BS 5467 Copper Conductor Multi Core SWA PVC BASEC 0.6/1kV Cable



Eland Product Group: A9S

APPLICATION

Multi-core PVC cable with steel wire armour (SWA). Power and auxiliary fixed wiring cables for use in power networks, underground, outdoor and indoor applications and for use in cable ducting.

CHARACTERISTICS

Voltage Rating Uo/U
0.6/1kV

Temperature Rating
Fixed: -25°C to +90°C

Minimum Bending Radius
1.5mm² to 16mm² - Fixed: 6 x overall diameter
25mm² and above - Fixed: 8 x overall diameter

CONSTRUCTION

Conductor
Class 2 stranded copper conductor

Insulation
XLPE (Cross-Linked Polyethylene)

Bedding
PVC (Polyvinyl Chloride)

Armour
SWA (Steel Wire Armour)

Sheath
PVC (Polyvinyl Chloride)

Core Identification
2 core: Brown Blue
3 core: Brown Black Grey
3 core (optional) : Green/Yellow Blue Brown
4 core: Brown Black Blue Grey
4 core (optional) : Green/Yellow Brown Black Grey
5 core: Green/Yellow Brown Blue Black Grey
7 core and above: White cores with Black numbers

Sheath Colour
Black

CABLE THIRD-PARTY ACCREDITATIONS

We supply BASEC approved products
Cables are tested and certified by BASEC, The British Approvals Service for Cables

STANDARDS

BS 5467, IEC/EN 60502-1, IEC/EN 60228

Flame Retardant to IEC/EN 60332-1-2
UV Resistant

THE CABLE LAB®

AN ISO/IEC 17025 AND IECEE CBTL ACCREDITED FACILITY

Our world-class testing facility assures the quality and compliance of this cable through a continuous and rigorous testing regime.

SUSTAINABILITY COMMITMENT

We are on a journey to Net Zero.

We've committed to near-term emissions reductions and a net-zero target with the Science Based Targets initiative and we're a signatory to the United Nations Global Compact Sustainable Development Goals.

Learn more about embodied carbon and our carbon emissions reduction actions, our comprehensive recycling services, and wider ESG activities for sustainable operations at: www.elandcables.com/company/about-us/esg-sustainability

REGULATORY COMPLIANCE

This cable is compliant with European Regulation EN 50575, the Construction Products Regulation.

This cable meets the requirements of the Low Voltage Directive 2014/35/EU, the RoHS Directive 2015/65/EU and Reach Directive EC 1907/2006. RoHS compliance has been tested and confirmed by The Cable Lab®.

DIMENSIONS

ELAND 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	WRAPAROUND CLEATS
				Under Armour	Overall			
A9SWA2015	2	1.5	0.6	7.3	12.1	302	20S	CC5
A9SWA2025	2	2.5	0.7	8.5	13.6	346	20S	CC6
A9SWA2040	2	4	0.7	9.4	14.7	410	20S	CC7
A9SWA2060	2	6	0.7	10.5	15.9	499	20	CC7
A9SWA210	2	10	0.7	12.3	18	648	20	CC8
A9SWA216	2	16	0.7	14.3	20.4	978	20	CC9
A9SWA225	2	25	0.9	14.7	20.4	1290	25	CC9
A9SWA235	2	35	0.9	16.8	23.3	1500	25	CC10
A9SWA250	2	50	1	19	25.8	1890	25	CC11
A9SWA270	2	70	1.1	22	29	2450	32	CC12
A9SWA295	2	95	1.1	25.1	33.1	3300	32	CC14
A9SWA2120	2	120	1.2	27.9	36.1	4020	40	CC16
A9SWA2150	2	150	1.4	30.9	39.3	4750	40	CC16
A9SWA3015	3	1.5	0.6	7.8	12.6	330	20S	CC5
A9SWA3025	3	2.5	0.7	9.2	14.1	390	20S	CC6
A9SWA3040	3	4	0.7	10	15.3	464	20S	CC7
A9SWA3060	3	6	0.7	11.2	16.6	568	20	CC7
A9SWA310	3	10	0.7	13.1	19.5	866	20	CC8
A9SWA316	3	16	0.7	15.3	21.6	1152	25	CC9
A9SWA325	3	25	0.9	18.9	23.6	1800	25	CC11
A9SWA335	3	35	0.9	21.3	25.7	2230	32	CC12
A9SWA350	3	50	1	21.7	28.5	2490	32	CC12
A9SWA370	3	70	1.1	25.2	32.2	3290	32	CC14
A9SWA395	3	95	1.1	28.8	37	4440	40	CC16
A9SWA3120	3	120	1.2	32	40.4	5470	40	CC16
A9SWA3150	3	150	1.4	35.9	45.5	6930	50S	CC18
A9SWA3185	3	185	1.6	40	49.8	8350	63S	CC20
A9SWA3240	3	240	1.7	44.9	55.1	10400	63S	-
A9SWA3300	3	300	1.8	49.8	60.2	12600	63S	-
A9SWA3400	3	400	2	55.8	66.6	14600	75S	-
A9SWA4015	4	1.5	0.6	8.5	13.3	365	20S	CC6
A9SWA4025	4	2.5	0.7	9.9	15	438	20S	CC6
A9SWA4040	4	4	0.7	11	16.4	532	20	CC7
A9SWA4060	4	6	0.7	12.3	18.7	764	20	CC8
A9SWA410	4	10	0.7	14.5	21.1	1013	25	CC9
A9SWA416	4	16	0.7	17	23.4	1360	25	CC10
A9SWA425	4	25	0.9	21	26.1	2160	32	CC11
A9SWA435	4	35	0.9	23.6	28.6	2690	32	CC12
A9SWA450	4	50	1	25	32	3130	32	CC14
A9SWA470	4	70	1.1	29.5	37.7	4500	40	CC16
A9SWA495	4	95	1.1	33.3	41.7	5600	50S	CC18

