

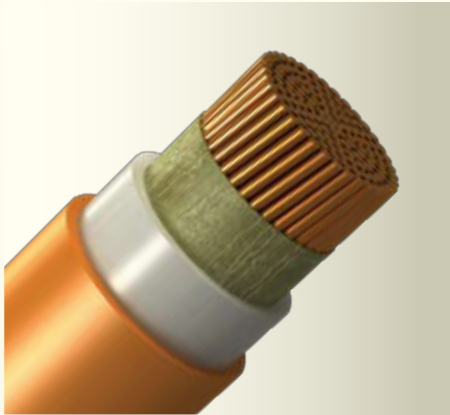
## LSZH Fire Resistant Cables

600/1000V Single-Core

Mica Tape Fire Barrier, XLPE Insulated, Unarmoured & Armoured,

LSZH Sheathed Fire Resistant Cable

CU/MICA/XLPE/LSZH or CU/MICA/XLPE/LSZH/AWA/LSZH



Application :	This cable is designed for areas where the integrity of the electrical circuit is critical in maintaining power supply. Applications can be found in emergency lightings, control and power circuits, power stations, fire alarm systems, underground tunnels, communications systems, sewage treatment plants, lifts, escalators, and high-rise buildings.
Voltage rating :	600/1000V
Construction :	Plain annealed copper, mica tape fire barrier, XLPE or XLEVA compound insulated, unarmoured or aluminum wires armoured, LSZH compound sheathed cable
Insulation colour :	Natural
Sheath colour :	Orange or as per order
Specification :	BS6724, BS6387, SS299-1, IEC60502-1, IEC60331, IEC60332-1, IEC60332-3, IEC60754, IEC61034

Conductor			Insulation	Unarmoured Cable		Armoured Cable	
Nominal Area	No./Dia. Of Strand	Dia. Of Conductor	Thickness	Approx. Overall Dia.	Approx. Weight	Approx. Overall Dia.	Approx. Weight
mm <sup>2</sup>	No./mm	mm	mm	mm	kg/km	mm	kg/km
1.5	7/0.53	1.59	0.7	6.5	54	-	-
2.5	7/0.67	2.01	0.7	6.8	67	-	-
4	7/0.85	2.55	0.7	7.5	86	-	-
6	7/1.04	3.12	0.7	8.1	110	-	-
10	7/1.35	4.05	0.7	9.2	155	-	-
16	7/1.70	5.10	0.7	10.2	220	-	-
25	7/2.14	6.42	0.9	11.9	325	-	-
35	19/1.53	7.65	0.9	13.2	425	-	-
50	19/1.78	8.90	1.0	14.6	600	18.5	780
70	19/2.14	10.70	1.1	16.6	820	20.5	1010
95	19/2.52	12.60	1.1	18.7	1100	23.0	1320
120	37/2.03	14.21	1.2	20.5	1350	24.5	1610
150	37/2.25	15.75	1.4	22.7	1640	27.0	2010
185	37/2.52	17.64	1.6	25.5	2040	29.5	2440
240	61/2.25	20.25	1.7	28.5	2650	34.5	3060
300	61/2.52	22.68	1.8	31.5	3260	36.9	3690
400	61/2.85	25.65	2.0	35.4	4130	41.5	4780
500	61/3.20	28.80	2.2	39.0	5200	45.5	5970
630	127/2.52	32.76	2.4	43.5	6600	50.5	7530
800	127/2.85	37.05	2.6	48.5	8300	56.8	9680
1000	127/3.20	41.60	2.8	53.5	10000	61.5	11980

Current rating and voltage drop

For Unarmoured Cable, please refer to Tables 4 & 5 (Page 48)

For Armoured Cable, please refer to Tables 6 & 7 (Page 49)

# Current Rating and Voltage Drop

XLPE (or LSZH) Insulated Cables  
Single-Core, Unarmoured

Single-Core Cables with XLPE (or LSZH) Insulation, with or without PVC (or LSZH) Outsheath 450/750V or 600/1000V

Table 4 : Current-Carrying Capacities (Amp)

[CU/LSZH, CU/XLPE/PVC, CU/XLPE/LSZH, CU/MICA/LSZH or CU/MICA/XLPE/LSZH Cables]

