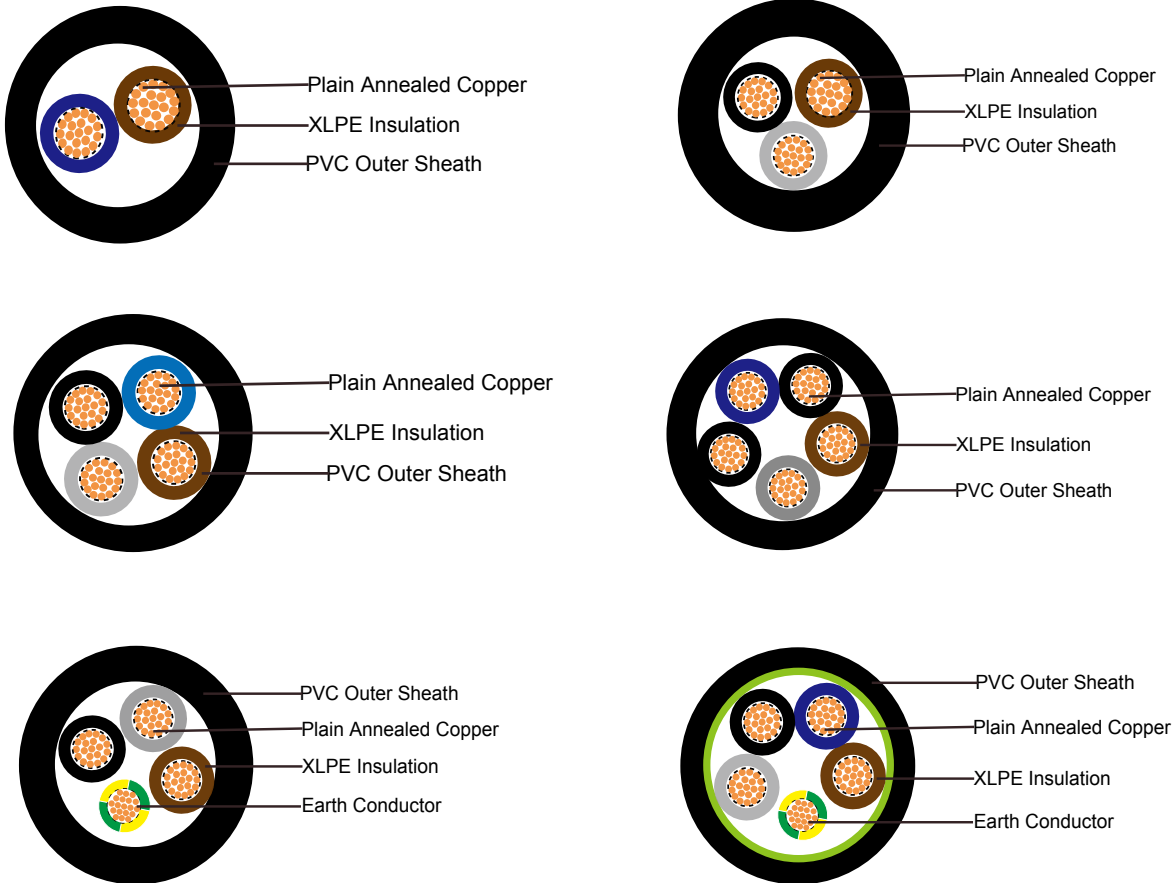


600/1000V XLPE Insulated PVC Sheathed Power Cables (Multicore)

FGD400 1RV-R (CU/XLPE/PVC 600/1000V Class 2)

Outdoor Cabling



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 IEC 60502-1

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

Note: Asterisk ** denotes that the standard compliance is optional, depending on the oxygen index of the PVC compound and the cable design.

VOLTAGE RATING

600/1000V

CABLE CONSTRUCTION

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

Insulation: Extruded cross-linked XLPE compound.

Outer Sheath: Thermoplastic PVC compound.