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ELAND 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	WRAPAROUND CLEATS
				Under Armour	Overall			
A9SWA4120	4	120	1.2	37.5	47.1	7400	50	CC20
A9SWA4150	4	150	1.4	41.6	51.4	8780	50	-
A9SWA4185	4	185	1.6	46.4	56.6	10630	63S	-
A9SWA4240	4	240	1.7	52.6	63	13390	63	-
A9SWA4300	4	300	1.8	58	68.8	16290	75S	-
A9SWA4400	4	400	2	65.4	78.1	19800	90	-
A9SWA5015	5	1.5	0.6	9.7	14.3	410	20S	CC6
A9SWA5025	5	2.5	0.7	11.7	16.1	470	20S	CC7
A9SWA5040	5	4	0.7	13	17.8	710	20	CC7
A9SWA5060	5	6	0.7	14.5	20	876	25	CC8
A9SWA510	5	10	0.7	17.2	22.9	1165	25	CC10
A9SWA516	5	16	0.7	20	26.6	1742	32	CC11
A9SWA525	5	25	0.9	24.7	31.5	2323	32	CC14
A9SWA535	5	35	0.9	27.8	34.8	2932	40	CC14
A9SWA550	5	50	1	32.4	40.4	4192	50S	CC16
A9SWA0715	7	1.5	0.6	10.2	15.2	470	20S	CC6
A9SWA7025	7	2.5	0.7	12.3	17.1	600	20	CC7
A9SWA7040	7	4	0.7	13.6	19.1	881	20	CC8
A9SWA1215	12	1.5	0.6	13.7	19.4	780	20	CC8
A9SWA12025	12	2.5	0.7	16.3	22.4	1000	25	CC9
A9SWA1915	19	1.5	0.6	16.2	22.2	1000	25	CC9
A9SWA1925	19	2.5	0.7	19.9	26.6	1540	25	CC11
A9SWA2715	27	1.5	0.6	20	26.7	1500	32	CC11
A9SWA2725	27	2.5	0.7	24	30.7	1950	32	CC14
A9SWA3715	37	1.5	0.6	22.3	29	1800	32	CC12
A9SWA3725	37	2.5	0.7	26.9	33.8	2350	40	CC14

CONDUCTORS

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

NOMINAL CROSS SECTIONAL AREA mm²	MINIMUM NO. OF WIRES IN CONDUCTOR						MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C 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
300	61	61	34	30	34	30	0.0601
400	61	61	53	53	53	53	0.047

The above table is in accordance with EN 60228

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ELECTRICAL CHARACTERISTICS XLPE/PVC/SWA/PVC

Current Carrying Capacity

NOMINAL CROSS SECTIONAL AREA mm²	REFERENCE METHOD C (CLIPPED DIRECT) Amps		REFERENCE METHOD E (IN FREE AIR OR ON A PERFORATED CABLE TRAY, HORIZONTAL OR VERTICAL) Amps		REFERENCE METHOD D1 (DUCTING IN GORUND, IN OR AROUND BUILDINGS) Amps		REFERENCE METHOD D2 (DIRECT 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 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	27	23
2.5	36	31	39	33	33	28	35	30
4	49	42	52	44	43	36	46	39
6	62	53	66	56	53	44	58	49
10	85	73	90	78	71	58	77	65
16	110	94	115	99	91	75	100	84
25	146	124	152	131	116	96	129	107
35	180	154	188	162	139	115	155	129
50	219	187	228	197	164	135	183	153
70	279	238	291	251	203	167	225	188
95	338	289	354	304	239	197	270	226
120	392	335	410	353	271	223	306	257
150	451	386	472	406	306	251	343	287
185	515	441	539	463	343	281	387	324
240	607	520	636	546	395	324	448	375
300	698	599	732	628	446	365	502	419
400	787	673	847	728	-	570	-	-

Laying Conditions:
Ambient temperature 30°C
Ground temperature 20°C
Soil thermal resistivities is 2.5 K.m/W
Depth of laying is 0.7m

Notes

1. Where a conductor operates at a temperature exceeding 70°C it must be ascertained that the equipment connected to the conductor is suitable for the conductor operating temperature (see Regulation 512.1.2 of the 17th Edition of IEE Wiring Regulations).

2. Where cables in this table are connected to equipment or accessories designed to operate at a temperature not exceeding 70°C, the current ratings given in the equivalent table for 70°C thermoplastic insulated cables (Table 4D4A) must be used (see also Regulation 523.1 of the 17th Edition of IEE Wiring Regulations).

The above table is in accordance with Table 4E4A of the 18th Edition of IEE Wiring Regulations BS7671 and IEC 60364-5-52

VOLTAGE DROP

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

Conductor operating temperature: 90°C

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

The above table is in accordance with Table 4E4B of the 18th Edition of IEE Wiring Regulations BS7671 and IEC 60364-5-52

For cables having conductors of 16mm² 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 16mm², 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 18th Edition of IEE Wiring Regulations BS7671

The information contained within this datasheet is for guidance only and is subject to change without notice or liability. All the information is provided in good faith and is believed to be correct at the time of publication. When selecting cable accessories, please note that actual cable dimensions may vary due to manufacturing tolerances.

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