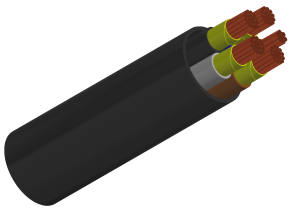
Caledonian

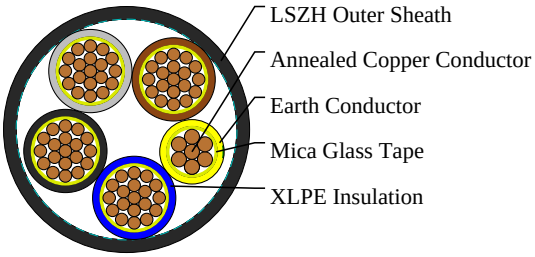
Airport Flame Retardant And Fire Resistant Cables

www.caledonian-cables.com marketing@caledonian-cables.com

600/1000V Mica+XLPE Insulated, LSZH Sheathed Power Cables to IEC 60502-1(4+1 Cores)

FFX400 1mRZ1-R 4C50/25(CU/MGT+XLPE/LSZH 600/1000V Class 2)
Emergency Lighting Cables





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 adapted from IEC 60502-1

FIRE PERFORMANCE

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)
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 & cables 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
System Circuit Integrity	DIN 4102-12, E30 depending on lay system

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VOLTAGE RATING

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
Cabling: The cores are cabled together in concentric layers with suitable non-hygroscopic fillers.
Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1

COLOUR CODE

Insulation Colour as per BS7671
Insulation Colour: Yellow/Green, Brown, Gray, Black, Blue
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: 6 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	Nom. Overall Diameter	Approx. Weight
	No.×mm²	no./mm	mm	mm	mm	kg/km
FFX400 1mRZ1-R 4G50/25	4x50/25	19/1.78	8.9	1	35.8	4100

Current-Carrying Capacities (Amp)

Conductor Cross-sectional Area	Ref. Method 4 3/4 cables, 3-phase a.c.	Ref. Method 3 2cables, 1-phase a.c. or d.c.	Ref. Method 3 3/4 cables, 3-phase a.c.	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 11 2 cables, 1-phase a.c. or d.c. flat and touching	Ref. Method 11 3/4 cables, 3-phase a.c. flat and touching or trefoil
mm²	A	A	A	A	A	A	A
50	130	175	154	209	179	225	192

Voltage Drop (Per Amp Per Meter)

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Nominal Cross sectional Area	2C cable, d.c.	2C cable, 1-phase a.c.	3C or 4C cable, 3-phase a.c.
mm²	mV/A/m	mV/A/m	mV/A/m
50	0.98	r:0.99x:0.155z:1	r:0.86x:z0.135:0.87

Rated voltage

Circuit Integrity
IEC 60331-21/BS6387/BS 8491

Flame Retardant
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1

Functional integrity
DIN 4102-12

IEC60502-1

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

Zero Halogen
IEC 60754-1/EN 50267-2-1
NF C20-454