

# (N)TSCGECECWÖU 3.6/6kV and 6/10kV ZH Cable



Eland Product Group: A7HZ

## APPLICATION

Flexible cable suitable for reeling drums of tunnel boring machines and generally for tunnel applications. Suitable for indoor and outdoor applications. Halogen-free sheathed version.

## CHARACTERISTICS

### Voltage Rating U<sub>o</sub>/U

3.6/6kV  
6/10kV

### Test Voltage

3.6/6kV: 11kV  
6/10kV: 17kV

### Maximum Short Circuit Temperature

+250°C

### Ambient Temperature

Fixed: -50°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 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

Halogen-free compound

### Monitoring Conductor

Copper wire screen over the inner sheath

### Outer Sheath

Halogen-free PUR (Polyurethane)

### Sheath Colour

● Black

## STANDARDS

VDE 0250 Part 812, VDE 0295, EN 60228

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

Halogen Free according to IEC/EN 60754-1/2

## 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

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					
A7HZ06KV1025BK	3.6/6	3+3+3+ÜL	25	25/3E	2.5ST	6.8	45.4	48.8	1125	2960
A7HZ06KV1035BK	3.6/6	3+3+3+ÜL	35	25/3E	2.5ST	7.8	46.9	50.4	1575	3340
A7HZ06KV1050BK	3.6/6	3+3+3+ÜL	50	25/3E	2.5ST	9.4	50	53.6	2250	3990
A7HZ06KV1070BK	3.6/6	3+3+3+ÜL	70	35/3E	2.5ST	11.2	55.6	59.4	3150	5180
A7HZ06KV1095BK	3.6/6	3+3+3+ÜL	95	50/3E	2.5ST	12.7	59.9	63.9	4275	6370
A7HZ06KV1120BK	3.6/6	3+3+3+ÜL	120	70/3E	2.5ST	14.4	64	68.4	5400	7730
A7HZ10KV1025BK	6/10	3+3+3+ÜL	25	25/3E	2.5ST	6.8	45.4	49.4	1125	3000
A7HZ10KV1035BK	6/10	3+3+3+ÜL	35	25/3E	2.5ST	7.8	46.9	51	1575	3380
A7HZ10KV1050BK	6/10	3+3+3+ÜL	50	25/3E	2.5ST	9.4	50	54.2	2250	4030
A7HZ10KV1070BK	6/10	3+3+3+ÜL	70	35/3E	2.5ST	11.2	55.6	60	3150	5220
A7HZ10KV1095BK	6/10	3+3+3+ÜL	95	50/3E	2.5ST	12.7	59.9	64.5	4275	6410
A7HZ10KV1120BK	6/10	3+3+3+ÜL	120	70/3E	2.5ST	14.4	64	69.1	5400	7770

## CURRENT CARRYING CAPACITY

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	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	35
35	162	170	130	99	79	68	62	44	44
50	202	212	162	123	99	85	77	55	55
70	250	263	200	153	123	105	95	68	68
95	301	316	241	184	147	126	114	81	81
120	352	370	282	215	172	148	134	95	95

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.