SWA LSZH POWER CABLE 0.6/1KV BS6724

Multi-core LSZH cables with steel wire armour (SWA) are versatile power and auxiliary control cables suitable for use in various applications, including power networks, underground installations, and indoor or outdoor use.

They provide excellent mechanical protection against damage, thanks to heavy galvanized steel wire armour, making them ideal for use inside and outside buildings or for direct burial in the ground.

These cables are designed for fixed wiring applications, offering reliability and durability in power networks, both indoors and outdoors, and within cable ducting systems.

CONDUCTOR	Plain Copper
STRANDING	Class 2
INSULATION	XLPE
BEDDING	LSZH
ARMOUR	AWA (single core) or SWA (multi core)
OUTERSHEATH	LSZH
OUTERSHEATH COLOUR	Black
RATED VOLTAGE	0.6/1kV
CORE IDENTIFICATION	1 Core - Brown 2 Core - Brown, Blue 3 Core - Brown, Black & Grey (Optional: Brown, Blue & Green/Yellow) 4Core - Brown, Black, Grey & Blue (Optional: Brown, Black, Grey & Green/Yellow) 5 Core - Numbered Cores (Optional: Brown, Black, Grey, Blue + Green/Yellow) 6 Core+ - Numbered Cores (Optional: Numbered + Green/Yellow)
MINIMUM BENDING RADIUS	1.5sqmm to 16sqmm - 6 x overall diameter (circular cond.) 25sqmm and above - 8 x overall diameter (shaped cond.)
OPERATING TEMPERATURE	Maximum 90°C. Mininum operating -25°C
STANDARDS	BS6724: Electric cables. Thermosetting insulated, armoured cables for voltages of 600/1000V and 1900/3300V, having low emission of smoke and corrosive gases when affected by fire BSEN50267-1Common test methods for cables under fire conditions. Tests on gases evolved during combustion of materials from cables. Apparatus BSEN50267-2-1:Common test methods for cables under fire conditions. Tests on gases evolved during combustion of materials from cables. Procedures. Determination of the amount of halogen acid gas BSEN50266-1Common test methods for cables under fire conditions. Test for vertical flame spread of vertically-mounted bunched wires or cables IEC60502: Power cables with extruded insulation and their accessories for rated voltages from 1kV to 30kV BSEN/IEC60332-1-2: Tests on electric and optical fibre cables under fire conditions Part 1: test for vertical flame propagation for a single insulated wire or cable Section 2: procedure for 1kW pre-mixed flame BSEN61034-2:2005 Measurement of smoke density of cables burned under defined conditions. Test procedure and requirements Flame Propagation Test to BS EN 60332-1-2:2004 for single cable and BS EN 60332- 3-24:2009 (Cat C) for multiple cables

SPECIFICATION DATA

BATT Part No	Number of cores	Nominal cross sectional area of conductor	Nominal thickness of insulation (mm)	Nominal diameter under armour (mm)	Nominal O/D (mm)	Weight
56415	1	50	1	11.7	16	623
56416	1	70	1.1	13.4	18.3	864
56417	1	95	1.1	15.2	21.4	1187
56418	1	120	1.2	17	23.1	1442
56419	1	150	1.4	19.1	25.6	1782
56420	1	185	1.6	21	27.7	2168
56421	1	240	1.7	23.9	30.4	2724
56422	1	300	1.8	26.5	33.25	3357
56423	1	400	2	30	37.4	4288
56424	1	500	2.2	33.2	41.15	5425
56425	1	630	2.4	37.3	45.35	6827
55131	2	1.5	0.6	7.1	11	245
55132	2	2.5	0.7	8.3	12.4	309
55134	2	4	0.7	9.3	13.45	367
55145	2	6	0.7	10.5	14.65	446
55147	2	10	0.7	11.8	16	575
55149	2	16	0.7	13.8	18.7	865
56428	2	25	0.9	17.2	22.9	1280
56429	2	35	0.9	19.4	26.1	1715
56430	2	50	1	19.9	26	1770
56431	2	70	1.1	23	28.75	2250
56432	2	95	1.1	26	32.95	3038
56433	2	120	1.2	29	36.25	3638
56434	2	150	1.4	31.9	39.15	4328
56435	2	185	1.6	35.7	44.7	5803
55151	3	1.5	0.6	7.5	11.45	268
55154	3	2.5	0.7	8.9	12.95	342
55155	3	4	0.7	10	14.05	416
55159	3	6	0.7	11.2	15.35	513
55160	3	10	0.7	12.7	17.55	769
55161	3	16	0.7	14.8	19.75	1025
56474	3	25	0.9	18.6	25.5	1746
56475	3	35	0.9	20.7	27.85	2137
56476	3	50	1	22.5	28.15	2338
56477	3	70	1.1	26	31.75	3083
56478	3	95	1.1	29.7	36.3	4143
56479	3	120	1.2	33	39.75	5003
56480	3	150	1.4	37.1	44.45	6413
56481	3	185	1.6	41	48.45	7710
56482	3	240	1.7	46	53.7	9605
56483	3	300	1.8	51.2	58.85	11698
55162	4	1.5	0.6	8.3	12.15	301
55175	4	2.5	0.7	9.8	13.85	389
55193	4	4	0.7	11	15.1	493
55194	4	6	0.7	12.5	17.4	698
55195	4	10	0.7	14.1	18.9	909

