

Instrumentation & Communication Cable



Cable Designation (S3, S3/S7)

250V BFOU(i), BFCU(i), BFBU(i)

Application Standard

- Design guide	: NEK-606 & IEC 60092-376
- Flame retardant	: IEC 60332-1 & IEC 60332-3 Category A
- Fire resistance	: IEC 60331-21(90min) IEC 60331-1,-2(120min)
- Halogen content	: IEC 60754-1, 0.5% ↓
- Cold bend / impact	: CSA 22.2 No.03 (-40°C/-35°C)
- Mud resistant	: NEK-606 (Mud type only)
- Smoke light transmittance	: IEC 61034, 60% ↑
- Sunlight (UV) resistant	: UL 1581

Construction

Sectional view	Classification	Code	Construction detail
	Conductor		- Stranded tinned annealed copper wires as per IEC 60228, Class 2
	Fire resisting layer	B	- Mica/glass tape
	Insulation		- EPR as per IEC 60092-360
	Twisting		- Two/Three Insulated cores shall be twisted together to form a pair/Triad
	Individual screen	(i)	- CU/PS or AL/PS tape + Tinned copper drain wire
	Cabling		- Twisted pairs / triads 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
	Inner covering	F	- Flame retardant halogen free thermoset compound
	Armor	O (B,C)	- Braid of tinned copper wire (O) / bronze wire (B) /galvanized steel wire (C) - A suitable separator tape(s) may be applied under/over the armor
	Sheath	U	- SHF2 or SHF Mud as per IEC 60092-360 - Outer sheath color : Grey (Non-IS Type) or Blue (IS Type)
	Core identification		- Each Pair / Triad : Core color ① Pair : Black, Light blue ② Triad : Black, Light blue, Brown - Multi Pairs / Triads : Number printing on the insulation or numbered tape

Note. Flexible cable (Class5 Conductor) can be supplied

250V BFOU(i), 250V BFCU(i), 250V BFBU(i)

