

BS 6724 Copper Conductor Single Core AWA LSZH 0.6/1kV Cable



Application

Single core LSZH cable with aluminium wire armour (AWA). 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.

Standards

BS 6724, IEC/EN 60502-1, EN 60228

Low Smoke Zero Halogen according to IEC/EN 60754-1/2, IEC/EN 61034-2

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

Characteristics

Voltage Rating U₀/U
0.6/1kV

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

Minimum Bending Radius
Fixed: 6 x overall diameter

Construction

Conductor

Class 2 stranded copper conductor

Insulation

XLPE (Cross-Linked Polyethylene)

Bedding

LSZH (Low Smoke Zero Halogen)

Armour

AWA (Aluminium Wire Armour)

Sheath

LSZH (Low Smoke Zero Halogen)

Sheath Colour

Black



Dimensions

NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm ²	NOMINAL THICKNESS OF INSULATION mm	NOMINAL OVERALL DIAMETER mm		NOMINAL WEIGHT kg/km	CW GLAND	WRAPAROUND CLEATS
			Under Armour	Overall			
1	50	1	12.7	17.5	800	20	CC7
1	70	1.1	14.7	20.2	960	25	CC8
1	95	1.1	16.6	22.3	1240	25	CC9
1	120	1.2	18.5	24.2	1510	25	CC10
1	150	1.4	20.8	27.4	1900	32	CC11
1	185	1.6	23.2	30	2320	32	CC12
1	240	1.7	26	32.8	2930	32	CC14
1	300	1.8	28.6	35.6	3580	40	CC16
1	400	2	32.4	40.5	4600	40	CC16
1	500	2.2	36	44.2	5770	50S	CC18
1	630	2.4	40	48.8	7250	50	CC20
1	800	2.6	45.6	55.4	9381	63S	-
1	1000	2.8	50.6	60.6	11540	63S	-

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
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	
300	61	61	34	30	34	30	0.0601	
400	61	61	53	53	53	53	0.047	
630	91	91	53	53	53	53	0.0283	
800	91	91	53	53	-	-	0.0221	
1000	91	91	53	53	-	-	0.0176	

The above table is in accordance with EN 60228

Electrical Characteristics XLPE/LSZH/AWA/LSZH

Current Carrying Capacity

NOMINAL CROSS SECTIONAL AREA mm ²	REFERENCE METHOD C (CLIPPED DIRECT) Amps		REFERENCE METHOD F (IN FREE AIR OR ON A PERFORATED CABLE TRAY, HORIZONTAL OR VERTICAL) Amps								
	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
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

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

Notes:

- 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 18th Edition of IEE Wiring Regulations).
- 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 4D3A) must be used (see Regulation 523.1 of the 18th Edition of IEE Wiring Regulations).

The above table is in accordance with Table 4E3A of the 18th Edition of IEE Wiring Regulations BS7671 and IEC 60364-5-52

Voltage Drop

NOMINAL CROSS SECTIONAL AREA mm ²	TWO CORE CABLE DC	REFERENCE METHOD C & F (CLIPPED DIRECT, ON TRAY OR IN FREE AIR) mV/A/m														
		2 Cables Single-Phase AC						3 or 4 Cables Three-Phase AC								
		Touching			Spaced*			Trefoil and Touching			Flat and Touching			Flat and Spaced*		
		r	x	z	r	x	z	r	x	z	r	x	z	r	x	z
50	0.980	0.990	0.210	1.000	0.980	0.29	1.00	0.860	0.180	0.870	0.840	0.250	0.88	0.840	0.330	0.90
70	0.670	0.680	0.200	0.710	0.690	0.29	0.75	0.590	0.170	0.620	0.600	0.250	0.65	0.620	0.320	0.70
95	0.490	0.510	0.195	0.550	0.530	0.28	0.60	0.440	0.170	0.470	0.460	0.240	0.52	0.490	0.310	0.58
120	0.390	0.410	0.190	0.450	0.430	0.27	0.51	0.350	0.165	0.390	0.380	0.240	0.44	0.410	0.300	0.51
150	0.310	0.330	0.185	0.380	0.360	0.27	0.45	0.290	0.160	0.330	0.310	0.230	0.39	0.340	0.290	0.45
185	0.250	0.270	0.185	0.330	0.300	0.26	0.40	0.230	0.160	0.280	0.260	0.230	0.34	0.290	0.290	0.41
240	0.195	0.210	0.180	0.280	0.240	0.26	0.35	0.180	0.155	0.240	0.210	0.220	0.30	0.240	0.280	0.37
300	0.155	0.170	0.175	0.250	0.195	0.25	0.32	0.145	0.150	0.210	0.170	0.220	0.28	0.200	0.270	0.34
400	0.115	0.145	0.170	0.220	0.180	0.24	0.30	0.125	0.150	0.195	0.160	0.210	0.27	0.200	0.270	0.33
500	0.093	0.125	0.170	0.210	0.165	0.24	0.29	0.105	0.145	0.180	0.145	0.200	0.25	0.190	0.240	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	0.230	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

Conductor operating temperature: 90°C

r = Resistive Component

x = Reactive Component

z = Impedance Value

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

The above table is in accordance with Table 4E3B of the 18th Edition of IEE Wiring Regulations BS7671 and IEC 60364-5-52

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 18th Edition of IEE Wiring Regulations.

The information contained within this datasheet is for guidance only and is subject to change without notice or liability. All the information is provided in good faith and is believed to be correct at the time of publication. When selecting cable accessories, please note that actual cable dimensions may vary due to manufacturing tolerances.