

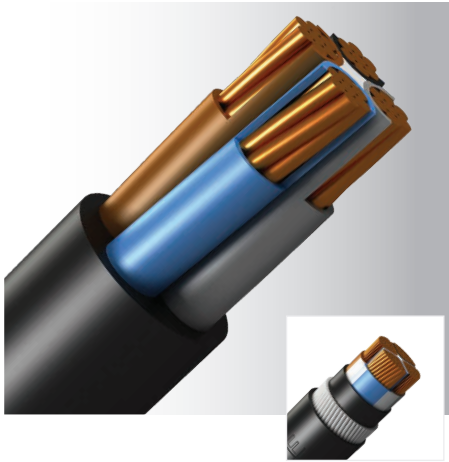
LSZH Flame Retardant Cables

0.6/1kV 2-Core ~ 5-Core

XLPE Insulated, Unarmoured & Armoured, LSZH Sheathed Cable

Description: CU/XLPE/LSZH-AT-UV or CU/XLPE/LSZH/SWA/LSZH-AT-UV

Model Code: XL-AT-UV or XLSL-AT-UV



Application :	This cable is mainly used in power stations, mass transit underground passenger systems, airports, petrochemical plants, hotels, hospitals, and high-rise buildings.
Voltage rating :	0.6/1kV
Construction :	Plain annealed copper (IEC 60228 Class 2), XLPE compound insulated, unarmoured or galvanized steel wires armoured, anti-termite and UV resistant LSZH compound sheathed cable
Insulation colour :	2-Core: Brown, Blue; 3-Core: Brown, Black, Grey; Brown, Blue, Green/Yellow; 4-Core: Brown, Black, Grey, Blue; Brown, Black, Grey, Green/Yellow; 5-Core: Brown, Black, Grey, Blue, Green/Yellow; (Other colour upon request)
Sheath colour :	Black (Other colour upon request)
Specification :	IEC 60502-1, BS 6724, IEC 60332-1-2, IEC 60332-3, IEC 60754, IEC 61034-2
Operating temperature :	90°C

2-CORE [2C]

(Brown, Blue) (1-phase and neutral)

Conductor Nominal Area (mm ²)	Insulation Thickness (mm)	Unarmoured Cable			Armoured Cable		
		Part No.	Approx. Overall Diam. (mm)	Approx. Weight (kg/km)	Part No.	Approx. Overall Diam. (mm)	Approx. Weight (kg/km)
1.5	0.7	07026777	10.1	130	07026791	14.5	362
2.5	0.7	08026777	11.0	165	08026791	15.5	410
4	0.7	09026777	12.0	215	09026791	16.5	490
6	0.7	10026777	13.1	270	10026791	18.0	580
10	0.7	11026777	16.0	390	11026791	20.8	800
16	0.7	12026777	18.0	495	12026791	22.9	1050
25 (cs)	0.9	13026777	21.2	726	13026791	26.7	1473
35 (cs)	0.9	14026777	23.4	944	14026791	29.0	1780
50 (cs)	1.0	15026777	25.8	1257	15026791	32.4	2188
70 (cs)	1.1	16026777	30.4	1724	16026791	36.3	2805
95 (cs)	1.1	17026777	34.0	2299	17026791	41.2	3827
120 (cs)	1.2	18026777	37.0	2848	18026791	44.2	4488
150 (cs)	1.4	19026777	41.0	3479	19026791	48.2	5277
185 (cs)	1.6	20026777	45.8	4323	20026791	54.4	6860
240 (cs)	1.7	21026777	51.8	5608	21026791	60.4	8445
300 (cs)	1.8	22026777	57.4	6948	22026791	66.3	10132
400 (cs)	2.0	23026777	65.0	8854	23026791	74.0	12388

Current rating and voltage drop

For Unarmoured Cable, please refer to Table 14 & 15 (Page 60)
For Armoured Cable, please refer to Table 16 & 17 (Page 61)

