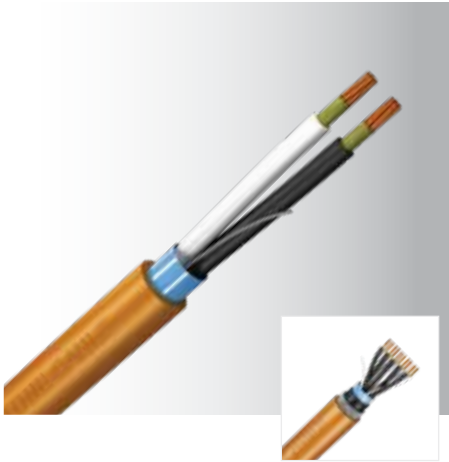


Fire Resistant Instrumentation Cables

500V Collective Screen
Mica, XLPE Insulated, OS, Unarmoured & Armoured, LSZH Sheathed Cable
CU/MICA/XLPE/OS/LSZH or CU/MICA/XLPE/OS/LSZH/SWA/LSZH
Model Code: MXOL or MXOLSL



Standard Reference	BS EN 50290, BS EN 50288-1 BS EN 50288-7
Flame Retardant Ref.	IEC 60332-3, IEC 60754 IEC 61034
Fire Resistant Ref.	BS 6387, IEC 60331, SS 299

Application :	This cable is intended for use in manufacturing and processing application for emergency services such as fire detection, fire alarm, PA system, where signal has to be assured in the event of fire
Construction :	Plain annealed copper wire, mica tape fire barrier, XLPE insulated, twisted pair or triad, overall aluminium/polyester tape with tinned copper drain wire screened, unarmoured or galvanized steel wire armoured, LSZH bedding & sheathed cable
Insulation Colour :	Pair: Black, White with numbering Triple: Red, Black, White with numbering
Sheath Colour :	Orange (Other colour upon request)
Operating Temperature :	90°C

Conductor			Insulation Thickness (mm)	Unarmoured			Armoured		
Nominal Area (mm ²)	No. of Pair/Triple (no.)	Stranded Dia. (mm)		Part No.	Approx. Overall Dia. (mm)	Approx. Weight (kg/km)	Part No.	Approx. Overall Dia. (mm)	Approx. Weight (kg/km)
0.5	0.90	0.6	1P		8.6	82		13.5	299
			2P		12.8	124		17.5	453
			4P		15.2	190		20.0	573
			6P		18.2	270		24.5	872
			8P		20.2	336		26.5	1021
			10P		23.0	402		30.5	1357
			12P		24.0	460		31.2	1456
			16P		26.8	592		34.2	1710
			20P		30.0	724		37.5	1987
			24P		33.5	862		42.0	2587
			36P		38.2	1203		47.5	3211
			50P		45.5	1638		55.8	4538
			1T		9.2	97		14.0	327
			4T		16.8	266		22.5	811
			6T		19.8	346		26.2	1018
			12T		26.8	629		34.5	1749
			16T		30.0	812		37.5	2076
			36T		43.5	1695		54.0	4422
0.75	1.11	0.6	1P		9.2	95		14.0	320
			2P		14.0	152		19.0	508
			4P		15.8	243		22.0	774
			6P		19.0	312		25.2	958
			8P		21.5	398		28.0	1142
			10P		24.5	492		31.8	1525
			12P		25.5	551		32.5	1626
			16P		28.5	712		35.8	1913
			20P		32.0	874		40.5	2515
			24P		35.5	1042		44.5	2895
			36P		41.2	1487		51.5	4108
			50P		49.0	2049		59.8	5182
			1T		9.5	112		14.7	356
			4T		17.5	321		24.0	915
			6T		21.2	424		27.5	1156
			12T		28.5	763		36.0	1964
			16T		32.0	988		40.5	2629
			36T		46.5	2105		57.5	5058

