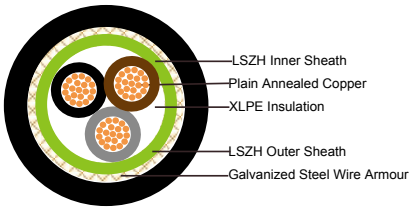
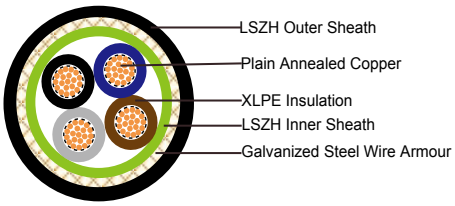
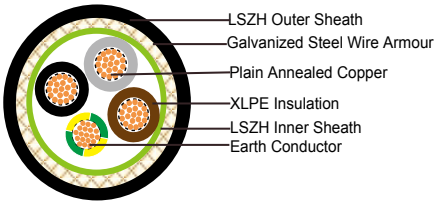
600/1000V XLPE Insulated, LSZH Sheathed, Armoured Power Cables (Multicore)

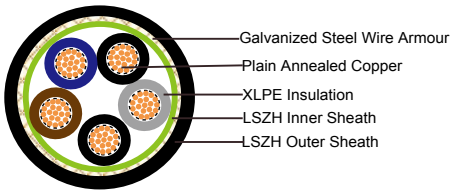
FTX400 1RZ1MZ1-R (CU/XLPE/LSZH/SWA/LSZH 600/1000V Class 2)

Indoor Feeder Cables (from MDB to SDB, SDB to TDB) & UPS Feeder Cables



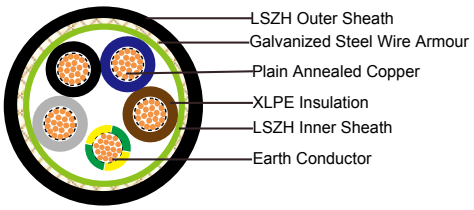






APPLICATION

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 to BS 6724

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: Extruded cross-linked XLPE compound
Inner Sheath : LSZH Compound
Armouring : Galvanized Steel Wire
Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1

COLOUR CODE

Insulation Colour as per BS7671

	With Earth Conductor	Without Earth Conductor
2 Cores	-	Brown, Blue
3 Cores	Yellow/Green, Brown, Blue	Brown, Gray, Black
4 Cores	Yellow/Green, Brown, Gray, Black	Brown, Gray, Black, Blue
5 Cores	Yellow/Green, Brown, Gray, Black, Blue	Brown, Gray, Black, Blue, Black
Above 5 Cores	Yellow/Green, Black Numbered	Black Numbered

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: 8 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	Diameter Under Armour	Armour Wire Diameter	Nominal Overall Diameter	Approx. Weight
	No. of Core X Cross Section / CPC Cross Section	No ./ Nominal Diameter of Strands					
	No.×mm^2	No./mm	mm	mm	mm	mm	kg/km
3 CORES							
FTX400 1RZ1MZ1-R 3G1.5	3x1.5	7/0.53	0.6	9.0	0.9	12.6	340
FTX400 1RZ1MZ1-R 3G2.5	3x2.5	7/0.67	0.7	9.9	0.9	14.1	408
FTX400 1RZ1MZ1-R 3G4	3x4	7/0.85	0.7	11.0	0.9	15.3	498
FTX400 1RZ1MZ1-R 3G6	3x6	7/1.04	0.7	11.6	1.25	16.6	600

