

(N)TSCGECEWÖU - 3.6/6kV and 6/10kV Submersible Cable



Eland Product Group: **A7HS**

APPLICATION

Flexible supply cable for use in permanent immersion in salty and brackish water up to 300 metres under high mechanical stresses. For applications such as pumps, dredgers and floating docks. It is suitable for trailing operations of opencast mining equipment. 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

EPR rubber compound with water proofing Type GM1b according to VDE 0207 Part 21

Outer Sheath

CM rubber compound water proofing Type 5GM3 according to VDE 0207 Part 21

CABLE STANDARDS

Generally to VDE 0250 Part 813, VDE 0295, BS EN/IEC 60332-1-2BS EN/IEC 60811-2-1, HD22.16



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

Maximum Permissible Water Temperature

+40°C

Ambient Temperature

Fixed: -40°C to +80°C
Flexed: -25°C to +60°C

Minimum Bending Radius

Fixed: 6 x overall diameter
Flexed: 10 overall diameter

Submersible

300mtr

Maximum Tensile Load*

15N/mm²

Sheath Colour

● Black

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					
A7HS06KV1025BK	3.6/6	3+3	25	25/3E	6.8	43.4	45.1	2830	1125
A7HS06KV1035BK	3.6/6	3+3	35	25/3E	7.8	45	46.7	3180	1575
A7HS06KV1050BK	3.6/6	3+3	50	25/3E	9.4	48.1	49.8	3830	2250
A7HS06KV1070BK	3.6/6	3+3	70	35/3E	11.2	53.7	55.5	4960	3150
A7HS06KV1095BK	3.6/6	3+3	95	50/3E	12.7	58.4	60.2	6170	4257
A7HS06KV1120BK	3.6/6	3+3	120	70/3E	14.4	62.9	65.2	7540	5400
A7HS06KV1150BK	3.6/6	3+3	150	70/3E	16.3	69.3	71.7	9050	6750
A7HS06KV1185BK	3.6/6	3+3	185	95/3E	17.6	72.1	74.5	10350	8325
A7HS10KV1025BK	6/10	3+3	25	25/3E	6.8	43.4	45.7	2870	1125
A7HS10KV1035BK	6/10	3+3	35	25/3E	7.8	45	47.3	3220	1575
A7HS10KV1050BK	6/10	3+3	50	25/3E	9.4	48.1	50.4	3870	2250
A7HS10KV1070BK	6/10	3+3	70	35/3E	11.2	53.7	56.1	5000	3150
A7HS10KV1090BK	6/10	3+3	95	50/3E	12.7	58.4	60.8	6210	4257
A7HS10KV1120BK	6/10	3+3	120	70/3E	14.4	62.9	65.9	7580	5400
A7HS10KV1150BK	6/10	3+3	150	70/3E	16.3	69.3	72.4	9090	6750
A7HS10KV1185BK	6/10	3+3	185	95/3E	17.6	72.1	75.2	10390	8325

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
185	461	484	369	281	226	194	175	124	101

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
185	0.25	0.27	0.27	0.24

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