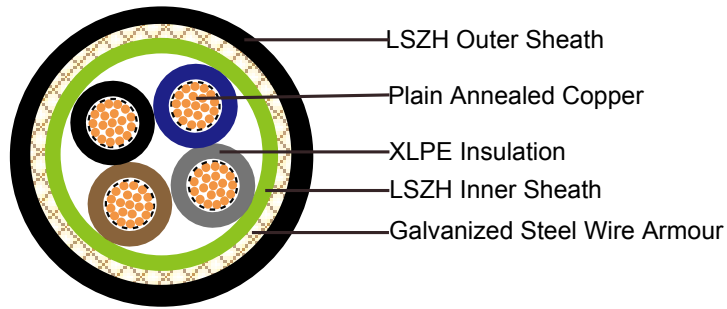
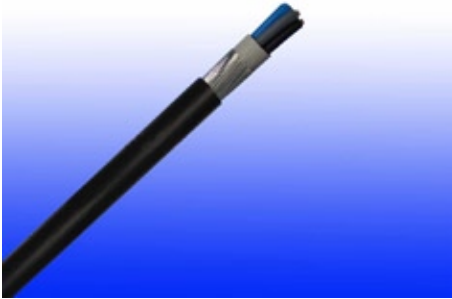




600/1000V XLPE Insulated, LSZH Sheathed, Armoured Cables to BS 6724 (2-5 Cores & Multicore)

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



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 adapted 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Note: Asterisk * denotes superseded standard.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 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

COLOUR CODE

Insulation Colour as per BS7671

	With Earth Conductor	Without Earth Conductor
2Cores	-	Brown, Blue
3Cores	Yellow/Green, Brown, Blue	Brown, Gray, Black
4Cores	Yellow/Green, Brown, Gray, Black	Brown, Gray, Black, Blue
5Cores	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: 10 x Overall Diameter

ELECTRICAL PROPERTIES

Dielectric test:	3500 V r.m.s. x 5' (core/core)
Insulation resistance	≥1000 MΩ x km (at 20°C)
Short circuit temperature	250°C

CONSTRUCTION PARAMETERS

No. of Core X Cross Section	No./Nominal Diameter of Strands	Nominal Insulation Thickness	Nominal Bedding Thickness	Nominal Steel Wire Armor Diameter	Nominal Sheath Thickness	Approx. Overall Diameter	Approx. Weight
No./mm ²	No./mm	mm	mm	mm	mm	mm	kg/km
2 CORES							
2x1.5	7/0.53	0.6	0.8	0.9	1.4	12.1	320
2x2.5	7/0.67	0.7	0.8	0.9	1.4	13.6	365
2x4	7/0.85	0.7	0.8	0.9	1.4	14.7	440
2x6	7/1.04	0.7	0.8	0.9	1.4	15.9	470
2x10	7/1.35	0.7	0.8	0.9	1.5	18.0	800
2x16	7/1.70	0.7	0.8	1.25	1.5	20.4	900



No. of Core X Cross Section	No./Nominal Diameter of Strands	Nominal Insulation Thickness	Nominal Bedding Thickness	Nominal Steel Wire Armor Diameter	Nominal Sheath Thickness	Approx. Overall Diameter	Approx. Weight
No./mm ²	No./mm	mm	mm	mm	mm	mm	kg/km
2x25	7/2.14	0.9	0.8	1.25	1.6	24.1	1240
2x25*	7/2.14	0.9	0.8	1.25	1.6	20.4	1240
2x35	7/2.52	0.9	1	1.6	1.7	27.7	1710
2x35*	7/2.52	0.9	1	1.6	1.7	23.3	1710
2x50*	19/1.78	1.0	1	1.6	1.8	25.8	1800
2x70*	19/2.14	1.1	1	1.6	1.9	29.0	2320
2x95*	19/2.52	1.1	1.2	2.0	2.0	33.0	3150
2x120*	37/2.03	1.2	1.2	2.0	2.1	36.1	3880
2x150*	37/2.25	1.4	1.2	2.0	2.2	39.3	4820
2x185*	37/2.52	1.6	1.4	2.5	2.4	44.7	5920
2x240*	61/2.25	1.7	1.4	2.5	2.5	49.0	7300
2x300*	61/2.52	1.8	1.6	2.5	2.6	53.5	8770
2x400*	61/2.85	2	1.6	2.5	2.8	59.0	10905