55196	4	16	0.7	16.4	21.35	1235
56496	4	25	0.9	20.6	27.5	2104
56497	4	35	0.9	23	29	2511
56498	4	50	1	25.8	32.55	3105
56499	4	70	1.1	30.1	38.3	4468
56500	4	95	1.1	34.1	42.25	5665
56501	4	120	1.2	38.3	47.7	7278
56502	4	150	1.4	42.6	52.25	8653
56503	4	185	1.6	47.1	57.1	10480
56504	4	240	1.7	53.3	63.4	13090
56505	4	300	1.8	58.9	69.2	15808
56506	4	400	2	67.7	78.05	20245
55163 (Numbered Cores)	2	1.5	0.6	7.1	11	245
55021 (Numbered Cores)	2	2.5	0.7	8.3	12.4	309
55102 (Numbered Cores)	3	1.5	0.6	7.5	11.45	268
55022 (Numbered Cores)	3	2.5	0.7	8.9	12.95	342
55054 (Numbered Cores)	4	1.5	0.6	8.3	12.15	301
55050 (Numbered Cores)	4	2.5	0.7	9.8	13.85	389
55158 (Numbered Cores)	5	1.5	0.6	9	13.1	350
55507 (Numbered Cores)	5	2.5	0.7	10.7	14.8	458
55509 (Numbered Cores)	5	4	0.7	12.1	16.35	578
55512 (Numbered Cores)	5	6	0.7	13.7	18.65	815
55478 (Numbered Cores)	5	10	0.7	15.5	20.28	1071
55203 (Numbered Cores)	5	16	0.7	18.5	24.35	1632
55157 (Numbered Cores)	7	1.5	0.6	9.9	14.05	402
55364 (Numbered Cores)	7	2.5	0.7	11.7	15.95	522
55510 (Numbered Cores)	7	4	0.7	13.4	18.35	761
55052 (Numbered Cores)	7	6	0.7		19.9	941
55137 (Numbered Cores)	7	10	0.7		22.2	1331
55167 (Numbered Cores)	7	16	0.7		26.9	2038
55166 (Numbered Cores)	12	1.5	0.6	13.2	18.2	674
55352 (Numbered Cores)	12	2.5	0.7	15.8	20.95	885
55511 (Numbered Cores)	12	4	0.7	18.2	24.05	1275
55451 (Numbered Cores)	19	1.5	0.6	15.6	20.6	870
55363 (Numbered Cores)	19	2.5	0.7	18.9	24.9	1343
55051 (Numbered Cores)	19	4	0.7	21.5	27.5	1708
55504 (Numbered Cores)	27	1.5	0.6		25	1229
55353 (Numbered Cores)	27	2.5	0.7		29.2	1685
55505 (Numbered Cores)	37	1.5	0.6		27.4	1493
55355 (Numbered Cores)	37	2.5	0.7		32.1	2079
55506 (Numbered Cores)	48	1.5				
55264 (G/Y Core)	3	1.5	0.6	7.5	11.45	268
55170 (G/Y Core)	3	2.5	0.7	8.9	12.95	342
55179 (G/Y Core)	3	4	0.7	10	14.05	416
55171 (G/Y Core)	3	6	0.7	11.2	15.35	513
55291 (G/Y Core)	3	10	0.7	12.7	17.55	769
55372 (G/Y Core)	3	16	0.7	14.8	19.75	1025
56802 (G/Y Core)	3	25	0.9	18.6	25.5	1746
56747 (G/Y Core)	3	35	0.9	20.7	27.85	2137
55321 (G/Y Core)	4	1.5	0.6	8.3	12.15	301
55322 (G/Y Core)	4	2.5	0.7	9.8	13.85	389