No. of Pairs	Conductor			Thickness of Insulation	Thickness of inner covering	Nominal dia. inner covering	Dia. of wire for armour	Thickness of sheath	Overall diameter		Conductor Resistance (at 20°C) (Max.)	Insulation Resistance (at 20°C) (Min.)	Test Voltage	Cable Weight Approx.
	Nominal Area	Max. No. of wires	Max. overall dia.						Nominal	Tolerance				
No.	mm²	EA	mm	mm	mm	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5min.	kg/km
1P	0.75	7	1.2	0.6	1.0	8.0	0.3	1.2	11.9	0.7	26.3	1,170	1,500	220
2P	0.75	7	1.2	0.6	1.0	12.9	0.3	1.4	17.2	0.8	26.3	1,170	1,500	380
3P	0.75	7	1.2	0.6	1.0	13.7	0.3	1.4	18.0	0.8	26.3	1,170	1,500	440
4P	0.75	7	1.2	0.6	1.0	15.0	0.3	1.5	19.5	0.9	26.3	1,170	1,500	510
5P	0.75	7	1.2	0.6	1.0	16.8	0.3	1.5	21.3	0.9	26.3	1,170	1,500	600
6P	0.75	7	1.2	0.6	1.0	17.5	0.3	1.6	22.2	1.0	26.3	1,170	1,500	650
7P	0.75	7	1.2	0.6	1.0	17.5	0.3	1.6	22.2	1.0	26.3	1,170	1,500	690
8P	0.75	7	1.2	0.6	1.0	19.3	0.3	1.6	24.0	1.0	26.3	1,170	1,500	780
10P	0.75	7	1.2	0.6	1.0	22.0	0.3	1.7	26.9	1.1	26.3	1,170	1,500	930
12P	0.75	7	1.2	0.6	1.0	22.9	0.3	1.8	28.0	1.1	26.3	1,170	1,500	1,030
14P	0.75	7	1.2	0.6	1.0	24.2	0.3	1.8	29.3	1.2	26.3	1,170	1,500	1,130
16P	0.75	7	1.2	0.6	1.0	26.0	0.3	1.9	31.3	1.2	26.3	1,170	1,500	1,270
19P	0.75	7	1.2	0.6	1.0	26.6	0.3	1.9	31.9	1.3	26.3	1,170	1,500	1,400
24P	0.75	7	1.2	0.6	1.2	31.6	0.4	2.1	37.7	1.4	26.3	1,170	1,500	1,820
32P	0.75	7	1.2	0.6	1.2	34.3	0.4	2.2	40.6	1.5	26.3	1,170	1,500	2,310
1P	1.0	7	1.4	0.6	1.0	8.4	0.3	1.2	12.3	0.7	19.3	1,050	1,500	240
2P	1.0	7	1.4	0.6	1.0	13.6	0.3	1.4	17.9	0.8	19.3	1,050	1,500	420
3P	1.0	7	1.4	0.6	1.0	14.4	0.3	1.4	18.7	0.9	19.3	1,050	1,500	490
4P	1.0	7	1.4	0.6	1.0	15.9	0.3	1.5	20.4	0.9	19.3	1,050	1,500	570
5P	1.0	7	1.4	0.6	1.0	17.8	0.3	1.6	22.5	1.0	19.3	1,050	1,500	670
6P	1.0	7	1.4	0.6	1.0	18.5	0.3	1.6	23.2	1.0	19.3	1,050	1,500	730
7P	1.0	7	1.4	0.6	1.0	18.5	0.3	1.6	23.2	1.0	19.3	1,050	1,500	780
8P	1.0	7	1.4	0.6	1.0	20.4	0.3	1.7	25.3	1.1	19.3	1,050	1,500	880
10P	1.0	7	1.4	0.6	1.0	23.3	0.3	1.8	28.4	1.2	19.3	1,050	1,500	1,060
12P	1.0	7	1.4	0.6	1.0	24.3	0.3	1.8	29.4	1.2	19.3	1,050	1,500	1,170
14P	1.0	7	1.4	0.6	1.0	25.6	0.3	1.9	30.9	1.2	19.3	1,050	1,500	1,310
