



# HALLEY CABLES

## RE-2G(St)HSAWAH-CI-TIMF FE180 90° C

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

Instrumentation Cables 500 V

Silicone insulated, screened, armoured, HFFR sheathed cable

www.halleycables.com

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### 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 copper drain wire 0,50 mm<sup>2</sup>.
- 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 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 / red cores with numbered tape under the 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: 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.

### 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).

- \*Special Design : Sunlight resistance : (UIL 1581 section 1200)
- Oil resistance : (ICEA S-82-552)

\*(See page 3)

### 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. 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.



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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
2x3x0,50	12,6	17,4	43	445
2x3x0,75	14,1	19,1	58	520
2x3x1	14,6	19,6	72	550
2x3x1,3	15,6	21,3	89	700
2x3x1,5	16,1	21,8	101	730
4x3x0,50	14,5	19,5	82	570
4x3x0,75	16,2	21,9	110	770
4x3x1	16,8	22,5	139	820
4x3x1,3	17,9	23,8	174	915
4x3x1,5	18,5	24,4	197	960
5x3x0,50	15,3	21,0	101	730
5x3x0,75	17,2	23,1	137	855
5x3x1	17,8	23,7	173	915
5x3x1,3	19,0	24,9	216	1010
5x3x1,5	19,6	25,5	245	1065
6x3x0,50	16,5	22,2	120	805
6x3x0,75	18,6	24,5	163	950
6x3x1	19,2	25,1	206	1015
6x3x1,3	20,6	26,7	258	1140
6x3x1,5	21,3	27,4	292	1200
8x3x0,50	18,7	24,6	158	955
8x3x0,75	21,1	27,2	216	1135
8x3x1	21,8	27,9	274	1220
8x3x1,3	23,4	29,5	343	1360
8x3x1,5	24,6	31,6	389	1655
10x3x0,50	20,7	26,8	197	1100
10x3x0,75	23,3	29,4	267	1295
10x3x1	24,1	30,4	341	1415
10x3x1,3	26,3	33,3	427	1795
10x3x1,5	27,1	34,3	485	1915
12x3x0,50	22,4	28,5	235	1225
12x3x0,75	25,7	32,7	322	1675
12x3x1	26,6	33,6	408	1805
12x3x1,3	28,5	35,7	512	2030
12x3x1,5	29,5	36,7	581	2150
16x3x0,50	25,9	32,9	312	1685
16x3x0,75	29,2	36,4	427	2010
16x3x1	30,3	37,5	542	2180
16x3x1,3	32,5	39,9	681	2465
16x3x1,5	33,6	42,0	773	2890

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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
20x3x0,50	28,6	35,8	389	1945
20x3x0,75	32,7	40,1	533	2385
20x3x1	33,9	42,3	677	2860
20x3x1,3	36,4	44,8	850	3200
20x3x1,5	37,6	46,2	965	3420
24x3x0,50	31,1	38,5	466	2200
24x3x0,75	35,5	43,9	638	2965
24x3x1	36,9	45,3	811	3215
24x3x1,3	39,6	48,2	1019	3630
24x3x1,5	40,9	49,7	1157	3880

**Special Design : Sunlight resistance** : (UL 1581 section 1200)  
**Oil resistance** : (ICEA S-82-552)

**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
4x3x1	15,6	21,6	141	927
6x3x1	19,9	26,8	209	1397
16x3x1	29,2	36,7	550	2491
6x3x1,5	22,2	29,3	300	1642

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