



HALLEY CABLES

RE-2X(St)HSAWAH-PIMF 90° C

CU/XLPE/ISCR/OSCR/LSZH/SWA/LSZH

Instrumentation Cables British Standard 300/500 V

XLPE insulated, screened, armoured, LSZH sheathed cable

RE-2X(St)HSAWAH PIMF



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 : XLPE compound, GP 8 (RE-2X...).
- 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 7655.
- 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 |

