ELAND® CABLES

N2XS2Y 12/20 (24)kV Cable

Eland Product Group: A9X

APPLICATION

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

CHARACTERISTICS

Voltage Rating Uo/U (Um)
12/20 (24)kV

Test Voltage
42kV AC 50Hz (5 mins)

Temperature Rating
-20°C to +60°C
Permissible Conductor Operating Temperature: +90°C
Permissible Short Circuit Temperature up to 5 sec: 250°C

Minimum Bending Radius
15 x overall diameter

CONSTRUCTION

Conductor
Class 2 Stranded Copper

Conductor Screen
Semi-conductive material

Insulation
XLPE (Cross-Linked Polyethylene)

Insulation Screen
Semi-conductive material (bonded)

Screen
Copper wires and copper tape

Outer Sheath
MDPE (Medium Density Polyethylene)

Sheath Colour
● Red ● Black

STANDARDS

IEC 60502-2, IEC 60228,

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.

ISO/IEC 17025 Accredited Testing Laboratory UKAS TESTING 8570
IECEE CBTL Accredited Testing Laboratory

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 Low Voltage Directive 2014/35/EU, the RoHS Directive 2015/65/EU and Reach Directive EC 1907/2006. RoHS compliance has been tested and confirmed by The Cable Lab®.

RoHS REACH

DIMENSIONS

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm²		NOMINAL CONDUCTOR DIAMETER	NUMBER WIRES CONDUCTOR	NOM. THICKNESS SEMI-CON. LAYER		NOMINAL INSULATION THICKNESS	MINIMUM INSULATION THICKNESS	NOMINAL DIAMETER OVER INSULATION
		Conductor	Screen			INNER	OUTER			
				mm	mm	mm	mm	mm	mm	mm
A9XY20KV1050**	1	50	16	8.10	10 x 2.62	0.50	0.40	5.50	4.85	20.3
A9XY20KV1070**	1	70	16	9.70	14 x 2.62	0.50	0.40	5.50	4.85	21.9
A9XY20KV1095**	1	95	16	11.4	19 x 2.62	0.50	0.40	5.50	4.85	23.6
A9XY20KV1120**	1	120	16	12.7	19 x 2.97	0.50	0.40	5.50	4.85	24.9
A9XY20KV1150**	1	150	25	14.5	19 x 3.20	0.50	0.40	5.50	4.85	26.7
A9XY20KV1185**	1	185	25	15.9	27 x 2.62	0.50	0.40	5.50	4.85	28.1
A9XY20KV1240**	1	240	25	18.6	48 x 2.62	0.50	0.40	5.50	4.85	30.8
A9XY20KV1300**	1	300	25	20.7	61 x 2.62	0.50	0.40	5.50	4.85	32.9
A9XY20KV1400**	1	400	35	23.5	61 x 2.97	0.50	0.40	5.50	4.85	35.7
A9XY20KV1500**	1	500	35	26.5	61 x 3.29	0.50	0.40	5.50	4.85	38.7
A9XY20KV1630**	1	630	35	30.2	61 x 3.80	0.50	0.40	5.50	4.85	42.9

** replace with sheath colour - RD = Red BK = Black

NOMINAL CROSS SECTIONAL AREA	NUMBER WIRES SCREEN	DIAMETER TAPE SCREEN	NOMINAL SHEATH THICKNESS	MINIMUM SHEATH THICKNESS	NOMINAL OVERALL DIAMETER	NOMINAL WEIGHT	MAXIMUM SIDEWALL PRESSURE	MAXIMUM PULLING TENSION
mm²	mm	mm	mm	mm	mm	kg/km	N/cm²	N
50	44 x 0.66	1x0.1x10	1.80	1.24	26	1000	489	2500
70	44 x 0.66	1x0.1x10	1.90	1.32	28	1200	619	3500
95	44 x 0.66	1x0.1x10	1.90	1.32	30	1500	784	4750
120	44 x 0.66	1x0.1x10	2.00	1.40	31	1800	915	6000
150	71 x 0.66	1x0.1x10	2.00	1.40	33	2250	1053	7500
185	71 x 0.66	1x0.1x10	2.10	1.48	35	2500	1236	9250
240	71 x 0.66	1x0.1x10	2.10	1.48	38	3250	1439	12000
300	71 x 0.66	1x0.1x10	2.20	1.56	40	3750	1635	15000
400	60 x 0.85	1x0.1x15	2.30	1.64	43	4750	2005	20000
500	60 x 0.85	1x0.1x15	2.40	1.72	48	5750	2299	25000
630	60 x 0.85	1x0.1x15	2.50	1.80	51	7000	2618	31500

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ELECTRICAL CHARACTERISTICS

NOMINAL CROSS SECTIONAL AREA	CONDUCTOR DC RESISTANCE AT 20°C	CONDUCTOR DC RESISTANCE AT 75°C	CONDUCTOR AC RESISTANCE BY MAX TEMP	CURRENT CARRYING CAPACITY (A)		REACTANCE	CHARGING ADMITTANCE	CAPACITANCE	S.C.C CONDUCTOR 1SEC kA	S.C.C SCREEN 1SEC	CONDUCTOR LOSSES IN THE GROUND
mm²	ohms/km	ohms/km	ohms/km	In Ground 20°C	In Air 30°C	ohms/km	A/km	uF/km		kA	kW/km
50	0.387	0.801	0.497	250	279	0.19	0.39	0.15	7.15	3.2	31.1
70	0.268	0.555	0.344	304	347	0.18	0.37	0.17	10.1	3.2	31.8
95	0.193	0.399	0.248	361	420	0.18	0.35	0.19	13.59	3.2	32.3
120	0.153	0.316	0.196	407	483	0.17	0.34	0.20	17.16	3.2	32.5
150	0.124	0.160	0.256	445	540	0.17	0.33	0.24	21.45	5.0	31.7
185	0.0991	0.205	0.128	498	614	0.16	0.32	0.24	26.46	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
300	0.0601	0.124	0.0800	633	813	0.16	0.29	0.29	42.90	5.0	32.1
400	0.0470	0.0974	0.0640	686	904	0.16	0.28	0.32	57.20	7.1	30.1
500	0.0366	0.0758	0.0510	756	1011	0.15	0.28	0.36	71.50	7.1	29.1
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)