

BS 6724 Copper Conductor Multi Core SWA LSZH BASEC 0.6/1kV Cable



APPLICATION

Multi-core LSZH cable with steel wire armour (SWA). Power and auxiliary fixed wiring cables for use in power networks, underground, outdoor and indoor applications and for use in cable ducting. For installation where fire, smoke emission and toxic fumes create a potential threat to life and equipment.

CHARACTERISTICS

Voltage Rating Uo/U
0.6/1kV

Temperature Rating
Fixed intallation: -20°C to +90°C

Minimum Bending Radius
1.5mm² to 16mm² - Fixed: 6 x overall diameter
25mm² and above - Fixed: 8 x overall diameter

CONSTRUCTION

Conductor
Class 2 stranded copper conductor

Insulation
XLPE (Cross-Linked Polyethylene)

Bedding
LSZH (Low Smoke Zero Halogen)

Armour
SWA (Steel Wire Armour)

Sheath
LSZH (Low Smoke Zero Halogen)

Core Identification
2 core: ● Brown ● Blue
3 core: ● Brown ● Black ● Grey
3 core (optional) : ● Green/Yellow ● Blue ● Brown
4 core: ● Brown ● Black ● Blue ● Grey
4 core (optional) : ● Green/Yellow ● Brown ● Black ● Grey
5 core: ● Green/Yellow ● Brown ● Blue ● Black ● Grey
7 core and above: ○ White cores with ● Black numbers

Sheath Colour
● Black

STANDARDS

BS 6724, BS EN/IEC 60228, BS EN/IEC 60754-1/2,
BS EN 50267-2-1, BS EN/IEC 60502-1, BS EN/IEC 61034-2

Flame Retardant according to BS EN/IEC 60332-1-2, BS EN/IEC 60332-3-24 Cat C

REGULATORY COMPLIANCE

This cable is compliant with European Regulation EN 50575, the Construction Products Regulation.



This cable meets the requirements of the Low Voltage Directive 2014/35/EU and the RoHS Directive 2011/65/EU. RoHS compliance has been tested and confirmed by The Cable Lab® as meeting the requirements of the BSI RoHS Trusted Kitemark™.

DIMENSIONS

	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm ²	NOMINAL THICKNESS OF INSULATION mm	NOMINAL DIAMETER mm		NOMINAL WEIGHT kg/km	BW / CW GLAND	WRAPAROUND CLEATS
				Under Armour	Overall			
	2	1.5	0.6	7.3	12.1	302	20S	CC5
	2	2.5	0.7	8.5	13.6	346	20S	CC6
	2	4	0.7	9.4	14.7	410	20S	CC6
	2	6	0.7	10.5	15.9	499	20	CC7
	2	10	0.7	12.3	18	648	20	CC8
	2	16	0.7	14.3	20.4	978	20	CC9
	2	25	0.9	14.7	20.4	1290	25	CC9
	2	35	0.9	16.8	23.3	1500	32	CC10
	2	50	1	19	25.8	1890	32	CC12
	2	70	1.1	22	29	2450	32	CC12
	2	95	1.1	25.1	33.1	3300	32	CC14
	2	120	1.2	31.1	39.3	4020	40	CC16
	2	150	1.4	30.9	39.3	4750	40	CC18
	3	1.5	0.6	7.8	12.6	330	20S	CC5
	3	2.5	0.7	9.2	14.1	390	20S	CC6
	3	4	0.7	10	15.3	464	20S	CC7
	3	6	0.7	11.2	16.6	568	20	CC7
	3	10	0.7	13.1	19.5	866	20	CC8
	3	16	0.7	15.3	21.6	1152	25	CC9
	3	25	0.9	18.9	23.6	1800	25	CC11
	3	35	0.9	21.3	25.7	2230	32	CC12
	3	50	1	21.7	28.5	2490	32	CC12
	3	70	1.1	25.2	32.2	3290	32	CC14
	3	95	1.1	28.8	37	4440	40	CC16
	3	120	1.2	32	40.4	5470	40	CC16
	3	150	1.4	35.9	45.5	6930	50S	CC18
	4	1.5	0.6	8.5	13.5	365	20S	CC6
	4	2.5	0.7	9.9	15	438	20S	CC6
	4	4	0.7	11	16.4	532	20	CC7
	4	6	0.7	12.3	18.7	764	20	CC8
	4	10	0.7	14.5	21.1	1013	25	CC9
	4	16	0.7	17	23.4	1360	25	CC10
	4	25	0.9	21	26.1	2160	32	CC11
	4	35	0.9	23.6	28.6	2690	32	CC12
	4	50	1	25	32	3130	32	CC14
	4	70	1.1	29.5	37.7	4500	40	CC16
	4	95	1.1	33.3	41.7	5600	50S	CC18
	4	120	1.2	37.5	47.1	7400	50	CC20
	4	150	1.4	41.6	51.4	8780	50	-
	4	185	1.6	46.4	56.6	10630	63S	-
	4	240	1.7	52.6	63	13390	63	-
	4	300	1.8	56.3	63.6	14998	75S	-
	5	1.5	0.6	9.7	14.3	410	20S	CC6
	5	2.5	0.7	11.7	16.3	470	20S	CC7
	5	4	0.7	13	17.8	710	20	CC7
	5	6	0.7	14.5	20	876	25	CC8

