

**ELAND<sup>®</sup>**  
**CABLES**

## (N)TSCGECEWÖU



Eland Product Group: A7HA

### APPLICATION

Flexible cable for fixed energy distribution in mines and alongside material handling equipment. Suitable for indoor and outdoor applications.

### CHARACTERISTICS

#### Voltage Rating ( $U_0/U$ )

1.8/3kV; 3.6/6kV; 6/10kV, 8.7/15kV, 12/20kV

#### Test Voltage

1.8/3kV: 6kV | 3.6/6kV: 11kV | 6/10kV: 17kV |  
8.7/15kV: 24kV | 12/20kV: 29kV

#### Maximum Tensile Load

15N/mm<sup>2</sup>

#### Temperature Range

Maximum Short Circuit Temperature: 250°C

Fixed: -40°C to +80°C

Flexing: -25°C to +80°C

#### Minimum Bending Radius

Fixed: 6 x overall diameter

### CONSTRUCTION

#### Phase Conductor

Class 5 tinned copper

#### Insulation

Rubber compound

#### Semi-Conductive Layers

Semi-conductive tape over the conductor and inner and outer semi-conductive rubber layer on the insulation

#### Earth Conductor

Individual copper wire screen, two earthing conductors, one checking earth wiring conductor

#### Central Filler

Rubber compound on a textile polyester support

#### Tape

1.8/3kV: TNT Tape

From 3.6/6kV: Semi-Conductive tape

#### Inner Sheath

Rubber compound

#### Antitwisting Element

Polyester Braid

#### Outer Sheath

Rubber compound

#### Sheath Colour

● Yellow

#### Note

Zero Halogen (ZH) version also available

### STANDARDS

Based on VDE 0250 Part 813, VDE 0295, IEC 60228,  
VDE 0207 Part 20 & 21, IEC 60332-1-2,  
IEC 60811-403/404, VDE 0298 Part 4



### UK LABORATORY TESTED

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



FS 672069

EMS 672067

OHS 672066

### REGULATORY COMPLIANCE

This cable meets the requirements of the Low Voltage Directive 2014/35/EU and the RoHS Directive 2011/65/EU. RoHS compliance has been tested and confirmed by The Cable Lab<sup>®</sup> as meeting the requirements of the BSI RoHS Trusted Kitemark<sup>™</sup>.



## DIMENSIONS ATB

ELAND PART NO.	VOLTAGE kV	NO. OF CORES (PHASE + EARTH)	NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>		CONDUCTOR DIAMETER mm	NOMINAL OVERALL DIAMETER mm	MAXIMUM TENSILE LOAD N	NOMINAL WEIGHT kg/km
			Phase Conductor	Earth Conductor				
A7HA06KV1025YW	3.6/6	3+3	25	25/3E	6.8	44.2	1125	2850
A7HA06KV1035YW	3.6/6	3+3	35	25/3E	7.8	45.8	1575	3200
A7HA06KV1050YW	3.6/6	3+3	50	25/3E	9.4	48.9	2250	3850
A7HA06KV1070YW	3.6/6	3+3	70	35/3E	11.2	54.6	3150	4980
A7HA06KV1095YW	3.6/6	3+3	95	50/3E	12.7	59.3	4275	6200
A7HA06KV1120YW	3.6/6	3+3	120	70/3E	14.4	64	5400	7580
A7HA06KV1150YW	3.6/6	3+3	150	70/3E	16.3	70.5	6750	9090
A7HA10KV1025YW	6/10	3+3	25	25/3E	6.8	44.5	1125	2890
A7HA10KV1035YW	6/10	3+3	35	25/3E	7.8	46.1	1575	3240
A7HA10KV1050YW	6/10	3+3	50	25/3E	9.4	49.2	2250	3890
A7HA10KV1070YW	6/10	3+3	70	35/3E	11.2	54.9	3150	5020
A7HA10KV1095YW	6/10	3+3	95	50/3E	12.7	59.6	4275	6240
A7HA10KV1120YW	6/10	3+3	120	70/3E	14.4	64.4	5400	7620
A7HA10KV1150YW	6/10	3+3	150	70/3E	16.3	70.8	6750	9130
A7HA15KV1025YW	8.7/15	3+3	25	25/3E	6.8	47.9	1125	3180
A7HA15KV1035YW	8.7/15	3+3	35	25/3E	7.8	49.1	1575	3570
A7HA15KV1050YW	8.7/15	3+3	50	25/3E	9.4	54.2	2250	4420
A7HA15KV1070YW	8.7/15	3+3	70	35/3E	11.2	58	3150	5410
A7HA15KV1095YW	8.7/15	3+3	95	50/3E	12.7	61.9	4257	6500
A7HA15KV1120YW	8.7/15	3+3	120	70/3E	14.4	68.3	5400	8150
A7HA20KV1025YW	12/20	3+3	25	25/3E	6.8	50.3	1125	3450
A7HA20KV1035YW	12/20	3+3	35	25/3E	7.8	51.8	1575	3820
A7HA20KV1050YW	12/20	3+3	50	25/3E	9.4	56.7	2250	4720
A7HA20KV1070YW	12/20	3+3	70	35/3E	11.2	60.5	3150	5690
A7HA20KV1095YW	12/20	3+3	95	50/3E	12.7	64.4	4257	6860

