

Enhanced Fire Resistant Cable BS7629-1 LPCB BASEC Approved



Eland Product Group: **A6F**

APPLICATION

Hard Skin Enhanced 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. 'Enhanced grade' fire resistance is recommended for systems, in particular building types, in which cables might need to operate correctly during a fire for periods in excess of those normally required for single phase evacuation of a building.

CONSTRUCTION

Conductor

1.5mm² - 2.5mm²: Class 1 solid conductor according to BS EN 60228

4mm²: Class 2 stranded conductor according to BS EN 60228

Insulation

Mica/Glass fire resistant tape covered by 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)

STANDARDS

BS 5839-1:2013 Clause 26.2e, BS EN 50200:2015 (PH 30 - PH 60 - PH 120), BS 6387:2013, BS 7629-1, IEC 60331 BS 6387 (cat. C-W-Z), BS EN 50200 (class PH120), BS EN 50200, BS 8434-2 (120 min), BS EN 60332-1-2, BS EN 60332-3-24 cat. C, BS EN 60754-1, BS EN 60754-2, BS EN 61034-2, BS 5266-1, BS 8519



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 ²	EARTH WIRE CONSTRUCTION n° /mm	NOMINAL OUTER DIAMETER mm	NOMINAL WEIGHT kg/km
A6F02015*/ENH	2	1.5	1/1.18	8.8	105
A6F02025*/ENH	2	2.5	1/1.75	10.2	150
A6F03015*/ENH	3	1.5	1/1.38	9.3	130
A6F03025*/ENH	3	2.5	1/1.75	10.8	190
A6F04015*/ENH	4	1.5	1/1.38	10.3	165
A6F04025*/ENH	4	2.5	1/1.38	12	240

Eland Part No. shown above designate the sheath colour (). For each colour substitute * for a colour code. e.g. A6F02015RD/ENH – 1.5mm² Red

Class 2 Stranded Plain Conductor

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm ²	EARTH WIRE CONSTRUCTION n° /mm	NOMINAL OUTER DIAMETER mm	NOMINAL WEIGHT kg/km
A6F02040*/ENH	2	4	7/0.85	12.2	220
A6F03040*/ENH	3	4	7/0.85	13	280
A6F04040*/ENH	4	4	7/0.85	14.4	350

Eland Part No. shown above designate the sheath colour (). For each colour substitute * for a colour code. e.g. A6F02040RD/ENH – 4mm² Red

ELECTRICAL CHARACTERISTICS

NOMINAL CROSS SECTIONAL AREA mm ²	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	95	160
1.5	12.1	300	110	170
2.5	7.41	300	120	200
4	4.61	300	150	250

CURRENT CARRYING CAPACITY

Clipped Direct

NOMINAL CROSS SECTIONAL AREA mm ²	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 ²	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 ²	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 ²	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