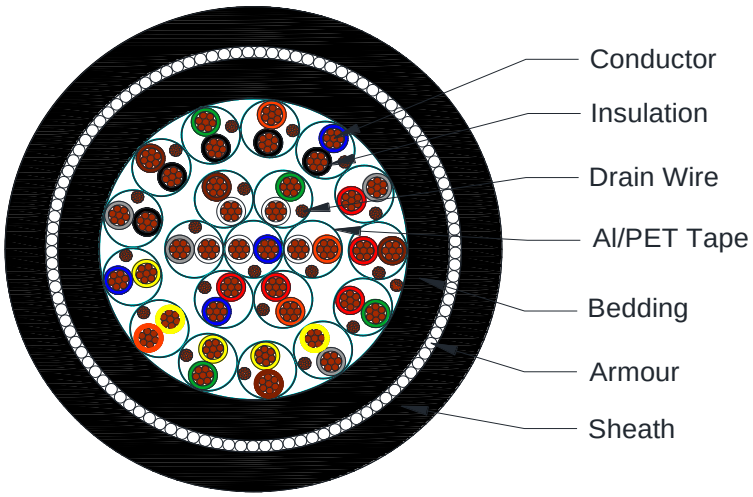
Control and Instrumentation Cables
PAS/BS5308 Part 2, Type 1 & 2
PVC Sheath

C3099 TO C3194

Applications

Process control, equipment interconnection, typically in chemical and petrochemical locations. The unarmoured versions (Type 1) are generally use for indoor installation and suitable for wet and damp areas.

Cross Section Drawing



Design

Unit	Properties
Conductor	Class5 plain Copper Wire
Insulation	PVC
Twinning	Pair construction
Individual Screening (where requested)	Aluminum/Polyester tape with Tinned copper drain wire
Collective Screening	Aluminum/Polyester tape with Tinned copper drain wire
Bedding (where requested)	Flame Retardant PVC
Armour (where requested)	Galvanized Steel wire Armour
Outer Sheath Material	Flame Retardant PVC Standard Colour: Black
Standard Put Up Length	305M or 500m

*Other Colors, Put Up Lengths and structures can be manufactured upon request, please contact your local B3 International sales representative.

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Electrical Characteristics at 20°C

Conductor Size(sqmm)	Conductor Construction	Max. DCR (Ohm/km)	Max. Mutual Capacitance (pF/m) at 1KHz		Max. Mutual Capacitance unbalance (pF/500m) at 1KHz	Test voltage between conductors and between conductors and screen (V r.m.s.)	Max. L/R ratio (µH/Ω)	Min Insulation Resistance of PE (M.Ohm/km)
			Cables with only collective screens (except 1 pair and 2 pair)	1Pair and 2 pair cables collectively screen or individual pair screens				
0.5	16*0.2	39.7	75	115	500	1000	25	5000
0.75	24*0.2	26.5	75	115	500	1000	25	5000
1.50	7*0.53	12.3	75	115	500	1000	40	5000

Constructional Information

Part 2: Type1: Collectively Screened Unarmoured

P/N	Number of Pairs	Conductor Construction (sq mm)	Nom. Radial Thickness of Insulation (mm)	Drain wire cross section (sq mm)	Nom. Thickness of Jacket (mm)	Overall Diameter (mm)	Nom. Weight (kg/km)
C3099	1	0.5 (16*0.2)	0.6	0.5	0.8	6.00	43.5
C3100	2	0.5 (16*0.2)	0.6	0.5	0.8	6.90	64.5
C3101	5	0.5 (16*0.2)	0.6	0.5	1.10	12.10	159.9
C3102	10	0.5 (16*0.2)	0.6	0.5	1.30	16.20	297.4
C3103	15	0.5 (16*0.2)	0.6	0.5	1.50	18.20	394.1
C3104	20	0.5 (16*0.2)	0.6	0.5	1.60	21.30	501.9
C3105	30	0.5 (16*0.2)	0.6	0.5	1.80	25.90	734.5
C3106	50	0.5 (16*0.2)	0.6	0.5	2.10	32.90	1170.6
C3107	1 TRIPE	0.5 (16*0.2)	0.6	0.5	0.80	6.30	53.0
C3108	1	0.75 (24*0.2)	0.6	0.5	0.80	6.40	50.6
C3109	2	0.75 (24*0.2)	0.6	0.5	0.80	7.40	77.6
C3110	5	0.75 (24*0.2)	0.6	0.5	1.20	13.30	201.0
C3111	10	0.75 (24*0.2)	0.6	0.5	1.60	16.20	362.4
C3112	15	0.75 (24*0.2)	0.6	0.5	1.60	20.50	504.8
C3113	20	0.75 (24*0.2)	0.6	0.5	1.80	21.30	640.8
C3114	30	0.75 (24*0.2)	0.6	0.5	2.05	28.50	954.3
C3115	50	0.75 (24*0.2)	0.6	0.5	2.50	36.40	1546.1
C3116	1 TRIPE	0.75 (24*0.2)	0.6	0.5	0.80	6.80	64.2
C3117	1	1.50 (7*0.53)	0.6	0.5	0.80	7.30	71.9
C3118	2	1.50 (7*0.53)	0.6	0.5	0.90	8.70	120.7
C3119	5	1.50 (7*0.53)	0.6	0.5	1.10	15.40	297.2
C3120	10	1.50 (7*0.53)	0.6	0.5	1.70	20.60	570.2
C3121	15	1.50 (7*0.53)	0.6	0.5	1.70	24.20	809.4
C3122	20	1.50 (7*0.53)	0.6	0.5	1.80	27.50	1032.6
C3123	30	1.50 (7*0.53)	0.6	0.5	2.10	33.30	1517.2
C3124	50	1.50 (7*0.53)	0.6	0.5	2.50	42.60	2469.0
C3125	1 TRIPE	1.50 (7*0.53)	0.6	0.5	0.80	7.80	94.3

