2XS(FL)2Y MDPE High Voltage 64/110 (123) kV Cable

Eland Product Group: H9C

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
Copper 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
MDPE (Medium 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.

ISO/IEC 17025 Accredited Testing Laboratory
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 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 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				
H9C110KV010150	1	150RM	14.4	18.0	53.4	95	59.2	67	5280	7.5	1.7
H9C110KV010185	1	185RM	15.8	17.0	52.2	95	58.0	66	5450	9.3	1.7
H9C110KV010240	1	240RM	18.5	16.5	53.5	95	59.3	67	6000	12.0	1.7
H9C110KV010300	1	300RM	20.5	15.5	53.5	95	59.3	67	6500	15.0	1.7
H9C110KV010400	1	400RM	23.6	14.5	54.6	95	60.4	69	7300	20.0	1.7
H9C110KV010500	1	500RM	26.4	14.0	56.4	95	62.2	71	8350	25.0	1.8
H9C110KV010630	1	630RM	30.3	14.0	60.9	95	66.7	75	9920	31.5	1.9
H9C110KV010800	1	800RM	34.7	14.0	65.3	95	71.1	80	11740	40.0	2.0
H9C110KV011000	1	1000RM	38.3	14.0	68.9	95	74.7	84	13880	50.0	2.1
H9C110KV011200	1	1200RMS	41.6 +	14.0	73.8	95	79.6	89	16090	60.0	2.2
H9C110KV011400	1	1400RMS	45.8	14.0	78.0	95	83.8	94	18040	70.0	2.3
H9C110KV011600	1	1600RMS	49.6	14.0	81.8	95	87.6	98	20290	80.0	2.4
H9C110KV011800	1	1800RMS	53.2	14.0	85.4	95	91.2	102	22700	90.0	2.5
H9C110KV012000	1	2000RMS	54.6	14.0	86.8	95	92.6	103	24270	100.0	2.6
H9C110KV012500	1	2500RMS	60.0	14.5	94.2	95	100.4	112	29830	100.0	2.8
H9C110KV013000	1	3000RMS	68.4	14.5	102.6	95	108.8	121	35960	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	0.1588	6.56	2.14	0.119	0.104	0.215	0.155
185RM	0.1272	6.67	2.33	0.127	0.098	0.210	0.150
240RM	0.0973	6.51	2.49	0.135	0.089	0.200	0.140
300RM	0.0781	6.57	2.76	0.154	0.083	0.195	0.135
400RM	0.0619	6.60	3.10	0.176	0.075	0.185	0.130
500RM	0.0492	6.60	3.35	0.195	0.071	0.180	0.125
630RM	0.0395	6.35	3.45	0.220	0.067	0.175	0.120
800RM	0.0325	6.15	3.50	0.240	0.062	0.170	0.115
1000RM	0.0275	6.05	3.60	0.260	0.059	0.170	0.110
1200RMS	0.0222	5.90	3.65	0.280	0.058	0.165	0.110

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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
1400RMS	0.0198	5.80	3.70	0.300	0.055	0.165	0.105
1600RMS	0.0182	5.70	3.75	0.320	0.053	0.160	0.105
1800RMS	0.0169	5.65	3.80	0.340	0.051	0.160	0.100
2000RMS	0.0158	5.60	3.80	0.345	0.050	0.160	0.100
2500RMS	0.0140	5.35	3.70	0.365	0.050	0.160	0.100
3000RMS	0.0126	5.30	3.80	0.405	0.046	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				CABLES IN AIR			
	65°C	90°C	65°C	90°C	65°C	90°C	65°C	90°C
150RM	360	435	325	395	345	415	335	405
185RM	410	490	355	435	390	465	375	450
240RM	475	570	395	485	450	545	430	520
300RM	540	645	430	525	510	615	480	580
400RM	615	740	465	570	580	700	535	650
500RM	700	845	500	615	660	795	595	725
630RM	800	965	530	660	745	900	660	805
800RM	900	1090	560	695	830	1005	715	880
1000RM	995	1205	580	725	910	1105	765	945
1200RMS	1100	1330	605	755	1020	1235	825	1020
1400RMS	1180	1430	620	775	1085	1320	860	1065
1600RMS	1250	1515	630	790	1140	1390	885	1100
1800RMS	1305	1590	640	805	1185	1450	910	1135
2000RMS	1360	1655	650	815	1230	1500	930	1160
2500RMS	1465	1790	665	835	1310	1605	965	1205
3000RMS	1580	1930	680	855	1395	1710	1000	1255

	SPP; CB		BOTH-ENDS		SPP; CB		BOTH-ENDS	
	CABLES IN AIR							
	65°C	90°C	65°C	90°C	65°C	90°C	65°C	90°C
150RM	390	520	360	490	350	470	345	465
185RM	445	595	405	545	400	540	390	525
240RM	530	710	465	630	470	635	455	615
300RM	610	815	515	705	535	725	510	700
400RM	705	950	570	790	620	840	585	800
500RM	815	1100	630	875	715	970	660	910
630RM	945	1275	695	970	820	1120	750	1030
800RM	1085	1465	755	1055	930	1275	835	1155
1000RM	1215	1650	800	1130	1035	1415	905	1265
1200RMS	1355	1830	850	1200	1170	1605	995	1390
1400RMS	1475	2000	885	1255	1265	1740	1055	1485
1600RMS	1575	2140	915	1300	1350	1855	1110	1560
1800RMS	1665	2270	940	1340	1420	1955	1150	1625
2000RMS	1740	2375	960	1365	1475	2035	1185	1675
2500RMS	1900	2595	1000	1430	1600	2210	1255	1780
3000RMS	2095	2860	1050	1495	1740	2410	1330	1895

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