	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm ²	NOMINAL THICKNESS OF INSULATION mm	NOMINAL DIAMETER mm		NOMINAL WEIGHT kg/km	BW / CW GLAND	WRAPAROUND CLEATS
				Under Armour	Overall			
	5	10	0.7	17.2	22.9	1165	25	CC10
	5	16	0.7	20	26.6	1742	32	CC11
	5	25	0.9	24.7	31.5	2323	32	CC14
	5	35	0.9	27.8	34.8	2932	40	CC14
	5	50	1	32.4	40.4	4192	50S	CC16
	7	1.5	0.6	10.2	15.2	470	20S	CC6
	7	2.5	0.7	12.3	17.1	600	20	CC7
	12	1.5	0.6	13.7	19.4	780	20	CC8
	12	2.5	0.7	16.3	22.4	1000	25	CC9
	19	1.5	0.6	16.2	22.2	1000	25	CC9
	19	2.5	0.7	19.9	26.6	1540	25	CC11
	27	1.5	0.6	20	26.7	1500	32	CC11
	27	2.5	0.7	24	30.7	1950	32	CC14
	37	1.5	0.6	22.3	29	1800	32	CC12
	37	2.5	0.7	26.9	33.8	2350	40	CC14

CONDUCTORS

Class 2 Stranded Conductors for Single Core and Multi-Core Cables

NOMINAL CROSS SECTIONAL AREA mm ²	MINIMUM NO. OF WIRES IN CONDUCTOR						MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C ohms/km
	Circular		Circular Compacted		Shaped		Annealed Copper Conductor
	Cu	Al	Cu	Al	Cu	Al	Plain Wires
1.5	7	-	6	-	-	-	12.1
2.5	7	-	6	-	-	-	7.41
4	7	-	6	-	-	-	4.61
6	7	-	6	-	-	-	3.08
10	7	7	6	6	-	-	1.83
16	7	7	6	6	-	-	1.15
25	7	7	6	6	6	6	0.727
35	7	7	6	6	6	6	0.524
50	19	19	6	6	6	6	0.387
70	19	19	12	12	12	12	0.268
95	19	19	15	15	15	15	0.193
120	37	37	18	15	18	15	0.153
150	37	37	18	15	18	15	0.124
185	37	37	30	30	30	30	0.0991
240	37	37	34	30	34	30	0.0754

The above table is in accordance with BS EN 60228 (previously BS 6360)

ELECTRICAL CHARACTERISTICS XLPE/LSZH/SWA/LSZH

Current Carrying Capacity

NOMINAL CROSS SECTIONAL AREA mm ²	REFERENCE METHOD C (CLIPPED DIRECT) Amps		REFERENCE METHOD E (IN FREE AIR OR ON A PERFORATED CABLE TRAY, HORIZONTAL OR VERTICAL) Amps		REFERENCE METHOD D (DIRECT IN GROUND OR IN DUCTING, IN GROUND, IN OR AROUND BUILDINGS) Amps	
	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
1.5	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	-	-

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

Notes

1. Where a conductor operates at a temperature exceeding 70°C it must be ascertained that the equipment connected to the conductor is suitable for the conductor operating temperature (see Regulation 512.1.2 of the 17th Edition of IEE Wiring Regulations).
2. Where cables in this table are connected to equipment or accessories designed to operate at a temperature not exceeding 70°C, the current ratings given in the equivalent table for 70°C thermoplastic insulated cables (Table 4D4A) must be used (see also Regulation 523.1 of the 17th Edition of IEE Wiring Regulations).

The above table is in accordance with Table 4E4A of the 17th Edition of IEE Wiring Regulations.

VOLTAGE DROP

NOMINAL CROSS SECTIONAL AREA mm ²	TWO CORE CABLE DC	TWO CORE CABLE SINGLE-PHASE AC mV/A/m			THREE OR FOUR CORE CABLE THREE-PHASE AC mV/A/m		
1.5	31	31			27		
2.5	19	19			16		
4	12	12			10		
6	7.9	7.9			6.8		
10	4.7	4.7			4		
16	2.9	2.9			2.5		
		r	x	z	r	x	z
25	1.85	1.85	0.160	1.900	1.600	0.140	1.650
35	1.35	1.35	0.155	1.350	1.150	0.135	1.150
50	0.98	0.99	0.155	1.000	0.860	0.135	0.870
70	0.67	0.67	0.150	0.690	0.590	0.130	0.600
95	0.49	0.50	0.150	0.520	0.430	0.130	0.450
120	0.39	0.40	0.145	0.420	0.340	0.130	0.370
150	0.31	0.32	0.145	0.350	0.280	0.125	0.300
185	0.25	0.26	0.145	0.290	0.220	0.125	0.260
240	0.195	0.20	0.140	0.240	0.175	0.125	0.210
300	0.155	0.16	0.140	0.210	0.140	0.120	0.185
400	0.12	0.13	0.140	0.190	0.115	0.120	0.165

Conductor operating temperature: 90°C

r = Resistive Component

x = Reactive Component

z = Impedance Value

The above table is in accordance with Table 4E4B of the 17th Edition of IEE Wiring Regulations.

For cables having conductors of 16mm² or less cross sectional area their inductances can be ignored and (mV/A/m)r values only are tabulated. For cables having conductors greater than 16mm², cross sectional area the impedance values are given as (mV/A/m)z, together with the resistive component (mV/A/m)r and the reactive component (mV/A/m)x.

The above paragraph is extracted from Appendix 4 of the 17th Edition of IEE Wiring Regulations.