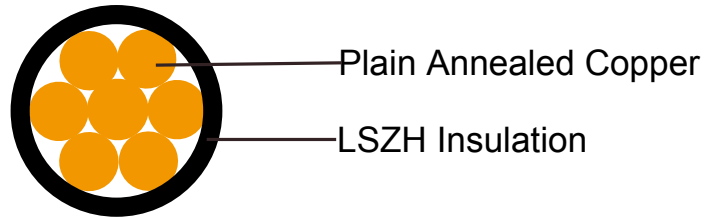




### 600/1000V LSZH Insulated, Non-sheathed Power Cables (Single Core)

FTX100 1Z1-R (CU/LSZH 600/1000V Class 2)



### APPLICATION

The cables is mainly used in power stations, mass transit underground passenger systems, airports, petrochemical plants, hotels, hospitals, and high-rise buildings.

### STANDARDS

Basic design adapted to BS7211

### 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

Note: Asterisk \* denotes superseded standard.

### VOLTAGE RATING

600/1000V

## CABLE CONSTRUCTION

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

**Insulation:** LSZH compound.

## 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:** 6 x OD

## ELECTRICAL PROPERTIES

Dielectric Test:	3500 V r.m.s. x 5' ( core / core )
Insulation Resistance	500 MΩ x km ( at 20°C )
Short circuit Temperature	250°C ( up to 5 secs )

## CONSTRUCTION PARAMETERS

Cable Code	Conductor		Nominal Insulation Thickness	Nominal Overall Diameter	Approx. Weight
	No. of Core X Cross Section	No./Nominal Diameter of Strands			
	Noxmm <sup>2</sup>	No./mm	mm	mm	kg/km
FTX100 1Z1-R 1G1.5	1x1.5	7/0.53	0.7	3.3	28
FTX100 1Z1-R 1G2.5	1x2.5	7/0.67	0.8	3.9	39
FTX100 1Z1-R 1G4	1x4	7/0.85	0.8	4.8	58
FTX100 1Z1-R 1G6	1x6	7/1.04	0.8	5.0	79
FTX100 1Z1-R 1G10	1x10	7/1.35	1.0	6.6	130
FTX100 1Z1-R 1G16	1x16	7/1.70	1.0	7.4	196
FTX100 1Z1-R 1G25	1x25	7/2.14	1.2	9.1	299
FTX100 1Z1-R 1G35	1x35	7/2.52	1.2	10.7	389
FTX100 1Z1-R 1G50	1x50	19/1.78	1.4	12.6	523
FTX100 1Z1-R 1G70	1x70	19/2.14	1.4	14.8	739
FTX100 1Z1-R 1G95	1x95	19/2.52	1.6	17.2	1023
FTX100 1Z1-R 1G120	1x120	37/2.03	1.6	18.9	1321
FTX100 1Z1-R 1G150	1x150	37/2.25	1.8	20.4	1591



FTX100 1Z1-R 1G185	1x185	37/2.52	2.0	22.3	1969
FTX100 1Z1-R 1G240	1x240	61/2.25	2.2	26.5	2568
FTX100 1Z1-R 1G300	1x300	61/2.52	2.4	28.9	3260
FTX100 1Z1-R 1G400	1x400	61/2.85	2.6	33.4	4120
FTX100 1Z1-R 1G500	1x500	61/3.20	2.8	35.6	5198
FTX100 1Z1-R 1G630	1x630	127/2.52	2.8	39.4	6510

### ELECTRICAL PROPERTIES

**Conductor Operating Temperature : 90°C**

**Ambient Temperature : 30°C**

### Current-Carrying Capacities (Amp)

Conductor cross-sectional 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)		
	Horizontal flat spaced	Vertical flat spaced	Trefoil	Horizontal flat spaced	Vertical flat spaced	Trefoil	Horizontal flat spaced	Vertical flat spaced	Trefoil		
	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. 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 3 cables three phase	2 cables, single-phase a.c. or d.c. or 3 cables three phase	3 cables, trefoil 3-phase a.c.
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	-	-	-	-	-
6	43	39	51	45	59	54	-	-	-	-	-
10	58	53	71	63	81	74	-	-	-	-	-
16	76	70	95	85	109	99	-	-	-	-	-
25	100	91	126	111	143	130	158	140	183	163	138
35	125	111	156	138	176	161	195	176	226	203	171
50	149	135	189	168	228	209	293	215	274	246	209

