



# O-Route<sup>®</sup>

Halogen free & Mud resistant Offshore cable  
NEK-606(2016) | IEC 60092-350, 353, 354, 376

# ENTERPRISE WITH DREAM, HOPE, AND FUTURE

TMC Co., Ltd has been pursuing innovation in technology and products for the specialty industrial cable market.

For 23 years TMC has had a single-minded focus on delivering superior customer services with marine and offshore plant cable solutions.

The operational excellence of TMC is underpinned by its products with the best quality and outstanding service to meet specific requirements that makes us the world's most experienced marine and offshore cable manufacturer.

## Company History

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- 1991** Establishment of Seojin Industry Co.,Ltd.
- 1998** ISO 9001 Certification by LRQA
- 2004** ISO 14001 Certification by LRQA
- 2005** Changed the name of company to TMC Co.,Ltd.
- 2006** Won the 30 million USD Export Tower Award granted by the Ministry of Knowledge Economy
- 2006** Earned recognition by Hyundai Mipo Dockyard Co., Ltd. as one of the excellent suppliers.
- 2007** Won the 70 million USD Export Tower Award granted by the Ministry of Knowledge Economy
- 2007** Received the High quality supplier Certification from DSME
- 2007** Achieved Korean world-class product award 2007
- 2008** Won the 100 million USD Export Tower Award granted by the Ministry of Knowledge Economy
- 2008** OHSAS 18001 Certification by LRQA
- 2009** Awarded the Q-Mark as a Silver grade for Offshore Cable supplier by Samsung Heavy Industries
- 2010** Awarded the Best Supplier for Offshore & Marine Cable by Ocean Rig
- 2010** Earned recognition by DSME as one of the excellent supplier
- 2011** Awarded the Best Supplier for Offshore & Marine Cable by Stena Sphere
- 2011** KEPIC Certification by KEA (Manufacture of Class 1E cable)
- 2012** Won the 200 million USD Export Tower Award granted by the Ministry of Knowledge Economy
- 2013** Designated as 'Korean Hidden Champion' by Korea Eximbank
- 2013** TL9000 certification by SGS (design & manufacture of optical fiber cable)
- 2014** Earned recognition by DSME Excellent supplier
- 2015** Minister Citation by the Ministry of Trade, Industry & Energy
- 2015** Acquisition of Zeepel
- 2016** Acquisition of Glow One (Formerly Posco LED)
- 2017** Awarded 'Certificate of Reliable marine equipment manufacturer&supplier' by KOSHIPA and KOMEA
- 2018** Selected as Best Quality Managed Supplier of Hyundai Heavy Industries(2017)
- 2019** Selected as Best Quality Managed Supplier of Hyundai Heavy Industries(2018)
- 2019** Selected as Best Partner of Samsung Heavy Industries

## Certificates

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- Type Approval Certification for shipboard cables : ABS, BV, DNV, GL, KR, LR, NK and RINA
- Type Approval Certification for NEK 606(2004) offshore cables : ABS, DNV and LR
- Type Approval Certification by ABS for offshore cables and listed on ETL
- Type Approval Certification for Passenger ships cables : ABS, DNV,LR, BV and CCS
- Obtained Patent of Paint Resistant Shipboard Cables (Patent NO. 10-0627241)
- Type Approval Certification for IEEE1580 Type P cables : ABS, DNV, CSA and listed on ETL
- Type Approval Certification for LNG Carrier cables : ABS, DNV, LR and BV
- Gost-R Certification for NEK 606(2004) offshore cables by GOSSTANDART
- Type Approval Certification for Marine Optical Fiber Cables : ABS and DNV
- Type Approval Certification for MIL 24643 Warship Cables : KR
- Type Approval Certification for VG 95218 Submarine Cables : KR





# Code Designation

Materials	Insulation	Inner covering	Armor	Outer sheath
EPR	R			
MGT + EPR	B			
Halogen-free compound (HFC)		F		
Tinned annealed copper wire braid			O	
Galvanized steel wire braid			C	
Bronze wire braid			B	
Thermoset compound, SHF2				
Enhanced oil thermoset compound, SHF2				U
Mud resistant thermoset compound, SHF2 MUD				

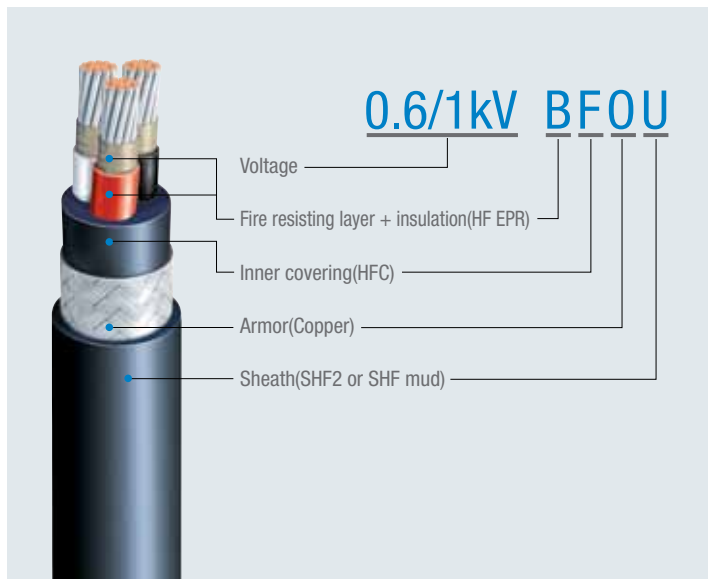
## Sheath code

Marking letters	Combinations of sheath codes describing the oil / Mud performance According to TABLE C
"no marking"	Minimum requirements
E	Enhanced Oil resistant - category b
M	Enhanced Oil resistant - category b Mud resistant - category c
H	Enhanced Oil resistant - category b Hydraulic / gear Oil resistant - category d
H-M	Enhanced Oil resistant - category b Mud resistant - category c Hydraulic / gear Oil resistant - category d

## Added abbreviation

(i)	Individual screen
(c)	Collective screen
(i&c)	Individual & Collective screen
VFD	Variable frequency AC motor drive

## Example



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	6/10kV RFOU, RFBU, RFCU		
	8.7/15kV RFOU, RFBU, RFCU		
LV power & lighting cable	0.6/1kV RU	11 ~ 15	
	0.6/1kV RFOU, RFCU, RFBU	16 ~ 20	
	0.6/1kV BU	21 ~ 25	
	Fire resistance	0.6/1kV BFOU, BFCU, BFBU	26 ~ 30
		250V RU(c)	32 ~ 34
	Flame retardant	250V RU(i), RU(i&c)	35 ~ 37
		250V RFOU(c), RFCU(c), RFBU(c)	38 ~ 40
		250V RFOU(i), RFCU(i), RFBU(i)	
		250V RFOU(i&c), RFCU(i&c), RFBU(i&c)	41 ~ 43
		250V BU(c)	
250V BU(i), BU(i&c)		47 ~ 49	
Fire resistance		250V BFOU(c), BFCU(c), BFBU(c)	50 ~ 52
	250V BFOU(i), BFCU(i), BFBU(i)	53 ~ 55	
	250V BFOU(i&c), BFCU(i&c), BFBU(i&c)		
	0.6/1kV UX, FX-UX		57 ~ 58
	VFD cable	0.6/1kV(1.8/3kV) RFOU(VFD), FX-RFOU(VFD)	60 ~ 61
0.6/1kV(1.8/3kV) BFOU(VFD), FX-BFOU(VFD)		62 ~ 63	
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## NEK 606 Cable type code

Designation	Cable type code
3.6/6kV RFOU	P102
6/10kV RFOU	P103
8.7/15kV RFOU	P104
0.6/1kV RFOU	P101
0.6/1kV BFOU	P105
0.6/1kV RU	P111
0.6/1kV BU	P110
0.6/1kV UX	P108
250V RFOU(i)	S101
250V RFOU(c)	S102
250V BFOU(i)	S103
250V BFOU(c)	S104
250V RU(i)	S105
250V RU(c)	S106
250V BU(i)	S107
250V BU(c)	S108



## HV Power Cable

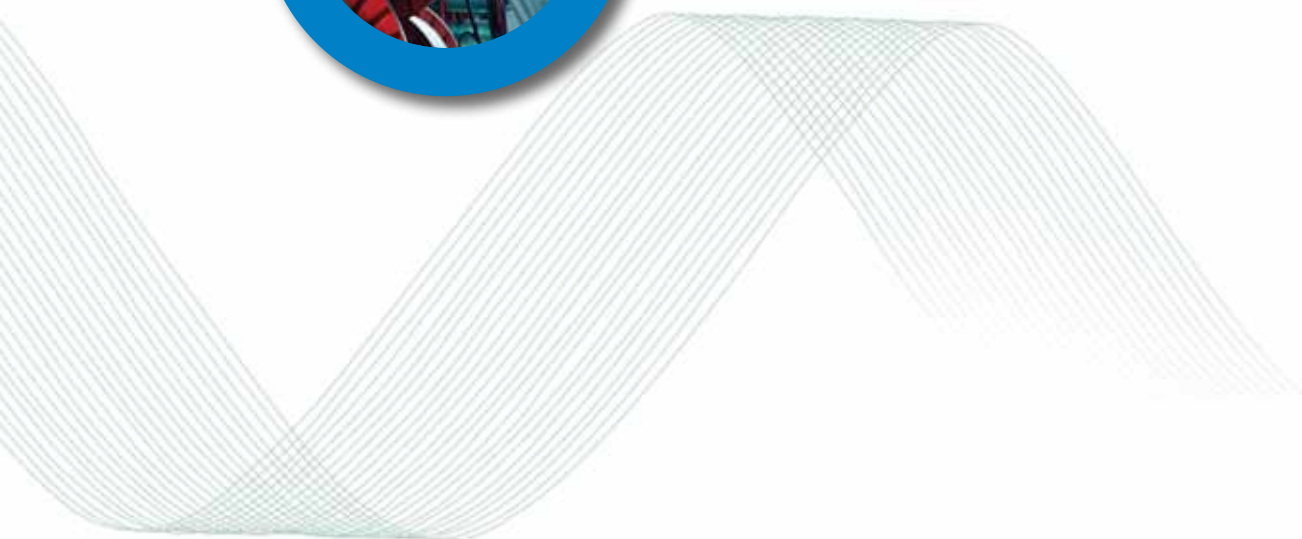


3.6/6KV RFOU, RFBU, RFCU

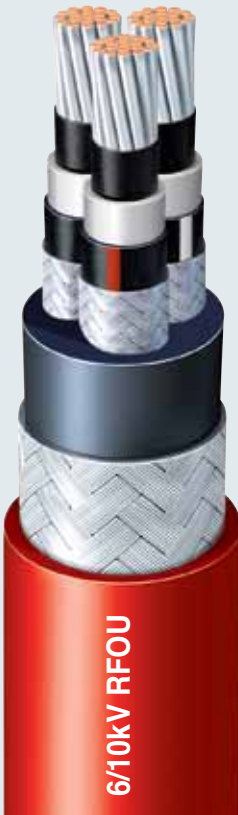
6/10KV RFOU, RFBU, RFCU

8.7/15KV RFOU, RFBU, RFCU

06 ~ 09



# 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	<b>R</b>	- 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	<b>F</b>	- Flame retardant halogen free thermoset compound
	Armor	<b>O</b> <b>(B,C)</b>	- 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	<b>U</b>	- SHF2 as per IEC 60092-360 - <b>Option</b> : 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 <sup>2</sup>	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  
LV Power & Lighting Cable  
Instrumentation & Communication Cable  
Earthing & Bonding wire  
VFD Cable  
Technical Information

# 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 <sup>2</sup>	EA	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

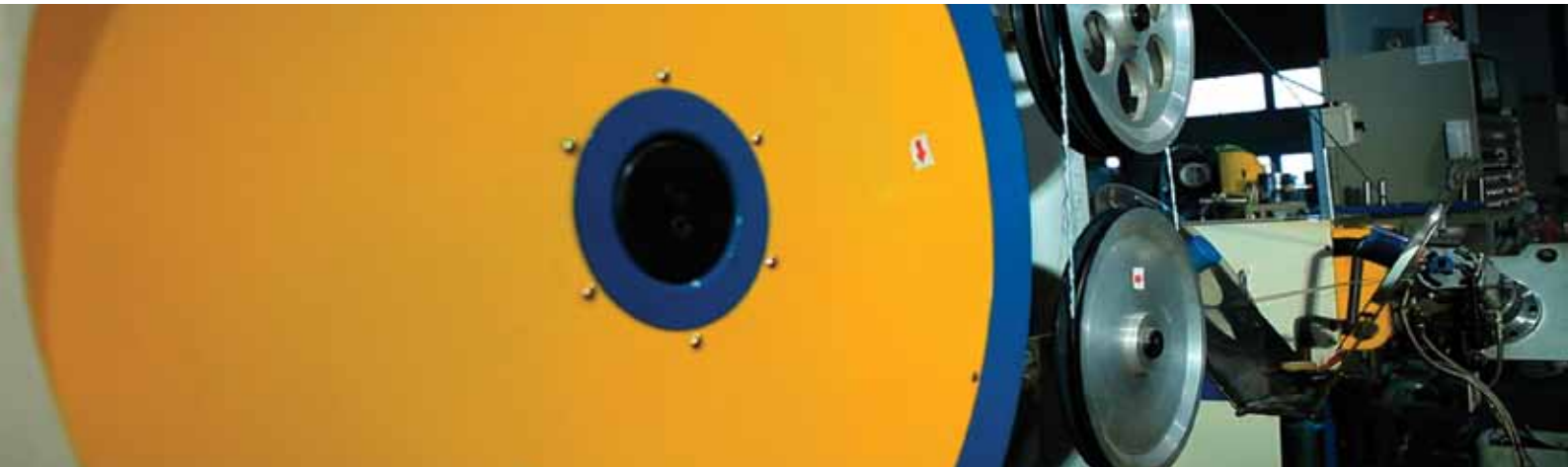
No. of Cores	Conductor			Thickness of Insulation	Dia of copper wire for braid	Thickness of inner covering	Nominal dia. inner covering	Dia. of wire for armour	Thickness of sheath	Overall diameter		Conductor Resistance (at 20°C) (Max.)	Test Voltage	Cable Weight
	Nominal Area	Min. No. of wires	Max. overall 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										



# LV Power & Lighting Cable



0.6/1kV RU	11 ~ 15
0.6/1kV RFOU, RFCU, RFBU	16 ~ 20
0.6/1kV BU	21 ~ 25
0.6/1kV BFOU, BFCU, BFBU	26 ~ 30



# LV Power & Lighting Cable

**O-Route®**  
NEK-606, IEC 60092-350, 353, 354, 376



## Cable Designation (P111)

0.6/1kV RU

### Application Standard

- Design guide : NEK-606 & IEC 60092-353
- 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

HV Power Cable

LV Power & Lighting Cable

Instrumentation & Communication Cable

Earthing & Bonding wire

VFD Cable

Technical Information

## Construction

Sectional view	Classification	Code	Construction detail																					
	Conductor		- Stranded tinned annealed copper wires as per IEC 60228, Class 2																					
	Insulation	<b>R</b>	- EPR as per IEC 60092-360																					
	Cabling		- Insulated cores 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																					
	Sheath	<b>U</b>	- SHF2 as per IEC 60092-360 - <b>Option</b> : NEK 606 Category a,b,c,d Mud or oil resistant - Outer sheath color : Black																					
Core identification			<table border="1"> <thead> <tr> <th>No. of cores</th> <th>Without Earth core</th> <th>With Earth core</th> </tr> </thead> <tbody> <tr> <td>1C</td> <td>Off-white or Black</td> <td>-</td> </tr> <tr> <td>2C</td> <td>Off-white, Black</td> <td>-</td> </tr> <tr> <td>3C / 2C + E</td> <td>Off-white, Black, Red</td> <td>Off-white, Black, G/Y</td> </tr> <tr> <td>4C / 3C + E</td> <td>Off-white, Black, Red, Blue</td> <td>Off-white, Black, Red, G/Y</td> </tr> <tr> <td>5C / 4C + E</td> <td>Black No. on white insulation</td> <td>Off-white, Black, Red, Blue, G/Y</td> </tr> <tr> <td>6C and over</td> <td>Black No. on white insulation</td> <td>Black No. on white insulation, G/Y</td> </tr> </tbody> </table>	No. of cores	Without Earth core	With Earth core	1C	Off-white or Black	-	2C	Off-white, Black	-	3C / 2C + E	Off-white, Black, Red	Off-white, Black, G/Y	4C / 3C + E	Off-white, Black, Red, Blue	Off-white, Black, Red, G/Y	5C / 4C + E	Black No. on white insulation	Off-white, Black, Red, Blue, G/Y	6C and over	Black No. on white insulation	Black No. on white insulation, G/Y
No. of cores	Without Earth core	With Earth core																						
1C	Off-white or Black	-																						
2C	Off-white, Black	-																						
3C / 2C + E	Off-white, Black, Red	Off-white, Black, G/Y																						
4C / 3C + E	Off-white, Black, Red, Blue	Off-white, Black, Red, G/Y																						
5C / 4C + E	Black No. on white insulation	Off-white, Black, Red, Blue, G/Y																						
6C and over	Black No. on white insulation	Black No. on white insulation, G/Y																						

**Note.** 1. Flexible cable (Class5 Conductor) can be supplied  
2. Earth core(G/Y) : Yellow/Green(Green base color with yellow stripe)

# LV Power & Lighting Cable

## 0.6/1kV RU

No. of Cores	Conductor			Thickness of Insulation	Thickness of sheath	Overall diameter		Conductor Resistance (at 20°C) (Max.)	Insulation Resistance (at 20°C) (Min.)	Test Voltage	Cable Weight
	Nominal Area	Min. No. of wires	Max. overall dia.			Nominal	Tolerance				
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5min.	kg/km
1	1.5	7	1.7	1.0	1.0	5.8	0.5	12.2	1,320	3,500	60
	2.5	7	2.2	1.0	1.0	6.2	0.5	7.56	1,110	3,500	70
	4	7	2.7	1.0	1.0	6.7	0.6	4.70	940	3,500	90
	6	7	3.3	1.0	1.0	7.3	0.6	3.110	800	3,500	110
	10	7	4.2	1.0	1.0	8.2	0.6	1.840	650	3,500	160
	16	7	5.3	1.0	1.1	9.4	0.7	1.160	540	3,500	230
	25	7	6.6	1.2	1.1	11.1	0.7	0.734	520	3,500	340
	35	7	7.9	1.2	1.2	12.4	0.8	0.529	450	3,500	450
	50	19	9.1	1.4	1.3	14.4	0.9	0.391	440	3,500	600
	70	19	11.0	1.4	1.3	16.1	0.9	0.270	380	3,500	810
	95	19	12.9	1.6	1.4	18.6	1.0	0.195	370	3,500	1,100
	120	37	14.5	1.6	1.5	20.3	1.1	0.154	330	3,500	1,360
	150	37	16.2	1.8	1.6	22.4	1.2	0.126	330	3,500	1,650
	185	37	18.0	2.0	1.7	25.1	1.3	0.100	330	3,500	2,070
	240	61	20.6	2.2	1.8	28.3	1.4	0.0762	320	3,500	2,690
	300	61	23.1	2.4	1.9	31.5	1.6	0.0607	310	3,500	3,340
400	61	26.1	2.6	2.1	36.0	1.7	0.0475	290	3,500	4,520	
500	61	29.2	2.8	2.2	39.3	1.9	0.0369	280	3,500	5,450	
630	91	33.2	2.8	2.3	43.7	2.0	0.0286	250	3,500	6,990	
2	1.5	7	1.7	1.0	1.1	9.6	0.7	12.2	1,320	3,500	140
	2.5	7	2.2	1.0	1.1	10.4	0.7	7.56	1,110	3,500	170
	4	7	2.7	1.0	1.2	11.6	0.8	4.70	940	3,500	230
	6	7	3.3	1.0	1.2	12.8	0.8	3.110	800	3,500	290
	10	7	4.2	1.0	1.3	14.8	0.9	1.840	650	3,500	390
	16	7	5.3	1.0	1.4	17.0	1.0	1.160	540	3,500	550
	25	7	6.6	1.2	1.5	20.6	1.1	0.734	520	3,500	840
	35	7	7.9	1.2	1.6	23.0	1.2	0.529	450	3,500	1,090
	50	19	9.1	1.4	1.7	26.8	1.4	0.391	440	3,500	1,450
	70	19	11.0	1.4	1.9	30.8	1.5	0.270	380	3,500	2,000
	95	19	12.9	1.6	2.0	35.6	1.7	0.195	370	3,500	2,690
	120	37	14.5	1.6	2.2	39.0	1.9	0.154	330	3,500	3,300
	150	37	16.2	1.8	2.3	43.0	2.0	0.126	330	3,500	4,000
185	37	18.0	2.0	2.5	48.4	2.2	0.100	330	3,500	5,030	
240	61	20.6	2.2	2.8	55.0	2.5	0.0762	320	3,500	6,550	
300	61	23.1	2.4	3.0	61.0	2.7	0.0607	310	3,500	8,090	
2C+E	1.5	7	1.7	1.0	1.1	10.2	0.7	12.2	1,320	3,500	160
2C+E	2.5	7	2.2	1.0	1.1	11.0	0.7	7.56	1,110	3,500	210
2C+E	4	7	2.7	1.0	1.2	12.3	0.8	4.70	940	3,500	270
2C+E	6	7	3.3	1.0	1.2	13.6	0.8	3.110	800	3,500	360
2C+E	10	7	4.2	1.0	1.3	15.7	0.9	1.840	650	3,500	510
2C+E	16	7	5.3	1.0	1.4	18.1	1.0	1.160	540	3,500	730
2C	25	7	6.6	1.2	1.5	21.3	1.2	0.734	520	3,500	1,000
Earth	16	7	5.3	1.0				1.160			
2C	35	7	7.9	1.2	1.6	24.1	1.3	0.529	450	3,500	1,360
Earth	25	7	6.6	1.2				0.734			
2C	50	19	9.1	1.4	1.8	27.7	1.4	0.391	440	3,500	1,730
Earth	25	7	6.6	1.2				0.734			
2C	70	19	11.0	1.4	1.9	31.6	1.6	0.270	380	3,500	2,350
Earth	35	7	7.9	1.2				0.529			
2C	95	19	12.9	1.6	2.1	36.7	1.8	0.195	370	3,500	3,190
Earth	50	19	9.1	1.4				0.391			
2C	120	37	14.5	1.6	2.2	40.2	1.9	0.154	330	3,500	3,970
Earth	70	19	11.0	1.4				0.270			
2C	150	37	16.2	1.8	2.4	44.9	2.1	0.126	330	3,500	4,970
Earth	95	19	12.9	1.6				0.195			
2C	185	37	18.0	2.0	2.6	49.7	2.3	0.100	330	3,500	5,980
Earth	95	19	12.9	1.6				0.195			
2C	240	61	20.6	2.2	2.8	56.0	2.5	0.0762	320	3,500	7,660
Earth	120	37	14.5	1.6				0.154			

0.6/1kV RU

No. of Cores	Conductor			Thickness of Insulation	Thickness of sheath	Overall diameter		Conductor Resistance (at 20°C) (Max.)	Insulation Resistance (at 20°C) (Min.)	Test Voltage	Cable Weight
	Nominal Area	Min. No. of wires	Max. overall dia.			Nominal	Tolerance				
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5min.	kg/km
3	1.5	7	1.7	1.0	1.1	10.2	0.7	12.2	1,320	3,500	160
	2.5	7	2.2	1.0	1.1	11.0	0.7	7.56	1,110	3,500	210
	4	7	2.7	1.0	1.2	12.3	0.8	4.70	940	3,500	270
	6	7	3.3	1.0	1.2	13.6	0.8	3.110	800	3,500	360
	10	7	4.2	1.0	1.3	15.7	0.9	1.840	650	3,500	510
	16	7	5.3	1.0	1.4	18.1	1.0	1.160	540	3,500	730
	25	7	6.6	1.2	1.5	21.9	1.2	0.734	520	3,500	1,110
	35	7	7.9	1.2	1.6	24.5	1.3	0.529	450	3,500	1,450
	50	19	9.1	1.4	1.8	29.0	1.5	0.391	440	3,500	1,990
	70	19	11.0	1.4	1.9	32.9	1.6	0.270	380	3,500	2,700
	95	19	12.9	1.6	2.1	38.2	1.8	0.195	370	3,500	3,670
	120	37	14.5	1.6	2.3	41.9	2.0	0.154	330	3,500	4,520
	150	37	16.2	1.8	2.4	46.1	2.1	0.126	330	3,500	5,480
	185	37	18.0	2.0	2.7	52.1	2.4	0.100	330	3,500	6,930
240	61	20.6	2.2	2.9	59.0	2.7	0.0762	320	3,500	8,970	
300	61	23.1	2.4	3.2	65.6	2.9	0.0607	310	3,500	11,140	
3C+E	1.5	7	1.7	1.0	1.1	11.1	0.7	12.2	1,320	3,500	200
3C+E	2.5	7	2.2	1.0	1.2	12.3	0.8	7.56	1,110	3,500	260
3C+E	4	7	2.7	1.0	1.2	13.5	0.8	4.70	940	3,500	340
3C+E	6	7	3.3	1.0	1.3	15.1	0.9	3.110	800	3,500	450
3C+E	10	7	4.2	1.0	1.4	17.5	1.0	1.840	650	3,500	650
3C+E	16	7	5.3	1.0	1.5	20.1	1.1	1.160	540	3,500	930
3C	25	7	6.6	1.2	1.6	23.8	1.3	0.734	520	3,500	1,330
Earth	16	7	5.3	1.0				1.160			
3C	35	7	7.9	1.2	1.7	26.9	1.4	0.529	450	3,500	1,780
Earth	25	7	6.6	1.2				0.734			
3C	50	19	9.1	1.4	1.9	31.2	1.5	0.391	440	3,500	2,330
Earth	25	7	6.6	1.2				0.734			
3C	70	19	11.0	1.4	2.0	35.3	1.7	0.270	380	3,500	3,140
Earth	35	7	7.9	1.2				0.529			
3C	95	19	12.9	1.6	2.3	41.3	2.0	0.195	370	3,500	4,300
Earth	50	19	9.1	1.4				0.391			
3C	120	37	14.5	1.6	2.4	45.2	2.1	0.154	330	3,500	5,330
Earth	70	19	11.0	1.4				0.270			
3C	150	37	16.2	1.8	2.6	50.3	2.3	0.126	330	3,500	6,620
Earth	95	19	12.9	1.6				0.195			
3C	185	37	18.0	2.0	2.8	55.9	2.5	0.100	330	3,500	8,060
Earth	95	19	12.9	1.6				0.195			
3C	240	61	20.6	2.2	3.1	63.2	2.8	0.0762	320	3,500	10,400
Earth	120	37	14.5	1.6				0.154			
4	1.5	7	1.7	1.0	1.1	11.1	0.7	12.2	1,320	3,500	200
	2.5	7	2.2	1.0	1.2	12.3	0.8	7.56	1,110	3,500	260
	4	7	2.7	1.0	1.2	13.5	0.8	4.70	940	3,500	340
	6	7	3.3	1.0	1.3	15.1	0.9	3.110	800	3,500	450
	10	7	4.2	1.0	1.4	17.5	1.0	1.840	650	3,500	650
	16	7	5.3	1.0	1.5	20.1	1.1	1.160	540	3,500	930
	25	7	6.6	1.2	1.6	24.4	1.3	0.734	520	3,500	1,430
	35	7	7.9	1.2	1.7	27.3	1.4	0.529	450	3,500	1,880
	50	19	9.1	1.4	1.9	32.2	1.6	0.391	440	3,500	2,570
	70	19	11.0	1.4	2.1	36.7	1.8	0.270	380	3,500	3,510
	95	19	12.9	1.6	2.3	42.7	2.0	0.195	370	3,500	4,790
	120	37	14.5	1.6	2.5	46.7	2.2	0.154	330	3,500	5,880
	150	37	16.2	1.8	2.6	51.5	2.4	0.126	330	3,500	7,140
	185	37	18.0	2.0	2.9	58.1	2.6	0.100	330	3,500	9,010
240	61	20.6	2.2	3.2	65.9	2.9	0.0762	320	3,500	11,720	
300	61	23.1	2.4	3.4	73.1	3.2	0.0607	310	3,500	14,500	

HV Power Cable  
 LV Power & Lighting Cable  
 Instrumentation & Communication Cable  
 Earthing & Bonding wire  
 VFD Cable  
 Technical Information

# LV Power & Lighting Cable

## 0.6/1kV RU

No. of Cores	Conductor			Thickness of Insulation	Thickness of sheath	Overall diameter		Conductor Resistance (at 20°C) (Max.)	Insulation Resistance (at 20°C) (Min.)	Test Voltage	Cable Weight
	Nominal Area	Min. No. of wires	Max. overall dia.			Nominal	Tolerance				
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	±mm	Ω/km	MΩ·km	V/5min.	kg/km
4C+E	1.5	7	1.7	1.0	1.2	12.3	0.8	12.2	1,320	3,500	240
4C+E	2.5	7	2.2	1.0	1.2	13.4	0.8	7.56	1,110	3,500	310
4C+E	4	7	2.7	1.0	1.3	15.0	0.9	4.70	940	3,500	420
4C+E	6	7	3.3	1.0	1.4	16.8	1.0	3.110	800	3,500	560
4C+E	10	7	4.2	1.0	1.4	19.2	1.1	1.840	650	3,500	790
4C+E	16	7	5.3	1.0	1.6	22.3	1.2	1.160	540	3,500	1,150
4C	25	7	6.6	1.2	1.7	26.6	1.4	0.734	520	3,500	1,670
Earth	16	7	5.3	1.0				1.160			
4C	35	7	7.9	1.2	1.8	30.1	1.5	0.529	450	3,500	2,250
Earth	25	7	6.6	1.2				0.734			
4C	50	19	9.1	1.4	2.0	34.8	1.7	0.391	440	3,500	2,940
Earth	25	7	6.6	1.2				0.734			
4C	70	19	11.0	1.4	2.2	39.6	1.9	0.270	380	3,500	4,000
Earth	35	7	7.9	1.2				0.529			
4C	95	19	12.9	1.6	2.4	46.0	2.1	0.195	370	3,500	5,430
Earth	50	19	9.1	1.4				0.391			
4C	120	37	14.5	1.6	2.6	50.5	2.3	0.154	330	3,500	6,750
Earth	70	19	11.0	1.4				0.270			
4C	150	37	16.2	1.8	2.8	56.2	2.5	0.126	330	3,500	8,350
Earth	95	19	12.9	1.6				0.195			
4C	185	37	18.0	2.0	3.0	62.5	2.8	0.100	330	3,500	10,230
Earth	95	19	12.9	1.6				0.195			
4C	240	61	20.6	2.2	3.3	70.7	3.1	0.0762	320	3,500	13,220
Earth	120	37	14.5	1.6				0.154			
5	1.5	7	1.7	1.0	1.2	12.3	0.8	12.2	1,320	3,500	240
5	2.5	7	2.2	1.0	1.2	13.4	0.8	7.56	1,110	3,500	310
5	4	7	2.7	1.0	1.3	15.0	0.9	4.70	940	3,500	420
5	6	7	3.3	1.0	1.4	16.8	1.0	3.110	800	3,500	560
5	10	7	4.2	1.0	1.4	19.2	1.1	1.840	650	3,500	790
5	16	7	5.3	1.0	1.6	22.3	1.2	1.160	540	3,500	1,150
5	25	7	6.6	1.2	1.7	27.1	1.4	0.734	520	3,500	1,780
5	35	7	7.9	1.2	1.9	30.7	1.5	0.529	450	3,500	2,370
5	50	19	9.1	1.4	2.1	35.9	1.7	0.391	440	3,500	3,200
5	70	19	11.0	1.4	2.2	40.7	1.9	0.270	380	3,500	4,350
5	95	19	12.9	1.6	2.5	47.5	2.2	0.195	370	3,500	5,950
5	120	37	14.5	1.6	2.6	51.8	2.4	0.154	330	3,500	7,270
5	150	37	16.2	1.8	2.9	57.5	2.6	0.126	330	3,500	8,910
5	185	37	18.0	2.0	3.1	64.7	2.9	0.100	330	3,500	11,200
5	240	61	20.6	2.2	3.4	73.4	3.2	0.0762	320	3,500	14,560

0.6/1kV RU

No. of Cores	Conductor			Thickness of Insulation	Thickness of sheath	Overall diameter		Conductor Resistance (at 20°C) (Max.)	Insulation Resistance (at 20°C) (Min.)	Test Voltage	Cable Weight
	Nominal Area	Min. No. of wires	Max. overall dia.			Nominal	Tolerance				
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	±mm	Ω/km	MΩ·km	V/5min.	kg/km
2	1.0	7	1.4	1.0	1.1	9.0	0.7	18.2	1,490	3,500	110
5	1.0	7	1.4	1.0	1.2	11.5	0.8	18.2	1,490	3,500	190
7	1.0	7	1.4	1.0	1.2	12.5	0.8	18.2	1,490	3,500	240
8	1.0	7	1.4	1.0	1.2	13.5	0.8	18.2	1,490	3,500	270
9	1.0	7	1.4	1.0	1.3	14.7	0.9	18.2	1,490	3,500	310
10	1.0	7	1.4	1.0	1.3	16.0	0.9	18.2	1,490	3,500	340
12	1.0	7	1.4	1.0	1.3	16.5	1.0	18.2	1,490	3,500	390
14	1.0	7	1.4	1.0	1.4	17.6	1.0	18.2	1,490	3,500	450
16	1.0	7	1.4	1.0	1.4	18.5	1.0	18.2	1,490	3,500	500
19	1.0	7	1.4	1.0	1.5	19.7	1.1	18.2	1,490	3,500	580
24	1.0	7	1.4	1.0	1.6	23.2	1.2	18.2	1,490	3,500	740
27	1.0	7	1.4	1.0	1.6	23.7	1.2	18.2	1,490	3,500	800
30	1.0	7	1.4	1.0	1.6	24.6	1.3	18.2	1,490	3,500	870
37	1.0	7	1.4	1.0	1.7	26.7	1.4	18.2	1,490	3,500	1,060
44	1.0	7	1.4	1.0	1.9	30.6	1.5	18.2	1,490	3,500	1,300
2	1.5	7	1.7	1.0	1.1	9.6	0.7	12.2	1,320	3,500	140
5	1.5	7	1.7	1.0	1.2	12.3	0.8	12.2	1,320	3,500	240
7	1.5	7	1.7	1.0	1.2	13.4	0.8	12.2	1,320	3,500	290
8	1.5	7	1.7	1.0	1.3	14.7	0.9	12.2	1,320	3,500	340
9	1.5	7	1.7	1.0	1.3	15.8	0.9	12.2	1,320	3,500	380
10	1.5	7	1.7	1.0	1.4	17.4	1.0	12.2	1,320	3,500	430
12	1.5	7	1.7	1.0	1.4	18.0	1.0	12.2	1,320	3,500	480
14	1.5	7	1.7	1.0	1.4	18.9	1.1	12.2	1,320	3,500	550
16	1.5	7	1.7	1.0	1.5	20.1	1.1	12.2	1,320	3,500	620
19	1.5	7	1.7	1.0	1.5	21.2	1.1	12.2	1,320	3,500	710
24	1.5	7	1.7	1.0	1.7	25.2	1.3	12.2	1,320	3,500	920
27	1.5	7	1.7	1.0	1.7	25.8	1.3	12.2	1,320	3,500	1,000
30	1.5	7	1.7	1.0	1.7	26.7	1.4	12.2	1,320	3,500	1,090
37	1.5	7	1.7	1.0	1.8	29.2	1.5	12.2	1,320	3,500	1,340
44	1.5	7	1.7	1.0	2.0	33.2	1.6	12.2	1,320	3,500	1,620
2	2.5	7	2.2	1.0	1.1	10.4	0.7	7.56	1,110	3,500	170
5	2.5	7	2.2	1.0	1.2	13.4	0.8	7.56	1,110	3,500	310
7	2.5	7	2.2	1.0	1.3	14.8	0.9	7.56	1,110	3,500	390
8	2.5	7	2.2	1.0	1.3	16.0	0.9	7.56	1,110	3,500	430
9	2.5	7	2.2	1.0	1.4	17.5	1.0	7.56	1,110	3,500	490
10	2.5	7	2.2	1.0	1.4	19.0	1.1	7.56	1,110	3,500	550
12	2.5	7	2.2	1.0	1.5	19.8	1.1	7.56	1,110	3,500	640
14	2.5	7	2.2	1.0	1.5	20.9	1.1	7.56	1,110	3,500	720
16	2.5	7	2.2	1.0	1.6	22.2	1.2	7.56	1,110	3,500	820
19	2.5	7	2.2	1.0	1.6	23.4	1.2	7.56	1,110	3,500	950
24	2.5	7	2.2	1.0	1.8	27.8	1.4	7.56	1,110	3,500	1,210
27	2.5	7	2.2	1.0	1.8	28.4	1.4	7.56	1,110	3,500	1,330
30	2.5	7	2.2	1.0	1.8	29.7	1.5	7.56	1,110	3,500	1,480
37	2.5	7	2.2	1.0	1.9	32.2	1.6	7.56	1,110	3,500	1,780
44	2.5	7	2.2	1.0	2.1	36.6	1.8	7.56	1,110	3,500	2,150
2	4	7	2.7	1.0	1.2	11.6	0.8	4.70	940	3,500	230
5	4	7	2.7	1.0	1.3	15.0	0.9	4.70	940	3,500	420
7	4	7	2.7	1.0	1.3	16.3	1.0	4.70	940	3,500	510
8	4	7	2.7	1.0	1.4	17.9	1.0	4.70	940	3,500	590
9	4	7	2.7	1.0	1.5	19.5	1.1	4.70	940	3,500	660
10	4	7	2.7	1.0	1.5	21.2	1.1	4.70	940	3,500	730
12	4	7	2.7	1.0	1.5	21.9	1.2	4.70	940	3,500	850
14	4	7	2.7	1.0	1.6	23.3	1.2	4.70	940	3,500	980
16	4	7	2.7	1.0	1.6	24.6	1.3	4.70	940	3,500	1,100
19	4	7	2.7	1.0	1.7	26.1	1.3	4.70	940	3,500	1,290
24	4	7	2.7	1.0	1.9	31.2	1.5	4.70	940	3,500	1,660
27	4	7	2.7	1.0	1.9	31.9	1.6	4.70	940	3,500	1,830
30	4	7	2.7	1.0	2.0	33.3	1.6	4.70	940	3,500	2,030
37	4	7	2.7	1.0	2.1	36.1	1.7	4.70	940	3,500	2,450
44	4	7	2.7	1.0	2.2	40.8	1.9	4.70	940	3,500	2,920