FTX400 1RZ1MZ1-R 3G10	3x10	7/1.35	0.7	14.3	1.25	19.5	915
FTX400 1RZ1MZ1-R 3G16	3x16	7/1.70	0.7	16.5	1.25	21.6	1130
FTX400 1RZ1MZ1-R 3G25	3x25	7/2.14	0.9	20.2	1.6	26.7	1710
FTX400 1RZ1MZ1-R 3G35	3x35	7/2.52	0.9	22.4	1.6	29.4	2100
FTX400 1RZ1MZ1-R 3G50	3x50(S)	19/1.78	1.0	24.2	1.6	28.5	2450
FTX400 1RZ1MZ1-R 3G70	3x70(S)	19/2.14	1.1	28.2	2.0	32.2	3120
FTX400 1RZ1MZ1-R 3G95	3x95(S)	19/2.52	1.1	31.7	2.0	37.0	4310
FTX400 1RZ1MZ1-R 3G120	3x120(S)	37/2.03	1.2	36.0	2.0	40.4	5160
FTX400 1RZ1MZ1-R 3G150	3x150(S)	37/2.25	1.4	39.5	2.5	45.5	7160
FTX400 1RZ1MZ1-R 3G185	3x185(S)	37/2.52	1.6	43.3	2.5	49.8	8600
FTX400 1RZ1MZ1-R 3G240	3x240(S)	61/2.25	1.7	48.4	2.5	55.1	10750
FTX400 1RZ1MZ1-R 3G300	3x300(S)	61/2.52	1.8	54.4	2.5	60.2	13080
FTX400 1RZ1MZ1-R 3G400	3x400(S)	61/2.85	2.0	57.8	2.5	66.6	15810
3 CORES + 1 EARTH CONDUCTOR							
FTX400 1RZ1MZ1-R 3G16/6	3xl6/6	7/1.70	0.7	17.6	1.25	22.6	1342
FTX400 1RZ1MZ1-R 3G16/10	3x16/l0	7/1.70	0.7	20.6	1.25	23.0	1567
FTX400 1RZ1MZ1-R 3G25/6	3x25/6	7/2.14	0.9	26.3	1.25	27.1	1876
FTX400 1RZ1MZ1-R 3G25/10	3x25/10	7/2.14	0.9	26.3	1.25	27.6	2091
FTX400 1RZ1MZ1-R 3G25/16	3x25/16	7/2.14	0.9	26.6	1.25	28.3	2150
FTX400 1RZ1MZ1-R 3G35/10	3x35/10	7/2.52	0.9	26.8	1.6	28.9	2210
FTX400 1RZ1MZ1-R 3G35/16	3x35/16	7/2.52	0.9	26.8	1.6	29.5	2390
FTX400 1RZ1MZ1-R 3G35/25	3x35/25	7/2.52	0.9	27.2	1.6	30.0	2505
FTX400 1RZ1MZ1-R 3G50/16	3×50/16	19/1.78	0.9	28.5	1.6	29.0	2916
FTX400 1RZ1MZ1-R 3G50/25	3x50/25	19/1.78	1.0	29.2	1.6	30.0	3107
FTX400 1RZ1MZ1-R 3G50/35	3x50/35	19/1.78	1.0	30.0	1.6	31.0	3175
FTX400 1RZ1MZ1-R 3G70/25	3×70/25	19/2.14	1.1	34.0	2.0	32.9	3203
FTX400 1RZ1MZ1-R 3G70/35	3x70/35	19/2.14	1.1	34.5	2.0	34.5	4067
FTX400 1RZ1MZ1-R 3G70/50	3x70/50	19/2.14	1.1	35	2.0	36.3	4310
FTX400 1RZ1MZ1-R 3G95/25	3×95/25	19/2.52	1.1	36.7	2.0	38.0	5047
FTX400 1RZ1MZ1-R 3G95/35	3×95/35	19/2.52	1.1	37.2	2.0	38.6	5115
FTX400 1RZ1MZ1-R 3G95/50	3x95/50	19/2.52	1.1	37.6	2.0	39.2	5289
FTX400 1RZ1MZ1-R 3G95/70	3x95/70	19/2.52	1.1	37.6	2.0	40.0	5360
FTX400 1RZ1MZ1-R 3G120/35	3×120/35	37/2.03	1.2	39.4	2.5	41.2	6160

