



## BS 7835 XLPE LSZH 8.7/15kV Cable



Eland Product Group: A9M

### APPLICATION

Medium voltage LSZH power cables for power networks, underground and in cable ducting.

### CHARACTERISTICS

**Voltage Rating**  $U_0/U$  (Um)  
8.7/15 (17.5) kV

**Temperature Rating**  
Fixed: 0°C to +90°C

#### 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 termination provided that the bending is carefully controlled by the use of a former)

### CONSTRUCTION

#### Conductor

Class 2 stranded copper conductor

#### Conductor Screen

Semi-conductive XLPE (Cross-Linked Polyethylene)

#### Insulation

XLPE (Cross-Linked Polyethylene)

#### Insulation Screen

Semi-conductive XLPE (Cross-Linked Polyethylene)

#### Metallic Screen

Individual or collective overall copper tape screen

#### 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)

#### Sheath Colour

● Red ● Black

### STANDARDS

BS 7835, IEC/EN 60228

Flame Retardant according to IEC/EN 60332-1-2

### ISO/IEC 17025 LABORATORY TESTED

This product is subject to the Quality Assurance protocols of The Cable Lab®, an ISO/IEC 17025 accredited cable testing laboratory. Testing includes vertical flame, conductor resistance, tensile & elongation, and dimensional consistency, verified to published standards and approved product drawings.



### REGULATORY COMPLIANCE

This cable meets the requirements of the RoHS Directive 2011/65/EU. RoHS compliance has been tested and confirmed by The Cable Lab® as meeting the requirements of the BSI RoHS Trusted Kitemark™.





## DIMENSIONS

ELAND PART NO.	NUMBER OF CORES	NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	MINIMUM THICKNESS mm		NOMINAL THICKNESS OF SEMI CONDUCTIVE LAYER mm		NOMINAL DIAMETER mm		NOMINAL WEIGHT kg/km
			Insulation	Outer sheath	Inner	Outer	Over insulation	Overall	
A9M15KV01050*	1	50	3.95	1.32	0.50	0.80	19.50	29	1300
A9M15KV01070*	1	70	3.95	1.40	0.50	0.80	21.10	31	1600
A9M15KV01095*	1	95	3.95	1.48	0.50	0.80	22.80	34	2000
A9M15KV01120*	1	120	3.95	1.48	0.50	0.80	24.10	35	2250
A9M15KV01150*	1	150	3.95	1.56	0.50	0.80	26.00	37	2600
A9M15KV01185*	1	185	3.95	1.56	0.50	0.80	27.30	39	3000
A9M15KV01240*	1	240	3.95	1.64	0.50	0.80	30.00	42	3600
A9M15KV01300*	1	300	3.95	1.72	0.50	0.80	32.10	45	4500
A9M15KV01400*	1	400	3.95	1.80	0.50	0.80	35.00	48	5400
A9M15KV01500*	1	500	3.95	1.88	0.50	0.80	38.00	51	6500
A9M15KV01630*	1	630	3.95	1.96	0.50	0.80	42.10	56	8000
A9M15KV03050*	3	50	3.95	2.12	0.50	0.80	19.50	57	5250
A9M15KV03070*	3	70	3.95	2.20	0.50	0.80	21.10	61	6250
A9M15KV03095*	3	95	3.95	2.28	0.50	0.80	22.80	65	7300
A9M15KV03120*	3	120	3.95	2.36	0.50	0.80	24.10	68	8300
A9M15KV03150*	3	150	3.95	2.52	0.50	0.80	26.00	74	10250
A9M15KV03185*	3	185	3.95	2.60	0.50	0.80	27.30	77	11500
A9M15KV03240*	3	240	3.95	2.76	0.50	0.80	30.00	83	13800
A9M15KV03300*	3	300	3.95	2.84	0.50	0.80	32.10	88	16200
A9M15KV03400*	3	400	3.95	3.08	0.50	0.80	35.00	95	19300
A9M15KV03500*	3	500	3.95	3.24	0.50	0.80	38.00	103	23100

\* Designates the sheath colour. For each Eland Cables part number replace with the colour code as listed below e.g. A9M15KV01050RD = 50mm<sup>2</sup> Red

## COLOUR CODES

COLOUR CODE	Red	Black
	RD	BK



Click here for more information:  
[elandcables.com](http://elandcables.com) [BS 7835 8.7/15kV Cable](#)

## CONDUCTORS

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

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	NOMINAL DIAMETER OF CONDUCTOR	NOMINAL SHORT CIRCUIT CURRENT AT 1 SECOND kA	CONDUCTOR DC RESISTANCE AT 20 °C Ω/km	CONDUCTOR DC RESISTANCE AT 20 °C Ω/km
50	8.10	7.15	0.387	0.497
70	9.70	10.01	0.268	0.344
95	11.40	13.59	0.193	0.248
120	12.70	17.16	0.153	0.196
150	14.50	21.45	0.124	0.160
185	15.90	26.46	0.0991	0.128
240	18.60	34.32	0.0754	0.098
300	20.70	42.90	0.0601	0.080
400	23.50	57.20	0.0470	0.064
500	26.50	71.50	0.0366	0.0510
630	30.20	90.09	0.0283	0.0420

## ELECTRICAL CHARACTERISTICS

Current Carrying Capacity

NUMBER OF CORES	NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	CURRENT CARRYING CAPACITY A		CONDUCTOR LOSSES IN THE GROUND kW/km
		In ground (20 °C)	In air (30 °C)	
1	50	249	277	30.81
1	70	303	345	31.58
1	95	358	418	31.78
1	120	404	481	31.99
1	150	441	537	31.12
1	185	493	612	31.11
1	240	563	716	31.06
1	300	626	811	31.35
1	400	676	901	29.25
1	500	743	1006	28.15
1	630	-	-	-
3	50	210	206	65.75
3	70	256	257	67.63
3	95	307	313	70.12
3	120	349	360	71.62
3	150	392	410	73.76
3	185	443	469	75.36
3	240	513	553	77.40
3	300	576	635	79.60
3	400	650	731	81.10
3	500	-	-	-



## 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 km/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 m	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

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.