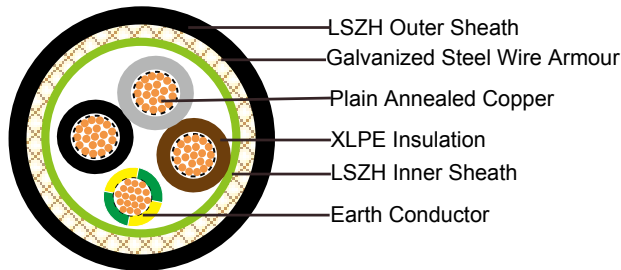
* D-Shaped stranded conductor (class 2)

3 CORES

3x1.5	7/0.53	0.6	0.8	0.9	1.3	12.6	340
3x2.5	7/0.67	0.7	0.8	0.9	1.4	14.1	408
3x4	7/0.85	0.7	0.8	0.9	1.4	15.3	498
3x6	7/1.04	0.7	0.8	0.9	1.4	16.6	600
3x10	7/1.35	0.7	0.8	1.25	1.5	19.5	915
3x16	7/1.70	0.7	0.8	1.25	1.6	21.6	1130
3x25	7/2.14	0.9	1	1.6	1.7	26.7	1710
3x25*	7/2.14	0.9	1	1.6	1.7	23.6	1710
3x35	7/2.52	0.9	1	1.6	1.8	29.4	2100
3x35*	7/2.52	0.9	1	1.6	1.8	25.7	2100
3x50*	19/1.78	1.0	1	1.6	1.8	28.5	2450
3x70*	19/2.14	1.1	1	1.6	1.9	32.2	3120
3x95*	19/2.52	1.1	1.2	2.0	2.1	37.0	4310
3x120*	37/2.03	1.2	1.2	2.0	2.2	40.4	5160
3x150*	37/2.25	1.4	1.4	2.5	2.3	45.5	7160
3x185*	37/2.52	1.6	1.4	2.5	2.4	49.8	8600

No. of Core X Cross Section	No./Nominal Diameter of Strands	Nominal Insulation Thickness	Nominal Bedding Thickness	Nominal Steel Wire Armor Diameter	Nominal Sheath Thickness	Approx. Overall Diameter	Approx. Weight
No./mm ²	No./mm	mm	mm	mm	mm	mm	kg/km
3x240*	61/2.25	1.7	1.4	2.5	2.6	55.1	10755
3x300*	61/2.52	1.8	1.6	2.5	2.7	60.2	13080
3x400*	61/2.85	2	1.6	2.5	2.9	66.6	15810

*Shaped stranded conductor (class 2)



3 CORES + 1 EARTH CONDUCTOR

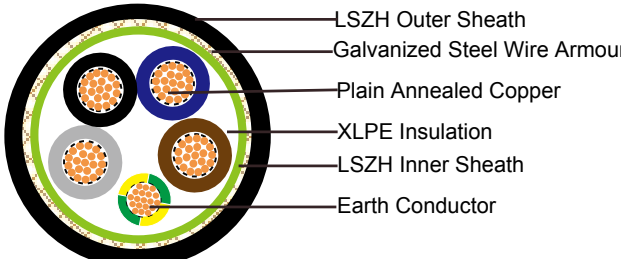
3x16/6	7/1.70	0.7	0.8	0.9	1.4	22.6	1342
3x16/10	7/1.70	0.7	0.8	0.9	1.4	23.0	1567
3x25/6	7/2.14	0.9	0.8	0.9	1.4	27.1	1876
3x25/10	7/2.14	0.9	1	1.6	1.7	27.6	2091
3x25/16	7/2.14	0.9	1	1.6	1.7	28.3	2150
3x35/10	7/2.52	0.9	1	1.6	1.8	28.9	2210
3x35/16	7/2.52	0.9	1	1.6	1.8	29.5	2390
3x35/25	7/2.52	0.9	1	1.6	1.8	30.0	2505
3x50/16	19/1.78	0.9	1	1.6	1.9	29.0	2916
3x50/25	19/1.78	1.0	1	1.6	1.9	30.0	3107
3x50/35	19/1.78	1.0	1	1.6	1.9	31.0	3175
3x70/25	19/2.14	1.1	1.2	2.0	2.1	32.9	3203
3x70/35	19/2.14	1.1	1.2	2.0	2.1	34.5	4067
3x70/50	19/2.14	1.1	1.2	2.0	2.1	36.3	4310
3x95/25	19/2.52	1.1	1.2	2.0	2.2	38.0	5047
3x95/35	19/2.52	1.1	1.2	2.0	2.2	38.6	5115
3x95/50	19/2.52	1.1	1.2	2.0	2.2	39.2	5289
3x95/70	19/2.52	1.1	1.2	2.0	2.2	40.0	5360
3x120/35	37/2.03	1.2	1.4	2.5	2.3	41.2	6160



