A2XS(FL)2Y HDPE High Voltage 36/60 (72.5) 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
36/60 (72.5) 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				
H9D60KV010120	1	120RM	12.5	10.0	33.7	35	37.5	44	1920	4.2	1.1
H9D60KV010150	1	150RM	14.1	10.0	35.3	35	39.1	45	2070	5.3	1.1
H9D60KV010185	1	185RM	15.8	10.0	37.0	35	40.8	47	2240	6.5	1.2
H9D60KV010240	1	240RM	17.9	10.0	39.1	35	42.9	49	2480	8.4	1.2
H9D60KV010300	1	300RM	20.0	10.0	41.2	35	45.0	52	2750	10.5	1.3
H9D60KV010400	1	400RM	22.9	10.0	44.5	35	48.7	55	3190	14.0	1.4
H9D60KV010500	1	500RM	25.7	10.0	47.3	35	51.5	58	3630	17.5	1.5
H9D60KV010630	1	630RM	29.3	10.0	51.1	35	55.3	63	4220	22.1	1.6
H9D60KV010800	1	800RM	33.0	10.0	54.8	35	59.0	67	4860	28.0	1.7
H9D60KV011000	1	1000RM	38.0	10.0	60.2	35	64.8	73	5800	35.0	1.8
H9D60KV011200	1	1200RM	42.5	10.0	64.7	50	69.3	78	6800	42.0	1.9
H9D60KV011200R	1	1200RMS	43.0	10.0	67.2	50	71.8	80	7070	42.0	2.0
H9D60KV011400	1	1400RMS	45.1	10.0	69.3	50	73.9	82	7750	49.0	2.1
H9D60KV011600	1	1600RMS	48.5	10.0	72.7	50	77.3	86	8520	56.0	2.2
H9D60KV011800	1	1800RMS	52.7	10.0	76.9	50	81.5	91	9450	63.0	2.3
H9D60KV012000	1	2000RMS	54.5	10.0	78.7	50	83.3	92	10020	70.0	2.3
H9D60KV012500	1	2500RMS	59.0	10.0	84.2	50	89.2	99	11580	87.5	2.5
H9D60KV013000	1	3000RMS	67.0	10.0	92.2	50	97.2	107	13990	100.0	2.7

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
120RM	0.3247	5.85	2.40	0.150	0.086	0.200	0.140
150RM	0.2645	5.65	2.45	0.160	0.081	0.195	0.135
185RM	0.2108	5.45	2.50	0.175	0.077	0.190	0.130
240RM	0.1610	5.30	2.60	0.190	0.072	0.185	0.125
300RM	0.1291	5.15	2.65	0.200	0.068	0.180	0.120
400RM	0.1009	4.95	2.75	0.225	0.065	0.175	0.115
500RM	0.0792	4.80	2.80	0.245	0.061	0.170	0.115
630RM	0.0622	4.70	2.85	0.270	0.057	0.165	0.110
800RM	0.0498	4.60	2.90	0.295	0.054	0.165	0.105
1000RM	0.0408	4.45	3.00	0.330	0.051	0.160	0.100

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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
1200RM	0.0359	4.40	3.05	0.365	0.048	0.155	0.100
1200RMS	0.0319	4.35	3.05	0.380	0.049	0.160	0.100
1400RMS	0.0275	4.30	3.10	0.395	0.048	0.160	0.100
1600RMS	0.0242	4.25	3.10	0.415	0.047	0.155	0.100
1800RMS	0.0216	4.25	3.15	0.445	0.045	0.155	0.095
2000RMS	0.0195	4.20	3.15	0.455	0.044	0.150	0.095
2500RMS	0.0168	4.15	3.20	0.495	0.043	0.150	0.095
3000RMS	0.0130	4.10	3.20	0.545	0.041	0.150	0.090

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						CABLES IN AIR	
	65°C	90°C	65°C	90°C	65°C	90°C	65°C	90°C
95RM	220	265	215	260	210	255	210	250
120RM	250	300	245	290	240	285	235	285
150RM	280	340	270	325	270	320	265	320
185RM	320	385	305	365	305	365	300	360
240RM	370	445	345	420	355	425	345	420
300RM	420	505	385	465	400	480	390	470
400RM	485	580	430	525	455	550	445	535
500RM	555	665	455	580	520	625	505	610
630RM	635	765	520	640	595	715	570	690
800RM	725	870	560	695	670	810	635	770
1000RM	815	980	600	745	750	905	700	850
1200RM	885	1070	595	745	805	975	730	895
1200RMS	930	1115	610	760	870	1040	780	950
1400RMS	1005	1210	630	790	940	1130	830	1015
1600RMS	1085	1300	650	815	1005	1210	875	1070
1800RMS	1160	1395	665	835	1075	1295	920	1130
2000RMS	1225	1470	675	850	1130	1360	955	1175
2500RMS	1335	1605	695	875	1225	1475	1015	1245
3000RMS	1540	1855	720	910	1400	1690	1105	1370

FLAT FORMATION		TREFOIL FORMATION		FLAT FORMATION		TREFOIL FORMATION	
CONFIGURATIONS							
SPP; CB		BOTH-ENDS		SPP; CB		BOTH-ENDS	
CABLES IN EARTH						CABLES IN AIR	
65°C	90°C	65°C	90°C	65°C	90°C	65°C	90°C
2120	2875	1085	1565	1765	2425	1445	2040

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