Caledonian

Airport Flame Retardant And Fire Resistant Cables

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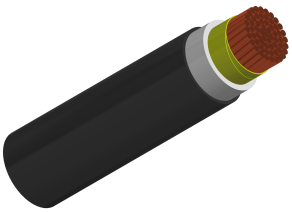
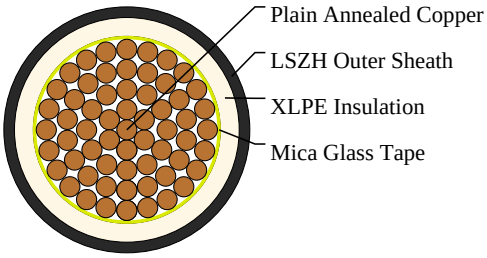
600/1000V Mica+XLPE Insulated, LSZH Sheathed Power Cables (Single Core)

FFX300 1mRZ1-R 1G400 (CU/MGT+XLPE/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 IEC 60502-1

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
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 : 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	Approx. Overall Diameter	Approx. Weight
	No.×mm²	no./mm	mm	mm	mm	kg/km
FFX300 1mRZ1-R 1G400	1x400	61/2.85	25.65	2	35.4	4130

Current-Carrying Capacities (Amp)

Conductor Cross-sectional Area	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	Ref. Method 12 2 cables, 1-phase a.c. or d.c. or 3 cables 3-phase Horizontal	Ref. Method 12 2 cables, 1-phase a.c. or d.c. or 3 cables 3-phase Vertical	Ref. Method 12 3 cables trefoil, 3-phase a.c.
mm²	A	A	A	A	A	A	A	A	A
400	684	584	868	793	915	849	1065	994	820

Voltage Drop (Per Amp Per Meter)

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Nominal Cross sectional Area	2 cables d.c.	Ref. Methods 3,4 2 cables, 1-phase a.c.	Ref. Methods 1,11 2 cables, 1-phase a.c.	Ref. Methods 3,4 3 or 4 cables, 3-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)
mm²	mV/A/m	mV/A/m	mV/A/m	mV/A/m	mV/A/m	mV/A/m
400	0.12	r:0.14 x:0.25 z:0.29	r:0.13 x:0.155 z:0.2	r:0.125 x:0.22 z:0.25	r:0.11 x:0.135 z:0.175	r:0.11 x:0.16 z:0.195

Rated voltage

Circuit Integrity
IEC 60331-21/BS 8491


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

Functional integrity
DIN 4102-12

Halogen Free
IEC 60754-1

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