

TYPE 1 INSTRUMENTATION PVC CAT CABLE



APPLICATION

Manufactured to PAS5308, Instrumentation cables are intrinsically safe and designed for use in communication and instrumentation applications in and around process industries for transmission of signals in control systems. The signals can be analogue or digital from a variety of sensors and transducers.

CABLE STANDARDS

PAS5308
BS EN 50265
BS EN/IEC 60332-3-24
Flame propagation to BS4066 Pt1

CONSTRUCTION PART 1

Conductor: Plain Annealed Copper Conductors

Insulation: Polyethylene (PE)

Arranged: Laid up to form pairs

Screen: Collective aluminium / mylar tape screen complete with 0.5mm drain wire

Sheath: Polyvinyl Chloride (PVC)

Sheath Colour: ■ Blue or ■ Black

CHARACTERISTICS

Voltage Rating: 300/500 Volts

Temperature Limits: -20°C to +65°C

Minimum Bending Radius: As per cable manufacturer datasheet

CONSTRUCTION PART 2

Conductor: Plain Annealed Copper Conductors

Insulation: Polyvinyl Chloride (PVC)

Arranged: Laid up to form pairs

Bedding: Polyvinyl Chloride (PVC)

Screen: Collective aluminium / mylar tape screen complete with 0.5mm drain wire

Sheath: Polyvinyl Chloride (PVC)

Sheath Colour: ■ Blue or ■ Black

CORE IDENTIFICATION

For Part 1 cables: Refer to Part 1 colour chart on page 3

For Part 2 Cables: Refer to Part 2 colour chart on page 3

PAS 5308 TYPE 1 PVC CAT CABLE - DIMENSIONS

CCC CODE		CONDUCTOR SIZE (MM ²)	STRANDING (MM)	NO OF PAIRS	WEIGHT (KG/KM)	OUTSIDE DIAMETER (MM)	GLAND SIZE
Part 1	Part 2						
7100	7300	0.5	16/0.20	1	60	6	20/16
7101	7301	0.5	16/0.20	2	75	6.9	20/16
7102	7302	0.5	16/0.20	5	190	12.1	20
7103	7303	0.5	16/0.20	10	305	16.2	25
7104	7304	0.5	16/0.20	20	518	21.3	32
7105	7305	0.5	16/0.20	30	759	25.9	32
7106	7306	0.5	16/0.20	50	1251	32.9	50S
7107	7307	0.5	16/0.20	1 Triple	69	6.1	20/16
7136	7336	0.75	24/0.20	1	69	6.3	20/16
7137	7337	0.75	24/0.20	2	99	7.3	20/16
7138	7338	0.75	24/0.20	5	242	13.3	20
7139	7339	0.75	24/0.20	10	380	17.7	25
7140	7340	0.75	24/0.20	20	684	23.5	32
7141	7341	0.75	24/0.20	30	989	28.5	40
7142	7342	0.75	24/0.20	50	1670	36.4	50S
7143	7343	0.75	24/0.20	1 Triple	83	6.8	20/16
7173	7373	1.5	7/0.53	1	87	7.3	20/16
7174	7374	1.5	7/0.53	2	145	8.7	20S
7175	7375	1.5	7/0.53	5	345	15.4	25
7176	7376	1.5	7/0.53	10	575	20.6	32
7177	7377	1.5	7/0.53	20	1075	27.5	40
7178	7378	1.5	7/0.53	1 Triple	115	8.4	20S
72700	-	0.5	16/0.2	1	60	6	20/16
72701	-	0.5	16/0.2	2	75	6.9	20/16
72702	-	0.5	16/0.2	5	190	12.1	20
72703	-	0.5	16/0.2	10	305	16.2	25
72704	-	0.5	16/0.2	20	518	21.3	32
72705	-	0.5	16/0.2	30	759	25.9	32
72707	-	0.5	16/0.2	1 Triple	69	6.1	20/16

