

INSTRUMENTATION CABLES, Acc. to BS 5308 PART 1 TYPE 2

RE-2Y(St)2YSWAY-fl-TIMF 70°C / 300/500 V

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

MULTI-TRIPLE, PE INSULATED, INDIVIDUAL & COLLECTIVE SCREENED, ARMoured, PVC SHEATHED



APPLICATION: 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 sources, 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.

CABLE DESIGN

Conductor : Plain annealed copper wire, BS 6360; 0,50 mm² and 1,0 mm² solid, 0,50 mm² and 0,75 mm² flexible or 1,5 mm² stranded

Insulation : PE compound, BS 6234 Type03

*Core identification : Black / White / Red; with numbered tape under separator tape of the pair screen

Triple : Three conductors twisted to a triple

TIMF Construction : Polyester tape above the triple, AL-PES tape over tinned copper drain wire, 0,50 mm²

Lay-up : TIMF 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, BS 6234 Type 03, Black

Armour : Galvanized round steel wire, BS EN 10257-1

Outer sheath : PVC comp., flame retardant; TM1, BS 7655

Sheath colour : RAL 9005, Black or RAL 5015, Blue

*Upon request ; Black / White / Red cores numbered 1-1-1, 2-2-2,...

Note: Other core configurations manufactured upon request.

TECHNICAL DATA

Standard : Designed acc. to BS 5308 Part 1 Type 2

Insulation thickness (nominal) : mm² 0,50 1,0 0,50 0,75 1,5 mm²
mm 0,50 0,60 0,60 0,60 0,60 mm

Conductor class, BS 6360 : mm² 0,50 1,0 0,50 0,75 1,5 mm²
Class 1 1 5 5 2 Class

Conductor resistance (20°C) : mm² 0,50 1,0 0,50 0,75 1,5 mm²
Ω/km 36,8 18,4 39,7 26,5 12,3 Ω/km

Insulation resistance (20°C) : Min. 5000 MΩ.km

Mutual Capacitance (1 kHz) : 0,50 mm² :max. 115 pF/m
0,75 mm² :max. 115 pF/m
1,0 mm² :max. 115 pF/m
1,5 mm² :max. 120 pF/m

Capacitance unbalance : (1 kHz) : max. 250 pF/250 m

L / R (ratio) (max.) : mm² 0,50 0,75 1,0 1,5 mm²
μH/Ω 25 25 25 40 μH/Ω

Rated voltage (U_o / U) : 300/500V

Test voltage : U_{rms} core-core: 1000 V
U_{rms} core-screen: 1000 V

Temperature range : operation : - 40 °C ~ + 70 °C
installation : - 5 °C ~ + 50 °C

Min. bending radius : 8 x D

Flame retardance test : IEC 60332-1 & BS EN 60332-1

Cross Sections

Part-number	No. of triples	Approx. Bedding Diameter (mm)	Approx. Outer Diameter (mm)	Copper Weight (Kg/km)	Approx. Cable Weight (Kg/km)
0,50 mm² (mono / solid)					
1608 11 002	2x3x0,50	11,2	16,0	53	395
1608 11 005	5x3x0,50	14,3	20,0	125	685
1608 11 010	10x3x0,50	19,6	26,2	245	1180
1608 11 015	15x3x0,50	22,3	29,1	265	1470
1608 11 020	20x3x0,50	25,7	32,7	485	1800
1608 11 030	30x3x0,50	31,1	39,1	725	2630
1608 11 050	50x3x0,50	39,5	49,1	1205	4190

Part-number	No. of triples	Approx. Bedding Diameter (mm)	Approx. Outer Diameter (mm)	Copper Weight (Kg/km)	Approx. Cable Weight (Kg/km)
0,50 mm² (bükülgen / flexible)					
1608 05 002	2x3x0,50	12,8	18,3	53	530
1608 05 005	5x3x0,50	16,2	21,9	125	755
1608 05 010	10x3x0,50	22,1	28,9	245	1305
1608 05 015	15x3x0,50	25,7	32,7	265	1653
1608 05 020	20x3x0,50	29,6	37,6	485	2245
1608 05 030	30x3x0,50	35,8	44,2	725	2975
1608 05 050	50x3x0,50	45,3	55,3	1205	4680

Cross Sections

Part-number	No. of triples	Approx. Bedding Diameter (mm)	Approx. Outer Diameter (mm)	Copper Weight (Kg/km)	Approx. Cable Weight (Kg/km)
0,75 mm² (bükülgen / flexible)					
1608 06 002	2x3x0,75	14,0	19,5	72	585
1608 06 005	5x3x0,75	17,5	23,4	173	865
1608 06 010	10x3x0,75	24,6	31,6	341	1550
1608 06 015	15x3x0,75	27,9	34,9	509	1930
1608 06 020	20x3x0,75	32,2	40,4	677	2650
1608 06 030	30x3x0,75	39,0	48,6	1013	3905
1608 06 050	50x3x0,75	49,5	59,7	1685	5610

Part-number	No. of triples	Approx. Bedding Diameter (mm)	Approx. Outer Diameter (mm)	Copper Weight (Kg/km)	Approx. Cable Weight (Kg/km)
1,0 mm² (mono / solid)					
1608 13 002	2x3x1	13,8	19,3	91	600
1608 13 005	5x3x1	17,0	22,7	221	890
1608 13 010	10x3x1	24,0	30,8	437	1610
1608 13 015	15x3x1	27,3	34,3	653	2050
1608 13 020	20x3x1	31,4	39,4	869	2775
1608 13 030	30x3x1	38,2	47,8	1301	4140
1608 13 050	50x3x1	48,3	58,5	2135	6015

Part-number	No. of triples	Approx. Bedding Diameter (mm)	Approx. Outer Diameter (mm)	Copper Weight (Kg/km)	Approx. Cable Weight (Kg/km)
1,5 mm² (bükülü / stranded)					
1608 45 002	2x3x1,5	15,5	21,2	129	710
1608 45 005	5x3x1,5	19,7	26,3	317	1340
1608 45 010	10x3x1,5	27,6	34,6	629	2005
1608 45 015	15x3x1,5	31,9	39,9	941	2860
1608 45 020	20x3x1,5	36,8	45,2	1253	3579
1608 45 030	30x3x1,5	44,3	54,3	1877	5280
1608 45 050	50x3x1,5	55,7	66,5	3125	7720