

RE-2Y(St)2YSWAY-fl-TIMF 70° C

CU/PE/ISCR/OSCR/PE/SWA/PVC

Instrumentation Cables British Standard 300/500 V

PE insulated, screened, armoured, PVC sheathed cable



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Construction:

Conductor	: plain annealed copper wire, 0,50 mm ² and 1,0 mm ² solid, 0,50 mm ² and 0,75 mm ² flexible or 1,5 mm ² stranded.
Insulation	: PE compound.
Core identification	: black / white / red; with numbered tape under separator tape of the pair screen.
Triple	: two conductors twisted to a pair.
TIMF construction	: polyester tape above the triple, AL-PES tapeover tinned copper drain wire, 0,50 mm ² .
Lay-up	: TIMF laid up in layers of optimum pitch.
Separator	: polyester tape.
Screen	: AL-PES tape over tinned copper drain wire 0,50 mm ² .
Bedding	: PE compound, black.
Armour	: galvanized round steel wire.
Outer sheath	: PVC compound, flame retardant, TM1.
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.
Capacitance unbalanced	: (1 kHz) : max. 250 pF/250 m.
Insulation resistance	: min. 5000 MΩ/km.
Min. bending radius	: 8 x D.

Standards:

Design	: BS 5308 Part 1 Type 2.
Conductor	: BS 6360.
Insulation	: BS 6234 Type 03.
Armour	: BS EN 10257-1.
Bedding	: BS 6234 Type 3.
Outer sheath	: BS 7655.
Flame retardancy	: IEC 60332-1 & BS EN 60332-1.

Applications:

This cable is 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 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. This cable is recommended for direct burial. It is suitable for indoor and outdoor installation, in dry and wet locations; on racks, trays, in conduits.

Technical data and tests:

Insulation thickness	: 0,50 mm ² : 0,50 mm; 1,0 mm ² : 0,60 mm; 0,50 mm ² : 0,60 mm; 0,75 mm ² : 0,60 mm; 1,50 mm ² : 0,60 mm.
Conductor class, BS 6360	: 0,50 mm ² : Class 1; 1,0 mm ² : Class 1; 0,50 mm ² : Class 5; 0,75 mm ² : Class 5; 1,50 mm ² : Class 2.
Conductor resistance	: 0,50 mm ² : 36,8 Ω/km; 1,0 mm ² : 18,4 Ω/km; 0,50 mm ² : 39,7 Ω/km; 0,75 mm ² : 26,5 Ω/km; 1,50 mm ² : 12,3 Ω/km.
L/R (ratio) (max)	: 0,50 mm ² : 25 μH/Ω; 0,75 mm ² : 25 μH/Ω; 1,0 mm ² : 25 μH/Ω; 1,5 mm ² : 40 μH/Ω.
Mutual capacitance (1 kHz)	: ≤ 2 pairs <u>all other pairs</u> 0,50 mm ² : max. 115 pF/m, max. 75 pF/m; 0,75 mm ² : max. 115 pF/m, max. 75 pF/m; 1,0 mm ² : max. 115 pF/m, max. 75 pF/m; 1,5 mm ² : 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)				
2x3x0,50	11,2	16,0	53	395
5x3x0,50	14,3	20,0	125	685
10x3x0,50	19,6	26,2	245	1180
15x3x0,50	22,3	29,1	265	1470
20x3x0,50	25,7	32,7	485	1800
30x3x0,50	31,1	39,1	725	2630
50x3x0,50	39,5	49,1	1205	4190
0,50 mm ² (flexible)				
2x3x0,50	12,8	18,3	53	530
5x3x0,50	16,2	21,9	125	755
10x3x0,50	22,1	28,9	245	1305
15x3x0,50	25,7	32,7	265	1653
20x3x0,50	29,6	37,6	485	2245
30x3x0,50	35,8	44,2	725	2975
50x3x0,50	45,3	55,3	1205	4680
0,75 mm ² (flexible)				
2x3x0,75	14,0	19,5	72	585
5x3x0,75	17,5	23,4	173	865
10x3x0,75	24,6	31,6	341	1550
15x3x0,75	27,9	34,9	509	1930
20x3x0,75	32,2	40,4	677	2650
30x3x0,75	39,0	48,6	1013	3905
50x3x0,75	49,5	59,7	1685	5610
1,0 mm ² (mono/solid)				
2x3x1	13,8	19,3	91	600
5x3x1	17,0	22,7	221	890
10x3x1	24,0	30,8	437	1610
15x3x1	27,3	34,3	653	2050
20x3x1	31,4	39,4	869	2775
30x3x1	38,2	47,8	1301	4140
50x3x1	48,3	58,5	2135	6015
1,5 mm ² (stranded)				
2x3x1,5	15,5	21,2	129	710
5x3x1,5	19,7	26,3	317	1340
10x3x1,5	27,6	34,6	629	2005
15x3x1,5	31,9	39,9	941	2860
20x3x1,5	36,8	45,2	1253	3579
30x3x1,5	44,3	54,3	1877	5280
50x3x1,5	55,7	66,5	3125	7720

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