55324 (G/Y Core)	4	4	0.7	11	15.1	493
55333 (G/Y Core)	4	6	0.7	12.5	17.4	698
55334 (G/Y Core)	4	10	0.7	14.1	18.9	909
55277 (G/Y Core)	4	16	0.7	16.4	21.35	1235
56755 (G/Y Core)	4	25	0.9	20.6	27.5	2104
56774 (G/Y Core)	4	35	0.9	23	29	2511
56801 (G/Y Core)	4	50	1	25.8	32.55	3105
56823 (G/Y Core)	4	70	1.1	30.1	38.3	4468
56830 (G/Y Core)	4	95	1.1	34.1	42.25	5665
56775 (G/Y Core)	4	120	1.2	38.3	47.4	7278
56027 (G/Y Core)	4	185	1.6	47.1	57.1	10480
55274 (G/Y Core)	5	1.5	0.6	9	13.1	350
55278 (G/Y Core)	5	2.5	0.7	10.7	14.8	458
55275 (G/Y Core)	5	4	0.7	12.1	16.35	578
55318 (G/Y Core)	5	6	0.7	13.7	18.65	815
55319 (G/Y Core)	5	10	0.7	15.5	20.28	1071
55339 (G/Y Core)	5	16	0.7	18.5	24.35	1632
56694 (G/Y Core)	5	25	0.9	22.7	28.6	2408
56695 (G/Y Core)	5	35	0.9	25.4	31.5	3047
56696 (G/Y Core)	5	50	1	29.9	37.2	4200
56697 (G/Y Core)	5	70	1.1	34.5	42.2	5600
56791 (G/Y Core)	5	95				
56752 (G/Y Core)	5	120				
56811 (G/Y Core)	5	150				
56870 (G/Y Core)	5	185				
56017 (G/Y Core)	5	240				
55418 (Numbered + G/Y)	7	1.5	0.6	9.9	14.05	402
55419 (Numbered + G/Y)	7	2.5	0.7	11.7	15.95	522
55356 (Numbered + G/Y)	12	1.5	0.6	13.2	18.2	674
55420 (Numbered + G/Y)	12	2.5	0.7	15.8	20.95	885
55019 (Numbered + G/Y)	19	1.5	0.6	15.6	20.6	870
55020 (Numbered + G/Y)	27	1.5	0.6		25	1229

RATING TABLES

COPPER CONDUCTORS

TABLE 4E3A – Single-core armoured 90 °C thermosetting insulated cables (non-magnetic armour) (COPPER CONDUCTORS)

CURRENT-CARRYING CAPACITY (amperes):

Ambient temperature: 30 °C
Conductor operating temperature: 90 °C

Conductor cross-sectional area	Reference Method C (clipped direct)		Reference Method F (in free air or on a perforated cable tray, horizontal or vertical)								
	Touching		Touching			Spaced by one cable diameter					
	2 cables, single-phase AC or DC flat	3 or 4 cables, three-phase AC flat	2 cables, single-phase AC or DC flat	3 cables, three-phase AC flat	3 cables, three-phase AC trefoil	2 cables, DC		2 cables, single-phase AC		3 or 4 cables, three-phase AC	
						Horizontal	Vertical	Horizontal	Vertical	Horizontal	Vertical
1	2	3	4	5	6	7	8	9	10	11	12
(mm²)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)
50	237	220	253	232	222	284	270	282	266	288	266
70	303	277	322	293	285	356	349	357	337	358	331
95	367	333	389	352	346	446	426	436	412	425	393
120	425	383	449	405	402	519	497	504	477	485	449
150	488	437	516	462	463	600	575	566	539	549	510
185	557	496	587	524	529	688	660	643	614	618	574
240	656	579	689	612	625	815	782	749	714	715	666
300	755	662	792	700	720	943	906	842	805	810	755
400	853	717	899	767	815	1137	1094	929	889	848	797
500	962	791	1016	851	918	1314	1266	1032	989	923	871
630	1082	861	1146	935	1027	1528	1474	1139	1092	992	940
800	1170	904	1246	987	1119	1809	1744	1204	1155	1042	978
1000	1261	961	1345	1055	1214	2100	2026	1289	1238	1110	1041

NOTES:

1. Where it is intended to connect the cables in this table to equipment or accessories designed to operate at a temperature lower than the maximum operating temperature of the cable, the cables should be rated at the maximum operating temperature of the equipment or accessory (see Regulation 512.1.5).
2. Where it is intended to group a cable in this table with other cables, the cable should be rated at the lowest of the maximum operating temperatures of any of the cables in the group (see Regulation 512.1.5).

