

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



Eland Product Group: **A7HR**

APPLICATION

Flexible supply cable for use in permanent salty and brackish water immersion up to 300 metres under high mechanical stresses. For applications such as pumps, dredges, 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)¹

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

Earth Conductor

Class 5 tinned copper conductor according to VDE 0295 (IEC 60228)¹

Central Filler

Semi-conductive compound on a textile polyester support

Inner Sheath

EPR rubber compound 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

Note

¹Special 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, 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)

3.6/6V
6/10V

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 x overall diameter

Maximum Tensile Load²

20N/mm²

Sheath Colour

● Black

Note

²Referred 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					
A7HR06KV1025BK	3.6/6	3+3	25	25/3	6.8	39.9	41.6	2580	1500
A7HR06KV1035BK	3.6/6	3+3	35	25/3	7.8	42.9	44.6	3080	2100
A7HR06KV1050BK	3.6/6	3+3	50	25/3	9.4	46	47.7	3710	3000
A7HR06KV1070BK	3.6/6	3+3	70	35/3	11.2	49.8	51.6	4670	4200
A7HR06KV1095BK	3.6/6	3+3	95	50/3	12.7	55.8	57.6	5880	5700
A7HR06KV1120BK	3.6/6	3+3	120	70/3	14.4	59.6	61.4	7140	7200
A7HR06KV1150BK	3.6/6	3+3	150	70/3	16.3	66	68.3	8690	9000
A7HR06KV1185BK	3.6/6	3+3	185	95/3	17.6	67.9	70.2	9890	11100
A7HR10KV1025BK	6/10	3+3	25	25/3	6.8	39.9	42.2	2620	1500
A7HR10KV1035BK	6/10	3+3	35	25/3	7.8	42.9	45.2	3120	2100
A7HR10KV1050BK	6/10	3+3	50	25/3	9.4	46	48.3	3750	3000
A7HR10KV1070BK	6/10	3+3	70	35/3	11.2	49.8	52.2	4710	4200
A7HR10KV1095BK	6/10	3+3	95	50/3	12.7	55.8	58.2	5920	5700
A7HR10KV1120BK	6/10	3+3	120	70/3	14.4	59.6	62.1	7180	7200
A7HR10KV1150BK	6/10	3+3	150	70/3	16.3	66	69	8730	9000
A7HR10KV1185BK	6/10	3+3	185	95/3	17.6	67.9	70.9	9930	11100

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

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.