

**Type P Power Cable for Distribution (0.6/1kV, 2kV) Fire Resistant
2,3,4 Conductors**



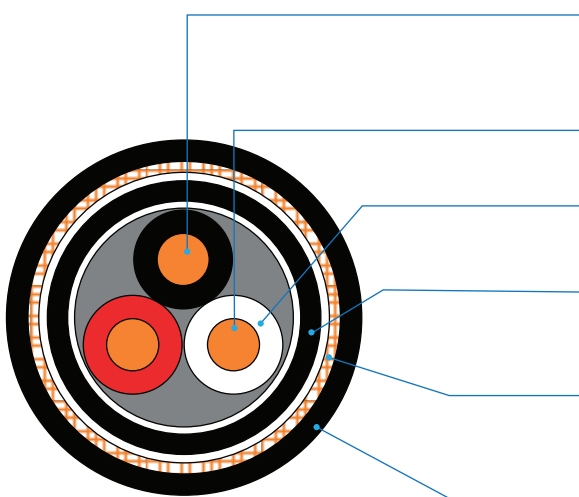
CABLE DESIGNATION

0.6/1kV FS-DPN, FS-DPNB, FS-DPNBS
0.6/1kV FS-TPN, FS-TPNB, FS-TPNBS
0.6/1kV FS-FPN, FS-FPNB, FS-FPNBS
0.6/1kV FS-QPN, FS-QPNB, FS-QPNBS

APPLICATION STANDARD

Design guide	IEEE 1580(2010) , UL 1309(2017)
Insulation material	IEEE 1580, Type P UL 1309, X110
Sheath material	IEEE 1580, Type N
Flame retardant	IEEE 1202 & IEC 60332-3 Category A
Fire resistance	IEC 60331-21(90min), IEC 60331-1,-2(120min), FS-type only
Cold bend / impact	CSA C22.2 NO. 2556(-40°C/-40°C) (Formerly CSA C22.2 NO.0.3)

CONSTRUCTION



Sectional view

Conductor	Flexible stranded tinned annealed copper wires as per IEEE 1580 A suitable separator tape(s) may be applied over the conductor
Fire resisting layer(optional)	Mica/glass tape (FS Type cable only)
Insulation	XLPO (Type P) as per IEEE 1580 & XLPO (X110) as per UL 1309
Jacket	Thermosetting Neoprene (Type N) as per IEEE 1580 & UL 1309
Armor	<ul style="list-style-type: none"> • Braid of commercial bronze wires • A suitable separator tape(s) may be applied under/over the armor
Sheath	<ul style="list-style-type: none"> • Thermosetting Neoprene (Type N) as per IEEE 1580 & UL 1309 • Outer sheath color : Black

Core identification

Colored insulation or Arabic number printing on the insulation

- 2C : Black, White or Red
- 3C : Black, White, Red or Blue
- 4C : Black, White, Red, Green or Orange
- 5C : Black, White, Red, Green, Orange

Cabling

- Insulated conductors shall be cabled
- Flame retardant & non-hygroscopic fillers may be used
- Suitable tape(s) may be applied on the cabled core
- A Filler may be applied to obtain a circular Cable