FTX400 1RZ1MZ1-R 3G120/50	3×120/50	37/2.03	1.2	39.9	2.5	42.3	6473
FTX400 1RZ1MZ1-R 3G120/70	3x120/70	37/2.03	1.2	40.3	2.5	44.6	6793
FTX400 1RZ1MZ1-R 3G120/95	3×120/95	37/2.03	1.2	41.2	2.5	46.2	7120
FTX400 1RZ1MZ1-R 3G150/50	3×150/50	37/2.25	1.4	45.2	2.5	57.0	7431
FTX400 1RZ1MZ1-R 3G150/70	3×150/70	37/2.25	1.4	45.2	2.5	58.1	7565
FTX400 1RZ1MZ1-R 3G150/95	3x150/95	37/2.25	1.4	45.5	2.5	59.4	8196
FTX400 1RZ1MZ1-R 3G150/120	3x150/120	37/2.25	1.4	46.0	2.5	50.6	8590
FTX400 1RZ1MZ1-R 3G185/70	3×185/70	37/2.52	1.6	50.4	2.5	51.6	8950
FTX400 1RZ1MZ1-R 3G185/95	3xI85/95	37/2.52	1.6	50.6	2.5	53.2	9573
FTX400 1RZ1MZ1-R 3G185/120	3x185/120	37/2.52	1.6	51.0	2.5	54.3	9968
FTX400 1RZ1MZ1-R 3G185/150	3x185/150	37/2.52	1.6	51.6	2.5	55.3	1023
FTX400 1RZ1MZ1-R 3G240/95	3×240/95	61/2.25	1.7	58.0	2.5	56.7	11620
FTX400 1RZ1MZ1-R 3G240/120	3x240/120	61/2.25	1.7	59.0	2.5	58.3	12015
FTX400 1RZ1MZ1-R 3G240/150	3x240/150	61/2.25	1.7	60.0	2.5	60.4	12373
FTX400 1RZ1MZ1-R 3G240/185	3x240/185	61/2.25	1.7	60.0	2.5	62.1	1350
FTX400 1RZ1MZ1-R 3G300/120	3x300/120	61/2.52	1.8	64.2	2.5	63.5	14197
FTX400 1RZ1MZ1-R 3G300/150	3x300/150	61/2.52	1.8	65.7	2.5	64.9	14556
FTX400 1RZ1MZ1-R 3G300/185	3x300/I85	61/2.52	1.8	67	2.5	66.2	15015
FTX400 1RZ1MZ1-R 3G300/240	3x300/240	61/2.52	1.8	67	2.5	67.4	15697
4 CORES							
FTX400 1RZ1MZ1-R 4G1.5	4x1.5	7/0.53	0.7	10.0	0.9	13.3	390
FTX400 1RZ1MZ1-R 4G2.5	4x2.5	7/0.67	0.7	10.8	0.9	15.0	470
FTX400 1RZ1MZ1-R 4G4	4x4	7/0.85	0.7	12.1	0.9	16.4	580
FTX400 1RZ1MZ1-R 4G6	4x6	7/1.04	0.7	13.5	1.25	18.7	705
FTX400 1RZ1MZ1-R 4G10	4x10	7/1.35	0.7	15.7	1.25	21.1	1090
FTX400 1RZ1MZ1-R 4G16	4x16	7/1.70	0.7	18.2	1.6	23.4	1320
FTX400 1RZ1MZ1-R 4G25	4x25	7/2.14	0.9	22.4	1.6	28.9	1840
FTX400 1RZ1MZ1-R 4G35	4x35(S)	7/2.52	0.9	24.4	1.6	31.9	2310
FTX400 1RZ1MZ1-R 4G50	4x50(S)	19/1.78	1.0	28.0	1.6	32	2970
FTX400 1RZ1MZ1-R 4G70	4x70(S)	19/2.14	1.1	32.2	2.0	37.7	4240
FTX400 1RZ1MZ1-R 4G95	4x95(S)	19/2.52	1.1	36.0	2.0	41.7	5400
FTX400 1RZ1MZ1-R 4G120	4x120(S)	37/2.03	1.2	38.0	2.5	47.1	7000
FTX400 1RZ1MZ1-R 4G150	4x150(S)	37/2.25	1.4	42.8	2.5	51.4	8350

