subsea ROV umbilical, AUV tether & sonar tow cable

22GAX203 Synthetic Buoyant Tether

22GAX203 Synthetic Armoured Buoyant Tether

DNV-ST-E402 / IEC 60794 · 1.8/3 kV · Subsea rov umbilical, auv tether & sonar tow cable



DNV-ST-E402 / IEC 60794 | 1.8/3 kV (-40 to +80 °C) | Subsea / Marine Outer Protective She

Application

22GAX203 Synthetic Armoured Buoyant Tether featuring single-mode / multi-mode optical unit and subsea / marine outer protective sheath (DNV-ST-E402 / IEC 60794, 1.8/3 kV, -40 to +80 °C, min. bend radius 7 × 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. Subsea / Marine Outer Protective Sheath

Technical data

Typical values

Rated voltage / operating system	1.8/3 kV (DNV-ST-E402 22GAX203 Synthetic-Armoured Neutrally Buoyant Tether 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**	−40…+80 °C (submerged seawater & topside deck service)
Hydrostatic & thermal cycling endurance	Verified cold-bend and wet dielectric stability across −40…+80 °C per DNV-ST-E402 22GAX203 Synthetic-Armoured Neutrally Buoyant Tether Standard	**Storage & transport temperature**	−40…+80 °C on export wooden/steel cable drum
Outer jacket / sheath protection	Subsea / Marine Outer Protective Sheath — Red neutrally buoyant cellular foamed Polyurethane (Foamed PUR) outer sheath	**Minimum bending radius**	7 × OD
Reinforcement / screen / bedding layer	Power & Control Copper Conductors — Stranded copper conductors with Cross-linked polyethylene (XLPE) insulation	**Seawater, hydrolysis & oil resistance**	Resistant to permanent seawater immersion, hydrolysis, hydraulic oil and bio-fouling per DNV-ST-E402 22GAX203 Synthetic-Armoured Neutrally Buoyant Tether Standard
Hydrostatic pressure & water blocking	Radial and longitudinal water-blocking integrity verified per DNV-ST-E402 22GAX203 Synthetic-Armoured Neutrally Buoyant Tether Standard	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	DNV-ST-E402 22GAX203 Synthetic-Armoured Neutrally Buoyant Tether 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
22GAX203 Synthetic Buoyant Tether Construction Schedule (−40…+80 °C) 3 sizes						
☐ 22GAX203 Synthetic Buoyant Tether Buoyant Ø9.5	2×1.5 mm² + 2×SM Fiber + 1×TP	SnCu + G.657.A2 + Aramid + Foamed PUR	9.5	92	6.5	60
☐ 22GAX203 Synthetic Buoyant Tether Buoyant Ø13.2	4×2.5 mm² + 4×SM Fiber + 2×TP	SnCu + G.657.A2 + Aramid/LCP + Foamed PUR	13.2	168	14.0	80
☐ 22GAX203 Synthetic Buoyant Tether Buoyant Ø17.8	3×6.0 mm² + 6×SM/MM + 4×TP	SnCu + Optical Unit + Synthetic Braid	17.8	315	28.0	110

– Custom core counts, optical fiber channels, wet-mate terminations and continuous winch lengths available per DNV-ST-E402 22GAX203 Synthetic-Armoured Neutrally Buoyant Tether Standard.

Electrical, optical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} Ω/km	Rating / Impedance / Load	Operating temp.
2×1.5 mm² + 2×SM Fiber + 1×TP	13.30	1.8/3 kV · SG ≈ 1.01	−40…+80 °C
4×2.5 mm² + 4×SM Fiber + 2×TP	7.98	1.8/3 kV · SG ≈ 1.02	−40…+80 °C
3×6.0 mm² + 6×SM/MM + 4×TP	3.30	1.8/3 kV · SG ≈ 1.02	−40…+80 °C

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

Standards and approvals

- DNV-ST-E402 / IEC 60794 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/22gax203-synthetic-armoured-buoyant-tether

Typical values for this cable type, based on DNV-ST-E402 22GAX203 Synthetic-Armoured Neutrally Buoyant Tether Standard. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.