

Instrumentation & Communication Cable



Cable Designation (S1, S1/S5)

250V RFOU(i), RFCU(i), RFBU(i)

Application Standard

- Design guide	: NEK-606 & IEC 60092-376
- Flame retardant	: IEC 60332-1 & IEC 60332-3 Category A
- 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
	Insulation	R	- 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 RFOU(i), 250V RFCU(i), 250V RFBU(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.	mm ²	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	6.8	0.3	1.1	10.5	0.6	26.3	1,170	1,500	200
2P	0.75	7	1.2	0.6	1.0	10.8	0.3	1.3	14.9	0.7	26.3	1,170	1,500	340
3P	0.75	7	1.2	0.6	1.0	11.4	0.3	1.3	15.5	0.8	26.3	1,170	1,500	390
4P	0.75	7	1.2	0.6	1.0	12.5	0.3	1.4	16.8	0.8	26.3	1,170	1,500	460
5P	0.75	7	1.2	0.6	1.0	14.0	0.3	1.4	18.3	0.8	26.3	1,170	1,500	530
6P	0.75	7	1.2	0.6	1.0	14.5	0.3	1.4	18.8	0.9	26.3	1,170	1,500	570
7P	0.75	7	1.2	0.6	1.0	14.5	0.3	1.4	18.8	0.9	26.3	1,170	1,500	600
8P	0.75	7	1.2	0.6	1.0	15.9	0.3	1.5	20.4	0.9	26.3	1,170	1,500	680
10P	0.75	7	1.2	0.6	1.0	18.1	0.3	1.6	22.8	1.0	26.3	1,170	1,500	810
12P	0.75	7	1.2	0.6	1.0	18.9	0.3	1.6	23.6	1.0	26.3	1,170	1,500	900
14P	0.75	7	1.2	0.6	1.0	19.8	0.3	1.6	24.5	1.0	26.3	1,170	1,500	990
16P	0.75	7	1.2	0.6	1.0	21.3	0.3	1.7	26.2	1.1	26.3	1,170	1,500	1,100
19P	0.75	7	1.2	0.6	1.0	21.8	0.3	1.7	26.7	1.1	26.3	1,170	1,500	1,210
24P	0.75	7	1.2	0.6	1.0	25.5	0.3	1.9	30.8	1.2	26.3	1,170	1,500	1,500
32P	0.75	7	1.2	0.6	1.2	28.5	0.3	2.0	34.0	1.3	26.3	1,170	1,500	1,930
1P	1.0	7	1.4	0.6	1.0	7.2	0.3	1.1	10.9	0.6	19.3	1,050	1,500	210
2P	1.0	7	1.4	0.6	1.0	11.5	0.3	1.3	15.6	0.8	19.3	1,050	1,500	380
3P	1.0	7	1.4	0.6	1.0	12.2	0.3	1.3	16.3	0.8	19.3	1,050	1,500	440
4P	1.0	7	1.4	0.6	1.0	13.3	0.3	1.4	17.6	0.8	19.3	1,050	1,500	510
5P	1.0	7	1.4	0.6	1.0	14.9	0.3	1.4	19.2	0.9	19.3	1,050	1,500	590
6P	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	660
7P	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	700
8P	1.0	7	1.4	0.6	1.0	17.0	0.3	1.5	21.5	0.9	19.3	1,050	1,500	780
10P	1.0	7	1.4	0.6	1.0	19.4	0.3	1.6	24.1	1.0	19.3	1,050	1,500	930
12P	1.0	7	1.4	0.6	1.0	20.2	0.3	1.7	25.1	1.1	19.3	1,050	1,500	1,050
14P	1.0	7	1.4	0.6	1.0	21.3	0.3	1.7	26.2	1.1	19.3	1,050	1,500	1,160