Fire Resistant Instrumentation Cables



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www.keystone-cable.com

500V Collective Screen

Mica, XLPE Insulated, OS, Unarmoured & Armoured, LSZH Sheathed Cable

CU/MICA/XLPE/OS/LSZH or CU/MICA/XLPE/OS/LSZH/SWA/LSZH

Model Code: MXOL or MXOLSL

Conductor			Insulation Thickness (mm)	Unarmoured			Armoured		
Nominal Area (mm ²)	No. of Pair/Triple (no.)	Stranded Dia. (mm)		Part No.	Approx. Overall Dia. (mm)	Approx. Weight (kg/km)	Part No.	Approx. Overall Dia. (mm)	Approx. Weight (kg/km)
1.0	1.29	0.6	1P		9.5	106		14.5	349
			2P		14.5	169		19.8	534
			4P		16.2	274		22.0	819
			6P		19.8	357		25.5	1030
			8P		22.5	458		29.0	1411
			10P		25.8	565		32.5	1659
			12P		26.8	651		33.5	1788
			16P		29.8	827		36.8	2090
			20P		33.8	1033		41.5	2903
			24P		37.8	1231		45.8	3204
			36P		43.2	1761		52.8	4530
			50P		51.5	2401		61.5	5687
			1T		10.0	121		15.0	373
			4T		18.2	365		24.8	986
			6T		22.2	490		29.5	1424
			12T		30.0	890		38.0	2437
16T		33.5	1173		41.8	2929			
36T		48.8	2479		58.8	5610			
1.5	1.59	0.6	1P		10.2	126		15.0	384
			2P		15.5	200		21.5	705
			4P		17.8	339		24.0	946
			6P		21.5	452		28.0	1196
			8P		24.5	581		32.0	1614
			10P		28.0	718		35.5	1898
			12P		28.8	818		36.5	2039
			16P		32.2	1061		40.5	2750
			20P		36.5	1324		44.8	3233
			24P		40.8	1577		50.5	4193
			36P		47.0	2267		57.2	5268
			50P		56.0	3123		68.0	7552
			1T		11.0	152		16.0	425
			4T		20.0	458		26.0	1131
			6T		24.0	629		31.5	1645
			12T		32.5	1149		41.0	2840
16T		36.5	1515		45.0	3426			
36T		53.2	3246		63.5	6664			
2.5	2.01	0.7	1P		11.5	172		16.5	464
			2P		17.8	274		24.0	866
			4P		20.5	475		27.0	1179
			6P		24.8	631		32.2	1683
			8P		28.2	814		35.8	2028
			10P		32.5	1021		41.2	2712
			12P		33.5	1167		42.2	2921
			16P		37.5	1518		46.5	3491
			20P		42.2	1890		52.5	4564
			24P		47.2	2252		57.8	5280
			36P		54.5	3274		66.0	6793
			50P		65.0	4502		78.5	9709
			1T		12.2	413		17.2	509
			4T		22.8	645		30.2	1600
			6T		27.8	880		35.5	2059
			12T		37.5	1649		45.2	3624
16T		42.2	2172		52.8	4889			
36T		61.8	4699		75.0	9664			

Note : For technical specification, please refer to Table 9 to 13 (Page 69)

Table 9 : Electrical Characteristics for Instrumentation Cables

Material	PVC	PE	XLPE	XLEVA	V-90
Max. Conductor Operating Temperature (°C)	70	70	90	105	90
Min. Ambient Temperature (°C)	-15	-15	-15	-15	-15
Max. Working Voltage (r.m.s)	300/500V	300/500V	300/500V	300/500V	300/500V
Test Voltage (1 minute)	2000 V R.M.S between conductors and screen/armour				
Min. Insulation Resistance (mΩ/km)	10	1000	1000	10	10

Table 10 : Conductor Resistance @ 20 °C

Conductor			Plain		Tinned	
Size mm ²	Class	Stranding no./mm	Single/Multi-Core	Multi-Pair/Triple	Single/Multi-Core	Multi-Pair/Triple
0.5	1	1/0.80	36.0	36.7	36.7	37.1
	2	7/0.30	36.0	36.7	36.7	37.1
	5	16/0.20	39.0	39.7	40.1	40.9
0.75	1	1/0.97	24.5	25.0	24.8	25.3
	2	7/0.37	24.5	25.0	24.8	25.3
	5	24/0.20	26.0	26.5	26.7	27.2
1.0	1	1/1.13	18.1	18.4	18.2	18.6
	2	7/0.43	18.1	18.4	18.2	18.6
	5	32/0.20	19.5	19.9	20.0	20.4
1.5	1	1/1.38	12.1	12.3	12.2	12.4
	2	7/0.53	12.1	12.3	12.2	12.4
	5	30/0.25	13.3	13.6	13.7	14.0
2.5	1	1/1.78	7.41	7.6	7.56	7.71
	2	7/0.67	7.41	7.6	7.56	7.71
	5	50/0.25	8.0	8.1	8.212	8.37

Table 11 : Maximum Inductance to Resistance Ratio (L/R)

Conductor	
Size mm ²	L/R Ratio (for adjacent cores) μH/Ω
0.50	25
0.75	25
1.0	25
1.5	40
2.5	60

Table 12 : Maximum Mutual Capacitance Values

Conductor Size mm ²	Type of Material	Requirement nF/km
0.5	PE XLPE XLEVA	150
0.75		
1.0		
1.5		
2.5	PVC	250

Table 13 : Minimum Bending Radius

Cable Type	Unarmoured	Armoured
Collective Screen (OS)	8D	10D
Individual and Overall Screen (ISOS)	8D	10D