FTX400 1RZ1MZ1-R 4G185	4x185(S)	37/2.52	1.6	48.4	2.5	56.6	10130
FTX400 1RZ1MZ1-R 4G240	4x240(S)	61/2.25	1.7	55.0	2.5	63.0	12840
FTX400 1RZ1MZ1-R 4G300	4x300(S)	61/2.52	1.8	59.6	2.5	68.8	15530
FTX400 1RZ1MZ1-R 4G400	4x400(S)	61/2.85	2.0	66.1	3.15	78.1	19950
4 CORES + 1 EARTH CONDUCTOR							
FTX400 1RZ1MZ1-R 4G16/6	4xl6/6	7/1.35	0.7	17.9	1.25	25.1	1356
FTX400 1RZ1MZ1-R 4G16/10	4x16/l0	7/1.70	0.7	20.6	1.25	26.0	1390
FTX400 1RZ1MZ1-R 4G25/6	4x25/6	7/2.14	0.7	24.1	1.25	29.0	1900
FTX400 1RZ1MZ1-R 4G25/10	4x25/10	7/2.14	0.9	24.9	1.25	29.4	1956
FTX400 1RZ1MZ1-R 4G25/16	4x25/16	7/2.14	0.9	25.3	1.25	30.0	2012
FTX400 1RZ1MZ1-R 4G35/10	4×35/10	7/2.52	0.9	25.4	1.25	32.1	2710
FTX400 1RZ1MZ1-R 4G35/16	4×35/16	7/2.52	0.9	25.6	1.6	33.4	2940
FTX400 1RZ1MZ1-R 4G35/25	4×35/25	7/2.52	0.9	26.2	1.6	34.0	3050
FTX400 1RZ1MZ1-R 4G50/16	4×50/16	19/1.78	1.0	28.5	1.6	33	3560
FTX400 1RZ1MZ1-R 4G50/25	4×50/25	19/1.78	1.0	29.2	1.6	35.6	3670
FTX400 1RZ1MZ1-R 4G50/35	4x50/35	19/1.78	1.0	30.0	1.6	38.2	3759
FTX400 1RZ1MZ1-R 4G70/25	4×70/25	19/2.14	1.1	34	2.0	38.6	4980
FTX400 1RZ1MZ1-R 4G70/35	4x70/35	19/2.14	1.1	34.5	2.0	40.6	5036
FTX400 1RZ1MZ1-R 4G70/50	4x70/50	19/2.14	1.1	35	2.0	42.9	5468
FTX400 1RZ1MZ1-R 4G95/25	4×95/25	19/2.52	1.1	36.7	2.0	43.2	6215
FTX400 1RZ1MZ1-R 4G95/35	4×95/35	19/2.52	1.1	37.2	2.0	46.3	6325
FTX400 1RZ1MZ1-R 4G95/50	4×95/50	19/2.52	1.1	37.6	2.0	48.5	6455
FTX400 1RZ1MZ1-R 4G95/70	4×95/50	19/2.52	1.1	38.0	2.0	50.7	6954
FTX400 1RZ1MZ1-R 3G120/35	3×120/35	37/2.03	1.2	39.4	2.5	54.2	7968
FTX400 1RZ1MZ1-R 4G120/50	4×120/50	37/2.03	1.2	39.9	2.5	55.3	8280
FTX400 1RZ1MZ1-R 4G120/70	4x120/70	37/2.03	1.2	40.3	2.5	55.9	8511
FTX400 1RZ1MZ1-R 4G120/95	4×120/95	37/2.03	1.2	41.2	2.5	56.4	8790
FTX400 1RZ1MZ1-R 4G150/50	4×150/50	37/2.25	1.4	44.9	2.5	55.3	8723
FTX400 1RZ1MZ1-R 4G150/70	4×150/70	37/2.25	1.4	45.2	2.5	56.48	8879
FTX400 1RZ1MZ1-R 4G150/95	4x150/95	37/2.25	1.4	45.5	2.5	57.59	10179
FTX400 1RZ1MZ1-R 4G150/120	4x150/120	37/2.25	1.4	46.0	2.5	58.65	10739
FTX400 1RZ1MZ1-R 4G185/70	4×185/70	37/2.52	1.6	50.4	2.5	62.03	11200
FTX400 1RZ1MZ1-R 4G185/95	4xl85/95	37/2.52	1.6	50.6	2.5	63.19	1263

