Instrumentation & Communication Cable

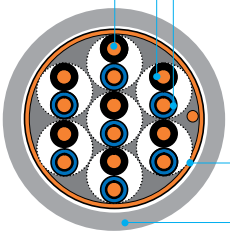
Cable Designation (S108)

250V BU(c)

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 C22.2 No. 2556 or IEC 60092-350 Annex.E Method 1 (-40℃/-35℃)
- Mud / Oil resistant	: NEK 606 (Category a,b,c,d)
- 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
	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
	Collective screen	(c)	- CU/PS or AL/PS tape + Tinned copper drain wire
	Sheath	U	- SHF2 as per IEC 60092-360 - **Option** : NEK 606 Category a,b,c,d Mud or oil resistant - 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

O-Route®

NEK-606, IEC 60092-350, 353, 354, 376

250V BU(c)

No. of Pairs	Conductor			Thickness of Insulation	Thickness of sheath	Overall diameter		Conductor Resistance (at 20℃) (Max.)	Insulation Resistance (at 20℃) (Min.)	Test Voltage	Cable Weight Approx.
	Nominal Area	Max. No. of wires	Max. overall dia.			Nominal	Toler-ance				
No.	mm^2	EA	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5min.	kg/km
1P	0.75	7	1.2	0.6	1.0	8.6	0.9	26.3	1,170	1,500	110
2P	0.75	7	1.2	0.6	1.2	13.0	1.0	26.3	1,170	1,500	220
3P	0.75	7	1.2	0.6	1.2	13.8	1.0	26.3	1,170	1,500	260
4P	0.75	7	1.2	0.6	1.3	14.9	1.1	26.3	1,170	1,500	310
5P	0.75	7	1.2	0.6	1.3	16.6	1.1	26.3	1,170	1,500	380
6P	0.75	7	1.2	0.6	1.4	18.0	1.1	26.3	1,170	1,500	450
7P	0.75	7	1.2	0.6	1.4	18.0	1.1	26.3	1,170	1,500	460
8P	0.75	7	1.2	0.6	1.4	19.2	1.2	26.3	1,170	1,500	520
10P	0.75	7	1.2	0.6	1.5	21.7	1.3	26.3	1,170	1,500	660
12P	0.75	7	1.2	0.6	1.6	22.8	1.3	26.3	1,170	1,500	740
14P	0.75	7	1.2	0.6	1.6	23.6	1.3	26.3	1,170	1,500	810
16P	0.75	7	1.2	0.6	1.7	25.6	1.4	26.3	1,170	1,500	950
19P	0.75	7	1.2	0.6	1.7	26.7	1.4	26.3	1,170	1,500	1,050
24P	0.75	7	1.2	0.6	1.9	30.6	1.5	26.3	1,170	1,500	1,370
32P	0.75	7	1.2	0.6	2.0	34.9	1.7	26.3	1,170	1,500	1,780
1P	1.0	7	1.4	0.6	1.1	9.2	0.9	19.3	1,050	1,500	130
2P	1.0	7	1.4	0.6	1.2	13.6	1.0	19.3	1,050	1,500	250
3P	1.0	7	1.4	0.6	1.3	14.8	1.1	19.3	1,050	1,500	310
4P	1.0	7	1.4	0.6	1.3	15.7	1.1	19.3	1,050	1,500	350
5P	1.0	7	1.4	0.6	1.4	17.8	1.1	19.3	1,050	1,500	450
