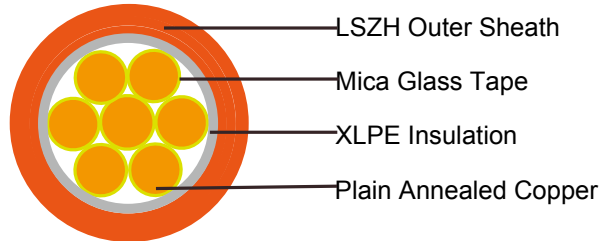
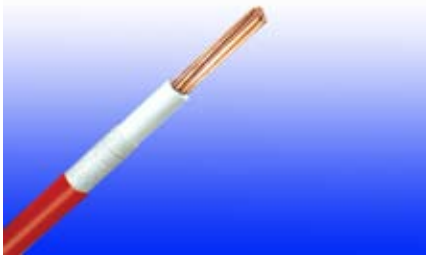




### 300/500V Mica+XLPE Insulated, LSZH Sheathed Power Cables (Single Core)

FFX300 05mRZ1-R (CU/MGT+XLPE/LSZH 300/500V Class 2)



### APPLICATION

The cables are designed for areas where the integrity of the electrical 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, lifts, escalators, and high-rise buildings.

### STANDARDS

Basic design to IEC 60502-1

### FIRE PERFORMANCE

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
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

Note: Asterisk \* denotes superseded standard.

## VOLTAGE RATING

300/500 V

## CABLE CONSTRUCTION

**Conductor:** Plain annealed copper wire, stranded according to IEC(EN) 60228 class 2.

**Insulation:** Mica glass tape covered by extruded cross-linked XLPE compound

**Earth Conductor(optional):** Uninsulated solid or stranded tinned copper conductor.

**Outer Sheath:** Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.)

## PHYSICAL AND THERMAL PROPERTIES

**Temperature range during operation (fixed state):** -30°C – +90°C

**Temperature range during installation (mobile state):** -20°C – +50°C

**Minimum bending radius:** 8 x Overall Diameter

## ELECTRICAL PROPERTIES

Dielectric test:	2000 V r.m.s. x 5' (core/core)
Insulation resistance	1000 MΩ x km (at 20°C)
Short circuit temperature	250°C

## CONSTRUCTION PARAMETERS

Conductor		FFX300 05mRZ1-R			
Nominal Cross Section Area mm <sup>2</sup>	No./Nominal Diameter of Strands	Nominal Insulation Thickness mm	Nominal Sheath Thickness mm	Without Earth Conductor	
	No./mm			Nominal Overall Diameter mm	Approx. Weight kg/km
1.5	7/0.53	0.5	0.5	4.4	29
2.5	7/0.67	0.5	0.5	4.9	40
4	7/0.85	0.5	0.5	5.5	55

## ELECTRICAL PROPERTIES

**Conductor Operating Temperature :** 90°C

**Ambient Temperature :** 30°C



### Current-Carrying Capacities (Amp)

Conductor cross-section area	Reference Method 4 (enclosed in conduit in thermally insulating wall etc)		Reference Method 3 (enclosed in conduit on a wall or in trunking etc)		Reference Method 1 (clipped direct)		Reference Method 11 (on a perforated cable tray, horizontal or vertical)		Reference Method 12 (free air)		
	2 cables, single-phase a.c. or d.c.	3 or 4 cables, 3-phase a.c.	2 cables, single-phase a.c. or d.c.	3 or 4 cables, 3-phase a.c.	2 cables, single-phase a.c. or d.c. flat and touching	3 or 4 cables, 3-phase a.c. flat and touching or trefoil	2 cables, single-phase a.c. or d.c. or flat and touching	3 or 4 cables, 3-phase a.c. flat and touching or trefoil	Horizontal flat spaced	Vertical flat spaced	Trefoil
1	2	3	4	5	6	7	8	9	10	11	12
mm <sup>2</sup>	A	A	A	A	A	A	A	A	A	A	A
1.5	18	17	22	19	25	23	-	-	-	-	-
2.5	24	23	30	26	34	31	-	-	-	-	-
4	33	30	40	35	46	41	-	-	-	-	-

### Voltage Drop (Per Amp Per Meter)

Nominal Cross Section Area	2 cables d.c.	2 cables, single-phase a.c.		3 or 4 cables, 3-phase a.c.		
		Ref. Methods 3 and 4 (enclosed in conduit etc, in or on a wall)	Ref. Methods 1 and 11 (clipped direct or on trays touching)	Ref. Methods 3 and 4 (enclosed in conduit etc, in or on a wall)	Ref. Methods 1, 11 and 12 (in trefoil)	Ref. Methods 1 and 11 (Flat and touching)
1	2	3	4	5	6	7
mm <sup>2</sup>	mV/A/m	mV/A/m	mV/A/m	mV/A/m	mV/A/m	mV/A/m
1.5	31	31	27	27	27	27
2.5	19	19	16	16	16	16
4	33	12	10	10	10	10



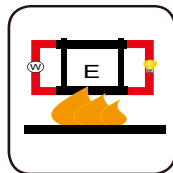
300/500V

Rated Voltage



IEC 60502-1

Standard



Circuit Integrity  
IEC 60331/BS 6387  
NF C32-070-2.3(CR1)



Reduced Fire Propagation  
NF C32-070-2.2(C1)  
IEC60332-3-24/EN50266-2-4



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



Low Toxicity  
NES 02-713/NF C 20-454



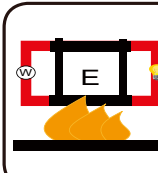
Low Corrosivity  
IEC60754-2  
EN50267-2-2/3  
NF C 32-074



Low Smoke Emission  
IEC 61034-1&2  
EN 50268-1&2/NF C32-073



Zero  
Halogen Free  
IEC60754-1  
EN50267-2-1



Functional Integrity  
DIN 4102-12