FTX400 1RZ1MZ1-R 4G185/120	4x185/120	37/2.52	1.6	51.0	2.5	64.23	13050
FTX400 1RZ1MZ1-R 4G185/150	4x185/150	37/2.52	1.6	51.6	2.5	65.38	13680
FTX400 1RZ1MZ1-R 4G240/95	4×240/95	61/2.25	1.7	58.0	2.5	71.53	14420
FTX400 1RZ1MZ1-R 4G240/120	4x240/120	61/2.25	1.7	59.0	2.5	72.76	14763
FTX400 1RZ1MZ1-R 4G240/150	4x240/150	61/2.25	1.7	60.0	2.5	73.10	15241
FTX400 1RZ1MZ1-R 4G240/185	4x240/185	61/2.25	1.7	61.5	2.5	74.0	1682
FTX400 1RZ1MZ1-R 4G300/120	4x300/150	61/2.52	1.8	64.2	2.5	75.08	18050
FTX400 1RZ1MZ1-R 4G300/150	4x300/150	61/2.52	1.8	65.7	2.5	76.44	18662
FTX400 1RZ1MZ1-R 4G300/185	4x300/I85	61/2.52	1.8	67	2.5	77.30	19031
FTX400 1RZ1MZ1-R 4G300/240	4x300/240	61/2.52	1.8	67	2.5	78.55	19878
5 CORES							
FTX400 1RZ1MZ1-R 5G1.5	5x1.5	7/0.53	0.6	9.9	0.9	14.3	430
FTX400 1RZ1MZ1-R 5G2.5	5x2.5	7/0.67	0.7	10.8	0.9	16.1	545
FTX400 1RZ1MZ1-R 5G4	5x4	7/0.85	0.7	12.1	0.9	17.8	680
FTX400 1RZ1MZ1-R 5G6	5x6	7/1.04	0.7	15.8	1.5	20	840
FTX400 1RZ1MZ1-R 5G10	5x10	7/1.35	0.7	24	2.8	22.9	1105
FTX400 1RZ1MZ1-R 5G16	5x16	7/1.70	0.7	27	2.8	26.6	1450
FTX400 1RZ1MZ1-R 5G25	5x25	7/2.14	0.9	34	2.8	31.5	2245
FTX400 1RZ1MZ1-R 5G35	5x35(S)	7/2.52	0.9	24.4	1.6	34.8	2840
FTX400 1RZ1MZ1-R 5G50	5x50(S)	19/1.78	1.0	28.0	1.6	40.4	3895
FTX400 1RZ1MZ1-R 5G70	5x70(S)	19/2.14	1.1	32.2	2.0	46.3	5145
FTX400 1RZ1MZ1-R 5G95	5x95(S)	19/2.52	1.1	36.0	2.0	53.2	6941
FTX400 1RZ1MZ1-R 5G120	5x120(S)	37/2.03	1.2	38.0	2.5	58.3	9154
FTX400 1RZ1MZ1-R 5G150	5x150(S)	37/2.25	1.4	42.8	2.5	64.3	10372
FTX400 1RZ1MZ1-R 5G185	5x185(S)	37/2.52	1.6	48.4	2.5	71.5	12828
FTX400 1RZ1MZ1-R 5G240	5x240(S)	61/2.25	1.7	55.0	2.5	80	15980
FTX400 1RZ1MZ1-R 5G300	5x300(S)	61/2.52	1.8	59.6	2.5	86.1	19521
FTX400 1RZ1MZ1-R 5G400	5x400(S)	61/2.85	2.0	66.1	3.15	96.3	25116