No. of Core X Cross Section	No./Nominal Diameter of Strands	Nominal Insulation Thickness	Nominal Bedding Thickness	Nominal Steel Wire Armor Diameter	Nominal Sheath Thickness	Approx. Overall Diameter	Approx. Weight
No./mm ²	No./mm	mm	mm	mm	mm	mm	kg/km
3×120/50	37/2.03	1.2	1.4	2.5	2.3	42.3	6473
3x120/70	37/2.03	1.2	1.4	2.5	2.3	44.6	6793
3×120/95	37/2.03	1.2	1.4	2.5	2.3	46.2	7120
3×150/50	37/2.25	1.4	1.4	2.5	2.4	57.0	7431
3×150/70	37/2.25	1.4	1.4	2.5	2.4	58.1	7565
3x150/95	37/2.25	1.4	1.4	2.5	2.4	59.4	8196
3x150/120	37/2.25	1.4	1.4	2.5	2.4	50.6	8590
3×185/70	37/2.52	1.6	1.6	2.5	2.6	51.6	8950
3x185/95	37/2.52	1.6	1.6	2.5	2.6	53.2	9573
3x185/120	37/2.52	1.6	1.6	2.5	2.6	54.3	9968
3x185/150	37/2.52	1.6	1.6	2.5	2.6	55.3	1023
3×240/95	61/2.25	1.7	1.6	2.5	2.7	56.7	11620
3x240/120	61/2.25	1.7	1.6	2.5	2.7	58.3	12015
3x240/150	61/2.25	1.7	1.6	2.5	2.7	60.4	12373
3x240/185	61/2.25	1.7	1.6	2.5	2.7	62.1	1350
3x300/120	61/2.52	1.8	1.6	2.5	2.9	63.5	14197
3x300/150	61/2.52	1.8	1.6	2.5	2.9	64.9	14556
3x300/185	61/2.52	1.8	1.6	2.5	2.9	66.2	15015
3x300/240	61/2.52	1.8	1.6	2.5	2.9	67.4	15697
4 CORES							
4x1.5	7/0.53	0.7	0.8	0.9	1.4	13.3	390
4x2.5	7/0.67	0.7	0.8	0.9	1.4	15.0	470
4x4	7/0.85	0.7	0.8	0.9	1.4	16.4	580
4x6	7/1.04	0.7	0.8	1.25	1.5	18.7	805
4x10	7/1.35	0.7	0.8	1.25	1.5	21.1	1090
4x16	7/1.70	0.7	0.8	1.25	1.6	23.4	1320
4x25	7/2.14	0.9	1	1.6	1.7	28.9	1840
4x25*	7/2.14	0.9	1	1.6	1.7	26.1	1840
4x35	7/2.52	0.9	1	1.6	1.8	31.9	2310
4x35*	7/2.52	0.9	1	1.6	1.8	28.6	2310

No. of Core X Cross Section	No./Nominal Diameter of Strands	Nominal Insulation Thickness	Nominal Bedding Thickness	Nominal Steel Wire Armor Diameter	Nominal Sheath Thickness	Approx. Overall Diameter	Approx. Weight
No./mm ²	No./mm	mm	mm	mm	mm	mm	kg/km
4x50*	19/1.78	1.0	1	1.6	1.9	32.0	2970
4x70*	19/2.14	1.1	1.2	2.0	2.1	37.7	4240
4x95*	19/2.52	1.1	1.2	2.0	2.2	41.7	5400
4x120*	37/2.03	1.2	1.4	2.5	2.3	47.1	7000
4x150*	37/2.25	1.4	1.4	2.5	2.4	51.4	8350
4x185*	37/2.52	1.6	1.4	2.5	2.6	56.6	10130
4x240*	61/2.25	1.7	1.6	2.5	2.7	63.0	12840
4x300*	61/2.52	1.8	1.6	2.5	2.9	68.8	15530
4x400*	61/2.85	2	1.8	3.15	3.2	78.1	19950