TABLE 4E3B

VOLTAGE DROP (per ampere per metre):

Conductor operating temperature: 90 °C

Conductor cross-sectional area	2 cables, DC	Reference Methods C & F (clipped direct, on tray or in free air)														
		2 cables, single-phase AC						3 or 4 cables, three-phase AC								
		touching			spaced*			trefoil and touching			flat and touching			flat and spaced*		
1	2	3			4			5			6			7		
(mm²)	(mV/A/m)	(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)		
		r	x	z	r	x	z	r	x	z	r	x	z	r	x	z
50	0.98	0.99	0.21	1.00	0.98	0.29	1.00	0.86	0.180	0.87	0.84	0.25	0.88	0.84	0.33	0.90
70	0.67	0.68	0.200	0.71	0.69	0.29	0.75	0.59	0.170	0.62	0.60	0.25	0.65	0.62	0.32	0.70
95	0.49	0.51	0.195	0.55	0.53	0.28	0.60	0.44	0.170	0.47	0.46	0.24	0.52	0.49	0.31	0.58
120	0.39	0.41	0.190	0.45	0.43	0.27	0.51	0.35	0.165	0.39	0.38	0.24	0.44	0.41	0.30	0.51
150	0.31	0.33	0.185	0.38	0.36	0.27	0.45	0.29	0.160	0.33	0.31	0.23	0.39	0.34	0.29	0.45
185	0.25	0.27	0.185	0.33	0.30	0.26	0.40	0.23	0.160	0.28	0.26	0.23	0.34	0.29	0.29	0.41
240	0.195	0.21	0.180	0.28	0.24	0.26	0.35	0.180	0.155	0.24	0.21	0.22	0.30	0.24	0.28	0.37
300	0.155	0.170	0.175	0.25	0.195	0.25	0.32	0.145	0.150	0.21	0.170	0.22	0.28	0.20	0.27	0.34
400	0.115	0.145	0.170	0.22	0.180	0.24	0.30	0.125	0.150	0.195	0.160	0.21	0.27	0.20	0.27	0.33
500	0.093	0.125	0.170	0.21	0.165	0.24	0.29	0.105	0.145	0.180	0.145	0.20	0.25	0.190	0.24	0.31
630	0.073	0.105	0.165	0.195	0.150	0.23	0.27	0.092	0.145	0.170	0.135	0.195	0.24	0.175	0.23	0.29
800	0.056	0.090	0.160	0.190	0.145	0.23	0.27	0.086	0.140	0.165	0.130	0.180	0.23	0.175	0.195	0.26
1000	0.045	0.092	0.155	0.180	0.140	0.21	0.25	0.080	0.135	0.155	0.125	0.170	0.21	0.165	0.180	0.24

NOTE: * Spacings larger than one cable diameter will result in a larger voltage drop.

COPPER CONDUCTORS

TABLE 4E4A – Multicore armoured 90 °C thermosetting insulated cables (COPPER CONDUCTORS)

Air ambient temperature: 30 °C
Ground ambient temperature: 20 °C
Conductor operating temperature: 90 °C

CURRENT-CARRYING CAPACITY (amperes):

Conductor cross-sectional area	Reference Method C (clipped direct)		Reference Method E (in free air or on a perforated cable tray etc, horizontal or vertical)		Reference Method D (direct in ground or in ducting in ground, in or around buildings)	
	1 two-core cable, single-phase AC or DC	1 three- or 1 four-core cable, three-phase AC	1 two-core cable, single-phase AC or DC	1 three- or 1 four-core cable, three-phase AC	1 two-core cable, single-phase AC or DC	1 three- or 1 four-core cable, three-phase AC
1	2	3	4	5	6	7
(mm^2)	(A)	(A)	(A)	(A)	(A)	(A)
1.5	27	23	29	25	25	21
2.5	36	31	39	33	33	28
4	49	42	52	44	43	36
6	62	53	66	56	53	44
10	85	73	90	78	71	58
16	110	94	115	99	91	75
25	146	124	152	131	116	96
35	180	154	188	162	139	115
50	219	187	228	197	164	135
70	279	238	291	251	203	167
95	338	289	354	304	239	197
120	392	335	410	353	271	223
150	451	386	472	406	306	251
185	515	441	539	463	343	281
240	607	520	636	546	395	324
300	698	599	732	628	446	365
400	787	673	847	728	-	-

NOTES:

1. Where it is intended to connect the cables in this table to equipment or accessories designed to operate at a temperature lower than the maximum operating temperature of the cable, the cables should be rated at the maximum operating temperature of the equipment or accessory (see Regulation 512.1.5).
2. Where it is intended to group a cable in this table with other cables, the cable should be rated at the lowest of the maximum operating temperatures of any of the cables in the group (see Regulation 512.1.5).

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