



HALLEY CABLES

RE-2Y(St)HSWAH-PIMF 70° C

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

Instrumentation Cables British Standard 300/500 V

PE insulated, screened, armoured, LSZH sheathed cable



Construction:

- Conductor : plain annealed copper wire, 0,50 mm² and 1,0 mm² flexible, 0,50 mm² and 0,75 mm² flexible or 1,5 mm² stranded.
- Insulation : PE compound, (RE-2Y...).
- Core identification : black / blue ; with numbered tape under separator tape of the pair screen.
- Pair : two conductors twisted to a pair.
- PIMF construction : polyester tape above the pair, AL-PES tape over tinned copper drain wire, 0,50 mm².
- Lay-up : PIMF laid up in layers of optimum pitch.
- Separator : polyester tape.
- Screen : AL-PES tape over tinned copper drain wire 0,50 mm².
- 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 (U₀/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 mm² : 25 μH/Ω;
0,75 mm² : 25 μH/Ω;
1,0 mm² : 25 μH/Ω;
1,5 mm² : 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 mm² : 0,50 mm;
1,0 mm² : 0,60 mm;
0,50 mm² : 0,60 mm;
0,75 mm² : 0,60 mm;
1,50 mm² : 0,60 mm.
- Conductor class, BS 6360 : 0,50 mm² : Class 1;
1,0 mm² : Class 1;
0,50 mm² : Class 5;
0,75 mm² : Class 5;
1,50 mm² : Class 2.
- Conductor resistance : 0,50 mm² : 36,8 Ω/km;
1,0 mm² : 18,4 Ω/km;
0,50 mm² : 39,7 Ω/km;
0,75 mm² : 26,5 Ω/km;
1,50 mm² : 12,3 Ω/km.
- Mutual capacitance (1 kHz) : ≤2 pairs : all other pairs
0,50 mm² : max. 115 pF/m, max. 75 pF/m;
0,75 mm² : max. 115 pF/m, max. 75 pF/m;
1,0 mm² : max. 115 pF/m, max. 75 pF/m;
1,5 mm² : max. 120 pF/m, max. 85 pF/m.



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DIMENSIONS

No. of cores x cross section mm ²	Approx. bedding diameter mm	Approx. outer diameter mm	Copper weight kg/km	Approx. cable weight kg/km
0,50 mm ² (mono/solid)				
2x2x0,50	10,3	14,9	33	385
5x2x0,50	13,5	19,0	76	660
10x2x0,50	18,3	24,2	148	935
15x2x0,50	21,1	27,7	220	1380
20x2x0,50	23,5	30,3	292	1620
30x2x0,50	27,9	34,9	436	2125
50x2x0,50	36,1	44,5	724	3375
0,50 mm ² (flexible)				
2x2x0,50	12,0	16,8	33	455
5x2x0,50	15,2	20,9	76	750
10x2x0,50	21,1	27,9	148	1365
15x2x0,50	24,5	31,3	220	1665
20x2x0,50	27,3	34,3	292	1900
30x2x0,50	32,3	40,5	436	2785
50x2x0,50	41,7	51,5	724	4465
0,75 mm ² (flexible)				
2x2x0,75	12,8	17,6	48	510
5x2x0,75	16,3	22,0	112	870
10x2x0,75	22,7	29,5	220	1485
15x2x0,75	26,4	33,4	328	1855
20x2x0,75	29,8	37,8	436	2550
30x2x0,75	35,5	43,9	652	3325
50x2x0,75	45,0	55,0	1084	5235
1,0 mm ² (mono/solid)				
2x2x1	12,8	17,6	52	480
5x2x1	16,2	21,9	125	830
10x2x1	22,6	29,4	245	1495
15x2x1	26,2	33,2	365	1890
20x2x1	29,8	37,8	485	2520
30x2x1	35,4	43,8	725	3350
50x2x1	44,9	54,9	1205	5105
1,5 mm ² (stranded)				
2x2x1,5	14,7	20,4	71	695
5x2x1,5	18,8	25,4	172	1215
10x2x1,5	26,5	33,5	340	1800
15x2x1,5	30,8	38,8	508	2555
20x2x1,5	34,4	42,6	676	3040
30x2x1,5	41,0	50,8	1012	4470
50x2x1,5	52,2	62,6	1684	6200

