Tri-rated Cable

Eland Product Group Reference **A2T**

ELAND CABLES
www.eland.co.uk

Application
High temperature, flame retardant cable designed for use in the switch control, relay and instrumentation panels of power switchgear and for purposes such as internal connectors in rectifier equipment, motor starters and controllers.

Standards
BS6231 Type CK
UL Subj.758
CSA c.22.2 No. 127 (only applicable for sizes up to 120mm²)

Conductor
Class 5 flexible plain copper conductor to BS EN 60228:2005 (previously BS6360)

Insulation
PVC (Polyvinyl Chloride)

Insulation Colour
Black, Red, Blue, Light Blue, Dark Blue, Yellow, Green/Yellow, Grey, Brown, Orange, White, Violet, Green, Pink

Voltage Rating
BS6231: 600/1000V
UL, CSA: 600V

Temperature Rating
BS6231: 90°C (105°C for 15,000 hours)
UL, CSA: 105°C

Minimum Bending Radius
6 x overall diameter

Note
Cables above 120mm² in size are referred to as Bi-rated since the CSA standard applies only to sizes up to and including 120mm²

RoHS

Dimensions

Eland Part Number	No of Cores x Nominal Cross Sectional Area # x mm²	AWG	Nominal Thickness of Insulation mm	Nominal Overall Diameter mm	Nominal Weight kg/Km	UL Style Number
A2T*0005	1 x 0.50	22	0.80	2.50	12	1015
A2T*00075	1 x 0.75	20	0.80	2.70	15	1015
A2T*0010	1 x 1.00	18	0.80	2.95	18	1015
A2T*0015	1 x 1.50	16	0.80	3.20	23	1015
A2T*0025	1 x 2.50	14	0.80	3.65	34	1015
A2T*0040	1 x 4.00	12	0.80	4.20	48	1015
A2T*0060	1 x 6.00	10	0.80	4.70	67	1015
A2T*010	1 x 10.00	8	1.14	6.50	119	1028
A2T*016	1 x 16.00	6	1.52	8.00	187	1283
A2T*025	1 x 25.00	4	1.52	9.40	291	1283
A2T*035	1 x 35.00	2	1.52	10.60	406	1283
A2T*050	1 x 50.00	1	2.02	12.90	580	1284
A2T*070	1 x 70.00	2/0	2.02	14.60	780	1284
A2T*095	1 x 95.00	3/0	2.02	16.10	1055	1284
A2T*120	1 x 120.00	4/0	2.02	17.90	1175	1284
A2T*150	1 x 150.00	250 MCM	2.41	20.20	1425	1284
A2T*185	1 x 185.00	350 MCM	2.41	22.85	1735	1284
A2T*240	1 x 240.00	450 MCM	2.41	24.40	2310	1284

*Eland Part Numbers shown above designate the sheath colour (*). For each colour substitute * for a colour code as listed below. e.g. A2TRD0040 = 4.0mm² Red, A2TPK0015 = 1.5mm² Pink

Colour	Black	Green	Blue	Light Blue	Dark Blue	Grey	Green/ Yellow	Orange	Red	Pink	Yellow	Violet	Brown	White
Code	BK	GN	BL	LTBL	DKBL	GR	GY	OR	RD	PK	YW	VI	BR	WH

Conductors

Class 5 flexible Copper Conductors for Single Core and Multi-Core cables

1	2	3
Nominal Cross Sectional Area mm²	Maximum Diameter of Wires in Conductor mm	Maximum Resistance of Conductor at 20°C
		Plain Wires ohms/Km
0.50	0.21	39.0000
0.75	0.21	26.0000
1.00	0.21	19.5000
1.50	0.26	13.3000
2.50	0.26	7.9800
4.00	0.31	4.9500
6.00	0.31	3.3000
10.00	0.41	1.9100
16.00	0.41	1.2100
25.00	0.41	0.7800
35.00	0.41	0.5540
50.00	0.41	0.3860
70.00	0.51	0.2720
95.00	0.51	0.2060
120.00	0.51	0.1610
150.00	0.51	0.1290
185.00	0.51	0.1060
240.00	0.51	0.0801

Table in accordance with BS EN 60228:2005 (previously BS6360)

Datasheet Continues »

Tri-rated Cable [Continued]

Electrical Characteristics

Current Carrying Capacity (amperes) and Voltage Drop (per ampere per metre)

Nominal Cross Sectional Area mm²	Current Rating Amps	Voltage Drop mV/A/m
0.50	11	46.00
0.75	14	31.00
1.00	17	22.00
1.50	21	15.00
2.50	30	9.10
4.00	41	5.70
6.00	53	3.80
10.00	75	2.20
16.00	100	1.40
25.00	136	0.89
35.00	167	0.64
50.00	204	0.45
70.00	259	0.32
95.00	321	0.24
120.00	374	0.19
150.00	418	0.16
185.00	480	0.13
240.00	593	0.10

Current ratings are based on a conductor operating temperature of **85°C** and an ambient air temperature of **45°C** and assumes single cable isolated in free air.

De-rating Factors

Ambient Temperature	45°C	50°C	55°C	60°C	65°C	70°C	75°C
De-rating Factor	1.0	0.97	0.90	0.82	0.73	0.63	0.52

Where Cables are to be grouped, the following factors should be applied:

Number of cables in group	2	3	4	5	6	7	8
De-rating Factor	0.80	0.70	0.65	0.60	0.56	0.53	0.50