80 °C)** 3 sizes | | | | | | |
| ☐ 18XM522 Config A (Compact) | 4×2×24 AWG + 2×18 AWG (or 4C) | Stranded tinned Cu (IEC 60228 / ASTM) | 10.4 | 155 | 4.5 | 85 |
| ☐ 18XM522 Config B (Standard) | 4×2×20 AWG + 4×16 AWG (or 8C) | Stranded tinned Cu (IEC 60228 / ASTM) | 13.3 | 265 | 9.6 | 110 |
| ☐ 18XM522 Config C (Heavy Hybrid) | 8×2×20 AWG + 4×12 AWG (or 12C) | Stranded tinned Cu (IEC 60228 / ASTM) | 16.6 | 420 | 18.5 | 140 |

– Custom core cross-sections, pair/fibre counts, armour grades and factory drum lengths available per IEC 60794-1-2 / IEC 60228 Subsea Hybrid Standard.

## Electrical, optical & thermal parameters

3 sizes

| Configuration | Max. DC $R_{20}$ / Atten. Ω/km or dB/km | Rating / Impedance | Operating temp. |
|---|---|---|---|
| 4×2×24 AWG + 2×18 AWG (or 4C) | 28.40 | 0.6/1 kV (45–100 Ω data) | −30…+80 °C |
| 4×2×20 AWG + 4×16 AWG (or 8C) | 10.70 | 0.6/1 kV (45–100 Ω data) | −30…+80 °C |
| 8×2×20 AWG + 4×12 AWG (or 12C) | 5.40 | 0.6/1 kV (High-Power Hybrid) | −30…+80 °C |

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

## Standards and approvals

- IEC 60794 / 60228 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/18xm522-14xm523**

Typical values for this cable type, based on IEC 60794-1-2 / IEC 60228 Subsea Hybrid Standard. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.