O-Route®

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



Cable Designation (S103, -)

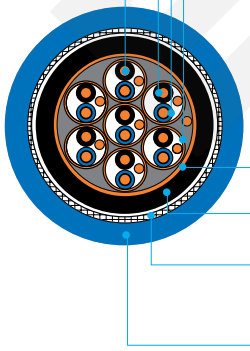
250V BFOU(i), 250 BFCU(i), 250V BFBU(i)

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



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 - In case of 1P, 1T for 250V BFO(C, B) (i&c), individual screen is omitted.
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 - In case of 250V BFO(C, B)U(i), collective screen is omitted.
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 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

Instrumentation & Communication Cable

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

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℃) (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	mm	mm	±mm	Ω/km	MΩ-km	V/5min.	kg/km
1P	0.75	7	1.2	0.6	1.0	8.1	0.3	1.2	12.0	0.8	26.3	1,170	1,500	240
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	440
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	500
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	590
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	690
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	760
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	780
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	890
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	1,090
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	1,200
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	1,320
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	1,490
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	1,610
24P	0.75	7	1.2	0.6	1.2	32.0	0.4	2.1	37.9	1.6	26.3	1,170	1,500	2,260
32P	0.75	7	1.2	0.6	1.2	34.7	0.4	2.3	40.9	1.8	26.3	1,170	1,500	2,720
1P	1.0	7	1.4	0.6	1.0	8.5	0.3	1.2	12.4	0.8	19.3	1,050	1,500	250
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	480
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	550
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	650
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	780
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	840
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	880
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	1,010
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	1,230
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	1,350
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	1,510
16P	1.0	7	1.4	0.6	1.2	28.4	0.3	2.0	33.7	1.5	19.3	1,050	1,500	1,810
19P	1.0	7	1.4	0.6	1.2	29.0	0.3	2.0	34.3	1.5	19.3	1,050	1,500	1,950
24P	1.0	7	1.4	0.6	1.2	33.9	0.4	2.2	40.0	1.7	19.3	1,050	1,500	2,580
32P	1.0	7	1.4	0.6	1.2	36.8	0.4	2.3	43.1	1.8	19.3	1,050	1,500	3,090
1P	1.5	7	1.7	0.7	1.0	9.5	0.3	1.2	13.3	0.8	12.9	1,020	1,500	290
2P	1.5	7	1.7	0.7	1.0	15.3	0.3	1.5	19.8	0.9	12.9	1,020	1,500	580
3P	1.5	7	1.7	0.7	1.0	16.3	0.3	1.5	20.7	1.0	12.9	1,020	1,500	660
4P	1.5	7	1.7	0.7	1.0	18.0	0.3	1.6	22.6	1.2	12.9	1,020	1,500	790
5P	1.5	7	1.7	0.7	1.0	20.2	0.3	1.7	25.0	1.2	12.9	1,020	1,500	950
6P	1.5	7	1.7	0.7	1.0	21.0	0.3	1.7	25.8	1.3	12.9	1,020	1,500	1,030
7P	1.5	7	1.7	0.7	1.0	21.0	0.3	1.7	25.8	1.3	12.9	1,020	1,500	1,070
8P	1.5	7	1.7	0.7	1.0	23.2	0.3	1.8	28.2	1.3	12.9	1,020	1,500	1,240
10P	1.5	7	1.7	0.7	1.0	26.6	0.3	1.9	31.8	1.5	12.9	1,020	1,500	1,520
12P	1.5	7	1.7	0.7	1.2	28.5	0.3	2.0	33.7	1.7	12.9	1,020	1,500	1,790
14P	1.5	7	1.7	0.7	1.2	30.0	0.3	2.1	35.2	1.9	12.9	1,020	1,500	1,990
16P	1.5	7	1.7	0.7	1.2	32.3	0.4	2.2	38.1	2.0	12.9	1,020	1,500	2,340
19P	1.5	7	1.7	0.7	1.2	33.0	0.4	2.2	38.9	2.0	12.9	1,020	1,500	2,520
24P	1.5	7	1.7	0.7	1.4	39.0	0.4	2.4	45.3	2.1	12.9	1,020	1,500	3,290
32P	1.5	7	1.7	0.7	1.4	42.4	0.4	2.6	49.0	2.4	12.9	1,020	1,500	3,980
1P	2.5	7	2.2	0.7	1.0	10.3	0.3	1.3	14.4	0.8	8.02	850	1,500	350
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	680
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	800
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	950
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	1,150
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	1,270
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	1,340
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	1,540
10P	2.5	7	2.2	0.7	1.2	30.0	0.3	2.1	35.4	1.7	8.02	850	1,500	2,030
12P	2.5	7	2.2	0.7	1.2	31.2	0.4	2.1	37.1	1.7	8.02	850	1,500	2,330
14P	2.5	7	2.2	0.7	1.2	32.9	0.4	2.2	39.0	1.7	8.02	850	1,500	2,600
16P	2.5	7	2.2	0.7	1.2	35.4	0.4	2.3	41.7	1.8	8.02	850	1,500	2,930
19P	2.5	7	2.2	0.7	1.2	36.2	0.4	2.3	42.5	1.8	8.02	850	1,500	3,190
24P	2.5	7	2.2	0.7	1.4	42.8	0.4	2.6	49.7	2.0	8.02	850	1,500	4,180
32P	2.5	7	2.2	0.7	1.4	46.6	0.4	2.7	53.7	2.1	8.02	850	1,500	5,080

