

HV Power Cable



Cable Designation (P102, P103, P104)

3.6/6KV RFOU, RFBU, RFCU

6/10KV RFOU, RFBU, RFCU

8.7/15KV RFOU, RFBU, RFCU

Application Standard

- Design guide : NEK-606 & IEC 60092-354
- Flame retardant : IEC 60332-1 & IEC 60332-3 Category A
- Halogen content : IEC 60754-1, 0.5%↓
- Cold bend / impact : CSA C22.2 No. 2556 or IEC 60092-350 Annex.E Method 1 (-40°C/-35°C)
- 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
	Conductor screen		- Semi-conducting layer (tape / compound)
	Insulation	R	- EPR as per IEC 60092-360
	Insulation screen		- Non-metallic part : Semi-conducting layer (tape / compound) - Metallic part : Copper wire braid - A suitable separator tape(s) may be applied over the metallic part
	Cabling		- Three metallic braided 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
	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 : Red
	Core identification		- 3C : Off-white, Black, Red

Note. Flexible cable (Class5 Conductor) can be supplied

3.6/6kV RFOU, 3.6/6kV RFBU

No. of Cores	Conductor			Thickness of Insulation	Dia of copper wire for braid	Thickness of inner covering	Nominal dia. inner covering	Dia. of wire for armour	Thickness of sheath	Overall diameter		Conductor Resistance (at 20°C) (Max.)	Test Voltage	Cable Weight
	Nominal Area	Min. No. of wires	Max. overall dia.							Nominal	Tolerance			
No.	mm ²	EA	mm	mm	mm	mm	mm	mm	mm	mm	±mm	Ω/km	V/5min.	kg/km
1	10	7	4.2	2.5	0.3	1.0	15.7	0.3	1.5	21.0	1.1	1.840	12.5	740
	16	7	5.3	2.5	0.3	1.0	16.7	0.3	1.6	22.2	1.2	1.160	12.5	850
	25	7	6.6	2.5	0.3	1.0	18.0	0.3	1.6	23.5	1.2	0.734	12.5	1,000
	35	7	7.9	2.5	0.3	1.0	19.2	0.3	1.7	24.9	1.3	0.529	12.5	1,160
	50	19	9.1	2.5	0.3	1.0	20.5	0.3	1.7	26.2	1.3	0.391	12.5	1,340
	70	19	11.0	2.5	0.3	1.0	22.3	0.3	1.8	28.2	1.4	0.270	12.5	1,630
	95	19	12.9	2.5	0.3	1.0	24.2	0.3	1.9	30.3	1.5	0.195	12.5	1,980
	120	37	14.5	2.5	0.3	1.0	25.8	0.3	1.9	31.9	1.6	0.154	12.5	2,290
	150	37	16.2	2.5	0.3	1.2	27.8	0.3	2.0	34.1	1.7	0.126	12.5	2,680
	185	37	18.0	2.5	0.3	1.2	29.6	0.3	2.1	36.1	1.7	0.100	12.5	3,130
	240	61	20.6	2.6	0.3	1.2	32.5	0.4	2.2	39.7	1.9	0.0762	12.5	3,940
	300	61	23.1	2.8	0.4	1.2	35.7	0.4	2.3	43.1	2.0	0.0607	12.5	4,800
	400	61	26.1	3.0	0.4	1.4	39.9	0.4	2.5	47.7	2.2	0.0475	12.5	6,050
	500	61	29.2	3.2	0.4	1.4	43.0	0.4	2.6	51.0	2.3	0.0369	12.5	7,090
	630	91	33.2	3.2	0.4	1.4	47.2	0.4	2.8	55.6	2.5	0.0286	12.5	8,810

