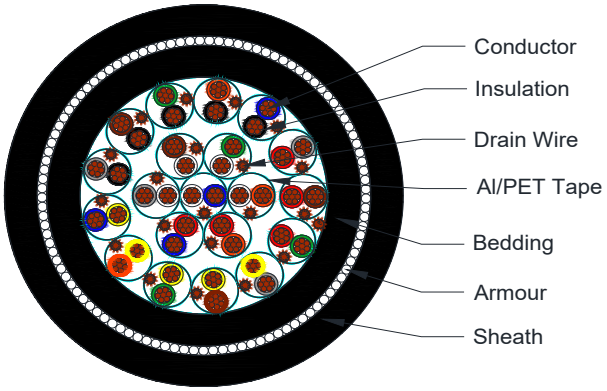
Control and Instrumentation Cables
PAS/BS5308 Part 1, Type 1 & 2
LSZH-HFFR Sheath

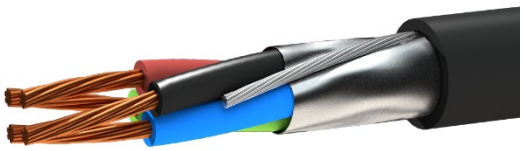
C3304 TO C3410, C3941 TO C3943

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. The armoured versions (Type 2) are generally used for outdoor applications and can be used in direct burial applications.

Cross Section Drawing





Design

Unit	Properties
Conductor	Class5 plain copper wire
Insulation	PE
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)	Halogen Free Flame Retardant (HFFR)
Armour (where requested)	Galvanized Steel Wire Armour
Outer Sheath Material	Halogen Free Flame Retardant (HFFR) 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.

Control and Instrumentation Cables
PAS/BS5308 Part 1, Type 1 & 2
LSZH-HFFR Sheath

C3304 TO C3410, C3941 TO C3943

Electrical Characteristics at 20°C

Conductor Size(sq mm)	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
1.00	7*0.43	18.4	75	115	500	1000	25	5000
1.50	7*0.53	12.3	75	115	500	1000	40	5000

Color Scheme

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

Control and Instrumentation Cables
PAS/BS5308 Part 1, Type 1 & 2
LSZH-HFFR Sheath

C3304 TO C3410, C3941 TO C3943

Constructional Information

Part 1: 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)
C3304	1	0.5 (16*0.2)	0.6	0.5	0.8	6.00	40.6
C3305	2	0.5 (16*0.2)	0.6	0.5	0.8	6.90	58.7
C3306	3	0.5 (16*0.2)	0.6	0.5	0.9	10.00	69.2
C3307	5	0.5 (16*0.2)	0.6	0.5	1.10	12.10	142.6
C3308	10	0.5 (16*0.2)	0.6	0.5	1.30	16.20	267.8
C3309	15	0.5 (16*0.2)	0.6	0.5	1.50	18.20	347.2
C3310	20	0.5 (16*0.2)	0.6	0.5	1.60	21.30	442.8
C3311	30	0.5 (16*0.2)	0.6	0.5	1.80	25.90	645.8
C3312	50	0.5 (16*0.2)	0.6	0.5	2.10	32.90	1022.8
C3313	1 TRIPE	0.5 (16*0.2)	0.6	0.5	0.80	6.30	48.6
C3314	1	0.75 (24*0.2)	0.6	0.5	0.80	6.40	47.3
C3315	2	0.75 (24*0.2)	0.6	0.5	0.80	7.40	71.0
C3316	5	0.75 (24*0.2)	0.6	0.5	1.20	13.30	181.3
C3317	10	0.75 (24*0.2)	0.6	0.5	1.60	16.20	329.0
C3318	15	0.75 (24*0.2)	0.6	0.5	1.60	20.50	451.6
C3319	20	0.75 (24*0.2)	0.6	0.5	1.80	21.30	573.8
C3320	30	0.75 (24*0.2)	0.6	0.5	2.05	28.50	853.8
C3321	50	0.75 (24*0.2)	0.6	0.5	2.50	36.40	1378.6
C3322	1 TRIPE	0.75 (24*0.2)	0.6	0.5	0.80	6.80	59.3
C3941	1	1.00 (7x0.43)	0.6	0.5	0.80	6.80	53.0
C3942	2	1.00 (7x0.43)	0.6	0.5	0.90	8.00	102.7
C3943	4	1.00 (7x0.43)	0.6	0.5	1.00	9.30	200.0
C3323	1	1.50 (7*0.53)	0.6	0.5	0.80	7.30	67.6
C3324	2	1.50 (7*0.53)	0.6	0.5	0.90	8.70	112.2
C3325	5	1.50 (7*0.53)	0.6	0.5	1.10	15.40	271.8
C3326	10	1.50 (7*0.53)	0.6	0.5	1.70	20.60	527.4
C3327	15	1.50 (7*0.53)	0.6	0.5	1.70	24.20	741.1
C3328	20	1.50 (7*0.53)	0.6	0.5	1.80	27.50	947.1
C3329	30	1.50 (7*0.53)	0.6	0.5	2.10	33.30	1388.8
C3330	50	1.50 (7*0.53)	0.6	0.5	2.50	42.60	2255.1
C3331	1 TRIPE	1.50 (7*0.53)	0.6	0.5	0.80	7.80	88.0

