



# Caledonian

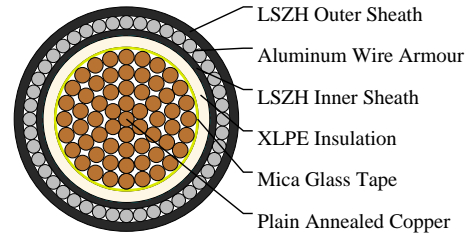
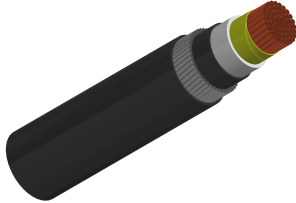
Airport Flame Retardant And Fire Resistant Cables

www.caledonian-cables.com

marketing@caledonian-cables.com

## 600/1000V Mica/XLPE Insulated, LSZH Sheathed, Armoured Power Cables (Single Core)

FFX300 1mRZ1MZ1-R 1G400 (CU/MGT+XLPE/LSZH/AWA/LSZH 600/1000V Class 2)



### APPLICATIONS

This cable is designed for areas where the integrity of the electrical properties circuit is critical in maintaining power supply. Applications can be found in emergency lightings, control and power circuits, power stations, fire alarm systems, underground tunnels, communications systems, sewage treatment plants, lifts, escalators, and high-rise buildings.

### STANDARDS

Basic design to BS 7846

### FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires& cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic Gases	NES 02-713; NF C 20-454
Circuit Integrity	IEC 60331-21; BS 6387 CWZ; DIN VDE 0472-814(FE180); CEI 20-36/2-1; SS229-1; NBN C 30-004 (cat. F3); NF C32-070-2.3(CR1)
System Circuit Integrity	DIN 4102-12, E30 depending on lay system

### VOLTAGE RATING



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600/1000V

## CABLE CONSTRUCTION

Conductor: Plain annealed copper wire, stranded according to IEC 60228 class 2

Insulation: Mica glass tape covered by extruded cross-linked XLPE compound

Inner Sheath :Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1

Armouring : Aluminum wire armour

Outer Sheath:Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1

## COLOUR CODE

Insulation Colour: Natural

Sheath Colour: Black (other colors upon request)

## PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation: -30°C ~ 90°C

Temperature Range during Installation : -5°C ~ 50°C

Minimum Bending Radius : 8 x OD

## Electrical Properties

Dielectric Test:3500 V r.m.s. x 5' ( core / core )

Insulation Resistance:1000 MΩ x km ( at 20°C )

Short circuit Temperature :250°C ( up to 5 secs )

Conductor Operating Temperature : 90°C

Ambient Temperature : 30°C

## DIMENSION AND PARAMETERS

Caledonian Cable Code	No. of Cores × Cross-sectional Area	No./Nominal Diameter of Strands	Conductor Diameter	Nominal Insulation Thickness	Approx. Overall Diameter	Approx. Weight
	No.×mm <sup>2</sup>	no./mm	mm	mm	mm	kg/km
FFX300 1mRZ1MZ1- R 1G400	1x400	61/2.85	25.65	2	41.5	4780

## Current-Carrying Capacities (Amp)

Conductor Cross-sectional Area	Ref. Method 1 2 cables, 1-phase a.c. or d.c. flat and touching	Ref. Method 1 3/4 cables, 3-phase a.c. flat and touching or trefoil	Ref. Method 1 2 cables, 1-phase a.c. or d.c. flat and touching	Ref. Method 1 1 2 cables, 3-phase a.c. flat and touching or trefoil	Ref. Method 1 2 3 cables trefoil, 3-phase a.c.	In single-way ducts 2 cables, 1-phase a.c. or d.c.	In single-way ducts 3/4 cables, 3-phase a.c.	Laid direct in ground 2 cables, 1-phase a.c. or d.c.	Laid direct in ground 3/4 cables, 3-phase a.c.
mm <sup>2</sup>	A	A	A	A	A	A	A	A	A
400	853	717	899	767	815	640	580	830	700

## Voltage Drop (Per Amp Per Meter)



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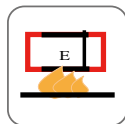
Nominal Cross sectional Area	2 cables d.c.	Ref. Methods 1,11 2 cables, 1-phase a.c.	Ref. Methods 1,11,12 3 or 4 cables, 3-phase a.c. (in trefoil)	Ref. Methods 1,11 3 or 4 cables, 3-phase a.c. (Flat and touching)	2 cables, 1-phase a.c. (In ducts)	2 cables, 1-phase a.c. (In ground)	3 or 4 cables, 3-phase a.c. touching (In ducts)	3 or 4 cables, 3-phase a.c. touching (In ground)
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
400	0.115	r:0.145 x:0.17 z:0.22	r:0.125 x:0.15 z:0.195	r:0.16 x:0.21 z:0.27	0.35	0.21	0.3	0.19



Rated voltage



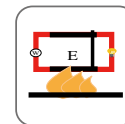
BS 7846



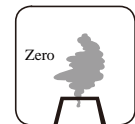
Circuit Integrity  
IEC 60331-21/BS 6387



Flame Retardant  
NF C32-070-2,1(C2)  
IEC60332-1-2/EN50266-2-1



Functional integrity  
DIN 4102-12



Halogen Free  
IEC 60754-1



Low Corrosivity  
IEC60754-2/EN50267-2-2/3  
NF C32-074/NF C20-453



Low Smoke Emission  
IEC 61034-2 / EN 50268-2  
NF C32-073/NF C 20-902



Low Toxicity  
NES 02-713/NF C 20-454



Reduced Fire Propagation  
NF C32-070-2,2(C1)  
IEC60332-3-24/EN50266-2-4