



# (N)TSCGECECWÖU 8.7/15kV and 12/20kV Cable



Eland Product Group: A7H

## APPLICATION

Flexible cable suitable for reeling drums of tunnel boring machines and generally for tunnel applications. Suitable for indoor and outdoor applications.

## CHARACTERISTICS

**Voltage Rating** U<sub>o</sub>/U  
8.7/15kV  
12/20kV

**Test Voltage**  
8.7/15kV: 24kV  
12/20kV: 29kV

**Ambient Temperature**  
Fixed: -40°C to +80°C  
Flexed: -25°C to +80°C

**Minimum Bending Radius**  
Fixed: 6 x overall diameter  
Flexed: 10 x overall diameter

**Maximum Torsional Stress**  
±25°/m

## CONSTRUCTION

**Phase Conductor**  
Class 5 tinned copper conductor

**Insulation**  
Rubber compound

**Semi-Conductive Layers**  
Semi-conductive tape over the conductor and inner and outer semi-conductive rubber layer on the insulation

**Protective Earth Conductor**  
Individual copper wire screen

**Control Conductor**  
Class 5 tinned copper conductor

**Central Filler**  
Semi-conductive compound on a textile polyester support

**Inner Sheath**  
Rubber compound

**Monitoring Conductor**  
Copper wire screen over the inner sheath

**Outer Sheath**  
Rubber compound

**Sheath Colour**  
● Red

## STANDARDS

VDE 0250 Part 813, VDE 0295, EN 60228

Flame Retardant according to IEC/EN 60332-1-2

## 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](http://www.elandcables.com/company/about-us/esg-sustainability)



## REGULATORY COMPLIANCE

This cable meets the requirements of the Low Voltage Directive 2014/35/EU, 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.	VOLTAGE kV	NO. OF CORES (PHASE + EARTH +CONTROL+ÜL)	NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>			CONDUCTOR DIAMETER mm	MINIMUM OVERALL DIAMETER mm	MAXIMUM OVERALL DIAMETER mm	MAXIMUM TENSILE LOAD N	NOMINAL WEIGHT kg/km
			Phase Conductor	Earth Conductor	Control Conductor					
A7H15KV1025RD	8.7/15	3+3+3+ÜL	25	25/3E	2.5ST	6.8	48	51.5	1125	3590
A7H15KV1035RD	8.7/15	3+3+3+ÜL	35	25/3E	2.5ST	7.8	49.5	53.1	1575	3990
A7H15KV1050RD	8.7/15	3+3+3+ÜL	50	25/3E	2.5ST	9.4	54.4	58.2	2250	4880
A7H15KV1070RD	8.7/15	3+3+3+ÜL	70	35/3E	2.5ST	11.2	58.2	62.2	3150	5950
A7H15KV1095RD	8.7/15	3+3+3+ÜL	95	50/3E	2.5ST	12.7	61.4	65.7	4275	7030
A7H15KV1120RD	8.7/15	3+3+3+ÜL	120	70/3E	2.5ST	14.4	67.4	71.9	5400	8690
A7H20KV1025RD	12/20	3+3+3+ÜL	25	25/3E	2.5ST	6.8	50.5	54.1	1125	3860
A7H20KV1035RD	12/20	3+3+3+ÜL	35	25/3E	2.5ST	7.8	52.3	56	1575	4260
A7H20KV1050RD	12/20	3+3+3+ÜL	50	25/3E	2.5ST	9.4	57.5	61.4	2250	5190
A7H20KV1070RD	12/20	3+3+3+ÜL	70	35/3E	2.5ST	11.2	61	65.3	3150	6280
A7H20KV1095RD	12/20	3+3+3+ÜL	95	50/3E	2.5ST	12.7	66.4	70.9	4275	7640
A7H20KV1120RD	12/20	3+3+3+ÜL	120	70/3E	2.5ST	14.4	70.5	75.2	5400	9050

## CURRENT CARRYING CAPACITY

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	LAYING ON THE FLOOR Amps	REELED Amps						
		1 Layer	2 Layer	3 Layer	4 Layer	5 Layer	6 Layer	7 Layer
25	139	111	85	68	58	53	38	31
35	172	138	105	84	72	65	46	38
50	216	173	132	106	91	82	58	48
70	265	212	162	130	111	101	72	58
95	319	255	195	156	134	121	86	70
120	371	297	226	182	156	141	100	82

Ambient temperature of 30°C

## VOLTAGE DROP

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	POWER FACTOR			
	0.7	0.8	0.9	1
25	1.29	1.45	1.6	1.71
35	0.95	1.06	1.16	1.23
50	0.69	0.77	0.83	0.87
70	0.51	0.56	0.6	0.61
95	0.41	0.45	0.47	0.47
120	0.34	0.36	0.38	0.36

## DE-RATING FACTORS

AMBIENT TEMPERATURE	10°C	15°C	20°C	25°C	30°C	35°C	40°C	45°C	50°C	55°C	60°C	65°C	70°C	75°C	80°C
DE-RATING FACTOR	1.15	1.12	1.08	1.04	1.00	0.96	0.91	0.87	0.82	0.76	0.71	0.65	0.58	0.50	0.41

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.