

(N)TSCGECECWÖU 3.6/6kV and 6/10kV 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 (U₀/U)
3.6/6kV; 6/10kV

Test Voltage
3.6/6kV: 11kV; 6/10kV: 17kV

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

Maximum Short Circuit Temperature
+250°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 Type 3GI3

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 Type 5GM5

Monitoring Conductor
Copper wire screen over the inner sheath

Outer Sheath
Rubber compound Type 5GM5

Sheath Colour
● Red

STANDARDS

VDE 0250 Part 813, VDE 0295, EN 60228

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

ISO/IEC 17025 LABORATORY TESTED

This product is subject to the Quality Assurance protocols of The Cable Lab®, an ISO/IEC 17025 accredited cable testing laboratory. Testing includes vertical flame, conductor resistance, tensile & elongation, and dimensional consistency, verified to published standards and approved product drawings.



REGULATORY COMPLIANCE

This cable meets the requirements of the RoHS Directive 2011/65/EU. RoHS compliance has been tested and confirmed by The Cable Lab® as meeting the requirements of the BSI RoHS Trusted Kitemark™.





DIMENSIONS

ELAND PART NO.	VOLTAGE kV	NO. OF CORES (PHASE + EARTH +CONTROL+ÜL)	NOMINAL CROSS SECTIONAL AREA mm ²			CONDUCTOR DIAMETER mm	MINIMUM OVERALL DIAMETER mm	MAXIMUM OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km
			Phase Conductor	Earth Conductor	Control Conductor				
A7H06KV1025RD	3.6/6	3+3+3+ÜL	25	25/3E	2.5ST	6.8	45.4	48.8	3010
A7H06KV1035RD	3.6/6	3+3+3+ÜL	35	25/3E	2.5ST	7.8	46.9	50.4	3390
A7H06KV1050RD	3.6/6	3+3+3+ÜL	50	25/3E	2.5ST	9.4	50	53.6	4050
A7H06KV1070RD	3.6/6	3+3+3+ÜL	70	35/3E	2.5ST	11.2	55.6	59.4	5260
A7H06KV1095RD	3.6/6	3+3+3+ÜL	95	50/3E	2.5ST	12.7	59.9	63.9	6460
A7H06KV1120RD	3.6/6	3+3+3+ÜL	120	70/3E	2.5ST	14.4	64	68.4	7820
A7H06KV1150RD	3.6/6	3+3+3+ÜL	150	70/3E	2.5ST	16.3	70.4	75	9430
A7H10KV1025RD	6/10	3+3+3+ÜL	25	25/3E	2.5ST	6.8	45.4	49.4	3050
A7H10KV1035RD	6/10	3+3+3+ÜL	35	25/3E	2.5ST	7.8	46.9	51	3430
A7H10KV1050RD	6/10	3+3+3+ÜL	50	25/3E	2.5ST	9.4	50	54.2	4090
A7H10KV1070RD	6/10	3+3+3+ÜL	70	35/3E	2.5ST	11.2	55.6	60	5300
A7H10KV1095RD	6/10	3+3+3+ÜL	95	50/3E	2.5ST	12.7	59.9	64.5	6500
A7H10KV1120RD	6/10	3+3+3+ÜL	120	70/3E	2.5ST	14.4	64	69.1	7860
A7H10KV1150RD	6/10	3+3+3+ÜL	150	70/3E	2.5ST	16.3	70.4	75.7	9470

ELECTRICAL CHARACTERISTICS

NOMINAL CROSS SECTIONAL AREA OF PHASE CONDUCTOR mm ²	MAXIMUM TENSILE LOAD N
25	1125
35	1575
50	2250
70	3150
95	4275
120	5400
150	6750

CURRENT CARRYING CAPACITY

NOMINAL CROSS SECTIONAL AREA mm ²	LAYING ON THE FLOOR Amps	FREE IN AIR Amps	REELED Amps						
			1 Layer	2 Layer	3 Layer	4 Layer	5 Layer	6 Layer	7 Layer
25	131	138	105	80	64	55	50	35	29
35	162	170	130	99	79	68	62	44	36
50	202	212	162	123	99	85	77	55	44
70	250	263	200	153	123	105	95	68	55
95	301	316	241	184	147	126	114	81	66
120	352	370	282	215	172	148	134	95	77
150	404	424	323	246	198	170	154	109	89

Ambient temperature of 30°C

VOLTAGE DROP

NOMINAL CROSS SECTIONAL AREA mm ²	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
150	0.29	0.31	0.32	0.29

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.