



# HALLEY CABLES

# RE-2Y(St)HSWAH-TIMF 70° C

## CU/PE/ISCR/OSCR/LSZH/SWA/LSZH

### Instrumentation Cables British Standard 300/500 V

PE insulated, screened, armoured, LSZH sheathed cable

RE-2Y(St)HSWAH-TIMF



### Construction:

- Conductor : plain annealed copper wire, 0,50 mm<sup>2</sup> and 1,0 mm<sup>2</sup> flexible, 0,50 mm<sup>2</sup> and 0,75 mm<sup>2</sup> flexible or 1,5 mm<sup>2</sup> stranded.
- Insulation : PE compound, (RE-2Y...).
- Core identification : black / white / red; with numbered tape under separator tape of the pair screen.
- Triple : three conductors twisted to a triple.
- TIMF construction : polyester tape above the pair, AL-PES tape over tinned 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 tinned copper drain wire 0,50 mm<sup>2</sup>.
- Bedding : LSZH compound, black.
- Armour : galvanized round steel wire.
- Outer sheath : LSZH compound, LST1; LSZH : Low Smoke Zero Halogen.
- Sheath colour : RAL 9005, black or RAL 5015, blue.

### Technical data and tests:

- Rated voltage (U<sub>0</sub>/U) : 300/500 V.
- Test voltage : Urms core-core : 1000 V;  
Urms core-screen : 1000 V.
- Temperature range : operation : - 40° C ~ + 70° C;  
installation : - 5° C ~ + 50° C.
- Capacitance unbalanced : (1 kHz) : max. 250 pF/250 m.
- Insulation resistance : min. 5000 MΩ/km.
- Min. bending radius : 8 x D.
- 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;  
1,5 mm<sup>2</sup> : 40 μH/Ω.

### Standards:

- Design : BS 5308 Part 1 Type 1.
- Conductor : BS 6360.
- Insulation : BS 6234 Type 03.
- Armour : BS EN 10257-1.
- Outer sheath : BS 7655.
- Flame retardancy : IEC 60332-1 & BS EN 60332-1.  
IEC 60332-3 & BS EN 50266-2-4.
- Smoke density : IEC 61034-2 & BS EN 61034-2.
- Halogen-free : IEC 60754-1/2 & BS EN 50267-2.

### Applications:

These cables are used for the 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... . Instrumentation cables are not allowed to be directly connected to a low impedance source, e.g. public mains electricity supply. In case of fire, these cables inhibit the propagation of the flames and the development of smoke is extremely low. No corrosive gases are emitted in the event of fire. 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> : 0,50 mm;  
1,0 mm<sup>2</sup> : 0,60 mm;  
0,50 mm<sup>2</sup> : 0,60 mm;  
0,75 mm<sup>2</sup> : 0,60 mm;  
1,50 mm<sup>2</sup> : 0,60 mm.
- Conductor class, BS 6360 : 0,50 mm<sup>2</sup> : Class 1;  
1,0 mm<sup>2</sup> : Class 1;  
0,50 mm<sup>2</sup> : Class 5;  
0,75 mm<sup>2</sup> : Class 5;  
1,50 mm<sup>2</sup> : Class 2.
- Conductor resistance : 0,50 mm<sup>2</sup> : 36,8 Ω/km;  
1,0 mm<sup>2</sup> : 18,4 Ω/km;  
0,50 mm<sup>2</sup> : 39,7 Ω/km;  
0,75 mm<sup>2</sup> : 26,5 Ω/km;  
1,50 mm<sup>2</sup> : 12,3 Ω/km.
- Mutual capacitance (1 kHz) : ≤2 pairs : all other pairs  
0,50 mm<sup>2</sup> : max. 115 pF/m, max. 75 pF/m;  
0,75 mm<sup>2</sup> : max. 115 pF/m, max. 75 pF/m;  
1,0 mm<sup>2</sup> : max. 115 pF/m, max. 75 pF/m;  
1,5 mm<sup>2</sup> : max. 120 pF/m, max. 85 pF/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
0,50 mm <sup>2</sup> (mono/solid)				
2x3x0,50	11,2	16,0	53	420
5x3x0,50	14,3	20,0	125	715
10x3x0,50	19,6	26,2	245	1235
15x3x0,50	22,3	29,1	265	1550
20x3x0,50	25,7	32,7	485	1890
30x3x0,50	31,1	39,1	725	2770
50x3x0,50	39,5	49,1	1205	4400
0,50 mm <sup>2</sup> (flexible)				
2x3x0,50	12,8	18,3	53	560
5x3x0,50	16,2	21,9	125	790
10x3x0,50	22,1	28,9	245	1380
15x3x0,50	25,7	32,7	265	1735
20x3x0,50	29,6	37,6	485	2350
30x3x0,50	35,8	44,2	725	3105
50x3x0,50	45,3	55,3	1205	4910
0,75 mm <sup>2</sup> (flexible)				
2x3x0,75	14,0	19,5	72	615
5x3x0,75	17,5	23,4	173	900
10x3x0,75	24,6	31,6	341	1630
15x3x0,75	27,9	34,9	509	2025
20x3x0,75	32,2	40,4	677	2785
30x3x0,75	39,0	48,6	1013	4095
50x3x0,75	49,5	59,7	1685	5890
1,0 mm <sup>2</sup> (mono/solid)				
2x3x1	13,8	19,3	91	635
5x3x1	17,0	22,7	221	930
10x3x1	24,0	30,8	437	1700
15x3x1	27,3	34,3	653	216
20x3x1	31,4	39,4	869	2915
30x3x1	38,2	47,8	1301	4350
50x3x1	48,3	58,5	2135	6335
1,5 mm <sup>2</sup> (stranded)				
2x3x1,5	15,5	21,2	129	750
5x3x1,5	19,7	26,3	317	142
10x3x1,5	27,6	34,6	629	2110
15x3x1,5	31,9	39,9	941	3010
20x3x1,5	36,8	45,2	1253	3760
30x3x1,5	44,3	54,3	1877	5545
50x3x1,5	55,7	66,5	3125	7995

