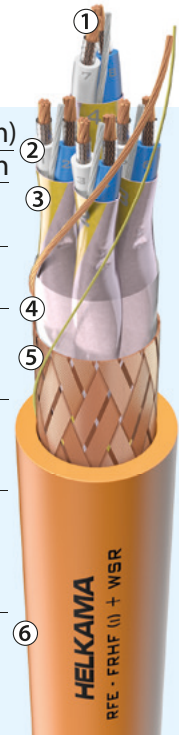


# RFE-FRHF(i)+WSR/WJR

**Fire Resistant + Water Spray Resistant and/or Water Jet Resistant armoured and individually screened instrumentation and communication cable 250V**

|   |  |                       |
|---|--|-----------------------|
| <b>Cable types:</b>                           | RFE-FRHF(i)+WSR (diameter ≤ 20 mm), RFE-FRHF(i)+WJR (diameter > 20 mm)   |                       |
| <b>DESIGN:</b>                                | <b>STANDARDS:</b>  | IEC 60092-376, design |
| <b>1. Conductor</b>                           | - stranded copper conductor 0,75–2,5 mm <sup>2</sup><br>- tinned stranded copper conductor on request  | IEC 60228, class 2    |
| <b>2. Insulation</b>                          | - special grade Mica tape(s)<br>- XLPE plastic   | IEC 60092-360         |
| <b>3. Twisted unit with individual screen</b> | - insulated, numbered cores twisted together to form a pair, triple or quad<br>- plastic coated aluminium tape and a tinned copper drain wire                                |                       |
| <b>4. Cabling and bedding</b>                 | - fillers or dummy cores may be added to obtain symmetrical and round construction<br>- filler tape  |                       |
| <b>5. Armour</b>                              | - drain wire (in all sizes)<br>- copper wire braid, coverage > 94%<br>- tinned copper wire braid on request<br>- the armour serves as a collective screen                    | IEC 60092-350         |
| <b>6. Sheath</b>                              | - polyolefine plastic, SHF1, standard colour orange<br>- oil resistant thermosetting black polyolefine, SHF2 on request<br>- other colours on request- rip cord under sheath | IEC 60092-360         |



● Halogen-free ● Flame-retardant ● Low smoke emission ● Fire-resistant ● Water Spray and/or Water Jet Resistant

**Application:** For fixed installation in most areas and on open deck in ships and offshore units. Especially intended to ensure the availability of all critical transportation-, comfort- and safety systems, i.e. to meet the concepts of; **Orderly Evacuation** (3 hours burning time) and **Safe Return to Port** (Fire test with simultaneous Water Spray / Water Jet + mechanical shocks) to simulate the firefighting conditions.

If the cable is exposed to direct sunlight, we recommend cable with black outer sheath or a protective covering.

## Main characteristics

|   |  |
|---|--|
| Rated voltage                               | 150/250V (300V)  |
| Halogen-free                                | IEC 60754 series   |
| Flame-retardant                             | IEC 60332-1-2 -test for single insulated wire and cable<br>IEC 60332-3-22 -test for bunched wires and cables, category A |
| Smoke emission                              | IEC 61034 series   |
| Fire- and Water Spray Resistant             | IEC 60331-2 (180 min test) + EN 50200:2015 Annex E (diameter ≤ 20 mm)  |
| Fire- and Water Jet Resistant               | IEC 60331-1 (180 min test) + BS 8491:2008 (diameter > 20 mm)   |
| Oil resistance (only SHF2)                  | IEC 60811-404 conditions according to 60092-360/SHF2   |
| For details see general information section |  |

## Electrical data:

|                                       | 0,75mm <sup>2</sup> | 1,5mm <sup>2</sup> | Unit    |
|---------------------------------------|---------------------|--------------------|---------|
| Loop resistance of pair, max. / +20°C | 52                  | 24,4               | ohm/km  |
| Pair capacitance, nom. / 1 KHz        | 55                  | 75                 | nF/km   |
| Loop inductance, nom.                 | 0,6                 | 0,7                | mH/km   |
| Insulation resistance / +20°C         | ≥1500               | ≥1500              | Mohm/km |

**Recommended minimum bending radius (fixed installation):** 4 x outer diameter of the cable

**Temperature rating:** Maximum conductor temperature + 90 °C  
Fixed installation - 40 °C to + 80 °C  
Minimum recommended installation temperature - 15 °C

For details see general information section

# HELKAMA

| RFE-FRHF (i)<br>+WSR/WJR<br>250V<br>Part number | Number of<br>conductors &<br>cross-section<br>n x mm <sup>2</sup> | Nominal<br>outer<br>diameter<br>mm | Approx-<br>imate<br>weight<br>kg/km | Min. bending<br>radius fixed<br>installation<br>mm |
|---|---|------------------------------------|-------------------------------------|--|
| 620546  | 1x2x0,75  | 9,5                                | 120                                 | 55   |
| 620548  | 2x2x0,75 Quad   | 11,0                               | 170                                 | 65   |
| 620550  | 2x2x0,75  | 14,0                               | 225                                 | 85   |
| 620552  | 4x2x0,75  | 16,5                               | 345                                 | 100  |
| 620554  | 7x2x0,75  | 20,0                               | 495                                 | 120  |
| 620556  | 8x2x0,75  | 21,0                               | 545                                 | 125  |
| 620558  | 10x2x0,75   | 24,5                               | 675                                 | 145  |
| 620560  | 12x2x0,75   | 25,5                               | 770                                 | 155  |
| 620562  | 14x2x0,75   | 27,0                               | 865                                 | 165  |
| 620563  | 16x2x0,75   | 29,0                               | 970                                 | 175  |
| 620564  | 19x2x0,75   | 31,0                               | 1105                                | 185  |
| 620566  | 24x2x0,75   | 35,0                               | 1370                                | 210  |
| <hr/>   |   |                                    |                                     |  |
| 620603  | 1x2x1,5   | 10,5                               | 160                                 | 65   |
| 620604  | 2x2x1,5 Quad  | 12,0                               | 225                                 | 70   |
| 620605  | 2x2x1,5   | 16,0                               | 335                                 | 95   |
| 620607  | 4x2x1,5   | 19,0                               | 470                                 | 115  |
| 620609  | 7x2x1,5   | 22,5                               | 710                                 | 135  |
| 620611  | 8x2x1,5   | 24,0                               | 795                                 | 145  |
| 620513  | 10x2x1,5  | 27,5                               | 970                                 | 165  |
| 620615  | 12x2x1,5  | 29,0                               | 1130                                | 175  |
| 620617  | 14x2x1,5  | 31,0                               | 1275                                | 185  |
| 620619  | 16x2x1,5  | 33,0                               | 1430                                | 200  |
| 620621  | 19x2x1,5  | 35,5                               | 1640                                | 215  |

Other sizes on request.

*sterk in kabels*

Part number for oil resistant SHF2 cable:

4 + code from above table → 4xxxxx