3.6/6kV RFOU, 3.6/6kV RFBU, 3.6/6kV RFCU

3	10	7	4.2	2.5	0.3	1.2	31.9	0.4	2.2	39.1	1.9	1.840	12.5	2,360
	16	7	5.3	2.5	0.3	1.2	34.1	0.4	2.3	41.5	2.0	1.160	12.5	2,740
	25	7	6.6	2.5	0.3	1.2	36.9	0.4	2.4	44.5	2.1	0.734	12.5	3,280
	35	7	7.9	2.5	0.3	1.4	39.9	0.4	2.5	47.7	2.2	0.529	12.5	3,860
	50	19	9.1	2.5	0.3	1.4	42.7	0.4	2.6	50.7	2.3	0.391	12.5	4,500
	70	19	11.0	2.5	0.3	1.4	46.5	0.4	2.8	54.9	2.5	0.270	12.5	5,520
	95	19	12.9	2.5	0.3	1.6	51.0	0.4	2.9	59.6	2.7	0.195	12.5	6,770
	120	37	14.5	2.5	0.3	1.6	54.5	0.4	3.1	63.5	2.8	0.154	12.5	7,910
	150	37	16.2	2.5	0.3	1.6	57.9	0.4	3.2	67.1	3.0	0.126	12.5	9,080
	185	37	18.0	2.5	0.3	1.6	61.8	0.4	3.4	71.4	3.2	0.100	12.5	10,630
	240	61	20.6	2.6	0.3	1.8	68.5	0.4	3.6	78.5	3.4	0.0762	12.5	13,190
3C	25	7	6.6	2.5	0.3	1.2	36.9	0.4	2.4	44.5	2.1	0.734	12.5	3,460
Earth	16	7	5.3	1.0										
3C	35	7	7.9	2.5	0.3	1.4	40.5	0.4	2.5	48.3	2.2	0.529	12.5	4,180
Earth	25	7	6.6	1.2										
3C	50	19	9.1	2.5	0.3	1.4	43.0	0.4	2.6	51.0	2.3	0.391	12.5	4,800
Earth	25	7	6.6	1.2										
3C	70	19	11.0	2.5	0.3	1.4	47.0	0.4	2.8	55.4	2.5	0.270	12.5	5,930
Earth	35	7	7.9	1.2										
3C	95	19	12.9	2.5	0.3	1.6	51.8	0.4	3.0	60.6	2.7	0.195	12.5	7,350
Earth	50	19	9.1	1.4										
3C	120	37	14.5	2.5	0.3	1.6	55.8	0.4	3.1	64.8	2.9	0.154	12.5	8,710
Earth	70	19	11.0	1.4										
3C	150	37	16.2	2.5	0.3	1.6	59.8	0.4	3.3	69.2	3.1	0.126	12.5	10,220
Earth	95	19	12.9	1.6										
3C	185	37	18.0	2.5	0.3	1.8	63.8	0.4	3.5	73.6	3.2	0.100	12.5	11,830
Earth	95	19	12.9	1.6										
3C	240	61	20.6	2.6	0.3	1.8	70.1	0.4	3.7	80.3	3.5	0.0762	12.5	14,540
Earth	120	37	14.5	1.6										

HV Power Cable

6/10kV RFOU, 6/10kV RFBU

No. of Cores	Conductor			Thickness of Insulation	Dia of copper wire for braid	Thickness of inner covering	Nominal dia. inner covering	Dia. of wire for armour	Thickness of sheath	Overall diameter		Conductor Resistance (at 20°C) (Max.)	Test Voltage	Cable Weight
	Nominal Area	Min. No. of wires	Max. overall dia.							Nominal	Tolerance			
No.	mm ²	EA	mm	mm	mm	mm	mm	mm	mm	mm	±mm	Ω/km	V/5min.	kg/km
1	16	7	5.3	3.4	0.3	1.0	18.5	0.3	1.6	24.0	1.3	1.160	21.0	960
	25	7	6.6	3.4	0.3	1.0	19.8	0.3	1.7	25.5	1.3	0.734	21.0	1,130
	35	7	7.9	3.4	0.3	1.0	21.0	0.3	1.7	26.7	1.4	0.529	21.0	1,280
	50	19	9.1	3.4	0.3	1.0	22.3	0.3	1.8	28.2	1.4	0.391	21.0	1,480
	70	19	11.0	3.4	0.3	1.0	24.1	0.3	1.8	30.0	1.5	0.270	21.0	1,770
	95	19	12.9	3.4	0.3	1.0	26.0	0.3	1.9	32.1	1.6	0.195	21.0	2,130
	120	37	14.5	3.4	0.3	1.2	28.0	0.3	2.0	34.3	1.7	0.154	21.0	2,500
	150	37	16.2	3.4	0.3	1.2	29.6	0.3	2.1	36.1	1.7	0.126	21.0	2,860
	185	37	18.0	3.4	0.3	1.2	31.4	0.4	2.2	38.6	1.8	0.100	21.0	3,410
	240	61	20.6	3.4	0.4	1.2	34.5	0.4	2.3	41.9	2.0	0.0762	21.0	4,220
	300	61	23.1	3.4	0.4	1.2	36.9	0.4	2.4	44.5	2.1	0.0607	21.0	4,960
	400	61	26.1	3.4	0.4	1.4	40.7	0.4	2.5	48.5	2.2	0.0475	21.0	6,140
	500	61	29.2	3.4	0.4	1.4	43.4	0.4	2.6	51.4	2.4	0.0369	21.0	7,140
	630	91	33.2	3.4	0.4	1.4	47.6	0.4	2.8	56.0	2.5	0.0286	21.0	8,870