(cs): Circular Compact Stranded Conductor

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0.6/1kV 2-Core ~ 5-Core

XLPE Insulated, Unarmoured & Armoured, LSZH Sheathed Cable

Description: CU/XLPE/LSZH-AT-UV or CU/XLPE/LSZH/SWA/LSZH-AT-UV

Model Code: XL-AT-UV or XLSL-AT-UV

3-CORE [3C]							
(Brown, Black, Grey) (3-phase, three wire)							
Conductor	Insulation	Unarmoured Cable			Armoured Cable		
		Part No.	Approx. Overall Diam.	Approx. Weight	Part No.	Approx. Overall Diam.	Approx. Weight
Nominal Area	Thickness						
(mm ²)	(mm)		(mm)	(kg/km)		(mm)	(kg/km)
1.5	0.7	07036809	10.5	145	07036824	15.0	390
2.5	0.7	08036809	11.4	190	08036824	16.0	435
4	0.7	09036809	12.8	250	09036824	17.0	550
6	0.7	10036809	14.0	320	10036824	18.5	660
10	0.7	11036809	16.9	480	11036824	21.7	900
16	0.7	12036809	19.0	645	12036824	24.0	1260
25 (cs)	0.9	13036809	22.5	968	13036824	28.0	1772
35 (cs)	0.9	14036809	25.0	1278	14036824	30.5	2175
50 (cs)	1.0	15036809	27.4	1688	15036824	33.7	2700
70 (cs)	1.1	16036809	32.6	2365	16036824	40.0	3805
95 (cs)	1.1	17036809	36.5	3197	17036824	44.0	4831
120 (cs)	1.2	18036809	39.7	3982	18036824	47.5	5772
150 (cs)	1.4	19036809	44.0	4872	19036824	53.2	7344
185 (cs)	1.6	20036809	49.2	6074	20036824	58.2	8813
240 (cs)	1.7	21036809	55.6	7903	21036824	65.0	11050
300 (cs)	1.8	22036809	61.6	9822	22036824	71.0	13312
400 (cs)	2.0	23036809	70.0	12624	23036824	80.5	17317

3-CORE [3G]							
(Brown, Blue, Green/Yellow) (1-phase and earth)							
Conductor	Insulation	Unarmoured Cable			Armoured Cable		
		Part No.	Approx. Overall Diam.	Approx. Weight	Part No.	Approx. Overall Diam.	Approx. Weight
Nominal Area	Thickness						
(mm ²)	(mm)		(mm)	(kg/km)		(mm)	(kg/km)
1.5	0.7	07036365	10.5	145	07036014	15.0	390
2.5	0.7	08036365	11.4	190	08036014	16.0	435
4	0.7	09036365	12.8	250	09036014	17.0	550
6	0.7	10036365	14.0	320	10036014	18.5	660
10	0.7	11036365	16.9	480	11036014	21.7	900
16	0.7	12036365	19.0	645	12036014	24.0	1260
25 (cs)	0.9	13036365	22.5	968	13036014	28.0	1772
35 (cs)	0.9	14036365	25.0	1278	14036014	30.5	2175
50 (cs)	1.0	15036365	27.4	1688	15036014	33.7	2700
70 (cs)	1.1	16036365	32.6	2365	16036014	40.0	3805
95 (cs)	1.1	17036365	36.5	3197	17036014	44.0	4831
120 (cs)	1.2	18036365	39.7	3982	18036014	47.5	5772
150 (cs)	1.4	19036365	44.0	4872	19036014	53.2	7344
185 (cs)	1.6	20036365	49.2	6074	20036014	58.2	8813
240 (cs)	1.7	21036365	55.6	7903	21036014	65.0	11050
300 (cs)	1.8	22036365	61.6	9822	22036014	71.0	13312
400 (cs)	2.0	23036365	70.0	12533	23036014	80.5	17317

Current rating and voltage drop
For Unarmoured Cable, please refer to Table 14 & 15 (Page 60)
For Armoured Cable, please refer to Table 16 & 17 (Page 61)

