



# HALLEY CABLES

# RE-2Y(St)Y-fl-PIMF 70° C

## CU/PE/ISCR/OSCR/PVC

### Instrumentation Cables British Standard 300/500 V

Multi-pair, PE insulated, screened, PVC sheathed cable

RE-2Y(St)Y-fl-PIMF



### Construction:

- Conductor : plain annealed copper wire, 0,50 mm<sup>2</sup> and 1,0 mm<sup>2</sup> solid, 0,50 mm<sup>2</sup> flexible or 1,5 mm<sup>2</sup> stranded.
- Insulation : PE compound.
- Core ident. : black / blue ; with numbered tape under separator tape of the pair screen.
- Pair : two conductors twisted to a pair.
- PIMF constr. : polyester tape above the pair, AL-PES tape over tinned copper drain wire, 0,50 mm<sup>2</sup>.
- 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>.
- Outer sheath : PVC compound, flame retardant.
- Sheath colour : RAL 9005, black.

### Technical data and tests:

- Rated voltage (U<sup>o</sup>/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.
- Min. bending radius : 6 x D.
- Insulation resist. (20° C) : min. 5000 MΩ/km.
- Capacitance unbalanced : (1 kHz) : max. 250 pF/250 m

### Standards:

- Design : BS 5308 Part 1 Type 1.
- Conductor : BS 6360.
- Insulation : BS 6234 Type 03.
- Outer sheath : TM1, BS 7655.
- Flame retardancy test : IEC 60332-1 & BS EN 60332-1.

### Applications:

These cables are used for transmission of analogue and digital signals in instrument and control systems at chemistry and petrochemistry industry plants, power plants, natural gas and petroleum plants, etc... . Instrumentation cables are not allowed for direct connection to a low impedance source, e.g. public mains electricity supply. 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;  
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;  
1,5 mm<sup>2</sup> : Class 2.
- Cond. resistance (20° C) : 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;  
1,5 mm<sup>2</sup> : 12,3 Ω/km.
- Mutual capacitance (1 kHz): 0,50 mm<sup>2</sup> : max. 115 pF/m;  
1,0 mm<sup>2</sup> : max. 115 pF/m;  
1,5 mm<sup>2</sup> : max. 120 pF/m.
- L/R (ratio) (max) : 0,50 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.

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## DIMENSIONS

No. of cores x cross section mm <sup>2</sup>	Approx. outer diameter mm	Copper weight kg/km	Approx. cable weight kg/km
0,5 mm <sup>2</sup> (flexible)			
2x2x0,50	12,0	33	125
5x2x0,50	15,2	76	220
10x2x0,50	21,1	148	385
15x2x0,50	24,5	220	560
20x2x0,50	27,3	292	710
30x2x0,50	32,3	436	980
50x2x0,50	41,7	724	1675
0,75 mm <sup>2</sup> (flexible)			
2x2x0,75	12,8	48	140
5x2x0,75	16,3	112	260
10x2x0,75	22,7	220	470
15x2x0,75	26,4	328	675
20x2x0,75	29,8	436	880
30x2x0,75	35,5	652	1295
50x2x0,75	45,0	1084	2050
1,5 mm <sup>2</sup> (stranded)			
2x2x1,5	14,7	71	195
5x2x1,5	18,8	172	370
10x2x1,5	26,5	340	675
15x2x1,5	30,8	508	990
20x2x1,5	34,4	676	1255
30x2x1,5	41,0	1012	1850
50x2x1,5	52,5	1684	2990