## DIMENSIONS GROUND CHECK CONDUCTOR

ELAND PART NO.	VOLTAGE kV	NO. OF CORES (PHASE + EARTH + GROUND CHECK CONDUCTOR)	NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>			CONDUCTOR DIAMETER mm	NOMINAL OVERALL DIAMETER mm	MAXIMUM TENSILE LOAD N	NOMINAL WEIGHT kg/km
			Phase Conductor	Earth Conductor	Ground Check Conductor				
A7HG03KV025YW	1.8/3	3+2+1	25	25/2	10	6.8	40.2	1125	2530
A7HG03KV035YW	1.8/3	3+2+1	35	25/2	10	7.8	41.8	1575	2930
A7HG03KV050YW	1.8/3	3+2+1	50	25/2	10	9.4	44.9	2250	3540
A7HG03KV070YW	1.8/3	3+2+1	70	35/2	10	11.2	50.5	3150	4730
A7HG03KV095YW	1.8/3	3+2+1	95	50/2	10	12.7	55.6	4257	5930
A7HG03KV120YW	1.8/3	3+2+1	120	70/2	10	14.4	60.2	5400	7270
A7HG03KV150YW	1.8/3	3+2+1	150	70/2	10	16.3	66.9	6750	8920
A7HG03KV185YW	1.8/3	3+2+1	185	95/2	10	17.6	78.5	8325	10220
A7HG06KV025YW	3.6/6	3+2+1	25	25/2	10	6.8	47.7	1125	3300
A7HG06KV035YW	3.6/6	3+2+1	35	25/2	10	7.8	49.1	1575	3710
A7HG06KV050YW	3.6/6	3+2+1	50	25/2	10	9.4	53.9	2250	4600
A7HG06KV070YW	3.6/6	3+2+1	70	35/2	10	11.2	57.9	3150	5710
A7HG06KV095YW	3.6/6	3+2+1	95	50/2	10	12.7	61.8	4257	6820
A7HG06KV120YW	3.6/6	3+2+1	120	70/2	10	14.4	68.2	5400	8540
A7HG06KV150YW	3.6/6	3+2+1	150	70/2	10	16.3	73.1	6750	9890
A7HG10KV025YW	6/10	3+2+1	25	25/2	10	6.8	50.5	1125	3640
A7HG10KV035YW	6/10	3+2+1	35	25/2	10	7.8	52	1575	4070
A7HG10KV050YW	6/10	3+2+1	50	25/2	10	9.4	56.9	2250	4980
A7HG10KV070YW	6/10	3+2+1	70	35/2	10	11.2	60.7	3150	6070
A7HG10KV095YW	6/10	3+2+1	95	50/2	10	12.7	64.6	4257	7280
A7HG10KV120YW	6/10	3+2+1	120	25/2	10	14.4	71.1	5400	9070
A7HG15KV025YW	8.7/15	3+2+1	25	25/2	10	6.8	56.6	1125	4490
A7HG15KV035YW	8.7/15	3+2+1	35	25/2	10	7.8	58	1575	4920
A7HG15KV050YW	8.7/15	3+2+1	50	25/2	10	9.4	61.3	2250	5700
A7HG15KV070YW	8.7/15	3+2+1	70	35/2	10	11.2	67.3	3150	7200
A7HG15KV095YW	8.7/15	3+2+1	95	50/2	10	12.7	71.1	4257	8480
A7HG20KV025YW	12/20	3+2+1	25	25/2	10	6.8	61	1125	5110
A7HG20KV035YW	12/20	3+2+1	35	25/2	10	7.8	62.7	1575	5580
A7HG20KV050YW	12/20	3+2+1	50	25/2	10	9.4	38.7	2250	6550
A7HG20KV070YW	12/20	3+2+1	70	35/2	10	11.2	71.5	3150	7800

## CURRENT CARRYING CAPACITY

## 3.6/6kV and 6/10kV

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	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

## 8.7/15kV and 12/20kV

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	LAYING ON THE FLOOR Amps	REELED						
		1 Layer Amps	2 Layer Amps	3 Layer Amps	4 Layer Amps	5 Layer Amps	6 Layer Amps	7 Layer Amps
25	139	111	85	68	58	53	38	31
35	172	138	105	84	72	65	46	38
50	216	173	132	106	91	82	58	48
70	265	212	162	130	111	101	72	58
95	319	255	195	156	134	121	86	70
120	371	297	132	182	156	141	100	82
150	428	342	251	210	180	163	116	94
185	488	390	298	239	205	185	132	107

## 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
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.