**Type P Power Cable for Distribution (0.6/1kV, 2kV) Fire Resistant
2,3,4 Conductors**

0.6/1kV FS-DPN, 0.6/1kV FS-DPNB, 0.6/1kV FS-DPNBS

No. of Cores	Conductor Nominal Area	Thickness of Insulation	Thickness of Jacket	Thickness of Sheath	Unarmor		Armor		Armor and Sheath	
					Nom.Dia. Approx.	Weight Approx.	Nom.Dia. Approx.	Weight Approx.	Nom.Dia. Approx.	Weight Approx.
No.	AWG or kcmil	mm/inch	mm/inch	mm/inch	mm/inch	kg/km	mm/inch	kg/km	mm/inch	kg/km
2	14	0.76 / 0.030	1.14 / 0.045	1.52 / 0.060	10.7 / 0.421	160	12.5 / 0.492	280	15.9 / 0.626	390
	12	0.76 / 0.030	1.14 / 0.045	1.52 / 0.060	11.6 / 0.457	210	13.4 / 0.528	330	16.8 / 0.661	450
	10	0.76 / 0.030	1.14 / 0.045	1.52 / 0.060	13.1 / 0.516	270	14.9 / 0.587	410	18.3 / 0.720	550
	8	1.14 / 0.045	1.52 / 0.060	2.03 / 0.080	16.3 / 0.642	420	18.1 / 0.713	580	22.6 / 0.890	800
	6	1.14 / 0.045	1.52 / 0.060	2.03 / 0.080	18.5 / 0.728	570	20.3 / 0.799	760	24.8 / 0.976	1000
	5	1.14 / 0.045	2.03 / 0.080	2.03 / 0.080	23.0 / 0.906	860	24.8 / 0.976	1090	29.3 / 1.154	1380
	4	1.14 / 0.045	2.03 / 0.080	2.03 / 0.080	24.0 / 0.945	950	25.8 / 1.016	1190	30.3 / 1.193	1490
	3	1.14 / 0.045	2.03 / 0.080	2.03 / 0.080	25.3 / 0.996	1070	27.1 / 1.067	1330	31.6 / 1.244	1640
	2	1.14 / 0.045	2.03 / 0.080	2.03 / 0.080	26.5 / 1.043	1220	28.3 / 1.114	1490	32.8 / 1.291	1810
	1	1.40 / 0.055	2.03 / 0.080	2.03 / 0.080	30.5 / 1.201	1630	32.3 / 1.272	1940	36.8 / 1.449	2310
	1/0	1.40 / 0.055	2.03 / 0.080	2.03 / 0.080	32.9 / 1.295	1970	34.7 / 1.366	2300	39.2 / 1.543	2690
	2/0	1.40 / 0.055	2.03 / 0.080	2.03 / 0.080	35.3 / 1.390	2370	37.1 / 1.461	2730	41.6 / 1.638	3150
	3/0	1.40 / 0.055	2.03 / 0.080	2.79 / 0.110	38.4 / 1.512	2830	40.2 / 1.583	3220	46.2 / 1.819	3830
	4/0	1.40 / 0.055	2.03 / 0.080	2.79 / 0.110	41.9 / 1.650	3460	43.7 / 1.720	3880	49.7 / 1.957	4550
262	1.65 / 0.065	2.79 / 0.110	2.79 / 0.110	47.4 / 1.866	4340	49.2 / 1.937	4810	55.2 / 2.173	5560	

Note. For outer diameter, it is applied to ±5% manufacturing tolerance.

0.6/1kV FS-TPN, 0.6/1kV FS-TPNB, 0.6/1kV FS-TPNBS

No. of Cores	Conductor Nominal Area	Thickness of Insulation	Thickness of Jacket	Thickness of Sheath	Unarmor		Armor		Armor and Sheath	
					Nom.Dia. Approx.	Weight Approx.	Nom.Dia. Approx.	Weight Approx.	Nom.Dia. Approx.	Weight Approx.
No.	AWG or kcmil	mm/inch	mm/inch	mm/inch	mm/inch	kg/km	mm/inch	kg/km	mm/inch	kg/km
3	14	0.76 / 0.030	1.14 / 0.045	1.52 / 0.060	11.3 / 0.445	190	13.1 / 0.516	310	16.5 / 0.650	430
	12	0.76 / 0.030	1.14 / 0.045	1.52 / 0.060	12.3 / 0.484	250	14.1 / 0.555	380	17.5 / 0.689	500
	10	0.76 / 0.030	1.52 / 0.060	1.52 / 0.060	14.6 / 0.575	360	16.4 / 0.646	510	19.8 / 0.780	660
	8	1.14 / 0.045	1.52 / 0.060	2.03 / 0.080	17.3 / 0.681	510	19.1 / 0.752	690	23.6 / 0.929	910
	6	1.14 / 0.045	1.52 / 0.060	2.03 / 0.080	19.7 / 0.776	720	21.5 / 0.846	920	26.0 / 1.024	1170
	5	1.14 / 0.045	2.03 / 0.080	2.03 / 0.080	24.4 / 0.961	1060	26.2 / 1.031	1310	30.7 / 1.209	1610
	4	1.14 / 0.045	2.03 / 0.080	2.03 / 0.080	25.6 / 1.008	1180	27.4 / 1.079	1440	31.9 / 1.256	1760
	3	1.14 / 0.045	2.03 / 0.080	2.03 / 0.080	26.9 / 1.059	1340	28.7 / 1.130	1610	33.2 / 1.307	1940
	2	1.14 / 0.045	2.03 / 0.080	2.03 / 0.080	28.2 / 1.110	1530	30.0 / 1.181	1820	34.5 / 1.358	2160
	1	1.40 / 0.055	2.03 / 0.080	2.03 / 0.080	32.6 / 1.283	2070	34.4 / 1.354	2400	38.9 / 1.531	2790
	1/0	1.40 / 0.055	2.03 / 0.080	2.03 / 0.080	35.1 / 1.382	2500	36.9 / 1.453	2860	41.4 / 1.630	3280
	2/0	1.40 / 0.055	2.03 / 0.080	2.79 / 0.110	37.7 / 1.484	3060	39.5 / 1.555	3440	45.5 / 1.791	4040
	3/0	1.40 / 0.055	2.03 / 0.080	2.79 / 0.110	41.1 / 1.618	3650	42.9 / 1.689	4070	48.9 / 1.925	4720
	4/0	1.40 / 0.055	2.79 / 0.110	2.79 / 0.110	46.3 / 1.823	4650	48.1 / 1.894	5120	54.1 / 2.130	5840
	262	1.65 / 0.065	2.79 / 0.110	2.79 / 0.110	50.7 / 1.996	5610	52.5 / 2.067	6110	58.5 / 2.303	6900
	313	1.65 / 0.065	2.79 / 0.110	2.79 / 0.110	54.3 / 2.138	6570	56.1 / 2.209	7110	62.1 / 2.445	7950
	373	1.65 / 0.065	2.79 / 0.110	2.79 / 0.110	58.0 / 2.283	7650	59.8 / 2.354	8230	65.8 / 2.591	9130
	444	1.65 / 0.065	2.79 / 0.110	3.56 / 0.140	62.1 / 2.445	8980	63.9 / 2.516	9600	71.4 / 2.811	10810
535	2.03 / 0.080	2.79 / 0.110	3.56 / 0.140	68.2 / 2.685	10790	70.0 / 2.756	11470	77.5 / 3.051	12780	
646	2.03 / 0.080	3.56 / 0.140	3.56 / 0.140	74.5 / 2.933	12910	76.3 / 3.004	13650	83.8 / 3.299	15070	
777	2.03 / 0.080	3.56 / 0.140	3.56 / 0.140	79.2 / 3.118	15200	81.0 / 3.189	15980	88.5 / 3.484	17490	