Control and Instrumentation Cables
PAS/BS5308 Part 1, Type 1 & 2
LSZH-HFFR Sheath

C3304 TO C3410, C3941 TO C3943

Part 1: 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)
C3332	2	0.5 (16*0.2)	0.60	0.50	1.10	11.00	110.3
C3333	5	0.5 (16*0.2)	0.60	0.50	1.20	14.20	200.3
C3334	10	0.5 (16*0.2)	0.60	0.50	1.30	20.10	350.1
C3335	15	0.5 (16*0.2)	0.60	0.50	1.50	23.50	514.0
C3336	20	0.5 (16*0.2)	0.60	0.50	1.50	26.30	636.7
C3337	30	0.5 (16*0.2)	0.60	0.50	1.70	31.30	916.0
C3338	50	0.5 (16*0.2)	0.60	0.50	2.20	40.70	1511.6
C3339	2	0.75 (24*0.2)	0.60	0.50	1.10	11.80	135.3
C3340	5	0.75 (24*0.2)	0.60	0.50	1.20	15.20	237.2
C3341	10	0.75 (24*0.2)	0.60	0.50	1.30	21.60	425.3
C3342	15	0.75 (24*0.2)	0.60	0.50	1.50	25.20	616.6
C3343	20	0.75 (24*0.2)	0.60	0.50	1.70	28.80	797.8
C3344	30	0.75 (24*0.2)	0.60	0.50	2.00	34.40	1163.0
C3345	50	0.75 (24*0.2)	0.60	0.50	2.20	43.90	1845.5
C3346	2	1.50 (7*0.53)	0.60	0.50	1.20	13.70	191.5
C3347	4	1.50 (7*0.53)	0.60	0.50	1.20	16.20	262.5
C3348	5	1.50 (7*0.53)	0.60	0.50	1.30	17.80	349.9
C3349	6	1.50 (7*0.53)	0.60	0.50	1.30	19.70	386.4
C3350	8	1.50 (7*0.53)	0.60	0.50	1.40	21.70	497.7
C3351	10	1.50 (7*0.53)	0.60	0.50	1.50	25.50	644.1
C3352	12	1.50 (7*0.53)	0.60	0.50	1.50	26.70	703.1
C3353	14	1.50 (7*0.53)	0.60	0.50	1.60	28.40	813.7
C3354	15	1.50 (7*0.53)	0.60	0.50	1.70	29.80	934.3
C3355	20	1.50 (7*0.53)	0.60	0.50	1.70	33.40	1177.5
C3356	30	1.50 (7*0.53)	0.60	0.50	2.00	40.00	1730.0
C3357	50	1.50 (7*0.53)	0.60	0.50	2.20	51.20	2778.6

Control and Instrumentation Cables
PAS/BS5308 Part 1, Type 1 & 2
LSZH-HFFR Sheath

C3304 TO C3410, C3941 TO C3943

Part 1: Type2: 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)	Nom. Diameter of cable (mm)	Nom. Weight (kg/km)
C3358	1	0.5 (16*0.2)	0.60	0.50	6.00	7.80	1.30	10.40	194.1
C3359	2	0.5 (16*0.2)	0.60	0.50	6.90	8.70	1.30	11.30	231.6
C3360	5	0.5 (16*0.2)	0.60	0.50	12.1	13.90	1.50	16.90	441.0
C3361	10	0.5 (16*0.2)	0.60	0.50	16.20	18.70	1.60	21.90	815.5
C3362	15	0.5 (16*0.2)	0.60	0.50	18.80	22.00	1.70	25.40	1075.7
C3363	20	0.5 (16*0.2)	0.60	0.50	21.30	24.50	1.80	28.10	1359.5
C3364	30	0.5 (16*0.2)	0.60	0.50	25.90	29.10	1.90	32.90	1640.4
C3365	50	0.5 (16*0.2)	0.60	0.50	32.90	36.90	2.10	41.10	2557.6
C3366	1 TRIPE	0.5 (16*0.2)	0.60	0.50	6.40	8.20	1.30	10.80	244.8
C3367	1	0.75 (24*0.2)	0.60	0.50	6.40	8.20	1.30	10.80	243.2
C3368	2	0.75 (24*0.2)	0.60	0.50	7.40	9.20	1.40	12.00	261.7
C3369	5	0.75 (24*0.2)	0.60	0.50	13.20	15.70	1.50	18.70	597.4
C3370	10	0.75 (24*0.2)	0.60	0.50	17.40	19.90	1.70	23.30	865.1
C3371	15	0.75 (24*0.2)	0.60	0.50	20.30	23.50	1.80	27.10	1234.1
C3372	20	0.75 (24*0.2)	0.60	0.50	23.40	26.60	1.80	30.20	1479.7
C3373	30	0.75 (24*0.2)	0.60	0.50	28.00	31.20	2.00	35.20	1906.5
C3374	50	0.75 (24*0.2)	0.60	0.50	36.30	40.30	2.20	44.70	3045.7
C3375	1 TRIPE	0.75 (24*0.2)	0.60	0.50	6.80	8.60	1.40	11.40	221.6
C3376	1	1.50 (7*0.53)	0.60	0.50	7.30	9.10	1.40	11.90	296.8
C3377	2	1.50 (7*0.53)	0.60	0.50	8.70	10.50	1.40	13.30	328.7
C3378	5	1.50 (7*0.53)	0.60	0.50	15.40	17.90	1.60	21.10	773.3
C3379	10	1.50 (7*0.53)	0.60	0.50	20.60	23.80	1.80	27.40	1313.1
C3380	15	1.50 (7*0.53)	0.60	0.50	24.20	27.40	1.90	31.20	1688.9
C3381	20	1.50 (7*0.53)	0.60	0.50	27.50	31.50	2.00	35.50	2231.5
C3382	30	1.50 (7*0.53)	0.60	0.50	33.30	37.30	2.10	41.50	2925.6
C3383	50	1.50 (7*0.53)	0.60	0.50	42.60	47.60	2.40	52.40	4693.8
C3384	1 TRIPE	1.50 (7*0.53)	0.60	0.50	7.60	9.40	1.40	12.20	284.1
C3385	8 TRIPE	1.50 (7*0.53)	0.60	0.50	21.50	24.70	1.80	28.3	1747.4

