subsea umbilical, ROV tether & oceanographic tow cable

M509 255-Ch Array

M509 48 V DC 255-Channel High-Speed Digital Towed Hydrophone Array Cab

M509 255-Ch Towed Array · 48 V DC · Subsea umbilical, rov tether & oceanographic tow cable



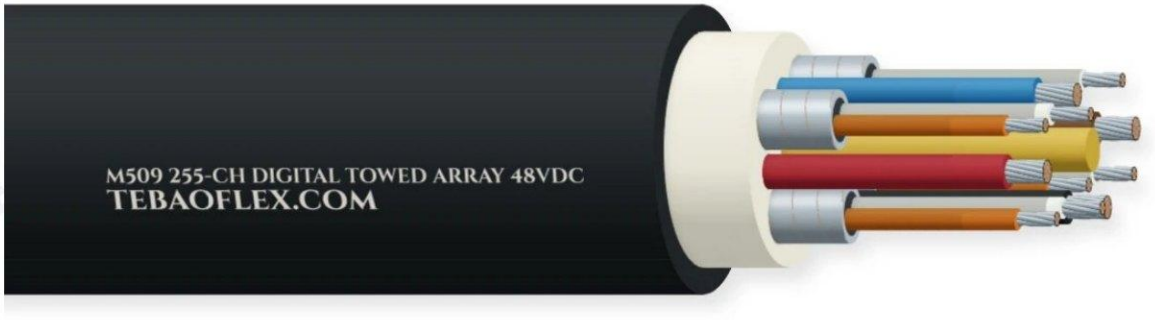
M509 255-Ch Towed Array | 48 V DC (-30 to +75 °C) | Neutrally Buoyant PUR Array Sheath

Application

M509 48 V DC 255-Channel High-Speed Digital Towed Hydrophone Array Cable (300 m Rated) featuring 255-channel high-speed digital acoustic bus and neutrally buoyant pur array sheath (M509 255-Ch Towed Array, 48 V DC, -30 to +75 °C).

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. 255-Channel High-Speed Digital Acoustic
2. 48 VDC Power & Non-Acoustic Sensor Lines
3. Internal Aramid Tensile Strength Structu
4. Neutrally Buoyant PUR Array Sheath

Technical data

Typical values

Rated voltage / transmission duty	48 V DC (M509 48 V DC 255-Channel High-Speed Aramid-Reinforced Digital Towed Array Specification)	**Core / conductor construction**	255-Channel High-Speed Digital Acoustic Bus — Screened polyolefin twisted pairs for high-channel-count sonar telemetry
Primary dielectric / buffering	48 VDC Power & Non-Acoustic Sensor Lines — Tinned copper power bus + heading, pitch, roll, depth & temperature lines	**Continuous operating temperature**	−30…+75 °C (subsea & offshore duty)
Hydrostatic & thermal stability	Verified thermal and hydrostatic stability per M509 48 V DC 255-Channel High-Speed Aramid-Reinforced Digital Towed Array Specification	**Storage & transport temperature**	−40…+80 °C on export wooden/steel winch reel
Outer protection / armouring	Neutrally Buoyant PUR Array Sheath — Acoustically transparent polyurethane outer tube	**Minimum bending radius**	10 × OD
Armour, strength member & mechanical duty	Internal Aramid Tensile Strength Structure — Axial aramid strength member rated for 300 m water depth	**Seawater, hydrostatic & hydrolysis resistance**	Engineered for continuous seawater immersion, pressure cycling and hydrolysis resistance per M509 48 V DC 255-Channel High-Speed Aramid-Reinforced Digital Towed Array Specification
Oil, drilling mud & abrasion resistance	Resistant to marine hydraulic oils, salt mist, winch sheave wear and seabed abrasion per M509 48 V DC 255-Channel High-Speed Aramid-Reinforced Digital Towed Array Specification	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	M509 48 V DC 255-Channel High-Speed Aramid-Reinforced Digital Towed Array 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
M509 255-Ch Array Construction Schedule (−30…+75 °C) 3 sizes						
☐ **M509 255-Ch Array Coax / Cat5e**	Coax (39/40/50/75 Ω) or 4Pr Cat5e + Power	Stranded SnCu + Foam PE/FEP + Armour/Aramid	8.2	245	42.7	120
☐ **M509 255-Ch Array Composite B**	Heavy Coax / 64-Ch Digital Bus + Power	Stranded SnCu + Low-Loss Dielectric + Strength	11.5	485	71.2	170
☐ **M509 255-Ch Array Array / Trunk C**	Multi-Ch Digital Streamer / 255-Ch Bus	Redundant Telemetry + Aramid + PUR Jacket	44.5	1,620	95.0	445

– Custom core cross-sections, pair/fibre counts, armour breaking loads and continuous winch/seabed lengths available per M509 48 V DC 255-Channel High-Speed Aramid-Reinforced Digital Towed Array Specification.

Electrical, optical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} / Atten. Ω/km or dB/km	Rating / Impedance	Operating temp.
Coax (39/40/50/75 Ω) or 4Pr Cat5e + Power	18.50	48 V DC (High-Speed)	−30…+75 °C
Heavy Coax / 64-Ch Digital Bus + Power	11.20	48 V DC (Deep-Tow/Array)	−30…+75 °C
Multi-Ch Digital Streamer / 255-Ch Bus	6.80	48 V DC (Full Array)	−30…+75 °C

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

Standards and approvals

- M509 255-Ch Towed Array 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/m509-255-ch-digital-towed-array-48vdc

Typical values for this cable type, based on M509 48 V DC 255-Channel High-Speed Aramid-Reinforced Digital Towed Array Specification. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.