O-Route®

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

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

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℃) (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	mm	mm	±mm	Ω/km	MΩ-km	V/5min.	kg/km
1T	0.75	7	1.2	0.6	1.0	8.5	0.3	1.2	12.4	0.8	26.3	1,170	1,500	260
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	490
3T	0.75	7	1.2	0.6	1.0	14.6	0.3	1.4	19.0	0.8	26.3	1,170	1,500	560
4T	0.75	7	1.2	0.6	1.0	16.1	0.3	1.5	20.7	0.9	26.3	1,170	1,500	670
5T	0.75	7	1.2	0.6	1.0	17.9	0.3	1.6	22.7	1.0	26.3	1,170	1,500	800
6T	0.75	7	1.2	0.6	1.0	20.3	0.3	1.7	25.3	1.1	26.3	1,170	1,500	950
7T	0.75	7	1.2	0.6	1.0	20.3	0.3	1.7	25.3	1.1	26.3	1,170	1,500	990
8T	0.75	7	1.2	0.6	1.0	21.8	0.3	1.7	26.8	1.1	26.3	1,170	1,500	1,100
10T	0.75	7	1.2	0.6	1.0	24.8	0.3	1.8	30.1	1.1	26.3	1,170	1,500	1,340
12T	0.75	7	1.2	0.6	1.0	26.3	0.3	1.9	31.7	1.2	26.3	1,170	1,500	1,520
14T	0.75	7	1.2	0.6	1.2	28.3	0.3	2.0	33.7	1.4	26.3	1,170	1,500	1,780
16T	0.75	7	1.2	0.6	1.2	30.1	0.4	2.1	36.0	1.7	26.3	1,170	1,500	2,070
19T	0.75	7	1.2	0.6	1.2	32.6	0.4	2.2	38.8	1.7	26.3	1,170	1,500	2,370
24T	0.75	7	1.2	0.6	1.2	36.2	0.4	2.3	42.6	1.7	26.3	1,170	1,500	2,850
32T	0.75	7	1.2	0.6	1.4	42.0	0.4	2.5	48.9	1.9	26.3	1,170	1,500	3,720
1T	1.0	7	1.4	0.6	1.0	8.6	0.3	1.2	12.7	0.9	19.3	1,050	1,500	270
2T	1.0	7	1.4	0.6	1.0	13.8	0.3	1.4	18.5	1.3	19.3	1,050	1,500	520
3T	1.0	7	1.4	0.6	1.0	14.8	0.3	1.4	19.6	1.4	19.3	1,050	1,500	610
4T	1.0	7	1.4	0.6	1.0	16.3	0.3	1.5	21.2	1.4	19.3	1,050	1,500	720
5T	1.0	7	1.4	0.6	1.0	18.1	0.3	1.6	23.3	1.5	19.3	1,050	1,500	860
6T	1.0	7	1.4	0.6	1.0	20.6	0.3	1.7	26.1	1.7	19.3	1,050	1,500	1,030
7T	1.0	7	1.4	0.6	1.0	20.6	0.3	1.7	26.1	1.7	19.3	1,050	1,500	1,080
8T	1.0	7	1.4	0.6	1.0	22.1	0.3	1.7	27.7	1.9	19.3	1,050	1,500	1,200
10T	1.0	7	1.4	0.6	1.0	25.2	0.3	1.9	31.2	2.0	19.3	1,050	1,500	1,490
12T	1.0	7	1.4	0.6	1.0	26.7	0.3	1.9	33.1	2.2	19.3	1,050	1,500	1,670
14T	1.0	7	1.4	0.6	1.2	28.7	0.3	2.0	34.8	2.2	19.3	1,050	1,500	1,950
16T	1.0	7	1.4	0.6	1.2	30.6	0.4	2.1	37.3	2.2	19.3	1,050	1,500	2,280
19T	1.0	7	1.4	0.6	1.2	33.0	0.4	2.2	40.1	2.3	19.3	1,050	1,500	2,610
