

BS 6622 XLPE PVC 12.7/22kV Cable



Eland Product Group: A9M

APPLICATION

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

CHARACTERISTICS

Voltage Rating U_o/U (Um)
12.7/22 (24) 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 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

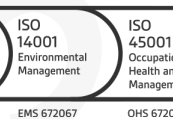
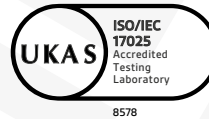
STANDARDS

BS 6622, 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 ²	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	
A9M22KV01050*	1	50	4.85	1.40	0.50	0.80	21.30	32	1600
A9M22KV01070*	1	70	4.85	1.48	0.50	0.80	23.00	34	1900
A9M22KV01095*	1	95	4.85	1.48	0.50	0.80	24.60	36	2250
A9M22KV01120*	1	120	4.85	1.56	0.50	0.80	26.00	37	2500
A9M22KV01150*	1	150	4.85	1.56	0.50	0.80	27.70	40	2800
A9M22KV01185*	1	185	4.85	1.64	0.50	0.80	29.30	41	3250
A9M22KV01240*	1	240	4.85	1.72	0.50	0.80	31.80	45	4100
A9M22KV01300*	1	300	4.85	1.80	0.50	0.80	34.00	47	4800
A9M22KV01400*	1	400	4.85	1.88	0.50	0.80	36.70	50	5750
A9M22KV01500*	1	500	4.85	1.96	0.50	0.80	39.70	53	6900
A9M22KV01630*	1	630	4.85	2.04	0.50	0.80	44.00	58	8400
A9M22KV03050*	3	50	4.85	2.20	0.50	0.80	21.30	61	6000
A9M22KV03070*	3	70	4.85	2.28	0.50	0.80	23.00	65	7000
A9M22KV03095*	3	95	4.85	2.44	0.50	0.80	24.60	69	8200
A9M22KV03120*	3	120	4.85	2.52	0.50	0.80	26.00	74	9900
A9M22KV03150*	3	150	4.85	2.68	0.50	0.80	27.70	78	11200
A9M22KV03185*	3	185	4.85	2.76	0.50	0.80	29.10	81	12600
A9M22KV03240*	3	240	4.85	2.84	0.50	0.80	31.80	87	14900
A9M22KV03300*	3	300	4.85	3.00	0.50	0.80	34.00	93	17400
A9M22KV03400*	3	400	4.85	3.24	0.50	0.80	36.70	100	20600
A9M22KV03500*	3	500	4.85	3.40	0.50	0.80	39.70	107	24500

* Designates the sheath colour. For each Eland Cables part number replace with the colour code as listed below e.g. A9M22KV01050RD = 50mm² Red

COLOUR CODES

COLOUR CODE	Red	Black
	RD	BK



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elandcables.com [BS 6622 XLPE PVC 12.7/22kV Cable](#)

CONDUCTORS

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

NOMINAL CROSS SECTIONAL AREA mm ²	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 ²	CURRENT CARRYING CAPACITY A		CONDUCTOR LOSSES IN THE GROUND kW/km
		In ground (20 °C)	In air (30 °C)	
1	50	250	279	31.10
1	70	304	347	31.80
1	95	361	420	32.30
1	120	407	483	32.47
1	150	445	540	31.68
1	185	498	614	31.74
1	240	569	718	31.73
1	300	633	813	32.10
1	400	686	904	30.10
1	500	756	1011	29.10
1	630	820	1030	28.20
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	77.37
3	300	576	635	79.60
3	400	650	731	81.12
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.