

# Flam-Guard 200 Range

## Standard Fire Resistant Multi Core Cable

(Complies with BS 7629-1:2015)

Class 1 Solid Copper Conductor or Class 2 Stranded Copper Conductor/  
Silicone Rubber Insulation / Aluminum Electrostatic Screen/  
Tinned Copper Circuit Protective Conductor/  
Low Smoke Zero Halogen Sheath

### Application

Fire Alarms for buildings and control circuits for fire safety systems, including IS 3218:2013  
Emergency lighting systems, BS 5266-1:2011 and IS3217:2013; Voice alarm and emergency  
voice communications systems, BS5839-8:2013 and BS 5839-9:2013; Data and Control  
circuits for other 'Standard' applications requiring fire resistance.

Manufactured with Low Smoke Zero Halogen (LSZH) insulation, making it  
suitable for installations in public buildings where, in the event of fire, smoke  
and acid gas evolution would pose a hazard to public life and equipment.

### Cable Description

Class 1 Solid Copper Conductor to BS EN 60228 for 1.5mm<sup>2</sup>  
Class 2 Stranded Copper Conductor to BS EN 60228 for 2.5mm<sup>2</sup> - 6.0mm<sup>2</sup>  
Silicone Rubber Insulation Type EI2 to BS EN 50363  
Aluminum Electrostatic Screen  
Tinned Copper circuit protective conductor  
Low Smoke Zero Halogen Sheath

**N.B.** In the event of fire, the gases evolved from this cable are free from Halogen and the design is optimised to limit the quantity and cleanliness of the smoke evolved during this period. Although the acronym HFFR is applied to the sheath material, the terms LSOH, HFFR and HFFR are also applicable.

### Insulation Colours

2 Core - Blue, Brown,

3 Core - Brown, Black, Grey

4 Core - Blue, Brown, Black, Grey

### Sheath Colours

White / Red (Other Colours Available on Request)

### Third party Accreditation



Cables are tested and approved by BASEC (British Approvals Service for Cables)



Cables are tested and approved by LPCB (Loss Prevention Certification Board)



## Physical Characteristics

No of Conductors	Nominal Cross-Sectional Area (mm <sup>2</sup> )	Nominal Radial Thickness Insulation (mm)	Nominal Radial Thickness Sheath (mm)	Approximate Maximum Diameter (mm)	Maximum Conductor Resistance at 20°C (ohms/km)	Nominal Weight (kg/km)
2	1.5	0.70	0.90	8.50	12.10	93.00
2	2.5	0.80	1.00	10.50	7.41	135.00
2	4.0	0.80	1.10	12.50	4.61	190.00
*2	6.0	0.80	1.10	14.00	3.08	250.00
3	1.5	0.70	0.90	9.50	12.10	130.00
3	2.5	0.80	1.00	11.50	7.41	180.00
3	4.0	0.80	1.10	13.50	4.61	250.00
*3	6.0	0.80	1.10	15.50	3.08	310.00
4	1.5	0.70	1.00	10.50	12.10	150.00
4	2.5	0.80	1.10	12.00	7.41	210.00
4	4.0	0.80	1.20	15.00	4.61	330.00
*4	6.0	0.80	1.10	17.00	3.08	400.00

\*Items non BASEC & LPCB Approved due to no being present in BS 7629. Cables internally tested for performance.

## Mechanical Characteristics

Characteristics	Unit	Value
Max Operating Temperature	°C	70 (*90)
Min Operating Temperature	°C	-40
Min Installation Temperature	°C	0
Max Installation Temperature	°C	70
Minimum Bend Radius	Diameter	6D

\*Cable installed in an enclosure, subject to the sheath being terminated upon entry and the combination of ambient temperature and temperature rise due to load resulting in a conductor temperature not exceeding 70 °C outside the enclosure, the conductor temperature in the enclosure can be increased to a temperature not exceeding 90 °C.

## Electrical Characteristics – General

Characteristics	Unit	Value
Voltage Rating	V	300/500
Current Rating Table	-	4D2

## Electrical Characteristics – Current Carrying Capacity

CONDUCTOR CROSS-SECTIONAL AREA	REFERENCE METHOD A (ENCLOSED IN CONDUIT THERMALLY INSULATING WALL ETC)		REFERENCE METHOD B (ENCLOSED IN CONDUIT ON A WALL OR IN TRUNKING ETC)		REFERENCE METHOD C (CLIPPED DIRECT)		REFERENCE METHOD E (IN FREE AIR OR ON A PERFORATED CABLE TRAY ETC, HORIZONTAL OR VERTICAL)	
	1 TWO CORE CABLE*, SINGLE PHASE AC OR DC	1 THREE CORE CABLE* OR 1 FOUR CORE CABLE, THREE-PHASE AC	1 TWO CORE CABLE*, SINGLE PHASE AC OR DC	1 THREE CORE CABLE* OR 1 FOUR CORE CABLE, THREE-PHASE AC	1 TWO CORE CABLE*, SINGLE PHASE AC OR DC	1 THREE CORE CABLE* OR 1 FOUR CORE CABLE, THREE-PHASE AC	1 TWO CORE CABLE*, SINGLE PHASE AC OR DC	1 THREE CORE CABLE* OR 1 FOUR CORE CABLE, THREE-PHASE AC
1	2	3	4	5	6	7	8	9
(mm <sup>2</sup> )	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)
1.5	14	13	16.50	15	19.50	17.50	22	18.50
2.5	18.50	17.50	23	20	27	24	30	25
4	25	23	30	27	36	32	40	34
6	32	29	38	34	46	41	51	53

The above is in accordance with 18<sup>th</sup> edition of the IET wiring regulations.

## Fire Performance

Test	Test Method	Comment
Construction Standard	BS 7629-1	Compliant
Circuit Integrity (PH60) – Flame & Shock 60 mins	BS EN 50200:2015	Compliant
Circuit Integrity – Flame, Shock & Water 30 mins	BS EN 50200- ANNEX E	Compliant
Circuit Integrity Test	BS 6387 C,W,Z	Compliant
Single Cable Vertical Burn Test	BS EN 60332-1: 2004	Compliant
Acid Gas Emission	BS EN 60754-1:2014	Compliant
Smoke Emission	BS EN 61034-2: 2005	Compliant

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