



HALLEY CABLES

RE-2Y(St)2YSWAY-fl 70° C

CU/PE/OSCR/PE/SWA/PVC

Instrumentation Cables British Standard 300/500 V

PE insulated, collective screened, armoured, PVC sheathed cable

RE-2Y(St)2YSWAY-fl

Construction:

- Conductor : plain annealed copper wire, 0,50 mm² and 1,0 mm² solid, 0,50 mm² and 0,75 mm² flexible or 1,5 mm² stranded.
- Insulation : PE compound.
- Core identification : black / white / red cores are numbered (1-1-1, 2-2-2,...).
- Triple : two conductors twisted to a pair.
- Lay-up : triples laid up in layers of optimum pitch.
- Separator : polyester tape.
- Screen : AL-PES tape over tinned copper drain wire 0,50 mm².
- Bedding : PE compound, black.
- Armour : galvanized round steel wire.
- Outer sheath : PVC compound, flame retardant.
- Sheath colour : RAL 9005, black or RAL 5015, blue.

Technical data and tests:

- Rated voltage (U_o/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 : 8 x D.
- Capacitance unbalanced : (1 kHz) : max. 250 pF/250 m.
- Mutual capacitance (1 kHz) :
0,50 mm² : max. 115 pF/m (≤2 pairs), max. 75 pF/m (all other pairs);
0,75 mm² : max. 115 pF/m (≤2 pairs), max. 75 pF/m (all other pairs);
1,0 mm² : max. 115 pF/m (≤2 pairs), max. 75 pF/m (all other pairs);
1,5 mm² : max. 120 pF/m (≤2 pairs), max. 85 pF/m (all other pairs).

Standards:

- Design : BS 5308 Part 1 Type 2.
- Conductor : BS 6360.
- Insulation & Bedding : BS 6234 Type 03.
- Armour : BS EN 10257-1.
- 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. With blue sheath it is suitable for intrinsically safe systems. The armour above the inner sheath protects the cable from mechanical shocks. These cables are 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;
1,5 mm² : Class 2.
- Conductor resistance (20° C) : 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;
1,5 mm² : 12,3 Ω/km.
- Insulation resistance (20° C) : min. 5000 MΩ / km.
- 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.

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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
Mono/solid				
1x3x0,50	6,6	11,0	19	210
2x3x0,50	9,8	14,4	33	320
5x3x0,50	12,2	17,0	77	470
10x3x0,50	16,6	22,3	149	825
15x3x0,50	20,0	25,6	221	1170
20x3x0,50	21,4	28,2	293	1380
30x3x0,50	26,0	33,0	437	1850
50x3x0,50	32,9	41,1	725	2900
Flexible				
1x3x0,50	7,3	11,7	19	230
2x3x0,50	11,5	16,3	33	375
5x3x0,50	14,1	19,8	77	630
10x3x0,50	19,3	25,9	149	1075
15x3x0,50	21,8	28,6	221	1305
20x3x0,50	25,2	32,2	293	1590
30x3x0,50	30,5	38,5	437	2325
50x3x0,50	38,7	48,3	725	3700
Flexible (0,50) / Mono-solid (1,0) / Stranded (1,5)				
1x3x0,75	7,5	11,9	26	245
1x3x1	7,7	12,1	33	280
1x3x1,5	8,6	13,2	48	325
2x3x0,75	12,8	18,3	48	525
2x3x1	12,3	17,1	62	435
2x3x1,5	14,0	19,5	91	615
5x3x0,75	15,6	21,3	113	735
5x3x1	15,2	20,9	148	760
5x3x1,5	17,8	23,7	221	940
10x3x0,75	21,3	28,1	221	1280
10x3x1	20,8	27,4	292	1325
10x3x1,5	24,9	31,9	437	1700
15x3x0,75	24,7	31,7	329	1625
15x3x1	24,1	30,9	437	1700
15x3x1,5	28,3	35,3	653	2150
20x3x0,75	27,9	34,9	437	1940
20x3x1	27,2	34,2	581	2080
20x3x1,5	32,5	40,7	867	2925
30x3x0,75	33,8	42	653	2850
30x3x1	32,9	41,1	869	3050
30x3x1,5	39,4	49,0	1301	4330
50x3x0,75	43,4	53,2	1085	4575
50x3x1	42,3	52,1	1445	4900
50x3x1,5	49,8	60,0	2165	6300

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