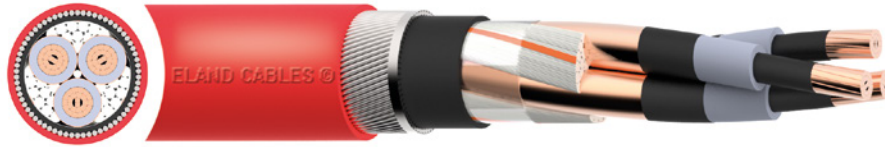


# BS 7835 XLPE LSZH 6.35/11 (12)kV Cable



Eland Product Group: **A9M**

## APPLICATION

Power cables for power networks, underground, outdoors and in cable ducting. For installation where fire, smoke emission and toxic fumes create a potential threat to life and equipment.

## CONSTRUCTION

### Conductor

Class 2 stranded copper conductor according to BS EN 60228 (previously BS 6360)

### Conductor Screen

Semi-conductive XLPE (Cross-Linked Polyethylene)

### Insulation

XLPE (Cross-Linked Polyethylene) Type GP8 according to BS 7655

### Insulation Screen

Semi-conductive XLPE (Cross-Linked Polyethylene)

### Metallic Screen

Individual or overall copper tape screen according to BS 6622

### Filler

PET (Polyethylene Terephthalate) fibres

### Separator

Binding tape

### Bedding

LSZH (Low Smoke Zero Halogen)

### Armour

Single core: AWA (Aluminium Wire Armoured)  
Multi-core: SWA (Steel Wire Armoured)

### Sheath

LSZH (Low Smoke Zero Halogen)

## CABLE STANDARDS

BS 7835, BS EN/IEC 60754-1, BS EN/IEC 60228, BS EN/IEC 60332-1-2



The electrical and dimensional properties of this product are measured by the Technical and Quality Assurance department at the Eland Cables laboratory. Cable performance in respect of conductor resistance, construction quality (workmanship), dimensional consistency, and other parameters are verified to published standards and approved product drawings. Conformance to RoHS (Restriction of the use of Hazardous Substances) is determined and confirmed.

## CHARACTERISTICS

### Voltage Rating (U<sub>0</sub>/U)<sub>m</sub>

6.35/11 (12)kV

### Temperature Rating

Fixed: 0°C to +90°C

### Combustion Characteristics

Oxygen index: 35

### HCL Emission

0.5% HCL in accordance with BS EN 50267-2-1

Low Smoke classification based on 3 metre cube test

Completed cables comply with the requirements of fire test BS EN 50266-2-4

### Minimum Bending Radius

Single core - Fixed: 15 x overall diameter

3 core - Fixed: 12 x overall diameter

(Single core 12 x overall diameter and 3 core 10 x overall diameter where bends are positioned adjacent to a joint or terminations provided that the bending is carefully controlled by the use of a former)

### Sheath Colour

● Red ● Black

## DIMENSIONS

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	NOMINAL DIAMETER			NOMINAL WEIGHT kg/km
			Under Armour mm	Over Armour mm	Overall mm	
A9M11KV01050L*	1	50	21.7	24.9	28.5	1200
A9M11KV01070L*	1	70	23	26.2	30	1500
A9M11KV01095L*	1	95	24.7	27.9	31.7	1600
A9M11KV01120L*	1	120	26.7	29.9	33.9	2100
A9M11KV01150L*	1	150	27.5	31.5	35.7	2500
A9M11KV01185L*	1	185	29.3	33.3	37.5	2900
A9M11KV01240L*	1	240	31.6	35.6	40	3600
A9M11KV01300L*	1	300	34.6	38.6	43	4300
A9M11KV01400L*	1	400	37	41	45.8	5200
A9M11KV01500L*	1	500	40.5	45.5	50.5	6500
A9M11KV01630L*	1	630	44.6	49.6	54.8	8000
A9M11KV01800L*	1	800	48.8	53.8	59.2	9850
A9M11KV011000L*	1	1000	53.5	58.5	64.3	12100
A9M11KV03025L*	3	25	39	44	48.8	4300
A9M11KV03035L*	3	35	41.6	46.6	51.6	4700
A9M11KV03050L*	3	50	44.4	49.4	54.6	5300
A9M11KV03070L*	3	70	48.1	53.1	58.5	6300
A9M11KV03095L*	3	95	52	57	62.6	7300
A9M11KV03120L*	3	120	55.6	60.6	66.6	8400
A9M11KV03150L*	3	150	58.6	63.6	69.8	9600
A9M11KV03185L*	3	185	62.7	67.7	74.1	11000
A9M11KV03240L*	3	240	68.1	74.4	81.2	14000
A9M11KV03300L*	3	300	73.5	79.8	87	16600
A9M11KV03400L*	3	400	78.3	84.6	92.2	20000

\*Eland Part No. shown above designate the sheath colour (\*). For each colour substitute \* for a colour code as listed below. e.g. A9M11KV01050LRD = 50mm<sup>2</sup> Red

## Colour Codes

COLOUR	Red	Black
CODE	RD	BK

## CONDUCTORS

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

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	MINIMUM NO. OF WIRES IN CONDUCTOR						MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C
	Circular		Circular Compacted		Shaped		Annealed Copper Conductor
	Cu	Al	Cu	Al	Cu	Al	Plain Wires ohms/km
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
500	61	61	53	53	53	53	0.0366
630	91	91	53	53	53	53	0.0283
800	91	91	53	53	-	-	0.0221
1000	91	91	53	53	-	-	0.0176

## ELECTRICAL CHARACTERISTICS

### Current Carrying Capacity

NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	CONTINUOUS CURRENT RATING					
		In Ground Amps		In Ducts Amps		In Air Amps	
		Trefoil	Flat	Trefoil	Flat	Trefoil	Flat
1	50	220	230	220	220	250	300
1	70	270	280	260	270	310	370
1	95	320	335	305	325	375	460
1	120	360	380	340	370	430	530
1	150	410	430	375	410	490	600
1	185	455	485	410	460	550	690
1	240	520	560	470	540	650	820
1	300	580	640	500	610	740	940
1	400	650	730	530	690	840	1100
1	500	710	830	570	780	930	1280
1	630	760	940	620	890	1040	1480
1	800	810	1060	660	990	1140	1690
1	1000	860	1170	690	1090	1230	1900
3	25	140	140	125	125	145	145
3	35	170	170	150	150	175	175
3	50	210	210	180	180	220	220
3	70	250	250	215	215	270	270
3	95	300	300	255	255	330	330
3	120	340	340	290	290	380	380
3	150	380	380	330	330	430	430
3	185	430	430	370	370	490	490
3	240	500	500	430	430	570	570
3	300	540	540	470	470	650	650
3	400	625	625	525	525	755	755

## DE-RATING FACTORS

AIR TEMPERATURE °C	25	30	35	40	45	50	55
DE-RATING FACTOR	1.00	0.96	0.92	0.88	0.83	0.78	0.73
GROUND TEMPERATURE °C	10	15	20	25	30	35	40
DE-RATING FACTOR	1.03	1.00	0.97	0.93	0.89	0.86	0.82
GROUND THERMAL RESISTIVITY k.m/W	0.9	1.0	1.2	1.5	2.0	2.5	3.0
DE-RATING FACTOR	1.06	1.04	1.00	0.92	0.82	0.74	0.68
DEPTH OF LAYING mtr	0.80	1.00	1.25	1.50	1.75	2.00	2.50
DE-RATING FACTOR	1.00	0.97	0.95	0.94	0.93	0.91	0.90