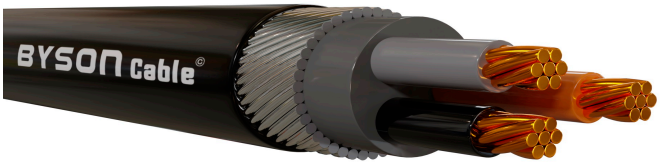
BS6724 SWA LSZH BASEC 0.6/1kV Cable

Stranded plain annealed copper conductors, XLPE insulated, LSZH bedding, galvanized steel wire armor, LSZH outer sheath. Black. 600/1000 volts grade to BS6724. Flame propagation to BS EN 60332-3-24.



APPLICATION RANGE

Power and control cables for fixed installation in the following applications:

- For indoor and outdoor use
- Heavy duty power equipment
- For use in power networks and cable ducting
- Low smoke Zero Halogen power & control

DESIGN

- Bare copper wire conductors
- Cores twisted in layers
- XLPE (Cross-Linked Polyethylene)
- SWA (Steel Wire Armour)
- LSZH outer sheath (BLACK)

Note: UV Resistant unless installation in extreme UV exposure and or high/low ambient temperatures i.e. desert or arctic conditions then additional carbon loading sheathing requirements maybe necessary

REGULATORY COMPLIANCE

Technical Data

Core Identification:

2-core: Blue, Brown
3-core: Brown, Black, Grey
4-core: Blue, Brown, Black, Grey
5-core: Blue, Brown, Black, Grey, G/Y
7-core & above white core with black numbers

Conductor Stranding: IEC60228
Class 2 stranded copper conductors

Cable Standards
BS6724, BS EN/IEC 60502-1
BS EN/IEC 60332-3-24 Cat C
Note 5X95 and above manufactured to IEC60502-1

Minimum Bending Radius
1.5mm^2 to 16mm^2 - Fixed: 6 x overall diameter 25mm^2 and above - Fixed: 8 x overall diameter

Nominal Voltage
600/1000V

Temperature Range
Fixed Installation: -20ºC to +90ºC

ELECTRICAL CHARACTERISTICS XLPE/PVC/SWA/PVC

Current Carrying Capacity
Air ambient temperature: 30ºC Ground ambient temperature: 20ºC Conductor operating temperature: 90ºC

NOMINAL CROSS SECTIONAL AREA mm^2	REFERENCE METHOD C (CLIPPED DIRECT) Amps		REFERENCE METHOD E (IN FREE AIR OR ON A PERFORATED CABLE TRAY, HORIZONTAL OR VERTICAL) Amps		REFERENCE METHOD D (DIRECT IN GROUND OR IN DUCTING IN GROUND, IN OR AROUND BUILDINGS) Amps	
	1 Two Core Cable Single-Phase AC or DC	1 Three or 1 Four Core Cable Three-Phase AC	1 Two Core Cable Single-Phase AC or DC	1 Three or 1 Four Core Cable Three-Phase AC	1 Two Core Cable Single-Phase AC or DC	1 Three or 1 Four Core Cable Three-Phase AC
1.5	27	23	29	25	25	21
2.5	36	31	39	33	33	28
4	49	42	52	44	43	36
6	62	53	66	56	53	44
10	85	73	90	78	71	58
16	110	94	115	99	91	75
25	146	124	152	131	116	96
35	180	154	188	162	139	115
50	219	187	228	197	164	135
70	279	238	291	251	203	167
95	338	289	354	304	239	197
120	392	335	410	353	271	223
150	451	386	472	406	306	251
185	515	441	539	463	343	281
240	607	520	636	546	395	324
300	698	599	732	628	446	365
400	787	673	847	728	-	570

The above table is in accordance with Table 4E4A of the 17th Edition of IEE Wiring Regulations.

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BS5467 SWA PVC BASEC 0.6/1kV Cable

Stranded plain annealed copper conductors, XLPE insulated, PVC bedding, galvanized steel wire armor, PVC outer sheath. Black. 600/1000 volts grade to BS5467. Flame propagation to BS EN 60332.

