

(N)3GHSSYCY 8.7/15kV and 12/20kV 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 (U_o/U)
8.7/15kV; 12/20kV

Test Voltage
8.7/15kV: 24kV; 12/20kV: 29kV

Temperature Range
Maximum Short Circuit Temperature: +250°C
Maximum Working Temperature on the Conductor: +90°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

CONSTRUCTION

Phase Conductor
Class 5 flexible stranded copper

Insulation
Rubber compound Type 3GI3

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 screen

Control Conductor
Class 5 flexible stranded tinned copper

Central Filler
Rubber compound on a textile polyester support

First Inner Sheath
PVC (Polyvinyl Chloride) Type YM5

Monitoring Conductor
Copper wire

Second Inner Sheath
PVC (Polyvinyl Chloride) Type YM5

Armour
Steel wire braid, over the second inner sheath

Outer Sheath
PVC (Polyvinyl Chloride) Type YM5

Sheath Colour
● Red

STANDARDS

VDE 0250 Part 605, VDE 0295, EN 60228

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

THE CABLE LAB[®]

AN ISO/IEC 17025 AND IECCE CBTL ACCREDITED FACILITY

Our world-class testing facility assures the quality and compliance of this cable through a continuous and rigorous testing regime.



SUSTAINABILITY COMMITMENT

We are on a journey to Net Zero.

We've committed to near-term emissions reductions and a net-zero target with the Science Based Targets initiative and we're a signatory to the United Nations Global Compact Sustainable Development Goals.

Learn more about embodied carbon and our carbon emissions reduction actions, our comprehensive recycling services, and wider ESG activities for sustainable operations at: www.elandcables.com/company/about-us/esg-sustainability



REGULATORY COMPLIANCE

This cable meets the requirements of the RoHS Directive 2015/65/EU and Reach Directive EC 1907/2006. RoHS compliance has been tested and confirmed by The Cable Lab[®].





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
			Phase Conductor	Earth Conductor	Control Conductor				
A7F15KV1025RD	8.7/15	3+3+3+ÜL	25	25/3E	2.5ST	6.1	50.5	55.6	4530
A7F15KV1035RD	8.7/15	3+3+3+ÜL	35	25/3E	2.5ST	7.2	52.3	57.6	5000
A7F15KV1050RD	8.7/15	3+3+3+ÜL	50	25/3E	2.5ST	8.9	55.8	61.3	5740
A7F15KV1070RD	8.7/15	3+3+3+ÜL	70	35/3E	2.5ST	10.6	59.3	65.2	6840
A7F15KV1095RD	8.7/15	3+3+3+ÜL	95	50/3E	2.5ST	12.3	62.8	68.9	8020
A7F15KV1120RD	8.7/15	3+3+3+ÜL	120	70/3E	2.5ST	13.8	66.2	72.6	9270
A7F20KV1025RD	12/20	3+3+3+ÜL	25	25/3E	2.5ST	6.1	52.9	58.2	4820
A7F20KV1035RD	12/20	3+3+3+ÜL	35	25/3E	2.5ST	7.2	54.7	60.2	5290
A7F20KV1050RD	12/20	3+3+3+ÜL	50	25/3E	2.5ST	8.9	58.3	64	6120
A7F20KV1070RD	12/20	3+3+3+ÜL	70	35/3E	2.5ST	10.6	61.7	67.8	7210
A7F20KV1095RD	12/20	3+3+3+ÜL	95	50/3E	2.5ST	12.3	65.2	71.5	8410
A7F20KV1120RD	12/20	3+3+3+ÜL	120	70/3E	2.5ST	13.8	68.7	75.3	9700

ELECTRICAL CHARACTERISTICS

NOMINAL CROSS SECTIONAL AREA mm ²	MAXIMUM TENSILE LOAD N
25	1125
35	1575
50	2250
70	3150
95	4275
120	5400

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

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.