

# ARE4H1R Cable



## APPLICATION

Medium Voltage power cable suitable for laying in underground channels; in underground pipe; in open air; Underground installation with protection is also allowed. Suitable in wind power plants.

## CHARACTERISTICS

**Voltage**  
12/20 kV,  
18/30 kV

### Temperature Rating

Minimum installation temperature: -25°C  
Maximum operating temperature: 90°C  
Maximum temperature during short circuit: 250°C

## CONSTRUCTION

### Conductor

Class 2 compacted stranded aluminium

### Conductor Screen

Semi-conductive XLPE compound

### Insulation

XLPE (Cross-Linked Polyethylene) compound (DIX 8)

### Insulation Screen

Semi-conductive XLPE compound

### Protective Layer

Semiconductive watertight tape

### Metallic Screen

Copper Wires and Tape

### Outer Sheath

PVC (Polyvinyl Chloride) (ST2)

### Outer Sheath Colour

● Red

## STANDARDS

In accordance with IEC 60502-2, CEI 20-13, generally to HD 620 10 11  
Halogen free to IEC 60754

## THE CABLE LAB<sup>®</sup>

AN ISO/IEC 17025 AND IECCE 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](http://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<sup>®</sup>.





## DIMENSIONS 12/20KV

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	NOMINAL CONDUCTOR DIAMETER mm	MINIMUM CONDUCTOR SCREEN THICKNESS mm	NOMINAL INSULATION THICKNESS mm	MINIMUM INSULATION THICKNESS mm	MINIMUM INSULATION SCREEN THICKNESS mm	NOMINAL DIAMETER OVER INSULATION mm	NOMINAL SHEATH THICKNESS mm	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km
T9XA20KV01050	1	50	8.2	0.3	4.9	4.31	0.3	19.32	2	27.32	695
T9XA20KV01070	1	70	9.8	0.3	4.9	4.31	0.3	20.92	2	28.92	791
T9XA20KV01095	1	95	11.5	0.3	4.9	4.31	0.3	22.62	2	30.62	903
T9XA20KV01120	1	120	12.65	0.3	4.9	4.31	0.3	23.77	2.1	31.97	1023
T9XA20KV01150	1	150	14.4	0.3	4.9	4.31	0.3	25.52	2.1	33.72	1148
T9XA20KV01185	1	185	15.75	0.3	4.9	4.31	0.3	26.87	2.2	35.27	1302
T9XA20KV01240	1	240	18.2	0.3	4.9	4.31	0.3	29.32	2.2	37.72	1515
T9XA20KV01300	1	300	20.5	0.3	4.9	4.31	0.3	31.62	2.3	40.22	1758
T9XA20KV01400	1	400	23	0.3	4.9	4.31	0.3	34.12	2.4	42.92	2132
T9XA20KV01500	1	500	26	0.3	4.9	4.31	0.3	37.12	2.5	46.12	2507
T9XA20KV01630	1	630	30.2	0.3	4.9	4.31	0.3	41.32	2.6	50.52	2987

## ELECTRICAL CHARACTERISTICS 12/20 KV

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	CONDUCTOR RESISTANCE Ω/Km	REACTANCE AT 50 HZ ohms/km	CAPACITANCE μF/Km	CURRENT CARRYING CAPACITY A		SHORT CIRCUIT CURRENT 1S kA	
				Trefoil formation:In air @30°C	Trefoil formation:In ground @20°C	Conductor	Screen
50	0.641	0.19	0.15	184	152	4.7	1.74
70	0.443	0.18	0.17	230	186	6.6	1.87
95	0.32	0.18	0.19	280	221	9	2.01
120	0.258	0.17	0.2	324	252	11.3	2.13
150	0.203	0.17	0.22	368	281	14.2	2.26
185	0.164	0.17	0.24	424	317	17.5	2.40
240	0.125	0.16	0.27	502	367	22.7	2.59
300	0.1	0.16	0.29	577	414	28.3	2.77
400	0.0778	0.16	0.32	676	470	37.8	3.04
500	0.0605	0.15	0.35	767	540	47.2	3.27
630	0.0469	0.15	0.4	914	610	59.5	3.55

Conditions for current ratings as below:  
Depth of laying: 0.8m, Soil thermal resistivity 1.5km/W.



## DIMENSIONS 18/30KV

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	NOMINAL CONDUCTOR DIAMETER mm	MINIMUM CONDUCTOR SCREEN THICKNESS mm	NOMINAL INSULATION THICKNESS mm	MINIMUM INSULATION THICKNESS mm	MINIMUM INSULATION SCREEN THICKNESS mm	NOMINAL DIAMETER OVER INSULATION mm	NOMINAL SHEATH THICKNESS mm	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km
T9XA30KV01050	1	50	8.2	0.3	7.25	6.5	0.3	24.02	2	32.02	855
T9XA30KV01070	1	70	9.8	0.3	7.25	6.5	0.3	25.62	2	33.62	961
T9XA30KV01095	1	95	11.5	0.3	7.25	6.5	0.3	27.32	2	35.32	1,084
T9XA30KV01120	1	120	12.65	0.3	7.25	6.5	0.3	28.47	2.1	36.67	1,213
T9XA30KV01150	1	150	14.4	0.3	7.25	6.5	0.3	30.22	2.1	38.42	1,348
T9XA30KV01185	1	185	15.75	0.3	7.25	6.5	0.3	31.57	2.2	39.97	1,512
T9XA30KV01240	1	240	18.2	0.3	7.25	6.5	0.3	34.02	2.2	42.42	1,739
T9XA30KV01300	1	300	20.5	0.3	7.25	6.5	0.3	36.32	2.3	44.92	1,997
T9XA30KV01400	1	400	23	0.3	7.25	6.5	0.3	38.82	2.4	47.62	2,391
T9XA30KV01500	1	500	26	0.3	7.25	6.5	0.3	41.82	2.5	50.82	2,784
T9XA30KV01630	1	630	30.2	0.3	7.25	6.5	0.3	46.02	2.6	55.22	3,286

## ELECTRICAL CHARACTERISTICS 18/30 KV

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	CONDUCTOR RESISTANCE Ω/Km	REACTANCE AT 50 HZ ohms/km	CAPACITANCE μF/Km	CURRENT CARRYING CAPACITY A		SHORT CIRCUIT CURRENT 1S kA	
				Trefoil formation:In air @30°C	Trefoil formation:In ground @20°C	Conductor	Screen
50	0.641	0.2	0.12	184	152	4.7	2.16
70	0.443	0.2	0.13	230	186	6.6	2.29
95	0.32	0.19	0.14	280	221	9	2.43
120	0.258	0.18	0.15	324	252	11.3	2.55
150	0.203	0.18	0.17	368	281	14.2	2.68
185	0.164	0.18	0.18	424	317	17.5	2.81
240	0.125	0.17	0.2	502	367	22.7	3.00
300	0.1	0.17	0.22	577	414	28.3	3.18
400	0.0778	0.16	0.24	676	470	37.8	3.45
500	0.0605	0.16	0.26	767	540	47.2	3.69
630	0.0469	0.16	0.29	914	610	59.5	3.96

Conditions for current ratings as below:  
 Depth of laying: 0.8m, Soil thermal resistivity 1.5km/W.

The information contained within this datasheet is for guidance only and is subject to change without notice or liability. All the information is provided in good faith and is believed to be correct at the time of publication. When selecting cable accessories, please note that actual cable dimensions may vary due to manufacturing tolerances.