



# Caledonian

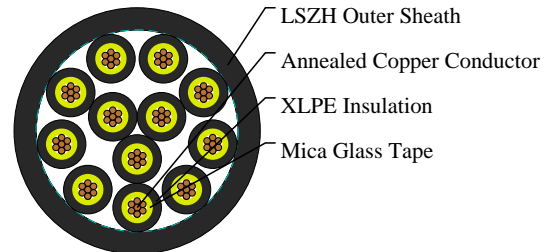
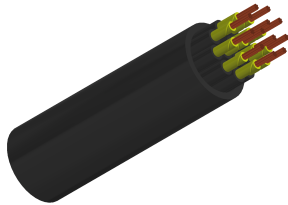
FIREFLIX Fire Resistant Power & Control Cables

www.caledonian-cables.com

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## 600/1000V Mica+XLPE Insulated, LSZH Sheathed Power Cables to IEC 60502-1(12C1.5)

FFX400 1mRZ1-R (CU/MGT+XLPE/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. This product type is CE and TUV approved.

### STANDARDS

Basic design adapted from IEC 60502-1

### APPROVALS

CE Certification

TUV Certification

### 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 IEC 60228.

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

Fire Barrier: Mica glass tape.

Insulation: Thermosetting XLPE material and thickness shall be as per IEC 60502-1.

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

12-core: Black cores with white numerals.

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

### 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
12x1.5	2	0.7	1.8	20.0	494

Current-Carrying Capacities (Amp) according to Current-Carrying Capacities (Amp) according to BS 7671:2008 table 4E2A

Conductor Cross-sectional Area	Ref. Method A One 2C cable, 1-phase a.c. or d.c.	Ref. Method A One 3C or 4C cable, 3-phase a.c.	Ref. Method B One 2C cable, 1-phase a.c. or d.c.	Ref. Method B One 3C or 4C cable, 3-phase a.c.	Ref. Method C One 1C cable, 1-phase a.c. or d.c.	Ref. Method C 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	A	A
1.5	18.5	16.5	22	19.5	24	22	26	23

Voltage Drop (Per Amp Per Meter) according to Voltage Drop (Per Amp Per Meter) according to BS 7671:2008 table 4E2B

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
1.5	31	31	27



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Rated voltage



Circuit Integrity  
IEC 60331-21/BS6387/BS 8491



Flame Retardancy  
IEC 60332-1-2



IEC60502-1



Low Corrosivity  
IEC 60754-2



Low Smoke Emission  
BS EN 61034-2



Reduced Fire Propagation  
IEC 60332-3-24



IEC 60754-1  
Zero  
Zero Halogen