* Shaped stranded conductor (class 2)



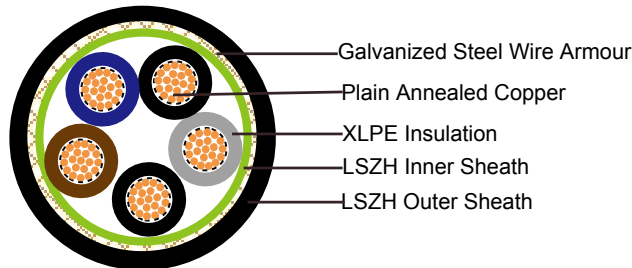
— LSZH Outer Sheath
 — Galvanized Steel Wire Armour
 — Plain Annealed Copper
 — XLPE Insulation
 — LSZH Inner Sheath
 — Earth Conductor

4 CORES + 1 EARTH CONDUCTOR

4x16/6	7/1.35	0.7	0.8	0.9	1.4	25.1	1356
4x16/10	7/1.70	0.7	0.8	0.9	1.4	26.0	1390
4x25/6	7/2.14	0.7	0.8	0.9	1.4	29.0	1900
4x25/10	7/2.14	0.9	1	1.6	1.7	29.4	1956
4x25/16	7/2.14	0.9	1	1.6	1.7	30.0	2012
4x35/10	7/2.52	0.9	1	1.6	1.8	32.1	2710
4x35/16	7/2.52	0.9	1	1.6	1.8	33.4	2940
4x35/25	7/2.52	0.9	1	1.6	1.8	34.0	3050
4x50/16	19/1.78	1.0	1	1.6	1.9	33	3560
4x50/25	19/1.78	1.0	1	1.6	1.9	35.6	3670
4x50/35	19/1.78	1.0	1	1.6	1.9	38.2	3759
4x70/25	19/2.14	1.1	1.2	2.0	2.1	38.6	4980
4x70/35	19/2.14	1.1	1.2	2.0	2.1	40.6	5036



No. of Core X Cross Section	No./Nominal Diameter of Strands	Nominal Insulation Thickness	Nominal Bedding Thickness	Nominal Steel Wire Armor Diameter	Nominal Sheath Thickness	Approx. Overall Diameter	Approx. Weight
No./mm ²	No./mm	mm	mm	mm	mm	mm	kg/km
4x70/50	19/2.14	1.1	1.2	2.0	2.1	42.9	5468
4x95/25	19/2.52	1.1	1.2	2.0	2.2	43.2	6215
4x95/35	19/2.52	1.1	1.2	2.0	2.2	46.3	6325
4x95/50	19/2.52	1.1	1.2	2.0	2.2	48.5	6455
4x95/50	19/2.52	1.1	1.2	2.0	2.2	50.7	6954
3x120/35	37/2.03	1.2	1.4	2.5	2.3	54.2	7968
4x120/50	37/2.03	1.2	1.4	2.5	2.3	55.3	8280
4x120/70	37/2.03	1.2	1.4	2.5	2.3	55.9	8511
4x120/95	37/2.03	1.2	1.4	2.5	2.3	56.4	8790
4x150/50	37/2.25	1.4	1.4	2.5	2.4	55.3	8723
4x150/70	37/2.25	1.4	1.4	2.5	2.4	56.48	8879
4x150/95	37/2.25	1.4	1.4	2.5	2.4	57.59	10179
4x150/120	37/2.25	1.4	1.4	2.5	2.4	58.65	10739
4x185/70	37/2.52	1.6	1.6	2.5	2.6	62.03	11200
4x185/95	37/2.52	1.6	1.6	2.5	2.6	63.19	1263
4x185/120	37/2.52	1.6	1.6	2.5	2.6	64.23	13050
4x185/150	37/2.52	1.6	1.6	2.5	2.6	65.38	13680
4x240/95	61/2.25	1.7	1.6	2.5	2.7	71.53	14420
4x240/120	61/2.25	1.7	1.6	2.5	2.7	72.76	14763
4x240/150	61/2.25	1.7	1.6	2.5	2.7	73.10	15241
4x240/185	61/2.25	1.7	1.6	2.5	2.7	74.0	1682
4x300/150	61/2.52	1.8	1.6	2.5	2.9	75.08	18050
4x300/150	61/2.52	1.8	1.6	2.5	2.9	76.44	18662
4x300/185	61/2.52	1.8	1.6	2.5	2.9	77.30	19031
4x300/240	61/2.52	1.8	1.6	2.5	2.9	78.55	19878



