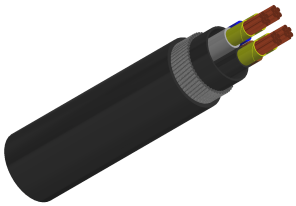
Caledonian

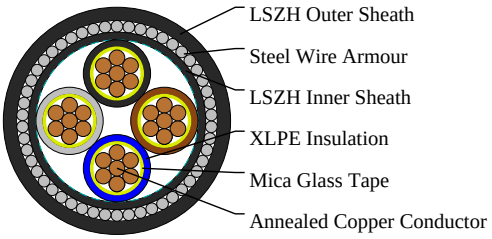
FIREFLIX Fire Resistant Power & Control Cables

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

600/1000V Mica+XLPE Insulated, LSZH Sheathed, Armoured Power Cables to IEC 60502-1 (2-5 Cores)

FFX400 1mRZ1MZ1-R (CU/MGT+XLPE/LSZH/SWA/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.

STANDARDS

Basic design adapted from IEC 60502-1

APPROVALS

CE Certification (GB 1067 5743 16)

FIRE PERFORMANCE

Circuit Integrity	IEC 60331-21; BS6387; 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 as per IEC 60502-1.
Inner Covering: Thermoplastic halogen free compound ST8 as per IEC 60502-1.
Armouring: Steel wire armour.
Outer Sheath: Thermoplastic halogen free compound ST8 as per IEC 60502-1.

Outer Sheath Option: UV resistance, hydrocarbon resistance, oil resistance, anti-rodent and anti-termite properties can be offered as option.

COLOUR CODE

Insulation Colour
2-core: Brown and blue.
3-core: Brown, black and grey.
4-core: Blue, brown, black and grey.
5-core: Green-and-yellow, blue, brown, black, grey.
Other colours can be offered upon request.
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: 6 × Overall Diameter
shaped copper conductors: 8 × Overall Diameter

Electrical Properties

Conductor operating temperature: 90°C
Air ambient temperature: 30°C
Ground ambient temperature: 20°C

DIMENSION AND PARAMETERS

No. of Cores × Cross-sectional Area	Conductor Class	Nominal Insulation Thickness	Nominal Thickness of Inner Covering	Nominal Sheath Thickness	Nominal Steel Wire Armour Diameter	Approx. Overall Diameter	Approx. Weight
No.×mm²		mm	mm	mm	mm	mm	kg/km
4x25	2	0.9	1.0	1.8	1.6	27.2	1622

Current-Carrying Capacities (Amp) according to BS 7671:2008 table 4E4A

Conductor Cross-sectional Area	Ref. Method C 2 cables, 1-phase a.c. or d.c. flat and touching	Ref. Method C 3/4 cables, 3-phase a.c. flat and touching or trefoil	Ref. Method D One 2C cable, 1-phase a.c. or d.c.	Ref. Method D 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.
mm²	A	A	A	A	A	A
25	146	124	116	96	152	131

Voltage Drop (Per Amp Per Meter) according to BS 7671:2008 table 4E4B

Conductor 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

Caledonian

FIREFLIX Fire Resistant Power & Control Cables

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

25	1.85	r:1.85;x:0.160;z:0.19	r:1.60;x:0.140;z:1.65

Rated voltage

Circuit Integrity
IEC 60331-21/BS6387/BS 8491

Flame Retardancy
IEC 60332-1-2

Halogen Free
IEC 60754-1

IEC60502-1

Low Corrosivity
IEC 60754-2

Low Smoke Emission
IEC 61034-2

Reduced Fire Propagation
IEC 60332-3-24