A2XS(FL)2Y HDPE High Voltage 64/110 (123) kV Cable

Eland Product Group: H9D

APPLICATION

High Voltage cables for distribution networks; also for connection to generation units and plant and process connection. For installation in ground, in water outdoors, indoors and in cable ducts for power stations, industry and distribution networks. The water blocking tape avoids water propagation inside the cable.

CHARACTERISTICS

Voltage Rating Uo/U
64/110 (123) kV

CONSTRUCTION

Conductor
Aluminium conductor (optional watertightness – WTC)

Conductor Screen
Semi-conductive screen extruded on the phase conductor

Insulation
XLPE (Cross-linked Polyethylene)

Insulation Screen
Semi-conductive screen extruded on insulation

Wrapping
Semi-conductive water swelling tape

Metallic Screen
Copper wires and equalising tape

Wrapping
Semi-conductive water swelling tape

Tape
Longitudinally applied aluminium tape coated with PE copolymer

Sheath
HDPE (High Density Polyethylene)

Optional – semi-conductive layer

Sheath Colour
● Black

STANDARDS

IEC 60840

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

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

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm²	NOMINAL DIAMETER OF CONDUCTOR mm	INSULATION mm		METALLIC SCREEN		NOMINAL OUTER DIAMETER OF CABLE mm	NOMINAL WEIGHT kg/km	MAXIMUM PULLING FORCE mm	MINIMUM BENDING RADIUS m
				Nominal thickness	Nominal diamter over	Nominal cross section mm²	Nominal diameter over mm				
H9D110KV010150	1	150RM	14.1	18.0	53.1	95	58.9	67	4350	5.3	1.7
H9D110KV010185	1	185RM	15.8	17.0	52.2	95	58.0	66	4330	6.5	1.7
H9D110KV010240	1	240RM	17.9	16.5	52.9	95	58.7	67	4490	8.4	1.7
H9D110KV010300	1	300RM	20.0	15.5	53.0	95	58.8	67	4600	10.5	1.7
H9D110KV010400	1	400RM	22.9	14.5	53.9	95	59.7	68	4820	14.0	1.7
H9D110KV010500	1	500RM	25.7	14.0	55.7	95	61.5	70	5210	17.5	1.8
H9D110KV010630	1	630RM	29.3	14.0	59.9	95	65.7	74	5910	22.1	1.9
H9D110KV010800	1	800RM	33.0	14.0	63.6	95	69.4	78	6610	28.0	2.0
H9D110KV011000	1	1000RM	38.0	14.0	68.6	95	74.4	84	7540	35.0	2.1
H9D110KV011200	1	1200RM	42.5	14.0	73.1	95	78.9	88	8440	42.0	2.2
H9D110KV011200R	1	1200RMS	43.0	14.0	75.2	95	81.0	91	8710	42.0	2.3
H9D110KV011400	1	1400RMS	45.1	14.0	77.3	95	83.1	93	9420	49.0	2.3
H9D110KV011600	1	1600RMS	48.5	14.0	80.7	95	86.5	97	10240	56.0	2.4
H9D110KV011800	1	1800RMS	52.7	14.0	84.9	95	90.7	101	11200	63.0	2.5
H9D110KV012000	1	2000RMS	54.5	14.0	86.7	95	92.5	103	11830	70.0	2.6
H9D110KV012500	1	2500RMS	59.0	14.5	93.2	95	99.4	110	13610	87.5	2.8
H9D110KV013000	1	3000RMS	67.0	14.5	101.2	95	107.4	119	16180	100.0	3.0