16P	1.0	7	1.4	0.6	1.0	22.9	0.3	1.8	28.0	1.1	19.3	1,050	1,500	1,300
19P	1.0	7	1.4	0.6	1.0	23.4	0.3	1.8	28.5	1.2	19.3	1,050	1,500	1,430
24P	1.0	7	1.4	0.6	1.2	28.2	0.3	2.0	33.7	1.3	19.3	1,050	1,500	1,870
32P	1.0	7	1.4	0.6	1.2	30.6	0.4	2.1	36.7	1.4	19.3	1,050	1,500	2,370
1P	1.5	7	1.7	0.7	1.0	8.2	0.3	1.2	12.1	0.7	12.9	1,020	1,500	260
2P	1.5	7	1.7	0.7	1.0	13.2	0.3	1.4	17.5	0.8	12.9	1,020	1,500	450
3P	1.5	7	1.7	0.7	1.0	14.0	0.3	1.4	18.3	0.8	12.9	1,020	1,500	530
4P	1.5	7	1.7	0.7	1.0	15.4	0.3	1.5	19.9	0.9	12.9	1,020	1,500	630
5P	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	730
6P	1.5	7	1.7	0.7	1.0	18.0	0.3	1.6	22.7	1.0	12.9	1,020	1,500	810
7P	1.5	7	1.7	0.7	1.0	18.0	0.3	1.6	22.7	1.0	12.9	1,020	1,500	870
8P	1.5	7	1.7	0.7	1.0	19.8	0.3	1.6	24.5	1.0	12.9	1,020	1,500	970
10P	1.5	7	1.7	0.7	1.0	22.7	0.3	1.8	27.8	1.1	12.9	1,020	1,500	1,180
12P	1.5	7	1.7	0.7	1.0	23.6	0.3	1.8	28.7	1.2	12.9	1,020	1,500	1,310
14P	1.5	7	1.7	0.7	1.0	24.9	0.3	1.8	30.0	1.2	12.9	1,020	1,500	1,460
16P	1.5	7	1.7	0.7	1.0	26.8	0.3	1.9	32.1	1.3	12.9	1,020	1,500	1,630
19P	1.5	7	1.7	0.7	1.2	28.2	0.3	2.0	33.7	1.3	12.9	1,020	1,500	1,920
24P	1.5	7	1.7	0.7	1.2	32.9	0.4	2.2	39.2	1.5	12.9	1,020	1,500	2,460
32P	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	3,020
1P	2.5	7	2.2	0.7	1.0	9.0	0.3	1.2	12.9	0.7	8.02	850	1,500	300
2P	2.5	7	2.2	0.7	1.0	14.6	0.3	1.4	18.9	0.9	8.02	850	1,500	540
3P	2.5	7	2.2	0.7	1.0	15.5	0.3	1.5	20.0	0.9	8.02	850	1,500	640
4P	2.5	7	2.2	0.7	1.0	17.1	0.3	1.5	21.6	0.9	8.02	850	1,500	760
5P	2.5	7	2.2	0.7	1.0	19.2	0.3	1.6	23.9	1.0	8.02	850	1,500	900
6P	2.5	7	2.2	0.7	1.0	20.0	0.3	1.7	24.9	1.0	8.02	850	1,500	1,010
7P	2.5	7	2.2	0.7	1.0	20.0	0.3	1.7	24.9	1.0	8.02	850	1,500	1,090
8P	2.5	7	2.2	0.7	1.0	22.1	0.3	1.7	27.0	1.1	8.02	850	1,500	1,220
10P	2.5	7	2.2	0.7	1.0	25.3	0.3	1.9	30.6	1.2	8.02	850	1,500	1,490
12P	2.5	7	2.2	0.7	1.0	26.3	0.3	1.9	31.6	1.2	8.02	850	1,500	1,670
14P	2.5	7	2.2	0.7	1.2	28.6	0.3	2.0	34.1	1.3	8.02	850	1,500	1,970
16P	2.5	7	2.2	0.7	1.2	30.7	0.4	2.1	36.8	1.4	8.02	850	1,500	2,290
19P	2.5	7	2.2	0.7	1.2	31.4	0.4	2.1	37.5	1.4	8.02	850	1,500	2,550
24P	2.5	7	2.2	0.7	1.2	36.7	0.4	2.3	43.2	1.6	8.02	850	1,500	3,150
32P	2.5	7	2.2	0.7	1.4	40.3	0.4	2.5	47.2	1.7	8.02	850	1,500	3,990