Control and Instrumentation Cables
PAS/BS5308 Part 1, Type 1 & 2
LSZH-HFFR Sheath

C3304 TO C3410, C3941 TO C3943

Part 1: 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)	Nom. Diameter of cable (mm)	Nom. Weight (kg/km)
C3386	2	0.5 (16*0.2)	0.60	0.50	11.00	12.80	1.50	15.80	421.9
C3387	5	0.5 (16*0.2)	0.60	0.50	14.20	16.70	1.60	19.90	660.2
C3388	10	0.5 (16*0.2)	0.60	0.50	20.10	23.30	1.80	26.90	1156.6
C3389	15	0.5 (16*0.2)	0.60	0.50	23.50	26.70	1.80	30.30	1430.7
C3390	20	0.5 (16*0.2)	0.60	0.50	26.30	29.50	1.90	33.30	1680.7
C3391	30	0.5 (16*0.2)	0.60	0.50	31.30	35.30	2.10	39.50	2417.9
C3392	50	0.5 (16*0.2)	0.60	0.50	40.70	45.70	2.40	50.50	3893.5
C3393	2	0.75 (24*0.2)	0.60	0.50	11.80	13.60	1.50	16.60	427.1
C3394	5	0.75 (24*0.2)	0.60	0.50	15.20	17.70	1.60	20.90	721.9
C3395	10	0.75 (24*0.2)	0.60	0.50	21.60	24.80	1.80	28.40	1272.9
C3396	15	0.75 (24*0.2)	0.60	0.50	25.20	28.40	1.90	32.20	1621.8
C3397	20	0.75 (24*0.2)	0.60	0.50	28.80	32.80	2.00	36.80	2165.8
C3398	30	0.75 (24*0.2)	0.60	0.50	34.40	38.40	2.20	42.80	2815.8
C3399	50	0.75 (24*0.2)	0.60	0.50	43.90	48.90	2.50	53.90	4431.8
C3400	2	1.50 (7*0.53)	0.60	0.50	13.70	16.20	1.60	19.40	727.2
C3401	5	1.50 (7*0.53)	0.60	0.50	17.80	21.00	1.70	24.40	1244.2
C3402	6	1.50 (7*0.53)	0.60	0.50	19.50	22.70	1.70	26.10	1261.2
C3403	8	1.50 (7*0.53)	0.60	0.50	21.30	24.50	1.80	28.10	1471.4
C3404	10	1.50 (7*0.53)	0.60	0.50	25.50	28.70	1.90	32.50	1651.1
C3405	12	1.50 (7*0.53)	0.60	0.50	26.70	29.90	1.90	33.7	2154.2
C3406	15	1.50 (7*0.53)	0.60	0.50	29.80	33.80	2.00	37.80	2358.7
C3407	20	1.50 (7*0.53)	0.60	0.50	33.40	37.40	2.10	41.60	2793.7
C3408	30	1.50 (7*0.53)	0.60	0.50	40.00	45.00	2.50	50.00	4101.9
C3409	40	1.50 (7*0.53)	0.60	0.50	44.60	49.60	2.60	54.80	4965.4
C3410	50	1.50 (7*0.53)	0.60	0.50	51.20	56.20	2.70	61.60	5829.8

Reference Standards

BS5308 Part 1	IEC 60754-1&-2
BS EN 60228	IEC 61034-1&-2
BS 7655	IEC60332-3-24
EN 50290-2	RoHS directives