2XS(FL)2Y MDPE High Voltage 36/60 (72.5) 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
36/60 (72.5) 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				
H9C60KV010120	1	120RM	12.8	10.0	34.0	35	37.8	44	2670	6.0	1.1
H9C60KV010150	1	150RM	14.4	10.0	35.6	35	39.4	46	2980	7.5	1.1
H9C60KV010185	1	185RM	15.8	10.0	37.0	35	40.8	47	3370	9.3	1.2
H9C60KV010240	1	240RM	18.5	10.0	39.7	35	43.5	50	3990	12.0	1.3
H9C60KV010300	1	300RM	20.5	10.0	41.7	35	45.5	52	4650	15.0	1.3
H9C60KV010400	1	400RM	23.6	10.0	45.2	35	49.4	56	5660	20.0	1.4
H9C60KV010500	1	500RM	26.4	10.0	48.0	35	52.2	59	6780	25.0	1.5
H9C60KV010630	1	630RM	30.3	10.0	52.1	35	56.3	64	8220	31.5	1.6
H9C60KV010800	1	800RM	34.7	10.0	56.5	35	60.7	68	9980	40.0	1.7
H9C60KV011000	1	1000RM	38.3	10.0	60.5	35	65.1	73	12140	50.0	1.8
H9C60KV011200	1	1200RMS	41.6	10.0	65.8	50	70.4	79	14500	60.0	2.0
H9C60KV011400	1	1400RMS	45.8	10.0	70.0	50	74.6	83	16360	70.0	2.1
H9C60KV011600	1	1600RMS	49.6	10.0	73.8	50	78.4	87	18580	80.0	2.2
H9C60KV011800	1	1800RMS	53.2	10.0	77.4	50	82.0	91	20930	90.0	2.3
H9C60KV012000	1	2000RMS	54.6	10.0	78.8	50	83.4	93	22490	100.0	2.3
H9C60KV012500	1	2500RMS	60.0	10.0	85.2	50	90.2	100	27450	100.0	2.5
H9C60KV013000	1	3000RMS	68.4	10.0	93.6	50	98.6	109	33750	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	0.1956	5.80	2.40	0.155	0.085	0.200	0.140
150RM	0.1588	5.60	2.45	0.160	0.080	0.190	0.135
185RM	0.1272	5.45	2.50	0.170	0.077	0.185	0.130
240RM	0.0973	5.25	2.60	0.190	0.071	0.180	0.125
300RM	0.0781	5.10	2.65	0.205	0.067	0.175	0.120
400RM	0.0619	4.90	2.75	0.230	0.064	0.175	0.115
500RM	0.0492	4.80	2.80	0.250	0.060	0.170	0.110
630RM	0.0395	4.65	2.90	0.275	0.056	0.165	0.110
800RM	0.0325	4.55	2.95	0.305	0.052	0.160	0.105
1000RM	0.0275	4.45	3.00	0.335	0.051	0.160	0.100

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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
1200RMS	0.0222	4.35	3.05	0.370	0.050	0.160	0.100
1400RMS	0.0198	4.30	3.10	0.400	0.048	0.155	0.100
1600RMS	0.0182	4.25	3.10	0.425	0.046	0.155	0.095
1800RMS	0.0169	4.20	3.15	0.450	0.044	0.155	0.095
2000RMS	0.0158	4.20	3.15	0.455	0.044	0.150	0.095
2500RMS	0.0140	4.15	3.20	0.500	0.043	0.150	0.095
3000RMS	0.0126	4.10	3.25	0.555	0.040	0.145	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							
	65°C	90°C	65°C	90°C	65°C	90°C	65°C	90°C
95RM	285	340	275	330	275	325	270	325
120RM	325	390	305	370	310	370	305	365
150RM	365	440	340	415	350	415	340	410
185RM	415	495	380	460	390	470	385	460
240RM	480	575	425	520	455	545	440	535
300RM	540	650	465	570	515	615	495	600
400RM	620	745	510	625	585	700	560	675
500RM	705	850	550	685	660	795	625	755
630RM	805	970	595	740	740	895	695	845
800RM	905	1090	630	790	825	1000	760	930
1000RM	995	1210	660	825	900	1090	815	1005
1200RMS	1105	1335	650	820	1020	1235	875	1075
1400RMS	1185	1435	665	840	1085	1320	915	1130
1600RMS	1250	1520	680	860	1140	1385	945	1175
1800RMS	1310	1590	690	870	1180	1440	970	1205
2000RMS	1360	1660	695	880	1220	1490	990	1235
2500RMS	1470	1790	710	900	1300	1595	1035	1295
3000RMS	1580	1930	725	920	1380	1695	1075	1345

	CABLES IN AIR							
	65°C	90°C	65°C	90°C	65°C	90°C	65°C	90°C
95RM	310	415	295	400	265	360	265	360
120RM	355	480	335	455	305	415	300	410
150RM	405	545	380	515	345	470	340	465
185RM	460	625	425	580	395	540	390	530
240RM	545	740	490	675	465	635	455	625
300RM	625	850	545	755	530	730	515	710
400RM	730	985	615	855	615	845	595	820
500RM	845	1145	685	955	710	975	680	935
630RM	980	1330	755	1060	815	1120	770	1070
800RM	1125	1535	825	1170	925	1275	865	1205
1000RM	1255	1720	880	1255	1025	1420	945	1325
1200RMS	1405	1915	895	1275	1175	1625	1035	1455
1400RMS	1530	2090	930	1335	1270	1760	1105	1550
1600RMS	1640	2245	965	1390	1355	1880	1160	1640
1800RMS	1735	2380	990	1430	1425	1980	1210	1715
2000RMS	1810	2490	1010	1455	1480	2060	1245	1765
2500RMS	1980	2720	1050	1520	1605	2240	1325	1885
3000RMS	2180	3005	1100	1590	1750	2440	1410	2015

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