

COLLECTIVELY SCREENED (OS) 500V

transmission of reliability & brightness



APPLICATION

This Specification covers screened cables used in the provision of communication services and the interconnection of electrical equipment and instruments, particularly in and around process plants. These cables are generally for indoor applications.

CONSTRUCTION

Conductor	: Plain Annealed Copper Wires to BS 6360
Insulation	: PE or XLPE or PVC or LSHF compound
For Pairs	: Insulated cores are twisted to form a pair, nominal length of lay of any pair shall not exceed 100mm
Insulation color	: 1 pair – Black & White 2 pair & above – Black & white core with number 1 Traid – Black, White and Red 2 Traids and above – Black, White and Red printed with number 2 cores and above – White cores printed with number
Wrapping	: Polyester Binder tape
Overall screen	: Aluminium/Polyester tape, metallic side down in contact with tinned copper drain wire 0.5mm ²
Outer sheath	: PVC-RP (Fire Retardant Compound) or LSHF (Fire retardant Low Smoke Halogen Free Compound)
Sheath color	: Blue for intrinsically safe cable Black for non-intrinsically safe cable Anti-termite, anti-vermin, anti-rodent, UV-resistant is available upon request

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TECHNICAL INFORMATION

Max. Operating Temperature (°C)	PE	XLPE	PVC	LSHF	
	65	90	70 or 105	90 or 150	
High Voltage Test	2000 V _{ac} for 1 minute				
Reference Standard	BS EN50288-7				
Flame Retardant Property	IEC 60332-1				
Fire Retardant on bunched cables Property	IEC 60332-3-22				
Halogen Free Property	IEC 60754 (only for LSHF)				
Low Smoke Emission Property	IEC 61034 (only for LSHF)				
Min. Bending Radius	5 × OD				
Max. DC Conductor Resistance @ 20°C	Multi-pair/Multi-Traid		Multi-core		
0.50mm ²	39.7Ω/km		39.0Ω/km		
0.75mm ²	26.5Ω/km		26.0Ω/km		
1.00mm ²	18.4Ω/km		18.1Ω/km		
1.50mm ²	12.3Ω/km		12.1Ω/km		
2.50mm ²	7.56Ω/km		7.41Ω/km		
Maximum L/R ratio	0.50mm ²	0.75mm ²	1.00mm ²	1.50mm ²	2.50mm ²
μH/Ω	25	25	25	40	60

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Type Available

CU/PVC/OS/PVC-RP
CU/XLPE/OS/PVC-RP
CU/PE/OS/PVC-RP
CU/XLPE/OS/LSHF
CU/PE/OS/LSHF
CU/LSHF/OS/LSHF

Nominal Area (mm ²)	Outer diameter approx (mm)	Cable Weight Approx. (kg/km)
No. of pairs		
1×2×0.5	6.9	67
2×2×0.5	11.5	138
3×2×0.5	12.0	161
4×2×0.5	13.5	193
5×2×0.5	14.5	229
6×2×0.5	15.9	268
8×2×0.5	17.9	335
10×2×0.5	20.5	419
12×2×0.5	21.0	461
15×2×0.5	23.5	564
16×2×0.5	23.5	575
20×2×0.5	26.5	709
24×2×0.5	29.5	857
30×2×0.5	31.0	993
36×2×0.5	33.7	1166
1×2×0.75	7.5	76
2×2×0.75	12.2	161
3×2×0.75	13.0	191
4×2×0.75	14.5	231
5×2×0.75	15.6	275
6×2×0.75	17.1	323
8×2×0.75	19.3	408

Nominal Area (mm ²)	Outer diameter approx (mm)	Cable Weight Approx. (kg/km)
No. of pairs		
10×2×0.75	22.0	527
12×2×0.75	22.8	566
15×2×0.75	25.5	694
16×2×0.75	25.5	710
20×2×0.75	28.6	877
24×2×0.75	31.9	1062
30×2×0.75	33.9	1238
36×2×0.75	36.7	1441
1×2×1.0	7.8	85
2×2×1.0	13.0	183
3×2×1.0	13.8	219
4×2×1.0	15.2	267
5×2×1.0	16.6	319
6×2×1.0	18.5	375
8×2×1.0	20.6	476
10×2×1.0	23.5	598
12×2×1.0	24.5	664
15×2×1.0	27.2	817
16×2×1.0	27.2	837
20×2×1.0	30.5	1036
24×2×1.0	34.0	1256
30×2×1.0	36.5	1470

