

Instrumentation Cable

Flame Retardant

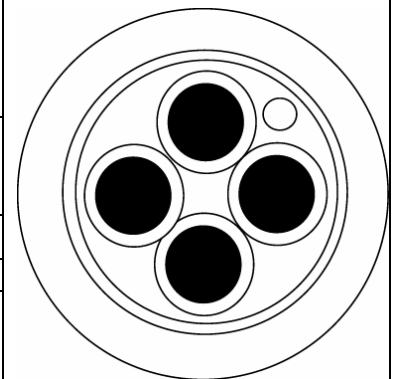
BS 5308 Part 2 Type 1

Multi-Core, PVC-Insulation, Collective Screen, PVC-Sheath

70° / 300/500 V

Construction

Conductor	Plain, annealed copper, sizes:0.5mm ² multistranded, 0.75mm ² multistranded, or 1.5mm ² stranded
Insulation	Polyvinyl chloride PVC
Colour code	Yellow with both printed numbers and written words in black (1/40) up to 40 cores and black with both printed numbers and written words in yellow (1/40) up to 80 cores (e.g 10 TEN)
Wrapping	At least 1 layer of plastic tape
Collective screen	24µm aluminium / PETP tape over tinned copper drain wire, 0.5mm ²
Outer sheath	Polyvinyl chloride PVC
Cable marking	BTCI BS 5308 Part 2 Type 1 No & Size of units FRRT



Technical Data

Flame Retardant to:	IEC 60 332-3 Cat C	Temperature range:	- 40°C up to + 70°C (during operation)
Outer sheath:			
Amount of HCL:	Max. 17% (BS 6425-1)		- 0°C to +50°C (during installation)
Oxygen Index (LOI):	Min.30% (IEC 60332-3 annex B)	Min. bending radius:	6 x cable Ø
Temperature Index (TI):	Min. 260°C (ASTM-D-2863)		
U.V. resistance:	(UL 1581 section 1200)		
Oil resistance:	(ICEA S-82-552)		

Electrical data at 20°C

Character	Unit	Values		
		0.5 Multistranded	0.75 Multistranded	1.5 Stranded
Conductor size	Nom. mm ²	0.5 Multistranded	0.75 Multistranded	1.5 Stranded
Conductor resistance	Max. Ω/km	39.0	26.0	12.1
Insulation resistance	Min. MΩ x km	25		
Mutual capacitance at 0.8 resp. 1 kHz	Max. nF/km	250		
Capacitance between any core or screen at 1 kHz	Max. pF/ m	400		
L/R (ratio)	Max. µH/Ω	25		40
Test voltage U_{ms} core : core	V	1000		
U_{ms} core : screen	V	1000		
Rated voltage U_o / U	Max. V	300/500		

Instrumentation Cable

Flame Retardant

BS 5308 Part 2 Type 1

Multi-Core, PVC-Insulation, Collective Screen, PVC-Sheath

70° / 300/500 V

Geometrical data

No. of pairs	RT of Insulation Nom. (mm)	RT of Outer Sheath Nom. (mm)	Overall Diameter Approx. (mm)	Weight Approx. (kg/km)
0.5mm² (16/0.2)				
2	0.6	0.8	6.2	50
3	0.6	0.8	6.6	60
4	0.6	0.8	7.2	70
6	0.6	0.9	8.6	100
10	0.6	1.1	11.2	150
20	0.6	1.2	14.2	260
40	0.6	1.3	18.7	470
80	0.6	1.5	26.5	900
0.75mm² (24/0.2)				
2	0.6	0.8	6.7	60
3	0.6	0.8	7.2	70
4	0.6	0.8	7.8	80
6	0.6	0.9	9.4	120
10	0.6	1.1	12.2	190
20	0.6	1.2	15.6	330
40	0.6	1.3	20.6	610
80	0.6	1.5	28.5	1160
1.5mm² (7/0.53)				
2	0.6	0.8	8.0	90
3	0.6	0.9	8.2	100
4	0.6	0.9	9.0	130
6	0.6	1.1	11.0	190
10	0.6	1.2	14.0	290
20	0.6	1.3	17.9	530
40	0.6	1.5	24.0	1010
80	0.6	1.7	32.9	1920