HV Power Cable  
 LV Power & Lighting Cable  
 Instrumentation & Communication Cable  
 Earthing & Bonding wire  
 VFD Cable  
 Technical Information

# LV Power & Lighting Cable



## Cable Designation (P101)

0.6/1kV RFOU, RFCU, RFBU

## Application Standard

- Design guide : NEK-606& IEC 60092-353
- 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℃/-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																					
	Insulation	<b>R</b>	- EPR as per IEC 60092-360																					
	Cabling		- Insulated cores 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	<b>F</b>	- Flame retardant halogen free thermoset compound																					
	Armor	<b>O</b> <b>(B,C)</b>	- 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	<b>U</b>	- SHF2 as per IEC 60092-360 - <b>Option</b> : NEK 606 Category a,b,c,d Mud or oil resistant - Outer sheath color : Black																					
Core identification			<table border="1"> <thead> <tr> <th>No. of cores</th> <th>Without Earth core</th> <th>With Earth core</th> </tr> </thead> <tbody> <tr> <td>1C</td> <td>Off-white or Black</td> <td>-</td> </tr> <tr> <td>2C</td> <td>Off-white, Black</td> <td>-</td> </tr> <tr> <td>3C / 2C + E</td> <td>Off-white, Black, Red</td> <td>Off-white, Black, G/Y</td> </tr> <tr> <td>4C / 3C + E</td> <td>Off-white, Black, Red, Blue</td> <td>Off-white, Black, Red, G/Y</td> </tr> <tr> <td>5C / 4C + E</td> <td>Black No. on white insulation</td> <td>Off-white, Black, Red, Blue, G/Y</td> </tr> <tr> <td>6C and over</td> <td>Black No. on white insulation</td> <td>Black No. on white insulation, G/Y</td> </tr> </tbody> </table>	No. of cores	Without Earth core	With Earth core	1C	Off-white or Black	-	2C	Off-white, Black	-	3C / 2C + E	Off-white, Black, Red	Off-white, Black, G/Y	4C / 3C + E	Off-white, Black, Red, Blue	Off-white, Black, Red, G/Y	5C / 4C + E	Black No. on white insulation	Off-white, Black, Red, Blue, G/Y	6C and over	Black No. on white insulation	Black No. on white insulation, G/Y
No. of cores	Without Earth core	With Earth core																						
1C	Off-white or Black	-																						
2C	Off-white, Black	-																						
3C / 2C + E	Off-white, Black, Red	Off-white, Black, G/Y																						
4C / 3C + E	Off-white, Black, Red, Blue	Off-white, Black, Red, G/Y																						
5C / 4C + E	Black No. on white insulation	Off-white, Black, Red, Blue, G/Y																						
6C and over	Black No. on white insulation	Black No. on white insulation, G/Y																						

**Note.** 1. Flexible cable (Class5 Conductor) can be supplied  
2. Earth core(G/Y) : Yellow/Green(Green base color with yellow stripe)



0.6/1kV RFOU, 0.6/1kV RFBU

No. of Cores	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
	Nominal Area	Min. No. of wires	Max. overall dia.						Nominal	Tolerance				
No.	mm²	EA	mm	mm	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5min.	kg/km	
1	1.5	7	1.7	1.0	1.0	5.6	0.3	1.1	9.3	0.7	12.2	1,320	3,500	150
	2.5	7	2.2	1.0	1.0	6.0	0.3	1.1	9.7	0.7	7.56	1,110	3,500	170
	4	7	2.7	1.0	1.0	6.5	0.3	1.1	10.2	0.7	4.70	940	3,500	200
	6	7	3.3	1.0	1.0	7.1	0.3	1.1	10.8	0.7	3.110	800	3,500	230
	10	7	4.2	1.0	1.0	8.0	0.3	1.2	11.9	0.8	1.840	650	3,500	290
	16	7	5.3	1.0	1.0	9.0	0.3	1.2	12.9	0.8	1.160	540	3,500	370
	25	7	6.6	1.2	1.0	10.7	0.3	1.3	14.8	0.9	0.734	520	3,500	520
	35	7	7.9	1.2	1.0	11.8	0.3	1.3	15.9	0.9	0.529	450	3,500	630
	50	19	9.1	1.4	1.0	13.6	0.3	1.4	17.9	1.0	0.391	440	3,500	810
	70	19	11.0	1.4	1.0	15.3	0.3	1.5	19.8	1.1	0.270	380	3,500	1,060
	95	19	12.9	1.6	1.0	17.6	0.3	1.6	22.3	1.2	0.195	370	3,500	1,380
	120	37	14.5	1.6	1.0	19.1	0.3	1.6	23.8	1.3	0.154	330	3,500	1,650
	150	37	16.2	1.8	1.0	21.0	0.3	1.7	25.9	1.3	0.126	330	3,500	1,970
	185	37	18.0	2.0	1.0	23.5	0.3	1.8	28.6	1.4	0.100	330	3,500	2,430
	240	61	20.6	2.2	1.0	26.5	0.3	1.9	31.8	1.6	0.0762	320	3,500	3,090
	300	61	23.1	2.4	1.2	30.1	0.4	2.1	36.2	1.7	0.0607	310	3,500	3,940
	400	61	26.1	2.6	1.2	34.2	0.4	2.2	40.5	1.9	0.0475	290	3,500	5,180
	500	61	29.2	2.8	1.2	37.3	0.4	2.4	44.0	2.1	0.0369	280	3,500	6,190
630	91	33.2	2.8	1.4	41.9	0.4	2.5	48.8	2.3	0.0286	250	3,500	7,860	

0.6/1kV RFOU, 0.6/1kV RFCU, 0.6/1kV RFBU

2	1.5	7	1.7	1.0	1.0	9.2	0.3	1.2	13.1	0.8	12.2	1,320	3,500	290
	2.5	7	2.2	1.0	1.0	10.0	0.3	1.3	14.1	0.9	7.56	1,110	3,500	340
	4	7	2.7	1.0	1.0	11.0	0.3	1.3	15.1	0.9	4.70	940	3,500	400
	6	7	3.3	1.0	1.0	12.2	0.3	1.3	16.3	1.0	3.110	800	3,500	480
	10	7	4.2	1.0	1.0	14.0	0.3	1.4	18.3	1.0	1.840	650	3,500	610
	16	7	5.3	1.0	1.0	16.0	0.3	1.5	20.5	1.1	1.160	540	3,500	790
	25	7	6.6	1.2	1.0	19.4	0.3	1.6	24.1	1.3	0.734	520	3,500	1,120
	35	7	7.9	1.2	1.0	21.6	0.3	1.7	26.5	1.4	0.529	450	3,500	1,390
	50	19	9.1	1.4	1.0	25.2	0.3	1.9	30.5	1.5	0.391	440	3,500	1,820
	70	19	11.0	1.4	1.2	29.4	0.3	2.0	34.9	1.7	0.270	380	3,500	2,450
	95	19	12.9	1.6	1.2	34.0	0.4	2.2	40.3	1.9	0.195	370	3,500	3,320
	120	37	14.5	1.6	1.2	37.0	0.4	2.3	43.5	2.0	0.154	330	3,500	3,950
	150	37	16.2	1.8	1.4	41.2	0.4	2.5	48.1	2.2	0.126	330	3,500	4,800
	185	37	18.0	2.0	1.4	46.2	0.4	2.7	53.5	2.4	0.100	330	3,500	5,910
240	61	20.6	2.2	1.6	52.8	0.4	3.0	60.7	2.7	0.0762	320	3,500	7,630	
300	61	23.1	2.4	1.6	58.4	0.4	3.2	66.7	3.0	0.0607	310	3,500	9,260	
2C+E	1.5	7	1.7	1.0	1.0	9.8	0.3	1.2	13.7	0.8	12.2	1,320	3,500	320
2C+E	2.5	7	2.2	1.0	1.0	10.6	0.3	1.3	14.7	0.9	7.56	1,110	3,500	380
2C+E	4	7	2.7	1.0	1.0	11.7	0.3	1.3	15.8	0.9	4.70	940	3,500	460
2C+E	6	7	3.3	1.0	1.0	13.0	0.3	1.4	17.3	1.0	3.110	800	3,500	570
2C+E	10	7	4.2	1.0	1.0	14.9	0.3	1.4	19.2	1.1	1.840	650	3,500	730
2C+E	16	7	5.3	1.0	1.0	17.1	0.3	1.5	21.6	1.2	1.160	540	3,500	980
2C	25	7	6.6	1.2	1.0	20.1	0.3	1.7	25.0	1.3	0.734	520	3,500	1,300
Earth	16	7	5.3	1.0							1.160			
2C	35	7	7.9	1.2	1.0	22.7	0.3	1.8	27.8	1.4	0.529	450	3,500	1,690
Earth	25	7	6.6	1.2							0.734			
2C	50	19	9.1	1.4	1.0	25.9	0.3	1.9	31.2	1.5	0.391	440	3,500	2,090
Earth	25	7	6.6	1.2							0.734			
2C	70	19	11.0	1.4	1.2	30.2	0.4	2.1	36.3	1.8	0.270	380	3,500	2,920
Earth	35	7	7.9	1.2							0.529			
2C	95	19	12.9	1.6	1.2	34.9	0.4	2.3	41.4	2.0	0.195	370	3,500	3,830
Earth	50	19	9.1	1.4							0.391			
2C	120	37	14.5	1.6	1.4	38.6	0.4	2.4	45.3	2.1	0.154	330	3,500	4,730
Earth	70	19	11.0	1.4							0.270			
2C	150	37	16.2	1.8	1.4	42.9	0.4	2.6	50.0	2.3	0.126	330	3,500	5,790
Earth	95	19	12.9	1.6							0.195			
2C	185	37	18.0	2.0	1.4	47.3	0.4	2.8	54.8	2.5	0.100	330	3,500	6,870
Earth	95	19	12.9	1.6							0.195			
2C	240	61	20.6	2.2	1.6	53.8	0.4	3.0	61.7	2.8	0.0762	320	3,500	8,760
Earth	120	37	14.5	1.6							0.154			

HV Power Cable  
LV Power & Lighting Cable  
Instrumentation & Communication Cable  
Earthing & Bonding wire  
VFD Cable  
Technical Information

# LV Power & Lighting Cable

## 0.6/1kV RFOU, 0.6/1kV RFCU, 0.6/1kV RFBU

No. of Cores	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
	Nominal Area	Min. No. of wires	Max. overall dia.						Nominal	Tolerance				
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5min.	kg/km
3	1.5	7	1.7	1.0	1.0	9.8	0.3	1.2	13.7	0.8	12.2	1,320	3,500	320
	2.5	7	2.2	1.0	1.0	10.6	0.3	1.3	14.7	0.9	7.56	1,110	3,500	380
	4	7	2.7	1.0	1.0	11.7	0.3	1.3	15.8	0.9	4.70	940	3,500	460
	6	7	3.3	1.0	1.0	13.0	0.3	1.4	17.3	1.0	3.110	800	3,500	570
	10	7	4.2	1.0	1.0	14.9	0.3	1.4	19.2	1.1	1.840	650	3,500	730
	16	7	5.3	1.0	1.0	17.1	0.3	1.5	21.6	1.2	1.160	540	3,500	980
	25	7	6.6	1.2	1.0	20.7	0.3	1.7	25.6	1.3	0.734	520	3,500	1,420
	35	7	7.9	1.2	1.0	23.1	0.3	1.8	28.2	1.4	0.529	450	3,500	1,790
	50	19	9.1	1.4	1.0	27.0	0.3	1.9	32.3	1.6	0.391	440	3,500	2,340
	70	19	11.0	1.4	1.2	31.5	0.4	2.1	37.6	1.8	0.270	380	3,500	3,290
	95	19	12.9	1.6	1.2	36.4	0.4	2.3	42.9	2.0	0.195	370	3,500	4,340
	120	37	14.5	1.6	1.4	40.1	0.4	2.5	47.0	2.2	0.154	330	3,500	5,290
	150	37	16.2	1.8	1.4	44.1	0.4	2.6	51.2	2.3	0.126	330	3,500	6,320
	185	37	18.0	2.0	1.6	50.1	0.4	2.9	57.8	2.6	0.100	330	3,500	7,960
240	61	20.6	2.2	1.6	56.6	0.4	3.1	64.7	2.9	0.0762	320	3,500	10,120	
300	61	23.1	2.4	1.6	62.6	0.4	3.4	71.3	3.2	0.0607	310	3,500	12,380	
3C+E	1.5	7	1.7	1.0	1.0	10.7	0.3	1.3	14.8	0.9	12.2	1,320	3,500	380
3C+E	2.5	7	2.2	1.0	1.0	11.7	0.3	1.3	15.8	0.9	7.56	1,110	3,500	450
3C+E	4	7	2.7	1.0	1.0	12.9	0.3	1.4	17.2	1.0	4.70	940	3,500	550
3C+E	6	7	3.3	1.0	1.0	14.3	0.3	1.4	18.6	1.0	3.110	800	3,500	680
3C+E	10	7	4.2	1.0	1.0	16.5	0.3	1.5	21.0	1.1	1.840	650	3,500	900
3C+E	16	7	5.3	1.0	1.0	18.9	0.3	1.6	23.6	1.2	1.160	540	3,500	1,210
3C	25	7	6.6	1.2	1.0	22.4	0.3	1.7	27.3	1.4	0.734	520	3,500	1,640
Earth	16	7	5.3	1.0							1.160			
3C	35	7	7.9	1.2	1.0	25.3	0.3	1.9	30.6	1.5	0.529	450	3,500	2,150
Earth	25	7	6.6	1.2							0.734			
3C	50	19	9.1	1.4	1.2	29.8	0.3	2.0	35.3	1.7	0.391	440	3,500	2,790
Earth	25	7	6.6	1.2							0.734			
3C	70	19	11.0	1.4	1.2	33.7	0.4	2.2	40.0	1.9	0.270	380	3,500	3,770
Earth	35	7	7.9	1.2							0.529			
3C	95	19	12.9	1.6	1.4	39.5	0.4	2.4	46.2	2.1	0.195	370	3,500	5,040
Earth	50	19	9.1	1.4							0.391			
3C	120	37	14.5	1.6	1.4	43.2	0.4	2.6	50.3	2.3	0.154	330	3,500	6,160
Earth	70	19	11.0	1.4							0.270			
3C	150	37	16.2	1.8	1.4	47.9	0.4	2.8	55.4	2.5	0.126	330	3,500	7,520
Earth	95	19	12.9	1.6							0.195			
3C	185	37	18.0	2.0	1.6	53.7	0.4	3.0	61.6	2.8	0.100	330	3,500	9,150
Earth	95	19	12.9	1.6							0.195			
3C	240	61	20.6	2.2	1.6	60.4	0.4	3.3	68.9	3.1	0.0762	320	3,500	11,610
Earth	120	37	14.5	1.6							0.154			
4	1.5	7	1.7	1.0	1.0	10.7	0.3	1.3	14.8	0.9	12.2	1,320	3,500	380
	2.5	7	2.2	1.0	1.0	11.7	0.3	1.3	15.8	0.9	7.56	1,110	3,500	450
	4	7	2.7	1.0	1.0	12.9	0.3	1.4	17.2	1.0	4.70	940	3,500	550
	6	7	3.3	1.0	1.0	14.3	0.3	1.4	18.6	1.0	3.110	800	3,500	680
	10	7	4.2	1.0	1.0	16.5	0.3	1.5	21.0	1.1	1.840	650	3,500	900
	16	7	5.3	1.0	1.0	18.9	0.3	1.6	23.6	1.2	1.160	540	3,500	1,210
	25	7	6.6	1.2	1.0	23.0	0.3	1.8	28.1	1.4	0.734	520	3,500	1,770
	35	7	7.9	1.2	1.0	25.7	0.3	1.9	31.0	1.5	0.529	450	3,500	2,250
	50	19	9.1	1.4	1.2	30.8	0.4	2.1	36.9	1.8	0.391	440	3,500	3,150
	70	19	11.0	1.4	1.2	34.9	0.4	2.3	41.4	2.0	0.270	380	3,500	4,160
	95	19	12.9	1.6	1.4	40.9	0.4	2.5	47.8	2.2	0.195	370	3,500	5,580
	120	37	14.5	1.6	1.4	44.5	0.4	2.6	51.6	2.4	0.154	330	3,500	6,700
	150	37	16.2	1.8	1.6	49.7	0.4	2.9	57.4	2.6	0.126	330	3,500	8,200
	185	37	18.0	2.0	1.6	55.7	0.4	3.1	63.8	2.9	0.100	330	3,500	10,140
240	61	20.6	2.2	1.6	62.9	0.4	3.4	71.6	3.2	0.0762	320	3,500	12,960	
300	61	23.1	2.4	1.8	70.1	0.4	3.7	79.4	3.5	0.0607	310	3,500	16,000	

0.6/1kV RFOU, 0.6/1kV RFCU, 0.6/1kV RFBU

No. of Cores	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
	Nominal Area	Min. No. of wires	Max. overall dia.						Nominal	Tolerance				
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5min.	kg/km	
4C+E	1.5	7	1.7	1.0	1.0	11.7	0.3	1.3	15.8	0.9	12.2	1,320	3,500	430
4C+E	2.5	7	2.2	1.0	1.0	12.8	0.3	1.4	17.1	1.0	7.56	1,110	3,500	520
4C+E	4	7	2.7	1.0	1.0	14.2	0.3	1.4	18.5	1.0	4.70	940	3,500	640
4C+E	6	7	3.3	1.0	1.0	15.8	0.3	1.5	20.3	1.1	3.110	800	3,500	810
4C+E	10	7	4.2	1.0	1.0	18.2	0.3	1.6	22.9	1.2	1.840	650	3,500	1,070
4C+E	16	7	5.3	1.0	1.0	20.9	0.3	1.7	25.8	1.3	1.160	540	3,500	1,450
4C	25	7	6.6	1.2	1.0	25.0	0.3	1.9	30.3	1.5	0.734	520	3,500	2,030
Earth	16	7	5.3	1.0							1.160			
4C	35	7	7.9	1.2	1.2	28.9	0.3	2.0	34.4	1.7	0.529	450	3,500	2,720
Earth	25	7	6.6	1.2							0.734			
4C	50	19	9.1	1.4	1.2	33.2	0.4	2.2	39.5	1.9	0.391	440	3,500	3,550
Earth	25	7	6.6	1.2							0.734			
4C	70	19	11.0	1.4	1.2	37.6	0.4	2.4	44.3	2.1	0.270	380	3,500	4,680
Earth	35	7	7.9	1.2							0.529			
4C	95	19	12.9	1.6	1.4	44.0	0.4	2.6	51.1	2.3	0.195	370	3,500	6,270
Earth	50	19	9.1	1.4							0.391			
4C	120	37	14.5	1.6	1.4	48.1	0.4	2.8	55.6	2.5	0.154	330	3,500	7,660
Earth	70	19	11.0	1.4							0.270			
4C	150	37	16.2	1.8	1.6	54.0	0.4	3.0	61.9	2.8	0.126	330	3,500	9,460
Earth	95	19	12.9	1.6							0.195			
4C	185	37	18.0	2.0	1.6	59.9	0.4	3.3	68.4	3.0	0.100	330	3,500	11,460
Earth	95	19	12.9	1.6							0.195			
4C	240	61	20.6	2.2	1.8	67.9	0.4	3.6	77.0	3.4	0.0762	320	3,500	14,670
Earth	120	37	14.5	1.6							0.154			
5	1.5	7	1.7	1.0	1.0	11.7	0.3	1.3	15.8	0.9	12.2	1,320	3,500	430
	2.5	7	2.2	1.0	1.0	12.8	0.3	1.4	17.1	1.0	7.56	1,110	3,500	520
	4	7	2.7	1.0	1.0	14.2	0.3	1.4	18.5	1.0	4.70	940	3,500	640
	6	7	3.3	1.0	1.0	15.8	0.3	1.5	20.3	1.1	3.110	800	3,500	810
	10	7	4.2	1.0	1.0	18.2	0.3	1.6	22.9	1.2	1.840	650	3,500	1,070
	16	7	5.3	1.0	1.0	20.9	0.3	1.7	25.8	1.3	1.160	540	3,500	1,450
	25	7	6.6	1.2	1.0	25.5	0.3	1.9	30.8	1.5	0.734	520	3,500	2,140
	35	7	7.9	1.2	1.2	29.3	0.3	2.0	34.8	1.7	0.529	450	3,500	2,820
	50	19	9.1	1.4	1.2	34.1	0.4	2.2	40.4	1.9	0.391	440	3,500	3,810
	70	19	11.0	1.4	1.4	39.1	0.4	2.4	45.8	2.1	0.270	380	3,500	5,110
	95	19	12.9	1.6	1.4	45.3	0.4	2.7	52.6	2.4	0.195	370	3,500	6,810
	120	37	14.5	1.6	1.6	50.0	0.4	2.9	57.7	2.6	0.154	330	3,500	8,340
	150	37	16.2	1.8	1.6	55.1	0.4	3.1	63.2	2.8	0.126	330	3,500	10,030
	185	37	18.0	2.0	1.6	61.9	0.4	3.3	70.4	3.1	0.100	330	3,500	12,440
	240	61	20.6	2.2	1.8	70.4	0.4	3.7	79.7	3.5	0.0762	320	3,500	16,060

HV Power Cable  
 LV Power & Lighting Cable  
 Instrumentation & Communication Cable  
 Earthing & Bonding wire  
 VFD Cable  
 Technical Information

# LV Power & Lighting Cable

## 0.6/1kV RFOU, 0.6/1kV RFCU, 0.6/1kV RFBU

No. of Cores	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
	Nominal Area	Min. No. of wires	Max. overall dia.						Nominal	Tolerance				
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5min.	kg/km	
2	1.0	7	1.4	1.0	1.0	8.6	0.3	1.2	12.5	0.8	18.2	1,490	3,500	250
5	1.0	7	1.4	1.0	1.0	10.9	0.3	1.3	15.0	0.9	18.2	1,490	3,500	360
7	1.0	7	1.4	1.0	1.0	11.9	0.3	1.3	16.0	0.9	18.2	1,490	3,500	430
8	1.0	7	1.4	1.0	1.0	12.9	0.3	1.4	17.2	1.0	18.2	1,490	3,500	480
9	1.0	7	1.4	1.0	1.0	13.9	0.3	1.4	18.2	1.0	18.2	1,490	3,500	520
10	1.0	7	1.4	1.0	1.0	15.2	0.3	1.5	19.7	1.1	18.2	1,490	3,500	580
12	1.0	7	1.4	1.0	1.0	15.7	0.3	1.5	20.2	1.1	18.2	1,490	3,500	630
14	1.0	7	1.4	1.0	1.0	16.6	0.3	1.5	21.1	1.1	18.2	1,490	3,500	690
16	1.0	7	1.4	1.0	1.0	17.5	0.3	1.6	22.2	1.2	18.2	1,490	3,500	770
19	1.0	7	1.4	1.0	1.0	18.5	0.3	1.6	23.2	1.2	18.2	1,490	3,500	850
24	1.0	7	1.4	1.0	1.0	21.8	0.3	1.7	26.7	1.4	18.2	1,490	3,500	1,040
27	1.0	7	1.4	1.0	1.0	22.3	0.3	1.7	27.2	1.4	18.2	1,490	3,500	1,120
30	1.0	7	1.4	1.0	1.0	23.2	0.3	1.8	28.3	1.4	18.2	1,490	3,500	1,220
37	1.0	7	1.4	1.0	1.0	25.1	0.3	1.9	30.4	1.5	18.2	1,490	3,500	1,420
44	1.0	7	1.4	1.0	1.2	29.2	0.3	2.0	34.7	1.7	18.2	1,490	3,500	1,750
2	1.5	7	1.7	1.0	1.0	9.2	0.3	1.2	13.1	0.8	12.2	1,320	3,500	290
5	1.5	7	1.7	1.0	1.0	11.7	0.3	1.3	15.8	0.9	12.2	1,320	3,500	430
7	1.5	7	1.7	1.0	1.0	12.8	0.3	1.4	17.1	1.0	12.2	1,320	3,500	500
8	1.5	7	1.7	1.0	1.0	13.9	0.3	1.4	18.2	1.0	12.2	1,320	3,500	550
9	1.5	7	1.7	1.0	1.0	15.0	0.3	1.5	19.5	1.1	12.2	1,320	3,500	610
10	1.5	7	1.7	1.0	1.0	16.4	0.3	1.5	20.9	1.1	12.2	1,320	3,500	670
12	1.5	7	1.7	1.0	1.0	17.0	0.3	1.5	21.5	1.2	12.2	1,320	3,500	730
14	1.5	7	1.7	1.0	1.0	17.9	0.3	1.6	22.6	1.2	12.2	1,320	3,500	820
16	1.5	7	1.7	1.0	1.0	18.9	0.3	1.6	23.6	1.2	12.2	1,320	3,500	900
19	1.5	7	1.7	1.0	1.0	20.0	0.3	1.7	24.9	1.3	12.2	1,320	3,500	1,010
24	1.5	7	1.7	1.0	1.0	23.6	0.3	1.8	28.7	1.4	12.2	1,320	3,500	1,250
27	1.5	7	1.7	1.0	1.0	24.2	0.3	1.8	29.3	1.5	12.2	1,320	3,500	1,340
30	1.5	7	1.7	1.0	1.0	25.1	0.3	1.9	30.4	1.5	12.2	1,320	3,500	1,460
37	1.5	7	1.7	1.0	1.2	28.0	0.3	2.0	33.5	1.6	12.2	1,320	3,500	1,800
44	1.5	7	1.7	1.0	1.2	31.6	0.4	2.1	37.7	1.8	12.2	1,320	3,500	2,190
2	2.5	7	2.2	1.0	1.0	10.0	0.3	1.3	14.1	0.9	7.56	1,110	3,500	340
5	2.5	7	2.2	1.0	1.0	12.8	0.3	1.4	17.1	1.0	7.56	1,110	3,500	520
7	2.5	7	2.2	1.0	1.0	14.0	0.3	1.4	18.3	1.0	7.56	1,110	3,500	600
8	2.5	7	2.2	1.0	1.0	15.2	0.3	1.5	19.7	1.1	7.56	1,110	3,500	670
9	2.5	7	2.2	1.0	1.0	16.5	0.3	1.5	21.0	1.1	7.56	1,110	3,500	740
10	2.5	7	2.2	1.0	1.0	18.0	0.3	1.6	22.7	1.2	7.56	1,110	3,500	820
12	2.5	7	2.2	1.0	1.0	18.6	0.3	1.6	23.3	1.2	7.56	1,110	3,500	910
14	2.5	7	2.2	1.0	1.0	19.7	0.3	1.6	24.4	1.3	7.56	1,110	3,500	1,010
16	2.5	7	2.2	1.0	1.0	20.8	0.3	1.7	25.7	1.3	7.56	1,110	3,500	1,120
19	2.5	7	2.2	1.0	1.0	22.0	0.3	1.7	26.9	1.4	7.56	1,110	3,500	1,260
24	2.5	7	2.2	1.0	1.0	26.0	0.3	1.9	31.3	1.6	7.56	1,110	3,500	1,570
27	2.5	7	2.2	1.0	1.0	26.6	0.3	1.9	31.9	1.6	7.56	1,110	3,500	1,700
30	2.5	7	2.2	1.0	1.2	28.5	0.3	2.0	34.0	1.7	7.56	1,110	3,500	1,940
37	2.5	7	2.2	1.0	1.2	30.8	0.4	2.1	36.9	1.8	7.56	1,110	3,500	2,370
44	2.5	7	2.2	1.0	1.2	34.8	0.4	2.3	41.3	2.0	7.56	1,110	3,500	2,790
2	4	7	2.7	1.0	1.0	11.0	0.3	1.3	15.1	0.9	4.70	940	3,500	400
5	4	7	2.7	1.0	1.0	14.2	0.3	1.4	18.5	1.0	4.70	940	3,500	640
7	4	7	2.7	1.0	1.0	15.5	0.3	1.5	20.0	1.1	4.70	940	3,500	750
8	4	7	2.7	1.0	1.0	16.9	0.3	1.5	21.4	1.2	4.70	940	3,500	830
9	4	7	2.7	1.0	1.0	18.3	0.3	1.6	23.0	1.2	4.70	940	3,500	930
10	4	7	2.7	1.0	1.0	20.0	0.3	1.7	24.9	1.3	4.70	940	3,500	1,040
12	4	7	2.7	1.0	1.0	20.7	0.3	1.7	25.6	1.3	4.70	940	3,500	1,160
14	4	7	2.7	1.0	1.0	21.9	0.3	1.7	26.8	1.4	4.70	940	3,500	1,290
16	4	7	2.7	1.0	1.0	23.2	0.3	1.8	28.3	1.4	4.70	940	3,500	1,440
19	4	7	2.7	1.0	1.0	24.5	0.3	1.8	29.6	1.5	4.70	940	3,500	1,630
24	4	7	2.7	1.0	1.2	29.8	0.3	2.0	35.3	1.7	4.70	940	3,500	2,130
27	4	7	2.7	1.0	1.2	30.5	0.4	2.1	36.6	1.8	4.70	940	3,500	2,410
30	4	7	2.7	1.0	1.2	31.7	0.4	2.1	37.8	1.8	4.70	940	3,500	2,600
37	4	7	2.7	1.0	1.2	34.3	0.4	2.2	40.6	1.9	4.70	940	3,500	3,070
44	4	7	2.7	1.0	1.4	39.2	0.4	2.4	45.9	2.1	4.70	940	3,500	3,680



### Cable Designation (P110)

0.6/1kV BU

### Application Standard

- Design guide : NEK-606 & IEC 60092-353
- 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°C/-35°C)
- Mud / Oil resistant : NEK 606 (Category a,b,c,d)
- Smoke light transmittance : IEC 61034, 60%↑
- Sunlight (UV) resistant : UL 1581

HV Power Cable

LV Power & Lighting Cable

Instrumentation & Communication Cable

Earthing & Bonding wire

VFD Cable

Technical Information

### Construction

Sectional view	Classification	Code	Construction detail																				
	Conductor		- Stranded tinned annealed copper wires as per IEC 60228, Class 2																				
	Fire resisting layer	<b>B</b>	- Mica/glass tape																				
	Insulation		- EPR as per IEC 60092-360																				
	Cabling		- Insulated cores 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																				
Sheath	<b>U</b>		- SHF2 as per IEC 60092-360 - <b>Option</b> : NEK 606 Category a,b,c,d Mud or oil resistant - Outer sheath color : Black																				
Core identification			<table border="1"> <thead> <tr> <th>No. of cores</th> <th>Without Earth core</th> <th>With Earth core</th> </tr> </thead> <tbody> <tr> <td>1C</td> <td>Off-white or Black</td> <td>-</td> </tr> <tr> <td>2C</td> <td>Off-white, Black</td> <td>-</td> </tr> <tr> <td>3C / 2C + E</td> <td>Off-white, Black, Red</td> <td>Off-white, Black, G/Y</td> </tr> <tr> <td>4C / 3C + E</td> <td>Off-white, Black, Red, Blue</td> <td>Off-white, Black, Red, G/Y</td> </tr> <tr> <td>5C / 4C + E</td> <td>Black No. on white insulation</td> <td>Off-white, Black, Red, Blue, G/Y</td> </tr> <tr> <td>6C and over</td> <td>Black No. on white insulation</td> <td>Black No. on white insulation, G/Y</td> </tr> </tbody> </table>	No. of cores	Without Earth core	With Earth core	1C	Off-white or Black	-	2C	Off-white, Black	-	3C / 2C + E	Off-white, Black, Red	Off-white, Black, G/Y	4C / 3C + E	Off-white, Black, Red, Blue	Off-white, Black, Red, G/Y	5C / 4C + E	Black No. on white insulation	Off-white, Black, Red, Blue, G/Y	6C and over	Black No. on white insulation
No. of cores	Without Earth core	With Earth core																					
1C	Off-white or Black	-																					
2C	Off-white, Black	-																					
3C / 2C + E	Off-white, Black, Red	Off-white, Black, G/Y																					
4C / 3C + E	Off-white, Black, Red, Blue	Off-white, Black, Red, G/Y																					
5C / 4C + E	Black No. on white insulation	Off-white, Black, Red, Blue, G/Y																					
6C and over	Black No. on white insulation	Black No. on white insulation, G/Y																					

**Note.** 1. Flexible cable (Class5 Conductor) can be supplied  
2. Earth core(G/Y) : Yellow/Green(Green base color with yellow stripe)