(cs): Circular Compact Stranded Conductor

LSZH Flame Retardant Cables

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0.6/1KV 2-Core ~ 5-Core

XLPE Insulated, Unarmoured & Armoured, LSZH Sheathed Cable

Description: CU/XLPE/LSZH-AT-UV or CU/XLPE/LSZH/SWA/LSZH-AT-UV

Model Code: XL-AT-UV or XLSL-AT-UV

4-CORE [4C]							
(Brown, Black, Grey, Blue) (3-phase and neutral)							
Conductor	Insulation	Unarmoured Cable			Armoured Cable		
		Part No.	Approx. Overall Diam.	Approx. Weight	Part No.	Approx. Overall Diam.	Approx. Weight
Nominal Area	Thickness						
(mm ²)	(mm)		(mm)	(kg/km)		(mm)	(kg/km)
1.5	0.7	07046790	11.5	180	07046819	15.5	430
2.5	0.7	08046790	12.5	230	08046819	16.5	495
4	0.7	09046790	14.0	315	09046819	18.0	610
6	0.7	10046790	15.0	395	10046819	20.0	810
10	0.7	11046790	18.4	590	11046819	23.2	1120
16	0.7	12046790	21.0	860	12046819	27.0	1480
25 (s)	0.9	13046789	22.0	1225	13046011	27.5	2000
35 (s)	0.9	14046789	25.0	1625	14046011	30.5	2480
50 (s)	1.0	15046789	28.0	2200	15046011	34.0	3180
70 (s)	1.1	16046789	32.0	3050	16046011	39.5	4500
95 (s)	1.1	17046789	36.0	4110	17046011	44.0	5775
120 (s)	1.2	18046789	40.3	5915	18046011	50.0	7450
150 (s)	1.4	19046789	44.6	6350	19046011	54.5	8830
185 (s)	1.6	20046789	50.5	7985	20046011	59.0	10805
240 (s)	1.7	21046789	58.0	10595	21046011	68.0	13630
300 (s)	1.8	22046789	64.0	13220	22046011	73.0	16530
400 (s)	2.0	23046789	73.0	16805	23046011	85.0	21840

4-CORE [4G]							
(Brown, Black, Grey, Green/Yellow) (3-phase and earth)							
Conductor	Insulation	Unarmoured Cable			Armoured Cable		
		Part No.	Approx. Overall Diam.	Approx. Weight	Part No.	Approx. Overall Diam.	Approx. Weight
Nominal Area	Thickness						
(mm ²)	(mm)		(mm)	(kg/km)		(mm)	(kg/km)
1.5	0.7	07046374	11.5	180	07046839	15.5	430
2.5	0.7	08046374	12.5	230	08046839	16.5	495
4	0.7	09046374	14.0	315	09046839	18.0	610
6	0.7	10046374	15.0	395	10046839	20.0	810
10	0.7	11046374	18.4	590	11046839	23.2	1120
16	0.7	12046374	21.4	860	12046839	27.0	1480
25 (cs)	0.9	13046374	25.0	1265	13046839	30.8	2160
35 (cs)	0.9	14046374	27.4	1665	14046839	33.8	2690
50 (cs)	1.0	15046374	31.4	2200	15046839	36.7	3365
70 (cs)	1.1	16046374	36.0	3100	16046839	43.7	4795
95 (cs)	1.1	17046374	41.3	4190	17046839	48.6	6095
120 (cs)	1.2	18046374	45.0	5060	18046839	53.2	7580
150 (cs)	1.4	19046374	49.6	6380	19046839	58.0	9190
185 (cs)	1.6	20046374	55.5	7920	20046839	64.0	11050
240 (cs)	1.7	21046374	62.7	10060	21046839	72.0	13780
300 (cs)	1.8	22046374	69.5	12500	22046839	78.4	16520
400 (cs)	2.0	23046374	78.6	16480	23046839	89.4	22120

Current rating and voltage drop

For Unarmoured Cable, please refer to Table 14 & 15 (Page 60)
For Armoured Cable, please refer to Table 16 & 17 (Page 61)

