



# Caledonian

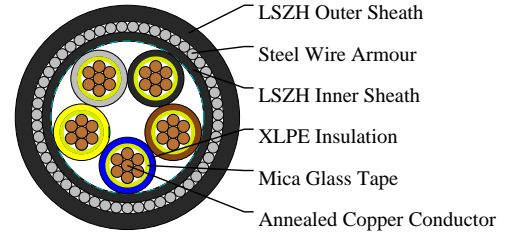
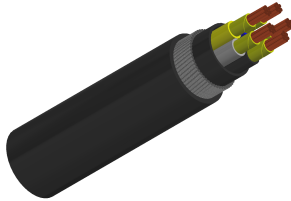
## FIREFLIX Fire Resistant Power & Control Cables

www.caledonian-cables.com

marketing@caledonian-cables.com

### 600/1000V Mica+XLPE Insulated, LSZH Sheathed, Armoured Power Cables to IEC 60502-1 (2-5 Cores)

FFX400 1mRZ1MZ1-R (CU/MGT+XLPE/LSZH/SWA/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 IEC 60502-1

### APPROVALS

CE Certification (GB 1067 5743 16)

### FIRE PERFORMANCE

|   |                               |
|---|-------------------------------|
| Circuit Integrity   | IEC 60331-21; BS6387; 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; EN 61034-2       |

### VOLTAGE RATING

600/1000V

### CABLE CONSTRUCTION

Conductor: The conductors shall be class 2 plain or metal-coated annealed copper in accordance with IEC 60228.

Class 1 and class 5 conductor can be offered as option.

Fire Barrier: Mica glass tape.

Insulation: Thermosetting XLPE material as per IEC 60502-1.

Inner Covering: Thermoplastic halogen free compound ST8 as per IEC 60502-1.

Armouring: Steel wire armour.

Outer Sheath: Thermoplastic halogen free compound ST8 as per IEC 60502-1.



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

### COLOUR CODE

Insulation Colour

2-core: Brown and blue.

3-core: Brown, black and grey.

4-core: Blue, brown, black and grey.

5-core: Green-and-yellow, blue, brown, black, grey.

Other colours can be offered upon request.

Sheath Colour: Black; other colours can be offered upon request.

### PHYSICAL AND THERMAL PROPERTIES

Maximum temperature range during operation: 90°C

Maximum short circuit temperature (5 Seconds): 250°C

Minimum bending radius

circular copper conductors: 6 × Overall Diameter

shaped copper conductors: 8 × Overall Diameter

### Electrical Properties

Conductor operating temperature: 90°C

Air ambient temperature: 30°C

Ground ambient temperature: 20°C

### DIMENSION AND PARAMETERS

| No. of Cores<br>× Cross-sectional<br>Area | Conductor<br>Class | Nominal<br>Insulation<br>Thickness | Nominal<br>Thickness<br>of Inner<br>Covering | Nominal<br>Sheath<br>Thickness | Nominal<br>Steel Wire<br>Armour<br>Diameter | Approx.<br>Overall<br>Diameter | Approx.<br>Weight |
|---|--------------------|------------------------------------|--|--------------------------------|---|--------------------------------|-------------------|
| No. x mm <sup>2</sup>                     |                    | mm                                 | mm   | mm                             | mm  | mm                             | kg/km             |
| 5x10                                      | 2                  | 0.7                                | 1.0  | 1.8                            | 1.25  | 25.4                           | 1465              |

### Current-Carrying Capacities (Amp) according to BS 7671:2008 table 4E4A

| Conductor Cross-sectional Area | 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 D One 2C cable, 1-phase a.c. or d.c. | Ref. Method D One 3C or 4C cable, 3-phase a.c. | Ref. Method E One 2C cable, 1-phase a.c. or d.c. | Ref. Method E One 3C or 4C cable, 3-phase a.c. |
|--------------------------------|--|---|--|--|--|--|
| mm <sup>2</sup>                | A  | A   | A  | A  | A  | A  |
| 10                             | 85   | 73  | 71   | 58   | 90   | 78   |

### Voltage Drop (Per Amp Per Meter) according to BS 7671:2008 table 4E4B

| Conductor Cross-sectional Area | 2C cable, d.c. | 2C cable, 1-phase a.c. | 3C or 4C cable, 3-phase a.c. |
|--------------------------------|----------------|------------------------|------------------------------|
| mm <sup>2</sup>                | mV/A/m         | mV/A/m                 | mV/A/m                       |
|                                |                |                        |                              |



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|    |     |     |     |
|----|-----|-----|-----|
| 10 | 4.7 | 4.7 | 4.0 |
|----|-----|-----|-----|



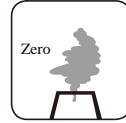
Rated voltage



Circuit Integrity  
IEC 60331-21/BS6387/BS 8491



Flame Retardancy  
IEC 60332-1-2



Halogen Free  
IEC 60754-1



IEC60502-1



Low Corrosivity  
IEC 60754-2



Low Smoke Emission  
IEC 61034-2



Reduced Fire Propagation  
IEC 60332-3-24