6/10KV RFOU, 6/10KV RFBU, 6/10KV RFCU

3	16	7	5.3	3.4	0.3	1.4	38.4	0.4	2.4	46.0	2.1	1.160	21.0	3,230
	25	7	6.6	3.4	0.3	1.4	41.2	0.4	2.6	49.2	2.3	0.734	21.0	3,820
	35	7	7.9	3.4	0.3	1.4	43.7	0.4	2.7	51.9	2.4	0.529	21.0	4,370
	50	19	9.1	3.4	0.3	1.4	46.5	0.4	2.8	54.9	2.5	0.391	21.0	5,040
	70	19	11.0	3.4	0.3	1.6	50.8	0.4	2.9	59.4	2.7	0.270	21.0	6,140
	95	19	12.9	3.4	0.3	1.6	54.9	0.4	3.1	63.9	2.9	0.195	21.0	7,400
	120	37	14.5	3.4	0.3	1.6	58.4	0.4	3.2	67.6	3.0	0.154	21.0	8,540
	150	37	16.2	3.4	0.3	1.6	61.8	0.4	3.4	71.4	3.2	0.126	21.0	9,780
	185	37	18.0	3.4	0.3	1.8	66.1	0.4	3.5	75.9	3.3	0.100	21.0	11,410
	240	61	20.6	3.4	0.4	1.8	72.8	0.4	3.8	83.2	3.6	0.0762	21.0	14,240
3C	25	7	6.6	3.4	0.3	1.4	41.2	0.4	2.6	49.2	2.3	0.734	21.0	4,020
Earth	16	7	5.3	1.0										
3C	35	7	7.9	3.4	0.3	1.4	44.0	0.4	2.7	52.2	2.4	0.529	21.0	4,680
Earth	25	7	6.6	1.2										
3C	50	19	9.1	3.4	0.3	1.4	46.5	0.4	2.8	54.9	2.5	0.391	21.0	5,320
Earth	25	7	6.6	1.2										
3C	70	19	11.0	3.4	0.3	1.6	50.9	0.4	2.9	59.5	2.7	0.270	21.0	6,520
Earth	35	7	7.9	1.2										
3C	95	19	12.9	3.4	0.3	1.6	55.4	0.4	3.1	64.4	2.9	0.195	21.0	7,940
Earth	50	19	9.1	1.4										
3C	120	37	14.5	3.4	0.3	1.6	59.2	0.4	3.3	68.6	3.0	0.154	21.0	9,340
Earth	70	19	11.0	1.4										
3C	150	37	16.2	3.4	0.3	1.8	63.8	0.4	3.5	73.6	3.2	0.126	21.0	10,990
Earth	95	19	12.9	1.6										
3C	185	37	18.0	3.4	0.3	1.8	67.3	0.4	3.6	77.3	3.4	0.100	21.0	12,520
Earth	95	19	12.9	1.6										
3C	240	61	20.6	3.4	0.4	1.8	74.0	0.4	3.9	84.6	3.7	0.0762	21.0	15,560
Earth	120	37	14.5	1.6										