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: -40°C ~ 70°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 Overall Diameter	Approx. Weight
	No. of Core X Cross Section / CPC Cross Section	No./Nominal Diameter of Strands	Nominal Insulation Thickness		
	No.×mm ²	No./mm	mm	mm	mm
2 CORES					
FGD400 1RV-R 2G1.5	2x1.5	7/0.53	0.7	10.0	126
FGD400 1RV-R 2G2.5	2x2.5	7/0.67	0.7	10.8	158
FGD400 1RV-R 2G4	2x4	7/0.85	0.7	11.9	205
FGD400 1RV-R 2G6	2x6	7/1.04	0.7	13.0	264
FGD400 1RV-R 2G10	2x10	7/1.35	0.7	14.9	378
FGD400 1RV-R 2G16	2x16	7/1.70	0.7	17.0	534
FGD400 1RV-R 2G25	2x25	7/2.14	0.9	20.4	650
FGD400 1RV-R 2G35	2x35	7/2.52	0.9	22.7	880
3 CORES					
FGD400 1RV-R 3G1.5	3x1.5	7/0.53	0.7	10.5	145
FGD400 1RV-R 3G2.5	3x2.5	7/0.67	0.7	11.4	185
FGD400 1RV-R 3G4	3x4	7/0.85	0.7	12.5	247
FGD400 1RV-R 3G6	3x6	7/1.04	0.7	13.8	323
FGD400 1RV-R 3G10	3x10	7/1.35	0.7	15.8	474
FGD400 1RV-R 3G16	3x16	7/1.70	0.7	18.0	682
FGD400 1RV-R 3G25	3x25	7/2.14	0.9	21.7	910
FGD400 1RV-R 3G35	3x35	7/2.52	0.9	24.0	1180
FGD400 1RV-R 3G50	3x50(S)	19/1.78	1.0	25.5	1600
FGD400 1RV-R 3G70	3x70(S)	19/2.14	1.1	29.0	2240
FGD400 1RV-R 3G95	3x95(S)	19/2.52	1.1	33.5	3050
FGD400 1RV-R 3G120	3x120(S)	37/2.03	1.2	37.5	3800
FGD400 1RV-R 3G150	3x150(S)	37/2.25	1.4	40.5	4640
FGD400 1RV-R 3G185	3x185(S)	37/2.52	1.6	45.0	5870



FGD400 1RV-R 3G40	3x240(S)	61/2.25	1.7	50.5	7670
FGD400 1RV-R 3G300	3x300(S)	61/2.52	1.8	57.0	9460
FGD400 1RV-R 3G400	3x400(S)	61/2.85	2.0	63.0	11945
3 CORE + 1 EARTH CONDUCTOR					
FGD400 1RV-R 3G16/6	3x16/6	7/1.70	0.7	16.5	698
FGD400 1RV-R 3G16/10	3x16/10	7/1.70	0.7	18.85	793
FGD400 1RV-R 3G25/6	3x25/6	7/2.14	0.9	21.7	956
FGD400 1RV-R 3G25/10	3x25/10	7/2.14	0.9	22.1	1021
FGD400 1RV-R 3G25/16	3x25/16	7/2.14	0.9	23.0	1070
FGD400 1RV-R 3G35/10	3x35/10	19/1.53	0.9	22.9	1263
FGD400 1RV-R 3G35/16	3x35/16	19/1.53	0.9	24.3	1349
FGD400 1RV-R 3G35/25	3x35/25	19/1.53	0.9	25.2	1470
FGD400 1RV-R 3G50/16	3x50/16	19/1.78	1.0	26.1	1769
FGD400 1RV-R 3G50/25	3x50/25	19/1.78	1.0	27.3	1890
FGD400 1RV-R 3G50/35	3x50/35	19/1.78	1.0	27.8	1995
FGD400 1RV-R 3G70/25	3x70/25	19/2.14	1.1	30.2	2530
FGD400 1RV-R 3G70/35	3x70/35	19/2.14	1.1	30.9	2660
FGD400 1RV-R 3G70/50	3x70/50	19/2.14	1.1	31.5	2840
FGD400 1RV-R 3G95/25	3x95/25	19/2.52	1.1	35.1	3340
FGD400 1RV-R 3G95/35	3x95/35	19/2.52	1.1	36.0	3470
FGD400 1RV-R 3G95/50	3x95/50	19/2.52	1.1	36.8	3650
FGD400 1RV-R 3G95/70	3x95/70	19/2.52	1.1	36.9	3890
FGD400 1RV-R 3G120/35	3x120/35	37/2.03	1.2	38.2	3920
FGD400 1RV-R 3G120/50	3x120/50	37/2.03	1.2	39.1	4400
FGD400 1RV-R 3G120/70	3x120/70	37/2.03	1.2	40.0	4610
FGD400 1RV-R 3G120/95	3x120/95	37/2.03	1.2	41.2	4820
FGD400 1RV-R 3G150/50	3x150/50	37/2.25	1.4	41.5	5240
FGD400 1RV-R 3G150/70	3x150/70	37/2.25	1.4	42.3	5450
FGD400 1RV-R 3G150/95	3x150/95	37/2.25	1.4	43.6	5660