Note. For outer diameter, it is applied to ±5% manufacturing tolerance.

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2,3,4 Conductors**

0.6/1kV FS-FPN, 0.6/1kV FS-FPNB, 0.6/1kV FS-FPNBS

No. of Cores	Conductor Nominal Area	Thickness of Insulation	Thickness of Jacket	Thickness of Sheath	Unarmor		Armor		Armor and Sheath	
					Nom.Dia. Approx.	Weight Approx.	Nom.Dia. Approx.	Weight Approx.	Nom.Dia. Approx.	Weight Approx.
No.	AWG or kcmil	mm/inch	mm/inch	mm/inch	mm/inch	kg/km	mm/inch	kg/km	mm/inch	kg/km
4	14	0.76 / 0.030	1.14 / 0.045	1.52 / 0.060	1.24 / 0.488	240	1.42 / 0.559	370	1.76 / 0.693	500
	12	0.76 / 0.030	1.52 / 0.060	1.52 / 0.060	1.42 / 0.559	330	1.60 / 0.630	480	1.94 / 0.764	620
	10	0.76 / 0.030	1.52 / 0.060	2.03 / 0.080	1.59 / 0.626	440	1.77 / 0.697	610	2.22 / 0.874	820
	8	1.14 / 0.045	1.52 / 0.060	2.03 / 0.080	1.90 / 0.748	630	2.08 / 0.819	830	2.53 / 0.996	1,070
	6	1.14 / 0.045	2.03 / 0.080	2.03 / 0.080	2.27 / 0.894	950	2.45 / 0.965	1,180	2.90 / 1.142	1,470
	5	1.14 / 0.045	2.03 / 0.080	2.03 / 0.080	2.70 / 1.063	1,330	2.88 / 1.134	1,600	3.33 / 1.311	1,940
	4	1.14 / 0.045	2.03 / 0.080	2.03 / 0.080	2.82 / 1.110	1,480	3.00 / 1.181	1,770	3.45 / 1.358	2,110
	3	1.14 / 0.045	2.03 / 0.080	2.03 / 0.080	2.9.6 / 1.165	1,680	3.14 / 1.236	1,980	3.5.9 / 1.413	2,340
	2	1.14 / 0.045	2.03 / 0.080	2.03 / 0.080	3.11 / 1.224	1,930	3.2.9 / 1.295	2,250	3.7.4 / 1.472	2,620
	1	1.40 / 0.055	2.03 / 0.080	2.03 / 0.080	3.5.9 / 1.413	2,620	3.7.7 / 1.484	2,980	4.2.2 / 1.661	3,400
	1/0	1.40 / 0.055	2.03 / 0.080	2.7.9 / 0.110	3.8.8 / 1.528	3,180	4.0.6 / 1.598	3,570	4.6.6 / 1.835	4,190
	2/0	1.40 / 0.055	2.03 / 0.080	2.7.9 / 0.110	4.1.7 / 1.642	3,900	4.3.5 / 1.713	4,310	4.9.5 / 1.949	4,980
	3/0	1.40 / 0.055	2.7.9 / 0.110	2.7.9 / 0.110	4.7.0 / 1.850	4,830	4.8.8 / 1.921	5,300	5.4.8 / 2.157	6,040
	4/0	1.40 / 0.055	2.7.9 / 0.110	2.7.9 / 0.110	5.1.1 / 2.012	5,920	5.2.9 / 2.083	6,430	5.8.9 / 2.319	7,230
	262	1.65 / 0.065	2.7.9 / 0.110	2.7.9 / 0.110	5.6.0 / 2.205	7,140	5.7.8 / 2.276	7,700	6.3.8 / 2.512	8,570
	313	1.65 / 0.065	2.7.9 / 0.110	2.7.9 / 0.110	6.0.1 / 2.366	8,400	6.1.9 / 2.437	9,000	6.7.9 / 2.673	9,920
	373	1.65 / 0.065	2.7.9 / 0.110	3.5.6 / 0.140	6.4.2 / 2.528	9,790	6.6.0 / 2.598	10,430	7.3.5 / 2.894	11,670
444	1.65 / 0.065	2.7.9 / 0.110	3.5.6 / 0.140	6.8.8 / 2.709	11,510	7.0.6 / 2.780	12,200	7.8.1 / 3.075	13,520	
535	2.03 / 0.080	3.5.6 / 0.140	3.5.6 / 0.140	7.7.2 / 3.039	14,130	7.9.0 / 3.110	14,890	8.6.5 / 3.406	16,370	
646	2.03 / 0.080	3.5.6 / 0.140	3.5.6 / 0.140	8.2.5 / 3.248	16,530	8.4.3 / 3.319	17,350	9.1.8 / 3.614	18,920	

