subsea umbilical, ROV tether & oceanographic tow cable

# 6000m EO Harness 3.6kV

## 6,000 m (10,000 PSI) 3.6 kV Deep-Sea Overmolded Electro-Optical Wet-En

6,000 m / 10,000 PSI Subsea EO · Up to 3.6 kV · Subsea umbilical, rov tether &



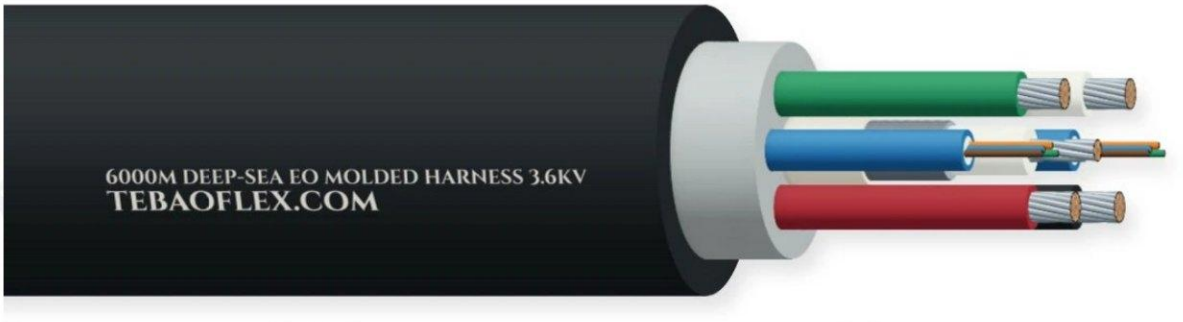

**6,000 m / 10,000 PSI Subsea EO** | **Up to 3.6 kV (-30 to +80 °C)** | **Overmolded PUR / Polychloroprene Jac**

## Application

6,000 m (10,000 PSI) 3.6 kV Deep-Sea Overmolded Electro-Optical Wet-End Harness Cable (6,000 m / 10,000 PSI Subsea EO) engineered for Up to 3.6 kV service across -30 to +80 °C (min. bend radius 8 × OD).

**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. 50/75-Ohm Coaxial & Optical Units
2. 3.6 kV FEP/PTFE Power & Signal Cores
3. 10,000 PSI Void-Free Elastomeric Bedding
4. Overmolded PUR / Polychloroprene Jacket

## Technical data

Typical values

| | | | |
|---|---|---|---|
| **Rated voltage / transmission duty** | Up to 3.6 kV (6,000 m (10,000 PSI) 3.6 kV Deep-Sea Moldable Electro-Optical Harness Specification) | **Core / conductor construction** | 50/75-Ohm Coaxial & Optical Units — Central fluoropolymer coax + 2 single-mode/multi-mode fiber sub-units |
| **Primary dielectric / buffering** | 3.6 kV FEP/PTFE Power & Signal Cores — Stranded tinned copper conductors with high-dielectric FEP/PTFE insulation | **Continuous operating temperature** | −30…+80 °C (subsea & offshore duty) |
| **Hydrostatic & thermal stability** | Verified thermal and hydrostatic stability per 6,000 m (10,000 PSI) 3.6 kV Deep-Sea Moldable Electro-Optical Harness Specification | **Storage & transport temperature** | −40…+80 °C on export wooden/steel winch reel |
| **Outer protection / armouring** | Overmolded PUR / Polychloroprene Jacket — Bondable polyurethane or polychloroprene wet-end hamess sheath | **Minimum bending radius** | 8 × OD |
| **Armour, strength member & mechanical duty** | 10,000 PSI Void-Free Elastomeric Bedding — Solid pressure-tolerant interstitial filler for 6,000 m depth | **Seawater, hydrostatic & hydrolysis resistance** | Engineered for continuous seawater immersion, pressure cycling and hydrolysis resistance per 6,000 m (10,000 PSI) 3.6 kV Deep-Sea Moldable Electro-Optical Harness Specification |
| **Oil, drilling mud & abrasion resistance** | Resistant to marine hydraulic oils, salt mist, winch sheave wear and seabed abrasion per 6,000 m (10,000 PSI) 3.6 kV Deep-Sea Moldable Electro-Optical Harness Specification | **RoHS & REACH compliance** | RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant |
| **Standards** | 6,000 m (10,000 PSI) 3.6 kV Deep-Sea Moldable Electro-Optical Harness 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 | Breaking / tensile kN ≈ | Min. bend R mm |
|---|---|---|---|---|---|---|
| **6000m EO Harness 3.6kV Construction Schedule (−30…+80 °C)** 3 sizes | | | | | | |
| ☐ 6000m EO Harness 3.6kV Config A | 3×25–50 mm² (or 3P+FO Composite) | Compacted / Class 5 Cu/SnCu + FO | 32.0 | 1,850 | 85.0 | 380 |
| ☐ 6000m EO Harness 3.6kV Config B | 3×95–150 mm² (or Heavy EOM) | Compacted / Class 5 Cu/SnCu + FO | 48.5 | 4,280 | 130.0 | 580 |
| ☐ 6000m EO Harness 3.6kV Config C | 3×240–400 mm² (or Trunk HV/MV) | Compacted Cu + Lead/Armour + FO | 78.0 | 9,650 | 210.0 | 950 |

– Custom core cross-sections, pair/fibre counts, armour breaking loads and continuous winch/seabed lengths available per 6,000 m (10,000 PSI) 3.6 kV Deep-Sea Moldable Electro-Optical Harness Specification.

## Electrical, optical & thermal parameters

3 sizes

| Configuration | Max. DC $R_{20}$ / Atten. Ω/km or dB/km | Rating / Impedance | Operating temp. |
|---|---|---|---|
| 3×25–50 mm² (or 3P+FO Composite) | 0.49 | Up to 3.6 kV (Subsea/MV) | −30…+80 °C |
| 3×95–150 mm² (or Heavy EOM) | 0.19 | Up to 3.6 kV (Subsea/MV) | −30…+80 °C |
| 3×240–400 mm² (or Trunk HV/MV) | 0.07 | Up to 3.6 kV (Trunk/HV) | −30…+80 °C |

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

## Standards and approvals

- 6,000 m / 10,000 PSI Subsea 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/6000m-deep-sea-eo-molded-harness-3-6kv**

Typical values for this cable type, based on 6,000 m (10,000 PSI) 3.6 kV Deep-Sea Moldable Electro-Optical Harness Specification. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.