



EXeCeWB 8.7/15 (17.5)kV Cable



Eland Product Group: B4M

APPLICATION

Medium voltage power cables for distribution networks and generation units, suitable for external installation including direct in ground and in buried cable ducts. UV Resistant.

CHARACTERISTICS

Voltage Rating U_o/U

8.7/15 (17.5)kV
12/20 (24)kV
18/30 (36)kV

Test Voltage

35kV AC 50Hz (5 mins)
42kV AC 50Hz (5 mins)
63kV AC 50Hz (5 mins)

Temperature Rating

Maximum Conductor Operating Temperature: 90°C
Maximum Screen Operating Temperature: 80°C
Maximum Conductor Temperature During S.C.: 250°C

Minimum Bending Radius

20 x Outer Diameter

CONSTRUCTION

Conductor

Class 2 Stranded Circular Compacted Copper

Conductor Screen

Extruded Inner Semi Conductor (Bonded Type)

Insulation

XLPE (Cross-Linked Polyethylene) 90°C

Insulation Screen

Extruded Outer Semi Conductor (Strippable Type)

Semi Conductive Water Blocking Tape

Screen

Copper Wires and Open Helix Copper Tape

Non-Conductive Water Blocking Tape

Tape

Aluminium Tape

Outer Sheath

MDPE (Medium Density Polyethylene)

Sheath Colour

● Red ● Black

STANDARDS

IEC 60502-2, IEC 60228,

Generally to HD620 10B

UV Resistant: ISO 4892-3

Water Resistant: EN 60529

Abrasion and Tear Resistance: EN 60229-4.1

Impact rated to: AG2 EN 60364-5.51

THE CABLE LAB[®]

AN ISO/IEC 17025 AND IECCE 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 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[®].





DIMENSIONS 8.7/15 (17.5)KV

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm ²	NOMINAL SCREEN CROSS SECTIONAL AREA mm ²	NOMINAL INSULATION THICKNESS mm	NOMINAL SHEATH THICKNESS mm	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km
B4M15KV01050	1	50	16	4.5	1.7	26.6	1008
B4M15KV01095	1	95	16	4.5	1.8	29.9	1505
B4M15KV01150	1	150	25	4.5	2	33.5	2155
B4M15KV01240	1	240	25	4.5	2.1	37.4	3086
B4M15KV01400	1	400	35	4.5	2.3	43	4609
B4M15KV01630	1	630	35	4.5	2.5	51.5	7060

ELECTRICAL CHARACTERISTICS 8.7/15 (17.5)KV

NOMINAL CROSS SECTIONAL AREA mm ²	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	COPPER SCREEN S.C.C FOR 1 SEC KA	CURRENT RATING A	
									Laid in ground	Laid in free air
50	0.387	0.494	0.214	0.586	20.37	0.135	7.15	1.75	210	221
95	0.193	0.247	0.267	0.73	25.39	0.122	13.585	1.75	302	336
150	0.124	0.159	0.317	0.868	30.20	0.114	21.45	2.73	383	440
240	0.0754	0.098	0.383	1.047	36.42	0.105	34.32	2.73	497	599
400	0.047	0.062	0.466	1.275	44.35	0.098	57.2	3.82	625	794
630	0.0283	0.039	0.601	1.643	57.17	0.093	90.09	3.82	780	1037



DIMENSIONS 12/20 (24)KV

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm ²		NOMINAL CONDUCTOR DIAMETER mm	NUMBER WIRES CONDUCTOR mm	NOM. THICKNESS SEMI-CON. LAYER		NOMINAL INSULATION THICKNESS mm	MINIMUM INSULATION THICKNESS mm	NOMINAL DIAMETER OVER INSULATION mm
		Conductor	Screen			INNER mm	OUTER mm			
B4M20KV01050	1	50	16	8.10	10 x 2.62	0.50	0.40	5.50	4.85	20.3
B4M20KV01095	1	95	16	11.4	19 x 2.62	0.50	0.40	5.50	4.85	23.6
B4M20KV01150	1	150	25	14.5	19 x 3.20	0.50	0.40	5.50	4.85	26.7
B4M20KV01240	1	240	25	18.6	48 x 2.62	0.50	0.40	5.50	4.85	30.8
B4M20KV01400	1	400	35	23.5	61 x 2.97	0.50	0.40	5.50	4.85	35.7
B4M20KV01630	1	630	35	30.2	61 x 3.80	0.50	0.40	5.50	4.85	42.9

NOMINAL CROSS SECTIONAL AREA mm ²	NUMBER WIRES SCREEN mm	DIAMETER TAPE SCREEN mm	NOMINAL SHEATH THICKNESS mm	MINIMUM SHEATH THICKNESS mm	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km	MAXIMUM SIDEWALL PRESSURE N/cm ²	MAXIMUM PULLING TENSION N
50	44 x 0.66	1x0.1x10	1.80	1.24	27	1100	475	2500
95	44 x 0.66	1x0.1x10	1.90	1.32	31	1600	747	4750
150	71 x 0.66	1x0.1x10	2.00	1.40	34	2250	1031	7500
240	71 x 0.66	1x0.1x10	2.10	1.48	38	3250	1413	12000
400	60 x 0.85	1x0.1x15	2.30	1.64	44	4750	1975	20000
630	60 x 0.85	1x0.1x15	2.50	1.80	51	7250	2586	31500

