RH5Z1-2OL Cable

Eland Product Group: H7I

APPLICATION

Medium voltage aluminium cable with XLPE insulation and halogen free outer sheath. Longitudinal aluminium screen provides additional water protection. Suitable for power distribution in multiple applications including renewable energy installations. External use or direct burial.

CHARACTERISTICS

Voltage Rating Uo/U
12/20 (24)kV
18/30 (36)kV

Temperature Rating
Maximum conductor operating temperature: 90°C
Initial temperature at S.C.C for metallic screen: 80°C
Maximum conductor temperature during S.C: 250°C

Minimum Bending Radius
20 x overall diameter

CONSTRUCTION

Conductor
Class 2 stranded Aluminium

Tape
Water blocking Tape Over Conductor

Conductor Screen
Extruded Inner Semi Conductor (Bonded Type)

Insulation
XLPE (Cross-Linked Polyethylene)

Insulation Screen
Extruded Outer Semi Conductor (Strippable Type)

Tape
Semi Conductive water blocking Tape

Aluminium Tape
Applied Longitudinally

Sheath
PO (DMZ1 in accordance with HD 620)

Sheath Colour
Red

STANDARDS

HD 620 10E-6, IEC 60502-2, UNE 211620:2020
Halogen Free IEC 60754-1/2
Water Resistant EN60529- AD7
Climate Resistant HD 605 2.2.13

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 - 12/20KV

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm²	NOMINAL INSULATION THICKNESS mm	NOMINAL SHEATH THICKNESS mm	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km
H7I20KV01050	1	50	4.9	2.75	29.3	782
H7I20KV01095	1	95	4.9	2.75	32.4	1007
H7I20KV01150	1	150	4.9	2.75	36	1278
H7I20KV01185	1	185	4.9	2.75	36.9	1398
H7I20KV01240	1	240	4.9	2.75	39.3	1626
H7I20KV01400	1	400	4.9	2.75	44.2	2205
H7I20KV01630	1	630	4.9	2.75	52.1	3208

ELECTRICAL CHARACTERISTICS - 12/20KV

NOMINAL CROSS SECTIONAL AREA mm²	MAXIMUM CONDUCTOR DC RESISTANCE AT 20 °C Ω/Km	MAXIMUM CONDUCTOR AC RESISTANCE AT OPERATING TEMP. AND 50HZ Ω/Km	MAXIMUM ELECTRICAL RESISTANCE OF AL FOIL SCREEN Ω/Km	CAPACITANCE µF/Km	CHARGING CURRENT A/Km	DIELECTRIC LOSSES W/Km	REACTANCE AT 50 HZ ohm/km	CONDUCTOR S.C.C FOR 1 SEC KA	SCREEN S.C.C FOR 1 SEC KA	CURRENT RATING A	
										Laid in ground	Laid in free air
50	0.641	0.822	1.551	0.177	0.666	31.97	0.141	4.7	1.71	180	197
95	0.32	0.411	1.344	0.217	0.82	39.36	0.127	8.9	1.91	265	298
150	0.206	0.265	1.186	0.264	0.996	47.82	0.116	14.1	2.21	338	390
185	0.164	0.211	1.045	0.276	1.04	49.92	0.113	17.3	2.21	387	449
240	0.125	0.161	1.08	0.307	1.157	55.51	0.109	22.5	2.41	444	534
400	0.0778	0.101	0.876	0.369	1.393	66.87	0.100	37.5	2.71	574	714
630	0.0469	0.062	0.749	0.47	1.773	85.10	0.094	59	3.32	755	966

Laying conditions at trefoil formation are as below:

-Soil thermal resistivity 120 °C.Cm/Watt

-Burial depth 0.5 m

-Ground temperature 15 °C

-Air temperature 25 °C

-Frequency 50 Hz

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DIMENSIONS - 18/30KV

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm²	NOMINAL INSULATION THICKNESS mm	NOMINAL SHEATH THICKNESS mm	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km
H7I30KV01050	1	50	7.25	2.75	34.3	1025
H7I30KV01095	1	95	7.25	2.75	37.4	1272
H7I30KV01150	1	150	7.25	2.75	41	1571
H7I30KV01185	1	185	7.25	2.75	41.9	1701
H7I30KV01240	1	240	7.25	2.75	44.3	1941
H7I30KV01400	1	400	7.25	2.75	49.2	2561
H7I30KV01630	1	630	7.25	2.75	57.1	3620

ELECTRICAL CHARACTERISTICS - 18/30KV

NOMINAL CROSS SECTIONAL AREA mm²	MAXIMUM CONDUCTOR DC RESISTANCE AT 20 °C Ω/Km	MAXIMUM CONDUCTOR AC RESISTANCE AT OPERATING TEMP. AND 50HZ Ω/Km	MAXIMUM ELECTRICAL RESISTANCE OF AL FOIL SCREEN Ω/Km	CAPACITANCE µF/Km	CHARGING CURRENT A/Km	DIELECTRIC LOSSES W/Km	REACTANCE AT 50 HZ ohm/km	CONDUCTOR S.C.C FOR 1 SEC KA	SCREEN S.C.C FOR 1 SEC KA	CURRENT RATING A	
										Laid in ground	Laid in free air
50	0.641	0.822	1.26	0.138	0.78	56.14	0.151	4.7	2.01	180	202
95	0.32	0.411	1.045	0.167	0.943	67.89	0.136	8.9	2.21	266	302
150	0.206	0.265	1.08	0.199	1.128	81.25	0.124	14.1	2.51	339	398
185	0.164	0.211	0.96	0.208	1.174	84.55	0.121	17.3	2.61	388	455
240	0.125	0.161	0.877	0.229	1.296	93.33	0.116	22.5	2.71	448	539
400	0.0778	0.101	0.775	0.273	1.543	111.11	0.107	37.5	3.11	579	719
630	0.0469	0.062	0.672	0.343	1.938	139.52	0.100	59	3.62	760	980

Laying conditions at trefoil formation are as below:
-Soil thermal resistivity 120 °C.Cm/Watt
-Burial depth 0.5 m
-Ground temperature 15 °C
-Air temperature 25 °C
-Frequency 50 Hz