



# Caledonian

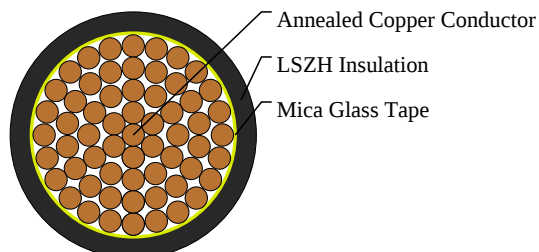
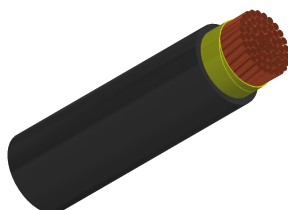
## FIREFLIX Fire Resistant Power & Control Cables

www.caledonian-cables.com

marketing@caledonian-cables.com

### 600/1000V Mica+LSZH Insulated, Non-sheathed Power Cables to BS EN 50525-3-31 (Single Core)

FFX100 1mZ1-R(CU/MGT+LSZH 600/1000V Class 2)



### APPLICATIONS

The cables are mainly used in power stations, mass transit underground passenger systems, airports, petrochemical plants, hotels, hospitals and high-rise buildings.

### STANDARDS

Basic design adapted from BS EN 50525-3-31

### FIRE PERFORMANCE

|                                                                           |                                |
|---------------------------------------------------------------------------|--------------------------------|
| Circuit Integrity                                                         | IEC 60331-21; BS 6387; BS 8491 |
| Flame Retardance (Single vertical wire or cable test)                     | IEC 60332-1-2; EN 60332-1-2    |
| Reduced Fire Propagation (Vertically-mounted bundled wires & cables test) | IEC 60332-3-24; EN 60332-3-24  |
| Halogen Free                                                              | IEC 60754-1; EN 50267-2-1      |
| No Corrosive Gas Emission                                                 | IEC 60754-2; EN 50267-2-2      |
| Minimum Smoke Emission                                                    | IEC 61034-2; EN61034-2         |

### VOLTAGE RATING

600/1000V

### CABLE CONSTRUCTION

Conductor: Copper conductor according to BS EN 60228 class 2.

Fire Barrier: Mica glass tape.

Insulation: Thermoplastic compound of type TI 7 to EN 50363-7.

Insulation Option: UV resistance, hydrocarbon resistance, oil resistance, anti-rodent and anti-termite properties can be offered as option.

### COLOUR CODE

Black, Blue, Brown, Grey, Orange, Pink, Red, Turquoise, Violet, White, Green and Yellow.

### PHYSICAL AND THERMAL PROPERTIES

Maximum temperature range during operation: 70°C



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Maximum short circuit temperature (5 Seconds): 160°C

Minimum bending radius

OD>12mm: 6 × Overall Diameter

### Electrical Properties

Conductor operating temperature: 70°C

Ambient temperature: 30°C

### DIMENSION AND PARAMETERS

| No. of Cores<br>× Cross-sectional Area | Conductor Class | Nominal Insulation Thickness | Overall Diameter (min.) | Overall Diameter (max.) | Approx. Weight |
|----------------------------------------|-----------------|------------------------------|-------------------------|-------------------------|----------------|
| No.×mm <sup>2</sup>                    |                 | mm                           | mm                      | mm                      | kg/km          |
| 1×500                                  | 2               | 2.8                          | 31.5                    | 37.9                    | 5359           |

### Current-Carrying Capacities (Amp) according to BS 7671:2008 table 4D1A

| Conductor Cross-sectional Area | Ref. Method B 2 cables, 1-phase a.c. or d.c. | Ref. Method B 3/4 cables, 3-phase a.c. | Ref. Method C 2 cables, 1-phase a.c. or d.c. flat and touching | Ref. Method C 3/4 cables, 3-phase a.c. flat and touching or trefoil | Ref. Method F 2 cables, 1-phase a.c. or d.c. flat | Ref. Method F 3 cables, 3-phase a.c. flat | Ref. Method F 3 cables, 3-phase a.c. trefoil | Ref. Method F 2 cables 1-phase 3 cables 3-phase flat Horizontal | Ref. Method F 2 cables 1-phase 3 cables 3-phase flat Vertical |
|--------------------------------|----------------------------------------------|----------------------------------------|----------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------|-------------------------------------------|----------------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------------|
| mm <sup>2</sup>                | A                                            | A                                      | A                                                              | A                                                                   | A                                                 | A                                         | A                                            | A                                                               | A                                                             |
| 500                            | 626                                          | 533                                    | 792                                                            | 723                                                                 | 868                                               | 789                                       | 749                                          | 982                                                             | 920                                                           |

### Voltage Drop (Per Amp Per Meter) according to BS 7671:2008 table 4D1B

| Conductor Cross-sectional Area | 2 cables d.c. | Ref. Methods A,B 2 cables, 1-phase a.c. | Ref. Methods C,F 2 cables, 1-phase a.c. (Cables touching) | Ref. Methods C,F 2 cables, 1-phase a.c. (Cables spaced) | Ref. Methods A,B 3 or 4 cables, 3-phase a.c. | Ref. Methods C,F 3 or 4 cables, 3-phase a.c. (Cables touching, Trefoil) | Ref. Methods C,F 3 or 4 cables, 3-phase a.c. (Cables touching, Flat) | Ref. Methods C,F 3 or 4 cables, 3-phase a.c. (Cables spaced, Flat) |
|--------------------------------|---------------|-----------------------------------------|-----------------------------------------------------------|---------------------------------------------------------|----------------------------------------------|-------------------------------------------------------------------------|----------------------------------------------------------------------|--------------------------------------------------------------------|
| mm <sup>2</sup>                | mV/A/m        | mV/A/m                                  | mV/A/m                                                    | mV/A/m                                                  | mV/A/m                                       | mV/A/m                                                                  | mV/A/m                                                               | mV/A/m                                                             |
| 500                            | 0.086         | 0.11;x:0.26;z:0.23                      | 0.098;x:0.155;z:0.14                                      | 0.093;x:0.24;z:0.22                                     | 0.1;x:0.22;z:0.25                            | 0.086;x:0.135;z:0.11                                                    | 0.086;x:0.21;z:0.20                                                  | 0.081;x:0.29;z:0.30                                                |



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Rated voltage



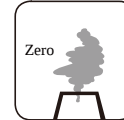
BS EN 50525-3-41



Circuit Integrity  
IEC 60331-21/BS6387/BS 8491



Flame Retardancy  
IEC 60332-1-2



Halogen Free  
IEC 60754-1



Low Corrosivity  
IEC 60754-2



Low Smoke Emission  
IEC 61034-2



Reduced Fire Propagation  
IEC 60332-3-24