



# HALLEY CABLES

# RE-Y(St)YSWAY-fl-PIMF 70° C

## CU/PVC/ISCR/OSCR/PVC/SWA/PVC

### Instrumentation Cables British Standard 300/500 V

PVC insulated, screened, armoured, PVC sheathed cable



### Construction:

- Conductor : plain annealed copper wire, 0,50 mm<sup>2</sup> and 0,75 mm<sup>2</sup> flexible, or 1,5 mm<sup>2</sup> stranded.
- Insulation : PVC compound, TH1.
- Core identification : white / 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 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>.
- Bedding : PVC compound, TM1, black.
- Armour : galvanized round steel wire.
- Outer sheath : PVC compound, flame retardant; TM1.
- 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.
- Insulation resistance (20° C) : min. 25 MΩ/km.
- Mutual capacitance (1 kHz) : max. 250 pF/m.
- Capacitance unbalanced : (1 kHz) : max. 450 pF/250 m.
- Min. bending radius : 6 x D.

### Standards:

- Design : BS 5308 Part 2 Type 1.
- Conductor : BS 6360.
- Insulation : BS 6746.
- Armour : BS EN 10257-1.
- Outer sheath : BS 7655.
- Flame retardancy : IEC 60332-1 & BS EN 60332-1.

### Applications:

These cables are used for 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 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:

- L/R (ratio) (max) : 0,50 mm<sup>2</sup> : 25 μH/Ω;  
0,75 mm<sup>2</sup> : 25 μH/Ω;  
1,5 mm<sup>2</sup> : 40 μH/Ω.
- Insulation thickness : 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 5;  
0,75 mm<sup>2</sup> : Class 5;  
1,5 mm<sup>2</sup> : Class 2.
- Conductor resistance (20° C) : 0,50 mm<sup>2</sup> : 39,7 Ω/km;  
0,75 mm<sup>2</sup> : 26,5 Ω/km;  
1,5 mm<sup>2</sup> : 12,3 Ω/km.

www.halleycables.com

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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> (flexible)				
2x2x0,50	12,0	16,8	33	450
5x2x0,50	15,2	20,9	76	755
10x2x0,50	21,1	27,9	148	1290
15x2x0,50	24,5	31,3	220	1600
20x2x0,50	27,3	34,3	292	1885
30x2x0,50	32,3	40,5	436	2700
50x2x0,50	41,7	51,5	724	4325
50x2x0,50	41,7	51,5	724	4325
0,75 mm <sup>2</sup> (flexible)				
2x2x0,75	12,8	17,6	48	480
5x2x0,75	16,3	22,0	112	830
10x2x0,75	22,7	29,5	220	1405
15x2x0,75	26,4	33,4	328	1765
20x2x0,75	29,8	37,8	436	2420
30x2x0,75	35,5	43,9	652	3165
50x2x0,75	45,0	55,0	1084	4960
1,5 mm <sup>2</sup> (stranded)				
2x2x1,5	14,7	20,4	71	690
5x2x1,5	18,8	25,4	172	1220
10x2x1,5	26,5	33,5	340	1830
15x2x1,5	30,8	38,8	508	2560
20x2x1,5	34,4	42,6	676	3020
30x2x1,5	41,0	50,8	1012	4405
50x2x1,5	52,2	62,6	1684	6220

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