ELECTRICAL DATA

De – Cable diameter

Cables in flat formation, the distance between the cable axes = 2 × De

Cables in trefoil formation, the distance between the cable axes = De

ELECTRICAL CHARACTERISTICS

NOMINAL CROSS SECTIONAL AREA mm²	NOMINAL RESISTANCE OF CONDUCTOR 90 °C Ω/km	ELECTRICAL FIELD STRESS kV/mm		CAPACITANCE µF/km	ZERO REACTANCE Ω/km	INDUCTANCE Ω/km	
		Conductor screen	Insulation			Flat formation	Trefoil formation
150RM	0.2645	6.61	2.13	0.118	0.105	0.215	0.160
185RM	0.2108	6.67	2.23	0.127	0.095	0.210	0.150
240RM	0.1610	6.58	2.47	0.130	0.090	0.200	0.145
300RM	0.1291	6.62	2.75	0.152	0.084	0.195	0.135
400RM	0.1009	6.66	3.08	0.172	0.076	0.185	0.130
500RM	0.0792	6.65	3.30	0.195	0.072	0.185	0.125
630RM	0.0622	6.40	3.40	0.215	0.068	0.180	0.120
800RM	0.0498	6.20	3.50	0.230	0.064	0.175	0.115
1000RM	0.0408	6.05	3.60	0.255	0.059	0.170	0.110
1200RM	0.0359	5.90	3.65	0.280	0.056	0.165	0.105

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ELECTRICAL CHARACTERISTICS

NOMINAL CROSS SECTIONAL AREA mm²	NOMINAL RESISTANCE OF CONDUCTOR 90 °C Ω/km	ELECTRICAL FIELD STRESS kV/mm		CAPACITANCE µF/km	ZERO REACTANCE Ω/km	INDUCTANCE Ω/km	
		Conductor screen	Insulation			Flat formation	Trefoil formation
1200RMS	0.0319	5.85	3.70	0.290	0.057	0.165	0.105
1400RMS	0.0275	5.80	3.70	0.300	0.056	0.165	0.105
1600RMS	0.0242	5.70	3.75	0.315	0.054	0.160	0.105
1800RMS	0.0216	5.65	3.80	0.335	0.051	0.160	0.100
2000RMS	0.0195	5.60	3.80	0.345	0.050	0.160	0.100
2500RMS	0.0168	5.35	3.70	0.360	0.050	0.160	0.100
3000RMS	0.0130	5.25	3.75	0.400	0.047	0.155	0.095

CURRENT RATING FOR SINGLE-CORE CABLES – AMPERES

NOMINAL CROSS SECTIONAL AREA mm²	FLAT FORMATION		TREFOIL FORMATION		FLAT FORMATION		TREFOIL FORMATION	
	CONFIGURATIONS							
	SPP; CB		BOTH-ENDS		SPP; CB		BOTH-ENDS	
	CABLES IN EARTH							
	65°C	90°C	65°C	90°C	65°C	90°C	65°C	90°C
150RM	280	335	265	320	265	320	260	315
185RM	315	380	295	355	300	360	295	355
240RM	370	440	330	400	350	420	3400	410
300RM	420	500	370	450	395	475	385	465
400RM	480	575	400	490	455	545	430	520
500RM	550	660	435	535	520	625	485	590
630RM	635	760	475	585	595	715	545	665
800RM	720	865	510	630	670	810	605	740
1000RM	810	980	540	670	750	905	665	815
1200RM	885	1065	560	695	810	980	705	865
1200RMS	925	1110	575	710	865	1040	740	905
1400RMS	1005	1205	590	735	935	1125	785	960
1600RMS	1080	1295	650	815	1005	1205	870	1065
1800RMS	1155	1390	620	775	1070	1285	865	1065
2000RMS	1220	1465	630	790	1130	1355	895	1100
2500RMS	1330	1600	650	815	1220	1470	945	1165
3000RMS	1535	1850	680	850	1395	1685	1020	1265

CABLES IN AIR							
SPP; CB		BOTH-ENDS		SPP; CB		BOTH-ENDS	
65°C	90°C	65°C	90°C	65°C	90°C	65°C	90°C
300	400	285	385	270	365	265	360
345	460	325	435	310	415	305	410
410	545	375	510	365	490	355	480
470	630	430	580	415	560	405	550
550	735	480	655	485	655	465	635
640	855	535	735	560	760	535	730
745	1000	600	825	650	885	610	840
860	1155	660	920	750	1015	695	955
990	1335	725	1010	855	1165	780	1075
1095	1475	770	1080	935	1275	840	1165
1140	1530	790	1105	1000	1355	890	1225
1250	1675	830	1160	1090	1475	955	1320
1360	1820	915	1285	1180	1600	1060	1465
1475	1980	900	1270	1280	1735	1080	1505
1560	2100	925	1305	1350	1840	1130	1575
1720	2310	970	1370	1485	2020	1210	1695
2025	2730	1035	1475	1735	2365	1355	1905

SPB – Single Point Bonding; CB – Cross-bonding Both-ends; BE – Both-ends bonding