



# BS 6622 XLPE/PVC Medium Voltage 19/33 (36)kV Cable



Eland Product Group: A9M

## APPLICATION

Power cables for power networks, underground and in cable ducting. Suitable for direct burial.

## CHARACTERISTICS

**Voltage Rating** U<sub>0</sub>/U (Um)  
19/33 (36)kV

### Temperature Rating

Fixed: 0°C to +90°C  
Initial temperature at S.C.C for metallic screen: 80°C  
Maximum conductor temperature during S.C: 250°C

### Minimum Bending Radius

Fixed: 15 x overall diameter

## 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

PVC (Polyvinyl Chloride)

### Armour

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

### Sheath

PVC (Polyvinyl Chloride)

### Sheath Colour

● Red ● Black

## STANDARDS

BS 6622, EN 60228, IEC 60502-2

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

## THE CABLE LAB<sup>®</sup>

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](http://www.elandcables.com/company/about-us/esg-sustainability)



## REGULATORY COMPLIANCE

This cable meets the requirements of the RoHS Directive 2015/65/EU and Reach Directive EC 1907/2006. RoHS compliance has been tested and confirmed by The Cable Lab<sup>®</sup>.





## DIMENSIONS

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	NOMINAL INSULATION THICKNESS mm	NOMINAL OUTER SHEATH THICKNESS mm	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km
A9M33KV01070*	1	70	8	2.2	38.8	2077
A9M33KV01095*	1	95	8	2.3	40.3	2393
A9M33KV01120*	1	120	8	2.3	41.7	2692
A9M33KV01150*	1	150	8	2.4	44.7	3193
A9M33KV01185*	1	185	8	2.5	46.4	3623
A9M33KV01240*	1	240	8	2.6	49	4309
A9M33KV01300*	1	300	8	2.6	51.6	4999
A9M33KV01400*	1	400	8	2.7	54.4	5956
A9M33KV01500*	1	500	8	2.8	58	7107
A9M33KV01630*	1	630	8	3	63.3	8783
A9M33KV01800*	1	800	8	3.1	67.6	10766
A9M33KV03070*	3	70	8	3.5	77.6	9625
A9M33KV03095*	3	95	8	3.7	81	10827
A9M33KV03120*	3	120	8	3.8	84.4	12043
A9M33KV03150*	3	150	8	3.9	88.1	13379
A9M33KV03185*	3	185	8	4	91.5	14800
A9M33KV03240*	3	240	8	4.2	97.1	17324
A9M33KV03300*	3	300	8	4.3	102.7	19777
A9M33KV03400*	3	400	8	4.6	109.1	23228

\* Designates the sheath colour. For each Eland Cables part number replace with the colour code as listed below e.g. A9M33KV01070RD = 70mm<sup>2</sup> Red

## COLOUR CODES

COLOUR	Red	Black
CODE	RD	BK

## ELECTRICAL CHARACTERISTICS

### Single Core Cables

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	MAXIMUM CONDUCTOR DC RESISTANCE AT 20 °C Ω/Km	MAXIMUM CONDUCTOR AC RESISTANCE AT OPERATING TEMP. AND 50HZ Ω/Km	CAPACITANCE μF/Km	CHARGING CURRENT A/Km	DIELECTRIC LOSSES W/Km	REACTANCE AT 50 HZ ohm/km	CONDUCTOR S.C.C FOR 1 SEC KA	CURRENT RATING A	
								Laid in ground	Laid in free air
70	0.268	0.342	0.159	0.947	72.00	0.146	10.02	275	308
95	0.193	0.2465	0.171	1.022	77.64	0.141	13.59	326	369
120	0.153	0.1957	0.184	1.101	83.67	0.135	17.17	368	421
150	0.124	0.1589	0.199	1.191	90.51	0.132	21.46	406	470
185	0.0991	0.1273	0.213	1.275	96.88	0.128	26.47	440	528
240	0.0754	0.0975	0.236	1.408	107.03	0.122	34.34	496	608
300	0.0601	0.0784	0.258	1.541	117.11	0.118	42.93	545	679
400	0.047	0.0623	0.282	1.684	127.99	0.113	57.23	597	758
500	0.0366	0.0498	0.313	1.87	142.16	0.109	71.54	650	844
630	0.0283	0.0401	0.356	2.127	161.68	0.106	90.14	699	931
800	0.0221	0.0332	0.394	2.35	178.65	0.102	114.47	744	1013

### Multicore Cables

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	MAXIMUM CONDUCTOR DC RESISTANCE AT 20 °C Ω/Km	MAXIMUM CONDUCTOR AC RESISTANCE AT OPERATING TEMP. AND 50HZ Ω/Km	CAPACITANCE μF/Km	CHARGING CURRENT A/Km	DIELECTRIC LOSSES W/Km	REACTANCE AT 50 HZ ohm/km	CONDUCTOR S.C.C FOR 1 SEC KA	CURRENT RATING A	
								Laid in ground	Laid in free air
70	0.268	0.3421	0.19	0.947	72.00	0.128	10.02	264	281
95	0.193	0.2466	0.205	1.022	77.64	0.123	13.59	312	336
120	0.153	0.1958	0.221	1.101	83.67	0.118	17.17	354	383
150	0.124	0.1591	0.239	1.191	90.51	0.114	21.46	395	432
185	0.0991	0.1276	0.256	1.275	96.88	0.110	26.47	443	489
240	0.0754	0.0979	0.283	1.408	107.03	0.106	34.34	507	567
300	0.0601	0.079	0.31	1.541	117.11	0.102	42.93	567	641
400	0.047	0.063	0.338	1.684	127.99	0.098	57.23	633	724

Laying conditions at trefoil formation are as below:

- Soil thermal resistivity 100 °C.Cm/Watt
- Burial depth 0.8 m
- Ground temperature 20 °C | Air temperature 30 °C | Frequency 50 Hz

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.



## 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

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