



# HALLEY CABLES

# RE-2X(St)HSWAH MP 90° C

## CU/XLPE/OSCR/LSZH/SWA/LSZH

### Instrumentation Cables HFFR DK 500 V

XLPE insulated, screened, armoured, HFFR sheathed cable



#### Construction:

- Conductor : plain copper wire, stranded.
- Insulation : XLPE compound (RE-2X...).
- Core identification : black / blue ; with numbered tape under separator tape of the pair screen. Upon request: black / blue cores numbered 1-1, 2-2,... Other core configurations manufactured upon request.
- Pair : two conductors twisted to a pair.
- Lay-up : pairs 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/outer sheath : HFFR compound
- Armour : galvanized round steel wire.
- Sheath colour : RAL 9005, black or RAL 5015, blue.

#### 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.
- 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/outer sheath : EN 50290-2-27.
- Armour : EN 10257-1.
- Flame test : IEC 60332-1 & 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.

#### Applications:

These cables are used for transmission of analogue and digital signals in instrumentation and control systems in chemistry and petrochemistry industry plants, power plants, natural gas and petroleum plants, etc... These cables are used in 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. 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 : 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 :  $\leq 4$  pairs      all other pairs  
0,50 mm<sup>2</sup> : max. 100 pF/m      max. 65 pF/m;  
0,75 mm<sup>2</sup> : max. 100 pF/m      max. 65 pF/m;  
1,0 mm<sup>2</sup> : max. 100 pF/m      max. 65 pF/m;  
1,3 mm<sup>2</sup> : max. 100 pF/m      max. 75 pF/m;  
1,5 mm<sup>2</sup> : max. 100 pF/m      max. 75 pF/m.
- Capacitance unbalanced : (1 kHz) : max. 500 pF/500 m.





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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
1x2x0,50	6,4	10,8	14	210
1x2x0,75	6,8	11,2	19	230
1x2x1	7,2	11,8	24	250
1x2x1,3	7,7	12,3	30	270
1x2x1,5	8,0	12,6	34	285
2x2x0,50	9,2	13,8	24	310
2x2x0,75	9,8	14,4	34	340
2x2x1	10,5	15,1	43	370
2x2x1,3	11,3	16,1	55	415
2x2x1,5	11,9	16,7	62	435
4x2x0,50	10,7	15,5	43	385
4x2x0,75	11,5	16,3	62	435
4x2x1	12,3	17,1	82	480
4x2x1,3	13,3	18,1	105	535
4x2x1,5	14,0	18,8	120	570
5x2x0,50	11,2	16,0	53	415
5x2x0,75	12,0	16,8	77	470
5x2x1	12,9	17,7	101	520
5x2x1,3	14,0	18,8	130	585
5x2x1,5	14,7	19,7	149	640
6x2x0,50	12,0	16,8	62	455
6x2x0,75	13,0	17,8	91	515
6x2x1	13,9	18,7	120	575
6x2x1,3	15,1	20,8	155	760
6x2x1,5	15,8	21,5	178	815
8x2x0,50	13,5	18,3	82	525
8x2x0,75	14,6	19,6	120	610
8x2x1	15,7	21,4	158	790
8x2x1,3	17,1	23,0	204	910
8x2x1,5	17,9	23,8	235	975
10x2x0,50	14,8	19,8	101	600
10x2x0,75	16,0	21,7	149	800
10x2x1	17,3	23,2	197	910
10x2x1,3	18,8	24,7	254	1035
10x2x1,5	19,8	25,7	293	1115
12x2x0,50	16,0	21,7	120	770
12x2x0,75	17,3	23,2	178	895





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12x2x1	18,7	24,6	235	1010
12x2x1,3	20,4	26,3	304	1155
12x2x1,5	21,4	27,5	350	1260
16x2x0,50	18,1	24,0	158	915
16x2x0,75	19,6	25,5	235	1060
16x2x1	21,2	27,3	312	1220
16x2x1,3	23,6	29,7	404	1435
16x2x1,5	24,8	31,8	466	1730
20x2x0,50	19,9	25,8	197	1040
20x2x0,75	21,7	27,8	293	1225
20x2x1	23,8	29,9	389	1435
20x2x1,3	26,0	33,0	504	1845
20x2x1,5	27,3	34,5	581	2010
24x2x0,50	21,6	27,7	235	1170
24x2x0,75	23,9	30,0	350	1410
24x2x1	25,8	32,8	466	1800
24x2x1,3	28,2	35,4	604	2090
24x2x1,5	29,7	36,9	696	2265