RT = Radial thickness

Instrumentation Cable

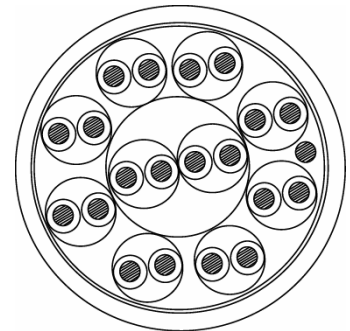
Flame Retardant

BS 5308 Part 2 Type 1

Single & Multi-Pair, PVC-Insulation, Collective Screen, PVC-Sheath

Construction

Conductor	Plain, annealed copper, sizes:0.5mm ² multistranded, 0.75mm ² multistranded, or 1.5mm ² stranded
Insulation	Polyvinyl chloride PVC
Colour code	According to BS 5308 Part 2 table 11
Wrapping	At least 1 layer of plastic tape
Collective screen	24µm aluminium / PETP tape over tinned copper drain wire, 0.5mm ²
Outer sheath	Polyvinyl chloride PVC
Cable marking	BTCI BS 5308 Part 2 Type 1 No & Size of units FRRT



Technical Data

Flame Retardant to:	IEC 60 332-3 Cat C	Temperature range:	- 40°C up to + 70°C (during operation)
Outer sheath:			
Amount of HCL:	Max. 17% (BS 6425-1)		- 0°C to +50°C (during installation)
Oxygen Index (LOI):	Min.30% (IEC 60332-3 annex B)	Min. bending radius:	6 x cable Ø
Temperature Index (TI):	Min. 260°C (ASTM-D-2863)		
U.V. resistance:	(UL 1581 section 1200)		
Oil resistance:	(ICEA S-82-552)		

Electrical data at 20°C

Character	Unit	Values		
		0.5 Multistranded	0.75 Multistranded	1.5 Stranded
Conductor size	Nom. mm ²	0.5 Multistranded	0.75 Multistranded	1.5 Stranded
Conductor resistance	Max. Ω/km	39.7	26.5	12.3
Insulation resistance	Min. MΩ x km	25		
Mutual capacitance at 0.8 resp. 1 kHz	Max. nF/km	250		
Capacitance between any core or screen at 1 kHz	Max. pF/ m	400		
L/R (ratio)	Max. µH/Ω	25		40
Test voltage U_{ms} core : core	V	1000		
U_{ms} core : screen	V	1000		
Rated voltage U_o / U	Max. V	300/500		

Instrumentation Cable

Flame Retardant

BS 5308 Part 2 Type 1

Single & Multi-Pair, PVC-Insulation, Collective Screen, PVC-Sheath

70° / 300/500 V

Geometrical data

No. of pairs	RT of Insulation Nom. (mm)	RT of Outer Sheath Nom. (mm)	Overall Diameter Approx. (mm)	Weight Approx. (kg/km)
0.5mm² (16/0.2)				
1	0.6	0.8	6.2	40
2 q	0.6	0.8	7.6	70
5	0.6	1.1	12.4	160
10	0.6	1.2	16.5	280
15	0.6	1.3	19.2	390
20	0.6	1.3	21.7	450
30	0.6	1.5	26.4	730
50	0.6	1.7	33.4	1160
0.75mm² (24/0.2)				
1	0.6	0.8	6.7	50
2 q	0.6	0.8	8.2	80
5	0.6	1.2	13.8	200
10	0.6	1.3	18.4	350
15	0.6	1.3	21.1	490
20	0.6	1.5	24.4	660
30	0.6	1.7	29.5	960
50	0.6	2.0	37.6	1540
1.5mm² (7/0.53)				
1	0.6	0.8	7.5	70
2 q	0.6	0.9	9.3	130
5	0.6	1.2	15.6	300
10	0.6	1.3	20.9	540
15	0.6	1.5	24.6	810
20	0.6	1.5	27.8	1030
30	0.6	1.7	33.7	1510
50	0.6	2.0	43.0	2470

RT = Radial thickness

q = 2 pairs are twisted in quad formation

Instrumentation Cable

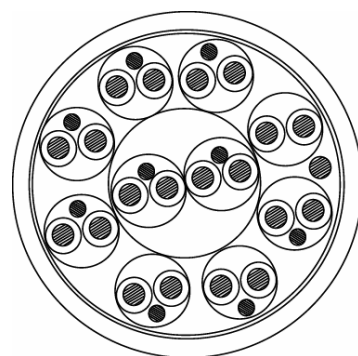
Flame Retardant

BS 5308 Part 2 Type 1

Multi-Pair, PVC-Insulation, Individual & Collective Screen, PVC-Sheath

Construction

Conductor	Plain, annealed copper, sizes:0.5mm ² multistranded, 0.75mm ² multistranded, or 1.5mm ² stranded
Insulation	Polyvinyl chloride PVC
Colour code	White / blue with numbered tape under separator tape of the pair screen
Pair screen	24µm aluminium / PETP tape over tinned copper drain wire, 0.5mm ²
Wrapping	At least 1 layer of plastic tape
Collective screen	24µm aluminium / PETP tape over tinned copper drain wire, 0.5mm ²
Outer sheath	Polyvinyl chloride PVC
Cable marking	BTCI BS 5308 Part 2 Type 1 No & Size of units FRRT



