Certificate No: LR2688593TA
Issue Date: 02/03/2026
Expiry Date: 11/01/2031

# Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

| | |
|---|---|
| **Manufacturer** | **Helmacab Oy** |
| **Address** | Lakimiehenkatu 4, Kaarina, 20780, Finland |
| **Place of Production** | Helmacab Oy<br>Lakimiehenkatu 4, Kaarina, 20780, Finland |
| **Place of Production** | Helmacab Oy<br>Lasitehtaankatu 12, Hanko, 10960, Finland |
| **Place of Production** | Helmacab Shanghai Co., Ltd<br>Plot 1-2, Minhang Export Processing Zone, No. 3111 Huan Cheng West Road, Fengxian District, Shanghai, 201401, China |
| **Type** | Cables Control, Telecommunication And Instrumentation |
| **Description** | Flame retardant, halogen free, cross-linked polyethylene (XLPE) insulated, screened, polyolefin sheathed instrumentation, control and communication cable 150/250 V (300 V).<br>TYPES RFA-HF Collectively screened<br>RFA-SHF2<br>RFA-HF(i) Collectively and individually screened<br>RFA-SHF2(i) |

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**Ashwinikumar Mhamal**

Electrical & Control Technical Manager - Africa, Middle East & India, Lead Specialist to Lloyd's Register Marine and Offshore India

Units 1702-1704, 17th Floor (Level-13), Building Q2, Aurum Q Parc; Gen 4/1 TTC, Thane-Belapur Road, Ghansoli, Navi Mumbai, 400710, India

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# Type Approval Certificate

**Trade Name** RFA-series

**Application** Fixed wiring on ships, offshore and industrial installations.

**Specified Standard**

| | |
|---|---|
| Construction: | IEC 60092-376: 2025 and IEC 60092-350: 2020 |
| Conductor: | IEC 60228: 2023 Plain or tinned to class 2 |
| Insulation: | IEC 60092-360: 2021 XLPE |
| Sheathing: | IEC 60092-360: 2021 SHF1 or SHF2 |

| | |
|---|---|
| Helmacab Oy specification: | HBKQ-9 |
| RFA-HF | 41 (Version: 23.05.2025/ dk) |
| RFA-SHF2 | 119 (Version: 23.05.2025/ dk) |
| RFA-HF(i) | 40 (Version: 23.05.2025/ dk) |
| RFA-SHF2(i) | 120 (Version: 23.05.2025/ dk) |

**Ratings**

| | |
|---|---|
| Rated voltage: | Uo/U (Um): 150/250 V (300 V) |
| Maximum conductor temperature: | 90° C |
| Minimum installation temperature: | -15°C |

RFA-HF / RFA-SHF2:

| Number of conductors | Conductor cross section |
|---|---|
| Pairs 1-37 | 0,5 / 0,75 / 1,0 / 1,5 |
| Triples 1 | 0,5 / 0,75 / 1,0 / 1,5 |
| Quads 1 | 0,5 / 0,75 / 1,0 / 1,5 |

RFA-HF(i) / RFA-SHF2(i):

| Number of conductors | Conductor cross section |
|---|---|
| Pairs 1-37 | 0,5 / 0,75 / 1,0 / 1,5 |
| Triples 1 | 0,5 / 0,75 / 1,0 / 1,5 |
| Quads 1 | 0,5 / 0,75 / 1,0 / 1,5 |

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# Type Approval Certificate

| Cable type | Insulation | Sheath |
|---|---|---|
| RFA-HF / RFA-HF(i) | XLPEe-x | SHF1-x |
| RFA-SHF2/ RFA-SHF2(i) | XLPEe-x | SHF2-x |

x = material composition no.

**Additional Tests**

| | |
|---|---|
| Flame retardancy: | IEC 60332-3-22: 2018<br>IEC 60332-1-2: 2025 |
| Acid gas emission: | IEC 60754-1: 2019 |
| pH and conductivity: | IEC 60754-2: 2019 |
| Fluorine content: | IEC 60684-2: 2025 |
| Smoke emission: | IEC 61034-1: 2019 and<br>IEC 61034-2: 2019 |

LR Polar code compliance (LR Test Specification Number 3, Section 1, Cl. 1.3.2.J). Winterization -50°C, witnessed by LR surveyor and provided evidence that the cables listed in this LR type approval certificate are suitable to withstand temperature of -50°C

**Other Conditions**

Type Approval does not eliminate the need (as required by LR Rules) the requirements for further review or for the product to be further inspected and/ or surveyed to be installed in ships classed or intended to be classed with LR.

If the specified standards are amended during the validity of this certificate, the product is to be reapproved prior to it being supplied to vessels to which the amended standards apply.

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register Marine and Offshore India LLP of any modification or changes to the equipment in order to obtain a valid Certificate.

**Previous Version:**

LR21219459TA

The Design Appraisal Document TSO-25-050127-E-01 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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