*INCLUDES ADDITIONAL 6MM INTEGRAL EARTH CONDUCTOR

PAS 5308 TYPE 1 PVC CAT CABLE – CONDUCTOR RESISTANCE

NOMINAL CROSS SECTIONAL AREA (MM ²)	CONDUCTOR CLASS	MAXIMUM RESISTANCE CONDUCTOR AT 20°C Ω/KM
8	1	18.1
12	1	18.1
16	1	18.1
20	1	18.1
8	1.5	12.1
12	1.5	12.1
16	1.5	12.1
20	1.5	12.1

THE ABOVE TABLE IS IN ACCORDANCE WITH 18TH EDITION OF IET WIRING REGULATIONS

PAS 5308 TYPE 1 PVC CAT CABLE – CURRENT CAPACITY

NOMINAL CROSS SECTIONAL AREA (MM ²)	MUTUAL CAPACITANCE pF/m			MINIMUM INSULATION RESISTANCE AT 20°C MOHMS/KM	MAXIMUM L/R RATIO MH/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

THE ABOVE TABLE IS IN ACCORDANCE WITH 18TH EDITION OF IET WIRING REGULATIONS

PAS 5308 INSTRUMENT CABLE - PAIR COLOUR CHARTS

PART 1 PAIR COLOURS					
PAIR	A	B	PAIR	A	B
1	BLACK	BLUE	26	WHITE	YELLOW
2	BLACK	GREEN	27	RED	YELLOW
3	BLUE	GREEN	28	ORANGE	YELLOW
4	BLACK	BROWN	29	BLACK	GREY
5	BLUE	BROWN	30	BLUE	GREY
6	GREEN	BROWN	31	GREEN	GREY
7	BLACK	WHITE	32	BROWN	GREY
8	BLUE	WHITE	33	WHITE	GREY
9	GREEN	WHITE	34	RED	GREY
10	BROWN	WHITE	35	ORANGE	GREY
11	BLACK	RED	36	YELLOW	GREY
12	BLUE	RED	37	BLACK	VIOLET
13	GREEN	RED	38	BLUE	VIOLET
14	BROWN	RED	39	GREEN	VIOLET
15	WHITE	RED	40	BROWN	VIOLET
16	BLACK	ORANGE	41	WHITE	VIOLET
17	BLUE	ORANGE	42	RED	VIOLET
18	GREEN	ORANGE	43	ORANGE	VIOLET
19	BROWN	ORANGE	44	YELLOW	VIOLET
20	WHITE	ORANGE	45	GREY	VIOLET
21	RED	ORANGE	46	BLACK	TURQUOISE
22	BLACK	YELLOW	47	BLUE	TURQUOISE
23	BLUE	YELLOW	48	GREEN	TURQUOISE
24	GREEN	YELLOW	49	BROWN	TURQUOISE
25	BROWN	YELLOW	50	WHITE	TURQUOISE

PART 2 PAIR COLOURS					
PAIR	A	B	Pair	A	B
1	White	Blue 2	6	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

- FOR INDIVIDUAL SCREENED PAIRS, IDENTIFICATION WILL BE BLACK/BLUE NUMBERED PAIRS.
- TWO PAIR COLLECTIVELY SCREENED CABLES ARE IN QUAD FORMATION COLOUR CODED IN ROTATION, BLACK, BLUE, GREEN, BROWN.
- SINGLE TRIPLE WILL BE BLUE , BLACK, GREEN
- FOR INDIVIDUAL SCREENED PAIRS, IDENTIFICATION WILL BE WHITE/BLUE NUMBERED PAIRS.
- TWO PAIR COLLECTIVELY SCREENED CABLES ARE IN QUAD FORMATION COLOUR CODED IN ROTATION, BLACK, BLUE, GREEN, BROWN
- SINGLE TRIPLE WILL BE BLUE, WHITE, ORANGE.

THE INFORMATION CONTAINED WITHIN THIS DATASHEET IS FOR GUIDANCE ONLY AND IS SUBJECT TO CHANGE WITHOUT NOTICE OR LIABILITY. WE BELIEVE THE INFORMATION IS CORRECT AT THE TIME OF PUBLICATION. PLEASE NOTE WHEN SELECTING CABLE ACCESSORIES THAT ACTUAL CABLE DIMENSIONS MAY VARY DUE TO MANUFACTURING TOLERANCES.