# LV Power & Lighting Cable

## 0.6/1kV BU

No. of Cores	Conductor			Thickness of Insulation	Thickness of sheath	Overall diameter		Conductor Resistance (at 20°C) (Max.)	Insulation Resistance (at 20°C) (Min.)	Test Voltage	Cable Weight
	Nominal Area	Min. No. of wires	Max. overall dia.			Nominal	Tolerance				
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	±mm	Ω/km	MΩ·km	V/5min.	kg/km
1	1.5	7	1.7	1.0	1.0	6.3	0.6	12.2	1,320	3,500	60
	2.5	7	2.2	1.0	1.0	6.7	0.6	7.56	1,110	3,500	80
	4	7	2.7	1.0	1.0	7.2	0.6	4.70	940	3,500	100
	6	7	3.3	1.0	1.0	7.8	0.6	3.110	800	3,500	120
	10	7	4.2	1.0	1.1	8.9	0.7	1.840	650	3,500	170
	16	7	5.3	1.0	1.1	9.9	0.7	1.160	540	3,500	240
	25	7	6.6	1.2	1.2	11.8	0.8	0.734	520	3,500	350
	35	7	7.9	1.2	1.2	12.9	0.8	0.529	450	3,500	460
	50	19	9.1	1.4	1.3	14.9	0.9	0.391	440	3,500	610
	70	19	11.0	1.4	1.4	16.8	1.0	0.270	380	3,500	830
	95	19	12.9	1.6	1.4	19.1	1.1	0.195	370	3,500	1,110
	120	37	14.5	1.6	1.5	20.9	1.1	0.154	330	3,500	1,370
	150	37	16.2	1.8	1.6	22.9	1.2	0.126	330	3,500	1,660
	185	37	18.0	2.0	1.7	25.4	1.3	0.100	330	3,500	2,080
	240	61	20.6	2.2	1.8	28.6	1.4	0.0762	320	3,500	2,690
300	61	23.1	2.4	1.9	31.8	1.6	0.0607	310	3,500	3,350	
400	61	26.1	2.6	2.1	36.4	1.8	0.0475	290	3,500	4,530	
500	61	29.2	2.8	2.2	39.7	1.9	0.0369	280	3,500	5,460	
630	91	33.2	2.8	2.4	44.3	2.1	0.0286	250	3,500	7,030	
2	1.5	7	1.7	1.0	1.1	10.6	0.7	12.2	1,320	3,500	170
	2.5	7	2.2	1.0	1.2	11.6	0.8	7.56	1,110	3,500	210
	4	7	2.7	1.0	1.2	12.6	0.8	4.70	940	3,500	260
	6	7	3.3	1.0	1.2	13.8	0.9	3.110	800	3,500	330
	10	7	4.2	1.0	1.3	15.8	0.9	1.840	650	3,500	430
	16	7	5.3	1.0	1.4	18.0	1.0	1.160	540	3,500	590
	25	7	6.6	1.2	1.5	21.6	1.2	0.734	520	3,500	870
	35	7	7.9	1.2	1.6	24.0	1.3	0.529	450	3,500	1,120
	50	19	9.1	1.4	1.8	28.0	1.4	0.391	440	3,500	1,510
	70	19	11.0	1.4	1.9	31.8	1.6	0.270	380	3,500	2,050
	95	19	12.9	1.6	2.1	36.8	1.8	0.195	370	3,500	2,770
	120	37	14.5	1.6	2.2	40.2	1.9	0.154	330	3,500	3,370
	150	37	16.2	1.8	2.4	44.2	2.1	0.126	330	3,500	4,090
	185	37	18.0	2.0	2.5	49.0	2.3	0.100	330	3,500	5,070
	240	61	20.6	2.2	2.8	55.6	2.5	0.0762	320	3,500	6,580
300	61	23.1	2.4	3.0	61.6	2.8	0.0607	310	3,500	8,130	
2C+E	1.5	7	1.7	1.0	1.2	11.4	0.8	12.2	1,320	3,500	200
2C+E	2.5	7	2.2	1.0	1.2	12.3	0.8	7.56	1,110	3,500	250
2C+E	4	7	2.7	1.0	1.2	13.4	0.8	4.70	940	3,500	310
2C+E	6	7	3.3	1.0	1.3	14.9	0.9	3.110	800	3,500	410
2C+E	10	7	4.2	1.0	1.4	17.0	1.0	1.840	650	3,500	560
2C+E	16	7	5.3	1.0	1.4	19.2	1.1	1.160	540	3,500	770
2C	25	7	6.6	1.2	1.6	22.6	1.2	0.734	520	3,500	1,060
Earth	16	7	5.3	1.0				1.160			
2C	35	7	7.9	1.2	1.7	25.4	1.3	0.529	450	3,500	1,420
Earth	25	7	6.6	1.2				0.734			
2C	50	19	9.1	1.4	1.8	29.0	1.5	0.391	440	3,500	1,800
Earth	25	7	6.6	1.2				0.734			
2C	70	19	11.0	1.4	1.9	32.6	1.6	0.270	380	3,500	2,400
Earth	35	7	7.9	1.2				0.529			
2C	95	19	12.9	1.6	2.1	37.8	1.8	0.195	370	3,500	3,250
Earth	50	19	9.1	1.4				0.391			
2C	120	37	14.5	1.6	2.3	41.7	2.0	0.154	330	3,500	4,080
Earth	70	19	11.0	1.4				0.270			
2C	150	37	16.2	1.8	2.4	46.0	2.1	0.126	330	3,500	5,040
Earth	95	19	12.9	1.6				0.195			
2C	185	37	18.0	2.0	2.6	50.4	2.3	0.100	330	3,500	6,020
Earth	95	19	12.9	1.6				0.195			
2C	240	61	20.6	2.2	2.8	56.8	2.6	0.0762	320	3,500	7,720
Earth	120	37	14.5	1.6				0.154			

0.6/1kV BU

No. of Cores	Conductor			Thickness of Insulation	Thickness of sheath	Overall diameter		Conductor Resistance (at 20°C) (Max.)	Insulation Resistance (at 20°C) (Min.)	Test Voltage	Cable Weight
	Nominal Area	Min. No. of wires	Max. overall dia.			Nominal	Tolerance				
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	±mm	Ω/km	MΩ·km	V/5min.	kg/km
3	1.5	7	1.7	1.0	1.2	11.4	0.8	12.2	1,320	3,500	200
	2.5	7	2.2	1.0	1.2	12.3	0.8	7.56	1,110	3,500	250
	4	7	2.7	1.0	1.2	13.4	0.8	4.70	940	3,500	310
	6	7	3.3	1.0	1.3	14.9	0.9	3.110	800	3,500	410
	10	7	4.2	1.0	1.4	17.0	1.0	1.840	650	3,500	560
	16	7	5.3	1.0	1.4	19.2	1.1	1.160	540	3,500	770
	25	7	6.6	1.2	1.6	23.2	1.2	0.734	520	3,500	1,160
	35	7	7.9	1.2	1.7	25.8	1.3	0.529	450	3,500	1,510
	50	19	9.1	1.4	1.8	30.1	1.5	0.391	440	3,500	2,040
	70	19	11.0	1.4	2.0	34.1	1.7	0.270	380	3,500	2,770
	95	19	12.9	1.6	2.2	39.5	1.9	0.195	370	3,500	3,760
	120	37	14.5	1.6	2.3	43.1	2.0	0.154	330	3,500	4,600
	150	37	16.2	1.8	2.5	47.4	2.2	0.126	330	3,500	5,580
185	37	18.0	2.0	2.7	52.8	2.4	0.100	330	3,500	6,970	
240	61	20.6	2.2	2.9	59.6	2.7	0.0762	320	3,500	9,010	
300	61	23.1	2.4	3.2	66.3	3.0	0.0607	310	3,500	11,190	
3C+E	1.5	7	1.7	1.0	1.2	12.5	0.8	12.2	1,320	3,500	240
3C+E	2.5	7	2.2	1.0	1.2	13.5	0.8	7.56	1,110	3,500	300
3C+E	4	7	2.7	1.0	1.3	14.9	0.9	4.70	940	3,500	390
3C+E	6	7	3.3	1.0	1.3	16.3	1.0	3.110	800	3,500	500
3C+E	10	7	4.2	1.0	1.4	18.7	1.0	1.840	650	3,500	710
3C+E	16	7	5.3	1.0	1.5	21.3	1.2	1.160	540	3,500	990
3C	25	7	6.6	1.2	1.7	25.3	1.3	0.734	520	3,500	1,400
Earth	16	7	5.3	1.0				1.160			
3C	35	7	7.9	1.2	1.8	28.3	1.4	0.529	450	3,500	1,850
Earth	25	7	6.6	1.2				0.734			
3C	50	19	9.1	1.4	1.9	32.4	1.6	0.391	440	3,500	2,390
Earth	25	7	6.6	1.2				0.734			
3C	70	19	11.0	1.4	2.1	36.7	1.8	0.270	380	3,500	3,230
Earth	35	7	7.9	1.2				0.529			
3C	95	19	12.9	1.6	2.3	42.5	2.0	0.195	370	3,500	4,370
Earth	50	19	9.1	1.4				0.391			
3C	120	37	14.5	1.6	2.5	46.8	2.2	0.154	330	3,500	5,460
Earth	70	19	11.0	1.4				0.270			
3C	150	37	16.2	1.8	2.6	51.5	2.4	0.126	330	3,500	6,710
Earth	95	19	12.9	1.6				0.195			
3C	185	37	18.0	2.0	2.8	56.7	2.6	0.100	330	3,500	8,110
Earth	95	19	12.9	1.6				0.195			
3C	240	61	20.6	2.2	3.1	64.0	2.9	0.0762	320	3,500	10,460
Earth	120	37	14.5	1.6				0.154			
4	1.5	7	1.7	1.0	1.2	12.5	0.8	12.2	1,320	3,500	240
	2.5	7	2.2	1.0	1.2	13.5	0.8	7.56	1,110	3,500	300
	4	7	2.7	1.0	1.3	14.9	0.9	4.70	940	3,500	390
	6	7	3.3	1.0	1.3	16.3	1.0	3.110	800	3,500	500
	10	7	4.2	1.0	1.4	18.7	1.0	1.840	650	3,500	710
	16	7	5.3	1.0	1.5	21.3	1.2	1.160	540	3,500	990
	25	7	6.6	1.2	1.7	25.8	1.3	0.734	520	3,500	1,500
	35	7	7.9	1.2	1.8	28.7	1.4	0.529	450	3,500	1,950
	50	19	9.1	1.4	2.0	33.6	1.6	0.391	440	3,500	2,650
	70	19	11.0	1.4	2.1	37.9	1.8	0.270	380	3,500	3,580
	95	19	12.9	1.6	2.4	44.1	2.1	0.195	370	3,500	4,890
	120	37	14.5	1.6	2.5	48.1	2.2	0.154	330	3,500	5,980
	150	37	16.2	1.8	2.7	52.9	2.4	0.126	330	3,500	7,260
185	37	18.0	2.0	2.9	58.8	2.7	0.100	330	3,500	9,060	
240	61	20.6	2.2	3.2	66.7	3.0	0.0762	320	3,500	11,770	
300	61	23.1	2.4	3.5	74.0	3.3	0.0607	310	3,500	14,600	

HV Power Cable  
 LV Power & Lighting Cable  
 Instrumentation & Communication Cable  
 Earthing & Bonding wire  
 VFD Cable  
 Technical Information

# LV Power & Lighting Cable

## 0.6/1kV BU

No. of Cores	Conductor			Thickness of Insulation	Thickness of sheath	Overall diameter		Conductor Resistance (at 20°C) (Max.)	Insulation Resistance (at 20°C) (Min.)	Test Voltage	Cable Weight
	Nominal Area	Min. No. of wires	Max. overall dia.			Nominal	Tolerance				
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5min.	kg/km
4C+E	1.5	7	1.7	1.0	1.2	13.7	0.8	12.2	1,320	3,500	290
4C+E	2.5	7	2.2	1.0	1.3	15.0	0.9	7.56	1,110	3,500	370
4C+E	4	7	2.7	1.0	1.3	16.3	1.0	4.70	940	3,500	470
4C+E	6	7	3.3	1.0	1.4	18.1	1.0	3.110	800	3,500	620
4C+E	10	7	4.2	1.0	1.5	20.8	1.1	1.840	650	3,500	870
4C+E	16	7	5.3	1.0	1.6	23.7	1.2	1.160	540	3,500	1,230
4C	25	7	6.6	1.2	1.8	28.1	1.4	0.734	520	3,500	1,750
Earth	16	7	5.3	1.0				1.160			
4C	35	7	7.9	1.2	1.9	31.7	1.6	0.529	450	3,500	2,340
Earth	25	7	6.6	1.2				0.734			
4C	50	19	9.1	1.4	2.1	36.3	1.8	0.391	440	3,500	3,030
Earth	25	7	6.6	1.2				0.734			
4C	70	19	11.0	1.4	2.2	40.9	1.9	0.270	380	3,500	4,070
Earth	35	7	7.9	1.2				0.529			
4C	95	19	12.9	1.6	2.5	47.6	2.2	0.195	370	3,500	5,560
Earth	50	19	9.1	1.4				0.391			
4C	120	37	14.5	1.6	2.7	52.3	2.4	0.154	330	3,500	6,910
Earth	70	19	11.0	1.4				0.270			
4C	150	37	16.2	1.8	2.9	57.8	2.6	0.126	330	3,500	8,500
Earth	95	19	12.9	1.6				0.195			
4C	185	37	18.0	2.0	3.1	63.6	2.8	0.100	330	3,500	10,330
Earth	95	19	12.9	1.6				0.195			
4C	240	61	20.6	2.2	3.4	71.8	3.2	0.0762	320	3,500	13,340
Earth	120	37	14.5	1.6				0.154			
5	1.5	7	1.7	1.0	1.2	13.7	0.8	12.2	1,320	3,500	290
	2.5	7	2.2	1.0	1.3	15.0	0.9	7.56	1,110	3,500	370
	4	7	2.7	1.0	1.3	16.3	1.0	4.70	940	3,500	470
	6	7	3.3	1.0	1.4	18.1	1.0	3.110	800	3,500	620
	10	7	4.2	1.0	1.5	20.8	1.1	1.840	650	3,500	870
	16	7	5.3	1.0	1.6	23.7	1.2	1.160	540	3,500	1,230
	25	7	6.6	1.2	1.8	28.6	1.4	0.734	520	3,500	1,850
	35	7	7.9	1.2	1.9	32.0	1.6	0.529	450	3,500	2,430
	50	19	9.1	1.4	2.1	37.3	1.8	0.391	440	3,500	3,280
	70	19	11.0	1.4	2.3	42.3	2.0	0.270	380	3,500	4,460
	95	19	12.9	1.6	2.5	48.9	2.3	0.195	370	3,500	6,050
	120	37	14.5	1.6	2.7	53.6	2.4	0.154	330	3,500	7,440
150	37	16.2	1.8	2.9	58.9	2.7	0.126	330	3,500	9,020	
185	37	18.0	2.0	3.2	65.7	2.9	0.100	330	3,500	11,300	
240	61	20.6	2.2	3.5	74.4	3.3	0.0762	320	3,500	14,670	

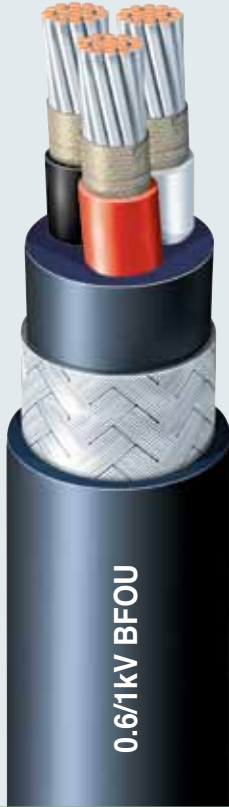


**0.6/1kV BU**

No. of Cores	Conductor			Thickness of Insulation	Thickness of sheath	Overall diameter		Conductor Resistance (at 20°C) (Max.)	Insulation Resistance (at 20°C) (Min.)	Test Voltage	Cable Weight
	Nominal Area	Min. No. of wires	Max. overall dia.			Nominal	Tolerance				
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	±mm	Ω/km	MΩ·km	V/5min.	kg/km
2	1.0	7	1.4	1.0	1.1	10.0	0.7	18.2	1,490	3,500	120
5	1.0	7	1.4	1.0	1.2	12.9	0.8	18.2	1,490	3,500	230
7	1.0	7	1.4	1.0	1.3	14.2	0.9	18.2	1,490	3,500	300
8	1.0	7	1.4	1.0	1.3	15.4	0.9	18.2	1,490	3,500	330
9	1.0	7	1.4	1.0	1.3	16.5	1.0	18.2	1,490	3,500	370
10	1.0	7	1.4	1.0	1.4	18.2	1.0	18.2	1,490	3,500	420
12	1.0	7	1.4	1.0	1.4	18.8	1.1	18.2	1,490	3,500	480
14	1.0	7	1.4	1.0	1.5	20.0	1.1	18.2	1,490	3,500	550
16	1.0	7	1.4	1.0	1.5	21.1	1.1	18.2	1,490	3,500	610
19	1.0	7	1.4	1.0	1.6	22.4	1.2	18.2	1,490	3,500	710
24	1.0	7	1.4	1.0	1.7	26.4	1.4	18.2	1,490	3,500	900
27	1.0	7	1.4	1.0	1.7	27.0	1.4	18.2	1,490	3,500	980
30	1.0	7	1.4	1.0	1.8	28.2	1.4	18.2	1,490	3,500	1,090
37	1.0	7	1.4	1.0	1.9	30.8	1.5	18.2	1,490	3,500	1,330
44	1.0	7	1.4	1.0	2.0	34.8	1.7	18.2	1,490	3,500	1,580
2	1.5	7	1.7	1.0	1.1	10.6	0.7	12.2	1,320	3,500	170
5	1.5	7	1.7	1.0	1.2	13.7	0.8	12.2	1,320	3,500	290
7	1.5	7	1.7	1.0	1.3	15.1	0.9	12.2	1,320	3,500	350
8	1.5	7	1.7	1.0	1.3	16.4	1.0	12.2	1,320	3,500	390
9	1.5	7	1.7	1.0	1.4	17.8	1.0	12.2	1,320	3,500	450
10	1.5	7	1.7	1.0	1.5	19.6	1.1	12.2	1,320	3,500	510
12	1.5	7	1.7	1.0	1.5	20.2	1.1	12.2	1,320	3,500	580
14	1.5	7	1.7	1.0	1.5	21.3	1.2	12.2	1,320	3,500	650
16	1.5	7	1.7	1.0	1.6	22.7	1.2	12.2	1,320	3,500	740
19	1.5	7	1.7	1.0	1.6	23.9	1.3	12.2	1,320	3,500	850
24	1.5	7	1.7	1.0	1.8	28.4	1.4	12.2	1,320	3,500	1,090
27	1.5	7	1.7	1.0	1.8	29.2	1.5	12.2	1,320	3,500	1,210
30	1.5	7	1.7	1.0	1.9	30.5	1.5	12.2	1,320	3,500	1,340
37	1.5	7	1.7	1.0	1.9	32.9	1.6	12.2	1,320	3,500	1,600
44	1.5	7	1.7	1.0	2.1	37.4	1.8	12.2	1,320	3,500	1,920
2	2.5	7	2.2	1.0	1.2	11.6	0.8	7.56	1,110	3,500	210
5	2.5	7	2.2	1.0	1.3	15.0	0.9	7.56	1,110	3,500	370
7	2.5	7	2.2	1.0	1.3	16.3	1.0	7.56	1,110	3,500	440
8	2.5	7	2.2	1.0	1.4	17.9	1.0	7.56	1,110	3,500	510
9	2.5	7	2.2	1.0	1.5	19.5	1.1	7.56	1,110	3,500	580
10	2.5	7	2.2	1.0	1.5	21.2	1.1	7.56	1,110	3,500	640
12	2.5	7	2.2	1.0	1.5	21.9	1.2	7.56	1,110	3,500	730
14	2.5	7	2.2	1.0	1.6	23.3	1.2	7.56	1,110	3,500	840
16	2.5	7	2.2	1.0	1.6	24.6	1.3	7.56	1,110	3,500	940
19	2.5	7	2.2	1.0	1.7	26.1	1.3	7.56	1,110	3,500	1,100
24	2.5	7	2.2	1.0	1.9	31.2	1.5	7.56	1,110	3,500	1,430
27	2.5	7	2.2	1.0	1.9	31.9	1.6	7.56	1,110	3,500	1,570
30	2.5	7	2.2	1.0	2.0	33.3	1.6	7.56	1,110	3,500	1,730
37	2.5	7	2.2	1.0	2.1	36.1	1.7	7.56	1,110	3,500	2,090
44	2.5	7	2.2	1.0	2.2	40.8	1.9	7.56	1,110	3,500	2,480
2	4	7	2.7	1.0	1.2	12.6	0.8	4.70	940	3,500	260
5	4	7	2.7	1.0	1.3	16.3	1.0	4.70	940	3,500	470
7	4	7	2.7	1.0	1.4	18.0	1.0	4.70	940	3,500	580
8	4	7	2.7	1.0	1.5	19.7	1.1	4.70	940	3,500	670
9	4	7	2.7	1.0	1.5	21.3	1.2	4.70	940	3,500	740
10	4	7	2.7	1.0	1.6	23.4	1.2	4.70	940	3,500	840
12	4	7	2.7	1.0	1.6	24.2	1.3	4.70	940	3,500	960
14	4	7	2.7	1.0	1.7	25.7	1.3	4.70	940	3,500	1,110
16	4	7	2.7	1.0	1.7	27.1	1.4	4.70	940	3,500	1,250
19	4	7	2.7	1.0	1.8	29.0	1.5	4.70	940	3,500	1,480
24	4	7	2.7	1.0	2.0	34.4	1.7	4.70	940	3,500	1,880
27	4	7	2.7	1.0	2.0	35.2	1.7	4.70	940	3,500	2,070
30	4	7	2.7	1.0	2.1	36.7	1.8	4.70	940	3,500	2,290
37	4	7	2.7	1.0	2.2	39.8	1.9	4.70	940	3,500	2,770
44	4	7	2.7	1.0	2.4	45.2	2.1	4.70	940	3,500	3,320

HV Power Cable  
 LV Power & Lighting Cable  
 Instrumentation & Communication Cable  
 Earthing & Bonding wire  
 VFD Cable  
 Technical Information

# LV Power & Lighting Cable



## Cable Designation (P105)

0.6/1kV BFOU, BFCU, BFBU

## Application Standard

- Design guide : NEK-606 & IEC 60092-353
- 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°C/-35°C)
- Mud / Oil resistant : NEK 606 (Category a,b,c,d)
- 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>B</b>	- Mica/glass tape																					
	Insulation		- EPR as per IEC 60092-360																					
	Cabling		- Insulated cores 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	<b>F</b>	- Flame retardant halogen free thermoset compound																					
	Armor	<b>O</b> <b>(B,C)</b>	- 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	<b>U</b>	- SHF2 as per IEC 60092-360 - <b>Option</b> : NEK 606 Category a,b,c,d Mud or oil resistant - Outer sheath color : Black																					
Core identification	<table border="1"> <thead> <tr> <th>No. of cores</th> <th>Without Earth core</th> <th>With Earth core</th> </tr> </thead> <tbody> <tr> <td>1C</td> <td>Off-white or Black</td> <td>-</td> </tr> <tr> <td>2C</td> <td>Off-white, Black</td> <td>-</td> </tr> <tr> <td>3C / 2C + E</td> <td>Off-white, Black, Red</td> <td>Off-white, Black, G/Y</td> </tr> <tr> <td>4C / 3C + E</td> <td>Off-white, Black, Red, Blue</td> <td>Off-white, Black, Red, G/Y</td> </tr> <tr> <td>5C / 4C + E</td> <td>Black No. on white insulation</td> <td>Off-white, Black, Red, Blue, G/Y</td> </tr> <tr> <td>6C and over</td> <td>Black No. on white insulation</td> <td>Black No. on white insulation, G/Y</td> </tr> </tbody> </table>		No. of cores	Without Earth core	With Earth core	1C	Off-white or Black	-	2C	Off-white, Black	-	3C / 2C + E	Off-white, Black, Red	Off-white, Black, G/Y	4C / 3C + E	Off-white, Black, Red, Blue	Off-white, Black, Red, G/Y	5C / 4C + E	Black No. on white insulation	Off-white, Black, Red, Blue, G/Y	6C and over	Black No. on white insulation	Black No. on white insulation, G/Y	
	No. of cores	Without Earth core	With Earth core																					
	1C	Off-white or Black	-																					
	2C	Off-white, Black	-																					
	3C / 2C + E	Off-white, Black, Red	Off-white, Black, G/Y																					
	4C / 3C + E	Off-white, Black, Red, Blue	Off-white, Black, Red, G/Y																					
5C / 4C + E	Black No. on white insulation	Off-white, Black, Red, Blue, G/Y																						
6C and over	Black No. on white insulation	Black No. on white insulation, G/Y																						

**Note.** 1. Flexible cable (Class5 Conductor) can be supplied  
2. Earth core(G/Y) : Yellow/Green(Green base color with yellow stripe)

0.6/1kV BFOU, 0.6/1kV BFBU

No. of Cores	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
	Nominal Area	Min. No. of wires	Max. overall dia.						Nominal	Tolerance				
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5min.	kg/km	
1	1.5	7	1.7	1.0	1.0	6.1	0.3	1.1	9.8	0.6	12.2	1,320	3,500	170
	2.5	7	2.2	1.0	1.0	6.5	0.3	1.1	10.2	0.6	7.56	1,110	3,500	190
	4	7	2.7	1.0	1.0	7.0	0.3	1.1	10.7	0.6	4.70	940	3,500	210
	6	7	3.3	1.0	1.0	7.6	0.3	1.2	11.5	0.6	3.110	800	3,500	250
	10	7	4.2	1.0	1.0	8.5	0.3	1.2	12.4	0.7	1.840	650	3,500	310
	16	7	5.3	1.0	1.0	9.5	0.3	1.2	13.4	0.7	1.160	540	3,500	390
	25	7	6.6	1.2	1.0	11.2	0.3	1.3	15.3	0.8	0.734	520	3,500	530
	35	7	7.9	1.2	1.0	12.3	0.3	1.3	16.4	0.8	0.529	450	3,500	650
	50	19	9.1	1.4	1.0	14.1	0.3	1.4	18.4	0.9	0.391	440	3,500	830
	70	19	11.0	1.4	1.0	15.8	0.3	1.5	20.3	0.9	0.270	380	3,500	1,080
	95	19	12.9	1.6	1.0	18.1	0.3	1.6	22.8	1.0	0.195	370	3,500	1,410
	120	37	14.5	1.6	1.0	19.7	0.3	1.6	24.4	1.0	0.154	330	3,500	1,680
	150	37	16.2	1.8	1.0	21.5	0.3	1.7	26.4	1.1	0.126	330	3,500	2,000
	185	37	18.0	2.0	1.0	23.8	0.3	1.8	28.9	1.2	0.100	330	3,500	2,440
	240	61	20.6	2.2	1.0	26.8	0.3	1.9	32.1	1.3	0.0762	320	3,500	3,100
	300	61	23.1	2.4	1.2	30.4	0.4	2.1	36.5	1.4	0.0607	310	3,500	3,960
	400	61	26.1	2.6	1.2	34.6	0.4	2.3	41.1	1.9	0.0475	290	3,500	5,220
	500	61	29.2	2.8	1.2	37.7	0.4	2.4	44.4	2.1	0.0369	280	3,500	6,220
	630	91	33.2	2.8	1.4	42.3	0.4	2.6	49.4	2.3	0.0286	250	3,500	7,910

0.6/1kV BFOU, 0.6/1kV BFCU, 0.6/1kV BFBU

2	1.5	7	1.7	1.0	1.0	10.2	0.3	1.3	14.3	0.9	12.2	1,320	3,500	330	
	2.5	7	2.2	1.0	1.0	11.0	0.3	1.3	15.1	0.9	7.56	1,110	3,500	380	
	4	7	2.7	1.0	1.0	12.0	0.3	1.3	16.1	0.9	4.70	940	3,500	450	
	6	7	3.3	1.0	1.0	13.2	0.3	1.4	17.5	1.0	3.110	800	3,500	540	
	10	7	4.2	1.0	1.0	15.0	0.3	1.5	19.5	1.1	1.840	650	3,500	660	
	16	7	5.3	1.0	1.0	17.0	0.3	1.5	21.5	1.2	1.160	540	3,500	840	
	25	7	6.6	1.2	1.0	20.4	0.3	1.7	25.3	1.3	0.734	520	3,500	1,170	
	35	7	7.9	1.2	1.0	22.6	0.3	1.8	27.7	1.4	0.529	450	3,500	1,450	
	50	19	9.1	1.4	1.0	26.2	0.3	1.9	31.5	1.6	0.391	440	3,500	1,870	
	70	19	11.0	1.4	1.2	30.4	0.4	2.1	36.5	1.8	0.270	380	3,500	2,620	
	95	19	12.9	1.6	1.2	35.0	0.4	2.3	41.5	2.0	0.195	370	3,500	3,410	
	120	37	14.5	1.6	1.4	38.6	0.4	2.4	45.3	2.1	0.154	330	3,500	4,130	
	150	37	16.2	1.8	1.4	42.2	0.4	2.6	49.3	2.3	0.126	330	3,500	4,900	
	185	37	18.0	2.0	1.4	46.8	0.4	2.7	54.1	2.5	0.100	330	3,500	5,950	
	240	61	20.6	2.2	1.6	53.4	0.4	3.0	61.3	2.8	0.0762	320	3,500	7,670	
	300	61	23.1	2.4	1.6	59.0	0.4	3.2	67.3	3.0	0.0607	310	3,500	9,310	
	2C+E	1.5	7	1.7	1.0	1.0	10.8	0.3	1.3	14.9	0.9	12.2	1,320	3,500	370
	2C+E	2.5	7	2.2	1.0	1.0	11.7	0.3	1.3	15.8	0.9	7.56	1,110	3,500	430
	2C+E	4	7	2.7	1.0	1.0	12.8	0.3	1.4	17.1	1.0	4.70	940	3,500	520
2C+E	6	7	3.3	1.0	1.0	14.1	0.3	1.4	18.4	1.0	3.110	800	3,500	630	
2C+E	10	7	4.2	1.0	1.0	16.0	0.3	1.5	20.5	1.1	1.840	650	3,500	800	
2C+E	16	7	5.3	1.0	1.0	18.2	0.3	1.6	22.9	1.2	1.160	540	3,500	1,050	
2C	25	7	6.6	1.2	1.0	21.2	0.3	1.7	26.1	1.3	0.734	520	3,500	1,360	
Earth	16	7	5.3	1.0						1.160					
2C	35	7	7.9	1.2	1.0	23.8	0.3	1.8	28.9	1.5	0.529	450	3,500	1,750	
Earth	25	7	6.6	1.2						0.734					
2C	50	19	9.1	1.4	1.0	27.0	0.3	1.9	32.3	1.6	0.391	440	3,500	2,150	
Earth	25	7	6.6	1.2						0.734					
2C	70	19	11.0	1.4	1.2	31.2	0.4	2.1	37.3	1.8	0.270	380	3,500	2,990	
Earth	35	7	7.9	1.2						0.529					
2C	95	19	12.9	1.6	1.2	36.0	0.4	2.3	42.5	2.0	0.195	370	3,500	3,910	
Earth	50	19	9.1	1.4						0.391					
2C	120	37	14.5	1.6	1.4	39.9	0.4	2.5	46.8	2.2	0.154	330	3,500	4,850	
Earth	70	19	11.0	1.4						0.270					
2C	150	37	16.2	1.8	1.4	44.0	0.4	2.6	51.1	2.3	0.126	330	3,500	5,880	
Earth	95	19	12.9	1.6						0.195					
2C	185	37	18.0	2.0	1.4	48.0	0.4	2.8	55.5	2.5	0.100	330	3,500	6,920	
Earth	95	19	12.9	1.6						0.195					
2C	240	61	20.6	2.2	1.6	54.6	0.4	3.1	62.7	2.8	0.0762	320	3,500	8,860	
Earth	120	37	14.5	1.6						0.154					

HV Power Cable  
 LV Power & Lighting Cable  
 Instrumentation & Communication Cable  
 Earthing & Bonding wire  
 VFD Cable  
 Technical Information

# LV Power & Lighting Cable

## 0.6/1kV BFOU, 0.6/1kV BFCU, 0.6/1kV BFBU

No. of Cores	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
	Nominal Area	Min. No. of wires	Max. overall dia.						Nominal	Tolerance				
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5min.	kg/km	
3	1.5	7	1.7	1.0	1.0	10.8	0.3	1.3	14.9	0.9	12.2	1,320	3,500	370
	2.5	7	2.2	1.0	1.0	11.7	0.3	1.3	15.8	0.9	7.56	1,110	3,500	430
	4	7	2.7	1.0	1.0	12.8	0.3	1.4	17.1	1.0	4.70	940	3,500	520
	6	7	3.3	1.0	1.0	14.1	0.3	1.4	18.4	1.0	3.110	800	3,500	630
	10	7	4.2	1.0	1.0	16.0	0.3	1.5	20.5	1.1	1.840	650	3,500	800
	16	7	5.3	1.0	1.0	18.2	0.3	1.6	22.9	1.2	1.160	540	3,500	1,050
	25	7	6.6	1.2	1.0	21.8	0.3	1.7	26.7	1.4	0.734	520	3,500	1,470
	35	7	7.9	1.2	1.0	24.2	0.3	1.8	29.3	1.5	0.529	450	3,500	1,850
	50	19	9.1	1.4	1.2	28.9	0.3	2.0	34.4	1.7	0.391	440	3,500	2,510
	70	19	11.0	1.4	1.2	32.5	0.4	2.2	38.8	1.9	0.270	380	3,500	3,380
	95	19	12.9	1.6	1.2	37.5	0.4	2.4	44.2	2.1	0.195	370	3,500	4,440
	120	37	14.5	1.6	1.4	41.3	0.4	2.5	48.2	2.2	0.154	330	3,500	5,390
	150	37	16.2	1.8	1.4	45.2	0.4	2.7	52.5	2.4	0.126	330	3,500	6,440
	185	37	18.0	2.0	1.6	50.8	0.4	2.9	58.5	2.6	0.100	330	3,500	8,010
240	61	20.6	2.2	1.6	57.2	0.4	3.2	65.5	2.9	0.0762	320	3,500	10,200	
300	61	23.1	2.4	1.6	63.3	0.4	3.4	72.0	3.2	0.0607	310	3,500	12,440	
3C+E	1.5	7	1.7	1.0	1.0	11.9	0.3	1.3	16.0	0.9	12.2	1,320	3,500	430
3C+E	2.5	7	2.2	1.0	1.0	12.9	0.3	1.4	17.2	1.0	7.56	1,110	3,500	510
3C+E	4	7	2.7	1.0	1.0	14.1	0.3	1.4	18.4	1.0	4.70	940	3,500	610
3C+E	6	7	3.3	1.0	1.0	15.5	0.3	1.5	20.0	1.1	3.110	800	3,500	750
3C+E	10	7	4.2	1.0	1.0	17.7	0.3	1.6	22.4	1.2	1.840	650	3,500	980
3C+E	16	7	5.3	1.0	1.0	20.1	0.3	1.7	25.0	1.3	1.160	540	3,500	1,290
3C	25	7	6.6	1.2	1.0	23.7	0.3	1.8	28.8	1.5	0.734	520	3,500	1,730
Earth	16	7	5.3	1.0							1.160			
3C	35	7	7.9	1.2	1.0	26.5	0.3	1.9	31.8	1.6	0.529	450	3,500	2,220
Earth	25	7	6.6	1.2							0.734			
3C	50	19	9.1	1.4	1.2	31.0	0.4	2.1	37.1	1.8	0.391	440	3,500	2,970
Earth	25	7	6.6	1.2							0.734			
3C	70	19	11.0	1.4	1.2	34.9	0.4	2.3	41.4	2.0	0.270	380	3,500	3,870
Earth	35	7	7.9	1.2							0.529			
3C	95	19	12.9	1.6	1.4	40.7	0.4	2.5	47.6	2.2	0.195	370	3,500	5,160
Earth	50	19	9.1	1.4							0.391			
3C	120	37	14.5	1.6	1.4	44.6	0.4	2.7	51.9	2.4	0.154	330	3,500	6,310
Earth	70	19	11.0	1.4							0.270			
3C	150	37	16.2	1.8	1.6	49.7	0.4	2.9	57.4	2.6	0.126	330	3,500	7,770
Earth	95	19	12.9	1.6							0.195			
3C	185	37	18.0	2.0	1.6	54.5	0.4	3.0	62.4	2.8	0.100	330	3,500	9,220
Earth	95	19	12.9	1.6							0.195			
3C	240	61	20.6	2.2	1.6	61.2	0.4	3.3	69.7	3.1	0.0762	320	3,500	11,680
Earth	120	37	14.5	1.6							0.154			
4	1.5	7	1.7	1.0	1.0	11.9	0.3	1.3	16.0	0.9	12.2	1,320	3,500	430
	2.5	7	2.2	1.0	1.0	12.9	0.3	1.4	17.2	1.0	7.56	1,110	3,500	510
	4	7	2.7	1.0	1.0	14.1	0.3	1.4	18.4	1.0	4.70	940	3,500	610
	6	7	3.3	1.0	1.0	15.5	0.3	1.5	20.0	1.1	3.110	800	3,500	750
	10	7	4.2	1.0	1.0	17.7	0.3	1.6	22.4	1.2	1.840	650	3,500	980
	16	7	5.3	1.0	1.0	20.1	0.3	1.7	25.0	1.3	1.160	540	3,500	1,290
	25	7	6.6	1.2	1.0	24.2	0.3	1.8	29.3	1.5	0.734	520	3,500	1,830
	35	7	7.9	1.2	1.0	26.9	0.3	1.9	32.2	1.6	0.529	450	3,500	2,320
	50	19	9.1	1.4	1.2	32.0	0.4	2.1	38.1	1.8	0.391	440	3,500	3,230
	70	19	11.0	1.4	1.2	36.1	0.4	2.3	42.6	2.0	0.270	380	3,500	4,240
	95	19	12.9	1.6	1.4	42.1	0.4	2.6	49.2	2.3	0.195	370	3,500	5,700
	120	37	14.5	1.6	1.4	45.9	0.4	2.7	53.2	2.4	0.154	330	3,500	6,850
	150	37	16.2	1.8	1.6	50.9	0.4	2.9	58.6	2.6	0.126	330	3,500	8,310
	185	37	18.0	2.0	1.6	56.4	0.4	3.1	64.5	2.9	0.100	330	3,500	10,200
240	61	20.6	2.2	1.6	63.7	0.4	3.4	72.4	3.2	0.0762	320	3,500	13,030	
300	61	23.1	2.4	1.8	70.8	0.4	3.7	80.1	3.5	0.0607	310	3,500	16,060	