(cs): Circular Compact Stranded Conductor
(s) : Sector Shaped Stranded Conductor

LSZH Flame Retardant Cables



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0.6/1kV 2-Core ~ 5-Core

XLPE Insulated, Unarmoured & Armoured, LSZH Sheathed Cable

Description: CU/XLPE/LSZH-AT-UV or CU/XLPE/LSZH/SWA/LSZH-AT-UV

Model Code: XL-AT-UV or XLSL-AT-UV

5-CORE [5G]							
(Brown, Black, Grey, Blue, Green/Yellow) (3-phase, neutral and earth)							
Conductor	Insulation	Unarmoured Cable			Armoured Cable		
Nominal Area	Thickness	Part No.	Approx. Overall Diam.	Approx. Weight	Part No.	Approx. Overall Diam.	Approx. Weight
(mm ²)	(mm)		(mm)	(kg/km)		(mm)	(kg/km)
1.5	0.7	07056275	12.8	208	07056363	16.8	455
2.5	0.7	08056275	13.9	263	08056363	17.8	540
4	0.7	09056275	15.4	355	09056363	20.0	795
6	0.7	10056275	16.9	465	10056363	21.8	956
10	0.7	11056275	19.8	700	11056363	24.8	1272
16	0.7	12056275	22.5	1020	12056363	28.6	1845
25 (cs)	0.9	13056275	27.0	1530	13056363	32.6	2500
35 (cs)	0.9	14056275	30.0	2035	14056363	36.2	3140
50 (cs)	1.0	15056275	33.7	2720	15056363	41.5	4300
70 (cs)	1.1	16056275	39.6	3825	16056363	46.8	5585
95 (cs)	1.1	17056275	45.0	5185	17056363	53.0	7675
120 (cs)	1.2	18056275	49.2	6320	18056363	57.6	9125
150 (cs)	1.4	19056275	54.5	7800	19056363	63.0	10824
185 (cs)	1.6	20056275	61.1	9800	20056363	70.0	13211
240 (cs)	1.7	21056275	69.2	12520	21056363	79.2	17466

Current rating and voltage drop

For Unarmoured Cable, please refer to Table 14 & 15 (Page 60)
For Armoured Cable, please refer to Table 16 & 17 (Page 61)

(cs): Circular Compact Stranded Conductor

Current Rating and Voltage Drop

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



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Multi-Core Cables with XLPE (or LSZH) Insulation, PVC (or LSZH) Outersheath 300/500V or 0.6/1kV

Table 14 : Current-Carrying Capacities (Amp)
[CU/XLPE/PVC, CU/XLPE/LSZH or CU/MT/XLPE/LSZH Cables]

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

IEC 60502-1

Conductor Cross-sectional Area	Reference Method 4 (enclosed in an conduit insulated wall etc)	Reference Method 3 (enclosed in conduit on a wall or ceiling, or in trunking)		Reference Method 1 (clipped direct)		Reference Method 11 (on a perforated cable tray), or Reference Method 13 (in free air)	
	one 3-core or 4-core cable, 3-phase a.c.	one 2-core cable, 1-phase a.c. or d.c.	one 3-core or 4-core cable, 3-phase a.c.	one 2-core cable, 1-phase a.c. or d.c.	one 3-core or 4-core cable, 3-phase a.c.	one 2-core cable, 1-phase a.c. or d.c.	one 3-core or 4-core cable, 3-phase a.c.
1	2	3	4	5	6	7	8
mm ²	A	A	A	A	A	A	A
1.5	16.5	22	19.5	24	22	26	23
2.5	22	30	26	33	30	36	32
4	30	40	35	45	40	49	42
6	38	51	44	58	52	63	54
10	51	69	60	80	71	86	75
16	68	91	80	107	96	115	100
25	89	119	105	138	119	149	127
35	109	146	128	171	147	185	158
50	130	175	154	209	179	225	192
70	164	221	194	269	229	289	246
95	197	265	233	328	278	352	298
120	227	305	268	382	322	410	346
150	259	334	300	441	371	473	399
185	295	384	340	506	424	542	456
240	346	459	398	599	500	641	538
300	396	532	455	693	576	741	621
400	472	625	536	803	667	865	741