FGD400 1RV-R 3G150/120	3x150/120	37/2.25	1.4	44.8	6240
FGD400 1RV-R 3G185/70	3x185/70	37/2.52	1.6	47.5	6680
FGD400 1RV-R 3G185/95	3x185/95	37/2.52	1.6	47.9	6990
FGD400 1RV-R 3G185/120	3x185/120	37/2.52	1.6	48.5	7395
FGD400 1RV-R 3G185/150	3x185/150	37/2.52	1.6	49.2	7580
FGD400 1RV-R 3G240/95	3x240/95	61/2.25	1.7	53.4	8690
FGD400 1RV-R 3G240/120	3x240/120	61/2.25	1.7	54.9	9095
FGD400 1RV-R 3G240/150	3x240/150	61/2.25	1.7	55.6	9380
FGD400 1RV-R 3G240/185	3x240/185	61/2.25	1.7	56.8	9687
FGD400 1RV-R 3G300/120	3x300/120	61/2.52	1.8	58.1	10480
FGD400 1RV-R 3G300/150	3x300/150	61/2.52	1.8	57.3	11170
FGD400 1RV-R 3G300/185	3x300/185	61/2.52	1.8	58.7	11480
FGD400 1RV-R 3G300/240	3x300/240	61/2.52	1.8	62.4	11290
4 CORES					
FGD400 1RV-R 4G1.5	4x1.5	7/0.53	0.7	11.3	169
FGD400 1RV-R 4G2.5	4x2.5	7/0.67	0.7	12.3	220
FGD400 1RV-R 4G4	4x4	7/0.85	0.7	13.6	297
FGD400 1RV-R 4G6	4x6	7/1.04	0.7	15.0	392
FGD400 1RV-R 4G10	4x10	7/1.35	0.7	17.2	585
FGD400 1RV-R 4G16	4x16	7/1.70	0.7	19.7	851
FGD400 1RV-R 4G25	4x25	7/2.14	0.9	23.9	1200
FGD400 1RV-R 4G35	4x35(S)	7/2.52	0.9	25.0	1600
FGD400 1RV-R 4G50	4x50(S)	19/1.78	1.0	28.0	2200
FGD400 1RV-R 4G70	4x70(S)	19/2.14	1.1	32.0	3050
FGD400 1RV-R 4G95	4x95(S)	19/2.52	1.1	37.0	4070
FGD400 1RV-R 4G120	4x120(S)	37/2.03	1.2	42.0	5915
FGD400 1RV-R 4G150	4x150(S)	37/2.25	1.4	46.0	6350
FGD400 1RV-R 4G185	4x185(S)	37/2.52	1.6	50.0	7890
FGD400 1RV-R 4G240	4x240(S)	61/2.25	1.7	57.0	10400
FGD400 1RV-R 4G300	4x300(S)	61/2.52	1.8	63.0	12810



FGD400 1RV-R 4G400	4x400(S)	61/2.85	2.0	71.0	15869
FGD400 1RV-R 4G500	4x500(S)	61/3.20	2.2	78.0	20300
4 CORE + 1 EARTH CONDUCTOR					
FGD400 1RV-R 4G16/6	4x16/6	7/1.70	0.7	19	654
FGD400 1RV-R 4G16/10	4x16/10	7/1.70	0.7	21.9	962
FGD400 1RV-R 4G25/6	4x25/10	7/2.14	0.7	25.3	1256
FGD400 1RV-R 4G25/10	4x25/10	7/2.14	0.7	26.6	1311
FGD400 1RV-R 4G25/16	4x25/16	7/2.14	0.7	27.3	1369
FGD400 1RV-R 4G35/10	4x35/10	19/1.53	0.9	26.8	1658
FGD400 1RV-R 4G35/16	4x35/16	19/1.53	0.9	27.6	1769
FGD400 1RV-R 4G35/25	4x35/25	19/1.53	0.9	28.4	1890
FGD400 1RV-R 4G50/16	4x50/16	19/1.78	1.0	29.4	2369
FGD400 1RV-R 4G50/25	4x50/25	19/1.78	1.0	31.6	2490
FGD400 1RV-R 4G50/35	4x50/35	19/1.78	1.0	33.2	2599
FGD400 1RV-R 4G70/25	4x70/25	19/2.14	1.1	34.2	3340
FGD400 1RV-R 4G70/35	4x70/35	19/2.14	1.1	35.6	3470
FGD400 1RV-R 4G70/50	4x70/50	19/2.14	1.1	37.8	3650
FGD400 1RV-R 4G95/25	4x95/25	19/2.52	1.1	42.6	4360
FGD400 1RV-R 4G95/35	4x95/35	19/2.52	1.1	43.3	4510
FGD400 1RV-R 4G95/50	4x95/50	19/2.52	1.1	44.1	4670
FGD400 1RV-R 4G95/70	4x95/70	19/2.52	1.1	45.3	4783
FGD400 1RV-R 4G120/35	4x120/35	37/2.03	1.2	42.6	6335
FGD400 1RV-R 4G120/50	4x120/50	37/2.03	1.2	43.8	6515
FGD400 1RV-R 4G120/70	4x120/70	37/2.03	1.2	45.9	6725
FGD400 1RV-R 4G120/95	4x120/95	37/2.03	1.2	46.4	6920
FGD400 1RV-R 4G150/50	4x150/50	37/2.25	1.4	47.3	6950
FGD400 1RV-R 4G150/70	4x150/70	37/2.25	1.4	48.5	7160
FGD400 1RV-R 4G150/95	4x150/95	37/2.25	1.4	50.2	7370
FGD400 1RV-R 4G150/120	4x150/120	37/2.25	1.4	53.7	7965
FGD400 1RV-R 4G185/70	4x185/70	37/2.52	1.6	52.4	8490
FGD400 1RV-R 4G185/95	4x185/95	37/2.52	1.6	53.9	8700

