



# Caledonian

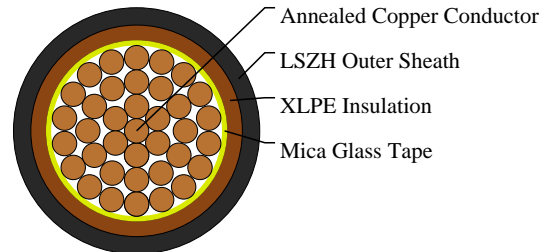
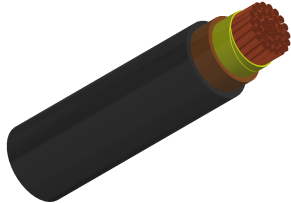
FIREFLIX Fire Resistant Power & Control Cables

www.caledonian-cables.com

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## 600/1000V Mica+XLPE Insulated, LSZH Sheathed Power Cables to IEC 60502-1(1C150)

FFX300 1mRZ1-R (CU/MGT+XLPE/LSZH 600/1000V Class 2)



### APPLICATIONS

These XLPE insulated and LSZH sheathed cables are generally used for fixed installation. Suitable for building wiring, especially in areas where smoke and fume emissions may cause a potential threat to life but not for burial in the ground, either directly or in ducts.

### STANDARDS

Basic design adapted from IEC 60502-1

### 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; 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 IEC60228.

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

Fire Barrier: Mica glass tape.

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

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

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

### COLOUR CODE



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Insulation Colour: Brown or blue; 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 OD≤25mm: 4 × Overall Diameter

circular copper conductors OD>25mm: 6 × Overall Diameter

shaped copper conductors: 8 × Overall Diameter

### Electrical Properties

Conductor operating temperature: 90°C

Ambient temperature: 30°C

### DIMENSION AND PARAMETERS

No. of Cores × Cross-sectional Area	Conductor Class	Nominal Insulation Thickness	Nominal Sheath Thickness	Approx. Overall Diameter	Approx. Weight
No.×mm <sup>2</sup>		mm	mm	mm	kg/km
1×150	2	1.4	1.6	22.8	1736

### Current-Carrying Capacities (Amp) according to BS 7671:2008 table 4E1A

Conductor Cross-sectional Area	Ref. Method A 2 cables, 1-phase a.c. or d.c.	Ref. Method A 3/4 cables, 3-phase a.c.	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 G 2 cables, 1-phase a.c. or d.c. or 3 cables 3-phase a.c. Horizontal	Ref. Method G 2 cables, 1-phase a.c. or d.c. or 3 cables 3-phase a.c. Vertical
mm <sup>2</sup>	A	A	A	A	A	A	A	A	A	A	A
150	318	285	393	342	476	436	505	464	444	577	527

### Voltage Drop (Per Amp Per Meter) according to BS 7671:2008 table 4E1B

Conductor Cross-sectional Area	2 cables d.c.	Ref. Methods A,B 2 cables, 1-phase a.c.	Ref. Methods C,F,G 2 cables, 1-phase a.c. (Cables touching)	Ref. Methods C,F,G 2 cables, 1-phase a.c. (Cables spaced)	Ref. Methods A,B 3 or 4 cables, 3-phase a.c.	Ref. Methods C,F,G 3 or 4 cables, 3-phase a.c. (Cables touching, Trefoil)	Ref. Methods C,F,G 3 or 4 cables, 3-phase a.c. (Cables touching, Flat)	Ref. Methods C,F,G 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
150	0.32	r:0.33 x:0.26 z:0.43	r:0.32 x:0.165 z:0.36	r:0.32 x:0.25 z:0.41	r:0.29 x:0.23 z:0.37	r:0.28 x:0.140 z:0.31	r:0.28 x:0.165 z:0.32	r:0.28 x:0.24 z:0.37



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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