



Caledonian

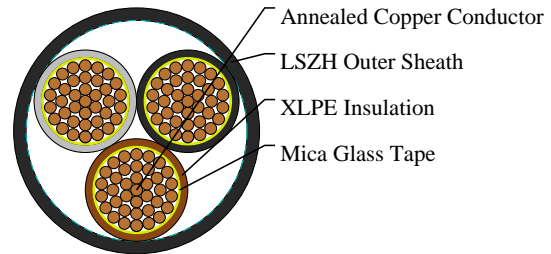
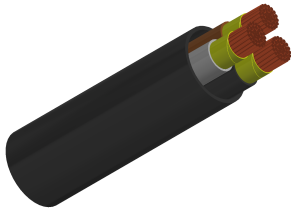
FIREFLIX Fire Resistant Power & Control Cables

www.caledonian-cables.com

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600/1000V Mica+XLPE Insulated, LSZH Sheathed Power Cables to IEC 60502-1(3C120)

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 (GB 1067 5743 16)

TUV Certification (B 098200 0027 Rev.00)

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:3-core: Brown, black and grey.

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 ²		mm	mm	mm	kg/km
3x120	2	1.2	2.1	42.4	4335

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 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 ²	A	A	A	A	A	A	A
120	253	227	305	268	322	410	346

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 ²	mV/A/m	mV/A/m	mV/A/m
120	0.39	r:0.40 x:0.145 z:0.42	r:0.34 x:0.130 z:0.37



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Rated voltage



Circuit Integrity
IEC 60331-21/BS6387/BS 8491



Flame Retardancy
IEC 60332-1-2



IEC60502-1



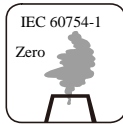
Low Corrosivity
IEC 60754-2



Low Smoke Emission
BS EN 61034-2



Reduced Fire Propagation
IEC 60332-3-24



Zero Halogen