0.6/1kV BFOU, 0.6/1kV BFCU, 0.6/1kV BFBU

No. of Cores	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
	Nominal Area	Min. No. of wires	Max. overall dia.						Nominal	Tolerance				
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5min.	kg/km	
4C+E	1.5	7	1.7	1.0	1.0	13.1	0.3	1.4	17.4	1.0	12.2	1,320	3,500	500
4C+E	2.5	7	2.2	1.0	1.0	14.2	0.3	1.4	18.5	1.0	7.56	1,110	3,500	590
4C+E	4	7	2.7	1.0	1.0	15.5	0.3	1.5	20.0	1.1	4.70	940	3,500	720
4C+E	6	7	3.3	1.0	1.0	17.1	0.3	1.5	21.6	1.2	3.110	800	3,500	880
4C+E	10	7	4.2	1.0	1.0	19.6	0.3	1.6	24.3	1.3	1.840	650	3,500	1,160
4C+E	16	7	5.3	1.0	1.0	22.3	0.3	1.7	27.2	1.4	1.160	540	3,500	1,540
4C	25	7	6.6	1.2	1.0	26.3	0.3	1.9	31.6	1.6	0.734	520	3,500	2,110
Earth	16	7	5.3	1.0							1.160			
4C	35	7	7.9	1.2	1.2	30.3	0.4	2.1	36.4	1.8	0.529	450	3,500	2,910
Earth	25	7	6.6	1.2							0.734			
4C	50	19	9.1	1.4	1.2	34.5	0.4	2.2	40.8	1.9	0.391	440	3,500	3,640
Earth	25	7	6.6	1.2							0.734			
4C	70	19	11.0	1.4	1.4	39.3	0.4	2.4	46.0	2.1	0.270	380	3,500	4,840
Earth	35	7	7.9	1.2							0.529			
4C	95	19	12.9	1.6	1.4	45.4	0.4	2.7	52.7	2.4	0.195	370	3,500	6,420
Earth	50	19	9.1	1.4							0.391			
4C	120	37	14.5	1.6	1.6	50.3	0.4	2.9	58.0	2.6	0.154	330	3,500	7,950
Earth	70	19	11.0	1.4							0.270			
4C	150	37	16.2	1.8	1.6	55.4	0.4	3.1	63.5	2.8	0.126	330	3,500	9,630
Earth	95	19	12.9	1.6							0.195			
4C	185	37	18.0	2.0	1.6	60.8	0.4	3.3	69.3	3.1	0.100	330	3,500	11,540
Earth	95	19	12.9	1.6							0.195			
4C	240	61	20.6	2.2	1.8	68.8	0.4	3.6	77.9	3.4	0.0762	320	3,500	14,760
Earth	120	37	14.5	1.6							0.154			
	1.5	7	1.7	1.0	1.0	13.1	0.3	1.4	17.4	1.0	12.2	1,320	3,500	500
	2.5	7	2.2	1.0	1.0	14.2	0.3	1.4	18.5	1.0	7.56	1,110	3,500	590
	4	7	2.7	1.0	1.0	15.5	0.3	1.5	20.0	1.1	4.70	940	3,500	720
	6	7	3.3	1.0	1.0	17.1	0.3	1.5	21.6	1.2	3.110	800	3,500	880
	10	7	4.2	1.0	1.0	19.6	0.3	1.6	24.3	1.3	1.840	650	3,500	1,160
	16	7	5.3	1.0	1.0	22.3	0.3	1.7	27.2	1.4	1.160	540	3,500	1,540
	25	7	6.6	1.2	1.0	26.8	0.3	1.9	32.1	1.6	0.734	520	3,500	2,220
5	35	7	7.9	1.2	1.2	30.6	0.4	2.1	36.7	1.8	0.529	450	3,500	3,010
	50	19	9.1	1.4	1.2	35.5	0.4	2.3	42.0	2.0	0.391	440	3,500	3,930
	70	19	11.0	1.4	1.4	40.5	0.4	2.5	47.4	2.2	0.270	380	3,500	5,240
	95	19	12.9	1.6	1.4	46.7	0.4	2.7	54.0	2.5	0.195	370	3,500	6,930
	120	37	14.5	1.6	1.6	51.6	0.4	2.9	59.3	2.7	0.154	330	3,500	8,500
	150	37	16.2	1.8	1.6	56.5	0.4	3.1	64.6	2.9	0.126	330	3,500	10,170
	185	37	18.0	2.0	1.6	62.7	0.4	3.4	71.4	3.2	0.100	330	3,500	12,540
	240	61	20.6	2.2	1.8	71.2	0.4	3.7	80.5	3.5	0.0762	320	3,500	16,130

HV Power Cable

LV Power & Lighting Cable

Instrumentation & Communication Cable

Earthing & Bonding wire

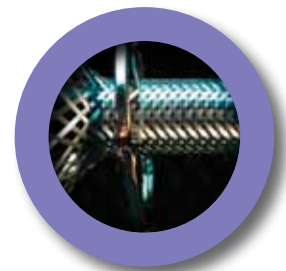
VFD Cable

Technical Information

# LV Power & Lighting Cable

## 0.6/1kV BFOU, 0.6/1kV BFCU, 0.6/1kV BFBU

No. of Cores	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
	Nominal Area	Min. No. of wires	Max. overall dia.						Nominal	Tolerance				
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5min.	kg/km	
2	1.0	7	1.4	1.0	1.0	9.6	0.3	1.2	13.5	0.8	18.2	1,490	3,500	280
5	1.0	7	1.4	1.0	1.0	12.3	0.3	1.3	16.4	1.0	18.2	1,490	3,500	420
7	1.0	7	1.4	1.0	1.0	13.4	0.3	1.4	17.7	1.0	18.2	1,490	3,500	500
8	1.0	7	1.4	1.0	1.0	14.6	0.3	1.4	18.9	1.1	18.2	1,490	3,500	550
9	1.0	7	1.4	1.0	1.0	15.7	0.3	1.5	20.2	1.1	18.2	1,490	3,500	610
10	1.0	7	1.4	1.0	1.0	17.2	0.3	1.5	21.7	1.2	18.2	1,490	3,500	670
12	1.0	7	1.4	1.0	1.0	17.8	0.3	1.6	22.5	1.2	18.2	1,490	3,500	750
14	1.0	7	1.4	1.0	1.0	18.8	0.3	1.6	23.5	1.2	18.2	1,490	3,500	820
16	1.0	7	1.4	1.0	1.0	19.9	0.3	1.6	24.6	1.3	18.2	1,490	3,500	900
19	1.0	7	1.4	1.0	1.0	21.0	0.3	1.7	25.9	1.3	18.2	1,490	3,500	1,010
24	1.0	7	1.4	1.0	1.0	24.8	0.3	1.8	29.9	1.5	18.2	1,490	3,500	1,240
27	1.0	7	1.4	1.0	1.0	25.4	0.3	1.9	30.7	1.5	18.2	1,490	3,500	1,350
30	1.0	7	1.4	1.0	1.0	26.4	0.3	1.9	31.7	1.6	18.2	1,490	3,500	1,450
37	1.0	7	1.4	1.0	1.2	29.4	0.3	2.0	34.9	1.7	18.2	1,490	3,500	1,790
44	1.0	7	1.4	1.0	1.2	33.2	0.4	2.2	39.5	1.9	18.2	1,490	3,500	2,200
2	1.5	7	1.7	1.0	1.0	10.2	0.3	1.3	14.3	0.9	12.2	1,320	3,500	330
5	1.5	7	1.7	1.0	1.0	13.1	0.3	1.4	17.4	1.0	12.2	1,320	3,500	500
7	1.5	7	1.7	1.0	1.0	14.3	0.3	1.4	18.6	1.0	12.2	1,320	3,500	570
8	1.5	7	1.7	1.0	1.0	15.6	0.3	1.5	20.1	1.1	12.2	1,320	3,500	640
9	1.5	7	1.7	1.0	1.0	16.8	0.3	1.5	21.3	1.2	12.2	1,320	3,500	700
10	1.5	7	1.7	1.0	1.0	18.4	0.3	1.6	23.1	1.2	12.2	1,320	3,500	780
12	1.5	7	1.7	1.0	1.0	19.0	0.3	1.6	23.7	1.2	12.2	1,320	3,500	850
14	1.5	7	1.7	1.0	1.0	20.1	0.3	1.7	25.0	1.3	12.2	1,320	3,500	950
16	1.5	7	1.7	1.0	1.0	21.3	0.3	1.7	26.2	1.3	12.2	1,320	3,500	1,050
19	1.5	7	1.7	1.0	1.0	22.5	0.3	1.8	27.6	1.4	12.2	1,320	3,500	1,180
24	1.5	7	1.7	1.0	1.0	26.6	0.3	1.9	31.9	1.6	12.2	1,320	3,500	1,460
27	1.5	7	1.7	1.0	1.2	28.0	0.3	2.0	33.5	1.6	12.2	1,320	3,500	1,670
30	1.5	7	1.7	1.0	1.2	29.1	0.3	2.0	34.6	1.7	12.2	1,320	3,500	1,800
37	1.5	7	1.7	1.0	1.2	31.5	0.4	2.1	37.6	1.8	12.2	1,320	3,500	2,190
44	1.5	7	1.7	1.0	1.2	35.6	0.4	2.3	42.1	2.0	12.2	1,320	3,500	2,580
2	2.5	7	2.2	1.0	1.0	11.0	0.3	1.3	15.1	0.9	7.56	1,110	3,500	380
5	2.5	7	2.2	1.0	1.0	14.2	0.3	1.4	18.5	1.0	7.56	1,110	3,500	590
7	2.5	7	2.2	1.0	1.0	15.5	0.3	1.5	20.0	1.1	7.56	1,110	3,500	680
8	2.5	7	2.2	1.0	1.0	15.5	0.3	1.5	20.0	1.1	7.56	1,110	3,500	680
9	2.5	7	2.2	1.0	1.0	18.3	0.3	1.6	23.0	1.2	7.56	1,110	3,500	840
10	2.5	7	2.2	1.0	1.0	20.0	0.3	1.7	24.9	1.3	7.56	1,110	3,500	940
12	2.5	7	2.2	1.0	1.0	20.7	0.3	1.7	25.6	1.3	7.56	1,110	3,500	1,040
14	2.5	7	2.2	1.0	1.0	21.9	0.3	1.7	26.8	1.4	7.56	1,110	3,500	1,150
16	2.5	7	2.2	1.0	1.0	23.2	0.3	1.8	28.3	1.4	7.56	1,110	3,500	1,280
19	2.5	7	2.2	1.0	1.0	24.5	0.3	1.8	29.6	1.5	7.56	1,110	3,500	1,440
24	2.5	7	2.2	1.0	1.2	29.8	0.3	2.0	35.3	1.7	7.56	1,110	3,500	1,890
27	2.5	7	2.2	1.0	1.2	30.5	0.4	2.1	36.6	1.8	7.56	1,110	3,500	2,140
30	2.5	7	2.2	1.0	1.2	31.7	0.4	2.1	37.8	1.8	7.56	1,110	3,500	2,310
37	2.5	7	2.2	1.0	1.2	34.3	0.4	2.2	40.6	1.9	7.56	1,110	3,500	2,710
44	2.5	7	2.2	1.0	1.4	39.2	0.4	2.4	45.9	2.1	7.56	1,110	3,500	3,250
2	4	7	2.7	1.0	1.0	12.0	0.3	1.3	16.1	0.9	4.70	940	3,500	450
5	4	7	2.7	1.0	1.0	15.5	0.3	1.5	20.0	1.1	4.70	940	3,500	720
7	4	7	2.7	1.0	1.0	17.0	0.3	1.5	21.5	1.2	4.70	940	3,500	830
8	4	7	2.7	1.0	1.0	18.5	0.3	1.6	23.2	1.2	4.70	940	3,500	930
9	4	7	2.7	1.0	1.0	20.1	0.3	1.7	25.0	1.3	4.70	940	3,500	1,040
10	4	7	2.7	1.0	1.0	22.0	0.3	1.7	26.9	1.4	4.70	940	3,500	1,150
12	4	7	2.7	1.0	1.0	22.8	0.3	1.8	27.9	1.4	4.70	940	3,500	1,300
14	4	7	2.7	1.0	1.0	24.1	0.3	1.8	29.2	1.5	4.70	940	3,500	1,450
16	4	7	2.7	1.0	1.0	25.5	0.3	1.9	30.8	1.5	4.70	940	3,500	1,620
19	4	7	2.7	1.0	1.0	27.0	0.3	1.9	32.3	1.6	4.70	940	3,500	1,830
24	4	7	2.7	1.0	1.2	32.8	0.4	2.2	39.1	1.9	4.70	940	3,500	2,500
27	4	7	2.7	1.0	1.2	33.6	0.4	2.2	39.9	1.9	4.70	940	3,500	2,700
30	4	7	2.7	1.0	1.2	34.9	0.4	2.3	41.4	2.0	4.70	940	3,500	2,940
37	4	7	2.7	1.0	1.2	37.8	0.4	2.4	44.5	2.1	4.70	940	3,500	3,460
44	4	7	2.7	1.0	1.4	43.2	0.4	2.6	50.3	2.3	4.70	940	3,500	4,160



## Instrumentation & Communication Cable



250V RU(c)	32 ~ 34
250V RU(i), 250V RU(i&c)	35 ~ 37
250V RFOU(c), RFCU(c), RFBU(c)	38 ~ 40
250V RFOU(i), 250 RFCU(i), 250V RFBU(i) 250V RFOU(i&c), 250 RFCU(i&c), 250V RFBU(i&c)	41 ~ 43
250V BU(c)	44 ~ 46
250V BU(i), 250V BU(i&c)	47 ~ 49
250V BFOU(c), BFCU(c), BFBU(c)	50 ~ 52
250V BFOU(i), 250 BFCU(i), 250V BFBU(i) 250V BFOU(i&c), 250 BFCU(i&c), 250V BFBU(i&c)	53 ~ 55



# Instrumentation & Communication Cable



## Cable Designation (S106)

250V RU(c)

### 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 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
	Insulation	<b>R</b>	- 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	<b>(c)</b>	- CU/PS or AL/PS tape + Tinned copper drain wire
	Sheath	<b>U</b>	- SHF2 as per IEC 60092-360 - <b>Option</b> : 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



## 250V RU(c)

No. of Pairs	Conductor			Thickness of Insulation	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 <sup>2</sup>	EA	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5min.	kg/km
1P	0.75	7	1.2	0.6	1.0	7.5	1.0	26.3	1,170	1,500	90
2P	0.75	7	1.2	0.6	1.1	10.9	1.1	26.3	1,170	1,500	170
3P	0.75	7	1.2	0.6	1.2	11.7	1.3	26.3	1,170	1,500	210
4P	0.75	7	1.2	0.6	1.2	12.5	1.3	26.3	1,170	1,500	240
5P	0.75	7	1.2	0.6	1.2	13.9	1.3	26.3	1,170	1,500	290
6P	0.75	7	1.2	0.6	1.3	15.1	1.4	26.3	1,170	1,500	350
7P	0.75	7	1.2	0.6	1.3	15.1	1.4	26.3	1,170	1,500	360
8P	0.75	7	1.2	0.6	1.3	16.0	1.4	26.3	1,170	1,500	410
10P	0.75	7	1.2	0.6	1.4	18.1	1.5	26.3	1,170	1,500	510
12P	0.75	7	1.2	0.6	1.4	18.8	1.5	26.3	1,170	1,500	560
14P	0.75	7	1.2	0.6	1.5	19.6	1.7	26.3	1,170	1,500	630
16P	0.75	7	1.2	0.6	1.5	21.1	1.7	26.3	1,170	1,500	720
19P	0.75	7	1.2	0.6	1.6	22.1	1.8	26.3	1,170	1,500	820
24P	0.75	7	1.2	0.6	1.7	25.2	2.0	26.3	1,170	1,500	1,040
32P	0.75	7	1.2	0.6	1.8	28.8	2.1	26.3	1,170	1,500	1,350
1P	1.0	7	1.4	0.6	1.0	7.9	1.0	19.3	1,050	1,500	110
2P	1.0	7	1.4	0.6	1.2	11.7	1.3	19.3	1,050	1,500	200
3P	1.0	7	1.4	0.6	1.2	12.6	1.3	19.3	1,050	1,500	240
4P	1.0	7	1.4	0.6	1.2	13.3	1.3	19.3	1,050	1,500	280
5P	1.0	7	1.4	0.6	1.3	15.1	1.4	19.3	1,050	1,500	350
6P	1.0	7	1.4	0.6	1.3	16.1	1.4	19.3	1,050	1,500	400
7P	1.0	7	1.4	0.6	1.3	16.1	1.4	19.3	1,050	1,500	420
8P	1.0	7	1.4	0.6	1.4	17.2	1.5	19.3	1,050	1,500	480
10P	1.0	7	1.4	0.6	1.5	19.4	1.6	19.3	1,050	1,500	610
12P	1.0	7	1.4	0.6	1.5	20.3	1.6	19.3	1,050	1,500	680
14P	1.0	7	1.4	0.6	1.5	21.1	1.7	19.3	1,050	1,500	750
16P	1.0	7	1.4	0.6	1.6	22.7	1.8	19.3	1,050	1,500	860
19P	1.0	7	1.4	0.6	1.6	23.8	1.8	19.3	1,050	1,500	970
24P	1.0	7	1.4	0.6	1.7	27.1	1.9	19.3	1,050	1,500	1,230
32P	1.0	7	1.4	0.6	1.9	31.0	2.1	19.3	1,050	1,500	1,630
1P	1.5	7	1.7	0.7	1.1	9.0	1.2	12.9	1,020	1,500	140
2P	1.5	7	1.7	0.7	1.2	13.5	1.2	12.9	1,020	1,500	260
3P	1.5	7	1.7	0.7	1.3	14.6	1.3	12.9	1,020	1,500	320
4P	1.5	7	1.7	0.7	1.3	15.5	1.3	12.9	1,020	1,500	380
5P	1.5	7	1.7	0.7	1.4	17.6	1.4	12.9	1,020	1,500	470
6P	1.5	7	1.7	0.7	1.4	18.8	1.5	12.9	1,020	1,500	540
7P	1.5	7	1.7	0.7	1.4	18.8	1.5	12.9	1,020	1,500	570
8P	1.5	7	1.7	0.7	1.5	20.2	1.5	12.9	1,020	1,500	650
10P	1.5	7	1.7	0.7	1.6	22.8	1.6	12.9	1,020	1,500	820
12P	1.5	7	1.7	0.7	1.6	23.8	1.7	12.9	1,020	1,500	920
14P	1.5	7	1.7	0.7	1.7	24.8	1.9	12.9	1,020	1,500	1,040
16P	1.5	7	1.7	0.7	1.7	26.7	1.9	12.9	1,020	1,500	1,180
19P	1.5	7	1.7	0.7	1.8	28.0	2.0	12.9	1,020	1,500	1,350
24P	1.5	7	1.7	0.7	1.9	32.1	2.0	12.9	1,020	1,500	1,720
32P	1.5	7	1.7	0.7	2.1	36.7	2.1	12.9	1,020	1,500	2,270
1P	2.5	7	2.2	0.7	1.1	9.9	1.1	8.02	850	1,500	170
2P	2.5	7	2.2	0.7	1.3	15.1	1.3	8.02	850	1,500	340
3P	2.5	7	2.2	0.7	1.3	16.1	1.3	8.02	850	1,500	420
4P	2.5	7	2.2	0.7	1.4	17.3	1.3	8.02	850	1,500	510
5P	2.5	7	2.2	0.7	1.5	19.5	1.6	8.02	850	1,500	630
6P	2.5	7	2.2	0.7	1.5	21.0	1.6	8.02	850	1,500	730
7P	2.5	7	2.2	0.7	1.5	21.0	1.6	8.02	850	1,500	770
8P	2.5	7	2.2	0.7	1.6	22.5	1.7	8.02	850	1,500	890
10P	2.5	7	2.2	0.7	1.7	25.5	1.7	8.02	850	1,500	1,120
12P	2.5	7	2.2	0.7	1.7	26.6	1.8	8.02	850	1,500	1,260
14P	2.5	7	2.2	0.7	1.8	27.7	2.0	8.02	850	1,500	1,420
16P	2.5	7	2.2	0.7	1.8	30.0	2.0	8.02	850	1,500	1,620
19P	2.5	7	2.2	0.7	1.9	31.5	2.1	8.02	850	1,500	1,860
24P	2.5	7	2.2	0.7	2.1	36.0	2.2	8.02	850	1,500	2,400
32P	2.5	7	2.2	0.7	2.3	41.2	2.4	8.02	850	1,500	3,180

HV Power Cable

LV Power &amp; Lighting Cable

Instrumentation &amp; Communication Cable

Earthing &amp; Bonding wire

VFD Cable

Technical Information

# Instrumentation & Communication Cable

## 250V RU(c)

No. of Triads	Conductor			Thickness of Insulation	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 <sup>2</sup>	EA	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5min.	kg/km
1T	0.75	7	1.2	0.6	1.0	7.9	1.0	26.3	1,170	1,500	110
2T	0.75	7	1.2	0.6	1.2	12.1	1.2	26.3	1,170	1,500	220
3T	0.75	7	1.2	0.6	1.2	12.8	1.2	26.3	1,170	1,500	260
4T	0.75	7	1.2	0.6	1.3	14.1	1.3	26.3	1,170	1,500	320
5T	0.75	7	1.2	0.6	1.3	15.6	1.3	26.3	1,170	1,500	380
6T	0.75	7	1.2	0.6	1.4	17.7	1.4	26.3	1,170	1,500	480
7T	0.75	7	1.2	0.6	1.4	17.7	1.4	26.3	1,170	1,500	500
8T	0.75	7	1.2	0.6	1.4	18.9	1.5	26.3	1,170	1,500	570
10T	0.75	7	1.2	0.6	1.5	21.5	1.7	26.3	1,170	1,500	710
12T	0.75	7	1.2	0.6	1.6	22.9	1.7	26.3	1,170	1,500	830
14T	0.75	7	1.2	0.6	1.6	23.8	1.7	26.3	1,170	1,500	920
16T	0.75	7	1.2	0.6	1.7	25.3	1.9	26.3	1,170	1,500	1,040
19T	0.75	7	1.2	0.6	1.8	27.5	2.0	26.3	1,170	1,500	1,230
24T	0.75	7	1.2	0.6	1.9	30.5	2.0	26.3	1,170	1,500	1,520
32T	0.75	7	1.2	0.6	2.0	35.1	2.2	26.3	1,170	1,500	2,000
1T	1.0	7	1.4	0.6	1.0	8.3	1.1	19.3	1,050	1,500	120
2T	1.0	7	1.4	0.6	1.2	12.8	1.2	19.3	1,050	1,500	250
3T	1.0	7	1.4	0.6	1.2	13.6	1.2	19.3	1,050	1,500	300
4T	1.0	7	1.4	0.6	1.3	15.1	1.4	19.3	1,050	1,500	370
5T	1.0	7	1.4	0.6	1.3	16.6	1.4	19.3	1,050	1,500	450
6T	1.0	7	1.4	0.6	1.4	18.8	1.5	19.3	1,050	1,500	560
7T	1.0	7	1.4	0.6	1.4	18.8	1.5	19.3	1,050	1,500	590
8T	1.0	7	1.4	0.6	1.5	20.3	1.5	19.3	1,050	1,500	680
10T	1.0	7	1.4	0.6	1.6	23.1	1.7	19.3	1,050	1,500	860
12T	1.0	7	1.4	0.6	1.6	24.3	1.8	19.3	1,050	1,500	970
14T	1.0	7	1.4	0.6	1.7	25.4	1.9	19.3	1,050	1,500	1,100
16T	1.0	7	1.4	0.6	1.7	27.1	1.9	19.3	1,050	1,500	1,230
19T	1.0	7	1.4	0.6	1.8	29.4	2.0	19.3	1,050	1,500	1,450
24T	1.0	7	1.4	0.6	2.0	32.8	2.1	19.3	1,050	1,500	1,830
32T	1.0	7	1.4	0.6	2.1	37.7	2.3	19.3	1,050	1,500	2,410
1T	1.5	7	1.7	0.7	1.1	9.6	1.1	12.9	1,020	1,500	160
2T	1.5	7	1.7	0.7	1.3	15.0	1.3	12.9	1,020	1,500	330
3T	1.5	7	1.7	0.7	1.3	15.9	1.3	12.9	1,020	1,500	400
4T	1.5	7	1.7	0.7	1.4	17.6	1.3	12.9	1,020	1,500	500
5T	1.5	7	1.7	0.7	1.5	19.6	1.6	12.9	1,020	1,500	620
6T	1.5	7	1.7	0.7	1.6	22.2	1.7	12.9	1,020	1,500	780
7T	1.5	7	1.7	0.7	1.6	22.2	1.7	12.9	1,020	1,500	820
8T	1.5	7	1.7	0.7	1.6	23.8	1.7	12.9	1,020	1,500	920
10T	1.5	7	1.7	0.7	1.7	27.1	1.8	12.9	1,020	1,500	1,170
12T	1.5	7	1.7	0.7	1.8	28.8	1.9	12.9	1,020	1,500	1,360
14T	1.5	7	1.7	0.7	1.9	30.2	1.9	12.9	1,020	1,500	1,530
16T	1.5	7	1.7	0.7	1.9	32.2	2.0	12.9	1,020	1,500	1,730
19T	1.5	7	1.7	0.7	2.0	34.9	2.1	12.9	1,020	1,500	2,030
24T	1.5	7	1.7	0.7	2.2	38.8	2.3	12.9	1,020	1,500	2,560
32T	1.5	7	1.7	0.7	2.4	44.8	2.5	12.9	1,020	1,500	3,420
1T	2.5	7	2.2	0.7	1.1	10.4	1.0	8.02	850	1,500	200
2T	2.5	7	2.2	0.7	1.3	16.4	1.2	8.02	850	1,500	430
3T	2.5	7	2.2	0.7	1.4	17.7	1.2	8.02	850	1,500	540
4T	2.5	7	2.2	0.7	1.4	19.4	1.3	8.02	850	1,500	660
5T	2.5	7	2.2	0.7	1.5	21.7	1.4	8.02	850	1,500	820
6T	2.5	7	2.2	0.7	1.6	24.7	1.6	8.02	850	1,500	1,020
7T	2.5	7	2.2	0.7	1.6	24.7	1.6	8.02	850	1,500	1,090
8T	2.5	7	2.2	0.7	1.7	26.6	1.6	8.02	850	1,500	1,260
10T	2.5	7	2.2	0.7	1.9	30.5	1.7	8.02	850	1,500	1,620
12T	2.5	7	2.2	0.7	1.9	32.3	1.7	8.02	850	1,500	1,850
14T	2.5	7	2.2	0.7	2.0	33.8	1.7	8.02	850	1,500	2,100
16T	2.5	7	2.2	0.7	2.1	36.0	1.9	8.02	850	1,500	2,400
19T	2.5	7	2.2	0.7	2.2	39.1	1.9	8.02	850	1,500	2,830
24T	2.5	7	2.2	0.7	2.3	43.5	2.1	8.02	850	1,500	3,520
32T	2.5	7	2.2	0.7	2.6	50.3	2.3	8.02	850	1,500	4,750



### Cable Designation (S105, -)

250V RU(i), 250V RU(i&c)

### 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 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
	Insulation	<b>R</b>	- EPR as per IEC 60092-360
	Twisting		- Two/Three Insulated cores shall be twisted together to form a pair/Triad
	Individual screen	<b>(i)</b>	- CU/PS or AL/PS tape + Tinned copper drain wire - In case of 1P, 1T for 250V RU(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	<b>(c)</b>	- CU/PS or AL/PS tape + Tinned copper drain wire
	Sheath	<b>U</b>	- SHF2 as per IEC 60092-360 - <b>Option</b> : 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 RU(i), 250V RU(i&c)

No. of Pairs	Conductor			Thickness of Insulation	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 <sup>2</sup>	EA	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5min.	kg/km	
1P	0.75	7	1.2	0.6	1.0	7.5	1.0	26.3	1,170	1,500	90
2P	0.75	7	1.2	0.6	1.2	11.9	1.2	26.3	1,170	1,500	210
3P	0.75	7	1.2	0.6	1.2	12.5	1.2	26.3	1,170	1,500	250
4P	0.75	7	1.2	0.6	1.2	13.6	1.2	26.3	1,170	1,500	300
5P	0.75	7	1.2	0.6	1.3	15.3	1.3	26.3	1,170	1,500	380
6P	0.75	7	1.2	0.6	1.3	15.9	1.4	26.3	1,170	1,500	420
7P	0.75	7	1.2	0.6	1.3	15.9	1.4	26.3	1,170	1,500	440
8P	0.75	7	1.2	0.6	1.4	17.5	1.4	26.3	1,170	1,500	520
10P	0.75	7	1.2	0.6	1.5	19.9	1.7	26.3	1,170	1,500	660
12P	0.75	7	1.2	0.6	1.5	20.7	1.7	26.3	1,170	1,500	740
14P	0.75	7	1.2	0.6	1.5	21.7	1.7	26.3	1,170	1,500	830
16P	0.75	7	1.2	0.6	1.6	23.4	1.7	26.3	1,170	1,500	950
19P	0.75	7	1.2	0.6	1.6	23.9	1.7	26.3	1,170	1,500	1,050
24P	0.75	7	1.2	0.6	1.8	28.0	2.1	26.3	1,170	1,500	1,390
32P	0.75	7	1.2	0.6	1.9	30.5	2.0	26.3	1,170	1,500	1,730
1P	1.0	7	1.4	0.6	1.0	7.9	1.0	19.3	1,050	1,500	110
2P	1.0	7	1.4	0.6	1.2	12.6	1.2	19.3	1,050	1,500	240
3P	1.0	7	1.4	0.6	1.2	13.3	1.2	19.3	1,050	1,500	290
4P	1.0	7	1.4	0.6	1.3	14.7	1.4	19.3	1,050	1,500	360
5P	1.0	7	1.4	0.6	1.3	16.3	1.4	19.3	1,050	1,500	440
6P	1.0	7	1.4	0.6	1.4	17.0	1.5	19.3	1,050	1,500	500
7P	1.0	7	1.4	0.6	1.4	17.0	1.5	19.3	1,050	1,500	530
8P	1.0	7	1.4	0.6	1.4	18.6	1.5	19.3	1,050	1,500	610
10P	1.0	7	1.4	0.6	1.5	21.3	1.7	19.3	1,050	1,500	780
12P	1.0	7	1.4	0.6	1.6	22.2	1.8	19.3	1,050	1,500	890
14P	1.0	7	1.4	0.6	1.6	23.4	1.8	19.3	1,050	1,500	990
16P	1.0	7	1.4	0.6	1.7	25.1	1.9	19.3	1,050	1,500	1,150
19P	1.0	7	1.4	0.6	1.7	25.7	1.9	19.3	1,050	1,500	1,260
24P	1.0	7	1.4	0.6	1.9	30.2	2.0	19.3	1,050	1,500	1,670
32P	1.0	7	1.4	0.6	2.0	32.8	2.1	19.3	1,050	1,500	2,080
1P	1.5	7	1.7	0.7	1.1	9.0	1.2	12.9	1,020	1,500	140
2P	1.5	7	1.7	0.7	1.3	14.4	1.4	12.9	1,020	1,500	320
3P	1.5	7	1.7	0.7	1.3	15.3	1.4	12.9	1,020	1,500	380
4P	1.5	7	1.7	0.7	1.4	16.9	1.5	12.9	1,020	1,500	470
5P	1.5	7	1.7	0.7	1.4	18.9	1.5	12.9	1,020	1,500	570
6P	1.5	7	1.7	0.7	1.5	19.7	1.6	12.9	1,020	1,500	650
7P	1.5	7	1.7	0.7	1.5	19.7	1.6	12.9	1,020	1,500	690
8P	1.5	7	1.7	0.7	1.5	21.6	1.6	12.9	1,020	1,500	800
10P	1.5	7	1.7	0.7	1.7	24.8	1.8	12.9	1,020	1,500	1,040
12P	1.5	7	1.7	0.7	1.7	25.9	1.8	12.9	1,020	1,500	1,160
14P	1.5	7	1.7	0.7	1.7	27.2	1.8	12.9	1,020	1,500	1,300
16P	1.5	7	1.7	0.7	1.8	29.3	1.9	12.9	1,020	1,500	1,510
19P	1.5	7	1.7	0.7	1.8	30.0	1.9	12.9	1,020	1,500	1,660
24P	1.5	7	1.7	0.7	2.0	35.2	2.1	12.9	1,020	1,500	2,200
32P	1.5	7	1.7	0.7	2.2	38.4	2.3	12.9	1,020	1,500	2,780
1P	2.5	7	2.2	0.7	1.1	9.9	1.1	8.02	850	1,500	170
2P	2.5	7	2.2	0.7	1.3	15.9	1.3	8.02	850	1,500	400
3P	2.5	7	2.2	0.7	1.4	16.9	1.4	8.02	850	1,500	500
4P	2.5	7	2.2	0.7	1.4	18.6	1.4	8.02	850	1,500	610
5P	2.5	7	2.2	0.7	1.5	21.0	1.5	8.02	850	1,500	760
6P	2.5	7	2.2	0.7	1.5	21.8	1.6	8.02	850	1,500	850
7P	2.5	7	2.2	0.7	1.5	21.8	1.6	8.02	850	1,500	910
8P	2.5	7	2.2	0.7	1.6	24.1	1.6	8.02	850	1,500	1,080
10P	2.5	7	2.2	0.7	1.8	27.6	1.8	8.02	850	1,500	1,390
12P	2.5	7	2.2	0.7	1.8	28.8	1.9	8.02	850	1,500	1,570
14P	2.5	7	2.2	0.7	1.9	30.5	1.9	8.02	850	1,500	1,790
16P	2.5	7	2.2	0.7	1.9	32.7	1.9	8.02	850	1,500	2,040
19P	2.5	7	2.2	0.7	2.0	33.5	2.0	8.02	850	1,500	2,290
24P	2.5	7	2.2	0.7	2.2	39.4	2.2	8.02	850	1,500	3,020
32P	2.5	7	2.2	0.7	2.3	42.9	2.4	8.02	850	1,500	3,790

## 250V RU(i), 250V RU(i&amp;c)

No. of Triads	Conductor			Thickness of Insulation	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 <sup>2</sup>	EA	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5min.	kg/km
1T	0.75	7	1.2	0.6	1.0	7.9	1.0	26.3	1,170	1,500	110
2T	0.75	7	1.2	0.6	1.2	12.6	1.2	26.3	1,170	1,500	250
3T	0.75	7	1.2	0.6	1.2	13.4	1.2	26.3	1,170	1,500	300
4T	0.75	7	1.2	0.6	1.3	14.8	1.3	26.3	1,170	1,500	370
5T	0.75	7	1.2	0.6	1.3	16.4	1.4	26.3	1,170	1,500	450
6T	0.75	7	1.2	0.6	1.4	18.6	1.5	26.3	1,170	1,500	560
7T	0.75	7	1.2	0.6	1.4	18.6	1.5	26.3	1,170	1,500	590
8T	0.75	7	1.2	0.6	1.5	19.9	1.6	26.3	1,170	1,500	680
10T	0.75	7	1.2	0.6	1.6	22.6	1.8	26.3	1,170	1,500	860
12T	0.75	7	1.2	0.6	1.6	24.0	1.8	26.3	1,170	1,500	970
14T	0.75	7	1.2	0.6	1.7	25.1	1.9	26.3	1,170	1,500	1,100
16T	0.75	7	1.2	0.6	1.7	26.7	1.9	26.3	1,170	1,500	1,240
19T	0.75	7	1.2	0.6	1.8	28.9	2.0	26.3	1,170	1,500	1,460
24T	0.75	7	1.2	0.6	1.9	32.2	2.0	26.3	1,170	1,500	1,820
32T	0.75	7	1.2	0.6	2.1	37.1	2.2	26.3	1,170	1,500	2,420
1T	1.0	7	1.4	0.6	1.0	8.3	1.1	19.3	1,050	1,500	120
2T	1.0	7	1.4	0.6	1.2	13.4	1.2	19.3	1,050	1,500	280
3T	1.0	7	1.4	0.6	1.3	14.2	1.3	19.3	1,050	1,500	350
4T	1.0	7	1.4	0.6	1.3	15.7	1.3	19.3	1,050	1,500	430
5T	1.0	7	1.4	0.6	1.4	17.5	1.3	19.3	1,050	1,500	530
6T	1.0	7	1.4	0.6	1.5	19.8	1.6	19.3	1,050	1,500	660
7T	1.0	7	1.4	0.6	1.5	19.8	1.6	19.3	1,050	1,500	700
8T	1.0	7	1.4	0.6	1.5	21.2	1.6	19.3	1,050	1,500	800
10T	1.0	7	1.4	0.6	1.6	24.1	1.7	19.3	1,050	1,500	1,000
12T	1.0	7	1.4	0.6	1.7	25.7	1.8	19.3	1,050	1,500	1,170
14T	1.0	7	1.4	0.6	1.7	26.7	1.8	19.3	1,050	1,500	1,300
16T	1.0	7	1.4	0.6	1.8	28.5	1.9	19.3	1,050	1,500	1,480
19T	1.0	7	1.4	0.6	1.9	30.9	2.1	19.3	1,050	1,500	1,750
24T	1.0	7	1.4	0.6	2.0	34.4	2.1	19.3	1,050	1,500	2,180
32T	1.0	7	1.4	0.6	2.2	39.7	2.3	19.3	1,050	1,500	2,900
1T	1.5	7	1.7	0.7	1.1	9.6	1.1	12.9	1,020	1,500	160
2T	1.5	7	1.7	0.7	1.3	15.5	1.3	12.9	1,020	1,500	370
3T	1.5	7	1.7	0.7	1.3	16.4	1.3	12.9	1,020	1,500	450
4T	1.5	7	1.7	0.7	1.4	18.2	1.4	12.9	1,020	1,500	570
5T	1.5	7	1.7	0.7	1.5	20.4	1.5	12.9	1,020	1,500	710
6T	1.5	7	1.7	0.7	1.6	23.1	1.6	12.9	1,020	1,500	880
7T	1.5	7	1.7	0.7	1.6	23.1	1.6	12.9	1,020	1,500	930
8T	1.5	7	1.7	0.7	1.7	24.8	1.8	12.9	1,020	1,500	1,070
10T	1.5	7	1.7	0.7	1.8	28.4	1.9	12.9	1,020	1,500	1,360
12T	1.5	7	1.7	0.7	1.8	30.0	1.9	12.9	1,020	1,500	1,550
14T	1.5	7	1.7	0.7	1.9	31.5	1.9	12.9	1,020	1,500	1,760
16T	1.5	7	1.7	0.7	2.0	33.5	2.0	12.9	1,020	1,500	2,010
19T	1.5	7	1.7	0.7	2.1	36.4	2.2	12.9	1,020	1,500	2,370
24T	1.5	7	1.7	0.7	2.2	40.4	2.2	12.9	1,020	1,500	2,940
32T	1.5	7	1.7	0.7	2.5	46.7	2.6	12.9	1,020	1,500	3,980
1T	2.5	7	2.2	0.7	1.1	10.4	1.0	8.02	850	1,500	200
2T	2.5	7	2.2	0.7	1.4	17.2	1.2	8.02	850	1,500	490
3T	2.5	7	2.2	0.7	1.4	18.2	1.3	8.02	850	1,500	600
4T	2.5	7	2.2	0.7	1.5	20.2	1.3	8.02	850	1,500	760
5T	2.5	7	2.2	0.7	1.6	22.6	1.4	8.02	850	1,500	950
6T	2.5	7	2.2	0.7	1.7	25.7	1.6	8.02	850	1,500	1,170
7T	2.5	7	2.2	0.7	1.7	25.7	1.6	8.02	850	1,500	1,260
8T	2.5	7	2.2	0.7	1.7	27.5	1.6	8.02	850	1,500	1,420
10T	2.5	7	2.2	0.7	1.9	31.6	1.7	8.02	850	1,500	1,830
12T	2.5	7	2.2	0.7	2.0	33.6	1.7	8.02	850	1,500	2,140
14T	2.5	7	2.2	0.7	2.0	35.0	1.8	8.02	850	1,500	2,390
16T	2.5	7	2.2	0.7	2.1	37.4	1.8	8.02	850	1,500	2,730
19T	2.5	7	2.2	0.7	2.2	40.5	1.9	8.02	850	1,500	3,220
24T	2.5	7	2.2	0.7	2.4	45.2	2.2	8.02	850	1,500	4,060
32T	2.5	7	2.2	0.7	2.7	52.1	2.5	8.02	850	1,500	5,470

