

FG7H1OAR - 8.7/15kV and 12/20kV 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 applications.

CHARACTERISTICS

Voltage Rating U₀/U

8.7/15kV
12/20kV

Test Voltage

8.7/15kV: 30.5kV
12/20kV: 42kV

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

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

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/EN 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.



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)	NOMINAL CROSS SECTIONAL AREA mm ²		CONDUCTOR DIAMETER mm	MINIMUM OVERALL DIAMETER mm	MAXIMUM OVERALL DIAMETER mm	MAXIMUM TENSILE LOAD N	NOMINAL WEIGHT kg/km
			Phase Conductor	Earth Conductor					
A7K15KV1025RD	8.7/15	3+3	25	2.5ST	6.1	40.9	45.2	1125	3040
A7K15KV1035RD	8.7/15	3+3	35	2.5ST	7.2	42.9	47.4	1575	3470
A7K15KV1050RD	8.7/15	3+3	50	2.5ST	8.9	46.9	51.8	2250	4280
A7K15KV1070RD	8.7/15	3+3	70	2.5ST	10.6	51.5	56.7	3150	5300
A7K15KV1095RD	8.7/15	3+3	95	2.5ST	12.3	55.2	60.7	4275	6420
A7K15KV1120RD	8.7/15	3+3	120	2.5ST	13.8	57.1	62.8	5400	7120
A7K15KV1150RD	8.7/15	3+3	150	2.5ST	15.5	62.1	68.2	6750	8600
A7K20KV1025RD	12/20	3+3	25	2.5ST	6.1	43.8	48.4	1125	3410
A7K20KV1035RD	12/20	3+3	35	2.5ST	7.2	45.7	50.4	1575	3830
A7K20KV1050RD	12/20	3+3	50	2.5ST	8.9	49.3	54.4	2250	4570
A7K20KV1070RD	12/20	3+3	70	2.5ST	10.6	54.1	59.6	3150	5760
A7K20KV1095RD	12/20	3+3	95	2.5ST	12.3	57.8	63.5	4275	6890
A7K20KV1120RD	12/20	3+3	120	2.5ST	13.8	61.0	66.9	5400	7650

CURRENT CARRYING CAPACITY

NOMINAL CROSS SECTIONAL AREA mm ²	LAYING ON THE FLOOR Amps	REELED Amps						
		1 Layer	2 Layer	3 Layer	4 Layer	5 Layer	6 Layer	7 Layer
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	226	182	156	141	100	82
150	428	342	261	210	180	163	116	94

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

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.