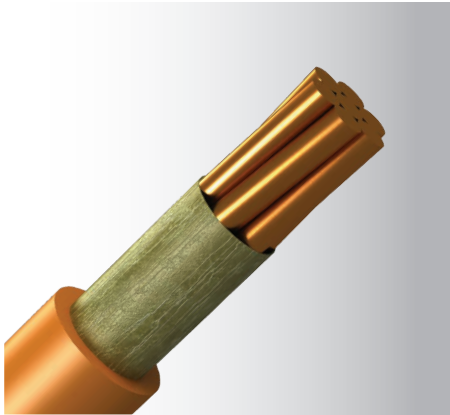


LSZH Fire Resistant Cables

450/750V (0.6/1kV*) Single-Core
Mica Tape, LSZH Insulated, Non-Sheathed Cable
Description: CU/MT/LSZH-AT-UV
Model Code: ML-AT-UV



Application :	This cable is used in fire alarm systems, voice alarm systems, emergency lighting systems, high-rise buildings, hotels, hospitals, subways, and public facilities.
Voltage rating :	450/750V (0.6/1kV* REF IEC 60502-1)
Construction :	Plain annealed copper (IEC 60228 Class 2), mica tape fire barrier, anti-termite and UV resistant cross-linked polyolefin EI 5 compound insulated cable
Insulation colour :	Orange (Other colour upon request)
Specification :	BS 8592, BS EN 50525-3-41, SS 299, BS 6387, IEC 60331-3, BS EN 60332-1-2, BS EN 60332-3, BS EN 60754, BS EN 61034-2
Operating temperature :	90°C

Conductor			Insulation	Part No.	Approx. Overall Diam.	Approx. Weight
Nominal Area	No./Diam. of Strand	Approx. Diam.	Thickness			
(mm ²)	(no./mm)	(mm)	(mm)		(mm)	(kg/km)
1.5	7/0.53	1.59	0.7	07011080	3.9	28
2.5	7/0.67	2.01	0.8	08011080	4.5	42
4	7/0.85	2.55	0.8	09011080	5.1	60
6	7/1.04	3.12	0.8	10011080	5.7	83
10	7/1.35	4.05	1.0	11011080	7.0	141
16	7/1.70	5.10	1.0	12011080	8.0	200
25 (cs)	7/2.14	6.20	1.2	13011080	9.5	304
35 (cs)	19/1.53	7.30	1.2	14011080	11.3	402
50 (cs)	19/1.78	8.20	1.4	15011080	12.6	537
70 (cs)	19/2.14	10.00	1.4	16011080	14.5	742
95** (cs)	19/2.52	11.80	1.6	17011080	16.7	1020
120** (cs)	37/2.03	13.00	1.6	18011080	17.8	1250
150** (cs)	37/2.25	14.40	1.8	19011080	19.7	1520
185** (cs)	37/2.52	16.20	2.0	20011080	21.9	1900
240** (cs)	61/2.25	18.80	2.2	21011080	25.0	2435
300** (cs)	61/2.52	21.20	2.4	22011080	27.9	3030
400** (cs)	61/2.85	24.30	2.6	23011080	31.4	3925
500** (cs)	61/3.20	27.40	2.8	24011080	35.0	4905
630**	127/2.52	32.76	2.8	25011080	40.2	6370

**Stands for 95mm² ~ 630mm² construction design to BS EN 50525-3-41

Current rating and voltage drop
Please refer to Table 10 & 11 (Page 58)

(cs): Circular Compact Stranded Conductor

Current Rating and Voltage Drop

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



tel (65) 6367 0107 fax (65) 6365 2963
www.keystone-cable.com

Single-Core Cables with XLPE (or LSZH) Insulation, with or without PVC (or LSZH) Outersheath 450/750V or 0.6/1kV

Table 10 : Current-Carrying Capacities (Amp)
[CU/LSZH, CU/XLPE/PVC, CU/XLPE/LSZH, CU/MT/LSZH or CU/MT/XLPE/LSZH Cables]