FGD400 1RV-R 4G185/120	4x185/120	37/2.52	1.6	55.6	8910
FGD400 1RV-R 4G185/150	4x185/150	37/2.52	1.6	59.4	9260
FGD400 1RV-R 4G240/95	4x240/95	61/2.25	1.7	61.9	11210
FGD400 1RV-R 4G240/120	4x240/120	61/2.25	1.7	63.4	11420
FGD400 1RV-R 4G240/150	4x240/150	61/2.25	1.7	63.9	12010
FGD400 1RV-R 4G240/185	4x240/185	61/2.25	1.7	64.3	12090
FGD400 1RV-R 4G300/120	4x300/120	61/2.52	1.8	64.0	12110
FGD400 1RV-R 4G300/150	4x300/150	61/2.52	1.8	66.1	13830
FGD400 1RV-R 4G300/185	4x300/185	61/2.52	1.8	71.5	14520
FGD400 1RV-R 4G300/240	4x300/240	61/2.52	1.8	72.0	14830
5 CORES					
FGD400 1RV-R 5G1.5	5x1.5	7/0.53	0.7	13.7	205
FGD400 1RV-R 5G2.5	5x2.5	7/0.85	0.7	14.9	265
FGD400 1RV-R 5G4	5x4	7/0.85	0.7	16.3	360
FGD400 1RV-R 5G6	5x6	7/1.04	0.7	18.2	478
FGD400 1RV-R 5G10	5x10	7/1.04	0.7	20.8	720
FGD400 1RV-R 5G16	5x16	7/1.04	0.7	24.2	1050
FGD400 1RV-R 5G25	5x25	7/1.04	0.7	29.4	1485
FGD400 1RV-R 5G35	5x35(S)	7/2.52	0.9	30.3	1940
FGD400 1RV-R 5G50	5x50(S)	19/1.78	1.0	34	2667
FGD400 1RV-R 5G70	5x70(S)	19/2.14	1.1	38.5	3698
FGD400 1RV-R 5G95	5x95(S)	19/2.52	1.1	44.6	4934
FGD400 1RV-R 5G120	5x120(S)	37/2.03	1.2	45.8	7171
FGD400 1RV-R 5G150	5x150(S)	37/2.25	1.4	55.6	7699
FGD400 1RV-R 5G185	5x185(S)	37/2.52	1.6	60.4	9566
FGD400 1RV-R 5G240	5x240(S)	61/2.25	1.7	69.1	12610
FGD400 1RV-R 5G300	5x300(S)	61/2.52	1.8	76.4	15532
FGD400 1RV-R 5G400	5x400(S)	61/2.85	2.0	86.1	19241
FGD400 1RV-R 5G500	5x500(S)	61/3.20	2.2	94.4	24613



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
	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	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 ²	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

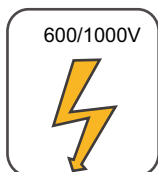
Voltage Drop (Per Amp Per Meter)

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 ²	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

Note :

r = conductor resistance at operating temperature

x = reactance z = impedance



Rated Voltage



Standard



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

Optional



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

Optional