6P	1.0	7	1.4	0.6	1.4	19.0	1.2	19.3	1,050	1,500	510
7P	1.0	7	1.4	0.6	1.4	19.0	1.2	19.3	1,050	1,500	530
8P	1.0	7	1.4	0.6	1.5	20.4	1.2	19.3	1,050	1,500	610
10P	1.0	7	1.4	0.6	1.6	23.1	1.3	19.3	1,050	1,500	770
12P	1.0	7	1.4	0.6	1.6	24.1	1.3	19.3	1,050	1,500	850
14P	1.0	7	1.4	0.6	1.7	25.2	1.4	19.3	1,050	1,500	960
16P	1.0	7	1.4	0.6	1.7	27.0	1.4	19.3	1,050	1,500	1,090
19P	1.0	7	1.4	0.6	1.8	28.5	1.5	19.3	1,050	1,500	1,240
24P	1.0	7	1.4	0.6	1.9	32.4	1.6	19.3	1,050	1,500	1,580
32P	1.0	7	1.4	0.6	2.1	37.1	1.7	19.3	1,050	1,500	2,090
1P	1.5	7	1.7	0.7	1.1	10.1	1.0	12.9	1,020	1,500	160
2P	1.5	7	1.7	0.7	1.3	15.5	1.2	12.9	1,020	1,500	320
3P	1.5	7	1.7	0.7	1.3	16.5	1.2	12.9	1,020	1,500	380
4P	1.5	7	1.7	0.7	1.4	17.8	1.2	12.9	1,020	1,500	460
5P	1.5	7	1.7	0.7	1.5	20.2	1.4	12.9	1,020	1,500	580
6P	1.5	7	1.7	0.7	1.5	21.6	1.4	12.9	1,020	1,500	660
7P	1.5	7	1.7	0.7	1.5	21.6	1.4	12.9	1,020	1,500	700
8P	1.5	7	1.7	0.7	1.6	23.2	1.4	12.9	1,020	1,500	800
10P	1.5	7	1.7	0.7	1.7	26.3	1.6	12.9	1,020	1,500	1,010
12P	1.5	7	1.7	0.7	1.7	27.4	1.6	12.9	1,020	1,500	1,120
14P	1.5	7	1.7	0.7	1.8	28.6	1.7	12.9	1,020	1,500	1,260
16P	1.5	7	1.7	0.7	1.9	31.0	1.7	12.9	1,020	1,500	1,460
19P	1.5	7	1.7	0.7	1.9	32.4	1.8	12.9	1,020	1,500	1,640
24P	1.5	7	1.7	0.7	2.1	37.1	1.9	12.9	1,020	1,500	2,130
32P	1.5	7	1.7	0.7	2.3	42.5	2.2	12.9	1,020	1,500	2,820
1P	2.5	7	2.2	0.7	1.1	11.0	1.0	8.02	850	1,500	190
2P	2.5	7	2.2	0.7	1.4	17.1	1.1	8.02	850	1,500	410
3P	2.5	7	2.2	0.7	1.4	18.3	1.2	8.02	850	1,500	500
4P	2.5	7	2.2	0.7	1.4	19.5	1.2	8.02	850	1,500	590
5P	2.5	7	2.2	0.7	1.5	22.1	1.3	8.02	850	1,500	740
6P	2.5	7	2.2	0.7	1.6	23.9	1.3	8.02	850	1,500	870
7P	2.5	7	2.2	0.7	1.6	23.9	1.3	8.02	850	1,500	920
8P	2.5	7	2.2	0.7	1.7	25.7	1.4	8.02	850	1,500	1,050
10P	2.5	7	2.2	0.7	1.8	29.1	1.5	8.02	850	1,500	1,330
12P	2.5	7	2.2	0.7	1.8	30.3	1.5	8.02	850	1,500	1,490
14P	2.5	7	2.2	0.7	1.9	31.7	1.6	8.02	850	1,500	1,680
16P	2.5	7	2.2	0.7	2.0	34.3	1.6	8.02	850	1,500	1,940
19P	2.5	7	2.2	0.7	2.1	36.1	1.7	8.02	850	1,500	2,220
24P	2.5	7	2.2	0.7	2.2	41.1	1.8	8.02	850	1,500	2,830
32P	2.5	7	2.2	0.7	2.5	47.3	2.0	8.02	850	1,500	3,800

