

INDIVIDUAL & COLLECTIVELY SCREENED (ISOS), 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 black number 1 Traid – Black, White and Red 2 Traids and above – Black, White and Red printed with number
Individual screen	: Aluminium/Polyester tape, metallic side down in contact with tinned copper drain wire 0.5mm ²
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/IS/OS/PVC-RP

CU/XLPE/IS/OS/PVC-RP

CU/PE/IS/OS/PVC-RP

CU/XLPE/IS/OS/LSHF

CU/PE/IS/OS/LSHF

CU/LSHF/IS/OS/LSHF

Nominal Area (mm ²)	Outer diameter approx. (mm)	Cable Weight Approx. (kg/km)
No. of pairs		
2×2×0.5	11.5	153
3×2×0.5	12.5	183
4×2×0.5	13.5	223
5×2×0.5	14.7	265
6×2×0.5	16.1	311
8×2×0.5	18.2	393
10×2×0.5	20.8	492
12×2×0.5	21.5	547
15×2×0.5	24.0	670
16×2×0.5	24.0	688
20×2×0.5	26.8	850
24×2×0.5	30.0	1027
30×2×0.5	31.8	1203
36×2×0.5	34.5	1399
2×2×0.75	12.4	178
3×2×0.75	13.2	214
4×2×0.75	14.5	261
5×2×0.75	15.9	312
6×2×0.75	17.4	368
8×2×0.75	20.0	467

Nominal Area (mm ²)	Outer diameter approx. (mm)	Cable Weight Approx. (kg/km)
No. of pairs		
10×2×0.75	22.5	586
12×2×0.75	23.5	654
15×2×0.75	26.0	826
16×2×0.75	26.0	826
20×2×0.75	27.5	942
24×2×0.75	32.5	1259
30×2×0.75	34.6	1454
36×2×0.75	37.6	1715
2×2×1.0	13.2	200
3×2×1.0	14.0	243
4×2×1.0	15.5	297
5×2×1.0	16.9	357
6×2×1.0	18.6	421
8×2×1.0	21.0	537
10×2×1.0	23.9	674
12×2×1.0	23.9	701
15×2×1.0	27.7	929
16×2×1.0	27.7	956
20×2×1.0	31.1	1185
24×2×1.0	34.7	1435

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Nominal Area (mm ²)	Outer diameter approx. (mm)	Cable Weight Approx. (kg/km)
No. of pairs		
30×2×1.0	37.0	1691
36×2×1.0	40.1	1997
2×2×1.5	14.3	240
3×2×1.5	15.3	295
4×2×1.5	16.9	384
5×2×1.5	18.5	439
6×2×1.5	20.5	520
8×2×1.5	23.0	665
10×2×1.5	26.5	838
12×2×1.5	27.5	941
16×2×1.5	30.5	1198
20×2×1.5	34.5	1489
24×2×1.5	38.3	1806
36×2×1.5	44.5	2526

Nominal Area (mm ²)	Outer diameter approx. (mm)	Cable Weight Approx. (kg/km)
No. of pairs		
2×2×2.5	17.0	333
3×2×2.5	18.1	414
4×2×2.5	20.0	516
5×2×2.5	22.1	625
6×2×2.5	24.5	743
8×2×2.5	27.6	958
10×2×2.5	31.6	1212
12×2×2.5	32.7	1366
16×2×2.5	36.7	1748
20×2×2.5	41.5	2234
24×2×2.5	46.5	2649

Due to variables in production, the information on this sheet is approximate and subject to change without notice.

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CU/XLPE/IS/OS/LSHF

CU/PE/IS/OS/LSHF

CU/LSHF/IS/OS/LSHF

Nominal Area (mm ²)	Outer diameter approx. (mm)	Cable Weight Approx. (kg/km)
No. of traids		
2×3×0.5	12.3	183
5×3×0.5	15.7	327
10×3×0.5	22.2	616
20×3×0.5	28.9	1085
24×3×0.5	32.0	1339
30×3×0.5	34.1	1550
2×3×0.75	13.2	214
5×3×0.75	17.0	392
10×3×0.75	24.0	745
20×3×0.75	31.3	1326
24×3×0.75	34.9	1605
30×3×0.75	37.5	1901
2×3×1.0	14.0	244
5×3×1.0	18.0	453
10×3×1.0	25.6	867
20×3×1.0	33.5	1553

Nominal Area (mm ²)	Outer diameter approx. (mm)	Cable Weight Approx. (kg/km)
No. of traids		
24×3×1.0	37.5	1885
30×3×1.0	40.0	2235
2×3×1.5	15.5	298
5×3×1.5	20.0	567
10×3×1.5	28.2	1095
20×3×1.5	36.8	1982
24×3×1.5	41.2	2402
30×3×1.5	43.8	2885
2×3×2.5	18.1	421
5×3×2.5	23.6	824
10×3×2.5	33.9	1611
20×3×2.5	44.5	2951
24×3×2.5	50.0	3583
30×3×2.5	53.0	4287

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