



# 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> - 4.0mm<sup>2</sup>
Silicone Rubber Insulation Type El2 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 (mm2)	Nominal Radial Thickness Insulation (mm)	Nominal Radial Thickness Sheath (mm)	Approximate Overall 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
3	1.5	0.70	.090	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
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

# **Mechanical Characteristics**

Characteristics	Unit	Value		
Max Conductor Temperature	°C	70		
Min Operating Temperature	°C	-25		
Min Installation Temperature	°C	0		
Max Installation Temperature	°C	60		
Minimum Bend Radius	Diameter	6D		

#### **Electrical Characteristics - General**

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

# **Electrical Characteristics - Current Carrying Capacity**

CONDUCTOR	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)	
CROSS - SECTIONAL AREA	1 TWO CORE CABLE*, SINGLE PHASE AC OR DC	1THREE CORE CABLE* OR 1 FOUR CORE CABLE, THREE-PHASE AC	1 TWO CORE CABLE*, SINGLE PHASE AC OR DC	ORE CABLE*, CABLE* OR 1 FOUR CABLE*, SINGL	1 TWO CORE CABLE*, SINGLE PHASE AC OR DC	1THREE CORE CABLE* OR 1FOUR 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
(mm2)	(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

The above is in accordance with  $18^{\text{th}}$  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