HV Power Cable

LV Power &amp; Lighting Cable

Instrumentation &amp; Communication Cable

Earthing &amp; Bonding wire

VFD Cable

Technical Information

# Instrumentation & Communication Cable



## Cable Designation (S102)

250V RFOU(c), RFCU(c), RFBUC(c)

### 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 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
	Insulation	<b>R</b>	- 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	<b>(c)</b>	- CU/PS or AL/PS tape + Tinned copper drain wire
	Inner covering	<b>F</b>	- Flame retardant halogen free thermoset compound
	Armor	<b>O</b> <b>(B,C)</b>	- 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	<b>U</b>	- SHF2 as per IEC 60092-360 - <b>Option</b> : 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

## 250V RFOU(c), 250V RFCU(c), 250V RFBU(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°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 <sup>2</sup>	EA	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	7.1	0.3	1.1	10.7	0.8	26.3	1,170	1,500	200
2P	0.75	7	1.2	0.6	1.0	10.4	0.3	1.3	14.3	0.9	26.3	1,170	1,500	330
3P	0.75	7	1.2	0.6	1.0	11.1	0.3	1.3	15.0	1.0	26.3	1,170	1,500	370
4P	0.75	7	1.2	0.6	1.0	11.8	0.3	1.3	15.7	1.0	26.3	1,170	1,500	410
5P	0.75	7	1.2	0.6	1.0	13.2	0.3	1.4	17.3	1.0	26.3	1,170	1,500	480
6P	0.75	7	1.2	0.6	1.0	14.2	0.3	1.4	18.3	1.2	26.3	1,170	1,500	530
7P	0.75	7	1.2	0.6	1.0	14.2	0.3	1.4	18.3	1.2	26.3	1,170	1,500	550
8P	0.75	7	1.2	0.6	1.0	15.2	0.3	1.5	19.3	1.3	26.3	1,170	1,500	610
10P	0.75	7	1.2	0.6	1.0	17.1	0.3	1.5	21.3	1.3	26.3	1,170	1,500	720
12P	0.75	7	1.2	0.6	1.0	17.8	0.3	1.6	22.1	1.4	26.3	1,170	1,500	790
14P	0.75	7	1.2	0.6	1.0	18.5	0.3	1.6	22.9	1.4	26.3	1,170	1,500	860
16P	0.75	7	1.2	0.6	1.0	20.0	0.3	1.7	24.4	1.5	26.3	1,170	1,500	970
19P	0.75	7	1.2	0.6	1.0	20.9	0.3	1.7	25.4	1.5	26.3	1,170	1,500	1,060
24P	0.75	7	1.2	0.6	1.0	23.8	0.3	1.8	28.5	1.7	26.3	1,170	1,500	1,300
32P	0.75	7	1.2	0.6	1.2	28.0	0.3	2.0	32.5	2.3	26.3	1,170	1,500	1,740
1P	1.0	7	1.4	0.6	1.0	7.5	0.3	1.2	11.2	0.9	19.3	1,050	1,500	220
2P	1.0	7	1.4	0.6	1.0	11.0	0.3	1.3	15.0	1.0	19.3	1,050	1,500	360
3P	1.0	7	1.4	0.6	1.0	11.8	0.3	1.3	15.8	1.0	19.3	1,050	1,500	400
4P	1.0	7	1.4	0.6	1.0	12.6	0.3	1.4	16.6	1.1	19.3	1,050	1,500	460
5P	1.0	7	1.4	0.6	1.0	14.2	0.3	1.4	18.3	1.2	19.3	1,050	1,500	540
6P	1.0	7	1.4	0.6	1.0	15.2	0.3	1.5	19.4	1.3	19.3	1,050	1,500	610
7P	1.0	7	1.4	0.6	1.0	15.2	0.3	1.5	19.4	1.3	19.3	1,050	1,500	630
8P	1.0	7	1.4	0.6	1.0	16.2	0.3	1.5	20.5	1.3	19.3	1,050	1,500	690
10P	1.0	7	1.4	0.6	1.0	18.3	0.3	1.6	22.7	1.3	19.3	1,050	1,500	830
12P	1.0	7	1.4	0.6	1.0	19.1	0.3	1.6	23.5	1.3	19.3	1,050	1,500	910
14P	1.0	7	1.4	0.6	1.0	19.9	0.3	1.6	24.3	1.4	19.3	1,050	1,500	980
16P	1.0	7	1.4	0.6	1.0	21.4	0.3	1.7	26.0	1.5	19.3	1,050	1,500	1,110
19P	1.0	7	1.4	0.6	1.0	22.5	0.3	1.8	27.1	1.6	19.3	1,050	1,500	1,230
24P	1.0	7	1.4	0.6	1.0	25.6	0.3	1.9	30.4	1.8	19.3	1,050	1,500	1,510
32P	1.0	7	1.4	0.6	1.2	30.0	0.3	2.1	35.1	2.0	19.3	1,050	1,500	2,020
1P	1.5	7	1.7	0.7	1.0	8.5	0.3	1.2	12.3	0.9	12.9	1,020	1,500	260
2P	1.5	7	1.7	0.7	1.0	12.7	0.3	1.4	16.8	1.1	12.9	1,020	1,500	440
3P	1.5	7	1.7	0.7	1.0	13.7	0.3	1.4	17.8	1.1	12.9	1,020	1,500	510
4P	1.5	7	1.7	0.7	1.0	14.6	0.3	1.4	18.7	1.1	12.9	1,020	1,500	570
5P	1.5	7	1.7	0.7	1.0	16.5	0.3	1.5	20.8	1.2	12.9	1,020	1,500	680
6P	1.5	7	1.7	0.7	1.0	17.7	0.3	1.6	22.1	1.4	12.9	1,020	1,500	770
7P	1.5	7	1.7	0.7	1.0	17.7	0.3	1.6	22.1	1.4	12.9	1,020	1,500	800
8P	1.5	7	1.7	0.7	1.0	18.9	0.3	1.6	23.4	1.4	12.9	1,020	1,500	880
10P	1.5	7	1.7	0.7	1.0	21.4	0.3	1.7	26.0	1.4	12.9	1,020	1,500	1,070
12P	1.5	7	1.7	0.7	1.0	22.4	0.3	1.7	27.0	1.5	12.9	1,020	1,500	1,170
14P	1.5	7	1.7	0.7	1.0	23.3	0.3	1.8	28.1	1.6	12.9	1,020	1,500	1,290
16P	1.5	7	1.7	0.7	1.0	25.1	0.3	1.9	30.0	1.7	12.9	1,020	1,500	1,460
19P	1.5	7	1.7	0.7	1.0	26.4	0.3	1.9	31.3	1.7	12.9	1,020	1,500	1,620
24P	1.5	7	1.7	0.7	1.2	30.9	0.4	2.1	36.4	2.1	12.9	1,020	1,500	2,210
32P	1.5	7	1.7	0.7	1.2	35.2	0.4	2.3	41.1	2.2	12.9	1,020	1,500	2,790
1P	2.5	7	2.2	0.7	1.0	9.3	0.3	1.2	13.1	0.8	8.02	850	1,500	300
2P	2.5	7	2.2	0.7	1.0	14.1	0.3	1.4	18.3	1.1	8.02	850	1,500	530
3P	2.5	7	2.2	0.7	1.0	15.2	0.3	1.5	19.4	1.2	8.02	850	1,500	630
4P	2.5	7	2.2	0.7	1.0	16.2	0.3	1.5	20.5	1.2	8.02	850	1,500	710
5P	2.5	7	2.2	0.7	1.0	18.3	0.3	1.6	22.8	1.3	8.02	850	1,500	860
6P	2.5	7	2.2	0.7	1.0	19.7	0.3	1.6	24.2	1.3	8.02	850	1,500	960
7P	2.5	7	2.2	0.7	1.0	19.7	0.3	1.6	24.2	1.3	8.02	850	1,500	1,010
8P	2.5	7	2.2	0.7	1.0	21.1	0.3	1.7	25.8	1.4	8.02	850	1,500	1,130
10P	2.5	7	2.2	0.7	1.0	23.9	0.3	1.8	28.7	1.5	8.02	850	1,500	1,380
12P	2.5	7	2.2	0.7	1.0	25.0	0.3	1.9	29.9	1.7	8.02	850	1,500	1,540
14P	2.5	7	2.2	0.7	1.0	26.0	0.3	1.9	31.0	1.7	8.02	850	1,500	1,690
16P	2.5	7	2.2	0.7	1.2	28.9	0.3	2.0	34.1	1.7	8.02	850	1,500	2,020
19P	2.5	7	2.2	0.7	1.2	30.3	0.4	2.1	35.7	2.1	8.02	850	1,500	2,340
24P	2.5	7	2.2	0.7	1.2	34.5	0.4	2.2	40.4	2.1	8.02	850	1,500	2,890
32P	2.5	7	2.2	0.7	1.4	39.8	0.4	2.5	46.1	2.3	8.02	850	1,500	3,770

HV Power Cable

LV Power &amp; Lighting Cable

Instrumentation &amp; Communication Cable

Earthing &amp; Bonding wire

VFD Cable

Technical Information

# Instrumentation & Communication Cable

## 250V RFOU(c), 250V RFCU(c), 250V RFBU(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°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 <sup>2</sup>	EA	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	7.5	0.3	1.2	11.2	0.9	26.3	1,170	1,500	220
2T	0.75	7	1.2	0.6	1.0	11.4	0.3	1.3	15.3	1.0	26.3	1,170	1,500	380
3T	0.75	7	1.2	0.6	1.0	12.1	0.3	1.3	16.0	1.0	26.3	1,170	1,500	420
4T	0.75	7	1.2	0.6	1.0	13.3	0.3	1.4	17.4	1.0	26.3	1,170	1,500	500
5T	0.75	7	1.2	0.6	1.0	14.7	0.3	1.4	18.8	1.1	26.3	1,170	1,500	580
6T	0.75	7	1.2	0.6	1.0	16.7	0.3	1.5	20.9	1.2	26.3	1,170	1,500	690
7T	0.75	7	1.2	0.6	1.0	16.7	0.3	1.5	20.9	1.2	26.3	1,170	1,500	710
8T	0.75	7	1.2	0.6	1.0	17.9	0.3	1.6	22.2	1.4	26.3	1,170	1,500	800
10T	0.75	7	1.2	0.6	1.0	20.3	0.3	1.7	24.8	1.6	26.3	1,170	1,500	970
12T	0.75	7	1.2	0.6	1.0	21.5	0.3	1.7	26.1	1.6	26.3	1,170	1,500	1,070
14T	0.75	7	1.2	0.6	1.0	22.5	0.3	1.8	27.1	1.6	26.3	1,170	1,500	1,180
16T	0.75	7	1.2	0.6	1.0	23.9	0.3	1.8	28.6	1.6	26.3	1,170	1,500	1,300
19T	0.75	7	1.2	0.6	1.0	25.9	0.3	1.9	30.8	1.7	26.3	1,170	1,500	1,500
24T	0.75	7	1.2	0.6	1.2	29.5	0.3	2.0	34.5	1.9	26.3	1,170	1,500	1,900
32T	0.75	7	1.2	0.6	1.2	33.9	0.4	2.2	39.6	2.1	26.3	1,170	1,500	2,520
1T	1.0	7	1.4	0.6	1.0	7.9	0.3	1.2	11.7	0.9	19.3	1,050	1,500	240
2T	1.0	7	1.4	0.6	1.0	12.1	0.3	1.3	16.0	1.0	19.3	1,050	1,500	420
3T	1.0	7	1.4	0.6	1.0	12.9	0.3	1.4	17.0	1.0	19.3	1,050	1,500	480
4T	1.0	7	1.4	0.6	1.0	14.2	0.3	1.4	18.3	1.2	19.3	1,050	1,500	560
5T	1.0	7	1.4	0.6	1.0	15.7	0.3	1.5	20.0	1.2	19.3	1,050	1,500	660
6T	1.0	7	1.4	0.6	1.0	17.8	0.3	1.6	22.1	1.4	19.3	1,050	1,500	790
7T	1.0	7	1.4	0.6	1.0	17.8	0.3	1.6	22.1	1.4	19.3	1,050	1,500	820
8T	1.0	7	1.4	0.6	1.0	19.1	0.3	1.6	23.5	1.4	19.3	1,050	1,500	910
10T	1.0	7	1.4	0.6	1.0	21.7	0.3	1.7	26.3	1.5	19.3	1,050	1,500	1,100
12T	1.0	7	1.4	0.6	1.0	23.0	0.3	1.8	27.6	1.6	19.3	1,050	1,500	1,240
14T	1.0	7	1.4	0.6	1.0	24.0	0.3	1.8	28.7	1.6	19.3	1,050	1,500	1,360
16T	1.0	7	1.4	0.6	1.0	25.6	0.3	1.9	30.4	1.7	19.3	1,050	1,500	1,520
19T	1.0	7	1.4	0.6	1.2	28.5	0.3	2.0	33.1	2.3	19.3	1,050	1,500	1,850
24T	1.0	7	1.4	0.6	1.2	31.6	0.4	2.1	37.2	2.3	19.3	1,050	1,500	2,310
32T	1.0	7	1.4	0.6	1.2	36.3	0.4	2.3	42.2	2.3	19.3	1,050	1,500	2,940
1T	1.5	7	1.7	0.7	1.0	9.0	0.3	1.2	12.8	0.9	12.9	1,020	1,500	290
2T	1.5	7	1.7	0.7	1.0	14.0	0.3	1.4	18.2	1.0	12.9	1,020	1,500	520
3T	1.5	7	1.7	0.7	1.0	14.9	0.3	1.4	19.1	1.1	12.9	1,020	1,500	590
4T	1.5	7	1.7	0.7	1.0	16.5	0.3	1.5	20.8	1.1	12.9	1,020	1,500	710
5T	1.5	7	1.7	0.7	1.0	18.4	0.3	1.6	22.9	1.3	12.9	1,020	1,500	850
6T	1.5	7	1.7	0.7	1.0	20.9	0.3	1.7	25.5	1.4	12.9	1,020	1,500	1,020
7T	1.5	7	1.7	0.7	1.0	20.9	0.3	1.7	25.5	1.4	12.9	1,020	1,500	1,060
8T	1.5	7	1.7	0.7	1.0	22.4	0.3	1.7	27.0	1.4	12.9	1,020	1,500	1,180
10T	1.5	7	1.7	0.7	1.0	25.5	0.3	1.9	30.4	1.7	12.9	1,020	1,500	1,450
12T	1.5	7	1.7	0.7	1.2	27.9	0.3	2.0	32.5	2.0	12.9	1,020	1,500	1,750
14T	1.5	7	1.7	0.7	1.2	29.1	0.3	2.0	34.2	2.0	12.9	1,020	1,500	1,910
16T	1.5	7	1.7	0.7	1.2	31.0	0.4	2.1	36.7	2.0	12.9	1,020	1,500	2,220
19T	1.5	7	1.7	0.7	1.2	33.5	0.4	2.2	39.4	2.0	12.9	1,020	1,500	2,540
24T	1.5	7	1.7	0.7	1.2	37.2	0.4	2.4	43.3	2.2	12.9	1,020	1,500	3,080
32T	1.5	7	1.7	0.7	1.4	43.2	0.4	2.6	49.6	2.5	12.9	1,020	1,500	4,030
1T	2.5	7	2.2	0.7	1.0	9.8	0.3	1.2	13.6	0.8	8.02	850	1,500	340
2T	2.5	7	2.2	0.7	1.0	15.4	0.3	1.5	19.8	1.0	8.02	850	1,500	640
3T	2.5	7	2.2	0.7	1.0	16.5	0.3	1.5	20.9	1.0	8.02	850	1,500	750
4T	2.5	7	2.2	0.7	1.0	18.2	0.3	1.6	22.8	1.1	8.02	850	1,500	900
5T	2.5	7	2.2	0.7	1.0	20.3	0.3	1.7	25.1	1.2	8.02	850	1,500	1,080
6T	2.5	7	2.2	0.7	1.0	23.1	0.3	1.8	28.1	1.3	8.02	850	1,500	1,300
7T	2.5	7	2.2	0.7	1.0	23.1	0.3	1.8	28.1	1.3	8.02	850	1,500	1,360
8T	2.5	7	2.2	0.7	1.0	24.8	0.3	1.8	29.8	1.4	8.02	850	1,500	1,520
10T	2.5	7	2.2	0.7	1.2	29.1	0.3	2.0	34.5	1.5	8.02	850	1,500	1,990
12T	2.5	7	2.2	0.7	1.2	30.8	0.4	2.1	36.8	1.6	8.02	850	1,500	2,340
14T	2.5	7	2.2	0.7	1.2	32.2	0.4	2.2	38.2	1.8	8.02	850	1,500	2,590
16T	2.5	7	2.2	0.7	1.2	34.3	0.4	2.2	40.4	1.8	8.02	850	1,500	2,880
19T	2.5	7	2.2	0.7	1.2	37.1	0.4	2.4	43.5	1.9	8.02	850	1,500	3,340
24T	2.5	7	2.2	0.7	1.4	41.7	0.4	2.5	48.4	2.1	8.02	850	1,500	4,140
32T	2.5	7	2.2	0.7	1.4	47.9	0.4	2.8	55.2	2.3	8.02	850	1,500	5,340





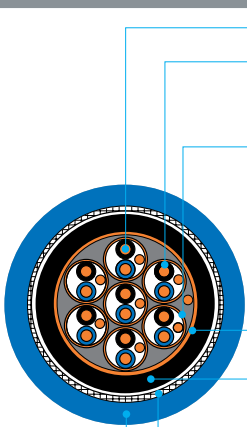
### Cable Designation (S101, - )

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

### 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 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
	Insulation	<b>R</b>	- EPR as per IEC 60092-360
	Twisting		- Two/Three Insulated cores shall be twisted together to form a pair/Triad
	Individual screen	<b>(i)</b>	- CU/PS or AL/PS tape + Tinned copper drain wire - In case of 1P, 1T for 250V RFO(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	<b>(c)</b>	- CU/PS or AL/PS tape + Tinned copper drain wire - In case of 250V RFO(C,B)U(i), collective screen is omitted.
	Inner covering	<b>F</b>	- Flame retardant halogen free thermoset compound
	Armor	<b>O</b> <b>(B,C)</b>	- 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	<b>U</b>	- SHF2 as per IEC 60092-360 - <b>Option</b> : 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

Earthing & Bonding wire

VFD Cable

Technical Information

# Instrumentation & Communication Cable

250V RFOU(i), 250 RFCU(i), 250V RFBU(i)  
 250V RFOU(i&c), 250 RFCU(i&c), 250V RFBU(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°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 <sup>2</sup>	EA	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	7.1	0.3	1.1	10.7	0.8	26.3	1,170	1,500	200
2P	0.75	7	1.2	0.6	1.0	11.1	0.3	1.3	15.1	0.9	26.3	1,170	1,500	370
3P	0.75	7	1.2	0.6	1.0	11.8	0.3	1.3	15.7	1.0	26.3	1,170	1,500	410
4P	0.75	7	1.2	0.6	1.0	12.9	0.3	1.4	17.0	1.0	26.3	1,170	1,500	490
5P	0.75	7	1.2	0.6	1.0	14.4	0.3	1.4	18.5	1.1	26.3	1,170	1,500	570
6P	0.75	7	1.2	0.6	1.0	15.0	0.3	1.5	19.2	1.3	26.3	1,170	1,500	620
7P	0.75	7	1.2	0.6	1.0	15.0	0.3	1.5	19.2	1.3	26.3	1,170	1,500	650
8P	0.75	7	1.2	0.6	1.0	16.5	0.3	1.5	20.7	1.3	26.3	1,170	1,500	730
10P	0.75	7	1.2	0.6	1.0	18.8	0.3	1.6	23.2	1.4	26.3	1,170	1,500	890
12P	0.75	7	1.2	0.6	1.0	19.5	0.3	1.6	23.9	1.4	26.3	1,170	1,500	970
14P	0.75	7	1.2	0.6	1.0	20.6	0.3	1.7	25.0	1.6	26.3	1,170	1,500	1,080
16P	0.75	7	1.2	0.6	1.0	22.1	0.3	1.7	26.6	1.6	26.3	1,170	1,500	1,200
19P	0.75	7	1.2	0.6	1.0	22.6	0.3	1.8	27.2	1.6	26.3	1,170	1,500	1,320
24P	0.75	7	1.2	0.6	1.0	26.4	0.3	1.9	31.3	1.8	26.3	1,170	1,500	1,650
32P	0.75	7	1.2	0.6	1.2	29.5	0.3	2.0	34.5	1.9	26.3	1,170	1,500	2,100
1P	1.0	7	1.4	0.6	1.0	7.5	0.3	1.2	11.2	0.9	19.3	1,050	1,500	220
2P	1.0	7	1.4	0.6	1.0	11.8	0.3	1.3	15.8	0.9	19.3	1,050	1,500	410
3P	1.0	7	1.4	0.6	1.0	12.5	0.3	1.4	16.6	1.1	19.3	1,050	1,500	470
4P	1.0	7	1.4	0.6	1.0	13.8	0.3	1.4	17.9	1.1	19.3	1,050	1,500	550
5P	1.0	7	1.4	0.6	1.0	15.4	0.3	1.5	19.6	1.3	19.3	1,050	1,500	650
6P	1.0	7	1.4	0.6	1.0	16.0	0.3	1.5	20.3	1.3	19.3	1,050	1,500	700
7P	1.0	7	1.4	0.6	1.0	16.0	0.3	1.5	20.3	1.3	19.3	1,050	1,500	730
8P	1.0	7	1.4	0.6	1.0	17.6	0.3	1.6	21.9	1.4	19.3	1,050	1,500	840
10P	1.0	7	1.4	0.6	1.0	20.1	0.3	1.7	24.6	1.6	19.3	1,050	1,500	1,030
12P	1.0	7	1.4	0.6	1.0	20.9	0.3	1.7	25.5	1.6	19.3	1,050	1,500	1,130
14P	1.0	7	1.4	0.6	1.0	22.0	0.3	1.7	26.6	1.6	19.3	1,050	1,500	1,240
16P	1.0	7	1.4	0.6	1.0	23.7	0.3	1.8	28.4	1.6	19.3	1,050	1,500	1,400
19P	1.0	7	1.4	0.6	1.0	24.2	0.3	1.8	28.9	1.6	19.3	1,050	1,500	1,520
24P	1.0	7	1.4	0.6	1.2	29.1	0.3	2.0	34.2	1.7	19.3	1,050	1,500	2,040
32P	1.0	7	1.4	0.6	1.2	31.6	0.4	2.1	37.2	1.9	19.3	1,050	1,500	2,550
1P	1.5	7	1.7	0.7	1.0	8.5	0.3	1.2	12.3	0.9	12.9	1,020	1,500	260
2P	1.5	7	1.7	0.7	1.0	13.6	0.3	1.4	17.7	1.0	12.9	1,020	1,500	500
3P	1.5	7	1.7	0.7	1.0	14.4	0.3	1.4	18.5	1.1	12.9	1,020	1,500	570
4P	1.5	7	1.7	0.7	1.0	15.9	0.3	1.5	20.2	1.2	12.9	1,020	1,500	670
5P	1.5	7	1.7	0.7	1.0	17.8	0.3	1.6	22.2	1.4	12.9	1,020	1,500	800
6P	1.5	7	1.7	0.7	1.0	18.5	0.3	1.6	23.0	1.4	12.9	1,020	1,500	880
7P	1.5	7	1.7	0.7	1.0	18.5	0.3	1.6	23.0	1.4	12.9	1,020	1,500	920
8P	1.5	7	1.7	0.7	1.0	20.4	0.3	1.7	24.9	1.5	12.9	1,020	1,500	1,050
10P	1.5	7	1.7	0.7	1.0	23.3	0.3	1.8	28.1	1.5	12.9	1,020	1,500	1,290
12P	1.5	7	1.7	0.7	1.0	24.3	0.3	1.8	29.1	1.6	12.9	1,020	1,500	1,420
14P	1.5	7	1.7	0.7	1.0	25.6	0.3	1.9	30.5	1.7	12.9	1,020	1,500	1,590
16P	1.5	7	1.7	0.7	1.2	28.4	0.3	2.0	33.0	2.1	12.9	1,020	1,500	1,900
19P	1.5	7	1.7	0.7	1.2	29.0	0.3	2.0	34.1	2.1	12.9	1,020	1,500	2,050
24P	1.5	7	1.7	0.7	1.2	33.9	0.4	2.2	39.7	2.1	12.9	1,020	1,500	2,710
32P	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	3,270
1P	2.5	7	2.2	0.7	1.0	9.3	0.3	1.2	13.1	0.8	8.02	850	1,500	300
2P	2.5	7	2.2	0.7	1.0	15.0	0.3	1.5	19.2	1.2	8.02	850	1,500	600
3P	2.5	7	2.2	0.7	1.0	15.9	0.3	1.5	20.2	1.2	8.02	850	1,500	700
4P	2.5	7	2.2	0.7	1.0	17.5	0.3	1.6	21.9	1.3	8.02	850	1,500	840
5P	2.5	7	2.2	0.7	1.0	19.7	0.3	1.6	24.2	1.3	8.02	850	1,500	1,000
6P	2.5	7	2.2	0.7	1.0	20.5	0.3	1.7	25.2	1.4	8.02	850	1,500	1,110
7P	2.5	7	2.2	0.7	1.0	20.5	0.3	1.7	25.2	1.4	8.02	850	1,500	1,170
8P	2.5	7	2.2	0.7	1.0	22.6	0.3	1.8	27.4	1.5	8.02	850	1,500	1,340
10P	2.5	7	2.2	0.7	1.0	25.9	0.3	1.9	30.9	1.5	8.02	850	1,500	1,660
12P	2.5	7	2.2	0.7	1.0	27.0	0.3	1.9	32.0	1.7	8.02	850	1,500	1,840
14P	2.5	7	2.2	0.7	1.2	29.3	0.3	2.0	34.5	1.7	8.02	850	1,500	2,170
16P	2.5	7	2.2	0.7	1.2	31.5	0.4	2.1	37.2	1.8	8.02	850	1,500	2,540
19P	2.5	7	2.2	0.7	1.2	32.2	0.4	2.2	38.0	2.0	8.02	850	1,500	2,790
24P	2.5	7	2.2	0.7	1.2	37.7	0.4	2.4	43.8	2.2	8.02	850	1,500	3,550
32P	2.5	7	2.2	0.7	1.4	41.4	0.4	2.5	47.8	2.3	8.02	850	1,500	4,410

**250V RFOU(i), 250 RFCU(i), 250V RFBU(i)**  
**250V RFOU(i&c), 250 RFCU(i&c), 250V RFBU(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°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 <sup>2</sup>	EA	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	7.5	0.3	1.2	11.2	0.9	26.3	1,170	1,500	220
2T	0.75	7	1.2	0.6	1.0	11.9	0.3	1.3	15.8	1.0	26.3	1,170	1,500	410
3T	0.75	7	1.2	0.6	1.0	12.7	0.3	1.4	16.7	1.1	26.3	1,170	1,500	480
4T	0.75	7	1.2	0.6	1.0	13.9	0.3	1.4	18.0	1.1	26.3	1,170	1,500	560
5T	0.75	7	1.2	0.6	1.0	15.5	0.3	1.5	19.8	1.2	26.3	1,170	1,500	660
6T	0.75	7	1.2	0.6	1.0	17.5	0.3	1.6	21.9	1.4	26.3	1,170	1,500	780
7T	0.75	7	1.2	0.6	1.0	17.5	0.3	1.6	21.9	1.4	26.3	1,170	1,500	820
8T	0.75	7	1.2	0.6	1.0	18.8	0.3	1.6	23.2	1.4	26.3	1,170	1,500	910
10T	0.75	7	1.2	0.6	1.0	21.3	0.3	1.7	25.9	1.5	26.3	1,170	1,500	1,100
12T	0.75	7	1.2	0.6	1.0	22.6	0.3	1.8	27.3	1.6	26.3	1,170	1,500	1,240
14T	0.75	7	1.2	0.6	1.0	23.6	0.3	1.8	28.4	1.6	26.3	1,170	1,500	1,360
16T	0.75	7	1.2	0.6	1.0	25.2	0.3	1.9	30.0	1.8	26.3	1,170	1,500	1,520
19T	0.75	7	1.2	0.6	1.2	28.0	0.3	2.0	32.6	2.2	26.3	1,170	1,500	1,850
24T	0.75	7	1.2	0.6	1.2	31.1	0.4	2.1	36.7	2.2	26.3	1,170	1,500	2,310
32T	0.75	7	1.2	0.6	1.2	35.7	0.4	2.3	41.5	2.3	26.3	1,170	1,500	2,940
1T	1.0	7	1.4	0.6	1.0	7.9	0.3	1.2	11.7	0.9	19.3	1,050	1,500	240
2T	1.0	7	1.4	0.6	1.0	12.6	0.3	1.4	16.7	1.1	19.3	1,050	1,500	460
3T	1.0	7	1.4	0.6	1.0	13.4	0.3	1.4	17.5	1.1	19.3	1,050	1,500	530
4T	1.0	7	1.4	0.6	1.0	14.8	0.3	1.4	18.9	1.1	19.3	1,050	1,500	630
5T	1.0	7	1.4	0.6	1.0	16.4	0.3	1.5	20.7	1.1	19.3	1,050	1,500	740
6T	1.0	7	1.4	0.6	1.0	18.6	0.3	1.6	23.1	1.3	19.3	1,050	1,500	890
7T	1.0	7	1.4	0.6	1.0	18.6	0.3	1.6	23.1	1.3	19.3	1,050	1,500	930
8T	1.0	7	1.4	0.6	1.0	20.0	0.3	1.7	24.5	1.4	19.3	1,050	1,500	1,040
10T	1.0	7	1.4	0.6	1.0	22.7	0.3	1.8	27.4	1.6	19.3	1,050	1,500	1,270
12T	1.0	7	1.4	0.6	1.0	24.1	0.3	1.8	28.9	1.6	19.3	1,050	1,500	1,430
14T	1.0	7	1.4	0.6	1.0	25.2	0.3	1.9	30.0	1.7	19.3	1,050	1,500	1,580
16T	1.0	7	1.4	0.6	1.0	26.8	0.3	1.9	31.7	1.7	19.3	1,050	1,500	1,750
19T	1.0	7	1.4	0.6	1.2	29.9	0.3	2.0	34.9	1.9	19.3	1,050	1,500	2,130
24T	1.0	7	1.4	0.6	1.2	33.1	0.4	2.2	38.9	2.0	19.3	1,050	1,500	2,680
32T	1.0	7	1.4	0.6	1.4	38.4	0.4	2.4	44.3	2.6	19.3	1,050	1,500	3,500
1T	1.5	7	1.7	0.7	1.0	9.0	0.3	1.2	12.8	0.9	12.9	1,020	1,500	290
2T	1.5	7	1.7	0.7	1.0	14.5	0.3	1.4	18.7	1.1	12.9	1,020	1,500	560
3T	1.5	7	1.7	0.7	1.0	15.5	0.3	1.5	19.8	1.1	12.9	1,020	1,500	660
4T	1.5	7	1.7	0.7	1.0	17.1	0.3	1.5	21.4	1.1	12.9	1,020	1,500	780
5T	1.5	7	1.7	0.7	1.0	19.1	0.3	1.6	23.6	1.3	12.9	1,020	1,500	940
6T	1.5	7	1.7	0.7	1.0	21.7	0.3	1.7	26.3	1.4	12.9	1,020	1,500	1,120
7T	1.5	7	1.7	0.7	1.0	21.7	0.3	1.7	26.3	1.4	12.9	1,020	1,500	1,180
8T	1.5	7	1.7	0.7	1.0	23.3	0.3	1.8	28.1	1.5	12.9	1,020	1,500	1,330
10T	1.5	7	1.7	0.7	1.0	26.6	0.3	1.9	31.6	1.7	12.9	1,020	1,500	1,630
12T	1.5	7	1.7	0.7	1.2	29.0	0.3	2.0	34.1	1.7	12.9	1,020	1,500	1,950
14T	1.5	7	1.7	0.7	1.2	30.3	0.4	2.1	35.7	2.1	12.9	1,020	1,500	2,240
16T	1.5	7	1.7	0.7	1.2	32.2	0.4	2.2	38.0	2.1	12.9	1,020	1,500	2,500
19T	1.5	7	1.7	0.7	1.2	34.9	0.4	2.3	40.9	2.1	12.9	1,020	1,500	2,880
24T	1.5	7	1.7	0.7	1.4	39.1	0.4	2.4	45.1	2.4	12.9	1,020	1,500	3,550
32T	1.5	7	1.7	0.7	1.4	45.0	0.4	2.7	51.6	2.6	12.9	1,020	1,500	4,580
1T	2.5	7	2.2	0.7	1.0	9.8	0.3	1.2	13.6	0.8	8.02	850	1,500	340
2T	2.5	7	2.2	0.7	1.0	16.0	0.3	1.5	20.4	1.0	8.02	850	1,500	690
3T	2.5	7	2.2	0.7	1.0	17.0	0.3	1.5	21.4	1.0	8.02	850	1,500	820
4T	2.5	7	2.2	0.7	1.0	18.8	0.3	1.6	23.4	1.1	8.02	850	1,500	990
5T	2.5	7	2.2	0.7	1.0	21.0	0.3	1.7	25.8	1.2	8.02	850	1,500	1,190
6T	2.5	7	2.2	0.7	1.0	23.9	0.3	1.8	28.9	1.4	8.02	850	1,500	1,430
7T	2.5	7	2.2	0.7	1.0	23.9	0.3	1.8	28.9	1.4	8.02	850	1,500	1,510
8T	2.5	7	2.2	0.7	1.0	25.7	0.3	1.9	30.9	1.4	8.02	850	1,500	1,710
10T	2.5	7	2.2	0.7	1.2	30.1	0.4	2.1	35.8	1.8	8.02	850	1,500	2,310
12T	2.5	7	2.2	0.7	1.2	32.0	0.4	2.1	37.9	1.8	8.02	850	1,500	2,610
14T	2.5	7	2.2	0.7	1.2	33.4	0.4	2.2	39.5	1.8	8.02	850	1,500	2,900
16T	2.5	7	2.2	0.7	1.2	35.6	0.4	2.3	41.9	1.8	8.02	850	1,500	3,250
19T	2.5	7	2.2	0.7	1.4	38.9	0.4	2.4	45.4	1.9	8.02	850	1,500	3,830
24T	2.5	7	2.2	0.7	1.4	43.2	0.4	2.6	50.1	2.1	8.02	850	1,500	4,670
32T	2.5	7	2.2	0.7	1.6	50.3	0.4	2.9	57.7	2.3	8.02	850	1,500	6,200