Note : For rating factors of ambient temperature other than 30°C, please refer to Table 25 (Page 66)

Table 15 : Voltage Drop (Per Amp Per Meter)
[CU/XLPE/PVC, CU/XLPE/LSZH or CU/MT/XLPE/LSZH Cables]

Conductor Operating Temperature : 90°C

IEC 60502-1

Conductor Cross-sectional Area	2-core cable, d.c.	2-core cable, 1-phase a.c.			3-core or 4-core cables, 3-phase a.c.		
	2	3			4		
1	2	3			4		
mm ²	mV/A/m	mV/A/m			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			4.0		
16	2.9	2.9			2.5		
		r	x	z	r	x	z
25	1.85	1.85	0.160	1.90	1.60	0.140	1.65
35	1.35	1.35	0.155	1.35	1.15	0.135	1.15
50	0.98	0.99	0.155	1.00	0.86	0.135	0.87
70	0.67	0.67	0.150	0.69	0.59	0.130	0.60
95	0.49	0.50	0.150	0.52	0.43	0.130	0.45
120	0.39	0.40	0.145	0.42	0.34	0.130	0.37
150	0.31	0.32	0.145	0.35	0.28	0.125	0.30
185	0.25	0.26	0.145	0.29	0.22	0.125	0.26
240	0.195	0.200	0.140	0.24	0.175	0.125	0.21
300	0.155	0.160	0.140	0.21	0.140	0.120	0.185
400	0.120	0.130	0.140	0.190	0.115	0.120	0.165

Note : r = resistive component; x = reactive component; z = impedance value

Current Rating and Voltage Drop

XLPE (or LSZH) Insulated Cables
Multi-Core, Armoured



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Multi-Core Cables with XLPE (or LSZH) Insulation, Armoured, PVC or LSZH Outersheath 0.6/1kV

Table 16 : Current-Carrying Capacities (Amp)

[CU/XLPE/PVC/SWA/PVC, CU/XLPE/LSZH/SWA/LSZH, CU/MT/XLPE/LSZH/SWA/LSZH Cables]

Conductor Operating Temperature : 90°C
Ambient Temperature : 30°C
Ground Temperature : 15°C

Depth of Laying : 0.5m

BS 6724
IEC 60502-1
Soil Thermal Resistivity : 1.2 k•m/W

Conductor Cross-sectional Area	Reference Method 1 (clipped direct)		Reference Method 11 (on a perforated horizontal cable tray) or Reference Method 13 (in free air)		In single-way ducts		Laid direct in ground	
	one 2-core cable, 1-phase a.c. or d.c.	one 3-core or 4-core cable, 3-phase a.c.	one 2-core cable, 1-phase a.c. or d.c.	one 3-core or 4-core cable, 3-phase a.c.	one 2-core cable, 1-phase a.c. or d.c.	one 3-core or 4-core cable, 3-phase a.c.	one 2-core cable, 1-phase a.c. or d.c.	one 3-core or 4-core cable, 3-phase a.c.
1	2	3	4	5	6	7	8	9
mm ²	A	A	A	A	A	A	A	A
1.5	27	23	29	25	-	23	-	28
2.5	36	31	39	33	-	30	-	36
4	49	42	52	44	-	40	-	48
6	62	53	66	56	-	50	-	60
10	85	73	90	78	-	65	-	80
16	110	94	115	99	115	94	140	115
25	146	124	152	131	145	125	180	150
35	180	154	188	162	175	150	215	180
50	219	187	228	197	210	175	255	215
70	279	238	291	251	260	215	315	265
95	338	289	354	304	310	260	380	315
120	392	335	410	353	355	300	430	360
150	451	386	472	406	400	335	480	405
185	515	441	539	463	455	380	540	460
240	607	520	636	546	520	440	630	530
300	698	599	732	628	590	495	700	590
400	787	673	847	728	660	560	790	670

