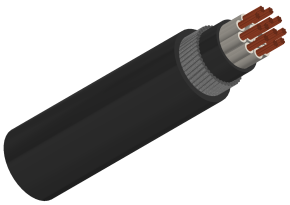
# Caledonian

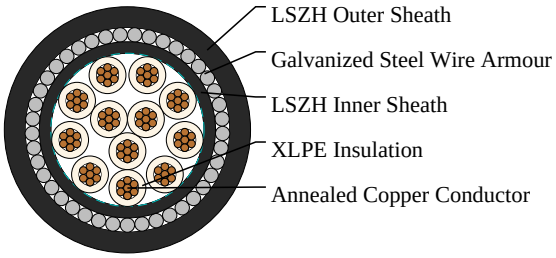
FIRETOX LSZH Flame Retardant Power & Control Cables

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

## 600/1000V XLPE Insulated, LSZH Sheathed, Armoured Power Cables to IEC 60502-1 (Multicore)

FTX400 1RZ1MZ1-R 12C1.5(CU/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. This product type is CE approved.

## STANDARDS

Basic design to IEC 60502-1

## APPROVALS

TUV Certification (B 098200 0033 Rev.00)

## FIRE PERFORMANCE

| | |
|---|---|
| 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 |
| CPR Compliance | Eca |

## 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.
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-termiteproperties can be offered as option.

## COLOUR CODE

Core identification: White insulation with black printed numerals. (Other colors available 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 Bedding Thickness | Nominal Sheath Thickness | Nominal Steel Wire Armour Diameter | Approx. Overall Diameter | Approx. Weight |
|---|---|---|---|---|---|---|---|
| No.×mm² | | mm | mm | mm | mm | mm | kg/km |
| 12×1.5 | 2 | 0.7 | 1.0 | 1.8 | 1.25 | 21.9 | 886 |

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

| Conductor Cross-sectional Area | Ref. Method C One 1C cable, 1-phase a.c. or d.c. | Ref. Method C One 3C or 4C cable, 3-phase a.c. | 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 |
| 1.5 | 27 | 23 | 25 | 21 | 29 | 25 |

## Voltage Drop (Per Amp Per Meter) according to Current-Carrying Capacities (Amp) 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 |
| 1.5 | 31 | 31 | 27 |

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Rated voltage



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