



Caledonian

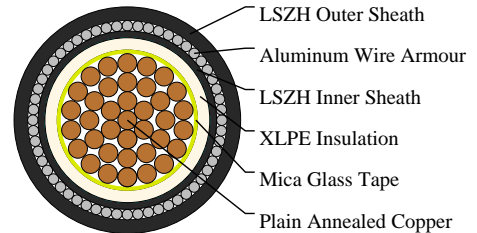
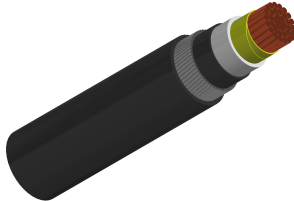
Airport Flame Retardant And Fire Resistant Cables

www.caledonian-cables.com

marketing@caledonian-cables.com

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

FFX300 1mRZ1MZ1-R 1G150 (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 ² | no./mm | mm | mm | mm | kg/km |
| FFX300 1mRZ1MZ1- R 1G150 | 1x150 | 37/2.25 | 15.75 | 1.4 | 27 | 2010 |

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 ² | A | A | A | A | A | A | A | A | A |
| 150 | 488 | 437 | 516 | 462 | 463 | 445 | 405 | 510 | 435 |

Voltage Drop (Per Amp Per Meter)



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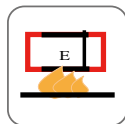
| Nominal Cross sectional Area | 2 cables d.c. | Ref. Methods 1,11 2 cables, 1-phase a.c. | Ref. Methods 1,11,12 3 or 4 cables, 3-phase a.c. (in trefoil) | Ref. Methods 1,11 3 or 4 cables, 3-phase a.c. (Flat and touching) | 2 cables, 1-phase a.c. (In ducts) | 2 cables, 1-phase a.c. (In ground) | 3 or 4 cables, 3-phase a.c. touching (In ducts) | 3 or 4 cables, 3-phase a.c. touching (In ground) |
|------------------------------|---------------|--|---|---|-----------------------------------|------------------------------------|---|--|
| mm ² | 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 | 0.31 | r:0.33 x:0.185 z:0.38 | r:0.29 x:0.16 z:0.33 | r:0.31 x:0.23 z:0.39 | 0.5 | 0.37 | 0.43 | 0.32 |



Rated voltage



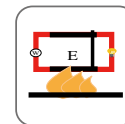
BS 7846



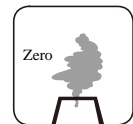
Circuit Integrity
IEC 60331-21/BS 6387



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