

EXCWB Cable



Eland Product Group: B4L

APPLICATION

Medium Voltage MDPE sheathed power distribution cables particularly noted for applications in wind energy installations.

CHARACTERISTICS

Voltage Rating U_0/U (Um)

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

Initial temperature at S.C.C for metallic screen: 80°C

Maximum conductor temperature during S.C: 250°C

Minimum Bending Radius

20 x overall diameter

CONSTRUCTION

Conductor

Class 2 Stranded Copper

Conductor Screen

Semi-conductive material (Bonded type)

Insulation

XLPE (Cross-Linked Polyethylene)

Insulation Screen

Semi-conductive material (Strippable type)

Screen

Copper wires with Open Helix Copper Tape Screen

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

Abrasion and Tear Resistant: EN 60229-4.1

Impact rated to: AG2 EN 60364-5.51

THE CABLE LAB[®]

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



SCIENCE
BASED
TARGETS

BUSINESS
AMBITION FOR 1.5°C



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
B4L15KV01050	1	50	16	4.5	1.7	23.8	904
B4L15KV01095	1	95	16	4.5	1.8	27.1	1389
B4L15KV01150	1	150	25	4.5	2	30.7	2027
B4L15KV01240	1	240	25	4.5	2.1	34.6	2943
B4L15KV01400	1	400	35	4.5	2.3	40.2	4445
B4L15KV01630	1	630	35	4.5	2.5	48.7	6869

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	0.128	7.15	1.75	227	238
95	0.193	0.247	0.267	0.73	25.39	0.116	13.585	1.75	325	362
150	0.124	0.159	0.317	0.868	30.20	0.108	21.45	2.73	413	474
240	0.0754	0.098	0.383	1.047	36.42	0.101	34.32	2.73	536	645
400	0.047	0.062	0.466	1.275	44.35	0.094	57.2	3.82	673	856
630	0.0283	0.039	0.601	1.643	57.17	0.090	90.09	3.82	840	1118

Laying conditions at trefoil formation are as below:

- Soil thermal resistivity 120 °C.Cm/Watt
- Burial depth 0.5 m
- Ground temperature 15 °C
- Air temperature 25 °C
- Frequency 50 Hz

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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			
B4L20KV01050	1	50	16	8.10	10 x 2.62	0.50	0.40	5.50	4.85	20.3
B4L20KV01095	1	95	16	11.4	19 x 2.62	0.50	0.40	5.50	4.85	23.6
B4L20KV01150	1	150	25	14.5	19 x 3.20	0.50	0.40	5.50	4.85	26.7
B4L20KV01240	1	240	25	18.6	48 x 2.62	0.50	0.40	5.50	4.85	30.8
B4L20KV01400	1	400	35	23.5	61 x 2.97	0.50	0.40	5.50	4.85	35.7
B4L20KV01630	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	26	1000	489	2500
95	44 x 0.66	1x0.1x10	1.90	1.32	30	1500	784	4750
150	71 x 0.66	1x0.1x10	2.00	1.40	33	2250	1053	7500
240	71 x 0.66	1x0.1x10	2.10	1.48	38	3250	1439	12000
400	60 x 0.85	1x0.1x15	2.30	1.64	43	4750	2005	20000
630	60 x 0.85	1x0.1x15	2.50	1.80	51	7000	2618	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	0.39	0.15	7.15	3.2	31.1
95	0.193	0.399	0.248	361	420	0.18	0.35	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	0.30	0.27	34.32	5.0	31.7
400	0.0470	0.0974	0.0640	686	904	0.16	0.28	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)



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			
B4L30KV01050	1	50	16	8.10	10 x 2.62	0.50	0.40	8.00	7.10	25.1
B4L30KV01095	1	95	16	11.4	19 x 2.62	0.50	0.40	8.00	7.10	28.4
B4L30KV01150	1	150	25	14.5	19 x 3.20	0.50	0.40	8.00	7.10	31.5
B4L30KV01240	1	240	25	18.6	48 x 2.62	0.50	0.40	8.00	7.10	35.6
B4L30KV01400	1	400	35	23.5	61 x 2.97	0.50	0.40	8.00	7.10	40.5
B4L30KV01630	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	1200	426	2500
95	44 x 0.66	1x0.1x10	2.10	1.48	35	1800	682	4750
150	71 x 0.66	1x0.1x10	2.20	1.56	38	2500	952	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	48	5000	1885	20000
630	60 x 0.85	1x0.1x15	2.70	1.96	56	7500	2465	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	0.43	0.12	7.15	3.2	31.3
95	0.193	0.399	0.248	363	421	0.19	0.39	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	0.33	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)

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