

(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.

CONSTRUCTION

Phase Conductor

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

Insulation

Rubber compound conductor 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 screen

Control Conductor

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

Central Filler

Rubber compound on a textile polyester support

First Inner Sheath

LSZH (Low Smoke Zero Halogen) Type M1 according to EN 50363

Monitoring Conductor

Copper wire screen over the first inner sheath

Second Inner Sheath

LSZH (Low Smoke Zero Halogen) Type M1 according to EN 50363

Armour

Steel wire braid over the second inner sheath

Outer Sheath

LSZH (Low Smoke Zero Halogen) Type M1 according to EN 50363

CABLE STANDARDS

Generally to VDE 0250 Part 605, VDE 0295, BS EN/IEC 60332-1-2, BS EN/IEC 60811-2-1, IEC 60754-1, IEC 60754-2



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: -40°C to +80°C
Flexed: +5°C to +80°C

Minimum Bending Radius

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

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