Note : For rating factors of ambient temperature other than 30°C, please refer to Table 25 (Page 66)
For rating factors of ground temperature other than 15°C, please refer to Table 26 (Page 66)

Table 17 : Voltage Drop (Per Amp Per Meter)

[CU/XLPE/PVC/SWA/PVC, CU/XLPE/LSZH/SWA/LSZH, CU/MT/XLPE/LSZH/SWA/LSZH Cables]

Conductor Operating Temperature : 90°C

BS 6724
IEC 60502-1

Conductor Cross-sectional Area	2-core cable, d.c.	2-core cables, 1-phase a.c.			3-core or 4-core cables, 3-phase a.c.			2-core cables, 1-phase a.c.	3-core or 4-core cables, 3-phase a.c.
								In ducts or in ground	In ducts or in ground
1	2	3			4			5	6
mm ²	mV/A/m	mV/A/m			mV/A/m			mV/A/m	mV/A/m
1.5	31.0	31.0			27.0			31.0	25.0
2.5	19.0	19.0			16.0			19.0	15.0
4	12.0	12.0			10.0			12.0	9.7
6	7.9	7.9			6.8			7.9	6.5
10	4.7	4.7			4.0			4.7	3.9
16	2.9	2.9			2.5			2.9	2.6
		r	x	z	r	x	z		
25	1.850	1.850	0.160	1.900	1.600	0.140	1.650	1.900	1.600
35	1.350	1.350	0.155	1.350	1.150	0.135	1.150	1.350	1.200
50	0.980	0.990	0.155	1.000	0.860	0.135	0.870	1.000	0.870
70	0.670	0.670	0.150	0.690	0.590	0.130	0.600	0.690	0.610
95	0.490	0.500	0.150	0.520	0.430	0.130	0.450	0.520	0.450
120	0.390	0.400	0.145	0.420	0.340	0.130	0.370	0.420	0.360
150	0.310	0.320	0.145	0.350	0.280	0.125	0.300	0.350	0.300
185	0.250	0.260	0.145	0.290	0.220	0.125	0.260	0.290	0.250
240	0.195	0.200	0.140	0.240	0.175	0.125	0.210	0.240	0.210
300	0.155	0.160	0.140	0.210	0.140	0.120	0.185	0.210	0.190
400	0.120	0.130	0.140	0.190	0.115	0.120	0.165	0.190	0.180

Note : r = resistive component; x = reactive component; z = impedance value

Table 25 : Correction Factor for Ambient Air Temperature Other Than 30°C to be Applied to the Current-Carrying Capacities for Cables in Free Air

Ambient Temperature (°C)	Insulation				
	PVC (70°C)	XLPE (90°C)	HT-PVC (90°C)	Rubber (85°C)	Rubber (60°C)
10	1.22	1.15	-	-	-
15	1.17	1.12	-	-	-
20	1.12	1.08	-	-	-
25	1.06	1.04	1.03	1.02	-
30	1.00	1.00	1.00	1.00	1.00
35	0.94	0.96	0.97	0.95	0.91
40	0.87	0.91	0.94	0.90	0.82
45	0.79	0.87	0.91	0.85	0.71
50	0.71	0.82	0.87	0.80	0.58
55	0.61	0.76	0.84	0.74	0.41
60	0.50	0.71	0.80	0.67	-
65	0.35	0.65	0.76	0.60	-
70	-	0.58	0.71	0.52	-
75	-	0.50	0.61	0.43	-
80	-	0.41	0.50	0.30	-
85	-	0.29	0.35	-	-

Table 26 : Correction Factor for Ambient Ground Temperature Other Than 15°C to be Applied to the Current-Carrying Capacities for Cables in Ducts or in Ground

Ground Temperature (°C)	Insulation	
	PVC (70°C)	XLPE (90°C)
10	1.04	1.03
15	1.00	1.00
20	0.95	0.97
25	0.90	0.93
30	0.85	0.89
35	0.80	0.86
40	0.74	0.82
45	0.67	0.77
50	0.60	0.73
55	-	0.68
60	-	0.63
65	-	0.58