HV Power Cable

LV Power &amp; Lighting Cable

Instrumentation &amp; Communication Cable

Earthing &amp; Bonding wire

VFD Cable

Technical Information

# 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°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
	Fire resisting layer	<b>B</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	<b>(c)</b>	- CU/PS or AL/PS tape + Tinned copper drain wire
	Sheath	<b>U</b>	- SHF2 as per IEC 60092-360 - <b>Option</b> : 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

## 250V BU(c)

No. of Pairs	Conductor			Thickness of Insulation	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 <sup>2</sup>	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

HV Power Cable

LV Power &amp; Lighting Cable

Instrumentation &amp; Communication Cable

Earthing &amp; Bonding wire

VFD Cable

Technical Information

# Instrumentation & Communication Cable

## 250V BU(c)

No. of Triads	Conductor			Thickness of Insulation	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 <sup>2</sup>	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



### Cable Designation (S107, - )

250V BU(i), 250V BU(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°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
	Fire resisting layer	<b>B</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	<b>(i)</b>	- CU/PS or AL/PS tape + Tinned copper drain wire - In case of 1P, 1T for 250V BU(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	<b>(c)</b>	- CU/PS or AL/PS tape + Tinned copper drain wire - In case of 250V BU(i), collective screen is omitted.
	Sheath	<b>U</b>	- SHF2 as per IEC 60092-360 - <b>Option</b> : 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 BU(i), 250V BU(i&c)

No. of Pairs	Conductor			Thickness of Insulation	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 <sup>2</sup>	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	13.8	1.0	26.3	1,170	1,500	260
3P	0.75	7	1.2	0.6	1.3	14.8	1.1	26.3	1,170	1,500	320
4P	0.75	7	1.2	0.6	1.3	16.1	1.1	26.3	1,170	1,500	380
5P	0.75	7	1.2	0.6	1.4	18.1	1.2	26.3	1,170	1,500	480
6P	0.75	7	1.2	0.6	1.4	18.8	1.2	26.3	1,170	1,500	530
7P	0.75	7	1.2	0.6	1.4	18.8	1.2	26.3	1,170	1,500	560
8P	0.75	7	1.2	0.6	1.5	20.8	1.2	26.3	1,170	1,500	660
10P	0.75	7	1.2	0.6	1.6	23.7	1.3	26.3	1,170	1,500	840
12P	0.75	7	1.2	0.6	1.6	24.6	1.3	26.3	1,170	1,500	930
13P	0.75	7	1.2	0.6	1.7	26.1	1.4	26.3	1,170	1,500	1,060
14P	0.75	7	1.2	0.6	1.8	28.1	1.5	26.3	1,170	1,500	1,230
19P	0.75	7	1.2	0.6	1.8	28.7	1.5	26.3	1,170	1,500	1,340
24P	0.75	7	1.2	0.6	2.0	33.7	1.6	26.3	1,170	1,500	1,790
32P	0.75	7	1.2	0.6	2.1	36.6	1.7	26.3	1,170	1,500	2,210
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	1.3	14.7	1.1	19.3	1,050	1,500	300
3P	1.0	7	1.4	0.6	1.3	15.5	1.1	19.3	1,050	1,500	360
4P	1.0	7	1.4	0.6	1.4	17.2	1.1	19.3	1,050	1,500	450
5P	1.0	7	1.4	0.6	1.4	19.1	1.2	19.3	1,050	1,500	540
6P	1.0	7	1.4	0.6	1.5	20.0	1.2	19.3	1,050	1,500	620
7P	1.0	7	1.4	0.6	1.5	20.0	1.2	19.3	1,050	1,500	650
8P	1.0	7	1.4	0.6	1.5	21.9	1.3	19.3	1,050	1,500	760
10P	1.0	7	1.4	0.6	1.7	25.2	1.4	19.3	1,050	1,500	980
12P	1.0	7	1.4	0.6	1.7	26.2	1.4	19.3	1,050	1,500	1,090
14P	1.0	7	1.4	0.6	1.7	27.5	1.4	19.3	1,050	1,500	1,220
16P	1.0	7	1.4	0.6	1.8	29.7	1.5	19.3	1,050	1,500	1,420
19P	1.0	7	1.4	0.6	1.8	30.3	1.5	19.3	1,050	1,500	1,550
24P	1.0	7	1.4	0.6	2.0	35.6	1.7	19.3	1,050	1,500	2,060
32P	1.0	7	1.4	0.6	2.2	38.9	1.8	19.3	1,050	1,500	2,600
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	16.4	1.2	12.9	1,020	1,500	370
3P	1.5	7	1.7	0.7	1.4	17.5	1.2	12.9	1,020	1,500	460
4P	1.5	7	1.7	0.7	1.4	19.2	1.4	12.9	1,020	1,500	560
5P	1.5	7	1.7	0.7	1.5	21.6	1.4	12.9	1,020	1,500	690
6P	1.5	7	1.7	0.7	1.6	22.5	1.6	12.9	1,020	1,500	790
7P	1.5	7	1.7	0.7	1.6	22.5	1.6	12.9	1,020	1,500	830
8P	1.5	7	1.7	0.7	1.6	24.8	1.6	12.9	1,020	1,500	960
10P	1.5	7	1.7	0.7	1.8	28.6	1.7	12.9	1,020	1,500	1,250
12P	1.5	7	1.7	0.7	1.8	29.7	1.7	12.9	1,020	1,500	1,400
14P	1.5	7	1.7	0.7	1.9	31.3	1.8	12.9	1,020	1,500	1,590
16P	1.5	7	1.7	0.7	2.0	33.8	1.8	12.9	1,020	1,500	1,840
19P	1.5	7	1.7	0.7	2.0	34.5	1.9	12.9	1,020	1,500	2,020
24P	1.5	7	1.7	0.7	2.2	40.5	2.0	12.9	1,020	1,500	2,680
32P	1.5	7	1.7	0.7	2.4	44.2	2.3	12.9	1,020	1,500	3,380
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	18.0	1.1	8.02	850	1,500	470
3P	2.5	7	2.2	0.7	1.4	19.1	1.2	8.02	850	1,500	570
4P	2.5	7	2.2	0.7	1.5	21.1	1.2	8.02	850	1,500	720
5P	2.5	7	2.2	0.7	1.6	23.8	1.3	8.02	850	1,500	900
6P	2.5	7	2.2	0.7	1.6	24.7	1.4	8.02	850	1,500	1,000
7P	2.5	7	2.2	0.7	1.6	24.7	1.4	8.02	850	1,500	1,060
8P	2.5	7	2.2	0.7	1.7	27.3	1.4	8.02	850	1,500	1,260
10P	2.5	7	2.2	0.7	1.9	31.5	1.6	8.02	850	1,500	1,630
12P	2.5	7	2.2	0.7	1.9	32.7	1.6	8.02	850	1,500	1,830
14P	2.5	7	2.2	0.7	2.0	34.6	1.6	8.02	850	1,500	2,090
16P	2.5	7	2.2	0.7	2.1	37.3	1.7	8.02	850	1,500	2,420
19P	2.5	7	2.2	0.7	2.1	38.1	1.8	8.02	850	1,500	2,660
24P	2.5	7	2.2	0.7	2.4	44.9	2.0	8.02	850	1,500	3,570
32P	2.5	7	2.2	0.7	2.5	48.9	2.1	8.02	850	1,500	4,470



## 250V BU(i), 250V BU(i&amp;c)

No. of Triads	Conductor			Thickness of Insulation	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 <sup>2</sup>	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	120
2T	0.75	7	1.2	0.6	1.3	14.8	1.1	26.3	1,170	1,500	310
3T	0.75	7	1.2	0.6	1.3	15.8	1.1	26.3	1,170	1,500	370
4T	0.75	7	1.2	0.6	1.4	17.5	1.1	26.3	1,170	1,500	470
5T	0.75	7	1.2	0.6	1.4	19.3	1.2	26.3	1,170	1,500	560
6T	0.75	7	1.2	0.6	1.5	21.9	1.3	26.3	1,170	1,500	700
7T	0.75	7	1.2	0.6	1.5	21.9	1.3	26.3	1,170	1,500	740
8T	0.75	7	1.2	0.6	1.6	23.6	1.3	26.3	1,170	1,500	850
10T	0.75	7	1.2	0.6	1.7	26.8	1.3	26.3	1,170	1,500	1,080
12T	0.75	7	1.2	0.6	1.8	28.5	1.4	26.3	1,170	1,500	1,250
13T	0.75	7	1.2	0.6	1.8	29.7	1.4	26.3	1,170	1,500	1,390
14T	0.75	7	1.2	0.6	1.9	31.8	1.5	26.3	1,170	1,500	1,580
19T	0.75	7	1.2	0.6	2.0	34.4	1.5	26.3	1,170	1,500	1,870
24T	0.75	7	1.2	0.6	2.1	38.2	1.7	26.3	1,170	1,500	2,320
32T	0.75	7	1.2	0.6	2.4	44.3	1.8	26.3	1,170	1,500	3,140
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	15.6	1.1	19.3	1,050	1,500	350
3T	1.0	7	1.4	0.6	1.3	16.6	1.1	19.3	1,050	1,500	430
4T	1.0	7	1.4	0.6	1.4	18.4	1.2	19.3	1,050	1,500	530
5T	1.0	7	1.4	0.6	1.5	20.6	1.2	19.3	1,050	1,500	660
6T	1.0	7	1.4	0.6	1.6	23.4	1.3	19.3	1,050	1,500	830
7T	1.0	7	1.4	0.6	1.6	23.4	1.3	19.3	1,050	1,500	870
8T	1.0	7	1.4	0.6	1.7	25.2	1.4	19.3	1,050	1,500	1,010
10T	1.0	7	1.4	0.6	1.8	28.7	1.5	19.3	1,050	1,500	1,280
12T	1.0	7	1.4	0.6	1.8	30.3	1.5	19.3	1,050	1,500	1,450
14T	1.0	7	1.4	0.6	1.9	31.8	1.6	19.3	1,050	1,500	1,640
16T	1.0	7	1.4	0.6	2.0	33.9	1.6	19.3	1,050	1,500	1,870
19T	1.0	7	1.4	0.6	2.1	36.8	1.7	19.3	1,050	1,500	2,210
24T	1.0	7	1.4	0.6	2.2	40.8	1.8	19.3	1,050	1,500	2,740
32T	1.0	7	1.4	0.6	2.5	47.3	2.0	19.3	1,050	1,500	3,710
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	17.7	1.3	12.9	1,020	1,500	450
3T	1.5	7	1.7	0.7	1.4	18.8	1.4	12.9	1,020	1,500	550
4T	1.5	7	1.7	0.7	1.5	20.9	1.4	12.9	1,020	1,500	690
5T	1.5	7	1.7	0.7	1.6	23.3	1.5	12.9	1,020	1,500	850
6T	1.5	7	1.7	0.7	1.7	26.5	1.7	12.9	1,020	1,500	1,070
7T	1.5	7	1.7	0.7	1.7	26.5	1.7	12.9	1,020	1,500	1,130
8T	1.5	7	1.7	0.7	1.8	28.5	1.7	12.9	1,020	1,500	1,300
10T	1.5	7	1.7	0.7	1.9	32.5	1.8	12.9	1,020	1,500	1,650
12T	1.5	7	1.7	0.7	2.0	34.5	2.0	12.9	1,020	1,500	1,910
14T	1.5	7	1.7	0.7	2.1	36.1	2.1	12.9	1,020	1,500	2,160
16T	1.5	7	1.7	0.7	2.2	38.5	2.2	12.9	1,020	1,500	2,460
19T	1.5	7	1.7	0.7	2.3	41.9	2.3	12.9	1,020	1,500	2,910
24T	1.5	7	1.7	0.7	2.5	46.6	2.5	12.9	1,020	1,500	3,650
32T	1.5	7	1.7	0.7	2.7	53.8	2.7	12.9	1,020	1,500	4,880
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	19.2	1.2	8.02	850	1,500	560
3T	2.5	7	2.2	0.7	1.5	20.6	1.2	8.02	850	1,500	710
4T	2.5	7	2.2	0.7	1.6	22.9	1.3	8.02	850	1,500	900
5T	2.5	7	2.2	0.7	1.7	25.6	1.4	8.02	850	1,500	1,110
6T	2.5	7	2.2	0.7	1.8	29.1	1.5	8.02	850	1,500	1,380
7T	2.5	7	2.2	0.7	1.8	29.1	1.5	8.02	850	1,500	1,470
8T	2.5	7	2.2	0.7	1.9	31.3	1.5	8.02	850	1,500	1,690
10T	2.5	7	2.2	0.7	2.0	35.7	1.7	8.02	850	1,500	2,150
12T	2.5	7	2.2	0.7	2.1	37.9	1.7	8.02	850	1,500	2,500
14T	2.5	7	2.2	0.7	2.2	39.8	1.8	8.02	850	1,500	2,830
16T	2.5	7	2.2	0.7	2.3	42.5	1.9	8.02	850	1,500	3,240
19T	2.5	7	2.2	0.7	2.4	46.0	2.0	8.02	850	1,500	3,820
24T	2.5	7	2.2	0.7	2.6	51.3	2.1	8.02	850	1,500	4,810
32T	2.5	7	2.2	0.7	2.9	59.4	2.4	8.02	850	1,500	6,500

HV Power Cable

LV Power &amp; Lighting Cable

Instrumentation &amp; Communication Cable

Earthing &amp; Bonding wire

VFD Cable

Technical Information

# Instrumentation & Communication Cable



## Cable Designation (S104)

250V BFOU(c), BFCU(c), BFBU(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°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
	Fire resisting layer	<b>B</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	<b>(c)</b>	- CU/PS or AL/PS tape + Tinned copper drain wire
	Inner covering	<b>F</b>	- Flame retardant halogen free thermoset compound
	Armor	<b>O</b> <b>(B,C)</b>	- 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	<b>U</b>	- SHF2 as per IEC 60092-360 - <b>Option</b> : 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

250V BFOU(c), 250V BFCU(c), 250V BFBU(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°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 <sup>2</sup>	EA	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	12.1	0.3	1.3	16.2	0.8	26.3	1,170	1,500	390
3P	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
4P	0.75	7	1.2	0.6	1.0	13.8	0.3	1.4	18.1	0.8	26.3	1,170	1,500	500
5P	0.75	7	1.2	0.6	1.0	15.5	0.3	1.5	20.0	0.9	26.3	1,170	1,500	590
6P	0.75	7	1.2	0.6	1.0	16.7	0.3	1.5	21.2	0.9	26.3	1,170	1,500	660
7P	0.75	7	1.2	0.6	1.0	16.7	0.3	1.5	21.2	0.9	26.3	1,170	1,500	670
8P	0.75	7	1.2	0.6	1.0	17.9	0.3	1.6	22.6	1.0	26.3	1,170	1,500	750
10P	0.75	7	1.2	0.6	1.0	20.2	0.3	1.7	25.1	1.1	26.3	1,170	1,500	910
12P	0.75	7	1.2	0.6	1.0	21.1	0.3	1.7	26.0	1.1	26.3	1,170	1,500	990
14P	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	1,060
16P	0.75	7	1.2	0.6	1.0	23.7	0.3	1.8	28.8	1.2	26.3	1,170	1,500	1,200
19P	0.75	7	1.2	0.6	1.0	24.8	0.3	1.8	29.9	1.2	26.3	1,170	1,500	1,320
24P	0.75	7	1.2	0.6	1.2	29.1	0.3	2.0	34.4	1.5	26.3	1,170	1,500	1,740
32P	0.75	7	1.2	0.6	1.2	33.2	0.4	2.2	39.3	1.7	26.3	1,170	1,500	2,290
1P	1.0	7	1.4	0.6	1.0	8.5	0.3	1.2	12.4	0.7	19.3	1,050	1,500	250
2P	1.0	7	1.4	0.6	1.0	12.7	0.3	1.4	17.0	0.8	19.3	1,050	1,500	430
3P	1.0	7	1.4	0.6	1.0	13.7	0.3	1.4	18.0	0.8	19.3	1,050	1,500	490
4P	1.0	7	1.4	0.6	1.0	14.6	0.3	1.4	18.9	0.9	19.3	1,050	1,500	550
5P	1.0	7	1.4	0.6	1.0	16.5	0.3	1.5	21.0	0.9	19.3	1,050	1,500	650
6P	1.0	7	1.4	0.6	1.0	17.7	0.3	1.6	22.4	1.0	19.3	1,050	1,500	740
7P	1.0	7	1.4	0.6	1.0	17.7	0.3	1.6	22.4	1.0	19.3	1,050	1,500	760
8P	1.0	7	1.4	0.6	1.0	18.9	0.3	1.6	23.6	1.0	19.3	1,050	1,500	840
10P	1.0	7	1.4	0.6	1.0	21.4	0.3	1.7	26.3	1.1	19.3	1,050	1,500	1,010
12P	1.0	7	1.4	0.6	1.0	22.4	0.3	1.7	27.3	1.1	19.3	1,050	1,500	1,110
14P	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	1,210
16P	1.0	7	1.4	0.6	1.0	25.1	0.3	1.9	30.4	1.2	19.3	1,050	1,500	1,370
19P	1.0	7	1.4	0.6	1.0	26.4	0.3	1.9	31.7	1.3	19.3	1,050	1,500	1,510
24P	1.0	7	1.4	0.6	1.2	30.9	0.4	2.1	36.8	1.6	19.3	1,050	1,500	2,070
32P	1.0	7	1.4	0.6	1.2	35.2	0.4	2.3	41.5	1.8	19.3	1,050	1,500	2,600
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	14.4	0.3	1.4	18.7	0.9	12.9	1,020	1,500	510
3P	1.5	7	1.7	0.7	1.0	15.5	0.3	1.5	19.9	1.0	12.9	1,020	1,500	590
4P	1.5	7	1.7	0.7	1.0	16.6	0.3	1.5	21.0	1.0	12.9	1,020	1,500	670
5P	1.5	7	1.7	0.7	1.0	18.8	0.3	1.6	23.4	1.2	12.9	1,020	1,500	810
6P	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	920
7P	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
8P	1.5	7	1.7	0.7	1.0	21.6	0.3	1.7	26.4	1.2	12.9	1,020	1,500	1,050
10P	1.5	7	1.7	0.7	1.0	24.5	0.3	1.8	29.5	1.4	12.9	1,020	1,500	1,270
12P	1.5	7	1.7	0.7	1.0	25.6	0.3	1.9	30.8	1.4	12.9	1,020	1,500	1,410
14P	1.5	7	1.7	0.7	1.0	26.7	0.3	1.9	31.8	1.5	12.9	1,020	1,500	1,530
16P	1.5	7	1.7	0.7	1.2	29.6	0.3	2.0	34.8	1.8	12.9	1,020	1,500	1,840
19P	1.5	7	1.7	0.7	1.2	31.1	0.4	2.1	36.8	1.8	12.9	1,020	1,500	2,140
24P	1.5	7	1.7	0.7	1.2	35.4	0.4	2.3	41.5	2.0	12.9	1,020	1,500	2,650
32P	1.5	7	1.7	0.7	1.4	40.8	0.4	2.5	47.3	2.2	12.9	1,020	1,500	3,420
1P	2.5	7	2.2	0.7	1.0	10.3	0.3	1.3	14.4	0.7	8.02	850	1,500	350
2P	2.5	7	2.2	0.7	1.0	15.8	0.3	1.5	20.3	0.9	8.02	850	1,500	610
3P	2.5	7	2.2	0.7	1.0	17.0	0.3	1.5	21.5	0.9	8.02	850	1,500	710
4P	2.5	7	2.2	0.7	1.0	18.2	0.3	1.6	22.9	1.0	8.02	850	1,500	820
5P	2.5	7	2.2	0.7	1.0	20.6	0.3	1.7	25.5	1.1	8.02	850	1,500	990
6P	2.5	7	2.2	0.7	1.0	22.2	0.3	1.7	27.1	1.1	8.02	850	1,500	1,120
7P	2.5	7	2.2	0.7	1.0	22.2	0.3	1.7	27.1	1.1	8.02	850	1,500	1,170
8P	2.5	7	2.2	0.7	1.0	23.8	0.3	1.8	28.9	1.2	8.02	850	1,500	1,310
10P	2.5	7	2.2	0.7	1.0	27.0	0.3	1.9	32.3	1.3	8.02	850	1,500	1,600
12P	2.5	7	2.2	0.7	1.2	29.0	0.3	2.0	34.3	1.5	8.02	850	1,500	1,880
14P	2.5	7	2.2	0.7	1.2	30.2	0.4	2.1	35.8	1.9	8.02	850	1,500	2,160
16P	2.5	7	2.2	0.7	1.2	32.6	0.4	2.2	38.7	1.9	8.02	850	1,500	2,440
19P	2.5	7	2.2	0.7	1.2	34.2	0.4	2.2	40.3	1.9	8.02	850	1,500	2,710
24P	2.5	7	2.2	0.7	1.4	39.4	0.4	2.4	45.9	1.9	8.02	850	1,500	3,440
32P	2.5	7	2.2	0.7	1.4	45.0	0.4	2.7	52.1	2.1	8.02	850	1,500	4,400

HV Power Cable

LV Power & Lighting Cable

Instrumentation & Communication Cable

Earthing & Bonding wire

VFD Cable

Technical Information

# Instrumentation & Communication Cable

## 250V BFOU(c), 250V BFCU(c), 250V BFBU(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°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 <sup>2</sup>	EA	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	13.1	0.3	1.4	17.4	0.8	26.3	1,170	1,500	450
3T	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	510
4T	0.75	7	1.2	0.6	1.0	15.4	0.3	1.5	19.9	0.9	26.3	1,170	1,500	610
5T	0.75	7	1.2	0.6	1.0	17.2	0.3	1.5	21.7	1.0	26.3	1,170	1,500	710
6T	0.75	7	1.2	0.6	1.0	19.5	0.3	1.6	24.2	1.0	26.3	1,170	1,500	850
7T	0.75	7	1.2	0.6	1.0	19.5	0.3	1.6	24.2	1.0	26.3	1,170	1,500	880
8T	0.75	7	1.2	0.6	1.0	20.9	0.3	1.7	25.8	1.1	26.3	1,170	1,500	980
10T	0.75	7	1.2	0.6	1.0	23.8	0.3	1.8	28.9	1.2	26.3	1,170	1,500	1,200
12T	0.75	7	1.2	0.6	1.0	25.2	0.3	1.9	30.5	1.2	26.3	1,170	1,500	1,340
14T	0.75	7	1.2	0.6	1.0	26.4	0.3	1.9	31.7	1.3	26.3	1,170	1,500	1,470
16T	0.75	7	1.2	0.6	1.2	28.9	0.3	2.0	34.2	1.5	26.3	1,170	1,500	1,740
19T	0.75	7	1.2	0.6	1.2	31.2	0.4	2.1	37.1	1.6	26.3	1,170	1,500	2,080
24T	0.75	7	1.2	0.6	1.2	34.6	0.4	2.3	40.8	1.8	26.3	1,170	1,500	2,500
32T	0.75	7	1.2	0.6	1.4	40.2	0.4	2.5	46.9	1.9	26.3	1,170	1,500	3,260
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	13.3	0.3	1.4	18.0	1.2	19.3	1,050	1,500	490
3T	1.0	7	1.4	0.6	1.0	14.2	0.3	1.4	18.9	1.3	19.3	1,050	1,500	560
4T	1.0	7	1.4	0.6	1.0	15.6	0.3	1.5	20.6	1.4	19.3	1,050	1,500	670
5T	1.0	7	1.4	0.6	1.0	17.4	0.3	1.5	22.5	1.6	19.3	1,050	1,500	780
6T	1.0	7	1.4	0.6	1.0	19.7	0.3	1.6	25.1	1.8	19.3	1,050	1,500	930
7T	1.0	7	1.4	0.6	1.0	19.7	0.3	1.6	25.1	1.9	19.3	1,050	1,500	970
8T	1.0	7	1.4	0.6	1.0	21.2	0.3	1.7	26.7	1.9	19.3	1,050	1,500	1,100
10T	1.0	7	1.4	0.6	1.0	24.1	0.3	1.8	30.0	2.0	19.3	1,050	1,500	1,340
12T	1.0	7	1.4	0.6	1.0	25.6	0.3	1.9	32.0	2.4	19.3	1,050	1,500	1,520
14T	1.0	7	1.4	0.6	1.0	26.8	0.3	1.9	33.2	2.4	19.3	1,050	1,500	1,660
16T	1.0	7	1.4	0.6	1.2	29.3	0.3	2.0	35.8	2.4	19.3	1,050	1,500	1,970
19T	1.0	7	1.4	0.6	1.2	31.7	0.4	2.1	38.6	2.4	19.3	1,050	1,500	2,350
24T	1.0	7	1.4	0.6	1.2	35.2	0.4	2.3	42.5	2.4	19.3	1,050	1,500	2,850
32T	1.0	7	1.4	0.6	1.4	40.8	0.4	2.5	48.8	2.8	19.3	1,050	1,500	3,710
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	16.0	0.3	1.5	20.4	1.0	12.9	1,020	1,500	610
3T	1.5	7	1.7	0.7	1.0	17.0	0.3	1.5	21.4	1.0	12.9	1,020	1,500	700
4T	1.5	7	1.7	0.7	1.0	18.8	0.3	1.6	23.4	1.1	12.9	1,020	1,500	840
5T	1.5	7	1.7	0.7	1.0	21.0	0.3	1.7	25.8	1.2	12.9	1,020	1,500	1,000
6T	1.5	7	1.7	0.7	1.0	23.9	0.3	1.8	28.9	1.4	12.9	1,020	1,500	1,210
7T	1.5	7	1.7	0.7	1.0	23.9	0.3	1.8	28.9	1.4	12.9	1,020	1,500	1,260
8T	1.5	7	1.7	0.7	1.0	25.7	0.3	1.9	30.9	1.4	12.9	1,020	1,500	1,420
10T	1.5	7	1.7	0.7	1.2	30.1	0.4	2.1	35.6	2.0	12.9	1,020	1,500	1,950
12T	1.5	7	1.7	0.7	1.2	32.0	0.4	2.1	37.7	2.0	12.9	1,020	1,500	2,170
14T	1.5	7	1.7	0.7	1.2	33.4	0.4	2.2	39.3	2.0	12.9	1,020	1,500	2,390
16T	1.5	7	1.7	0.7	1.2	35.6	0.4	2.3	41.7	2.0	12.9	1,020	1,500	2,670
19T	1.5	7	1.7	0.7	1.4	38.9	0.4	2.4	45.2	2.1	12.9	1,020	1,500	3,130
24T	1.5	7	1.7	0.7	1.4	43.2	0.4	2.6	49.9	2.3	12.9	1,020	1,500	3,790
32T	1.5	7	1.7	0.7	1.6	50.3	0.4	2.9	57.3	2.7	12.9	1,020	1,500	5,040
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	17.4	0.3	1.5	21.9	1.0	8.02	850	1,500	730
3T	2.5	7	2.2	0.7	1.0	18.6	0.3	1.6	23.3	1.0	8.02	850	1,500	870
4T	2.5	7	2.2	0.7	1.0	20.6	0.3	1.7	25.5	1.1	8.02	850	1,500	1,040
5T	2.5	7	2.2	0.7	1.0	23.0	0.3	1.8	28.1	1.1	8.02	850	1,500	1,250
6T	2.5	7	2.2	0.7	1.0	26.1	0.3	1.9	31.4	1.2	8.02	850	1,500	1,500
7T	2.5	7	2.2	0.7	1.0	26.1	0.3	1.9	31.4	1.2	8.02	850	1,500	1,580
8T	2.5	7	2.2	0.7	1.2	28.9	0.3	2.0	34.2	1.5	8.02	850	1,500	1,880
10T	2.5	7	2.2	0.7	1.2	32.9	0.4	2.2	39.0	1.7	8.02	850	1,500	2,430
12T	2.5	7	2.2	0.7	1.2	34.9	0.4	2.3	41.1	1.8	8.02	850	1,500	2,740
14T	2.5	7	2.2	0.7	1.2	36.5	0.4	2.3	42.8	1.8	8.02	850	1,500	3,010
16T	2.5	7	2.2	0.7	1.4	39.3	0.4	2.4	45.8	1.9	8.02	850	1,500	3,450
19T	2.5	7	2.2	0.7	1.4	42.5	0.4	2.6	49.4	2.0	8.02	850	1,500	3,990
24T	2.5	7	2.2	0.7	1.4	47.3	0.4	2.8	54.5	2.2	8.02	850	1,500	4,860
32T	2.5	7	2.2	0.7	1.6	55.1	0.4	3.1	62.8	2.6	8.02	850	1,500	6,460



### 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°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
Fire resisting layer	<b>B</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	<b>(i)</b>		- 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	<b>(c)</b>		- 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	<b>F</b>		- Flame retardant halogen free thermoset compound
Armor	<b>(O, B, C)</b>		- 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	<b>U</b>		- SHF2 as per IEC 60092-360
			- <b>Option</b> : 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°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 <sup>2</sup>	EA	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

**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°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 <sup>2</sup>	EA	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

HV Power Cable  
 LV Power & Lighting Cable  
 Instrumentation & Communication Cable  
 Earthing & Bonding wire  
 VFD Cable  
 Technical Information

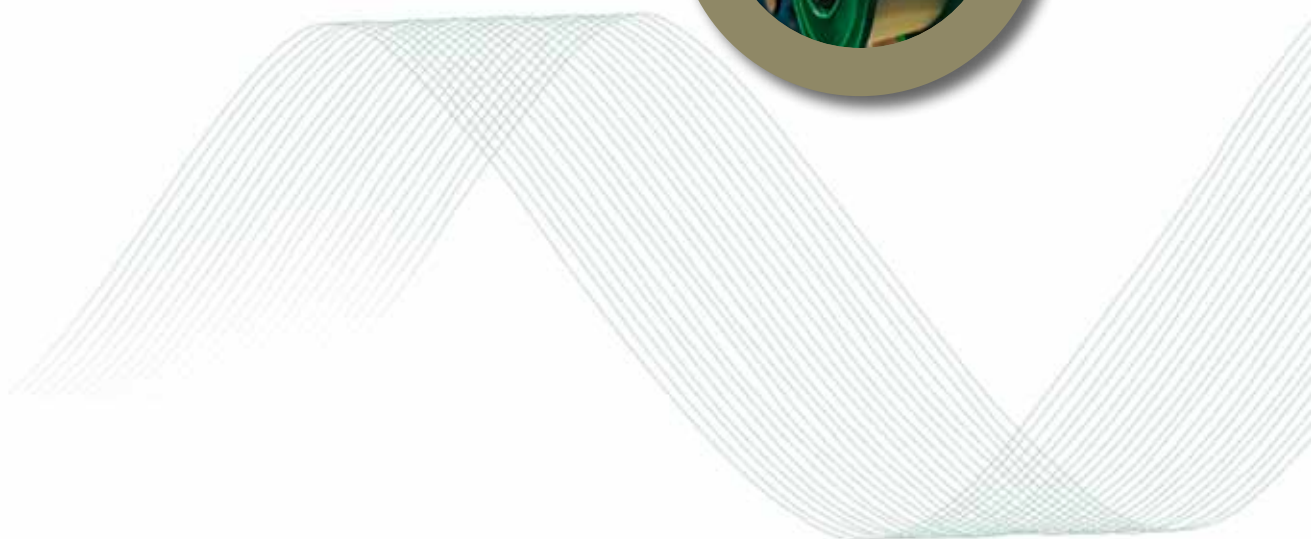


# Earthing & Bonding wire



0.6/1kV UX, FX - UX

57 ~ 58





# Earthing & Bonding wire

**O-Route®**  
NEK-606, IEC 60092-350, 353, 354, 376



## Cable Designation (P108)

0.6/1kV UX, FX - UX

### Application Standard

- Design guide : NEK-606 & IEC 60092-353
- 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
		<b>UX</b>	- SHF2 as per IEC 60092-360 - <b>Option</b> : NEK 606 Category a,b,c,d Mud or oil resistant
			- Insulation color : Yellow/Green (Green base with yellow strip) or Green

### 0.6/1kV UX (CLASS 2 CONDUCTOR)

No. of Cores	Conductor			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 <sup>2</sup>	EA	mm	mm	mm	±mm	Ω/km	V/5min.	kg/km
1	1.0	7	1.4	1.0	3.5	0.4	18.2	3,500	26
	1.5	7	1.7	1.0	3.8	0.5	12.2	3,500	33
	2.5	7	2.2	1.0	4.2	0.5	7.56	3,500	43
	4	7	2.7	1.0	4.7	0.5	4.70	3,500	59
	6	7	3.3	1.0	5.3	0.5	3.11	3,500	81
	10	7	4.2	1.0	6.2	0.5	1.84	3,500	120
	16	7	5.3	1.0	7.2	0.6	1.16	3,500	180
	25	7	6.6	1.2	8.9	0.7	0.734	3,500	280
	35	7	7.9	1.2	10.0	0.7	0.529	3,500	380
	50	19	9.1	1.4	11.8	0.8	0.391	3,500	510
	70	19	11.0	1.6	13.9	0.9	0.270	3,500	730
	95	19	12.9	1.6	15.8	0.9	0.195	3,500	980
	120	37	14.5	1.6	17.3	1.0	0.154	3,500	1,210
	150	37	16.2	1.8	19.2	1.1	0.126	3,500	1,480
	185	37	18.0	2.0	21.5	1.2	0.100	3,500	1,860
	240	61	20.6	2.2	24.5	1.3	0.0762	3,500	2,440
300	61	23.1	2.4	27.2	1.4	0.0607	3,500	3,030	

HV Power Cable  
LV Power & Lighting Cable  
Instrumentation & Communication Cable

Earthing & Bonding wire

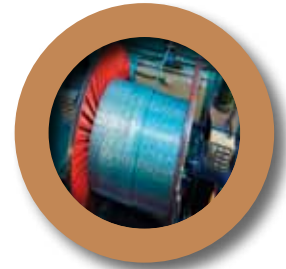
VFD Cable

Technical Information

## Earthing & Bonding wire

### 0.6/1kV FX-UX (CLASS 5 CONDUCTOR)

No. of Cores	Conductor			Thickness of Sheath	Overall diameter		Conductor Resistance (at 20) (Max.)	Test Voltage	Cable Weight
	Nominal Area	Min. No. of wires	Max. overall dia.		Nominal	Tolerance			
No.	mm <sup>2</sup>	EA	mm	mm	mm	±mm	Ω/km	V/5min.	kg/km
1	1.0	0.21	1.5	1.0	3.5	0.4	20.0	3,500	26
	1.5	0.26	1.8	1.0	3.8	0.5	13.7	3,500	32
	2.5	0.26	2.4	1.0	4.3	0.5	8.21	3,500	44
	4	0.31	3.0	1.0	4.8	0.5	5.09	3,500	60
	6	0.31	3.9	1.0	5.4	0.5	3.39	3,500	81
	10	0.41	5.1	1.0	6.3	0.6	1.95	3,500	120
	16	0.41	6.3	1.0	7.8	0.6	1.24	3,500	180
	25	0.41	7.8	1.2	9.7	0.7	0.795	3,500	270
	35	0.41	9.2	1.2	10.9	0.7	0.565	3,500	370
	50	0.41	11.0	1.4	12.9	0.8	0.393	3,500	530
	70	0.51	13.1	1.6	15.2	0.9	0.277	3,500	750
	95	0.51	15.1	1.6	16.9	1.0	0.210	3,500	960
	120	0.51	17.0	1.6	18.7	1.0	0.164	3,500	1,210
	150	0.51	19.0	1.8	20.9	1.1	0.132	3,500	1,510
	185	0.51	21.0	2.0	22.8	1.2	0.108	3,500	1,840
	240	0.51	24.0	2.2	25.9	1.3	0.0817	3,500	2,410
300	0.51	27.0	2.4	28.9	1.5	0.0654	3,500	3,040	



# VFD Cable



0.6/1kV(1.8/3kV) RFOU(VFD), FX-RFOU(VFD)

60 ~ 61

0.6/1kV(1.8/3kV) BFOU(VFD), FX-BFOU(VFD)

62 ~ 63



# VFD Cable



## Cable Designation

0.6/1kV(1.8/3kV) RFOU(VFD), FX-RFOU(VFD)  
 1.8/3kV RFOU(VFD), FX-RFOU(VFD)