ELECTRICAL PROPERTIES

Conductor Operating Temperature : 90°C

Ambient Temperature : 30°C

Current-Carrying Capacities (Amp)

Conductor cross-sectional area	Reference Method 1 (clipped direct)		Reference Method 11 (on a perforated horizontal cable trayor Reference Method 13 [free air])		In single-way ducts		Laid direct in ground	
	one 2-core cable single phase a.c. or d.c.	one 3-core or 4-core cable 3-phase a.c.	one 2-core cable single phase a.c. or d.c.	one 3-core or 4-core cable 3-phase a.c.	one 2-core cable single phase a.c. or d.c.	one 3-core or 4-core cable 3-phase a.c.	one 2-core cable single phase a.c. or d.c.	one 3-core or 4-core cable 3-phase a.c.
1	2	3	4	5	6	7	8	9
mm^2	A	A	A	A	A	A	A	A
1.5	27	23	29	25	-	23	-	28
2.5	36	31	39	33	-	30	-	36
4	49	42	52	44	-	40	-	48
6	62	53	66	56	-	50	-	60
10	85	73	90	78	-	65	-	80
16	110	94	115	99	115	94	140	115
25	146	124	152	131	145	125	180	150
35	180	154	188	162	175	150	215	180
50	219	187	228	197	210	175	255	215
70	279	238	291	251	260	215	315	265
95	338	289	354	304	310	260	380	315
120	392	335	410	353	355	300	430	360
150	451	386	472	406	400	335	480	405
185	515	441	539	463	455	380	540	460
240	607	520	636	546	520	440	630	530
300	698	599	732	628	590	495	700	590
400	787	673	847	728	660	560	790	670

Voltage Drop (Per Amp Per Meter)

Conductor cross-sectional area	2-core cable d.c.	2 cables, single-phase a.c.	3 or 4 cables, 3-phase a.c.	2 cables, single-phase a.c.	3 or 4 cables, 3-phase a.c.
				In ducts or in ground	In ducts or in ground
1	2	3	4	5	6

mm^2	mV/A/m	mV/A/m			mV/A/m			mV/A/m	mV/A/m
1.5	31.0	31.0			27.0			31.0	25.0
2.5	19.0	19.0			16.0			19.0	15.0
4	12.0	12.0			10.0			12.0	9.7
6	7.9	7.9			6.8			7.9	6.5
10	4.7	4.7			4.0			4.7	3.9
16	2.9	2.9			2.5			2.9	2.6
		r	x	z	r	x	z		
25	1.850	1.350	0.160	1.900	1.600	0.140	1.650	1.900	1.600
35	1.350	1.350	0.155	1.350	1.150	0.135	1.150	1.350	1.200
50	0.980	0.990	0.155	1.000	0.860	0.135	0.870	1.000	0.870
70	0.670	0.670	0.150	0.690	0.590	0.130	0.600	0.690	0.610
95	0.490	0.500	0.150	0.520	0.430	0.130	0.450	0.520	0.450
120	0.390	0.400	0.145	0.420	0.340	0.130	0.370	0.420	0.360
150	0.310	0.320	0.145	0.350	0.280	0.125	0.300	0.350	0.300
185	0.250	0.260	0.145	0.290	0.220	0.125	0.260	0.290	0.250
240	0.195	0.200	0.140	0.240	0.175	0.125	0.210	0.240	0.210
300	0.155	0.160	0.140	0.210	0.140	0.120	0.185	0.210	0.190
400	0.120	0.130	0.140	0.190	0.115	0.120	0.165	0.190	0.180

Note : r = conductor resistance at operating temperature
x = reactance
z = impedance

Rated Voltage

Standard

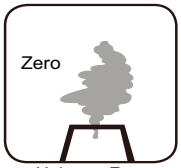

Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1


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