FG7H1OAR - 3.6/6kV and 6/10kV Cable

Eland Product Group: A7K

APPLICATION

Flexible cable for energy supply to MV equipment, in tunnelling and underground mining applications. Suitable for indoor and outdoor application.

CHARACTERISTICS

Voltage Rating Uo/U
3.6/6kV
6/10kV

Test Voltage
3.6/6kV: 12.5kV
6/10kV: 21kV

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

Maximum Short Circuit Temperature
+250°C

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

CONSTRUCTION

Phase Conductor
Class 5 tinned copper conductor

Insulation
HEPR (Hard Ethylene Propylene Rubber)

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

Control Conductor
Class 5 tinned copper conductor

Central Filler
Rubber compound on a textile polyester support

Inner Sheath
PVC (Polyvinyl Chloride)

Armour
Steel wire braid over the inner sheath

Outer Sheath
PVC (Polyvinyl Chloride)

Sheath Colour
Red

STANDARDS

Generally to IEC 60502-2, IEC 60228

Flame Retardant according to IEC/EN 60332-1-2

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.

UKAS ISO/IEC 17025 Accredited Testing Laboratory 8578

bsi. ISO 9001 Quality Management FS 672069 | ISO 14001 Environmental Management EMS 672067 | ISO 45001 Occupational Health and Safety Management 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® as meeting the requirements of the BSI RoHS Trusted Kitemark™.

bsi. RoHS Trusted KITEMARK™ KM 634267 | RoHS | CE

DIMENSIONS

ELAND PART NO.	VOLTAGE kV	NO. OF CORES (PHASE + EARTH)	NOMINAL CROSS SECTIONAL AREA mm²		CONDUCTOR DIAMETER mm	MINIMUM OVERALL DIAMETER mm	MAXIMUM OVERALL DIAMETER mm	MAXIMUM TENSILE LOAD N	NOMINAL WEIGHT kg/km
			Phase Conductor	Earth Conductor					
A7K06KV1025RD	3.6/6	3+3	25	2.5ST	6.1	36.3	40.2	1125	2250
A7K06KV1035RD	3.6/6	3+3	35	2.5ST	7.2	38.8	43.0	1575	3200
A7K06KV1050RD	3.6/6	3+3	50	2.5ST	8.9	42.5	47.0	2250	3860
A7K06KV1070RD	3.6/6	3+3	70	2.5ST	10.6	46.1	50.8	3150	4630
A7K06KV1095RD	3.6/6	3+3	95	2.5ST	12.3	49.9	55.0	4275	5680
A7K06KV1120RD	3.6/6	3+3	120	2.5ST	13.8	56.8	62.5	5400	7010
A7K06KV1150RD	3.6/6	3+3	150	2.5ST	15.5	57.8	63.5	6750	7910
A7K06KV1185RD	3.6/6	3+3	185	2.5ST	17.0	61.2	67.1	8325	9060
A7K10KV1025RD	6/10	3+3	25	2.5ST	6.1	36.3	40.8	1125	2290
A7K10KV1035RD	6/10	3+3	35	2.5ST	7.2	38.8	43.6	1575	3240
A7K10KV1050RD	6/10	3+3	50	2.5ST	8.9	42.5	47.6	2250	3900
A7K10KV1070RD	6/10	3+3	70	2.5ST	10.6	46.1	51.4	3150	4670
A7K10KV1095RD	6/10	3+3	95	2.5ST	12.3	49.9	55.6	4275	5720
A7K10KV1120RD	6/10	3+3	120	2.5ST	13.8	56.8	63.2	5400	7050
A7K10KV1150RD	6/10	3+3	150	2.5ST	15.5	57.8	64.2	6750	7950
A7K10KV1185RD	6/10	3+3	185	2.5ST	17.0	61.2	67.8	8325	9100

CURRENT CARRYING CAPACITY

NOMINAL CROSS SECTIONAL AREA mm²	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

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VOLTAGE DROP

NOMINAL CROSS SECTIONAL AREA mm²	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