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Part 2: Type1: Individually & Collectively Screened Unarmoured

P/N	Number of Pairs	Conductor Construction (sq mm)	Nom. Radial Thickness of Insulation (mm)	Drain wire cross section (sq mm)	Nom. Thickness of Jacket (mm)	Overall Diameter (mm)	Nom. Weight (kg/km)
C3126	2	0.5 (16*0.2)	0.60	0.50	1.10	11.00	119.2
C3127	5	0.5 (16*0.2)	0.60	0.50	1.20	14.20	218.5
C3128	10	0.5 (16*0.2)	0.60	0.50	1.30	20.10	379.6
C3129	15	0.5 (16*0.2)	0.60	0.50	1.50	23.50	561.7
C3130	20	0.5 (16*0.2)	0.60	0.50	1.50	26.30	695.8
C3131	30	0.5 (16*0.2)	0.60	0.50	1.70	31.30	1004.7
C3132	50	0.5 (16*0.2)	0.60	0.50	2.20	40.70	1659.4
C3133	2	0.75 (24*0.2)	0.60	0.50	1.10	11.80	149.3
C3134	5	0.75 (24*0.2)	0.60	0.50	1.20	15.20	257.5
C3135	10	0.75 (24*0.2)	0.60	0.50	1.30	21.60	458.8
C3136	15	0.75 (24*0.2)	0.60	0.50	1.50	25.20	670.5
C3137	20	0.75 (24*0.2)	0.60	0.50	1.70	28.80	864.9
C3138	30	0.75 (24*0.2)	0.60	0.50	2.00	34.40	1263.5
C3139	50	0.75 (24*0.2)	0.60	0.50	2.20	43.90	2013.0
C3140	2	1.50 (7*0.53)	0.60	0.50	1.20	13.70	210.7
C3141	5	1.50 (7*0.53)	0.60	0.50	1.30	17.80	377.1
C3142	10	1.50 (7*0.53)	0.60	0.50	1.50	25.50	686.9
C3143	15	1.50 (7*0.53)	0.60	0.50	1.70	29.80	1004.3
C3144	20	1.50 (7*0.53)	0.60	0.50	1.70	33.40	1263.0
C3145	30	1.50 (7*0.53)	0.60	0.50	2.00	40.00	1858.4
C3146	50	1.50 (7*0.53)	0.60	0.50	2.20	51.20	2992.5

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Part 2: Type2: Collectively Screened Armoured

