

# BS 5308 Part 1 Type 2 - CAM - PE Instrumentation Cable



Eland Product Group: I

## APPLICATION

BS 5308 cables are designed to carry communication and control signals in a variety of installation types including those found in the petrochemical industry. The signals can be of analogue, data or voice type and from a variety of transducers such as pressure, proximity or microphone. Part 1 Type 2 cables are designed where a greater degree of mechanical protection is required namely outdoor / exposed or direct burial at suitable depth. Collectively and individually screened pairs are available within the range where further signal security is required.

## CABLE STANDARDS

BS/PAS 5308, BS EN 60228, BS 6234, BS EN 50363,  
BS EN/IEC 60332-1, BS EN/IEC 60332-3-24



The electrical and dimensional properties of this product are measured by the Technical and Quality Assurance department at the Eland Cables laboratory. Cable performance in respect of conductor resistance, construction quality (workmanship), dimensional consistency, and other parameters are verified to published standards and approved product drawings. Conformance to RoHS (Restriction of the use of Hazardous Substances) is determined and confirmed.

## CONSTRUCTION

### Conductor

Class 1 solid, Class 2 stranded or Class 5 copper conductor according to BS EN 60228 (previously to 6360)

### Insulation

PE (Polyethylene) Type 03 according to BS 6234

### Binding Tape

PET (Polyester Tape)

### Screen

AL/PET (Aluminium/Polyester Tape)

### Drain Wire

Tinned copper

### Bedding

PE (Polyethylene) Type 03 according to BS 6234

### Armour

Galvanized SWA (Steel Wire Armour)

### Sheath

PVC (Polyvinyl Chloride) Type TM1 according to BS EN 50363

## CHARACTERISTICS

### Voltage Rating (U<sub>o</sub>/U)

300/500V

### Temperature Rating

Fixed: -30°C to +75°C

### Minimum Bending Radius

Fixed: 18 x overall diameter

### Sheath Colour

● Blue ● Black

## DIMENSIONS

## Collectively Screened

ELAND PART NO.	NO. OF PAIRS/TRIPLE	NOMINAL GROSS SECTIONAL AREA mm <sup>2</sup>	NOMINAL OVERALL DIAMETER mm
I0105P1T2CPE**	1P	0.5	11.4
I0175P1T2CPE**	1P	0.75	11.8
I0110P1T2CPE**	1P	1	11.8
I0115P1T2CPE**	1P	1.5	12.9
I0125P1T2CPE**	1P	2.5	13.7
I1T05P1T2CPE**	1T	0.5	11.7
I1T75P1T2CPE**	1T	0.75	12.1
I1T10P1T2CPE**	1T	1	12.3
I1T15P1T2CPE**	1T	1.5	13.5
I1T25P1T2CPE**	1T	2.5	14.3
I0205P1T2CPE**	2P(Q)	0.5	12.3
I0275P1T2CPE**	2P(Q)	0.75	13
I0210P1T2CPE**	2P(Q)	1	13
I0215P1T2CPE**	2P(Q)	1.5	14.3
I0225P1T2CPE**	2P(Q)	2.5	15.3
I0505P1T2CPE**	5P	0.5	17.9
I0575P1T2CPE**	5P	0.75	19.3
I0510P1T2CPE**	5P	1	19.7
I0515P1T2CPE**	5P	1.5	22.1
I0525P1T2CPE**	5P	2.5	24.1
I1005P1T2CPE**	10P	0.5	22.9
I1075P1T2CPE**	10P	0.75	25.5
I1010P1T2CPE**	10P	1	24.3
I1015P1T2CPE**	10P	1.5	28.4
I1025P1T2CPE**	10P	2.5	32.1
I1505P1T2CPE**	15P	0.5	26.4
I1575P1T2CPE**	15P	0.75	28.7
I1510P1T2CPE**	15P	1	28.1
I1515P1T2CPE**	15P	1.5	32.2
I1525P1T2CPE**	15P	2.5	36.4
I2005P1T2CPE**	20P	0.5	29.1
I2075P1T2CPE**	20P	0.75	31.6
I2010P1T2CPE**	20P	1	31.2
I2015P1T2CPE**	20P	1.5	35.7
I2025P1T2CPE**	20P	2.5	41

P = Pairs  
Q = Quads  
T = Triples

## CONDUCTORS

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	MAXIMUM DC RESISTANCE OF CONDUCTOR AT 20°C ohms/km
0.5	36
0.75	24.5
1	18.1
1.5	12.1
2.5	7.41

## ELECTRICAL CHARACTERISTICS

### Individually and Collectively Screened Cables

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	MUTUAL CAPACITANCE pF/m			MINIMUM INSULATION RESISTANCE AT 20°C Gohms/km	MAXIMUM L/R RATIO μH/ohms
	Cables with Collective Screen Only	1 Pair, 2 Pairs, 1 Triple Collectively Screened	Cables with Individually Screened pairs		
0.5	75	115	115	>5	25
0.75	75	115	115	>5	25
1	75	115	115	>5	25
1.5	85	120	120	>5	40
2.5	85	120	120	>5	65

## CORE COLOURS

PAIR NO.	A WIRE	B WIRE
1	Black	Blue
2	Black	Green
3	Blue	Green
4	Black	Brown
5	Blue	Brown
6	Green	Brown
7	Black	White
8	Blue	White
9	Green	White
10	Brown	White
11	Black	Red
12	Blue	Red
13	Green	Red
14	Brown	Red
15	White	Red
16	Black	Orange
17	Blue	Orange
18	Green	Orange
19	Brown	Orange
20	White	Orange
21	Red	Orange
22	Black	Yellow
23	Blue	Yellow
24	Green	Yellow

PAIR NO.	A WIRE	B WIRE
25	Brown	Yellow
26	White	Yellow
27	Red	Yellow
28	Orange	Yellow
29	Black	Grey
30	Blue	Grey
31	Green	Grey
32	Brown	Grey
33	White	Grey
34	Red	Grey
35	Orange	Grey
36	Yellow	Grey
37	Black	Violet
38	Blue	Violet
39	Green	Violet
40	Brown	Violet
41	White	Violet
42	Red	Violet
43	Orange	Violet
44	Yellow	Violet
45	Grey	Violet
46	Black	Turquoise
47	Blue	Turquoise
48	Green	Turquoise
49	Brown	Turquoise
50	White	Turquoise

Individually screened pairs will be number coded all with Pair 1 colouring