## Application Standard

- Design guide : NEK-606 & IEC 60092-353
- 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
	Insulation	<b>R</b>	- EPR as per IEC 60092-360
	Cabling		- Insulated cores 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	<b>F</b>	- Flame retardant halogen free thermoset compound
	Armor (Screen)	<b>(VFD)</b>	- CU/PS tape providing 100% Coverage
		<b>O</b>	- Braid of tinned annealed copper wire - A suitable separator tape(s) may be applied under/over the armor
	Sheath	<b>U</b>	- SHF2 as per IEC 60092-360 - <b>Option</b> : NEK 606 Category a,b,c,d Mud or oil resistant - Outer sheath color : Black
	Core identification		- 3C+3E : Off-white, Black, Red + G/Y

**Note.** 1. Flexible cable (Class5 Conductor) can be supplied  
 2. Earth core(G/Y) : Yellow/Green(Green base color with yellow stripe)

**0.6/1KV(1.8/3KV) RFOU(VFD), 1.8/3KV RFOU(VFD)**

No. of Cores	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
	Nominal Area	Min. Number of wires	Max. Dia.						Nominal	Tolerance				
No.	mm <sup>2</sup>	ea.	mm	mm	mm	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5min.	kg/km
3C	25	7	6.6	2.2	1.0	25.7	0.3	1.9	31.7	1.6	0.734	830	6,500	1,970
+3E	6	7	3.3	1.0							3.110	790	3,500	
3C	35	7	7.9	2.2	1.2	28.7	0.3	2.0	34.9	1.7	0.529	730	6,500	2,420
+3E	6	7	3.3	1.0							3.110	790	3,500	
3C	50	19	9.1	2.2	1.2	31.5	0.4	2.2	38.5	1.8	0.391	640	6,500	3,160
+3E	10	7	4.2	1.0							1.840	640	3,500	
3C	70	19	11.0	2.2	1.2	35.4	0.4	2.3	42.6	2.0	0.270	550	6,500	4,150
+3E	16	7	5.3	1.0							1.160	530	3,500	
3C	95	19	12.9	2.4	1.4	40.7	0.4	2.5	48.3	2.2	0.195	510	6,500	5,330
+3E	16	7	5.3	1.0							1.160	530	3,500	
3C	120	37	14.5	2.4	1.4	44.2	0.4	2.7	52.2	2.4	0.154	460	6,500	6,540
+3E	25	7	6.6	1.2							0.734	510	3,500	
3C	150	37	16.2	2.4	1.4	47.6	0.4	2.8	55.8	2.5	0.126	420	6,500	7,590
+3E	25	7	6.6	1.2							0.734	510	3,500	
3C	185	37	18.0	2.4	1.6	51.9	0.4	3.0	60.5	2.7	0.1000	380	6,500	9,230
+3E	35	7	7.9	1.2							0.5290	440	3,500	
3C	240	61	20.6	2.4	1.6	57.7	0.4	3.2	66.7	3.0	0.0762	340	6,500	11,690
+3E	50	19	9.1	1.4							0.3910	440	3,500	

**0.6/1KV(1.8/3KV) FX-RFOU(VFD), 1.8/3KV FX-RFOU(VFD)**

No. of Cores	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
	Nominal Area	Max. dia. of wires	Max. overall dia.						Nominal	Tolerance				
No.	mm <sup>2</sup>	mm	mm	mm	mm	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5min.	kg/km
3C	25	0.41	7.8	2.2	1.2	28.3	0.3	2.0	34.5	1.7	0.795	750	6,500	2,140
+3E	6	0.31	3.9	1.0							3.390	790	3,500	
3C	35	0.41	9.2	2.2	1.2	31.3	0.4	2.1	38.1	1.8	0.565	650	6,500	2,710
+3E	6	0.31	3.9	1.0							3.390	790	3,500	
3C	50	0.41	11.0	2.2	1.2	34.7	0.4	2.3	41.9	2.0	0.393	570	6,500	3,520
+3E	10	0.41	5.1	1.0							1.950	630	3,500	
3C	70	0.51	13.1	2.2	1.4	39.2	0.4	2.5	46.8	2.2	0.277	490	6,500	4,550
+3E	16	0.41	6.3	1.0							1.240	470	3,500	
3C	95	0.51	15.1	2.4	1.4	44.0	0.4	2.7	52.0	2.4	0.210	470	6,500	5,640
+3E	16	0.41	6.3	1.0							1.240	470	3,500	
3C	120	0.51	17.0	2.4	1.4	47.8	0.4	2.8	56.0	2.5	0.164	420	6,500	6,880
+3E	25	0.41	7.8	1.2							0.795	450	3,500	
3C	150	0.51	19.0	2.4	1.6	52.1	0.4	3.0	60.7	2.7	0.132	380	6,500	8,120
+3E	25	0.41	7.8	1.2							0.795	450	3,500	
3C	185	0.51	21.0	2.4	1.6	56.2	0.4	3.1	65.0	2.9	0.108	350	6,500	9,620
+3E	35	0.41	9.2	1.2							0.565	390	3,500	
3C	240	0.51	24.0	2.4	1.6	63.1	0.4	3.4	72.5	3.2	0.0817	310	6,500	12,390
+3E	50	0.41	11.0	1.4							0.393	380	3,500	

HV Power Cable  
 LV Power & Lighting Cable  
 Instrumentation & Communication Cable  
 Earthing & Bonding wire  
 VFD Cable  
 Technical Information

# VFD Cable



## Cable Designation

0.6/1KV(1.8/3KV) BFOU(VFD), FX-BFOU(VFD)  
 1.8/3KV BFOU(VFD), FX-BFOU(VFD)

## Application Standard

- Design guide : NEK-606 & IEC 60092-353
- 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>B</b>	- Mica/glass tape	
	Insulation		- EPR as per IEC 60092-360	
	Cabling		- Insulated cores 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	<b>F</b>	- Flame retardant halogen free thermoset compound	
	Armor (Screen)	<b>(VFD)</b>	- CU/PS tape providing 100% Coverage	
	Sheath	<b>O</b>	- Braid of tinned annealed copper wire - A suitable separator tape(s) may be applied under/over the armor	
	Core identification	<b>U</b>	- SHF2 as per IEC 60092-360 - <b>Option</b> : NEK 606 Category a,b,c,d Mud or oil resistant - Outer sheath color : Black	
				- 3C+3E : Off-white, Black, Red + G/Y

**Note.** 1. Flexible cable (Class5 Conductor) can be supplied  
 2. Earth core(G/Y) : Yellow/Green(Green base color with yellow stripe)

## 0.6/1KV(1.8/3KV) BFOU(VFD), 1.8/3KV BFOU(VFD)

No. of Cores	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
	Nominal Area	Min. Number of wires	Max. Dia.						Nominal	Tolerance				
No.	mm <sup>2</sup>	ea.	mm	mm	mm	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5min.	kg/km
3C	25	7	6.6	2.2	1.0	26.8	0.3	2.0	33.0	1.6	0.734	830	6,500	2,070
+3E	6	7	3.3	1.0							3.110	790	3,500	
3C	35	7	7.9	2.2	1.2	29.8	0.4	2.1	36.6	1.8	0.529	730	6,500	2,630
+3E	6	7	3.3	1.0							3.110	790	3,500	
3C	50	19	9.1	2.2	1.2	32.8	0.4	2.2	39.8	1.9	0.391	640	6,500	3,270
+3E	10	7	4.2	1.0							1.840	640	3,500	
3C	70	19	11.0	2.2	1.2	36.7	0.4	2.4	44.1	2.1	0.270	550	6,500	4,300
+3E	16	7	5.3	1.0							1.160	530	3,500	
3C	95	19	12.9	2.4	1.4	42.0	0.4	2.6	49.8	2.3	0.195	510	6,500	5,490
+3E	16	7	5.3	1.0							1.160	530	3,500	
3C	120	37	14.5	2.4	1.4	45.5	0.4	2.7	53.5	2.4	0.154	460	6,500	6,690
+3E	25	7	6.6	1.2							0.734	510	3,500	
3C	150	37	16.2	2.4	1.6	49.3	0.4	2.9	57.7	2.6	0.126	420	6,500	7,800
+3E	25	7	6.6	1.2							0.734	510	3,500	
3C	185	37	18.0	2.4	1.6	53.4	0.4	3.0	62.0	2.8	0.100	380	6,500	9,420
+3E	35	7	7.9	1.2							0.529	440	3,500	
3C	240	61	20.6	2.4	1.6	59.0	0.4	3.3	68.2	3.0	0.0762	340	6,500	11,900
+3E	50	19	9.1	1.4							0.391	440	3,500	

## 0.6/1KV(1.8/3KV) FX-BFOU(VFD), 1.8/3KV FX-BFOU(VFD)

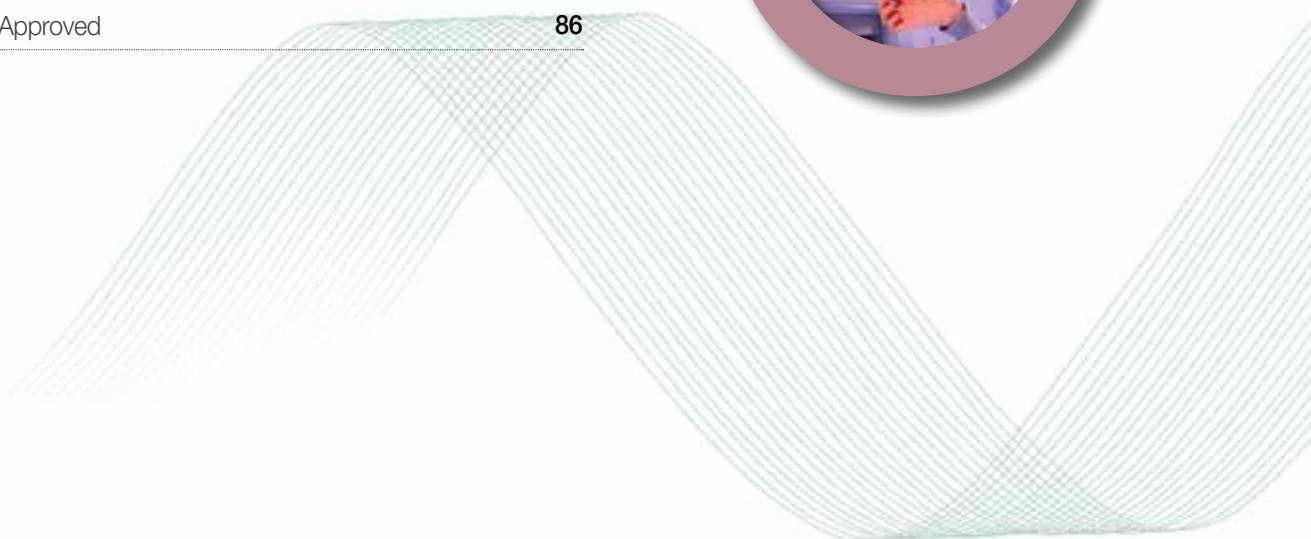
No. of Cores	Conductor			Thickness of Insulation	Thickness of inner covering	Nominal dia. inner covering	Dia. of wire for armour	Thickness of sheath	Overall diameter		Conductor Resistance (at 20°C) (Max.)	Insulation Resistance (at 20°C) (Min.)	Test Voltage	Cable Weight
	Nominal Area	Max. dia. of wires	Max. overall dia.						Nominal	Tolerance				
No.	mm <sup>2</sup>	mm	mm	mm	mm	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5min.	kg/km
3C	25	0.41	7.8	2.2	1.2	29.3	0.3	2.1	35.7	1.7	0.795	750	6,500	2,240
+3E	6	0.31	3.9	1.0							3.390	790	3,500	
3C	35	0.41	9.2	2.2	1.2	32.4	0.4	2.2	39.4	1.9	0.565	650	6,500	2,840
+3E	6	0.31	3.9	1.0							3.390	790	3,500	
3C	50	0.41	11.0	2.2	1.2	35.8	0.4	2.3	43.0	2.0	0.393	570	6,500	3,640
+3E	10	0.41	5.1	1.0							1.950	630	3,500	
3C	70	0.51	13.1	2.2	1.4	41.6	0.4	2.6	49.4	2.3	0.277	490	6,500	4,870
+3E	16	0.41	6.3	1.0							1.240	470	3,500	
3C	95	0.51	15.1	2.4	1.4	45.0	0.4	2.7	53.0	2.4	0.210	470	6,500	5,770
+3E	16	0.41	6.3	1.0							1.240	470	3,500	
3C	120	0.51	17.0	2.4	1.6	50.2	0.4	2.9	58.6	2.6	0.164	420	6,500	7,210
+3E	25	0.41	7.8	1.2							0.795	450	3,500	
3C	150	0.51	19.0	2.4	1.6	53.2	0.4	3.0	61.8	2.8	0.132	380	6,500	8,300
+3E	25	0.41	7.8	1.2							0.795	450	3,500	
3C	185	0.51	21.0	2.4	1.6	57.3	0.4	3.2	66.3	3.0	0.108	350	6,500	9,840
+3E	35	0.41	9.2	1.2							0.565	390	3,500	
3C	240	0.51	24.0	2.4	1.8	65.6	0.4	3.5	75.2	3.3	0.0817	310	6,500	12,830
+3E	50	0.41	11.0	1.4							0.393	380	3,500	



# Technical Information



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# Technical Information

## ELECTRICAL DATA

### 1. Current rating for continuous

Conductor temperature	90°C		
	Nominal cross-sectional area (mm <sup>2</sup> )	Single core (A)	Two core (A)
1	18	15	13
1.5	23	20	16
2.5	30	26	21
4	40	34	28
6	52	44	36
10	72	61	50
16	96	82	67
25	127	108	89
35	157	133	110
50	196	167	137
70	242	206	169
95	293	249	205
120	339	288	237
150	389	331	273
185	444	377	311
240	522	444	366
300	601	511	420

**NOTES)**

- Maximum permissible service temperature of the conductor is 90°C
- The current ratings given above are based on an ambient air temperature of 45°C
- The current ratings given above are for 6 cables of less bunched or laid together in flat formation.  
When more than 6 cables are bunched or laid close together, the current ratings given above should be multiplied correction factor 0.85.  
In case of cables not being loaded simultaneously, consideration of the actual loading appertaining is permitted
- For cables with more than 4 core cables, the current ratings are given by the Formula;

$$I = \frac{I_1}{\sqrt[3]{N}}$$

Where,  $I_1$  : Current for single core cable  
 $N$  : Number of cores

No. of cores	1.0SQMM	1.5SQMM	2.5SQMM
5	11	13	18
7	9	12	16
9	9	11	14
12	8	10	13
14	7	10	12
16	7	9	12
19	7	9	11
24	6	8	10
30	6	7	10
37	5	7	9
44	5	7	8

Maximum conductor temperature	Correction factors for various ambient air temperature									
	35	40	45	50	55	60	65	70	75	80
°C	1.10	1.05	1.00	0.94	0.88	0.82	0.74	0.67	0.58	0.47

HV Power Cable  
LV Power & Lighting Cable  
Instrumentation & Communication Cable  
Earthing & Bonding wire  
VFD Cable  
Technical Information

# Technical Information

## ELECTRICAL DATA

### 2. Capacitance, Inductance, Reactance, Impedance Data

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

Nominal Area	Single core cable						Multi core cable					
	Capacitance C	Inductance L	Reactance X 50 Hz	Reactance X 60 Hz	Impedance Z at 50 Hz 90°C	Impedance Z at 60 Hz 90°C	Capacitance C	Inductance L	Reactance X 50 Hz	Reactance X 60 Hz	Impedance Z at 50 Hz 90°C	Impedance Z at 60 Hz 90°C
mm <sup>2</sup>	μF/km	mH / km	Ω/km	Ω/km	Ω/km	Ω/km	μF/km	mH / km	Ω/km	Ω/km	Ω/km	Ω/km
10	0.247	0.458	0.144	0.173	2.351	2.353	0.247	0.324	0.102	0.122	2.348	2.349
16	0.284	0.434	0.136	0.164	1.485	1.488	0.284	0.306	0.096	0.115	1.482	1.484
25	0.328	0.409	0.128	0.154	0.945	0.949	0.328	0.290	0.091	0.109	0.940	0.942
35	0.362	0.393	0.123	0.148	0.686	0.691	0.362	0.281	0.088	0.106	0.680	0.683
50	0.408	0.375	0.118	0.142	0.512	0.518	0.408	0.270	0.085	0.102	0.506	0.509
70	0.466	0.358	0.112	0.135	0.362	0.370	0.466	0.260	0.082	0.098	0.354	0.358
95	0.528	0.343	0.108	0.129	0.273	0.282	0.528	0.252	0.079	0.095	0.263	0.268
120	0.581	0.332	0.104	0.125	0.224	0.234	0.581	0.246	0.077	0.093	0.213	0.219
150	0.624	0.326	0.102	0.123	0.193	0.205	0.624	0.242	0.076	0.091	0.181	0.187
185	0.695	0.317	0.099	0.119	0.165	0.177	0.695	0.237	0.074	0.089	0.151	0.159
240	0.742	0.310	0.097	0.117	0.140	0.154	0.742	0.234	0.073	0.088	0.125	0.134
300	0.770	0.305	0.096	0.115	0.126	0.141	-	-	-	-	-	-

#### 6/10kV RFOU, 6/10kV RFCU, 6/10kV RFBU

Nominal Area	Single core cable						Multi core cable					
	Capacitance C	Inductance L	Reactance X 50 Hz	Reactance X 60 Hz	Impedance Z at 50 Hz 90°C	Impedance Z at 60 Hz 90°C	Capacitance C	Inductance L	Reactance X 50 Hz	Reactance X 60 Hz	Impedance Z at 50 Hz 90°C	Impedance Z at 60 Hz 90°C
mm <sup>2</sup>	/km	mH / km	Ω/km	Ω/km	Ω/km	Ω/km	/km	mH / km	Ω/km	Ω/km	Ω/km	Ω/km
16	0.228	0.450	0.141	0.170	1.486	1.489	0.228	0.335	0.105	0.126	1.483	1.484
25	0.261	0.425	0.134	0.160	0.945	0.950	0.261	0.316	0.099	0.119	0.941	0.943
35	0.287	0.407	0.128	0.153	0.687	0.692	0.287	0.305	0.096	0.115	0.681	0.684
50	0.321	0.390	0.123	0.147	0.513	0.520	0.321	0.292	0.092	0.110	0.507	0.511
70	0.365	0.370	0.116	0.140	0.363	0.371	0.365	0.280	0.088	0.106	0.355	0.360
95	0.411	0.355	0.111	0.134	0.275	0.284	0.411	0.270	0.085	0.102	0.265	0.271
120	0.450	0.346	0.109	0.130	0.226	0.237	0.450	0.263	0.083	0.099	0.215	0.222
150	0.484	0.337	0.106	0.127	0.195	0.207	0.484	0.258	0.081	0.097	0.183	0.190
185	0.535	0.330	0.104	0.124	0.167	0.181	0.535	0.251	0.079	0.095	0.153	0.162
240	0.591	0.321	0.101	0.121	0.143	0.158	0.591	0.245	0.077	0.092	0.127	0.137
300	0.651	0.311	0.098	0.117	0.128	0.143	-	-	-	-	-	-

#### 8.7/15kV RFOU, 8.7/15kV RFCU, 8.7/15kV RFBU

Nominal Area	Single core cable						Multi core cable					
	Capacitance C	Inductance L	Reactance X 50 Hz	Reactance X 60 Hz	Impedance Z at 50 Hz 90°C	Impedance Z at 60 Hz 90°C	Capacitance C	Inductance L	Reactance X 50 Hz	Reactance X 60 Hz	Impedance Z at 50 Hz 90°C	Impedance Z at 60 Hz 90°C
mm <sup>2</sup>	μF/km	mH / km	Ω/km	Ω/km	Ω/km	Ω/km	μF/km	mH / km	Ω/km	Ω/km	Ω/km	Ω/km
25	0.215	0.443	0.139	0.167	0.946	0.951	0.215	0.344	0.108	0.130	0.942	0.945
35	0.235	0.424	0.133	0.160	0.688	0.693	0.235	0.330	0.104	0.125	0.682	0.686
50	0.261	0.406	0.128	0.153	0.515	0.522	0.261	0.316	0.099	0.119	0.508	0.513
70	0.295	0.386	0.121	0.145	0.365	0.374	0.295	0.302	0.095	0.114	0.357	0.363
95	0.330	0.371	0.117	0.140	0.277	0.288	0.330	0.290	0.091	0.109	0.267	0.274
120	0.360	0.362	0.114	0.137	0.229	0.241	0.360	0.281	0.088	0.106	0.217	0.225
150	0.386	0.353	0.111	0.133	0.198	0.211	0.386	0.275	0.086	0.104	0.185	0.194
185	0.424	0.341	0.107	0.129	0.169	0.184	0.424	0.267	0.084	0.101	0.156	0.166
240	0.468	0.332	0.104	0.125	0.145	0.161	0.468	0.260	0.082	0.098	0.130	0.141
300	0.514	0.324	0.102	0.122	0.131	0.147	-	-	-	-	-	-

**0.6/1kV(1.8/3kV) RFOU(VFD), 1.8/3kV RFOU(VFD)**

No. of Cores	Nominal Area	Multi core cable					
		Capacitance C	Inductance L	Reactance X 50 Hz	Reactance X 60 Hz	Impedance Z at 50 Hz 90°C	Impedance Z at 60 Hz 90°C
No.	mm <sup>2</sup>	/km	mH / km	Ω/km	Ω/km	Ω/km	Ω/km
3C	25	0.417	0.296	0.093	0.112	0.941	0.943
3E	6						
3C	35	0.455	0.284	0.089	0.107	0.680	0.683
3E	6						
3C	50	0.516	0.272	0.085	0.103	0.506	0.509
3E	10						
3C	70	0.562	0.260	0.082	0.098	0.354	0.358
3E	16						
3C	95	0.582	0.255	0.080	0.096	0.264	0.269
3E	16						
3C	120	0.667	0.249	0.078	0.094	0.213	0.219
3E	25						
3C	150	0.715	0.244	0.077	0.092	0.181	0.188
3E	25						
3C	185	0.736	0.238	0.075	0.090	0.151	0.159
3E	35						
3C	240	0.794	0.233	0.073	0.088	0.125	0.134
3E	50						

**0.6/1kV(1.8/3kV) BFOU(VFD), 1.8/3kV BFOU(VFD)**

3C	25	0.417	0.305	0.096	0.115	0.941	0.943
3E	6						
3C	35	0.447	0.292	0.092	0.110	0.681	0.683
3E	6						
3C	50	0.500	0.281	0.088	0.106	0.506	0.510
3E	10						
3C	70	0.544	0.268	0.084	0.101	0.354	0.359
3E	16						
3C	95	0.550	0.262	0.082	0.099	0.264	0.270
3E	16						
3C	120	0.603	0.255	0.080	0.096	0.214	0.220
3E	25						
3C	150	0.658	0.250	0.079	0.094	0.182	0.189
3E	25						
3C	185	0.715	0.244	0.077	0.092	0.152	0.160
3E	35						
3C	240	0.770	0.238	0.075	0.090	0.126	0.135
3E	50						

**0.6/1kV(1.8/3kV) FX-RFOU(VFD), 1.8/3kV FX-RFOU(VFD)**

3C	25	0.455	0.287	0.090	0.108	1.018	1.019
3E	6						
3C	35	0.516	0.276	0.087	0.104	0.726	0.728
3E	6						
3C	50	0.544	0.264	0.083	0.099	0.508	0.511
3E	10						
3C	70	0.596	0.254	0.080	0.096	0.362	0.366
3E	16						
3C	95	0.642	0.251	0.079	0.095	0.282	0.286
3E	16						
3C	120	0.676	0.245	0.077	0.092	0.225	0.230
3E	25						
3C	150	0.747	0.240	0.075	0.090	0.187	0.194
3E	25						
3C	185	0.770	0.235	0.074	0.089	0.160	0.167
3E	35						
3C	240	0.834	0.230	0.072	0.087	0.130	0.139
3E	50						

HV Power Cable  
 LV Power & Lighting Cable  
 Instrumentation & Communication Cable  
 Earthing & Bonding wire  
 VFD Cable  
**Technical Information**

## Technical Information

### 0.6/1kV(1.8/3kV) FX-BFOU(VFD), 1.8/3kV FX-BFOU(VFD)

No. of Cores	Nominal Area	Multi core cable					
		Capacitance C	Inductance L	Reactance X 50 Hz	Reactance X 60 Hz	Impedance Z at 50 Hz 90	Impedance Z at 60 Hz 90
No.	mm <sup>2</sup>	μF/km	mH / km	Ω/km	Ω/km	Ω/km	Ω/km
3C	25	0.417	0.296	0.093	0.111	1.018	1.020
3E	6						
3C	35	0.455	0.283	0.089	0.107	0.726	0.728
3E	6						
3C	50	0.527	0.270	0.085	0.102	0.508	0.511
3E	10						
3C	70	0.562	0.260	0.082	0.098	0.362	0.367
3E	16						
3C	95	0.596	0.256	0.080	0.096	0.282	0.287
3E	16						
3C	120	0.642	0.249	0.078	0.094	0.225	0.231
3E	25						
3C	150	0.715	0.244	0.077	0.092	0.188	0.195
3E	25						
3C	185	0.747	0.239	0.075	0.090	0.161	0.168
3E	35						
3C	240	0.782	0.233	0.073	0.088	0.131	0.140
3E	50						

### 0.6/1kV RFOU, 0.6/1kV RFCU, 0.6/1kV RFBU

Nominal Area	Single core cable * )						Multi core cable					
	Capacitance C	Inductance L	Reactance X 50 Hz	Reactance X 60 Hz	Impedance Z at 50 Hz 90°C	Impedance Z at 60 Hz 90°C	Capacitance C	Inductance L	Reactance X 50 Hz	Reactance X 60 Hz	Impedance Z at 50 Hz 90°C	Impedance Z at 60 Hz 90°C
mm <sup>2</sup>	μF/km	mH / km	Ω/km	Ω/km	Ω/km	Ω/km	μF/km	mH / km	Ω/km	Ω/km	Ω/km	Ω/km
1.5	0.199	0.546	0.171	0.206	15.557	15.558	0.305	0.356	0.112	0.134	15.557	15.557
2.5	0.237	0.506	0.159	0.191	9.641	9.642	0.345	0.329	0.103	0.124	9.640	9641
4	0.282	0.471	0.148	0.177	5.995	5.996	0.379	0.307	0.096	0.116	5.994	5.994
6	0.326	0.441	0.138	0.166	3.968	3.969	0.435	0.291	0.091	0.110	3.967	3.967
10	0.401	0.409	0.128	0.154	2.350	2.351	0.477	0.272	0.085	0.102	2.348	2.348
16	0.490	0.379	0.119	0.143	1.484	1.486	0.500	0.257	0.081	0.097	1.481	1.482
25	0.509	0.360	0.113	0.136	0.943	0.946	0.589	0.254	0.080	0.096	0.939	0.941
35	0.588	0.342	0.107	0.129	0.683	0.687	0.685	0.245	0.077	0.092	0.679	0.681
50	0.591	0.332	0.104	0.125	0.509	0.514	0.705	0.245	0.077	0.092	0.504	0.507
70	0.705	0.315	0.099	0.119	0.358	0.364	0.715	0.236	0.074	0.089	0.352	0.356
95	0.713	0.307	0.096	0.116	0.269	0.276	0.770	0.235	0.074	0.089	0.262	0.266
120	0.813	0.296	0.093	0.111	0.219	0.228	0.834	0.230	0.072	0.087	0.211	0.216
150	0.793	0.293	0.092	0.110	0.188	0.197	0.834	0.231	0.072	0.087	0.179	0.185
185	0.799	0.289	0.091	0.109	0.160	0.171	0.834	0.232	0.073	0.088	0.150	0.158
240	0.832	0.282	0.089	0.106	0.134	0.147	0.848	0.230	0.072	0.087	0.124	0.133
300	0.857	0.286	0.090	0.108	0.122	0.136	0.848	0.230	0.072	0.087	0.109	0.119

\* Reactance for 1-conductor cables given at Three-foil formation

0.6/1kV BFOU, 0.6/1kV BFCU, 0.6/1kV BFBU

Nominal Area	Single core cable * )						Multi core cable					
	Capacitance C	Inductance L	Reactance X 50 Hz	Reactance X 60 Hz	Impedance Z at 50 Hz 90°C	Impedance Z at 60 Hz 90°C	Capacitance C	Inductance L	Reactance X 50 Hz	Reactance X 60 Hz	Impedance Z at 50 Hz 90°C	Impedance Z at 60 Hz 90°C
mm <sup>2</sup>	μF/km	mH / km	Ω/km	Ω/km	Ω/km	Ω/km	μF/km	mH / km	Ω/km	Ω/km	Ω/km	Ω/km
1.5	0.172	0.556	0.175	0.210	15.557	15.558	0.278	0.382	0.120	0.144	15.557	15.557
2.5	0.203	0.516	0.162	0.195	9.641	9.642	0.309	0.353	0.111	0.133	9.640	9.641
4	0.239	0.480	0.151	0.181	5.995	5.996	0.345	0.328	0.103	0.124	5.994	5.994
6	0.276	0.453	0.142	0.171	3.968	3.969	0.385	0.309	0.097	0.117	3.967	3.967
10	0.336	0.417	0.131	0.157	2.350	2.351	0.435	0.288	0.090	0.108	2.348	2.349
16	0.436	0.387	0.121	0.146	1.484	1.486	0.500	0.271	0.085	0.102	1.482	1.483
25	0.461	0.367	0.115	0.138	0.943	0.946	0.527	0.265	0.083	0.100	0.940	0.941
35	0.531	0.348	0.109	0.131	0.683	0.687	0.556	0.255	0.080	0.096	0.679	0.681
50	0.542	0.337	0.106	0.127	0.510	0.515	0.589	0.253	0.080	0.096	0.505	0.508
70	0.644	0.320	0.101	0.121	0.359	0.365	0.695	0.243	0.076	0.092	0.353	0.356
95	0.660	0.311	0.098	0.117	0.269	0.277	0.715	0.242	0.076	0.091	0.262	0.267
120	0.749	0.301	0.094	0.113	0.220	0.228	0.758	0.237	0.074	0.089	0.212	0.217
150	0.738	0.296	0.093	0.112	0.188	0.198	0.758	0.236	0.074	0.089	0.180	0.186
185	0.749	0.291	0.092	0.110	0.160	0.171	0.782	0.235	0.074	0.089	0.151	0.158
240	0.784	0.284	0.089	0.107	0.135	0.147	0.807	0.233	0.073	0.088	0.125	0.134
300	0.811	0.288	0.090	0.108	0.122	0.136	0.820	0.232	0.073	0.087	0.110	0.120

\* Reactance for 1-conductor cables given at Three-foil formation

0.6/1kV RU

Nominal Area	Single core cable * )						Multi core cable					
	Capacitance C	Inductance L	Reactance X 50 Hz	Reactance X 60 Hz	Impedance Z at 50 Hz 90°C	Impedance Z at 60 Hz 90°C	Capacitance C	Inductance L	Reactance X 50 Hz	Reactance X 60 Hz	Impedance Z at 50 Hz 90°C	Impedance Z at 60 Hz 90°C
mm <sup>2</sup>	μF/km	mH / km	Ω/km	Ω/km	Ω/km	Ω/km	μF/km	mH / km	Ω/km	Ω/km	Ω/km	Ω/km
1.5	0.199	0.451	0.142	0.170	15.557	15.557	0.305	0.356	0.112	0.134	15.557	15.557
2.5	0.237	0.417	0.131	0.157	9.641	9.641	0.345	0.329	0.103	0.124	9.640	9.641
4	0.282	0.387	0.121	0.146	5.994	5.995	0.379	0.307	0.096	0.116	5.994	5.994
6	0.326	0.363	0.114	0.137	3.967	3.968	0.435	0.291	0.091	0.110	3.967	3.967
10	0.401	0.334	0.105	0.126	2.349	2.350	0.477	0.272	0.085	0.102	2.348	2.348
16	0.490	0.316	0.099	0.119	1.482	1.484	0.500	0.257	0.081	0.097	1.481	1.482
25	0.509	0.303	0.095	0.114	0.941	0.943	0.589	0.254	0.080	0.096	0.939	0.941
35	0.588	0.292	0.092	0.110	0.681	0.683	0.685	0.245	0.077	0.092	0.679	0.681
50	0.591	0.288	0.091	0.109	0.507	0.510	0.705	0.245	0.077	0.092	0.504	0.507
70	0.705	0.274	0.086	0.103	0.355	0.359	0.715	0.236	0.074	0.089	0.352	0.356
95	0.713	0.271	0.085	0.102	0.265	0.271	0.770	0.235	0.074	0.089	0.262	0.266
120	0.813	0.264	0.083	0.100	0.215	0.222	0.834	0.230	0.072	0.087	0.211	0.216
150	0.793	0.264	0.083	0.099	0.183	0.192	0.834	0.231	0.072	0.087	0.179	0.185
185	0.799	0.263	0.083	0.099	0.155	0.165	0.834	0.232	0.073	0.088	0.150	0.158
240	0.832	0.259	0.081	0.098	0.130	0.141	0.848	0.230	0.072	0.087	0.124	0.133
300	0.857	0.258	0.081	0.097	0.115	0.127	0.848	0.230	0.072	0.087	0.109	0.119

\* Reactance for 1-conductor cables given at Three-foil formation

HV Power Cable

LV Power & Lighting Cable

Instrumentation & Communication Cable

Earthing & Bonding wire

VFD Cable

Technical Information

## Technical Information

### 0.6/1kV BU

Nominal Area	Single core cable *)						Multi core cable					
	Capacitance C	Inductance L	Reactance X 50 Hz	Reactance X 60 Hz	Impedance Z at 50 Hz 90°C	Impedance Z at 60 Hz 90°C	Capacitance C	Inductance L	Reactance X 50 Hz	Reactance X 60 Hz	Impedance Z at 50 Hz 90°C	Impedance Z at 60 Hz 90°C
mm <sup>2</sup>	µF/km	mH / km	Ω/km	Ω/km	Ω/km	Ω/km	µF/km	mH / km	Ω/km	Ω/km	Ω/km	Ω/km
1.5	0.172	0.468	0.147	0.176	15.557	15.557	0.278	0.382	0.120	0.144	15.557	15.557
2.5	0.203	0.432	0.136	0.163	9.641	9.641	0.309	0.353	0.111	0.133	9.640	9.641
4	0.239	0.401	0.126	0.151	5.994	5.995	0.345	0.328	0.103	0.124	5.994	5.994
6	0.276	0.376	0.118	0.142	3.967	3.968	0.385	0.309	0.097	0.117	3.967	3.967
10	0.336	0.351	0.110	0.132	2.349	2.350	0.435	0.288	0.090	0.108	2.348	2.349
16	0.436	0.326	0.102	0.123	1.483	1.484	0.500	0.271	0.085	0.102	1.482	1.483
25	0.461	0.315	0.099	0.119	0.941	0.943	0.527	0.265	0.083	0.100	0.940	0.941
35	0.531	0.300	0.094	0.113	0.681	0.684	0.556	0.255	0.080	0.096	0.679	0.681
50	0.542	0.295	0.093	0.111	0.507	0.511	0.589	0.253	0.080	0.096	0.505	0.508
70	0.644	0.283	0.089	0.107	0.356	0.360	0.695	0.243	0.076	0.092	0.353	0.356
95	0.660	0.276	0.087	0.104	0.266	0.272	0.715	0.242	0.076	0.091	0.262	0.267
120	0.749	0.270	0.085	0.102	0.216	0.223	0.758	0.237	0.074	0.089	0.212	0.217
150	0.738	0.268	0.084	0.101	0.184	0.192	0.758	0.236	0.074	0.089	0.180	0.186
185	0.749	0.266	0.083	0.100	0.156	0.165	0.782	0.235	0.074	0.089	0.151	0.158
240	0.784	0.261	0.082	0.098	0.130	0.141	0.807	0.233	0.073	0.088	0.125	0.134
300	0.811	0.260	0.082	0.098	0.116	0.128	0.820	0.232	0.073	0.087	0.110	0.120

\* Reactance for 1-conductor cables given at Three-foil formation

### 250V Instrument & communication cables.

Size	unit	0.75mm <sup>2</sup>	1.0mm <sup>2</sup>	1.5mm <sup>2</sup>	2.5mm <sup>2</sup>	
Mutual capacitance	Individual screen	nF/km	100	100	120	120
	Collective screen	nF/km	80	80	90	90
Inductance	mH/km	0.75	0.73	0.68	0.68	

## ELECTRICAL DATA

### 3. Short circuit current rating

The short circuit currents quoted here are for cables operating normally at maximum conductor temperature of 90°C. HF EPR insulation is actually capable of withstanding short-term Temperature up to 250°C

