marine & offshore instrumentation cable

# FMGCG & FMGCH 60/250 V (DIN 89159 HEPR)

## FMGCG & FMGCH 60/250 V DIN 89159 HEPR Shipboard Telecommunication & Si

DIN 89159 / IEC 60092-375 · 60/250 V · Marine & offshore instrumentation cable




**DIN 89159 / IEC 60092-375** | **60/250 V (-40 to +90 °C)** | **5GM3 Polychloroprene / SHF1 Outer Ja**

## Application

FMGCG & FMGCH 60/250 V DIN 89159 HEPR Shipboard Telecommunication & Signal Cable (DIN 89159 / IEC 60092-375) engineered for 60/250 V service across -40 to +90 °C (min. bend radius 6 × OD).

**Typical uses:** Offshore DCS, ESD & Fire-Gas Systems, Shipboard Bridge & Engine Room Automation, Drilling Rig Instrumentation & Mud Logging, Naval Radar, Sonar & Combat Switchboards

## Construction






Cross-section, not to scale

1. HEPR Star-Quad Units (4×4×0.75 mm²)
2. Extruded Elastomeric Inner Covering
3. Copper Wire Braid Screen & Armour (C)
4. 5GM3 Polychloroprene / SHF1 Outer Jacket

## Technical data

Typical values

| | | | |
|---|---|---|---|
| **Rated voltage / transmission duty** | 60/250 V (DIN 89159 & IEC 60092-375 / IEC 60092-376) | **Core / conductor construction** | HEPR Star-Quad Units (4×4×0.75 mm²) — Four star-quads of stranded copper with HEPR (3GI3) rubber insulation |
| **Primary dielectric / buffering** | Extruded Elastomeric Inner Covering — Inner bedding sheath filling interstices between star-quads | **Continuous operating temperature** | −40…+90 °C (shipboard & offshore duty) |
| **Short-circuit / peak thermal rating** | Verified thermal stability per DIN 89159 & IEC 60092-375 / IEC 60092-376 | **Storage & transport temperature** | −40…+80 °C on export wooden/steel drum |
| **Outer protection / armouring** | 5GM3 Polychloroprene / SHF1 Outer Jacket — Oil-resistant polychloroprene (FMGCG) or halogen-free SHF1 (FMGCH) sheath | **Minimum bending radius** | 6 × OD |
| **Armour, screen & mechanical duty** | Copper Wire Braid Screen & Armour (C) — High-coverage bare copper wire braid for EMI shielding and protection | **Flame, fire & smoke performance** | Qualified for marine flame-retardance and low-smoke zero-halogen / fire safety per DIN 89159 & IEC 60092-375 / IEC 60092-376 |
| **Oil, drilling mud & seawater resistance** | Resistant to marine fuel/lube oils, salt mist and offshore fluids per DIN 89159 & IEC 60092-375 / IEC 60092-376 | **RoHS & REACH compliance** | RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant |
| **Standards** | DIN 89159 & IEC 60092-375 / IEC 60092-376 | | |

## 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 |
|---|---|---|---|---|---|---|
| **FMGCG & FMGCH 60/250 V (DIN 89159 HEPR) Construction Schedule (−40…+90 °C)** 3 sizes | | | | | | |
| ☐ **FMGCG & FMGCH 60/250 V 2×2×0.75 mm²** | **2 × 2 × 0.75 mm² (2Pr)** | **Stranded Cu/SnCu (IEC 60228 Class 2/5)** | **11.4** | **195** | **1.2** | **70** |
| ☐ **FMGCG & FMGCH 60/250 V 4×2×1.0 mm²** | **4 × 2 × 1.0 mm² (4Pr)** | **Stranded Cu/SnCu (IEC 60228 Class 2/5)** | **15.6** | **365** | **2.4** | **95** |
| ☐ **FMGCG & FMGCH 60/250 V 8×2×1.5 mm²** | **8 × 2 × 1.5 mm² (8Pr)** | **Stranded Cu/SnCu (IEC 60228 Class 2/5)** | **22.8** | **760** | **4.8** | **140** |

– Custom core cross-sections, pair/fibre counts, armour grades and factory drum lengths available per DIN 89159 & IEC 60092-375 / IEC 60092-376.

## Electrical, optical & thermal parameters

3 sizes

| Configuration | Max. DC $R_{20}$ / Atten. Ω/km or dB/km | Rating / Impedance | Operating temp. |
|---|---|---|---|
| **2 × 2 × 0.75 mm² (2Pr)** | **26.00** | **60/250 V (≤60 nF/km)** | **−40…+90 °C** |
| **4 × 2 × 1.0 mm² (4Pr)** | **19.50** | **60/250 V (≤65 nF/km)** | **−40…+90 °C** |
| **8 × 2 × 1.5 mm² (8Pr)** | **13.30** | **60/250 V (≤75 nF/km)** | **−40…+90 °C** |

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

## Standards and approvals

- DIN 89159 / IEC 60092-375 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/fmgcg-fmgch-60-250-v-din-89159-hepr**

Typical values for this cable type, based on DIN 89159 & IEC 60092-375 / IEC 60092-376. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.