HV Power Cable

LV Power & Lighting Cable

Instrumentation & Communication Cable

Earthing & Bonding wire

VFD Cable

Technical Information

Instrumentation & Communication Cable

250V RFOU(i), 250V RFCU(i), 250V RFBU(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	7.2	0.3	1.1	10.9	0.6	26.3	1,170	1,500	220
2T	0.75	7	1.2	0.6	1.0	11.5	0.3	1.3	15.6	0.8	26.3	1,170	1,500	380
3T	0.75	7	1.2	0.6	1.0	12.3	0.3	1.3	16.4	0.8	26.3	1,170	1,500	450
4T	0.75	7	1.2	0.6	1.0	13.5	0.3	1.4	17.8	0.8	26.3	1,170	1,500	530
5T	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	620
6T	0.75	7	1.2	0.6	1.0	17.0	0.3	1.5	21.5	0.9	26.3	1,170	1,500	710
7T	0.75	7	1.2	0.6	1.0	17.0	0.3	1.5	21.5	0.9	26.3	1,170	1,500	760
8T	0.75	7	1.2	0.6	1.0	18.2	0.3	1.6	22.9	1.0	26.3	1,170	1,500	840
10T	0.75	7	1.2	0.6	1.0	20.6	0.3	1.7	25.5	1.1	26.3	1,170	1,500	1,010
12T	0.75	7	1.2	0.6	1.0	21.9	0.3	1.7	26.8	1.1	26.3	1,170	1,500	1,130
14T	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	1,260
16T	0.75	7	1.2	0.6	1.0	24.3	0.3	1.8	29.4	1.2	26.3	1,170	1,500	1,390
19T	0.75	7	1.2	0.6	1.0	26.3	0.3	1.9	31.6	1.2	26.3	1,170	1,500	1,590
24T	0.75	7	1.2	0.6	1.2	30.1	0.4	2.1	36.2	1.4	26.3	1,170	1,500	2,100
32T	0.75	7	1.2	0.6	1.2	34.5	0.4	2.2	40.8	1.5	26.3	1,170	1,500	2,630
1T	1.0	7	1.4	0.6	1.0	7.6	0.3	1.2	11.5	0.6	19.3	1,050	1,500	240
2T	1.0	7	1.4	0.6	1.0	12.3	0.3	1.3	16.4	0.8	19.3	1,050	1,500	430
3T	1.0	7	1.4	0.6	1.0	13.0	0.3	1.4	17.3	0.8	19.3	1,050	1,500	510
4T	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	600
5T	1.0	7	1.4	0.6	1.0	16.0	0.3	1.5	20.5	0.9	19.3	1,050	1,500	700
6T	1.0	7	1.4	0.6	1.0	18.1	0.3	1.6	22.8	1.0	19.3	1,050	1,500	820
7T	1.0	7	1.4	0.6	1.0	18.1	0.3	1.6	22.8	1.0	19.3	1,050	1,500	880
8T	1.0	7	1.4	0.6	1.0	19.4	0.3	1.6	24.1	1.0	19.3	1,050	1,500	970
10T	1.0	7	1.4	0.6	1.0	22.0	0.3	1.7	26.9	1.1	19.3	1,050	1,500	1,160
12T	1.0	7	1.4	0.6	1.0	23.4	0.3	1.8	28.5	1.2	19.3	1,050	1,500	1,320
14T	1.0	7	1.4	0.6	1.0	24.4	0.3	1.8	29.5	1.2	19.3	1,050	1,500	1,460
16T	1.0	7	1.4	0.6	1.0	26.0	0.3	1.9	31.3	1.2	19.3	1,050	1,500	1,630
19T	1.0	7	1.4	0.6	1.2	28.9	0.3	2.0	34.4	1.3	19.3	1,050	1,500	1,960
