

(N)TSCGECEWÖU 3.6/6kV and 6/10kV ATB Cable



Eland Product Group: **A7HA**

APPLICATION

Flexible cable for the energy supply to heavy mobile equipment such as drag lines, shovels, dredges and drills under extreme mechanical stresses and abrasion during trailing operation in opencast mines. Suitable for indoor and outdoor applications.

CONSTRUCTION

Phase Conductor

Class 5 tinned copper conductor according to VDE 0295 (IEC 60228)

Insulation

Rubber compound Type 3GI3 according to VDE 0207 Part 20

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 braid

Central Filler

Rubber compound on a textile polyester support

Inner Sheath

Abrasion resistant rubber compound Type 5GM5 according to VDE 0207 Part 21

Anti-Torsion Braid

Polyester braid between the inner and outer sheath

Outer Sheath

Abrasion resistant rubber compound Type 5GM5 according to VDE 0207 Part 21

Note

*Special construction for higher flexibility

CABLE STANDARDS

Generally to VDE 0250 Part 813, VDE 0295, BS EN/IEC 60332-1-2, BS EN/IEC 60811-2-1



The electrical and dimensional properties of this product are measured by the Technical and Quality Assurance department at the Eland Cables laboratory. Cable performance in respect of conductor resistance, construction quality (workmanship), dimensional consistency, and other parameters are verified to published standards and approved product drawings. Conformance to RoHS (Restriction of the use of Hazardous Substances) is determined and confirmed.

CHARACTERISTICS

Voltage Rating (U₀/U)

3.6/6kV
6/10kV

Test Voltage

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

Maximum Short Circuit Temperature

+250°C

Ambient Temperature

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

Minimum Bending Radius

Fixed: 6 x overall diameter
Flexed: 10 x overall diameter

Maximum Tensile Load*

15N/mm²

Sheath Colour

● Yellow

Note

*Referred to the total phase conductors cross section

DIMENSIONS

ELAND PART NO.	VOLTAGE kV	NO. OF CORES (PHASE + EARTH)	NOMINAL CROSS SECTIONAL AREA mm ²		CONDUCTOR DIAMETER mm	MINIMUM OVERALL DIAMETER mm	MAXIMUM OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km	MAXIMUM TENSILE LOAD N
			Phase Conductor	Earth Conductor					
A7HA06KV1025YW	3.6/6	3+3	25	25/3E	6.8	43.4	45.1	2850	1125
A7HA06KV1035YW	3.6/6	3+3	35	25/3E	7.8	45	46.7	3200	1575
A7HA06KV1050YW	3.6/6	3+3	50	25/3E	9.4	48.1	49.8	3850	2250
A7HA06KV1070YW	3.6/6	3+3	70	35/3E	11.2	53.7	55.5	4980	3150
A7HA06KV1095YW	3.6/6	3+3	95	50/3E	12.7	58.4	60.2	6200	4275
A7HA06KV1120YW	3.6/6	3+3	120	70/3E	14.4	62.9	65.2	7580	5400
A7HA06KV1150YW	3.6/6	3+3	150	70/3E	16.3	69.3	71.7	9090	6750
A7HA10KV1025YW	6/10	3+3	25	25/3E	6.8	43.4	45.7	2890	1125
A7HA10KV1035YW	6/10	3+3	35	25/3E	7.8	45	47.3	3240	1575
A7HA10KV1050YW	6/10	3+3	50	25/3E	9.4	48.1	50.4	3890	2250
A7HA10KV1070YW	6/10	3+3	70	35/3E	11.2	53.7	56.1	5020	3150
A7HA10KV1095YW	6/10	3+3	95	50/3E	12.7	58.4	60.8	6240	4275
A7HA10KV1120YW	6/10	3+3	120	70/3E	14.4	62.9	65.9	7620	5400
A7HA10KV1150YW	6/10	3+3	150	70/3E	16.3	69.3	72.4	9130	6750

ELECTRICAL CHARACTERISTICS

Current Carrying Capacity

NOMINAL CROSS SECTIONAL AREA mm ²	LAYING ON THE FLOOR Amps	FREE IN AIR Amps	REELED						
			1 Layer Amps	2 Layer Amps	3 Layer Amps	4 Layer Amps	5 Layer Amps	6 Layer Amps	7 Layer Amps
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