DIMENSIONS

BYSON PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm^2	NOMINAL THICKNESS OF INSULATION mm	NOMINAL DIAMETER mm		NOMINAL WEIGHT kg/km	BW / CW GLAND	Copper Index Kg's per km
				Under Armour	Overall			
200001	2	1.5	0.6	7.3	12.1	302	20S	28.8
200002	2	2.5	0.7	8.5	13.6	346	20S	48
200003	2	4	0.7	9.4	14.7	410	20S	76
200004	2	6	0.7	10.5	15.9	499	20	116
200005	2	10	0.7	12.3	18	648	20	192
200006	2	16	0.7	14.3	20.4	978	20	308
200007	2	25	0.9	14.7	20.4	1290	25	480
200008	2	35	0.9	16.8	23.3	1500	25	672
200009	2	50	1	19	25.8	1890	25	960
200010	2	70	1.1	22	29	2450	32	1344
200011	2	95	1.1	25.1	33.1	3300	32	1824
200012	2	120	1.2	27.9	36.1	4020	40	2304
200013	2	150	1.4	30.9	39.3	4750	40	2880
200014	3	1.5	0.6	7.8	12.6	330	20S	43
200015	3	2.5	0.7	9.2	14.1	390	20S	72
200016	3	4	0.7	10	15.3	464	20S	115
200017	3	6	0.7	11.2	16.6	568	20	173
200018	3	10	0.7	13.1	19.5	866	20	288
200019	3	16	0.7	15.3	21.6	1152	25	461
200020	3	25	0.9	18.9	23.6	1800	25	720
200021	3	35	0.9	21.3	25.7	2230	32	1008
200022	3	50	1	21.7	28.5	2490	32	1440
200023	3	70	1.1	25.2	32.2	3290	32	2016
200024	3	95	1.1	28.8	37	4440	40	2736
200025	3	120	1.2	32	40.4	5470	40	3456
200026	3	150	1.4	35.9	45.5	6930	50S	4320
200027	3	185	1.6	40	49.8	8350	63S	5328
200028	3	240	1.7	44.9	55.1	10400	63S	6912
200029	3	300	1.8	49.8	60.2	12600	63S	8640
200030	3	400	2	55.8	66.6	14600	75S	11520
200031	4	1.5	0.6	8.5	13.3	365	20S	58
200032	4	2.5	0.7	9.9	15	438	20S	96
200033	4	4	0.7	11	16.4	532	20	154
200034	4	6	0.7	12.3	18.7	764	20	230
200035	4	10	0.7	14.5	21.1	1013	25	384
200036	4	16	0.7	17	23.4	1360	25	614
200037	4	25	0.9	21	26.1	2160	32	960
200038	4	35	0.9	23.6	28.6	2690	32	1344
200039	4	50	1	25	32	3130	32	1920
200040	4	70	1.1	29.5	37.7	4500	40	2688
200041	4	95	1.1	33.3	41.7	5600	50S	3648

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BS5467 SWA PVC BASEC 0.6/1kV Cable

Stranded plain annealed copper conductors, XLPE insulated, PVC bedding, galvanized steel wire armor, PVC outer sheath. Black. 600/1000 volts grade to BS5467. Flame propagation to BS EN 60332.

BYSON PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm²	NOMINAL THICKNESS OF INSULATION mm	NOMINAL DIAMETER mm		NOMINAL WEIGHT kg/km	BW / CW GLAND	Copper Index Kg's per km
				Under Armour	Overall			
200042	4	120	1.2	37.5	47.1	7400	50	4608
200043	4	150	1.4	41.6	51.4	8780	50	5760
200044	4	185	1.6	46.4	56.6	10630	63S	7104
200045	4	240	1.7	52.6	63	13390	63	9216
200046	4	300	1.8	58	68.8	16290	75S	11520
200047	4	400	2	65.4	78.1	19800	90	15360
200048	5	1.5	0.6	9.7	14.3	410	20S	72
200049	5	2.5	0.7	11.7	16.1	470	20S	120
200050	5	4	0.7	13	17.8	710	20	192
200051	5	6	0.7	14.5	20	876	25	288
200052	5	10	0.7	17.2	22.9	1165	25	480
200053	5	16	0.7	20	26.6	1742	32	768
200054	5	25	0.9	24.7	31.5	2323	32	1200
200055	5	35	0.9	27.8	34.8	2932	40	1680
200056	5	50	1	32.4	40.4	4192	50S	2400
200057	7	1.5	0.6	10.2	15.2	470	20S	101
200058	7	2.5	0.7	12.3	17.1	600	20	168
200059	7	4	0.7	13.6	19.1	881	20	115
200060	12	1.5	0.6	13.7	19.4	780	20	173
200061	12	2.5	0.7	16.3	22.4	1000	25	288
200062	19	1.5	0.6	16.2	22.2	1000	25	274
200063	19	2.5	0.7	19.9	26.6	1540	25	456
200064	27	1.5	0.6	20	26.7	1500	32	390
200065	27	2.5	0.7	24	30.7	1950	32	648
200066	37	1.5	0.6	22.3	29	1800	32	534
200067	37	2.5	0.7	26.9	33.8	2350	40	888