16P	1.0	7	1.4	0.6	1.2	28.0	0.3	2.0	33.5	1.3	19.3	1,050	1,500	1,470
19P	1.0	7	1.4	0.6	1.2	28.6	0.3	2.0	34.1	1.3	19.3	1,050	1,500	1,630
24P	1.0	7	1.4	0.6	1.2	33.5	0.4	2.2	39.8	1.5	19.3	1,050	1,500	2,200
32P	1.0	7	1.4	0.6	1.2	36.4	0.4	2.3	42.9	1.6	19.3	1,050	1,500	2,690
1P	1.5	7	1.7	0.7	1.0	9.3	0.3	1.2	13.2	0.7	12.9	1,020	1,500	280
2P	1.5	7	1.7	0.7	1.0	15.2	0.3	1.5	19.7	0.9	12.9	1,020	1,500	500
3P	1.5	7	1.7	0.7	1.0	16.1	0.3	1.5	20.6	0.9	12.9	1,020	1,500	590
4P	1.5	7	1.7	0.7	1.0	17.7	0.3	1.6	22.4	1.0	12.9	1,020	1,500	690
5P	1.5	7	1.7	0.7	1.0	20.0	0.3	1.7	24.9	1.0	12.9	1,020	1,500	810
6P	1.5	7	1.7	0.7	1.0	20.7	0.3	1.7	25.6	1.1	12.9	1,020	1,500	890
7P	1.5	7	1.7	0.7	1.0	20.7	0.3	1.7	25.6	1.1	12.9	1,020	1,500	950
8P	1.5	7	1.7	0.7	1.0	22.9	0.3	1.8	28.0	1.1	12.9	1,020	1,500	1,080
10P	1.5	7	1.7	0.7	1.0	26.3	0.3	1.9	31.6	1.2	12.9	1,020	1,500	1,300
12P	1.5	7	1.7	0.7	1.2	27.8	0.3	2.0	33.3	1.3	12.9	1,020	1,500	1,470
14P	1.5	7	1.7	0.7	1.2	29.2	0.3	2.0	34.7	1.3	12.9	1,020	1,500	1,630
16P	1.5	7	1.7	0.7	1.2	31.5	0.4	2.1	37.6	1.4	12.9	1,020	1,500	1,920
19P	1.5	7	1.7	0.7	1.2	32.2	0.4	2.2	38.5	1.5	12.9	1,020	1,500	2,230
24P	1.5	7	1.7	0.7	1.4	38.2	0.4	2.4	44.9	1.6	12.9	1,020	1,500	2,750
32P	1.5	7	1.7	0.7	1.4	41.5	0.4	2.5	48.4	1.8	12.9	1,020	1,500	3,440
1P	2.5	7	2.2	0.7	1.0	10.2	0.3	1.3	14.3	0.7	8.02	850	1,500	320
2P	2.5	7	2.2	0.7	1.0	16.7	0.3	1.5	21.2	0.9	8.02	850	1,500	590
3P	2.5	7	2.2	0.7	1.0	17.8	0.3	1.6	22.5	1.0	8.02	850	1,500	700
4P	2.5	7	2.2	0.7	1.0	19.6	0.3	1.6	24.3	1.0	8.02	850	1,500	840
5P	2.5	7	2.2	0.7	1.0	22.1	0.3	1.7	27.0	1.1	8.02	850	1,500	990
6P	2.5	7	2.2	0.7	1.0	23.0	0.3	1.8	28.1	1.1	8.02	850	1,500	1,100
7P	2.5	7	2.2	0.7	1.0	23.0	0.3	1.8	28.1	1.1	8.02	850	1,500	1,180
8P	2.5	7	2.2	0.7	1.0	25.4	0.3	1.9	30.7	1.2	8.02	850	1,500	1,340
10P	2.5	7	2.2	0.7	1.2	29.6	0.3	2.0	35.1	1.4	8.02	850	1,500	1,720
12P	2.5	7	2.2	0.7	1.2	30.8	0.4	2.1	36.9	1.4	8.02	850	1,500	1,930
14P	2.5	7	2.2	0.7	1.2	32.5	0.4	2.2	38.8	1.5	8.02	850	1,500	2,250
16P	2.5	7	2.2	0.7	1.2	35.0	0.4	2.3	41.5	1.5	8.02	850	1,500	2,520
19P	2.5	7	2.2	0.7	1.2	35.8	0.4	2.3	42.3	1.6	8.02	850	1,500	2,800
24P	2.5	7	2.2	0.7	1.4	42.4	0.4	2.6	49.5	1.8	8.02	850	1,500	3,550
32P	2.5	7	2.2	0.7	1.4	46.2	0.4	2.7	53.5	1.9	8.02	850	1,500	4,390

