



# HALLEY CABLES

# RE-2X(St)HSWAH-PIMF

## Instrumentation Cables HFFR 300 V CU/XLPE/ISCR/OSCR/LSZH/SWA/LSZH

XLPE insulated, armoured, HFFR sheathed cable



RE-2X(St)HSWAH-PIMF

### Construction:

- Conductor : plain copper wire, stranded.
- Insulation : XLPE compound, (RE-2X...).
- Core identification : black / white with numbered tape under separator tape of the pair screen. Upon request: black/white cores numbered 1-1, 2-2,...
- Pair : two conductors twisted to a pair.
- Lay-up : PIMF laid up in layers of optimum pitch.
- Separator : polyester tape.
- Screen : AL-PES tape over 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.

### Technical data and tests:

- Rated voltage : 300 V.
- Test voltage : Urms core-core : 1500 V;  
Urms core-screen : 1500 V.
- Temperature range : operation : - 30° C ~ + 70° C;  
installation : - 5° C ~ + 50° C.
- Min. bending radius : 10 x D.
- Insulation resistance : min. 5000 MΩ/km.

### Standards:

- Design : DIN EN 50288-7.
- Conductor : IEC 60228 class 2, DIN EN 60228 class 2.
- Insulation : EN 50290-2-29.
- Inner sheath : EN 50290-2-27.
- Armour : EN 10257-1.
- Outer sheath : EN 50290-2-27.
- Flame retardancy : IEC 60332-1 & DIN EN 60332-1,  
IEC 60332-3 & DIN EN 50266-2-4.
- Halogen-free test : IEC 60754-1/2;  
DIN EN 50267-2.
- Smoke density test : IEC 61034-2 & DIN EN 61034-2.

### 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 the environments which must have no corrosive gases emitted in the event of fire. In case of fire, these cables inhibit the propagation of the flames whereby 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:

- Insulation thickness : 0,50 mm<sup>2</sup> : 0,40 mm;  
0,75 mm<sup>2</sup> : 0,40 mm;  
1,0 mm<sup>2</sup> : 0,40 mm;  
1,3 mm<sup>2</sup> : 0,45 mm;  
1,50 mm<sup>2</sup> : 0,45 mm;
- Conductor resistance : 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.
- Mutual capacitance (1 kHz) : max. 120 pF/m.

www.halleycables.com

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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	9,1	13,7	34	315
4x2x0,50	10,5	15,1	62	385
5x2x0,50	11,2	16,0	77	430
6x2x0,50	12,0	16,8	91	475
8x2x0,50	13,5	18,3	120	550
10x2x0,50	14,8	19,8	149	635
12x2x0,50	16,0	21,7	178	810
16x2x0,50	18,1	24,0	235	965
20x2x0,50	20,0	25,9	293	1105
24x2x0,50	21,6	27,7	350	1250
2x2x0,75	9,9	14,5	43	345
4x2x0,75	11,4	16,2	82	445
5x2x0,75	12,2	17,0	101	490
6x2x0,75	13,2	18,0	120	540
8x2x0,75	14,8	20,5	158	740
10x2x0,75	16,3	22,0	197	835
12x2x0,75	17,6	23,5	235	940
16x2x0,75	20,0	25,9	312	1115
20x2x0,75	22,0	28,1	389	1295
24x2x0,75	24,3	30,6	466	1505
2x2x1	10,7	15,3	53	380
4x2x1	12,4	17,2	101	490
5x2x1	13,2	18,0	125	545
6x2x1	14,3	20,0	149	705
8x2x1	16,1	21,8	197	825
10x2x1	17,7	23,6	245	955
12x2x1	19,2	25,1	293	1060
16x2x1	21,8	27,9	389	1280
20x2x1	24,5	31,5	485	1690
24x2x1	26,6	33,6	581	1895
2x2x1,3	11,9	16,7	64	430
4x2x1,3	13,8	18,6	123	560
5x2x1,3	14,8	20,5	153	735
6x2x1,3	16,0	21,7	183	810
8x2x1,3	18,1	24,0	242	965
10x2x1,3	19,9	25,8	302	1105
12x2x1,3	21,6	27,7	361	1250
16x2x1,3	24,6	31,6	480	1676
20x2x1,3	27,6	34,8	600	1990
24x2x1,3	30,0	37,2	719	2235
2x2x1,5	12,2	17,0	72	455
4x2x1,5	14,3	19,1	139	590
5x2x1,5	15,3	20,3	173	665
6x2x1,5	16,5	22,2	206	850
8x2x1,5	18,7	24,6	274	1020
10x2x1,5	20,7	26,8	341	1180
12x2x1,5	22,4	28,5	408	1325
16x2x1,5	25,9	32,9	542	1820
20x2x1,5	28,6	35,8	677	2115
24x2x1,5	31,1	38,5	811	2400

