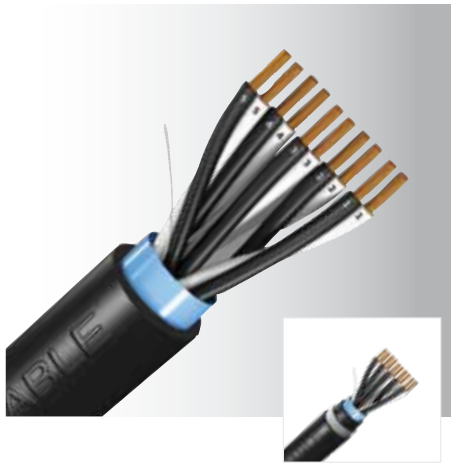


Flame Retardant Instrumentation Cables

500V Collective Screen
XLPE Insulated, OS, Unarmoured & Armoured, LSZH Sheathed Cable
CU/XLPE/OS/LSZH or CU/XLPE/OS/LSZH/SWA/LSZH
Model Code: XOL or XOLS



Standard Reference	BS EN 50290, BS EN 50288-1 BS EN 50288-7
Flame Retardant Ref.	IEC 60332-3, IEC 60754 IEC 61034

Application :	This cable is intended for use in machineries, especially suitable for areas where fire would create dense smoke and toxic fumes, imposing major threat to lives and equipment
Construction :	Plain annealed copper wire, 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 :	Black (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	0.9	0.6	1P		7.0	57		11.8	232
			2P		10.2	94		15.0	345
			4P		12.2	152		16.4	438
			6P		14.0	178		18.5	527
			8P		15.6	226		20.2	614
			10P		17.5	270		23.0	849
			12P		18.0	307		23.8	902
			16P		20.4	389		26.8	1210
			20P		22.8	482		29.5	1408
			24P		25.4	574		32.0	1605
			36P		29.2	802		36.5	1981
			50P		34.5	1093		42.0	2837
			1T		7.4	66		12.0	244
			4T		13.2	196		18.0	524
			6T		15.5	239		20.0	626
			12T		20.5	411		26.2	1084
			16T		23.0	535		29.5	1462
			36T		33.2	1131		40.8	2807
0.75	1.11	0.6	1P		7.4	67		12.0	255
			2P		10.8	110		15.5	375
			4P		12.5	187		17.5	507
			6P		14.8	222		19.5	594
			8P		16.8	280		22.5	833
			10P		19.0	345		25.0	978
			12P		19.8	386		25.5	1044
			16P		22.2	502		28.5	1407
			20P		25.0	622		31.5	1632
			24P		27.5	741		34.2	1874
			36P		31.6	1043		38.5	2365
			50P		37.5	1424		45.5	3326
			1T		7.8	79		12.5	269
			4T		13.8	236		18.8	586
			6T		16.6	302		22.2	854
			12T		22.2	536		28.0	1268
			16T		24.8	697		31.5	1709
			36T		36.0	1482		43.5	3293

Flame Retardant Instrumentation Cables

500V Collective Screen
XLPE Insulated, OS, Unarmoured & Armoured, LSZH Sheathed Cable
CU/XLPE/OS/LSZH or CU/XLPE/OS/LSZH/SWA/LSZH
Model Code: XOL or XOLSL

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		7.8	77		12.5	272
			2P		11.5	125		16.2	408
			4P		13.2	214		18.0	550
			6P		16.0	269		21.5	796
			8P		18.0	332		23.5	914
			10P		20.5	411		26.2	1083
			12P		21.0	463		27.0	1161
			16P		23.6	603		30.0	1570
			20P		26.5	749		33.0	1823
			24P		29.5	893		36.0	2092
			36P		34.2	1283		41.5	2996
			50P		40.5	1754		48.0	3790
			1T		8.2	85		13.0	288
			4T		14.6	276		19.8	647
			6T		17.8	360		23.2	940
			12T		23.8	649		29.5	1447
			16T		26.6	846		33.2	1937
			36T		38.5	1813		46.2	3749
1.5	1.59	0.6	1P		8.5	95		13.5	304
			2P		12.5	152		17.8	478
			4P		14.5	267		19.5	631
			6P		17.5	346		23.0	915
			8P		19.8	442		25.5	1100
			10P		22.6	547		29.0	1473
			12P		23.4	613		30.0	1588
			16P		26.2	812		32.8	1882
			20P		29.2	1008		36.0	2222
			24P		32.5	1202		40.0	2857
			36P		37.8	1736		45.5	3640
			50P		44.8	2377		54.0	5175
			1T		9.0	106		13.5	330
			4T		16.4	358		22.0	898
			6T		19.6	480		25.5	1127
			12T		26.4	879		33.0	1953
			16T		29.5	1149		36.2	2348
			36T		43.0	2494		51.5	5140
2.5	2.01	0.7	1P		10.0	135		14.5	380
			2P		14.5	215		19.5	580
			4P		17.2	375		23.0	942
			6P		20.5	504		26.5	1190
			8P		23.4	648		30.0	1446
			10P		27.0	822		34.0	1935
			12P		27.8	942		35.0	2097
			16P		31.2	1219		38.4	2520
			20P		35.0	1513		43.0	3318
			24P		39.2	1823		47.4	3851
			36P		45.2	2636		55.0	5463
			50P		54.0	3622		63.5	7031
			1T		10.4	167		15.5	413
			4T		19.2	528		25.0	1173
			6T		23.2	707		30.0	1673
			12T		31.5	1336		38.5	2658
			16T		35.2	1736		43.0	3542
			36T		51.5	3802		61.0	7043

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