Note. For outer diameter, it is applied to ±5% manufacturing tolerance.

0.6/1kV FS-QPN, 0.6/1kV FS-QPNB, 0.6/1kV FS-QPNBS

No. of Cores	Conductor Nominal Area	Thickness of Insulation	Thickness of Jacket	Thickness of Sheath	Unarmor		Armor		Armor and Sheath	
					Nom.Dia. Approx.	Weight Approx.	Nom.Dia. Approx.	Weight Approx.	Nom.Dia. Approx.	Weight Approx.
No.	AWG or kcmil	mm/inch	mm/inch	mm/inch	mm/inch	kg/km	mm/inch	kg/km	mm/inch	kg/km
5	14	0.76 / 0.030	1.52 / 0.060	1.52 / 0.060	1.42 / 0.559	310	1.60 / 0.630	460	1.94 / 0.764	600
	12	0.76 / 0.030	1.52 / 0.060	1.52 / 0.060	1.5.5 / 0.610	400	1.7.3 / 0.681	560	2.0.7 / 0.815	710
	10	0.76 / 0.030	1.52 / 0.060	2.03 / 0.080	1.7.4 / 0.685	540	1.9.2 / 0.756	720	2.3.5 / 0.925	930
	8	1.14 / 0.045	1.52 / 0.060	2.03 / 0.080	2.0.9 / 0.823	770	2.2.7 / 0.894	990	2.7.2 / 1.071	1,250
	6	1.14 / 0.045	2.03 / 0.080	2.03 / 0.080	2.5.2 / 0.992	1,160	2.7.0 / 1.063	1,420	3.1.5 / 1.240	1,730
	4	1.14 / 0.045	2.03 / 0.080	2.03 / 0.080	3.1.2 / 1.228	1,810	3.3.0 / 1.299	2,130	3.7.5 / 1.476	2,500
	2	1.14 / 0.045	2.03 / 0.080	2.03 / 0.080	3.4.4 / 1.354	2,370	3.6.2 / 1.425	2,720	4.0.5 / 1.594	3,110
	1	1.40 / 0.055	2.03 / 0.080	2.7.9 / 0.110	3.9.9 / 1.571	3,230	4.1.7 / 1.642	3,630	4.7.5 / 1.870	4,250
	1/0	1.40 / 0.055	2.7.9 / 0.110	2.7.9 / 0.110	4.4.6 / 1.756	4,080	4.6.4 / 1.827	4,530	5.2.2 / 2.055	5,210
	2/0	1.40 / 0.055	2.7.9 / 0.110	2.7.9 / 0.110	4.7.8 / 1.882	4,980	4.9.6 / 1.953	5,460	5.5.4 / 2.181	6,180
	3/0	1.40 / 0.055	2.7.9 / 0.110	2.7.9 / 0.110	5.2.0 / 2.047	5,940	5.3.8 / 2.118	6,470	5.9.6 / 2.346	7,240
4/0	1.40 / 0.055	2.7.9 / 0.110	2.7.9 / 0.110	5.6.6 / 2.228	7,300	5.8.4 / 2.299	7,870	6.4.2 / 2.528	8,710	

Note. For outer diameter, it is applied to ±5% manufacturing tolerance.