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Nominal Area (mm ²)	Outer diameter approx (mm)	Cable Weight Approx. (kg/km)
No. of pairs		
36×2×1.0	40.0	1733
1×2×1.5	8.5	101
2×2×1.5	14.0	223
3×2×1.5	15.0	271
4×2×1.5	16.6	332
5×2×1.5	18.5	399
6×2×1.5	20.0	472
8×2×1.5	22.7	603
10×2×1.5	26.0	759
12×2×1.5	27.0	848
16×2×1.5	30.0	1075
20×2×1.5	33.8	1229
24×2×1.5	37.7	1620
36×2×1.5	43.6	2253

Nominal Area (mm ²)	Outer diameter approx (mm)	Cable Weight Approx. (kg/km)
No. of pairs		
1×2×2.5	9.6	135
2×2×2.5	16.7	315
3×2×2.5	17.9	388
4×2×2.5	19.8	481
5×2×2.5	21.8	583
6×2×2.5	23.9	692
8×2×2.5	27.2	890
10×2×2.5	31.2	1127
12×2×2.5	32.3	1266
16×2×2.5	36.2	1616
20×2×2.5	41.0	2014
24×2×2.5	45.5	2449

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CU/XLPE/OS/LSHF
CU/PE/OS/LSHF
CU/LSHF/OS/LSHF

Nominal Area (mm ²)	Outer diameter approx. (mm)	Cable Weight Approx. (kg/km)
No. of traids		
1×3×0.5	7.3	79
2×3×0.5	12.0	167
5×3×0.5	15.5	290
10×3×0.5	21.8	496
20×3×0.5	28.2	941
24×3×0.5	31.4	1138
30×3×0.5	33.4	1335
1×3×0.75	7.8	92
2×3×0.75	13.0	198
5×3×0.75	16.7	354
10×3×0.75	23.6	669
20×3×0.75	30.7	1177
24×3×0.75	34.5	1425
30×3×0.75	36.4	1680
1×3×1.0	8.2	104
2×3×1.0	13.8	227
5×3×1.0	17.8	414
10×3×1.0	25.2	789
20×3×1.0	32.8	1401
24×3×1.0	36.7	1698
30×3×1.0	39.0	2009
1×3×1.5	8.8	126

Nominal Area (mm ²)	Outer diameter approx. (mm)	Cable Weight Approx. (kg/km)
No. of traids		
2×3×1.5	15.0	280
5×3×1.5	19.5	526
10×3×1.5	27.8	1013
20×3×1.5	36.3	1824
24×3×1.5	40.5	2212
30×3×1.5	43.1	2630
1×3×2.5	10.0	174
2×3×2.5	17.9	402
5×3×2.5	23.5	780
10×3×2.5	33.5	1524
20×3×2.5	43.8	2780
24×3×2.5	49.0	3376
30×3×2.5	52.5	3955
2×0.5	7.0	71
3×0.5	7.5	83
5×0.5	8.5	113
10×0.5	11.3	193
20×0.5	14.3	325
24×0.5	15.8	387
30×0.5	16.7	453
2×0.75	7.4	82
3×0.75	7.8	96

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Nominal Area (mm ²)	Outer diameter approx. (mm)	Cable Weight Approx. (kg/km)
No. of traids		
5×0.75	9.0	133
10×0.75	12.5	235
20×0.75	15.5	402
24×0.75	17.2	480
30×0.75	18.1	565
2×1.0	7.8	91
3×1.0	8.2	109
5×1.0	9.5	153
10×1.0	13.0	274
20×1.0	16.5	475
24×1.0	18.5	568
30×1.0	19.3	672
2×1.5	8.3	108
3×1.5	8.8	132

Nominal Area (mm ²)	Outer diameter approx. (mm)	Cable Weight Approx. (kg/km)
No. of traids		
5×1.5	10.5	190
10×1.5	14.2	347
20×1.5	18.0	612
24×1.5	20.0	799
30×1.5	21.2	874
2×2.5	9.6	147
3×2.5	10.1	184
5×2.5	12.2	273
10×2.5	16.9	512
20×2.5	21.5	921
24×2.5	24.0	1108
30×2.5	25.5	1327

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