

# Standard Fire Resistant Cable

## BS7629-1 LPCB BASEC Approved



Eland Product Group: **A6F**

### APPLICATION

Hard Skin Standard Fire Resistant Cables for use primarily in fire detection, fire alarm, voice alarm, and emergency lighting circuits. These cables are designed to continue to operate for a period of time in a fire situation. 'Standard' fire resistance is recommended for general use.

### CONSTRUCTION

#### Conductor

1.5mm<sup>2</sup> - 2.5mm<sup>2</sup>: Class 1 solid conductor according to BS EN 60228

4mm<sup>2</sup>: Class 2 stranded conductor according to BS EN 60228

#### Insulation

High performance fire resistant silicone rubber

#### Overall Screen

AL/PET (Aluminium/Polyester Tape)

#### Circuit Protective Conductor

Tinned copper

#### Outer Sheath

LSZH (Low Smoke Zero Halogen) Thermoplastic

### STANDARDS

BS 5839-1:2013 Clause 26.2d, BS EN 61034-2, BS EN 60228 BS EN 50200:2015 (PH 30 - PH 60 - PH 120), BS 6387:2013 BS 5839-9, BS 5266-1, BS 8519, BS 7629-1, IEC 60331, BS 6387 (cat. C-W-Z), BS EN 50200, BS EN 50200 annex E, (class PH30 - PH60 - PH120), BS EN 60332-1-2, BS EN 60332-3-24 cat. C BS EN 60754-1, BS EN 60754-2



The electrical and dimensional properties of this product are measured by the Technical and Quality Assurance department at the Eland Cables laboratory. Cable performance in respect of conductor resistance, construction quality (workmanship), dimensional consistency, and other parameters are verified to published standards and approved product drawings. Conformance to RoHS (Restriction of the use of Hazardous Substances) is determined and confirmed.

### CHARACTERISTICS

#### Voltage Rating

300/500V

#### Operating Temperature

-40°C to +90°C

#### Minimum Bending Radius

6 x overall diameter

#### Core Identification

2 cores: ● Blue ● Brown + Bare Earth

3 cores: ● Brown ● Black ● Grey + Bare Earth

4 cores: ● Blue ● Brown ● Black ● Grey + Bare Earth

#### Outer Sheath Colour

● Red ○ White

## DIMENSIONS

### Class 1 Solid Plain Conductor

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	EARTH WIRE CONSTRUCTION n° /mm	NOMINAL OUTER DIAMETER mm	NOMINAL WEIGHT kg/km
A6F02015*	2	1.5	1/1.38	8	95
A6F02025*	2	2.5	1/1.75	9.4	130
A6F03015*	3	1.5	1/1.38	8.5	115
A6F03025*	3	2.5	1/1.75	10	170
A6F04015*	4	1.5	1/1.38	9.4	140
A6F04025*	4	2.5	1/1.75	11	210

\*Eland Part No. shown above designate the sheath colour (\*). For each colour substitute \* for a colour code. e.g. A6F02015RD – 1.5mm<sup>2</sup> Red

### Class 2 Stranded Plain Conductor

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	EARTH WIRE CONSTRUCTION n° /mm	NOMINAL OUTER DIAMETER mm	NOMINAL WEIGHT kg/km
A6F02040*	2	4	7/0.85	11.5	200
A6F03040*	3	4	7/0.85	12.2	260
A6F04040*	4	4	7/0.85	13.5	330

\*Eland Part No. shown above designate the sheath colour (\*). For each colour substitute \* for a colour code. e.g. A6F02040RD – 4mm<sup>2</sup> Red

## ELECTRICAL CHARACTERISTICS

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	CONDUCTOR RESISTANCE AT 20°C Ω/km	INSULATION RESISTANCE AT 20°C MΩXkm	NOMINAL CAPACITANCE pF/m	
			Core / Core	Core / Screen
1	18.1	300	100	170
1.5	12.1	300	110	190
2.5	7.41	300	130	220
4	4.61	300	160	270

## CURRENT CARRYING CAPACITY

### Clipped Direct

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	CURRENT RATING	
	2 Core Amps	3 and 4 Core Amps
1	19	17
1.5	24	22
2.5	33	30
4	45	40

### In Conduit or in Cable Tray

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	CURRENT RATING	
	2 Core Amps	3 and 4 Core Amps
1	17	15
1.5	22	19.5
2.5	30	26
4	40	35

## VOLTAGE DROP

### Clipped Direct

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	VOLTAGE DROP	
	2 Core mV/A/m	3 and 4 Core mV/A/m
1	45	39
1.5	30	26
2.5	18	15
4	11	10

### In Conduit or in Cable Tray

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	VOLTAGE DROP	
	2 Core mV/A/m	3 and 4 Core mV/A/m
1	45	39
1.5	30	26
2.5	18	15
4	11	10

## RATING FACTORS

AMBIENT TEMPERATURE °C	25	30	35	40	45	50	55	60	65
RATING FACTOR	1.04	1.00	0.95	0.90	0.85	0.80	0.74	0.67	0.60