P/N	Number of Pairs	Conductor Construction (sq mm)	Nom. Radial Thickness of Insulation	Drain wire cross section (sq mm)	Diameter of Bedding (mm)	Diameter of Armour (mm)	Nom. Thickness of Jacket (mm)	Overall Diameter (mm)	Nom. Weight (kg/km)
C3147	1	0.5 (16*0.2)	0.60	0.50	6.00	7.80	1.30	10.40	203.7
C3148	2	0.5 (16*0.2)	0.60	0.50	6.90	8.70	1.30	11.30	245.2
C3149	5	0.5 (16*0.2)	0.60	0.50	12.1	13.90	1.50	16.90	477.7
C3150	10	0.5 (16*0.2)	0.60	0.50	16.20	18.70	1.60	21.90	873.9
C3151	15	0.5 (16*0.2)	0.60	0.50	18.80	22.00	1.70	25.40	1159.0
C3152	20	0.5 (16*0.2)	0.60	0.50	21.30	24.50	1.80	28.10	1460.3
C3153	30	0.5 (16*0.2)	0.60	0.50	25.90	29.10	1.90	32.90	1787.7
C3154	50	0.5 (16*0.2)	0.60	0.50	32.90	36.90	2.10	41.10	2790.4
C3155	1 TRIPE	0.5 (16*0.2)	0.60	0.50	6.40	8.20	1.30	10.80	221.0
C3156	1	0.75 (24*0.2)	0.60	0.50	6.40	8.20	1.30	10.80	218.2
C3157	2	0.75 (24*0.2)	0.60	0.50	7.40	9.20	1.40	12.00	276.8
C3158	5	0.75 (24*0.2)	0.60	0.50	13.20	15.70	1.50	18.70	640.1
C3159	10	0.75 (24*0.2)	0.60	0.50	17.40	19.90	1.70	23.30	929.8
C3160	15	0.75 (24*0.2)	0.60	0.50	20.30	23.50	1.80	27.10	1326.9
C3161	20	0.75 (24*0.2)	0.60	0.50	23.40	26.60	1.80	30.20	1599.3
C3162	30	0.75 (24*0.2)	0.60	0.50	28.00	31.20	2.00	35.20	2070.6
C3163	50	0.75 (24*0.2)	0.60	0.50	36.30	40.30	2.20	44.70	3323.1
C3164	1 TRIPE	0.75 (24*0.2)	0.60	0.50	6.80	8.60	1.40	11.40	234.3
C3165	1	1.50 (7*0.53)	0.60	0.50	7.30	9.10	1.40	11.90	270.4
C3166	2	1.50 (7*0.53)	0.60	0.50	8.70	10.50	1.40	13.30	349.5
C3167	5	1.50 (7*0.53)	0.60	0.50	15.40	17.90	1.60	21.10	828.9
C3168	10	1.50 (7*0.53)	0.60	0.50	20.60	23.80	1.80	27.40	1401.6
C3169	15	1.50 (7*0.53)	0.60	0.50	24.20	27.40	1.90	31.20	1819.9
C3170	20	1.50 (7*0.53)	0.60	0.50	27.50	31.50	2.00	35.50	2390.5
C3171	30	1.50 (7*0.53)	0.60	0.50	33.30	37.30	2.10	41.50	3140.0
C3172	50	1.50 (7*0.53)	0.60	0.50	42.60	47.60	2.40	52.40	5037.8
C3173	1 TRIPE	1.50 (7*0.53)	0.60	0.50	7.60	9.40	1.40	12.20	299.1

C3099 TO C3194

Part 2: Type2: Individually & Collectively Screened Armoured

P/N	Number of Pairs	Conductor Construction (sq mm)	Nom. Radial Thickness of Insulation (mm)	Drain wire cross section (sq mm)	Diameter of Bedding (mm)	Diameter of Armour (mm)	Nom. Thickness of Jacket (mm)	Overall Diameter (mm)	Nom. Weight (kg/km)
C3174	2	0.5 (16*0.2)	0.60	0.50	11.00	12.80	1.50	15.80	409.3
C3175	5	0.5 (16*0.2)	0.60	0.50	14.20	16.70	1.60	19.90	703.4
C3176	10	0.5 (16*0.2)	0.60	0.50	20.10	23.30	1.80	26.90	1225.3
C3177	15	0.5 (16*0.2)	0.60	0.50	23.50	26.70	1.80	30.30	1531.3
C3178	20	0.5 (16*0.2)	0.60	0.50	26.30	29.50	1.90	33.30	1799.4
C3179	30	0.5 (16*0.2)	0.60	0.50	31.30	35.30	2.10	39.50	2587.2
C3180	50	0.5 (16*0.2)	0.60	0.50	40.70	45.70	2.40	50.50	4177.0
C3181	2	0.75 (24*0.2)	0.60	0.50	11.80	13.60	1.50	16.60	460.0
C3182	5	0.75 (24*0.2)	0.60	0.50	15.20	17.70	1.60	20.90	769.2
C3183	10	0.75 (24*0.2)	0.60	0.50	21.60	24.80	1.80	28.40	1348.7
C3184	15	0.75 (24*0.2)	0.60	0.50	25.20	28.40	1.90	32.20	1732.6
C3185	20	0.75 (24*0.2)	0.60	0.50	28.80	32.80	2.00	36.80	2306.7
C3186	30	0.75 (24*0.2)	0.60	0.50	34.40	38.40	2.20	42.80	3020.1
C3187	50	0.75 (24*0.2)	0.60	0.50	43.90	48.90	2.50	53.90	4746.3
C3188	2	1.50 (7*0.53)	0.60	0.50	13.70	16.20	1.60	19.40	672.4
C3189	5	1.50 (7*0.53)	0.60	0.50	17.80	21.00	1.70	24.40	1112.7
C3190	10	1.50 (7*0.53)	0.60	0.50	25.50	28.70	1.90	32.50	1751.5
C3191	15	1.50 (7*0.53)	0.60	0.50	29.80	33.80	2.00	37.80	2505.1
C3192	20	1.50 (7*0.53)	0.60	0.50	33.40	37.40	2.10	41.60	2965.6
C3193	30	1.50 (7*0.53)	0.60	0.50	40.00	45.00	2.50	50.00	4352.0
C3194	50	1.50 (7*0.53)	0.60	0.50	51.20	56.20	2.70	61.60	6216.4

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Colour Code

Pair No.	Color		Pair No.	Color	
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

Note: 2 Pair unscreened cables are in quad formation, colour code (clockwise): Black, Blue, Green, and Brown

Reference Standards

BS5308 Part 2	EN 50290-2
BS EN 60228	RoHS directives
BS 7655	IEC60332-3-24