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

BS EN 50525-3-41 (BS 7211)
BS 8592
IEC 60502-1

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 (in free air)		
	2 cables, 1-phase a.c. or d.c.	3 or 4 cables, 3-phase a.c.	2 cables, 1-phase a.c. or d.c.	3 or 4 cables, 3-phase a.c.	2 cables, 1-phase a.c. or d.c. flat and touching	3 or 4 cables, 3-phase a.c. flat and touching or trefoil	2 cables, 1-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, 1-phase a.c. or d.c. or 3 cables 3-phase a.c.	2 cables, 1-phase a.c. or d.c. or 3 cables 3-phase a.c.	3 cables trefoil, 3-phase a.c.
1	2	3	4	5	6	7	8	9	10	11	12
mm ²	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	124	111	156	138	176	161	195	176	226	203	171
50	149	135	189	168	228	209	239	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	-	-	683	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	1581	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 25 (Page 66)

Table 11 : Voltage Drop (Per Amp Per Meter)
[CU/LSZH, CU/XLPE/PVC, CU/XLPE/LSZH, CU/MT/LSZH or CU/MT/XLPE/LSZH Cables]

Conductor Operating Temperature : 90°C

BS EN 50525-3-41 (BS 7211)
BS 8592
IEC 60502-1

Conductor Cross-sectional Area	2 cables, d.c.	2 cables, 1-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 (trefoil)			Reference Methods 1 and 11 (flat and touching)		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
mm ²	mV/A/m	mV/A/m	mV/A/m	mV/A/m	mV/A/m	mV/A/m	mV/A/m	mV/A/m	mV/A/m	mV/A/m	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	27
2.5	19	19	16	16	16	16	16	16	16	16	16	16	16	16	16	16
4	12	12	10	10	10	10	10	10	10	10	10	10	10	10	10	10
6	7.9	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	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	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	2.9
	r	x	z	r	x	z	r	x	z	r	x	z	r	x	z	z
25	1.85	1.85	0.31	1.90	1.85	0.190	1.85	1.60	0.27	1.65	1.60	0.165	1.60	1.60	0.190	1.60
35	1.35	1.35	0.29	1.35	1.35	0.180	1.35	1.15	0.25	1.15	1.15	0.155	1.15	1.15	0.180	1.15
50	0.99	1.00	0.29	1.05	0.99	0.180	1.00	0.87	0.25	0.90	0.86	0.155	0.87	0.86	0.180	0.87
70	0.68	0.70	0.28	0.75	0.68	0.175	0.71	0.60	0.24	0.65	0.59	0.150	0.61	0.59	0.175	0.62
95	0.49	0.51	0.27	0.58	0.49	0.170	0.52	0.44	0.23	0.50	0.43	0.145	0.45	0.43	0.170	0.46
120	0.39	0.41	0.26	0.48	0.39	0.165	0.43	0.35	0.23	0.42	0.34	0.140	0.37	0.34	0.165	0.38
150	0.32	0.33	0.26	0.43	0.32	0.165	0.36	0.29	0.23	0.37	0.28	0.140	0.31	0.28	0.165	0.32
185	0.25	0.27	0.26	0.37	0.26	0.165	0.30	0.23	0.23	0.32	0.22	0.140	0.26	0.22	0.165	0.28
240	0.190	0.21	0.26	0.33	0.20	0.160	0.25	0.185	0.22	0.29	0.170	0.140	0.22	0.170	0.165	0.24
300	0.155	0.175	0.25	0.31	0.160	0.160	0.22	0.150	0.22	0.27	0.140	0.140	0.195	0.135	0.160	0.21
400	0.12	0.140	0.25	0.29	0.130	0.155	0.20	0.125	0.22	0.25	0.110	0.135	0.175	0.110	0.160	0.195
500	0.093	0.120	0.25	0.28	0.105	0.155	0.185	0.100	0.22	0.24	0.090	0.135	0.160	0.088	0.160	0.180
630	0.072	0.100	0.25	0.27	0.086	0.155	0.175	0.088	0.21	0.23	0.074	0.135	0.150	0.071	0.160	0.170
800	0.056	-	-	-	0.072	0.150	0.170	-	-	-	0.062	0.130	0.145	0.059	0.155	0.165
1000	0.045	-	-	-	0.063	0.150	0.165	-	-	-	0.055	0.130	0.140	0.050	0.155	0.165

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