6,000 m deepwater electro-optical ROV & intervention cable

EO FM021814

6,000m 600V–4.0kV Deepwater Electro-Optical Umbilical

ITU-T G.652.D / Subsea · 3.6/6 kV · 6,000 m deepwater electro-optical rov &

600 V – 4.0 kV DC | 6,000 m Deepwater EO | 200 kpsi OS2 Optical

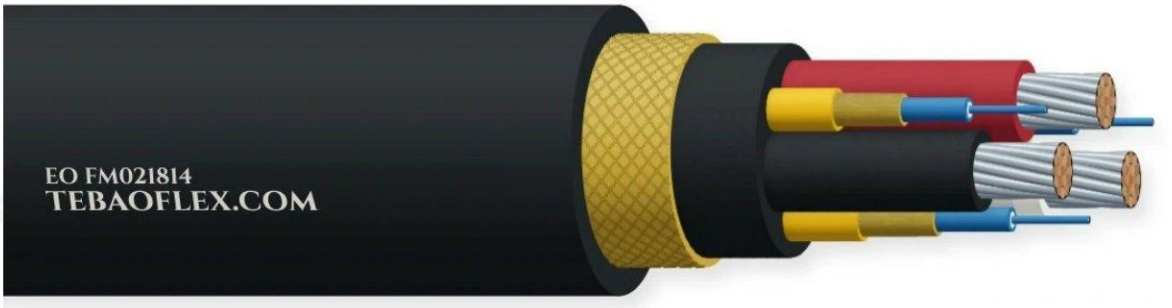


Application

Subsea EO (FM021814-1 to FM021814-10) 6,000m Deepwater 600V–4.0kV Electro-Optical Subsea Umbilical & Intervention Cable (ITU-T G.652.D / Subsea, 3.6/6 kV, -40 to +80 °C, min. bend radius 12 × 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. HV Power Conductors (3×10 AWG)
2. Subsea Optical Units (3×SMF)
3. 6,000 m Water-Blocked Core
4. Synthetic Strength Braid (2,700–4,000 lb)
5. Heavy-Duty Subsea PUR Jacket (Ø16.64 mm)

Technical data

Typical values

Rated voltage / transmission duty	3.6/6 kV (ITU-T G.652.D / 6,000 m Deepwater EO Umbilical Standard)	**Core / conductor construction**	HV Power Conductors (3×10 AWG) — Stranded tinned copper with 3.6–4.0 kV low-water-absorption copolymer insulation
Primary dielectric / buffering	Subsea Optical Units (3×SMF) — Three PUR-jacketed 200 kpsi proof-tested OS2 9/125 µm single-mode fiber units	**Continuous operating temperature**	−40…+80 °C (subsea, marine & submersible duty)
Short-circuit / peak thermal rating	Verified thermal stability per ITU-T G.652.D / 6,000 m Deepwater EO Umbilical Standard	**Storage & transport temperature**	−40…+80 °C on export wooden/steel drum
Outer protection / armouring	Heavy-Duty Subsea PUR Jacket (Ø16.64 mm) — 0.090" (2.29 mm) cut- and hydrolysis-resistant black polyurethane jacket	**Minimum bending radius**	12 × OD
Hydrostatic, tensile & crush duty	Synthetic Strength Braid (2,700–4,000 lb) — High-modulus aramid / LCP tensile braid (or optional GIPS steel armor)	**Hydrostatic pressure & water blocking**	Engineered for continuous submersion and hydrostatic integrity per ITU-T G.652.D / 6,000 m Deepwater EO Umbilical Standard
Seawater, oil & chemical resistance	Resistant to seawater hydrolysis, hydraulic oils and abrasion per ITU-T G.652.D / 6,000 m Deepwater EO Umbilical Standard	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	ITU-T G.652.D / 6,000 m Deepwater EO Umbilical 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
EO FM021814 Construction Schedule (−40…+80 °C) 3 sizes						
☐ **EO FM021814 Config A (Compact)**	4×2×24 AWG + 2×18 AWG (or 4C)	Stranded tinned Cu (IEC 60228 / ASTM)	10.4	155	4.5	85
☐ **EO FM021814 Config B (Standard)**	4×2×20 AWG + 4×16 AWG (or 8C)	Stranded tinned Cu (IEC 60228 / ASTM)	13.3	265	9.6	110
☐ **EO FM021814 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 ITU-T G.652.D / 6,000 m Deepwater EO Umbilical 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	3.6/6 kV (45–100 Ω data)	−40…+80 °C
4×2×20 AWG + 4×16 AWG (or 8C)	10.70	3.6/6 kV (45–100 Ω data)	−40…+80 °C
8×2×20 AWG + 4×12 AWG (or 12C)	5.40	3.6/6 kV (High-Power Hybrid)	−40…+80 °C

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

Standards and approvals

- ITU-T G.652.D / Subsea 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/eo-fm021814

Typical values for this cable type, based on ITU-T G.652.D / 6,000 m Deepwater EO Umbilical Standard. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.