24T	1.0	7	1.4	0.6	1.2	36.7	0.4	2.3	44.3	2.8	19.3	1,050	1,500	3,150
32T	1.0	7	1.4	0.6	1.4	42.6	0.4	2.6	50.8	3.0	19.3	1,050	1,500	4,140
1T	1.5	7	1.7	0.7	1.0	10.1	0.3	1.3	14.0	0.9	12.9	1,020	1,500	330
2T	1.5	7	1.7	0.7	1.0	16.5	0.3	1.5	20.9	1.1	12.9	1,020	1,500	660
3T	1.5	7	1.7	0.7	1.0	17.6	0.3	1.6	22.1	1.3	12.9	1,020	1,500	780
4T	1.5	7	1.7	0.7	1.0	19.5	0.3	1.6	24.1	1.3	12.9	1,020	1,500	920
5T	1.5	7	1.7	0.7	1.0	21.7	0.3	1.7	26.5	1.3	12.9	1,020	1,500	1,100
6T	1.5	7	1.7	0.7	1.0	24.8	0.3	1.8	29.7	1.5	12.9	1,020	1,500	1,330
7T	1.5	7	1.7	0.7	1.0	24.8	0.3	1.8	29.7	1.5	12.9	1,020	1,500	1,390
8T	1.5	7	1.7	0.7	1.0	26.6	0.3	1.9	31.7	1.5	12.9	1,020	1,500	1,560
10T	1.5	7	1.7	0.7	1.2	31.2	0.4	2.1	36.9	1.9	12.9	1,020	1,500	2,140
12T	1.5	7	1.7	0.7	1.2	33.1	0.4	2.2	38.9	2.0	12.9	1,020	1,500	2,420
14T	1.5	7	1.7	0.7	1.2	34.6	0.4	2.3	40.5	2.1	12.9	1,020	1,500	2,670
16T	1.5	7	1.7	0.7	1.2	36.8	0.4	2.3	42.8	2.1	12.9	1,020	1,500	2,950
19T	1.5	7	1.7	0.7	1.4	40.3	0.4	2.5	46.6	2.4	12.9	1,020	1,500	3,510
24T	1.5	7	1.7	0.7	1.4	44.7	0.4	2.7	51.4	2.6	12.9	1,020	1,500	4,250
32T	1.5	7	1.7	0.7	1.6	52.1	0.4	3.0	59.2	3.0	12.9	1,020	1,500	5,650
1T	2.5	7	2.2	0.7	1.0	10.9	0.3	1.3	15.0	0.9	8.02	850	1,500	390
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	790
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	940
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	1,140
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	1,370
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	1,650
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	1,740
8T	2.5	7	2.2	0.7	1.2	29.8	0.3	2.0	35.1	1.6	8.02	850	1,500	2,070
10T	2.5	7	2.2	0.7	1.2	34.0	0.4	2.2	40.1	1.7	8.02	850	1,500	2,670
12T	2.5	7	2.2	0.7	1.2	36.0	0.4	2.3	42.3	1.8	8.02	850	1,500	3,020
14T	2.5	7	2.2	0.7	1.2	37.7	0.4	2.4	44.2	1.8	8.02	850	1,500	3,360
16T	2.5	7	2.2	0.7	1.4	40.6	0.4	2.5	47.3	1.9	8.02	850	1,500	3,840
19T	2.5	7	2.2	0.7	1.4	43.9	0.4	2.6	50.8	2.0	8.02	850	1,500	4,430
24T	2.5	7	2.2	0.7	1.6	49.4	0.4	2.8	56.6	2.3	8.02	850	1,500	5,560
32T	2.5	7	2.2	0.7	1.6	56.9	0.4	3.1	64.7	2.6	8.02	850	1,500	7,200