LSZH Fire Resistant Variable Speed Drive (VSD) Cables

KEYSTONE CABLE
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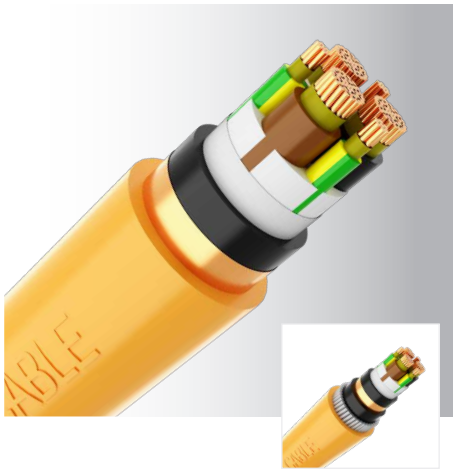
0.6/1kV 3-Phase Core + 3-Earth Core
Mica Tape, XLPE Insulated, Copper Tape Screen, Unarmoured & Armoured, LSZH Sheathed Cable

Description: CU/MT/XLPE/LSZH/CTS/LSZH-AT-UV or CU/MT/XLPE/LSZH/CTS/LSZH/SWA/LSZH-AT-UV
Model Code: MXLCTL-AT-UV or MXLCTLSL-AT-UV



Application :	This cable is designed for areas where the integrity of the electrical circuit is critical in maintaining power supply. It also provides enhanced protection against electrical noise and maintains stable electrical performance, ensuring reliable system uptime in harsh environments where high-frequency currents are present.
Voltage rating :	0.6/1kV
Construction :	Plain annealed copper (IEC 60228 Class 2), mica tape fire barrier, XLPE insulated, 3-earth cores disposed in interstices of the phase cores, copper tape screen, unarmoured or galvanized steel wires armoured, anti-termite and UV resistant LSZH compound sheathed cable
Insulation colour :	Brown, Black, Grey, Green/Yellow (other colour upon request)
Sheath colour :	Orange (other colour upon request)
Specification :	IEC 60502-1, SS 299, BS 6387, IEC 60331, IEC 60332-1-2, IEC 60332-3, IEC 60754, IEC 61034-2
Operating temperature :	90˚C

3-PHASE CORE + 3-EARTH CORE [3C + 3E]
(Brown, Black, Grey, Green/Yellow)

Conductor				Insulation		Unarmoured Cable			Armoured Cable		
Phase		Earth		Phase	Earth						
Nominal Area	Approx. Diam.	Nominal Area	Approx. Diam.	Thickness	Thickness	**Part No.**	Approx. Overall Diam.	Approx. Weight	**Part No.**	Approx. Overall Diam.	Approx. Weight
(mm^2)	(mm)	(mm^2)	(mm)	(mm)	(mm)		(mm)	(kg/km)		(mm)	(kg/km)
1.5	1.59	1.5	1.59	0.7	0.7	**07C64679**	19.7	480	**07C64680**	24.1	895
2.5	2.01	1.5	1.59	0.7	0.7	**08CA4679**	20.5	530	**08CA4680**	25.6	1140
4	2.55	1.5	1.59	0.7	0.7	**09CE4679**	21.7	600	**09CE4680**	26.8	1250
6	3.12	2.5	2.01	0.7	0.7	**10CH4679**	22.8	715	**10CH4680**	28.1	1395
10	4.05	4	2.55	0.7	0.7	**11CL4679**	25.9	965	**11CL4680**	31.0	1740
16	5.10	6	3.12	0.7	0.7	**12CR4679**	28.4	1260	**12CR4680**	34.1	2305
25 (cs)	6.20	6	3.12	0.9	0.7	**13CV4679**	30.7	1600	**13CV4680**	36.4	2720
35 (cs)	7.30	6	3.12	0.9	0.7	**14CX4679**	32.2	1920	**14CX4680**	38.1	3115
50 (cs)	8.20	10	4.05	1.0	0.7	**15D04679**	37.3	2585	**15D04680**	44.4	4305
70 (cs)	10.00	16	5.10	1.1	0.7	**16D34679**	41.4	3510	**16D34680**	47.1	5285
95 (cs)	11.80	16	5.10	1.1	0.7	**17D54679**	44.0	4340	**17D54680**	51.2	6355
120 (cs)	13.00	25 (cs)	6.20	1.2	0.9	**18D94679**	48.9	5405	**18D94680**	57.1	8150
150 (cs)	14.40	25 (cs)	6.20	1.4	0.9	**19DB4679**	51.6	6410	**19DB4680**	60.0	9325
185 (cs)	16.20	35 (cs)	7.30	1.6	0.9	**20DF4679**	56.7	7875	**20DF4680**	65.4	11095
240 (cs)	18.80	50 (cs)	8.20	1.7	1.0	**21DJ4679**	64.4	10155	**21DJ4680**	73.4	13840
300 (cs)	21.20	50 (cs)	8.20	1.8	1.0	**22DL4679**	69.1	12040	**22DL4680**	79.5	16195

Current rating and voltage drop
For Unarmoured Cable, please refer to Table 6 & 7 (Page 69)
For Armoured Cable, please refer to Table 8 & 9 (Page 70)

(cs) : Circular Compact Stranded Conductor

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

Table 6 : Current-Carrying Capacities (Amp)

[CU/XLPE/PVC/CTS/PVC, CU/XLPE/LSZH/CTS/LSZH or CU/MT/XLPE/LSZH/CTS/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 10 (Page 71)

Table 7 : Voltage Drop (Per Amp Per Meter)

[CU/XLPE/PVC/CTS/PVC, CU/XLPE/LSZH/CTS/LSZH or CU/MT/XLPE/LSZH/CTS/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.		
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 Insulated Cables
Multi-Core (3-Phase Core + 3-Earth Core), Armoured

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Table 8 : Current-Carrying Capacities (Amp)

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

Conductor Operating Temperature : 90°C — BS 6724
Ambient Temperature : 30°C — IEC 60502-1
Ground Temperature : 15°C — Depth of Laying : 0.5m — 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 10 (Page 71)
For rating factors of ground temperature other than 15°C, please refer to Table 11 (Page 71)

Table 9 : Voltage Drop (Per Amp Per Meter)

[CU/XLPE/PVC/CTS/PVC/SWA/PVC, CU/XLPE/LSZH/CTS/LSZH/SWA/LSZH, CU/MT/XLPE/LSZH/CTS/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