24T	1.0	7	1.4	0.6	1.2	32.1	0.4	2.2	38.4	1.5	19.3	1,050	1,500	2,470
32T	1.0	7	1.4	0.6	1.2	36.9	0.4	2.3	43.4	1.6	19.3	1,050	1,500	3,100
1T	1.5	7	1.7	0.7	1.0	8.7	0.3	1.2	12.6	0.7	12.9	1,020	1,500	290
2T	1.5	7	1.7	0.7	1.0	14.2	0.3	1.4	18.5	0.9	12.9	1,020	1,500	520
3T	1.5	7	1.7	0.7	1.0	15.1	0.3	1.5	19.6	0.9	12.9	1,020	1,500	630
4T	1.5	7	1.7	0.7	1.0	16.7	0.3	1.5	21.2	0.9	12.9	1,020	1,500	740
5T	1.5	7	1.7	0.7	1.0	18.6	0.3	1.6	23.3	1.0	12.9	1,020	1,500	880
6T	1.5	7	1.7	0.7	1.0	21.1	0.3	1.7	26.0	1.1	12.9	1,020	1,500	1,030
7T	1.5	7	1.7	0.7	1.0	21.1	0.3	1.7	26.0	1.1	12.9	1,020	1,500	1,110
8T	1.5	7	1.7	0.7	1.0	22.7	0.3	1.8	27.8	1.1	12.9	1,020	1,500	1,240
10T	1.5	7	1.7	0.7	1.0	25.9	0.3	1.9	31.2	1.2	12.9	1,020	1,500	1,490
12T	1.5	7	1.7	0.7	1.2	28.2	0.3	2.0	33.7	1.3	12.9	1,020	1,500	1,790
14T	1.5	7	1.7	0.7	1.2	29.5	0.3	2.0	35.0	1.4	12.9	1,020	1,500	1,980
16T	1.5	7	1.7	0.7	1.2	31.4	0.4	2.1	37.5	1.4	12.9	1,020	1,500	2,300
19T	1.5	7	1.7	0.7	1.2	34.0	0.4	2.2	40.3	1.5	12.9	1,020	1,500	2,630
24T	1.5	7	1.7	0.7	1.2	37.7	0.4	2.4	44.4	1.6	12.9	1,020	1,500	3,180
32T	1.5	7	1.7	0.7	1.4	43.8	0.4	2.6	50.9	1.8	12.9	1,020	1,500	4,110
1T	2.5	7	2.2	0.7	1.0	9.6	0.3	1.2	13.5	0.7	8.02	850	1,500	340
2T	2.5	7	2.2	0.7	1.0	15.8	0.3	1.5	20.3	0.9	8.02	850	1,500	640
3T	2.5	7	2.2	0.7	1.0	16.8	0.3	1.5	21.3	0.9	8.02	850	1,500	770
4T	2.5	7	2.2	0.7	1.0	18.6	0.3	1.6	23.3	1.0	8.02	850	1,500	930
5T	2.5	7	2.2	0.7	1.0	20.8	0.3	1.7	25.7	1.1	8.02	850	1,500	1,110
6T	2.5	7	2.2	0.7	1.0	23.6	0.3	1.8	28.7	1.2	8.02	850	1,500	1,300
7T	2.5	7	2.2	0.7	1.0	23.6	0.3	1.8	28.7	1.2	8.02	850	1,500	1,410
8T	2.5	7	2.2	0.7	1.0	25.4	0.3	1.9	30.7	1.2	8.02	850	1,500	1,580
10T	2.5	7	2.2	0.7	1.2	29.8	0.3	2.0	35.3	1.4	8.02	850	1,500	2,010
12T	2.5	7	2.2	0.7	1.2	31.6	0.4	2.1	37.7	1.4	8.02	850	1,500	2,380
14T	2.5	7	2.2	0.7	1.2	33.0	0.4	2.2	39.3	1.5	8.02	850	1,500	2,670
16T	2.5	7	2.2	0.7	1.2	35.2	0.4	2.3	41.7	1.6	8.02	850	1,500	2,980
19T	2.5	7	2.2	0.7	1.4	38.5	0.4	2.4	45.2	1.7	8.02	850	1,500	3,490
24T	2.5	7	2.2	0.7	1.4	42.7	0.4	2.6	49.8	1.8	8.02	850	1,500	4,230
32T	2.5	7	2.2	0.7	1.6	49.7	0.4	2.9	57.4	2.0	8.02	850	1,500	5,530