Conductor Operating Temperature : 90°C  
Ambient Temperature : 30°C

BS 7211  
IEC60502-1

Conductor cross-sectional area	Reference Method 4 (enclosed in conduit in thermally insulating wall etc)		Reference Method 3 (enclosed in conduit on a wall or in trunking etc)		Reference Method 1 (clipped direct)		Reference Method 11 (on a perforated cable tray, horizontal or vertical)		Reference Method 12 (free air)		
	2 cables, single-phase a.c. or d.c.	3 or 4 cables, 3-phase a.c.	2 cables, single-phase a.c. or d.c.	3 or 4 cables, 3-phase a.c.	2 cables, single-phase a.c. or d.c. flat and touching	3 or 4 cables, 3-phase a.c. flat and touching or trefoil	2 cables, single-phase a.c. or d.c. flat and touching	3 or 4 cables, 3-phase a.c. flat and touching or trefoil	Horizontal flat spaced	Vertical flat spaced	Trefoil
									2 cables, single-phase a.c. or d.c. or 3 cables three phase	2 cables, single-phase a.c. or d.c. or 3 cables three phase	3 cables, trefoil 3-phase a.c.
1	2	3	4	5	6	7	8	9	10	11	12
mm <sup>2</sup>	A	A	A	A	A	A	A	A	A	A	A
1.5	18	17	22	19	25	23	-	-	-	-	-
2.5	24	23	30	26	34	31	-	-	-	-	-
4	33	30	40	35	46	41	-	-	-	-	-
6	43	39	51	45	59	54	-	-	-	-	-
10	58	53	71	63	81	74	-	-	-	-	-
16	76	70	95	85	109	99	-	-	-	-	-
25	100	91	126	111	143	130	158	140	183	163	138
35	125	111	156	138	176	161	195	176	226	203	171
50	149	135	189	168	228	209	293	215	274	246	209
70	189	170	240	214	293	268	308	279	351	318	270
95	228	205	290	259	355	326	375	341	426	389	330
120	263	235	336	299	413	379	436	398	495	453	385
150	300	270	375	328	476	436	505	461	570	524	445
185	341	306	426	370	545	500	579	530	651	600	511
240	400	358	500	433	644	590	686	630	769	711	606
300	459	410	573	493	743	681	794	730	886	824	701
400	-	-	684	584	868	793	915	849	1065	994	820
500	-	-	783	666	990	904	1044	973	1228	1150	936
630	-	-	900	764	1130	1033	1191	1115	1423	1338	1069
800	-	-	-	-	1288	1179	1358	1275	1580	1485	1214
1000	-	-	-	-	1443	1323	1520	1436	1775	1671	1349

Note : For rating factors of ambient temperature other than 30°C please refer to Table 24  
For rating factors of ground temperature other than 15°C please refer to Table 25

Table 5 : Voltage Drop (Per Amp Per Meter)

[CU/LSZH, CU/XLPE/PVC, CU/XLPE/LSZH, CU/MICA/LSZH or CU/MICA/XLPE/LSZH Cables]

Conductor Operating Temperature : 90°C  
Ambient Temperature : 30°C

BS 7211  
IEC60502-1

Size of Conductor	2 cables d.c.	2 cables, single-phase a.c.						3 or 4 cables, 3-phase a.c.									
		Reference Methods 3 and 4 (enclosed in conduit etc, in or on a wall)			Reference Methods 1 and 11 (clipped direct or on trays touching)			Reference Methods 3 and 4 (enclosed in conduit etc, in or on a wall)			Reference Methods 1, 11 and 12 (in trefoil)			Reference Methods 1 and 11 (flat and touching)			
1	2	3		4		5			6			7					
mm <sup>2</sup>	mV/A/m	mV/A/m		mV/A/m		mV/A/m			mV/A/m			mV/A/m					
1.5	31	31	27	27	27	27	27	27	27	27	27	27	27	27	27		
2.5	19	19	16	16	16	16	16	16	16	16	16	16	16	16	16		
4	33	12	10	10	10	10	10	10	10	10	10	10	10	10	10		
6	7.8	7.9	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8		
10	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7		
16	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9		
25	1.85	r	x	z	r	x	z	r	x	z	r	x	z	r	x	z	
35	1.35	1.85	0.31	1.90	1.85	0.190	1.85	1.60	0.27	1.65	1.600	0.165	1.600	1.600	0.190	1.600	
50	0.99	1.35	0.29	1.35	1.35	0.180	1.35	1.15	0.25	1.15	1.150	0.155	1.150	1.150	0.180	1.150	
70	0.68	1.00	0.29	1.05	0.99	0.180	1.00	0.87	0.25	0.90	0.860	0.155	0.870	0.860	0.180	0.870	
95	0.49	0.70	0.28	0.75	0.68	0.175	0.71	0.60	0.24	0.65	0.590	0.150	0.610	0.590	0.175	0.620	
120	0.39	0.51	0.27	0.58	0.49	0.170	0.52	0.44	0.23	0.50	0.430	0.145	0.450	0.430	0.170	0.460	
150	0.32	0.41	0.26	0.48	0.39	0.165	0.43	0.35	0.23	0.42	0.340	0.140	0.370	0.340	0.165	0.380	
185	0.25	0.32	0.26	0.43	0.32	0.165	0.36	0.29	0.23	0.37	0.280	0.140	0.310	0.280	0.165	0.320	
240	0.19	0.27	0.26	0.37	0.26	0.165	0.30	0.23	0.23	0.32	0.220	0.140	0.260	0.220	0.165	0.280	
300	0.155	0.21	0.26	0.33	0.20	0.160	0.25	0.185	0.22	0.29	0.170	0.140	0.220	0.170	0.165	0.240	
400	0.12	0.155	0.175	0.25	0.31	0.16	0.160	0.22	0.150	0.22	0.27	0.140	0.140	0.195	0.135	0.160	0.210
500	0.093	0.140	0.25	0.29	0.13	0.155	0.20	0.125	0.22	0.25	0.110	0.135	0.175	0.110	0.160	0.195	
630	0.072	0.12	0.25	0.28	0.105	0.155	0.185	0.10	0.22	0.24	0.090	0.135	0.160	0.088	0.160	0.180	
800	0.056	0.072	0.100	0.25	0.27	0.086	0.155	0.175	0.088	0.21	0.074	0.135	0.150	0.071	0.160	0.170	
1000	0.045	-	-	-	0.072	0.150	0.170	-	-	-	0.062	0.130	0.145	0.059	0.155	0.165	
					0.063	0.150	0.165	-	-	-	0.055	0.130	0.140	0.050	0.155	0.165	

Note : = conductor resistance at operating temperature, x = reactance, z = impedance