(N)3GHSSYCY 3.6/6kV and 6/10kV Cable

Eland Product Group: A7F

APPLICATION

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

CHARACTERISTICS

Voltage Rating Uo/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 conductor

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
PVC (Polyvinyl Chloride)

Monitoring Conductor
Copper wire

Second Inner Sheath
PVC (Polyvinyl Chloride)

Armour
Steel wire braid over the second inner sheath

Outer Sheath
PVC (Polyvinyl Chloride)

Sheath Colour
Red

STANDARDS

VDE 0250 Part 605, VDE 0295 (IEC 60228)

Flame Retardant according to BS EN/IEC 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
OHSAS 18001 Occupational Health and Safety Management OHS 672066

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™.

bsi. RoHS Trusted KITEMARK™ KM 634267
RoHS

DIMENSIONS

ELAND PART NO.	VOLTAGE kV	NO. OF CORES (PHASE + EARTH + CONTROL+ÜL)	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	Control Conductor					
A7F06KV1025RD	3.6/6	3+3+3+ÜL	25	25/3E	2.5ST	6.1	47.2	52.1	1125	4160
A7F06KV1035RD	3.6/6	3+3+3+ÜL	35	25/3E	2.5ST	7.2	49	54	1575	4610
A7F06KV1050RD	3.6/6	3+3+3+ÜL	50	25/3E	2.5ST	8.9	52.5	57.8	2250	5340
A7F06KV1070RD	3.6/6	3+3+3+ÜL	70	35/3E	2.5ST	10.6	56.1	61.6	3150	6410
A7F06KV1095RD	3.6/6	3+3+3+ÜL	95	50/3E	2.5ST	12.3	60.3	66.2	4275	7650
A7F06KV1120RD	3.6/6	3+3+3+ÜL	120	70/3E	2.5ST	13.8	63.8	70	5400	9040
A7F06KV1150RD	3.6/6	3+3+3+ÜL	150	70/3E	2.5ST	15.5	67.2	73.7	6750	10190
A7F10KV1025RD	6/10	3+3+3+ÜL	25	25/3E	2.5ST	6.1	47.2	52.7	1125	4200
A7F10KV1035RD	6/10	3+3+3+ÜL	35	25/3E	2.5ST	7.2	49	54.6	1575	4650
A7F10KV1050RD	6/10	3+3+3+ÜL	50	25/3E	2.5ST	8.9	52.5	58.4	2250	5380
A7F10KV1070RD	6/10	3+3+3+ÜL	70	35/3E	2.5ST	10.6	56.1	62.2	3150	6450
A7F10KV1095RD	6/10	3+3+3+ÜL	95	50/3E	2.5ST	12.3	60.3	66.8	4275	7690
A7F10KV1120RD	6/10	3+3+3+ÜL	120	70/3E	2.5ST	13.8	63.8	70.7	5400	9080
A7F10KV1150RD	6/10	3+3+3+ÜL	150	70/3E	2.5ST	15.5	67.2	74.4	6750	10230

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	139	138	105	80	64	55	50	35	29
35	172	170	130	99	79	68	62	44	36
50	216	212	162	123	99	85	77	55	44
70	265	263	200	153	123	105	95	68	55
95	319	316	241	184	147	126	114	81	66
120	371	370	282	215	172	148	134	95	77
150	428	424	323	246	198	170	154	109	89

Ambient temperature of 30°C

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

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

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