HV Power Cable

LV Power & Lighting Cable

Instrumentation & Communication Cable

Earthing & Bonding wire

VFD Cable

Technical Information

Instrumentation & Communication Cable

250V BFOU(i), 250V BFCU(i), 250V BFBU(i)

No. of Triads	Conductor			Thickness of Insulation	Thickness of inner covering	Nominal dia. inner covering	Dia. of wire for armour	Thickness of sheath	Overall diameter		Conductor Resistance (at 20°C) (Max.)	Insulation Resistance (at 20°C) (Min.)	Test Voltage	Cable Weight Approx.
	Nominal Area	Max. No. of wires	Max. overall dia.						Nominal	Tolerance				
No.	mm ²	EA	mm	mm	mm	mm	mm	mm	mm	±mm	Ω/km	MΩ·km	V/5min.	kg/km
1T	0.75	7	1.2	0.6	1.0	8.4	0.3	1.2	12.3	0.7	26.3	1,170	1,500	240
2T	0.75	7	1.2	0.6	1.0	13.7	0.3	1.4	18.0	0.8	26.3	1,170	1,500	430
3T	0.75	7	1.2	0.6	1.0	14.7	0.3	1.4	19.0	0.9	26.3	1,170	1,500	510
4T	0.75	7	1.2	0.6	1.0	16.2	0.3	1.5	20.7	0.9	26.3	1,170	1,500	590
5T	0.75	7	1.2	0.6	1.0	18.0	0.3	1.6	22.7	1.0	26.3	1,170	1,500	690
6T	0.75	7	1.2	0.6	1.0	20.4	0.3	1.7	25.3	1.1	26.3	1,170	1,500	810
7T	0.75	7	1.2	0.6	1.0	20.4	0.3	1.7	25.3	1.1	26.3	1,170	1,500	870
8T	0.75	7	1.2	0.6	1.0	22.0	0.3	1.7	26.9	1.1	26.3	1,170	1,500	970
10T	0.75	7	1.2	0.6	1.0	25.0	0.3	1.9	30.3	1.2	26.3	1,170	1,500	1,160
12T	0.75	7	1.2	0.6	1.0	26.5	0.3	1.9	31.8	1.3	26.3	1,170	1,500	1,300
14T	0.75	7	1.2	0.6	1.2	28.1	0.3	2.0	33.6	1.3	26.3	1,170	1,500	1,450
16T	0.75	7	1.2	0.6	1.2	30.0	0.3	2.1	35.7	1.4	26.3	1,170	1,500	1,600
19T	0.75	7	1.2	0.6	1.2	32.4	0.4	2.2	38.7	1.5	26.3	1,170	1,500	1,930
24T	0.75	7	1.2	0.6	1.2	36.0	0.4	2.3	42.5	1.6	26.3	1,170	1,500	2,420
32T	0.75	7	1.2	0.6	1.4	41.9	0.4	2.5	48.8	1.8	26.3	1,170	1,500	3,110
1T	1.0	7	1.4	0.6	1.0	8.9	0.3	1.2	12.8	0.7	19.3	1,050	1,500	270
2T	1.0	7	1.4	0.6	1.0	14.5	0.3	1.4	18.8	0.9	19.3	1,050	1,500	480
3T	1.0	7	1.4	0.6	1.0	15.5	0.3	1.5	20.0	0.9	19.3	1,050	1,500	570
4T	1.0	7	1.4	0.6	1.0	17.1	0.3	1.5	21.6	0.9	19.3	1,050	1,500	680
5T	1.0	7	1.4	0.6	1.0	19.1	0.3	1.6	23.8	1.0	19.3	1,050	1,500	800
6T	1.0	7	1.4	0.6	1.0	21.7	0.3	1.7	26.6	1.1	19.3	1,050	1,500	940
7T	1.0	7	1.4	0.6	1.0	21.7	0.3	1.7	26.6	1.1	19.3	1,050	1,500	1,000
8T	1.0	7	1.4	0.6	1.0	23.3	0.3	1.8	28.4	1.2	19.3	1,050	1,500	1,110
10T	1.0	7	1.4	0.6	1.0	26.6	0.3	1.9	31.9	1.3	19.3	1,050	1,500	1,330
12T	1.0	7	1.4	0.6	1.2	28.6	0.3	2.0	34.1	1.3	19.3	1,050	1,500	1,510
