submarine & offshore armoured optical cable

# MINISUB DA 192F

## MINISUB DA Up to 192F Double Steel-Wire Armoured Repeatered & Unrepeat

ITU-T G.972 / MINISUB DA · Optical · Submarine & offshore armoured optical cable




ITU-T G.972 / MINISUB DA | Optical (-20 to +70 °C) | PP Yarn & Bitumen Outer Serving

## Application

MINISUB DA Up to 192F Double Steel-Wire Armoured Repeatered & Unrepeatered Submarine Optical Cable (ITU-T G.972 / MINISUB DA) engineered for Optical service across -20 to +70 °C (min. bend radius 20 × OD).

**Typical uses:** Submarine Telecom & Cabled Ocean Observatories, Island, Coastal & Inter-Platform Subsea Optical Links, Offshore Platform & FPSO Fire-Safe Optical Backbones, Tactical Marine & Harsh-Environment Optical Deployment

## Construction






Cross-section, not to scale

1. Stainless-Steel Optical Unit (Up to 192F
2. Copper Power Tube & PE Inner Bedding
3. Double Galvanized Steel Wire Armour (DA)
4. PP Yarn & Bitumen Outer Serving

## Technical data

Typical values

| | | | |
|---|---|---|---|
| **Rated voltage / transmission duty** | Optical (ITU-T G.972 MINISUB DA Double-Armoured Shallow-Water & Shore-End Submarine Optical Specification) | **Core / conductor construction** | Stainless-Steel Optical Unit (Up to 192F) — Hermetic stainless-steel tube housing G.652 / G.654 optical fibers |
| **Primary dielectric / buffering** | Copper Power Tube & PE Inner Bedding — Remote power feeding copper tube + polyethylene insulation/bedding | **Continuous operating temperature** | −20…+70 °C (subsea & offshore duty) |
| **Hydrostatic & thermal stability** | Verified thermal and hydrostatic stability per ITU-T G.972 MINISUB DA Double-Armoured Shallow-Water & Shore-End Submarine Optical Specification | **Storage & transport temperature** | −40…+80 °C on export wooden/steel winch reel |
| **Outer protection / armouring** | PP Yarn & Bitumen Outer Serving — Abrasion-resistant polypropylene and bitumen outer protection | **Minimum bending radius** | 20 × OD |
| **Armour, strength member & mechanical duty** | Double Galvanized Steel Wire Armour (DA) — Two contra-helical layers of heavy galvanized steel wire armour | **Seawater, hydrostatic & hydrolysis resistance** | Engineered for continuous seawater immersion, pressure cycling and hydrolysis resistance per ITU-T G.972 MINISUB DA Double-Armoured Shallow-Water & Shore-End Submarine Optical Specification |
| **Oil, drilling mud & abrasion resistance** | Resistant to marine hydraulic oils, salt mist, winch sheave wear and seabed abrasion per ITU-T G.972 MINISUB DA Double-Armoured Shallow-Water & Shore-End Submarine Optical Specification | **RoHS & REACH compliance** | RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant |
| **Standards** | ITU-T G.972 MINISUB DA Double-Armoured Shallow-Water & Shore-End Submarine Optical 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 |
|---|---|---|---|---|---|---|
| **MINISUB DA 192F Construction Schedule (−20…+70 °C)** 3 sizes | | | | | | |
| ☐ **MINISUB DA 192F 4–12F EOM/Sub** | **4–12 × ITU-T G.652D / G.654E SM (+ Power)** | **Laser-welded SS FIMT + Steel/Aramid Armour** | **8.2** | **260** | **48.0** | **125** |
| ☐ **MINISUB DA 192F 24–48F EOM/Sub** | **24–48 × ITU-T G.652D / G.654E SM (+ Power)** | **Laser-welded SS FIMT + Contra-Helical Steel** | **17.5** | **680** | **120.0** | **260** |
| ☐ **MINISUB DA 192F 96–192F Trunk** | **96–192 × ITU-T G.654E / G.652D Submarine** | **SS Tube + Steel Vault + Cu Tube + DA Armour** | **28.0** | **1,650** | **300.0** | **420** |

– Custom core cross-sections, pair/fibre counts, armour breaking loads and continuous winch/seabed lengths available per ITU-T G.972 MINISUB DA Double-Armoured Shallow-Water & Shore-End Submarine Optical Specification.

## Electrical, optical & thermal parameters

3 sizes

| Configuration | Max. DC $R_{20}$ / Atten. Ω/km or dB/km | Rating / Impedance | Operating temp. |
|---|---|---|---|
| **4–12 × ITU-T G.652D / G.654E SM (+ Power)** | **0.35** | **≤0.35 dB/km @ 1310 nm** | **−20…+70 °C** |
| **24–48 × ITU-T G.652D / G.654E SM (+ Power)** | **0.21** | **≤0.21 dB/km @ 1550 nm** | **−20…+70 °C** |
| **96–192 × ITU-T G.654E / G.652D Submarine** | **0.18** | **≤0.18 dB/km @ 1550 nm** | **−20…+70 °C** |

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

## Standards and approvals

- ITU-T G.972 / MINISUB DA 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/minisub-da-double-armoured-subsea-cable**

Typical values for this cable type, based on ITU-T G.972 MINISUB DA Double-Armoured Shallow-Water & Shore-End Submarine Optical Specification. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.