

## (N)3GHSSHCH 3.6/6kV and 6/10kV Cable



Eland Product Group: A7FL

### APPLICATION

Flexible cable for energy supply to MV equipment in tunnelling and underground mining applications. Low smoke zero halogen (LSZH) sheathed version. Suitable for indoor and outdoor applications.

### CHARACTERISTICS

**Voltage Rating** U<sub>o</sub>/U  
3.6/6kV | 6/10kV

**Test Voltage**  
3.6/6kV: 11kV | 6/10kV: 17kV

**Ambient Temperature**  
Fixed: -40°C to +80°C  
Flexed: +5°C to +80°C

**Minimum Bending Radius**  
Fixed: 6 x overall diameter  
Flexed: 10 x overall diameter

### CONSTRUCTION

**Phase Conductor**  
Class 5 copper

**Insulation**  
Rubber compound

**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 screen

**Control Conductor**  
Class 5 tinned copper

**Central Filler**  
Rubber compound on a textile polyester support

**First Inner Sheath**  
LSZH (Low Smoke Zero Halogen)

**Monitoring Conductor**  
Copper wire screen over the first inner sheath

**Second Inner Sheath**  
LSZH (Low Smoke Zero Halogen)

**Armour**  
Steel wire braid over the second inner sheath

**Outer Sheath**  
LSZH (Low Smoke Zero Halogen)

**Sheath Colour**  
● Black

### STANDARDS

VDE 0250 Part 605, VDE 0295, EN 60228

Flame Retardant according to IEC/EN 60332-1-2  
Halogen Free according to IEC/EN 60754-1/2

### ISO/IEC 17025 LABORATORY TESTED

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



### REGULATORY COMPLIANCE

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





## 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 N Conductor	Earth Conductor	Control Conductor					
A7FLS06KV1025BK	3.6/6	3+3+3+ÜL	25	25/3E	2.5ST	6.1	47.2	52.1	1125	4120
A7FLS06KV1035BK	3.6/6	3+3+3+ÜL	35	25/3E	2.5ST	7.2	49	54	1575	4570
A7FLS06KV1050BK	3.6/6	3+3+3+ÜL	50	25/3E	2.5ST	8.9	52.5	57.8	2250	5300
A7FLS06KV1070BK	3.6/6	3+3+3+ÜL	70	35/3E	2.5ST	10.6	56.1	61.6	3150	6370
A7FLS06KV1095BK	3.6/6	3+3+3+ÜL	95	50/3E	2.5ST	12.3	60.3	66.2	4275	7600
A7FLS06KV1120BK	3.6/6	3+3+3+ÜL	120	70/3E	2.5ST	13.8	63.8	70	5400	8990
A7FLS06KV1150BK	3.6/6	3+3+3+ÜL	150	70/3E	2.5ST	15.5	67.2	73.7	6750	10130
A7FLS10KV1025BK	6/10	3+3+3+ÜL	25	25/3E	2.5ST	6.1	47.2	52.7	1125	4160
A7FLS10KV1035BK	6/10	3+3+3+ÜL	35	25/3E	2.5ST	7.2	49	54.6	1575	4610
A7FLS10KV1050BK	6/10	3+3+3+ÜL	50	25/3E	2.5ST	8.9	52.5	58.4	2250	5340
A7FLS10KV1070BK	6/10	3+3+3+ÜL	70	35/3E	2.5ST	10.6	56.1	62.2	3150	6410
A7FLS10KV1095BK	6/10	3+3+3+ÜL	95	50/3E	2.5ST	12.3	60.3	66.8	4275	7640
A7FLS10KV1120BK	6/10	3+3+3+ÜL	120	70/3E	2.5ST	13.8	63.8	70.7	5400	9030
A7FLS10KV1150BK	6/10	3+3+3+ÜL	150	70/3E	2.5ST	15.5	67.2	74.4	6750	10170

## 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	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 <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

## 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.