14T	1.0	7	1.4	0.6	1.2	29.9	0.3	2.0	35.4	1.4	19.3	1,050	1,500	1,780
16T	1.0	7	1.4	0.6	1.2	31.8	0.4	2.1	37.9	1.4	19.3	1,050	1,500	1,960
19T	1.0	7	1.4	0.6	1.2	34.5	0.4	2.2	40.8	1.5	19.3	1,050	1,500	2,350
24T	1.0	7	1.4	0.6	1.4	38.7	0.4	2.4	45.4	1.7	19.3	1,050	1,500	2,820
32T	1.0	7	1.4	0.6	1.4	44.6	0.4	2.7	51.9	1.9	19.3	1,050	1,500	3,630
1T	1.5	7	1.7	0.7	1.0	9.9	0.3	1.2	13.8	0.7	12.9	1,020	1,500	310
2T	1.5	7	1.7	0.7	1.0	16.2	0.3	1.5	20.7	0.9	12.9	1,020	1,500	580
3T	1.5	7	1.7	0.7	1.0	17.3	0.3	1.5	21.8	1.0	12.9	1,020	1,500	690
4T	1.5	7	1.7	0.7	1.0	19.2	0.3	1.6	23.9	1.0	12.9	1,020	1,500	830
5T	1.5	7	1.7	0.7	1.0	21.4	0.3	1.7	26.3	1.1	12.9	1,020	1,500	990
6T	1.5	7	1.7	0.7	1.0	24.3	0.3	1.8	29.4	1.2	12.9	1,020	1,500	1,160
7T	1.5	7	1.7	0.7	1.0	24.3	0.3	1.8	29.4	1.2	12.9	1,020	1,500	1,250
8T	1.5	7	1.7	0.7	1.0	26.2	0.3	1.9	31.5	1.2	12.9	1,020	1,500	1,380
10T	1.5	7	1.7	0.7	1.2	30.3	0.4	2.1	36.4	1.4	12.9	1,020	1,500	1,770
12T	1.5	7	1.7	0.7	1.2	32.1	0.4	2.2	38.4	1.5	12.9	1,020	1,500	2,090
14T	1.5	7	1.7	0.7	1.2	33.6	0.4	2.2	39.9	1.5	12.9	1,020	1,500	2,330
16T	1.5	7	1.7	0.7	1.2	35.8	0.4	2.3	42.3	1.6	12.9	1,020	1,500	2,580
19T	1.5	7	1.7	0.7	1.4	39.2	0.4	2.4	45.9	1.7	12.9	1,020	1,500	2,970
24T	1.5	7	1.7	0.7	1.4	43.6	0.4	2.6	50.7	1.8	12.9	1,020	1,500	3,640
32T	1.5	7	1.7	0.7	1.6	50.6	0.4	2.9	58.3	2.0	12.9	1,020	1,500	4,640
1T	2.5	7	2.2	0.7	1.0	10.8	0.3	1.3	14.9	0.7	8.02	850	1,500	370
2T	2.5	7	2.2	0.7	1.0	17.9	0.3	1.6	22.6	1.0	8.02	850	1,500	680
3T	2.5	7	2.2	0.7	1.0	19.1	0.3	1.6	23.8	1.0	8.02	850	1,500	850
4T	2.5	7	2.2	0.7	1.0	21.2	0.3	1.7	26.1	1.1	8.02	850	1,500	1,010
5T	2.5	7	2.2	0.7	1.0	23.7	0.3	1.8	28.8	1.2	8.02	850	1,500	1,200
6T	2.5	7	2.2	0.7	1.0	27.0	0.3	1.9	32.3	1.3	8.02	850	1,500	1,430
7T	2.5	7	2.2	0.7	1.0	27.0	0.3	1.9	32.3	1.3	8.02	850	1,500	1,560
8T	2.5	7	2.2	0.7	1.2	29.4	0.3	2.0	34.9	1.3	8.02	850	1,500	1,830
10T	2.5	7	2.2	0.7	1.2	33.6	0.4	2.2	39.9	1.5	8.02	850	1,500	2,290
12T	2.5	7	2.2	0.7	1.2	35.6	0.4	2.3	42.1	1.6	8.02	850	1,500	2,620
14T	2.5	7	2.2	0.7	1.2	37.3	0.4	2.4	44.0	1.6	8.02	850	1,500	2,930
16T	2.5	7	2.2	0.7	1.4	40.2	0.4	2.5	47.1	1.7	8.02	850	1,500	3,270
19T	2.5	7	2.2	0.7	1.4	43.5	0.4	2.6	50.6	1.8	8.02	850	1,500	3,830
24T	2.5	7	2.2	0.7	1.6	48.8	0.4	2.8	56.3	2.0	8.02	850	1,500	4,650
32T	2.5	7	2.2	0.7	1.6	56.3	0.4	3.1	64.4	2.2	8.02	850	1,500	6,080