



# HALLEY CABLES

## RE-2G(St)HSWAH-CI-PIMF FE180 90° C

CU/SH/ISCR/OSCR/LSZH/SWA/LSZH

Instrumentation Cables 500 V

Silicone insulated, individual & collective screened, HFFR sheathed cable

RE-2G(St)HSWAH-CI-PIMF FE180



### Construction:

- Conductor : stranded copper wires, class 2.
- Insulation : special silicone rubber compound.
- Pair : two conductors twisted to a pair.
- PIMF construction : polyester tape above the pair, AL-PES tape over solid tinned copper drain wire, 0,60 mm. Upon request: stranded copper drain wire 0,50 mm<sup>2</sup>.
- Lay-up : PIMF laid up in layers of optimum pitch.
- Separator : polyester tape.
- Screen : AL-PES tape over stranded tinned copper drain wire 0,50 mm<sup>2</sup>.
- Inner sheath : HFFR compound.
- Armour : galvanized round steel wire.
- Outer sheath : HFFR compound.
- Sheath colour : RAL 9005, black or RAL 5015, blue.
- Core identification : black / blue cores with numbered tape under the separator tape of the pair screen. Upon request: black / blue cores numbered 1-1, 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: 10 x D.

### Standards:

- Design : EN 50288-7.
- Conductor : IEC 60228 class 2, DIN EN 60228 class 2.
- Inner sheath : EN 50290-2-27.
- Armour : EN 10257-1.
- 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. The armour above the inner sheath protects the cable from mechanical shocks. 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 mm<sup>2</sup> : 36,7 Ω/km;  
0,75 mm<sup>2</sup> : 25,0 Ω/km;  
1,0 mm<sup>2</sup> : 18,5 Ω/km;  
1,3 mm<sup>2</sup> : 14,2 Ω/km;  
1,5 mm<sup>2</sup> : 12,3 Ω/km.
- L / R (ratio) (max.) : 0,50 mm<sup>2</sup> : 25 μH/Ω;  
0,75 mm<sup>2</sup> : 25 μH/Ω;  
1,0 mm<sup>2</sup> : 25 μH/Ω;  
1,3 mm<sup>2</sup> : 40 μH/Ω;  
1,5 mm<sup>2</sup> : 40 μH/Ω.
- Insulation resistance (20° C) : min. 300 MΩ/km.
- Mutual capacitance : max. 150 pF/m (1 kHz).



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**DIMENSIONS**

No. of cores x cross section mm <sup>2</sup>	Approx. bedding diameter mm	Approx. outer diameter mm	Copper weight kg/km	Approx. cable weight kg/km
2x2x0,50	10,7	15,5	34	375
2x2x0,75	11,9	16,7	43	420
2x2x1	12,2	17,0	53	440
2x2x1,3	13,0	17,8	64	480
2x2x1,5	13,4	18,2	72	500
4x2x0,50	12,4	17,2	62	465
4x2x0,75	13,8	18,6	82	535
4x2x1	14,3	19,3	101	580
4x2x1,3	15,2	20,9	123	735
4x2x1,5	15,7	20,7	139	665
5x2x0,50	13,2	18,0	77	515
5x2x0,75	14,8	20,5	101	700
5x2x1	15,3	21,0	125	745
5x2x1,3	16,3	22,0	153	815
5x2x1,5	16,9	21,9	173	740
6x2x0,50	13,2	19,3	91	575
6x2x0,75	16,0	21,7	120	770
6x2x1	16,5	22,2	149	820
6x2x1,3	17,7	23,6	183	915
6x2x1,5	18,2	24,1	206	960
8x2x0,50	16,1	21,8	120	780
8x2x0,75	18,1	24,0	158	915
8x2x1	18,7	24,6	197	980
8x2x1,3	20,0	25,9	242	1080
8x2x1,5	20,7	26,8	274	1150
10x2x0,50	17,7	23,6	149	895
10x2x0,75	19,9	25,8	197	1040
10x2x1	20,7	26,8	245	1130
10x2x1,3	22,1	28,2	302	1250
10x2x1,5	22,9	29,0	341	1320
12x2x0,50	19,2	25,1	178	990
12x2x0,75	21,6	27,7	235	1170
12x2x1	22,4	28,5	293	1260
12x2x1,3	24,4	30,7	361	1450
12x2x1,5	25,2	31,5	408	1535

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16x2x0,50	21,8	27,9	235	1185
16x2x0,75	25,0	32,0	312	1615
16x2x1	25,9	32,9	389	1730
16x2x1,3	27,7	34,9	480	1940
16x2x1,5	28,7	35,9	542	2050
20x2x0,50	24,5	31,5	293	1570
20x2x0,75	27,6	34,8	389	1860
20x2x1	28,6	35,8	485	2005
20x2x1,3	30,7	38,1	600	2255
20x2x1,5	31,7	39,1	677	2390
24x2x0,50	26,6	33,6	350	1755
24x2x0,75	30,0	37,2	466	2085
24x2x1	28,6	38,5	581	2270
24x2x1,3	33,8	41,2	719	2590
24x2x1,5	34,9	43,3	811	3025

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