No. of Core X Cross Section	No./Nominal Diameter of Strands	Nominal Insulation Thickness	Nominal Bedding Thickness	Nominal Steel Wire Armor Diameter	Nominal Sheath Thickness	Approx. Overall Diameter	Approx. Weight
No./mm ²	No./mm	mm	mm	mm	mm	mm	kg/km
5 CORES							
5x1.5	7/0.53	0.6	0.8	0.9	1.4	14.3	430
5x2.5	7/0.67	0.7	0.8	0.9	1.4	16.1	545
5x4	7/0.85	0.7	0.8	0.9	1.5	17.8	680
5x6	7/1.04	0.7	0.8	1.25	1.5	20	840
5x10	7/1.35	0.7	0.8	1.25	1.6	22.9	1105
5x16	7/1.70	0.7	1	1.6	1.7	26.6	1450
5x25	7/2.14	0.9	1	1.6	1.8	31.5	2245
5x35	7/2.52	0.9	1	1.6	1.9	34.8	2840
5x50	19/1.78	1.0	1.2	2	2	40.4	3895
5x70	19/2.14	1.1	1.2	2	2.2	46.3	5145
7 CORES							
7x1.5	7/0.53	0.6	0.8	0.9	1.4	15.2	500
7x2.5	7/0.67	0.7	0.8	0.9	1.4	17.1	730
7x4	7/0.85	0.7	0.8	1.25	1.5	19.7	840
12 CORES							
12x1.5	7/0.53	0.6	0.8	1.25	1.5	19.4	820
12x2.5	7/0.67	0.7	0.8	1.25	1.6	22.4	1020
12x4	7/0.85	0.7	1	1.6	1.6	25.7	1390
19 CORES							
19x1.5	7/0.53	0.6	0.8	1.25	1.6	22.2	1080
19x2.5	7/0.67	0.7	1	1.6	1.7	26.6	1530
19x4	7/0.85	0.7	1	1.6	1.7	29.3	1850
27 CORES							
27x1.5	7/0.53	0.6	1	1.6	1.7	26.7	1550
27x2.5	7/0.67	0.7	1	1.6	1.8	30.7	1960
27x4	7/0.85	0.7	1	1.6	1.9	34.4	2350
37 CORES							
37x1.5	7/0.53	0.6	1	1.6	1.7	29	1850
37x2.5	7/0.67	0.7	1	1.6	1.8	33.8	2450
37x4	7/0.85	0.7	1.2	2	2	39.2	2800



No. of Core X Cross Section	No./Nominal Diameter of Strands	Nominal Insulation Thickness	Nominal Bedding Thickness	Nominal Steel Wire Armor Diameter	Nominal Sheath Thickness	Approx. Overall Diameter	Approx. Weight
No./mm ²	No./mm	mm	mm	mm	mm	mm	kg/km
48 CORES							
48x1.5	7/0.53	0.6	1	1.6	1.8	32.7	2250
48x2.5	7/0.67	0.7	1.2	2	2	39.3	3260
48x4	7/0.85	0.7	1.2	2	2.1	44.1	3250

ELECTRICAL PROPERTIES

Conductor Operating Temperature : 90°C

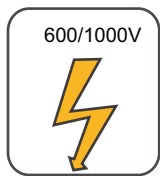
Ambient Temperature : 30°C

Current-Carrying Capacities (Amp)

Conductor cross-sectional area	Reference Method 1 (clipped direct)		Reference Method 11 (on a perforated horizontal cable tray or 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



600/1000V

Rated Voltage



BS 6724

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



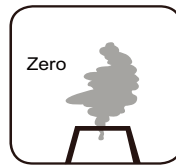
Low Toxicity
NES 02-713/NF C 20-454



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



Zero
Halogen Free
IEC60754-1
EN50267-2-1