COLLECTIVELY SCREENED (OS) ARMOURED SWA, 500V

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 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}
Bedding	:	PVC or LSHF
Armouring	:	Galvanized steel wires SWA
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 65	XLPE 90	PVC 70 or 105	LSHF 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	6 × 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/SWA/PVC-RP
CU/XLPE/OS/PVC/SWA/PVC-RP
CU/PE/OS/PVC/SWA/PVC-RP
CU/XLPE/OS/LSHF/SWA/LSHF
CU/PE/OS/LSHF/SWA/LSHF
CU/LSHF/OS/LSHF/SWA/LSHF

Nominal Area (mm^2) No. of pairs	Outer diameter approx. (mm)	Cable Weight Approx. (kg/km)
1×2×0.5	10.8	254
2×2×0.5	15.5	432
3×2×0.5	16.5	472
4×2×0.5	17.5	531
5×2×0.5	18.6	595
6×2×0.5	20.0	666
8×2×0.5	23.0	919
10×2×0.5	25.0	1077
12×2×0.5	26.0	1140
15×2×0.5	28.5	1315
16×2×0.5	28.5	1327
20×2×0.5	31.0	1545
24×2×0.5	35.5	2054
30×2×0.5	37.0	2260
36×2×0.5	40.0	2533
1×2×0.75	11.5	274
2×2×0.75	16.3	476
3×2×0.75	17.0	524
4×2×0.75	18.5	594
5×2×0.75	20.0	669
6×2×0.75	21.9	902
8×2×0.75	24.1	1037

Nominal Area (mm^2) No. of pairs	Outer diameter approx. (mm)	Cable Weight Approx. (kg/km)
10×2×0.75	27.0	1222
12×2×0.75	27.6	1299
15×2×0.75	30.3	1507
16×2×0.75	30.3	1523
20×2×0.75	34.1	2000
24×2×0.75	38.0	2359
30×2×0.75	40.0	2611
36×2×0.75	43.6	3228
1×2×1.0	11.7	291
2×2×1.0	17.0	515
3×2×1.0	17.8	570
4×2×1.0	19.2	650
5×2×1.0	21.5	887
6×2×1.0	23.0	971
8×2×1.0	25.4	1143
10×2×1.0	28.5	1352
12×2×1.0	29.5	1444
15×2×1.0	32.7	1889
16×2×1.0	32.7	1910
20×2×1.0	36.5	2133
24×2×1.0	40.0	2637
30×2×1.0	42.3	2933

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Nominal Area (mm^2) No. of pairs	Outer diameter approx. (mm)	Cable Weight Approx. (kg/km)
36×2×1.0	46.7	3719
1×2×1.5	12.3	321
2×2×1.5	18.2	582
3×2×1.5	19.5	652
4×2×1.5	21.5	880
5×2×1.5	23.0	996
6×2×1.5	24.9	1122
8×2×1.5	27.5	1332
10×2×1.5	30.9	1585
12×2×1.5	32.5	1907
16×2×1.5	36.0	2273
20×2×1.5	40.0	2702
24×2×1.5	44.5	3464
36×2×1.5	51.0	4435

Nominal Area (mm^2) No. of pairs	Outer diameter approx. (mm)	Cable Weight Approx. (kg/km)
1×2×2.5	13.6	388
2×2×2.5	21.5	866
3×2×2.5	22.8	974
4×2×2.5	24.5	1124
5×2×2.5	26.5	1285
6×2×2.5	28.8	1460
8×2×2.5	32.7	1962
10×2×2.5	37.1	2396
12×2×2.5	38.2	2578
16×2×2.5	42.0	3028
20×2×2.5	48.0	4110
24×2×2.5	53.0	4723

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

Nominal Area (mm^2) No. of traids	Outer diameter approx. (mm)	Cable Weight Approx. (kg/km)
1×3×0.5	11.2	275
2×3×0.5	16.1	477
5×3×0.5	19.4	680
10×3×0.5	26.5	1243
20×3×0.5	33.7	2048
24×3×0.5	27.5	2417
30×3×0.5	40.0	2689
1×3×0.75	11.7	299
2×3×0.75	17.0	530
5×3×0.75	21.5	904
10×3×0.75	28.5	1428
20×3×0.75	36.8	2428
24×3×0.75	40.5	2811
30×3×0.75	42.5	3149
1×3×1.0	12.1	320
2×3×1.0	18.0	578
5×3×1.0	22.5	997
10×3×1.0	30.0	1594
20×3×1.0	39.0	2733
24×3×1.0	42.6	3175
30×3×1.0	45.8	3911
1×3×1.5	12.8	358

Nominal Area (mm^2) No. of traids	Outer diameter approx. (mm)	Cable Weight Approx. (kg/km)
2×3×1.5	19.1	661
5×3×1.5	24.5	1161
10×3×1.5	33.5	2107
20×3×1.5	42.5	3286
24×3×1.5	47.8	4251
30×3×1.5	51.0	4791
1×3×2.5	14.1	441
2×3×2.5	22.7	988
5×3×2.5	28.1	1529
10×3×2.5	39.5	2879
20×3×2.5	51.0	4972
24×3×2.5	57.5	6421
30×3×2.5	61.0	7284
2×0.5	10.8	259
3×0.5	11.5	279
5×0.5	12.5	338
10×0.5	15.5	487
20×0.5	18.5	688
24×0.5	20.0	785
30×0.5	21.5	989
2×0.75	11.5	279
3×0.75	12.0	303

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Nominal Area (mm^2) No. of traids	Outer diameter approx. (mm)	Cable Weight Approx. (kg/km)
5×0.75	13.0	373
10×0.75	16.5	549
20×0.75	20.0	792
24×0.75	22.0	1043
30×0.75	23.0	1138
2×1.0	11.7	298
3×1.0	12.1	326
5×1.0	13.5	404
10×1.0	17.0	606
20×1.0	21.2	1018
24×1.0	23.0	1164
30×1.0	24.5	1288
2×1.5	12.2	329
3×1.5	12.8	364

Nominal Area (mm^2) No. of traids	Outer diameter approx. (mm)	Cable Weight Approx. (kg/km)
5×1.5	14.5	460
10×1.5	18.1	706
20×1.5	22.8	1203
24×1.5	24.8	1384
30×1.5	26.0	1542
2×2.5	13.6	400
3×2.5	14.1	450
5×2.5	16.1	585
10×2.5	21.5	1064
20×2.5	26.3	1616
24×2.5	28.7	1875
30×2.5	30.2	2138

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