8.7/15kV RFOU, 8.7/15kV RFBU

No. of Cores	Conductor			Thickness of Insulation	Dia of copper wire for braid	Thickness of inner covering	Nominal dia. inner covering	Dia. of wire for armour	Thickness of sheath	Overall diameter		Conductor Resistance (at 20°C) (Max.)	Test Voltage	Cable Weight
	Nominal Area	Min. No. of wires	Max. overall dia.							Nominal	Tolerance			
No.	mm²	EA	mm	mm	mm	mm	mm	mm	mm	mm	±mm	Ω/km	V/5min.	kg/km
1	25	7	6.6	4.5	0.3	1.0	22.0	0.3	1.8	27.9	1.4	0.734	30.5	1,300
	35	7	7.9	4.5	0.3	1.0	23.2	0.3	1.8	29.1	1.5	0.529	30.5	1,460
	50	19	9.1	4.5	0.3	1.0	24.5	0.3	1.9	30.6	1.5	0.391	30.5	1,660
	70	19	11.0	4.5	0.3	1.0	26.3	0.3	1.9	32.4	1.6	0.270	30.5	1,960
	95	19	12.9	4.5	0.3	1.2	28.6	0.3	2.0	34.9	1.7	0.195	30.5	2,370
	120	37	14.5	4.5	0.3	1.2	30.2	0.4	2.1	37.2	1.8	0.154	30.5	2,810
	150	37	16.2	4.5	0.3	1.2	31.8	0.4	2.2	39.0	1.9	0.126	30.5	3,180
	185	37	18.0	4.5	0.3	1.2	33.6	0.4	2.2	40.8	1.9	0.100	30.5	3,630
	240	61	20.6	4.5	0.4	1.2	36.7	0.4	2.4	44.3	2.1	0.0762	30.5	4,490
	300	61	23.1	4.5	0.4	1.4	39.5	0.4	2.5	47.3	2.2	0.0607	30.5	5,290
	400	61	26.1	4.5	0.4	1.4	42.9	0.4	2.6	50.9	2.3	0.0475	30.5	6,450
	500	61	29.2	4.5	0.4	1.4	45.6	0.4	2.7	53.8	2.5	0.0369	30.5	7,460
	630	91	33.2	4.5	0.4	1.6	50.2	0.4	2.9	58.8	2.7	0.0286	30.5	9,270

8.7/15KV RFOU, 8.7/15KV RFBU, 8.7/15KV RFCU

3	25	7	6.6	4.5	0.3	1.4	45.9	0.4	2.7	54.1	2.5	0.734	30.5	4,430
	35	7	7.9	4.5	0.3	1.6	48.9	0.4	2.9	57.5	2.6	0.529	30.5	5,110
	50	19	9.1	4.5	0.3	1.6	51.7	0.4	3.0	60.5	2.7	0.391	30.5	5,810
	70	19	11.0	4.5	0.3	1.6	55.6	0.4	3.1	64.6	2.9	0.270	30.5	6,900
	95	19	12.9	4.5	0.3	1.6	59.7	0.4	3.3	69.1	3.1	0.195	30.5	8,210
	120	37	14.5	4.5	0.3	1.6	63.1	0.4	3.4	72.7	3.2	0.154	30.5	9,380
	150	37	16.2	4.5	0.3	1.8	67.0	0.4	3.6	77.0	3.4	0.126	30.5	10,750
	185	37	18.0	4.5	0.3	1.8	70.8	0.4	3.7	81.0	3.5	0.100	30.5	12,330
	240	61	20.6	4.5	0.4	1.8	77.5	0.4	4.0	88.3	3.8	0.0762	30.5	15,260
3C	25	7	6.6	4.5	0.3	1.4	45.9	0.4	2.7	54.1	2.5	0.734	30.5	4,670
Earth	16	7	5.3	1.0										
3C	35	7	7.9	4.5	0.3	1.6	48.9	0.4	2.9	57.5	2.6	0.529	30.5	5,420
Earth	25	7	6.6	1.2										
3C	50	19	9.1	4.5	0.3	1.6	51.7	0.4	3.0	60.5	2.7	0.391	30.5	6,140
Earth	25	7	6.6	1.2										
3C	70	19	11.0	4.5	0.3	1.6	55.6	0.4	3.1	64.6	2.9	0.270	30.5	7,320
Earth	35	7	7.9	1.2										
3C	95	19	12.9	4.5	0.3	1.6	59.7	0.4	3.3	69.1	3.1	0.195	30.5	8,730
Earth	50	19	9.1	1.4										
3C	120	37	14.5	4.5	0.3	1.8	63.9	0.4	3.5	73.7	3.2	0.154	30.5	10,250
Earth	70	19	11.0	1.4										
3C	150	37	16.2	4.5	0.3	1.8	68.0	0.4	3.6	78.0	3.4	0.126	30.5	11,830
Earth	95	19	12.9	1.6										
3C	185	37	18.0	4.5	0.3	1.8	71.5	0.4	3.8	81.9	3.6	0.100	30.5	13,430
Earth	95	19	12.9	1.6										
3C	240	61	20.6	4.5	0.4	1.8	78.3	0.4	4.0	89.1	3.9	0.0762	30.5	16,540
Earth	120	37	14.5	1.6										