



#### 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, TI1.
Core identification	: according to BS 5308 Part 2 colour coded.
Pair	: two conductors twisted to a pair.
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 <sub>o</sub> /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.
Mutual capacitance (1 kHz)	: max. 250 pF/m.
Capacitance unbalanced	: (1 kHz) : max. 450 pF/250 m.
Insulation resistance (20° C)	: min. 25 MΩ/km.
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 (oran-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.

## 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)				
1x2x0,50	7,0	11,4	14	240
2x2x0,50	7,9	12,3	24	270
5x2x0,50	13,1	17,9	52	500
10x2x0,50	17,2	22,9	100	860
15x2x0,50	19,8	26,4	149	1240
20x2x0,50	22,3	29,1	196	160
30x2x0,50	26,9	33,9	292	1930
50x2x0,50	33,9	42,1	484	2960
0,75 mm <sup>2</sup> (flexible)				
1x2x0,75	7,3	11,7	19	260
2x2x0,75	8,3	12,9	33	310
5x2x0,75	14,3	19,8	77	685
10x2x0,75	18,7	25,3	149	1205
15x2x0,75	21,4	28,2	221	1425
20x2x0,75	24,5	31,3	292	1730
30x2x0,75	29,5	37,5	437	2540
50x2x0,75	37,4	45,8	725	4030
1,5 mm <sup>2</sup> (stranded)				
1x2x1,5	8,3	12,9	33	300
2x2x1,5	9,7	14,3	62	405
5x2x1,5	16,4	22,1	148	875
10x2x1,5	21,6	28,4	292	1505
15x2x1,5	25,2	32,2	436	1980
20x2x1,5	28,5	35,7	580	2325
30x2x1,5	34,3	42,5	868	3415
50x2x1,5	43,6	53,4	1444	5425