ELECTRICAL CHARACTERISTICS 12/20 (24)KV

NOMINAL CROSS SECTIONAL AREA mm ²	CONDUCTOR DC RESISTANCE AT 20°C ohms/km	CONDUCTOR DC RESISTANCE AT 75°C ohms/km	CONDUCTOR AC RESISTANCE BY MAX TEMP ohms/km	CURRENT CARRYING CAPACITY (A)		REACTANCE ohms/km	CHARGING ADMITTANCE A/km	CAPACITANCE uF/km	S.C.C CONDUCTOR 1SEC kA	S.C.C SCREEN 1SEC kA	CONDUCTOR LOSSES IN THE GROUND kW/km
				In Ground 20°C	In Air 30°C						
50	0.387	0.801	0.497	250	279	0.19	0.40	0.15	7.15	3.2	31.1
95	0.193	0.399	0.248	361	420	0.18	0.36	0.19	13.59	3.2	32.3
150	0.124	0.160	0.256	445	540	0.17	0.33	0.24	21.45	5.0	31.7
240	0.0754	0.156	0.0980	569	718	0.16	0.31	0.27	34.32	5.0	31.7
400	0.0470	0.0974	0.0640	686	904	0.16	0.29	0.32	57.20	7.1	30.1
630	0.0283	0.0420	0.0586	850	1030	0.15	0.27	0.40	90.09	7.1	30.3

Derating factor (ground): 1 (Soil thermal resistivity: 1km/W, Depth 0.8m, Flat formation - touching)

Derating factor (air): 1 (Flat formation - touching)

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.



DIMENSIONS 18/30 (36)KV

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm ²		NOMINAL CONDUCTOR DIAMETER mm	NUMBER WIRES CONDUCTOR mm	NOM. THICKNESS SEMI-CON. LAYER		NOMINAL INSULATION THICKNESS mm	MINIMUM INSULATION THICKNESS mm	NOMINAL DIAMETER OVER INSULATION mm
		Conductor	Screen			INNER mm	OUTER mm			
B4M30KV01050	1	50	16	8.10	10 x 2.62	0.50	0.40	8.00	7.10	25.1
B4M30KV01095	1	95	16	11.4	19 x 2.62	0.50	0.40	8.00	7.10	28.4
B4M30KV01150	1	150	25	14.5	19 x 3.20	0.50	0.40	8.00	7.10	31.5
B4M30KV01240	1	240	25	18.6	48 x 2.62	0.50	0.40	8.00	7.10	35.6
B4M30KV01400	1	400	35	23.5	61 x 2.97	0.50	0.40	8.00	7.10	40.5
B4M30KV01630	1	630	35	30.2	61 x 3.80	0.50	0.40	8.00	7.10	47.7

NOMINAL CROSS SECTIONAL AREA mm ²	NUMBER WIRES SCREEN mm	DIAMETER TAPE SCREEN mm	NOMINAL SHEATH THICKNESS mm	MINIMUM SHEATH THICKNESS mm	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km	MAXIMUM SIDEWALL PRESSURE N/cm ²	MAXIMUM PULLING TENSION N
50	44 x 0.66	1x0.1x10	2.00	1.40	32	1300	416	2500
95	44 x 0.66	1x0.1x10	2.10	1.48	36	1900	668	4750
150	71 x 0.66	1x0.1x10	2.20	1.56	39	2500	935	7500
240	71 x 0.66	1x0.1x10	2.30	1.64	43	3500	1299	12000
400	60 x 0.85	1x0.1x15	2.50	1.80	49	5250	1839	20000
630	60 x 0.85	1x0.1x15	2.70	1.96	56	7250	2436	31500

ELECTRICAL CHARACTERISTICS 18/30 (36)KV

NOMINAL CROSS SECTIONAL AREA mm ²	CONDUCTOR DC RESISTANCE AT 20°C ohms/km	CONDUCTOR DC RESISTANCE AT 75°C ohms/km	CONDUCTOR AC RESISTANCE BY MAX TEMP ohms/km	CURRENT CARRYING CAPACITY (A)		REACTANCE ohms/km	CHARGING ADMITTANCE A/km	CAPACITANCE uF/km	S.C.C CONDUCTOR 1SEC kA	S.C.C SCREEN 1SEC kA	CONDUCTOR LOSSES IN THE GROUND kW/km
				In Ground 20°C	In Air 30°C						
50	0.387	0.801	0.497	251	279	0.20	0.44	0.12	7.15	3.2	31.3
95	0.193	0.399	0.248	363	421	0.19	0.38	0.14	13.59	3.2	32.7
150	0.124	0.160	0.256	449	540	0.18	0.36	0.17	21.45	5.0	32.3
240	0.0754	0.156	0.0980	576	718	0.17	0.34	0.20	34.32	5.0	32.5
400	0.0470	0.0974	0.0640	697	904	0.16	0.31	0.24	57.20	7.1	31.1
630	0.0283	0.0420	0.0586	850	1030	0.15	0.29	0.29	90.09	7.1	30.3

Derating factor (ground): 1 (Soil thermal resistivity: 1km/W, Depth 0.8m, Flat formation - touching)

Derating factor (air): 1 (Flat formation - touching)