Technical Data

Flame Retardant to:	IEC 60 332-3 Cat C	Temperature range:	- 40°C up to + 70°C (during operation)
Outer sheath:			
Amount of HCL:	Max. 17% (BS 6425-1)		- 0°C to +50°C (during installation)
Oxygen Index (LOI):	Min.30% (IEC 60332-3 annex B)	Min. bending radius:	6 x cable Ø
Temperature Index (TI):	Min. 260°C (ASTM-D-2863)		
U.V. resistance:	(UL 1581 section 1200)		
Oil resistance:	(ICEA S-82-552)		

Electrical data at 20°C

Character	Unit	Values		
		0.5 Multistranded	0.75 Multistranded	1.5 Stranded
Conductor size	Nom.	mm ²		
Conductor resistance	Max.	Ω/km	39.7	26.5
Insulation resistance	Min.	MΩ x km	25	
Mutual capacitance at 0.8 resp. 1 kHz	Max.	nF/km	250	
Capacitance between any core or screen at 1 kHz	Max.	pF/ m	400	
L/R (ratio)	Max.	µH/Ω	25	40
Test voltage U_{ms} core : core		V	1000	
U_{ms} core : screen		V	1000	
Rated voltage U_o / U	Max.	V	300/500	

Instrumentation Cable

Flame Retardant

BS 5308 Part 2 Type 1

Multi-Pair, PVC-Insulation, Individual & Collective Screen, PVC-Sheath

70° / 300/500 V

Geometrical data

No. of pairs	RT of Insulation Nom. (mm)	RT of Outer Sheath Nom. (mm)	Overall Diameter Approx. (mm)	Weight Approx. (kg/km)
0.5mm² (16/0.2)				
2	0.6	1.1	11.2	120
5	0.6	1.2	14.6	210
10	0.6	1.3	19.4	370
15	0.6	1.5	22.7	540
20	0.6	1.5	25.9	690
30	0.6	1.7	31.2	950
50	0.6	2.2	40.1	1650
0.75mm² (24/0.2)				
2	0.6	1.1	12.2	130
5	0.6	1.2	15.8	250
10	0.6	1.3	21.1	450
15	0.6	1.5	24.9	650
20	0.6	1.7	28.6	850
30	0.6	2.0	34.7	1260
50	0.6	2.2	43.9	2000
1.5mm² (7/0.53)				
2	0.6	1.2	13.6	190
5	0.6	1.3	14.8	360
10	0.6	1.5	24.1	670
15	0.6	1.7	28.2	970
20	0.6	1.7	31.9	1240
30	0.6	2.0	38.8	1830
50	0.6	2.2	49.1	2940

RT = Radial thickness

BS 5308 Part 2

A) Identification of Collectively screened pairs

Two pair unscreened or collectively screened cables shall be cabled in quad formation and colour coded in clockwise order of rotation: blue, green, orange, brown.

All other cables up to 50 pairs conform to the coding of following table:

Pair No	a-wire	b-wire	Pair No	a-wire	b-wire
1	white	blue	26	red-blue	blue
2	white	orange	27	red-blue	orange
3	white	green	28	red-blue	green
4	white	brown	29	red-blue	brown
5	white	grey	30	red-blue	grey
6	red	blue	31	blue-black	blue
7	red	orange	32	blue-black	orange
8	red	green	33	blue-black	green
9	red	brown	34	blue-black	brown
10	red	grey	35	blue-black	grey
11	black	blue	36	yellow-blue	blue
12	black	orange	37	yellow-blue	orange
13	black	green	38	yellow-blue	green
14	black	brown	39	yellow-blue	brown
15	black	grey	40	yellow-blue	grey
16	yellow	blue	41	white-orange	blue
17	yellow	orange	42	white-orange	orange
18	yellow	green	43	white-orange	green
19	yellow	brown	44	white-orange	brown
20	yellow	grey	45	white-orange	grey
21	white-blue	blue	46	orange-red	blue
22	white-blue	orange	47	orange-red	orange
23	white-blue	green	48	orange-red	green
24	white-blue	brown	49	orange-red	brown
25	white-blue	grey	50	orange-red	grey

A) Identification of individually screened pairs

Screened pairs are identified by numbered tape under the separator tapes of the pair screens.

Each pair has one white and one blue core.

Each triple with either collective screen or individual triple screens shall be one white, one blue and one orange.

Clients specific pair triple colour coding available on request.

B) Identification of cores

Core 1 to 40: yellow with both printed numbers and written word in black, "10, TEN"

Core 41 to 80: black with both printed numbers and written word in yellow, "10, TEN"