

N2XSH 12/20 (24)kV Cable



Eland Product Group: A9X

APPLICATION

Medium voltage power cables for distribution networks and generation units. LSZH outer sheathing makes the cable suitable for internal installation as well as directly in ground, outdoors, and in 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
LSZH (Low Smoke Zero Halogen)

Sheath Colour
● Red ● Black

STANDARDS

IEC 60502-2, IEC 60228,
Low Smoke Zero Halogen: IEC 60754-1/2, IEC 61034-2
Flame Retardant: IEC 60332-3-24 Cat C, IEC 60332-1-2
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 IEC 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 is compliant with European Regulation EN 50575, the Construction Products Regulation.



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[®].





DIMENSIONS

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			
A9XH20KV1050RDC	1	50	16	8.10	10 x 2.62	0.50	0.40	5.50	4.85	20.3
A9XH20KV1070RDC	1	70	16	9.70	14 x 2.62	0.50	0.40	5.50	4.85	21.9
A9XH20KV1095RDC	1	95	16	11.4	19 x 2.62	0.50	0.40	5.50	4.85	23.6
A9XH20KV1120RDC	1	120	16	12.7	19 x 2.97	0.50	0.40	5.50	4.85	24.9
A9XH20KV1150RDC	1	150	25	14.5	19 x 3.20	0.50	0.40	5.50	4.85	26.7
A9XH20KV1185RDC	1	185	25	15.9	27 x 2.62	0.50	0.40	5.50	4.85	28.1
A9XH20KV1240RDC	1	240	25	18.6	48 x 2.62	0.50	0.40	5.50	4.85	30.8
A9XH20KV1300RDC	1	300	25	20.7	61 x 2.62	0.50	0.40	5.50	4.85	32.9
A9XH20KV1400RDC	1	400	35	23.5	61 x 2.97	0.50	0.40	5.50	4.85	35.7
A9XH20KV1500RDC	1	500	35	26.5	61 x 3.29	0.50	0.40	5.50	4.85	38.7
A9XH20KV1630RDC	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
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	785	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	1413	12000
300	71 x 0.66	1x0.1x10	2.20	1.56	40	3750	1647	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	2586	31500



ELECTRICAL CHARACTERISTICS

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
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	0.36	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	0.22	21.45	5.0	31.7
185	0.0991	0.205	0.128	498	614	0.17	0.32	0.24	26.46	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
300	0.0601	0.124	0.0800	633	813	0.16	0.30	0.29	42.90	5.0	32.1
400	0.0470	0.0974	0.0640	686	904	0.16	0.29	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)