VOLTAGE DROP

The below table is in accordance with Table 4E4B of the 17th Edition of IEE Wiring Regulations.

NOMINAL CROSS SECTIONAL AREA mm²	TWO CORE CABLE DC	TWO CORE CABLE SINGLE-PHASE AC mV/A/m			THREE OR FOUR CORE CABLE THREE-PHASE AC mV/A/m		
1.5	31	31			27		
2.5	19	19			16		
4	12	12			10		
6	7.9	7.9			6.8		
10	4.7	4.7			4		
16	2.9	2.9			2.5		
		r	x	z	r	x	z
25	1.85	1.85	0.160	1.900	1.600	0.140	1.650
35	1.35	1.35	0.155	1.350	1.150	0.135	1.150
50	0.98	0.99	0.155	1.000	0.860	0.135	0.870
70	0.67	0.67	0.150	0.690	0.590	0.130	0.600
95	0.49	0.50	0.150	0.520	0.430	0.130	0.450
120	0.39	0.40	0.145	0.420	0.340	0.130	0.370
150	0.31	0.32	0.145	0.350	0.280	0.125	0.300
185	0.25	0.26	0.145	0.290	0.220	0.125	0.260
240	0.195	0.20	0.140	0.240	0.175	0.125	0.210
300	0.155	0.16	0.140	0.210	0.140	0.120	0.185
400	0.12	0.13	0.140	0.190	0.115	0.120	0.165

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VOLTAGE DROP Continued..

Conductor operating temperature: 90ºC

r = Resistive Component
x = Reactive Component
z = Impedance Value

For cables having conductors of 16mm^2 or less cross sectional area their inductances can be ignored and (mV/A/m)r values only are tabulated. For cables having conductors greater than 16mm^2, cross sectional area the impedance values are given as (mV/A/m)z, together with the resistive component (mV/A/m)r and the reactive component (mV/A/m)x.

The above paragraph is extracted from Appendix 4 of the 17th Edition of IEE Wiring Regulations.

CONDUCTORS

Class 2 Stranded Conductors for Single Core and Multi-Core Cables

NOMINAL CROSS SECTIONAL AREA mm^2	MINIMUM NO. OF WIRES IN CONDUCTOR						MAXIMUM RESISTANCE OF CONDUCTOR AT 20ºC ohms/km
	Circular		Circular Compacted		Shaped		Annealed Copper Conductor
	Cu	Al	Cu	Al	Cu	Al	Plain Wires
1.5	7	-	6	-	-	-	12.1
2.5	7	-	6	-	-	-	7.41
4	7	-	6	-	-	-	4.61
6	7	-	6	-	-	-	3.08
10	7	7	6	6	-	-	1.83
16	7	7	6	6	-	-	1.15
25	7	7	6	6	6	6	0.727
35	7	7	6	6	6	6	0.524
50	19	19	6	6	6	6	0.387
70	19	19	12	12	12	12	0.268
95	19	19	15	15	15	15	0.193
120	37	37	18	15	18	15	0.153
150	37	37	18	15	18	15	0.124
185	37	37	30	30	30	30	0.0991
240	37	37	34	30	34	30	0.0754

The above table is in accordance with BS EN 60228 (previously BS 6360)

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