subsea ROV umbilical, AUV tether & sonar tow cable

M-PAC Seafloor Observatory
& BMS Umbilical Cable

ITU-T G.972 / CIGRE TB 490 · 1.8/3 kV · Subsea rov umbilical, auv tether & sonar tow cable



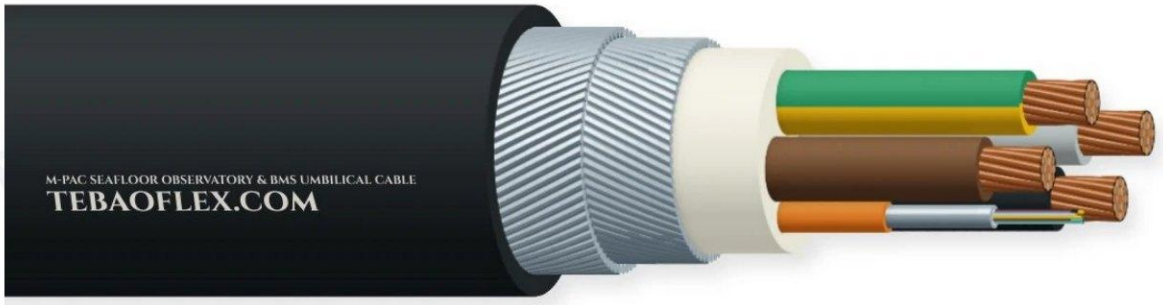
ITU-T G.972 / CIGRE TB 490 | 1.8/3 kV (-20 to +70 °C) | Subsea / Marine Outer Protective She

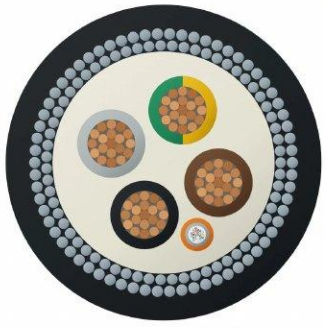
Application

M-PAC Seafloor Observatory & BMS Umbilical Cable featuring single-mode / multi-mode optical unit and subsea / marine outer protective sheath (ITU-T G.972 / CIGRE TB 490, 1.8/3 kV, -20 to +70 °C, min. bend radius 15 × 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. Single-Mode / Multi-Mode Optical Unit
2. Power & Control Copper Conductors
3. Galvanized Steel Wire Armour
4. Subsea / Marine Outer Protective Sheath

Technical data

Typical values

Rated voltage / operating system	1.8/3 kV (ITU-T G.972 & CIGRE TB 490 M-PAC Seafloor Observatory Umbilical Standard)	**Core / conductor construction**	Single-Mode / Multi-Mode Optical Unit — Hermetic stainless-steel tube / tight-buffered optical unit
Primary dielectric / optical buffer	Power & Control Copper Conductors — Stranded copper conductors with Cross-linked polyethylene (XLPE) insulation	**Continuous operating temperature**	−20…+70 °C (submerged seawater & topside deck service)
Hydrostatic & thermal cycling endurance	Verified cold-bend and wet dielectric stability across −20…+70 °C per ITU-T G.972 & CIGRE TB 490 M-PAC Seafloor Observatory Umbilical 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**	15 × OD
Reinforcement / screen / bedding layer	Galvanized Steel Wire Armour — High-strength galvanized steel wire armour layer	**Seawater, hydrolysis & oil resistance**	Resistant to permanent seawater immersion, hydrolysis, hydraulic oil and bio-fouling per ITU-T G.972 & CIGRE TB 490 M-PAC Seafloor Observatory Umbilical Standard
Hydrostatic pressure & water blocking	Radial and longitudinal water-blocking integrity verified per ITU-T G.972 & CIGRE TB 490 M-PAC Seafloor Observatory Umbilical Standard	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	ITU-T G.972 & CIGRE TB 490 M-PAC Seafloor Observatory 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	Max. pulling kN ≈	Min. bend R mm
M-PAC Seafloor Observatory Construction Schedule (−20…+70 °C) 3 sizes							
☐	**M-PAC Seafloor Observatory 3×6 + 4×SM + 2TP**	**3×6 mm² Power + 4×SM Fiber + 2×2×0.75**	**SnCu + Gel Tube + Contra-Helical GSWA**	**20.8**	**1,280**	**115.0**	**250**
☐	**M-PAC Seafloor Observatory 3×10 + 6×SM + 4TP**	**3×10 mm² Power + 6×SM Fiber + 4×2×0.75**	**SnCu + SS Tube + Double Steel Armour**	**25.4**	**1,890**	**185.0**	**305**
☐	**M-PAC Seafloor Observatory 3×16 + 8×SM/MM**	**3×16 mm² Power + 8×SM/MM + 3×2×1.0**	**SnCu + SS Tube + Heavy GSWA Pack**	**30.2**	**2,680**	**260.0**	**365**

– Custom core counts, optical fiber channels, wet-mate terminations and continuous winch lengths available per ITU-T G.972 & CIGRE TB 490 M-PAC Seafloor Observatory Umbilical Standard.

Electrical, optical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} Ω/km	Rating / Impedance / Load	Operating temp.
3×6 mm² Power + 4×SM Fiber + 2×2×0.75	**3.30**	**1.8/3 kV · 115 kN MBS**	**−20…+70 °C**
3×10 mm² Power + 6×SM Fiber + 4×2×0.75	**1.91**	**1.8/3 kV · 185 kN MBS**	**−20…+70 °C**
3×16 mm² Power + 8×SM/MM + 3×2×1.0	**1.21**	**1.8/3 kV · 260 kN MBS**	**−20…+70 °C**

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

Standards and approvals

- ITU-T G.972 / CIGRE TB 490 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/m-pac-seafloor-observatory-bms-umbilical-cable

Typical values for this cable type, based on ITU-T G.972 & CIGRE TB 490 M-PAC Seafloor Observatory 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.