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250V BU(c)

No. of Triads	Conductor			Thickness of Insulation	Thickness of sheath	Overall diameter		Conductor Resistance (at 20℃) (Max.)	Insulation Resistance (at 20℃) (Min.)	Test Voltage	Cable Weight Approx.
	Nominal Area	Max. No. of wires	Max. overall dia.			Nominal	Toler-ance				
No.	mm²	EA	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5min.	kg/km
1T	0.75	7	1.2	0.6	1.1	9.2	0.9	26.3	1,170	1,500	130
2T	0.75	7	1.2	0.6	1.2	14.0	1.0	26.3	1,170	1,500	270
3T	0.75	7	1.2	0.6	1.3	15.1	1.1	26.3	1,170	1,500	330
4T	0.75	7	1.2	0.6	1.3	16.5	1.1	26.3	1,170	1,500	400
5T	0.75	7	1.2	0.6	1.4	18.5	1.2	26.3	1,170	1,500	490
6T	0.75	7	1.2	0.6	1.5	21.0	1.2	26.3	1,170	1,500	620
7T	0.75	7	1.2	0.6	1.5	21.0	1.2	26.3	1,170	1,500	640
8T	0.75	7	1.2	0.6	1.6	22.6	1.3	26.3	1,170	1,500	740
10T	0.75	7	1.2	0.6	1.7	25.7	1.4	26.3	1,170	1,500	940
12T	0.75	7	1.2	0.6	1.7	27.1	1.4	26.3	1,170	1,500	1,060
14T	0.75	7	1.2	0.6	1.8	28.5	1.5	26.3	1,170	1,500	1,200
16T	0.75	7	1.2	0.6	1.8	30.2	1.5	26.3	1,170	1,500	1,340
19T	0.75	7	1.2	0.6	1.9	32.7	1.6	26.3	1,170	1,500	1,580
24T	0.75	7	1.2	0.6	2.1	36.5	1.7	26.3	1,170	1,500	1,990
32T	0.75	7	1.2	0.6	2.3	42.1	1.9	26.3	1,170	1,500	2,660
1T	1.0	7	1.4	0.6	1.1	9.7	0.9	19.3	1,050	1,500	150
2T	1.0	7	1.4	0.6	1.3	15.1	1.1	19.3	1,050	1,500	320
3T	1.0	7	1.4	0.6	1.3	16.0	1.1	19.3	1,050	1,500	380
4T	1.0	7	1.4	0.6	1.4	17.8	1.1	19.3	1,050	1,500	470
5T	1.0	7	1.4	0.6	1.5	19.9	1.2	19.3	1,050	1,500	580
6T	1.0	7	1.4	0.6	1.6	22.6	1.3	19.3	1,050	1,500	730
7T	1.0	7	1.4	0.6	1.6	22.6	1.3	19.3	1,050	1,500	760
8T	1.0	7	1.4	0.6	1.6	24.1	1.3	19.3	1,050	1,500	860
10T	1.0	7	1.4	0.6	1.7	27.4	1.4	19.3	1,050	1,500	1,090
12T	1.0	7	1.4	0.6	1.8	29.2	1.5	19.3	1,050	1,500	1,260
14T	1.0	7	1.4	0.6	1.9	30.6	1.5	19.3	1,050	1,500	1,410
16T	1.0	7	1.4	0.6	1.9	32.5	1.6	19.3	1,050	1,500	1,590
19T	1.0	7	1.4	0.6	2.0	35.2	1.7	19.3	1,050	1,500	1,870
24T	1.0	7	1.4	0.6	2.2	39.3	1.8	19.3	1,050	1,500	2,360
32T	1.0	7	1.4	0.6	2.4	45.3	2.0	19.3	1,050	1,500	3,150
1T	1.5	7	1.7	0.7	1.1	10.7	1.0	12.9	1,020	1,500	180
2T	1.5	7	1.7	0.7	1.4	17.2	1.2	12.9	1,020	1,500	410
3T	1.5	7	1.7	0.7	1.4	18.2	1.3	12.9	1,020	1,500	490
4T	1.5	7	1.7	0.7	1.5	20.2	1.3	12.9	1,020	1,500	610
5T	1.5	7	1.7	0.7	1.6	22.6	1.4	12.9	1,020	1,500	760
6T	1.5	7	1.7	0.7	1.7	25.7	1.6	12.9	1,020	1,500	950
7T	1.5	7	1.7	0.7	1.7	25.7	1.6	12.9	1,020	1,500	1,000
8T	1.5	7	1.7	0.7	1.7	27.5	1.6	12.9	1,020	1,500	1,130
10T	1.5	7	1.7	0.7	1.9	31.5	1.8	12.9	1,020	1,500	1,460
12T	1.5	7	1.7	0.7	2.0	33.5	1.8	12.9	1,020	1,500	1,700
14T	1.5	7	1.7	0.7	2.0	34.9	1.9	12.9	1,020	1,500	1,880
16T	1.5	7	1.7	0.7	2.1	37.3	1.9	12.9	1,020	1,500	2,150
19T	1.5	7	1.7	0.7	2.2	40.4	2.0	12.9	1,020	1,500	2,530
24T	1.5	7	1.7	0.7	2.4	45.1	2.3	12.9	1,020	1,500	3,190
32T	1.5	7	1.7	0.7	2.7	52.0	2.6	12.9	1,020	1,500	4,310
1T	2.5	7	2.2	0.7	1.2	11.8	1.1	8.02	850	1,500	240
2T	2.5	7	2.2	0.7	1.4	18.7	1.2	8.02	850	1,500	510
3T	2.5	7	2.2	0.7	1.5	20.1	1.2	8.02	850	1,500	640
4T	2.5	7	2.2	0.7	1.5	22.1	1.3	8.02	850	1,500	790
5T	2.5	7	2.2	0.7	1.6	24.7	1.4	8.02	850	1,500	980
6T	2.5	7	2.2	0.7	1.8	28.2	1.5	8.02	850	1,500	1,240
7T	2.5	7	2.2	0.7	1.8	28.2	1.5	8.02	850	1,500	1,310
8T	2.5	7	2.2	0.7	1.8	30.2	1.5	8.02	850	1,500	1,490
10T	2.5	7	2.2	0.7	2.0	34.6	1.6	8.02	850	1,500	1,920
12T	2.5	7	2.2	0.7	2.1	36.8	1.7	8.02	850	1,500	2,230
14T	2.5	7	2.2	0.7	2.1	38.4	1.8	8.02	850	1,500	2,480
16T	2.5	7	2.2	0.7	2.2	41.0	1.8	8.02	850	1,500	2,840
19T	2.5	7	2.2	0.7	2.4	44.6	1.9	8.02	850	1,500	3,390
24T	2.5	7	2.2	0.7	2.6	49.8	2.1	8.02	850	1,500	4,280
32T	2.5	7	2.2	0.7	2.9	57.6	2.3	8.02	850	1,500	5,770