



HALLEY CABLES

RE-2G(St)H-CI-TIMF FE180 90° C

CU/SH/ISCR/OSCR/LSZH

Instrumentation Cables 500 V

Silicone insulated, individual & collective screened, HFFR sheathed cable

RE-2G(St)H-CI-TIMF FE180 90° C



Construction:

- Conductor : stranded copper wires, class 2.
- Insulation : special silicone rubber compound.
- Triple : three conductors twisted to a triple.
- TIMF construction : polyester tape above the triple, AL-PES tape over solid tinned copper drain wire, 0,60 mm. Upon request: stranded 0.50 mm² copper drain wire.
- Lay-up : TIMF laid up in layers of optimum pitch.
- Separator : polyester tape.
- Screen : AL-PES tape over stranded tinned copper drain wire 0,50 mm².
- Outer sheath : HFFR compound.
- Sheath colour : RAL 9005, black or RAL 5015, blue.
- Core identification : black / blue / red with numbered tape under separator tape of the pair screen. Upon request: black / blue / red cores numbered 1-1-1, 2-2-2,...
- Note : other core configurations manufactured upon request.

Technical data and tests:

- Rated voltage : 500 V.
- Test voltage : Urms core-core : 2000 V;
Urms core-screen : 2000 V.
- Temperature range : operation : - 30° C ~ + 90° C;
installation : - 5° C ~ + 50° C.
- Min. bending radius: 7.5 x D.

Standards:

- Design : EN 50288-7.
- Conductor : IEC 60228 class 2, DIN EN 60228 class 2.
- Outer sheath : EN 50290-2-27.
- Flame test : IEC 60332-1 & DIN EN 60332-1.
IEC 60332-3 & DIN EN 50266-2-4.
- Smoke density : IEC 61034-2 & DIN EN 61034-2.
- Halogen-free : IEC 60754-1/2 & DIN EN 50267-2.
- Circ. integrity (CI) : IEC 60331, VDE 0472-814;
BS 6387 cat. CWZ.

Applications:

These cables are used for transmission of analogue and digital signals in instrumentation and control systems at chemistry and petrochemistry industry plants, power plants, natural gas and petroleum plants, etc... These cables are used in a fixed operating mode, and can continue the supply of power under existing fire conditions and in environments which have no corrosive gases emitted in the event of fire. In case of fire, these cables inhibit the propagation of the flames and the development of smoke is extremely low. Instrumentation cables are not allowed for direct connection to a low impedance source, e.g. public mains electricity supply. With blue sheath it is suitable for intrinsically safe systems. These cables are not recommended for direct burial. They are for indoor and outdoor installation, in dry and wet locations; on racks, trays, in conduits.

Technical data and tests:

- Conductor resistance (20° C) : 0,50 mm² : 36,7 Ω/km;
0,75 mm² : 25,0 Ω/km;
1,0 mm² : 18,5 Ω/km;
1,3 mm² : 14,2 Ω/km;
1,5 mm² : 12,3 Ω/km.
- Insulation resistance (20° C) : min. 300 MΩ/km.
- Mutual capacitance (1 kHz) : max. 150 pF/m.
- L / R (ratio) (max.) : 0,50 mm² : max. 25 μH/Ω;
0,75 mm² : max. 25 μH/Ω;
1,0 mm² : max. 25 μH/Ω;
1,3 mm² : max. 40 μH/Ω;
1,5 mm² : max. 40 μH/Ω.



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DIMENSIONS

| No. of cores x cross section mm ² | Approx. outer diameter mm | Copper weight kg/km | Approx. cable weight kg/km |
|---|------------------------------|------------------------|-------------------------------|
| 2x3x0,50 | 12,8 | 43 | 130 |
| 2x3x0,75 | 14,5 | 58 | 165 |
| 2x3x1 | 15,0 | 72 | 185 |
| 2x3x1,3 | 16,0 | 89 | 210 |
| 2x3x1,5 | 16,7 | 101 | 235 |
| 4x3x0,50 | 14,9 | 82 | 210 |
| 4x3x0,75 | 16,8 | 110 | 270 |
| 4x3x1 | 17,4 | 139 | 300 |
| 4x3x1,3 | 18,5 | 174 | 350 |
| 4x3x1,5 | 19,3 | 197 | 390 |
| 5x3x0,50 | 15,7 | 101 | 245 |
| 5x3x0,75 | 17,8 | 137 | 315 |
| 5x3x1 | 18,4 | 173 | 360 |
| 5x3x1,3 | 19,8 | 216 | 425 |
| 5x3x1,5 | 20,4 | 245 | 460 |
| 6x3x0,50 | 17,1 | 120 | 290 |
| 6x3x0,75 | 19,4 | 163 | 375 |
| 6x3x1 | 20,0 | 206 | 425 |
| 6x3x1,3 | 21,4 | 258 | 495 |
| 6x3x1,5 | 22,3 | 292 | 550 |
| 8x3x0,50 | 19,5 | 158 | 380 |
| 8x3x0,75 | 22,1 | 216 | 485 |
| 8x3x1 | 22,8 | 274 | 550 |
| 8x3x1,3 | 24,6 | 343 | 660 |
| 8x3x1,5 | 25,4 | 389 | 715 |
| 10x3x0,50 | 21,7 | 197 | 465 |
| 10x3x0,75 | 24,5 | 267 | 595 |
| 10x3x1 | 25,3 | 341 | 680 |
| 10x3x1,3 | 27,3 | 427 | 810 |
| 10x3x1,5 | 28,1 | 485 | 880 |
| 12x3x0,50 | 23,4 | 235 | 540 |
| 12x3x0,75 | 26,5 | 322 | 695 |
| 12x3x1 | 27,6 | 408 | 805 |
| 12x3x1,3 | 29,5 | 512 | 945 |
| 12x3x1,5 | 30,7 | 581 | 1045 |
| 16x3x0,50 | 26,7 | 312 | 695 |
| 16x3x0,75 | 30,4 | 427 | 915 |
| 16x3x1 | 31,5 | 542 | 1045 |

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| No. of cores x cross section mm ² | Approx. outer diameter mm | Copper weight kg/km | Approx. cable weight kg/km |
|---|------------------------------|------------------------|-------------------------------|
| 16x3x1,3 | 33,9 | 681 | 1245 |
| 16x3x1,5 | 35,2 | 773 | 1375 |
| 20x3x0,50 | 29,8 | 389 | 870 |
| 20x3x0,75 | 33,7 | 533 | 1125 |
| 20x3x1 | 35,1 | 677 | 1300 |
| 20x3x1,3 | 37,6 | 850 | 1535 |
| 20x3x1,5 | 39,0 | 965 | 1690 |
| 24x3x0,50 | 32,5 | 466 | 1035 |
| 24x3x0,75 | 36,7 | 638 | 1335 |
| 24x3x1 | 38,3 | 811 | 1540 |
| 24x3x1,3 | 41,2 | 1019 | 1840 |
| 24x3x1,5 | 42,5 | 1157 | 2010 |

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