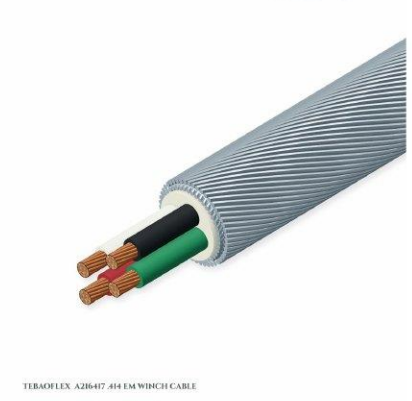
subsea umbilical, ROV tether & oceanographic tow cable

A216417 .414 EM

A216417 .414-Inch (10.52 mm) 17,800 lbs Double-Armoured Electromechani

UNOLS / .414 EM Winch · 600 V · Subsea umbilical, rov tether & oceanographic tow cable



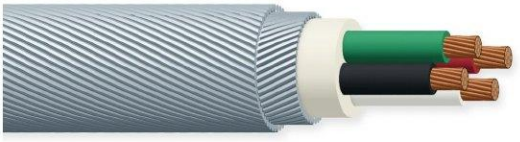
UNOLS / .414 EM Winch | **600 V (-40 to +85 °C)** | **Double Contra-Helical Steel Armour**

Application

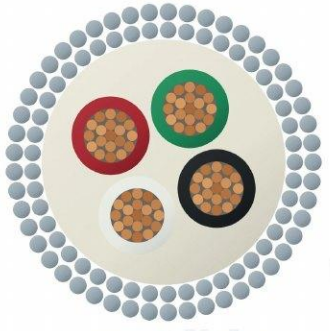
A216417 .414-Inch (10.52 mm) 17,800 lbs Double-Armoured Electromechanical Winch Cable featuring stranded copper conductors and double contra-helical steel armour (UNOLS / .414 EM Winch, 600 V, -40 to +85 °C, min. bend radius 15 × OD).

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



TEBAOFLEX A216417 .414 EM WINCH CABLE



Cross-section, not to scale

1. Stranded Copper Conductors
2. Polyolefin Core Insulation
3. Double Contra-Helical Steel Armour

Technical data

Typical values

Rated voltage / transmission duty	600 V (Hydrographic .414-Inch (10.52 mm) Torque-Balanced Double-Armoured EM Winch Specification)	**Core / conductor construction**	Stranded Copper Conductors — High-conductivity stranded copper electromechanical conductors
Primary dielectric / buffering	Polyolefin Core Insulation — Low-loss polyolefin dielectric color-coded Black, White, Red, Green	**Continuous operating temperature**	−40…+85 °C (subsea & offshore duty)
Hydrostatic & thermal stability	Verified thermal and hydrostatic stability per Hydrographic .414-Inch (10.52 mm) Torque-Balanced Double-Armoured EM Winch Specification	**Storage & transport temperature**	−40…+80 °C on export wooden/steel winch reel
Outer protection / armouring	Double Contra-Helical Steel Armour — Two contra-helically served galvanized steel wire layers (Ø 10.52 mm, 17,800 lbs)	**Minimum bending radius**	15 × OD
Armour, strength member & mechanical duty	Polyolefin Core Insulation — Low-loss polyolefin dielectric color-coded Black, White, Red, Green	**Seawater, hydrostatic & hydrolysis resistance**	Engineered for continuous seawater immersion, pressure cycling and hydrolysis resistance per Hydrographic .414-Inch (10.52 mm) Torque-Balanced Double-Armoured EM Winch Specification
Oil, drilling mud & abrasion resistance	Resistant to marine hydraulic oils, salt mist, winch sheave wear and seabed abrasion per Hydrographic .414-Inch (10.52 mm) Torque-Balanced Double-Armoured EM Winch Specification	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	Hydrographic .414-Inch (10.52 mm) Torque-Balanced Double-Armoured EM Winch 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
A216417 .414 EM Construction Schedule (−40…+85 °C) 3 sizes						
☐ **A216417 .414 EM Type I**	**Standard oceanographic / offshore build**	**Stranded SnCu / Double Steel or UHMWPE**	**8.2**	**265**	**54.3**	**125**
☐ **A216417 .414 EM Type II**	**Medium-duty deepwater / offshore build**	**Stranded SnCu / Double Steel or UHMWPE**	**9.5**	**355**	**64.9**	**145**
☐ **A216417 .414 EM Type III**	**Heavy-duty deep-tow / offshore build**	**Stranded SnCu / Double Steel or UHMWPE**	**10.5**	**440**	**79.2**	**160**

– Custom core cross-sections, pair/fibre counts, armour breaking loads and continuous winch/seabed lengths available per Hydrographic .414-Inch (10.52 mm) Torque-Balanced Double-Armoured EM Winch Specification.

Electrical, optical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} / Atten. Ω/km or dB/km	Rating / Impedance	Operating temp.
Standard oceanographic / offshore build	**11.50**	**600 V (Std Duty)**	**−40…+85 °C**
Medium-duty deepwater / offshore build	**8.20**	**600 V (Med Duty)**	**−40…+85 °C**
Heavy-duty deep-tow / offshore build	**6.50**	**600 V (Heavy Duty)**	**−40…+85 °C**

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

Standards and approvals

- UNOLS / .414 EM Winch 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/a216417-414-em-winch-cable

Typical values for this cable type, based on Hydrographic .414-Inch (10.52 mm) Torque-Balanced Double-Armoured EM Winch Specification. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.