Hybrid electro-optical ROV tether

REF 43330

3000 V Hybrid ROV Tether Cable

ISO 13628-5 / IEC 60092-350 · 3000 V HV + Optical · Aramid-reinforced ROV umbilical cable

ISO 13628-5 | 3000 V HV + Fibre | Aramid Reinforced

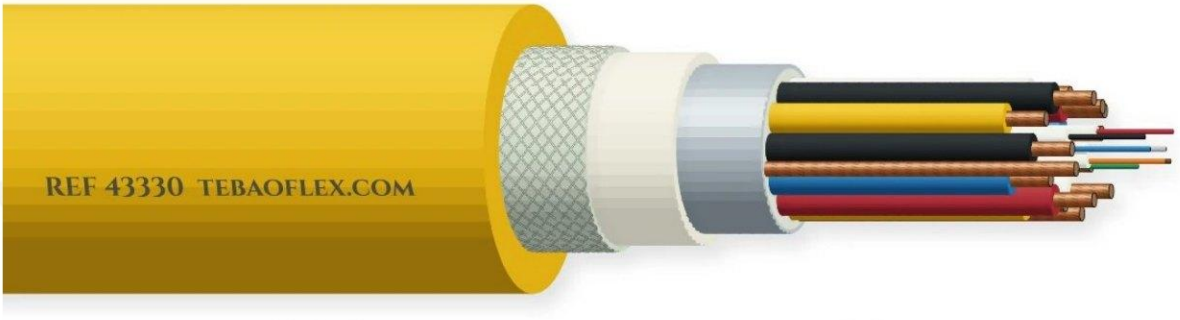


Application

REF 43330 3000 V hybrid electro-optical subsea ROV tether and umbilical cable combining 3 × 3000 V high-voltage power conductors, 4 × single-mode/multimode optical fibres, screened control pairs, high-modulus Aramid braid and a.

Typical uses: Subsea ROV, AUV & Towed Array Systems, Offshore Oil, Gas & Subsea Production Umbilicals, Oceanographic Mooring & Deep-Water Telemetry, Naval Defence, Hydrographic & Sonar Arrays

Construction





Cross-section, not to scale

1	Central 8-Fiber Loose-Tube Optical Sub-Unit	ISO 13628-5 / IEC 60092-350
2	Stranded Bare Copper Power & Control Conductors	ISO 13628-5 / IEC 60092-350
3	Special High-Dielectric Polyolefin Core Insulation	ISO 13628-5 / IEC 60092-350
4	Fluid-Filled Interstices & Metallic Screen Tape	ISO 13628-5 / IEC 60092-350
5	Polyolefin Inner Sheath & Aramid Fiber Strength Braid	ISO 13628-5 / IEC 60092-350
6	High-Visibility Yellow Polyolefin Subsea Outer Sheath	ISO 13628-5 / IEC 60092-350

Technical data

Typical values

Rated voltage / transmission duty	3000 V AC/DC (ISO 13628-5 / IEC 60092-350)	**Core / conductor construction**	Central 8-Fiber Loose-Tube Optical Sub-Unit — Eight 9/125 µm single-mode optical fibers housed in a gel-filled loose tube with a protective polyolefin sub-sheath
Primary dielectric / buffering	Stranded Bare Copper Power & Control Conductors — 11 stranded electrolytic copper conductors (3000 V HV power & LV control) plus 3 interstitial bare copper drain/ground strands	**Continuous operating temperature**	−40…+80 °C (subsea immersion & marine deck service)
Storage & transport temperature	−40…+80 °C on marine export reel	**Outer protection / armouring**	High-Visibility Yellow Polyolefin Subsea Outer Sheath — Abrasion-, cut-, and seawater-resistant yellow polyolefin outer jacket for high-visibility subsea ROV deployment
Minimum bending radius	8–12 × OD	**Hydrostatic depth rating**	Up to 6,000 m water depth (60 MPa hydrostatic pressure)
Seawater, hydrolysis & oil resistance	Continuous seawater immersion, hydraulic fluids and marine UV per ISO 13628-5 / IEC 60092-350	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	ISO 13628-5 / IEC 60092-350		

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	Weight in air ≈ kg/km	Breaking load kN ≈	Min. bend R mm
REF 43330 Subsea Construction Schedule (−40…+80 °C) 3 sizes						
☐ **REF 43330 Standard Hybrid**	3×4.0 mm² (3 kV) + 2×(2×0.5) + 4×FO	Class 5 tinned Cu + SM/MM	22.8	540	45.0	185
☐ **REF 43330 Heavy-Duty ROV**	3×6.0 mm² (3 kV) + 4×(2×0.5) + 6×FO	Class 5 tinned Cu + SM/MM	26.5	730	65.0	215
☐ **REF 43330 Compact Inspection**	3×2.5 mm² (3 kV) + 1×(2×0.5) + 4×FO	Class 5 tinned Cu + SM/MM	19.2	385	32.0	155

– Custom core counts, optical fibre counts, armour wire grades and factory-moulded subsea terminations available per ISO 13628-5 / IEC 60092-350.

Electrical, optical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} / Atten. Ω/km or dB/km	Rating / Impedance	Operating temp.
3×4.0 mm² (3 kV) + 4×FO	5.09	3000 V HV / 600 V Aux	−40…+80 °C
3×6.0 mm² (3 kV) + 6×FO	3.39	3000 V HV / 600 V Aux	−40…+80 °C
3×2.5 mm² (3 kV) + 4×FO	8.21	3000 V HV / 600 V Aux	−40…+80 °C

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

Standards and approvals

- ISO 13628-5 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/ref-43330-3000v-hybrid-electro-optical-subsea-rov-umbilical-cable

Typical values for this cable type, based on ISO 13628-5 / IEC 60092-350. Values for your order are confirmed in the quotation. Subject to change without notice.
Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.