armoured marine & offshore optical cable

# FXMSU & FXVDMSU / LKSM-FO

## IEC 60794 Armoured SHF1/SHF2 Marine Optical

IEC 60794 / IEC 60092-360 · Optical · Armoured marine & offshore optical cable



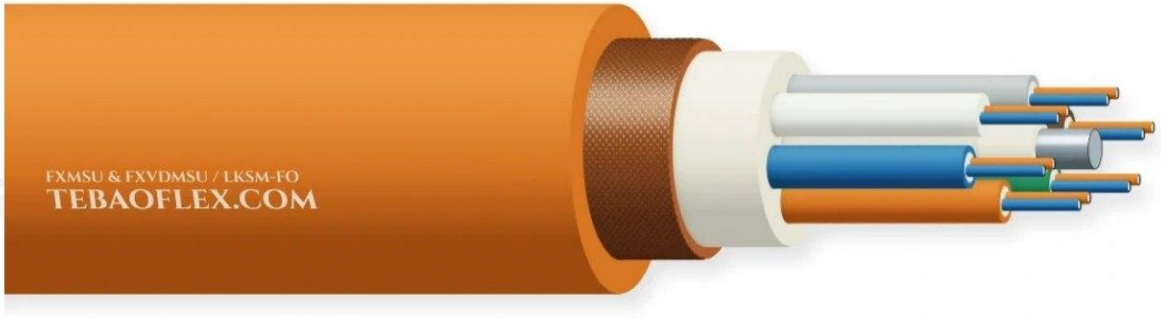

IEC 60794 / IEC 60092-360 | Optical (-40 to +80 °C) | SHF1 / SHF2 Marine Optical Outer Jac

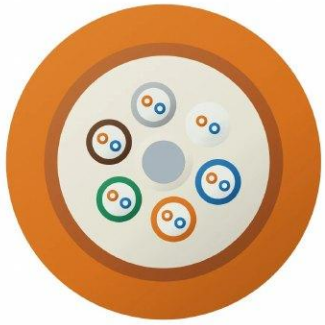
## Application

FXMSU & FXVDMSU / LKSM-FO & FRHF(f) Glass-Fiber Central Element PP-Slotted-Core & Copper-Braided Water-Blocked SHF1/SHF2 Marine Optical Fiber Cable (IEC 60794 / IEC 60092-360, Optical, -40 to +80 °C, min. bend radius 10 × OD).

**Typical uses:** Offshore Platform & FPSO Optical Backbones, Shipboard Integrated Bridge & IT Networks, Fire-Safe ESD, CCTV & Telecom Links, LNG Carrier & Drillship Process Control

## Construction



Cross-section, not to scale

1. Central FRP Rod & Slotted Core (12 Fibre
2. Water-Swellable Glass-Fibre Yarns
3. Halogen-Free Inner Sheath
4. Copper Wire Braid Armour (FXMSU / LKSM-F
5. SHF1 / SHF2 Marine Optical Outer Jacket

## Technical data

Typical values

| | | | |
|---|---|---|---|
| **Rated voltage / transmission duty** | Optical (IEC 60794 / IEC 60092-360 / IEC 60332-3-22 Cat. A) | **Core / conductor construction** | Central FRP Rod & Slotted Core (12 Fibres) — Non-metallic FRP rod with helically grooved PP slotted core / tight buffers |
| **Primary dielectric / buffering** | Water-Swellable Glass-Fibre Yarns — Longitudinal water-blocking and rodent-resistant E-glass yarns | **Continuous operating temperature** | −40…+80 °C (shipboard & offshore duty) |
| **Short-circuit / peak thermal rating** | Verified thermal stability per IEC 60794 / IEC 60092-360 / IEC 60332-3-22 Cat. A | **Storage & transport temperature** | −40…+80 °C on export wooden/steel drum |
| **Outer protection / armouring** | SHF1 / SHF2 Marine Optical Outer Jacket — DNV-approved halogen-free flame-retardant outer sheath | **Minimum bending radius** | 10 × OD |
| **Armour, screen & mechanical duty** | Copper Wire Braid Armour (FXMSU / LKSM-FO) — Braided copper wire mechanical armour for shipboard routing | **Flame, fire & smoke performance** | Qualified for marine flame-retardance and low-smoke zero-halogen / fire safety per IEC 60794 / IEC 60092-360 / IEC 60332-3-22 Cat. A |
| **Oil, drilling mud & seawater resistance** | Resistant to marine fuel/lube oils, salt mist and offshore fluids per IEC 60794 / IEC 60092-360 / IEC 60332-3-22 Cat. A | **RoHS & REACH compliance** | RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant |
| **Standards** | IEC 60794 / IEC 60092-360 / IEC 60332-3-22 Cat. A | | |

## 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 | Tensile rating kN ≈ | Min. bend R mm |
|---|---|---|---|---|---|---|
| **FXMSU & FXVDMSU / LKSM-FO Construction Schedule (−40…+80 °C)** 3 sizes | | | | | | |
| ☐ **FXMSU 4F OS2 / OM3** | 4 × 9/125 µm OS2 or 50/125 µm OM3 | Armoured marine optical core | 10.6 | 155 | 2.2 | 110 |
| ☐ **FXMSU 12F OS2 / OM4** | 12 × 9/125 µm OS2 or 50/125 µm OM4 | Armoured marine optical core | 12.8 | 235 | 3.0 | 130 |
| ☐ **FXMSU 24F OS2 / OM4** | 24 × 9/125 µm OS2 or 50/125 µm OM4 | Armoured marine optical core | 15.4 | 345 | 4.2 | 155 |

– Custom core cross-sections, pair/fibre counts, armour grades and factory drum lengths available per IEC 60794 / IEC 60092-360 / IEC 60332-3-22 Cat. A.

## Electrical, optical & thermal parameters

3 sizes

| Configuration | Max. DC $R_{20}$ / Atten. Ω/km or dB/km | Rating / Impedance | Operating temp. |
|---|---|---|---|
| 4 × 9/125 µm OS2 or 50/125 µm OM3 | 0.35 | ≤0.35 dB/km @ 1310 nm | −40…+80 °C |
| 12 × 9/125 µm OS2 or 50/125 µm OM4 | 0.22 | ≤0.22 dB/km @ 1550 nm | −40…+80 °C |
| 24 × 9/125 µm OS2 or 50/125 µm OM4 | 0.20 | ≤0.20 dB/km @ 1550 nm | −40…+80 °C |

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

## Standards and approvals

- IEC 60794 / IEC 60092-360 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/fxmsu-fxvdmsu-lksm-fo**

Typical values for this cable type, based on IEC 60794 / IEC 60092-360 / IEC 60332-3-22 Cat. A. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.