70	189	170	240	214	293	268	308	279	351	318	270
95	228	205	290	259	355	326	375	341	426	389	330
120	263	235	336	299	413	379	436	398	495	453	385
150	300	270	375	328	476	436	505	461	570	524	445
185	341	306	426	370	545	500	579	530	651	600	511
240	400	358	500	433	644	590	686	630	769	711	606
300	459	410	573	493	743	681	794	730	886	824	701
400	-	-	684	584	868	793	915	849	1065	994	820
500	-	-	783	666	990	904	1044	973	1228	1150	936
630	-	-	900	764	1130	1033	1191	1115	1423	1338	1069

### Voltage Drop (Per Amp Per Meter)

Size of conductor	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		
6	7.8	7.9			6.8			6.8			6.8			6.8		
10	4.7	4.7			4.7			4			4			4		
16	2.9	2.9			2.9			2.5			2.5			2.5		
		r	x	z	r	x	z	r	x	z	r	x	z	r	x	z
25	1.85	1.85	0.31	1.90	1.85	0.190	1.85	1.60	0.27	1.65	1.600	0.165	1.600	1.600	0.190	1.600
35	1.35	1.35	0.29	1.35	1.35	0.180	1.35	1.15	0.25	1.15	1.150	0.155	1.50	1.150	0.180	1.150
50	0.99	1.00	0.29	1.05	0.99	0.180	1.00	0.87	0.25	0.90	0.860	0.155	0.870	0.860	0.180	0.870
70	0.68	0.70	0.28	0.75	0.68	0.175	0.71	0.60	0.24	0.65	0.590	0.150	0.610	0.590	0.175	0.620



95	0.49	0.51	0.27	0.58	0.49	0.170	0.52	0.44	0.23	0.50	0.430	0.145	0.450	0.430	0.170	0.460
120	0.39	0.41	0.26	0.48	0.39	0.165	0.43	0.35	0.23	0.42	0.340	0.140	0.370	0.340	0.165	0.380
150	0.32	0.33	0.26	0.43	0.32	0.165	0.36	0.29	0.23	0.37	0.280	0.140	0.310	0.280	0.165	0.320
185	0.25	0.27	0.26	0.37	0.26	0.165	0.30	0.23	0.23	0.32	0.220	0.140	0.260	0.220	0.165	0.280
240	0.19	0.21	0.26	0.33	0.20	0.160	0.25	0.185	0.22	0.29	0.170	0.140	0.220	0.170	0.165	0.240
300	0.155	0.175	0.25	0.31	0.16	0.160	0.22	0.150	0.22	0.27	0.140	0.140	0.195	0.135	0.160	0.210
400	0.12	0.140	0.25	0.29	0.13	0.155	0.20	0.125	0.22	0.25	0.110	0.135	0.175	0.110	0.160	0.195
500	0.093	0.120	0.25	0.28	0.105	0.155	0.185	0.100	0.22	0.24	0.090	0.135	0.160	0.088	0.160	0.180
630	0.072	0.100	0.25	0.27	0.086	0.155	0.175	0.088	0.21	0.23	0.074	0.135	0.150	0.071	0.160	0.170

Note :

r = conductor resistance at operating temperature

x = reactance

z = impedance



Rated Voltage



Standard



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



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



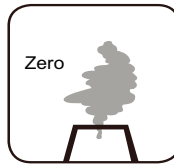
Low Toxicity  
NES 02-713/NF C 20-454



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



Halogen Free  
IEC60754-1  
EN50267-2-1