According to ICEA P-32-382 Curves based on formula

$$I_s = A \times \sqrt{\frac{0.115 \log \frac{(T_2 + 234)}{(T_1 + 234)}}{t}}$$

Where  $I_s$  : Short Circuit Current (kA)  
 $A$  : Conductor area (mm<sup>2</sup>)  
 $T_1$  : Operating temperature (90°C)  
 $T_2$  : Short Circuit temperature (250°C)  
 $t$  : Short Circuit duration (sec)

$T_1 = 90, T_2 = 250$

Nominal Area mm <sup>2</sup>	Short circuit currents (kA)													
	Duration of short circuit in second													
	0.03	0.05	0.07	0.1	0.14	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
1.5	1.3	1.0	0.8	0.7	0.6	0.5	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2
2.5	2.0	1.6	1.3	1.1	0.9	0.8	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.3
4	3.2	2.5	2.1	1.8	1.5	1.3	1.0	0.9	0.8	0.7	0.7	0.6	0.6	0.6
6	4.9	3.8	3.2	2.7	2.3	1.9	1.5	1.3	1.2	1.1	1.0	0.9	0.9	0.8
10	8.2	6.3	5.4	4.5	3.8	3.2	2.6	2.2	2.0	1.8	1.7	1.6	1.5	1.4
16	13.0	10.1	8.5	7.1	6.0	5.0	4.1	3.6	3.2	2.9	2.7	2.5	2.4	2.2
25	20.6	15.9	13.5	11.3	9.5	8.0	6.5	5.6	5.0	4.6	4.3	4.0	3.8	3.6
35	28.5	22.1	18.7	15.6	13.2	11.1	9.0	7.8	7.0	6.4	5.9	5.5	5.2	4.9
50	38.6	29.9	25.3	21.2	17.9	15.0	12.2	10.6	9.5	8.6	8.0	7.5	7.1	6.7
70	55.9	43.3	36.6	30.6	25.9	21.6	17.7	15.3	13.7	12.5	11.6	10.8	10.2	9.7
95	77.5	60.0	50.7	42.4	35.9	30.0	24.5	21.2	19.0	17.3	16.0	15.0	14.1	13.4
120	97.9	75.8	64.1	53.6	45.3	37.9	31.0	26.8	24.0	21.9	20.3	19.0	17.9	17.0
150	120.3	93.1	78.7	65.9	55.7	46.6	38.0	32.9	29.5	26.9	24.9	23.3	22.0	20.8
185	150.8	116.8	98.8	82.6	69.8	58.4	47.7	41.3	36.9	33.7	31.2	29.2	27.5	26.1
240	198.3	153.6	129.8	108.6	91.8	76.8	62.7	54.3	48.6	44.3	41.0	38.4	36.2	34.3
300	248.7	192.6	162.8	136.2	115.1	96.3	78.6	68.1	60.9	55.6	51.5	48.2	45.4	43.1
400	329.3	255.1	215.6	180.4	152.5	127.6	104.1	90.2	80.7	73.6	68.2	63.8	60.1	57.0
500	401.0	310.6	262.5	219.6	185.6	155.3	126.8	109.8	98.2	89.7	83.0	77.7	73.2	69.5

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VFD Cable

Technical Information

# Technical Information

## 4. Voltage drop

### Calculate fomula

#### 1) D.C. circuit

$$\text{Voltage drop rate} = \frac{R_{dc} \times 2L \times I}{V} \times 100(\%)$$

#### 2) A.C. circuit

$$\text{Voltage drop rate of single-phase A.C.} = \frac{R_{ac} \times 2L \times I}{V} \times \partial \times 100(\%)$$

$$\text{Voltage drop rate of three-phase A.C.} = \frac{R_{ac} \times 2L \times I}{V} \times \frac{\sqrt{3}}{2} \times \partial \times 100(\%)$$

Where

- L : Cable length (km)
- I : Current(A)
- V : Circuit Voltage(V)
- R<sub>dc</sub> : D.C. resistance at maximum rated conductor temperature (see following table)
- R<sub>ac</sub> : A.C. resistance at maximum rated conductor temperature (see following table)
- ∂ : Inductive voltage drop coefficient

### Voltage drop coefficient

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

Nominal Area	R-dc (at 20°C)	R-dc (at 90°C)	R-ac (at 90°C)	Inductive voltage drop coefficient						
				Dielectric power factor (at 60HZ & 90°C Conductor temperature)						
				100%	95%	90%	85%	80%	75%	70%
mm <sup>2</sup>	Ω/km	Ω/km	Ω/km							
10	1.840	2.346	2.346	1.00	0.97	0.93	0.89	0.84	0.80	0.75
16	1.160	1.479	1.479	1.00	0.98	0.95	0.91	0.87	0.82	0.78
25	0.734	0.936	0.936	1.00	1.00	0.97	0.94	0.90	0.86	0.82
35	0.529	0.675	0.675	1.00	1.02	1.00	0.97	0.93	0.90	0.86
50	0.391	0.499	0.499	1.00	1.04	1.02	1.00	0.97	0.94	0.90
70	0.270	0.344	0.344	1.00	1.07	1.07	1.06	1.04	1.01	0.98
95	0.195	0.249	0.251	1.00	1.11	1.12	1.12	1.11	1.09	1.07
120	0.154	0.196	0.198	1.00	1.15	1.17	1.18	1.18	1.17	1.15
150	0.126	0.161	0.164	1.00	1.18	1.23	1.25	1.25	1.25	1.24
185	0.100	0.128	0.131	1.00	1.23	1.30	1.33	1.35	1.35	1.35
240	0.0762	0.0972	0.1010	1.00	1.31	1.40	1.46	1.49	1.51	1.53

#### 6/10kV RFOU, 6/10kV RFCU, 6/10kV RFBU

Nominal Area	R-dc (at 20°C)	R-dc (at 90°C)	R-ac (at 90°C)	Inductive voltage drop coefficient						
				Dielectric power factor (at 60HZ & 90°C Conductor temperature)						
				100%	95%	90%	85%	80%	75%	70%
mm <sup>2</sup>	Ω/km	Ω/km	Ω/km							
16	1.160	1.479	1.479	1.00	0.99	0.95	0.91	0.87	0.83	0.78
25	0.734	0.936	0.936	1.00	1.00	0.97	0.94	0.90	0.86	0.82
35	0.529	0.675	0.675	1.00	1.02	1.00	0.97	0.94	0.90	0.86
50	0.391	0.499	0.499	1.00	1.04	1.03	1.01	0.98	0.95	0.91
70	0.270	0.344	0.344	1.00	1.08	1.08	1.06	1.04	1.02	0.99
95	0.195	0.249	0.251	1.00	1.12	1.13	1.13	1.12	1.10	1.08
120	0.154	0.196	0.198	1.00	1.16	1.19	1.20	1.19	1.19	1.17
150	0.126	0.161	0.164	1.00	1.19	1.24	1.26	1.27	1.26	1.25
185	0.100	0.128	0.131	1.00	1.25	1.31	1.35	1.37	1.38	1.38
240	0.0762	0.0972	0.1010	1.00	1.32	1.42	1.48	1.52	1.54	1.55

#### 8.7/15kV RFOU, 8.7/15kV RFCU, 8.7/15kV RFBU

Nominal Area	R-dc (at 20°C)	R-dc (at 90°C)	R-ac (at 90°C)	Inductive voltage drop coefficient						
				Dielectric power factor (at 60HZ & 90°C Conductor temperature)						
				100%	95%	90%	85%	80%	75%	70%
mm <sup>2</sup>	Ω/km	Ω/km	Ω/km							
25	0.734	0.936	0.936	1.00	1.01	0.98	0.94	0.91	0.87	0.83
35	0.529	0.675	0.675	1.00	1.02	1.00	0.97	0.94	0.91	0.87
50	0.391	0.499	0.499	1.00	1.05	1.03	1.01	0.98	0.95	0.92
70	0.270	0.344	0.344	1.00	1.08	1.08	1.07	1.05	1.03	1.00
95	0.195	0.249	0.251	1.00	1.12	1.14	1.14	1.13	1.12	1.10
120	0.154	0.196	0.198	1.00	1.17	1.20	1.21	1.21	1.21	1.19
150	0.126	0.161	0.164	1.00	1.20	1.25	1.28	1.29	1.29	1.28
185	0.100	0.128	0.131	1.00	1.26	1.33	1.37	1.39	1.40	1.40
240	0.0762	0.0972	0.1010	1.00	1.34	1.44	1.50	1.54	1.57	1.58



## ELECTRICAL DATA

### 0.6/1kV(1.8/3kV) RFOU(VFD), 1.8/3kV RFOU(VFD)

No. of Cores	Nominal Area	R-dc (at 20°C)	R-dc (at 90°C)	R-ac (at 90°C)	Inductive voltage drop coefficient						
					Dielectric power factor (at 60Hz & 90°C Conductor temperature)						
No.	mm <sup>2</sup>	ohm/km	ohm/km	ohm/km	100%	95%	90%	85%	80%	75%	70%
3C	25	0.734	0.936	0.936	1.00	0.99	0.95	0.91	0.87	0.83	0.79
3E	6	3.110	3.966	3.966							
3C	35	0.529	0.675	0.675	1.00	1.00	0.97	0.93	0.90	0.86	0.81
3E	6	3.110	3.966	3.966							
3C	50	0.391	0.499	0.499	1.00	1.01	0.99	0.96	0.92	0.89	0.85
3E	10	1.840	2.346	2.346							
3C	70	0.270	0.344	0.344	1.00	1.04	1.02	1.00	0.97	0.94	0.90
3E	16	1.160	1.479	1.479							
3C	95	0.195	0.249	0.251	1.00	1.07	1.07	1.05	1.03	1.00	0.97
3E	16	1.160	1.479	1.479							
3C	120	0.154	0.196	0.198	1.00	1.10	1.11	1.10	1.08	1.06	1.04
3E	25	0.734	0.936	0.936							
3C	150	0.126	0.161	0.164	1.00	1.13	1.15	1.15	1.14	1.12	1.10
3E	25	0.734	0.936	0.936							
3C	185	0.100	0.128	0.131	1.00	1.16	1.20	1.21	1.21	1.20	1.19
3E	35	0.529	0.675	0.675							
3C	240	0.076	0.097	0.101	1.00	1.22	1.28	1.31	1.32	1.33	1.32
3E	50	0.391	0.499	0.499							

### 0.6/1kV(1.8/3kV) BFOU(VFD), 1.8/3kV BFOU(VFD)

3C	25	0.734	0.936	0.936	1.00	0.99	0.95	0.91	0.87	0.83	0.79
3E	6	3.110	3.966	3.966							
3C	35	0.529	0.675	0.675	1.00	1.00	0.97	0.94	0.90	0.86	0.82
3E	6	3.110	3.966	3.966							
3C	50	0.391	0.499	0.499	1.00	1.02	0.99	0.96	0.93	0.89	0.85
3E	10	1.840	2.346	2.346							
3C	70	0.270	0.344	0.344	1.00	1.04	1.03	1.00	0.98	0.94	0.91
3E	16	1.160	1.479	1.479							
3C	95	0.195	0.249	0.251	1.00	1.07	1.07	1.06	1.04	1.01	0.98
3E	16	1.160	1.479	1.479							
3C	120	0.154	0.196	0.198	1.00	1.10	1.11	1.11	1.09	1.07	1.05
3E	25	0.734	0.936	0.936							
3C	150	0.126	0.161	0.164	1.00	1.13	1.15	1.15	1.15	1.13	1.11
3E	25	0.734	0.936	0.936							
3C	185	0.100	0.128	0.131	1.00	1.17	1.21	1.22	1.22	1.21	1.20
3E	35	0.529	0.675	0.675							
3C	240	0.076	0.097	0.101	1.00	1.23	1.29	1.32	1.33	1.34	1.33
3E	50	0.391	0.499	0.499							

### 0.6/1kV(1.8/3kV) FX-RFOU(VFD), 1.8/3kV FX-RFOU(VFD)

3C	25	0.795	1.014	1.014	1.00	0.98	0.95	0.91	0.86	0.82	0.78
3E	6	3.390	4.323	4.323							
3C	35	0.565	0.720	0.720	1.00	1.00	0.96	0.93	0.89	0.85	0.80
3E	6	3.390	4.323	4.323							
3C	50	0.393	0.501	0.501	1.00	1.01	0.99	0.95	0.92	0.88	0.84
3E	10	1.950	2.486	2.486							
3C	70	0.277	0.353	0.353	1.00	1.03	1.02	0.99	0.96	0.93	0.89
3E	16	1.240	1.581	1.581							
3C	95	0.210	0.268	0.270	1.00	1.06	1.05	1.03	1.01	0.98	0.95
3E	16	1.240	1.581	1.581							
3C	120	0.164	0.209	0.211	1.00	1.09	1.09	1.08	1.06	1.04	1.01
3E	25	0.795	1.014	1.014							
3C	150	0.132	0.168	0.172	1.00	1.11	1.13	1.13	1.12	1.10	1.08
3E	25	0.795	1.014	1.014							
3C	185	0.108	0.138	0.142	1.00	1.15	1.17	1.18	1.17	1.16	1.15
3E	35	0.565	0.720	0.720							
3C	240	0.082	0.104	0.108	1.00	1.20	1.25	1.27	1.28	1.28	1.27
3E	50	0.393	0.501	0.501							

HV Power Cable  
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 VFD Cable  
**Technical Information**

# Technical Information

## ELECTRICAL DATA

### 0.6/1kV(1.8/3kV) FX-BFOU(VFD), 1.8/3kV FX-BFOU(VFD)

No. of Cores	Nominal Area	R-dc (at 20°C)	R-dc (at 90°C)	R-ac (at 90°C)	Inductive voltage drop coefficient						
					Dielectric power factor (at 60Hz & 90°C Conductor temperature)						
No.	mm <sup>2</sup>	ohm/km	ohm/km	ohm/km	100%	95%	90%	85%	80%	75%	70%
3C	25	0.795	1.014	1.014	1.00	0.98	0.95	0.91	0.87	0.82	0.78
3E	6	3.390	4.323	4.323							
3C	35	0.565	0.720	0.720	1.00	1.00	0.96	0.93	0.89	0.85	0.81
3E	6	3.390	4.323	4.323							
3C	50	0.393	0.501	0.501	1.00	1.01	0.99	0.96	0.92	0.88	0.85
3E	10	1.950	2.486	2.486							
3C	70	0.277	0.353	0.353	1.00	1.04	1.02	1.00	0.97	0.93	0.90
3E	16	1.240	1.581	1.581							
3C	95	0.210	0.268	0.270	1.00	1.06	1.06	1.04	1.01	0.99	0.95
3E	16	1.240	1.581	1.581							
3C	120	0.164	0.209	0.211	1.00	1.09	1.09	1.08	1.07	1.04	1.02
3E	25	0.795	1.014	1.014							
3C	150	0.132	0.168	0.172	1.00	1.12	1.13	1.13	1.12	1.10	1.08
3E	25	0.795	1.014	1.014							
3C	185	0.108	0.138	0.142	1.00	1.15	1.18	1.18	1.18	1.17	1.15
3E	35	0.565	0.720	0.720							
3C	240	0.082	0.104	0.108	1.00	1.20	1.25	1.28	1.29	1.29	1.28
3E	50	0.393	0.501	0.501							

### 0.6/1kV RFOU, 0.6/1kV RFCU, 0.6/1kV RFBU

Nominal Area	R-dc (at 20°C)	R-dc (at 90°C)	R-ac (at 90°C)	Inductive voltage drop coefficient						
				Dielectric power factor (at 60Hz & 90°C Conductor temperature)						
mm <sup>2</sup>	ohm/km	ohm/km	ohm/km	100%	95%	90%	85%	80%	75%	70%
1.5	12.2	15.6	15.6	1.00	0.95	0.91	0.86	0.81	0.76	0.71
2.5	7.56	9.64	9.64	1.00	0.96	0.91	0.86	0.81	0.76	0.71
4	4.70	5.99	5.99	1.00	0.96	0.91	0.87	0.82	0.77	0.72
6	3.11	3.97	3.97	1.00	0.96	0.92	0.87	0.83	0.78	0.73
10	1.84	2.35	2.35	1.00	0.97	0.93	0.88	0.84	0.79	0.75
16	1.16	1.48	1.48	1.00	0.98	0.94	0.90	0.86	0.81	0.77
25	0.734	0.936	0.936	1.00	1.00	0.96	0.93	0.89	0.85	0.80
35	0.529	0.675	0.675	1.00	1.01	0.98	0.95	0.91	0.88	0.84
50	0.391	0.499	0.499	1.00	1.03	1.01	0.98	0.95	0.92	0.88
70	0.270	0.344	0.344	1.00	1.06	1.05	1.03	1.01	0.98	0.95
95	0.195	0.249	0.251	1.00	1.09	1.10	1.09	1.08	1.05	1.03
120	0.154	0.196	0.198	1.00	1.13	1.15	1.15	1.14	1.12	1.10
150	0.126	0.161	0.164	1.00	1.16	1.19	1.20	1.20	1.20	1.18
185	0.100	0.128	0.131	1.00	1.21	1.26	1.29	1.30	1.30	1.29
240	0.0762	0.0972	0.1010	1.00	1.28	1.36	1.41	1.43	1.45	1.45
300	0.0607	0.0774	0.0820	1.00	1.36	1.47	1.54	1.59	1.62	1.64

0.6/1kV BFOU, 0.6/1kV BFCU, 0.6/1kV BFBU

Nominal Area	R-dc (at 20°C)	R-dc (at 90°C)	R-ac (at 90°C)	Inductive voltage drop coefficient							
				Dielectric power factor (at 60Hz & 90°C Conductor temperature)							
				100%	95%	90%	85%	80%	75%	70%	
mm <sup>2</sup>	ohm/km	ohm/km	ohm/km								
1.5	12.2	15.6	15.6	1.00	0.95	0.91	0.86	0.81	0.76	0.71	
2.5	7.56	9.64	9.64	1.00	0.96	0.91	0.86	0.81	0.76	0.71	
4	4.70	5.99	5.99	1.00	0.96	0.91	0.87	0.82	0.77	0.72	
6	3.11	3.97	3.97	1.00	0.96	0.92	0.87	0.83	0.78	0.73	
10	1.84	2.35	2.35	1.00	0.97	0.93	0.89	0.84	0.79	0.75	
16	1.16	1.48	1.48	1.00	0.98	0.94	0.90	0.86	0.82	0.77	
25	0.734	0.936	0.936	1.00	1.00	0.96	0.93	0.89	0.85	0.81	
35	0.529	0.675	0.675	1.00	1.01	0.98	0.95	0.92	0.88	0.84	
50	0.391	0.499	0.499	1.00	1.03	1.01	0.98	0.95	0.92	0.88	
70	0.270	0.344	0.344	1.00	1.06	1.05	1.03	1.01	0.98	0.95	
95	0.195	0.249	0.251	1.00	1.10	1.10	1.10	1.08	1.06	1.03	
120	0.154	0.196	0.198	1.00	1.13	1.15	1.15	1.14	1.13	1.11	
150	0.126	0.161	0.164	1.00	1.16	1.20	1.21	1.21	1.20	1.19	
185	0.100	0.128	0.131	1.00	1.21	1.26	1.29	1.30	1.30	1.30	
240	0.0762	0.0972	0.1010	1.00	1.28	1.36	1.41	1.44	1.45	1.46	
300	0.0607	0.0774	0.0820	1.00	1.36	1.48	1.55	1.59	1.62	1.64	

0.6/1kV RU

Nominal Area	R-dc (at 20°C)	R-dc (at 90°C)	R-ac (at 90°C)	Inductive voltage drop coefficient							
				Dielectric power factor (at 60Hz & 90°C Conductor temperature)							
				100%	95%	90%	85%	80%	75%	70%	
mm <sup>2</sup>	ohm/km	ohm/km	ohm/km								
1.5	12.2	15.6	15.6	1.00	0.95	0.90	0.86	0.81	0.76	0.71	
2.5	7.56	9.64	9.64	1.00	0.96	0.91	0.86	0.81	0.76	0.71	
4	4.70	5.99	5.99	1.00	0.96	0.91	0.86	0.81	0.77	0.72	
6	3.11	3.97	3.97	1.00	0.96	0.92	0.87	0.82	0.77	0.72	
10	1.84	2.35	2.35	1.00	0.97	0.92	0.88	0.83	0.79	0.74	
16	1.16	1.48	1.48	1.00	0.98	0.94	0.89	0.85	0.80	0.76	
25	0.734	0.936	0.936	1.00	0.99	0.95	0.91	0.87	0.83	0.79	
35	0.529	0.675	0.675	1.00	1.00	0.97	0.94	0.90	0.86	0.82	
50	0.391	0.499	0.499	1.00	1.02	1.00	0.96	0.93	0.89	0.86	
70	0.270	0.344	0.344	1.00	1.04	1.03	1.01	0.98	0.95	0.91	
95	0.195	0.249	0.251	1.00	1.08	1.08	1.06	1.04	1.02	0.99	
120	0.154	0.196	0.198	1.00	1.11	1.12	1.11	1.10	1.08	1.06	
150	0.126	0.161	0.164	1.00	1.14	1.16	1.17	1.16	1.15	1.13	
185	0.100	0.128	0.131	1.00	1.19	1.23	1.25	1.25	1.25	1.24	
240	0.0762	0.0972	0.1010	1.00	1.25	1.32	1.36	1.38	1.39	1.39	
300	0.0607	0.0774	0.0820	1.00	1.32	1.42	1.48	1.51	1.54	1.55	

0.6/1kV BU

Nominal Area	R-dc (at 20°C)	R-dc (at 90°C)	R-ac (at 90°C)	Inductive voltage drop coefficient							
				Dielectric power factor (at 60Hz & 90°C Conductor temperature)							
				100%	95%	90%	85%	80%	75%	70%	
mm <sup>2</sup>	ohm/km	ohm/km	ohm/km								
1.5	12.2	15.6	15.6	1.00	0.95	0.90	0.86	0.81	0.76	0.71	
2.5	7.56	9.64	9.64	1.00	0.96	0.91	0.86	0.81	0.76	0.71	
4	4.70	5.99	5.99	1.00	0.96	0.91	0.86	0.82	0.77	0.72	
6	3.11	3.97	3.97	1.00	0.96	0.92	0.87	0.82	0.77	0.73	
10	1.84	2.35	2.35	1.00	0.97	0.92	0.88	0.83	0.79	0.74	
16	1.16	1.48	1.48	1.00	0.98	0.94	0.89	0.85	0.80	0.76	
25	0.734	0.936	0.936	1.00	0.99	0.96	0.92	0.88	0.83	0.79	
35	0.529	0.675	0.675	1.00	1.00	0.97	0.94	0.90	0.86	0.82	
50	0.391	0.499	0.499	1.00	1.02	1.00	0.97	0.93	0.90	0.86	
70	0.270	0.344	0.344	1.00	1.05	1.03	1.01	0.99	0.95	0.92	
95	0.195	0.249	0.251	1.00	1.08	1.08	1.07	1.05	1.02	1.00	
120	0.154	0.196	0.198	1.00	1.11	1.12	1.12	1.11	1.09	1.07	
150	0.126	0.161	0.164	1.00	1.14	1.17	1.18	1.17	1.16	1.14	
185	0.100	0.128	0.131	1.00	1.19	1.23	1.25	1.26	1.25	1.24	
240	0.0762	0.0972	0.1010	1.00	1.25	1.32	1.36	1.38	1.39	1.40	
300	0.0607	0.0774	0.0820	1.00	1.32	1.42	1.48	1.52	1.54	1.55	

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 Earthing & Bonding wire  
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 Technical Information

# Technical Information

## VOLTAGE RATING SELECTION

### Selection cable for A.C systems

Supply system	Supply category	System voltage (kV)					Recommended (kV)	
		Phase to earth (U <sub>0</sub> )		Phase to phase (U)		Maximum sustained voltage (U <sub>m</sub> )	IEC standard	BS standards
		Above	Up to and including	Above	Up to and including		U <sub>0</sub> / U	U <sub>0</sub> / U
3-Phase 4-Wire	A & B	-	0.15	-	0.25	0.28	0.15 / 0.25	0.15 / 0.25
		0.15	0.6	0.25	1	1.2	0.6 / 1	0.6 / 1
3-Phase 4-Wire	C	-	-	-	0.15	-	0.15 / 0.25	0.15 / 0.25
		-	-	0.15	0.6	-	0.6 / 1	0.6 / 1
3-Phase 3-Wire	A & B	-	0.15	-	0.25	0.28	0.15 / 0.25	0.15 / 0.25
		0.15	0.6	0.25	1	1.2	0.6 / 1	0.6 / 1
		0.6	1.9	-	3.3	3.6	1.8 / 3	1.9 / 3.3
		1.9	3.8	3.3	6.6	7.2	3.6 / 6	3.8 / 6.6
		3.8	6.35	6.6	11	12	6 / 10	6.35 / 11
		6.35	8.7	11	15	17	8.7 / 15	-
3-Phase 3-Wire	C	-	-	-	0.15	-	0.15 / 0.25	0.15 / 0.25
		-	-	0.15	0.6	-	0.6 / 1	0.6 / 1
		-	-	0.6	1.9	-	1.8 / 3	1.9 / 3.3
		-	-	1.9	3.3	3.6	3.6 / 6	3.8 / 6.6
		-	-	3.3	6.6	7.2	6 / 10	6.35 / 11
		-	-	6.6	11	12	8.7 / 15	11 / 11
2-Phase 3-Wire or 2-Phase 4-Wire	A & B	-	0.15	-	0.21	-	0.15 / 0.25	0.15 / 0.25
		0.15	0.6	-	0.84	-	0.6 / 1	0.6 / 1
2-Phase 3-Wire or 2-Phase 4-Wire	C	-	-	-	0.15	-	0.15 / 0.25	0.15 / 0.25
		-	-	0.15	0.6	-	0.6 / 1	0.6 / 1
		-	-	0.6	1.9	-	1.8 / 3	1.9 / 3.3
1-Phase 3-Wire	A & B	-	0.15	-	0.25	0.28	0.15 / 0.25	0.15 / 0.25
		0.15	0.6	0.25	1	1.2	0.6 / 1	0.6 / 1
1-Phase 3-Wire	C	-	-	-	0.15	-	0.15 / 0.25	0.15 / 0.25
		-	-	0.25	0.6	-	0.6 / 1	0.6 / 1
1-Phase 2-Wire or 1-Phase 1-Wire	C	-	-	-	0.15	-	0.15 / 0.25	0.15 / 0.25
		-	-	0.15	0.6	-	0.6 / 1	0.6 / 1
		-	-	0.6	1.9	-	1.8 / 3	1.9 / 3.3
		-	-	1.9	3.3	3.6	3.6 / 6	3.8 / 6.6
		-	-	3.3	6.6	7.2	6 / 10	6.35 / 11
		-	-	6.6	11	12	8.7 / 15	-
-	-	11	15	17.5	12 / 20	12.7 / 22		

Note) The rated voltage of the cable for a given application shall be suitable for the operating condition in the system in which the cable is used. To facilitate the choice of the cable, the system are divided into the following three categories

Category A : This category comprises those systems in which any phase conductor than comes in contact with earth or an earth conductor , is automatically disconnected from the system within 1 minute.

Category B : This category comprises those systems in which, under fault conditions, are operated for a short time, not exceeding 8 hours on any occasion, faults in any year should not exceed 125 hours.

Category C : This category comprises all systems which do not fall into categories A and B.

## TEST METHODS & TEST EQUIPMENT

### 1. Flame retardant test



IEC 60332-3. CAT. A (VTFT)

### 2. Fire resistant test



IEC 60331 (at 750°C, 830°C)

### 3. Cold test (Bending / Impact)



CSA C22.2 No.03 (-40°C/ -35°C)

### 4. Halogen content test



IEC 60754-1,2 Test

### 5. Smoke emission test



IEC 61034-1,2 Test

### 6. Oxygen index test



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Technical Information

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### 7. Oil and Mud resistant tests (Comply with NEK 606)

Category a – Minimum requirement oil resistance	Unit	Requirement
<b>Mechanical properties after ageing in IRM 902 and IRM 903 :</b>		
·Temperature / tolerance of oil		100 ± 2
·Duration of treatment	h	
<b>Result to be obtained:</b>		
·Tensile strength, variation max	%	± 30
·Elongation at break, variation max	%	± 30
Category b – Enhanced oil resistance : (Sheath code E)	Unit	Requirement
<b>Mechanical properties after ageing in IRM 902 and IRM 903 :</b>		
·Temperature / tolerance of oil	°C	100 ± 2
·Duration of treatment	d	7
<b>Result to be obtained:</b>		
·Tensile strength, variation max	%	± 30
·Elongation at break, variation max	%	± 30
·Volume swelling, variation max	%	± 30
·Weight change, variation max	%	± 30
Category c – Mud resistance : (shall comply with category b and c) (Sheath code M)	Unit	Requirement
<b>Mechanical properties after ageing in Calcium Bromide:</b>		
·Temperature / tolerance of oil	°C	70± 2
·Duration of treatment	d	56
<b>Result to be obtained:</b>		
·Tensile strength, variation max	%	± 25
·Elongation at break, variation max	%	± 25
·Volume swelling, variation max	%	± 20
·Weight change, variation max	%	± 15
<b>Mechanical properties after ageing in EDC 95-11 base oil:</b>		
·Temperature / tolerance of oil	°C	70± 2
·Duration of treatment	d	56
<b>Result to be obtained:</b>		
·Tensile strength, variation max	%	± 30
·Elongation at break, variation max	%	± 30
·Volume swelling, variation max	%	± 25
·Weight change, variation max	%	± 15
Category d – Hydraul / gear oil resistance : (shall comply with category b and d. May in addition comply with category c) (Sheath code H or H-M)	Unit	Requirement
<b>Mechanical properties after ageing in relevant hydraulic / gear oil: *</b>		
·Temperature / tolerance of oil	°C	100± 2
·Duration of treatment	d	7
<b>Result to be obtained:</b>		
·Tensile strength, variation max	%	± 30
·Elongation at break, variation max	%	± 30
·Volume swelling, variation max	%	± 30
·Weight change, variation max	%	± 30

\* Test oil shall be agreed between manufacture and user

Note 1) Requirements marked in bold and italic test are more demanding than IEC 60092-360 : 2014

Note 2) EDC 95-11 is a well-defined base oil often used in oil based drilling fluids.

## INSTALLATION RECOMMENDATIONS

The following installation recommendations are in accordance with IEC regulation and practice. Different regulations may apply in other countries.

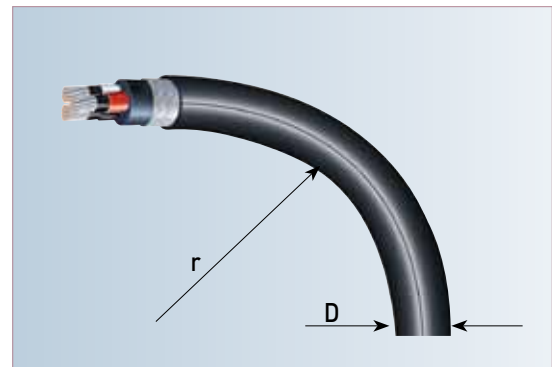
### 1. Minimum cable bending radius

The bending radius for the installation of cables should be not less than the values given as follows;

	Type of cable	Minimum bending radius
Up to 1.8/3kV	Unarmored or unbraided	
	D ≤ 25mm	4 X D
	D > 25mm	6 X D
	Metal braid screened or armored	6 X D
3.6/6kV above	Tape screened	8 X D
	Single core	12 X D
	3-core	9 X D

Note) For cables rated at 3.6/6(7.2)kV and above employing flexible conductor stranding(Class5) and braid insulation shields indicating a minimum bend radius of 6D for unarmoured cables and 8D for armoured cables in concurrence with the approval of the cable manufacturer.

Notes) D : Overall diameter of cable



### 2. Installation temperature

Minimum recommended installation temperature for cables shall be -20°C.

But, if the ambient temperature were below -20°C, the cable should be installed after maintained at room temperature (about 15~25°C) for 24 hours or more.

## Technical Information

### 3. Explosion risk areas

#### 1) Areas

The areas on board are usually classified in two main categories with regards to the explosion risk :

- ▶ Hazardous areas : Areas in which explosive gas-air mixtures are, or may be expected to be, present in quantities such as to require special precautions for the construction and use of electrical apparatus.
- ▶ Safe areas(non-hazardous areas ) : Area in which explosive gas-air mixtures are not expected to be, present in quantities such as to required special precautions for the construction and use of electrical apparatus.

A hazardous area is divided into three zones :

- ▶ Zone 0 : in which an explosive gas-air mixture is continuously present or present for long periods.
- ▶ Zone 1 : in which an explosive gas-air mixture is likely to occur in normal operation
- ▶ Zone 2 : in which an explosive gas-air mixture is not likely to occur, and if occurs it will only exist for a short time

#### 2) Installation of cables

- ▶ For cables to be used in zone 0 and zone 1, one of the following types of protection is required:
  - A non-metallic outer sheath in combination with braiding or other metallic covering for earth fault detection and mechanical protection. A non-metallic outer sheath is, however, not required if the screen or armouring consists of a corrosion resistant bronze alloy.
  - A lead sheathing in addition to further mechanical protection, for example armour braiding or non-metallic impervious sheath.
  - For mineral insulated cables, a copper or stainless steel sheath.
  - Single core cables in installations with A.C or D.C. current with a high ripple content should be of types without screen or armouring. where mechanical damage is possible, such cables should otherwise be mechanically protected or installed in ducts or similar.
- ▶ For installations in zone 2, cables without screen or armour can be used.



## 4. Earthing of metal coverings of cables

### 1) General requirements

All metal coverings of cables, armouring or shielding shall be earthed. Earthing must be provided at both ends except for final sub-circuits where earthing at only one end (the supply end) is sufficient. Earthing at one end is permitted where it is required for technical or safety reasons, control and instrumentation cables, mineral insulated cables, intrinsically safe circuits, control circuits etc.

Metal covering of single core cable for AC and single core cable for DC with ripple content exceeding 10% and having a current rating exceeding 20A is to be earthed at one and only. when single core cables for AC and DC with ripple content higher than 10% are installed in or passing through hazardous areas, the metal screen or armour is to be earthed inside the hazardous area to avoid dangerous potential between screen armour and earthed part of the installation

### 2) Cross section of earth connections

Earth connections for metal coverings shall be carried out with conductors having cross sectional areas related to the cross sectional areas of the phase conductors and the current ratings of the cables, or at least the same cross sectional areas as the metal covering it self.

### 3) Earthing through metal clamps etc.

Metal coverings of cables may be earthed through clamps. The clamps must grip the metal covering of the cable and must be connected to the hull and provide a good conductive connection between the metal covering and the hull. The metal clamps must be corrosion resistant.

### 4) Earthing through cable glands

The metal coverings of cables may be earthed by means of glands intended for the purpose and so designed as to ensure an effective earth connection. The glands shall be firmly attached to, and in effective electrical contact with, a metal structure earthed in accordance with these regulations.

### 5) Earthing of metal pipes, conduits etc.

Metal pipes and cable conduits are to be earthed. Pipes and conduits may be earthed by being screwed into a metal enclosure, or by nuts in both sides of the wall of metallic enclosure, provided that the surface is clean and free from rust, scale or print.

Comments : For intrinsically safe circuits it is important to separate the earth conductor from the protective earthing. The resistance between a zener barrier earth and protective earth must be max.

1ohm and preferably less than. 0.1ohm to avoid that possible fault current does not lead to a potential increase in the system.

## Technical Information

### 5. Fixing of cables

Cables are to be suitably fixed to the supports. In order to guard against the effects of electrodynamic forces developing on the occurrence of a short circuit, single core cables should be firmly fixed by using supports of a strength adequate to withstand forces corresponding to the values of prospective short circuit current.

The requirement concerning fixing can normally be fulfilled when the cables are clamped as follows:

- For cables entering enclosures and conduits the nearest clamp is to be placed at a minimum distance from the entry of 10 times the diameter the cable concerned from the entry.
- At other points the distance between the clamps must not exceed the in the following table:

External diameter of cable (mm)		Spacing of fixing points (mm)	
Above	Up to	Cables without Metal braid or armor	Cables with copper, bronze or steel braid or armor
-	8	200	250
8	13	250	300
12	20	300	350
20	30	350	400
30	-	400	450

### 6. Mechanical protection of cables

Cables are to be installed in such a way that they are not subject to damaging mechanical stressed. where this can not be obtained the cables are to be protected. Unless the cable itself(for example armour or sheath) provides adequate protection the cables should be:

- Enclosed in suitable conduits or casings
- covered by steel pipes or profiles
- Steel pipes in which the cables are run

in areas where there is an exceptional risk of mechanical damage, for example in cargo hold area or different storage areas, the cables always have to be protected, even when the cables are armoured.

The thickness of the protective conduits must be at least 4mm.

The wall thickness of the protective conduit must be at least 2mm.

Cables lay on aluminum supports may have a corresponding protection of aluminum.

the thickness must be at least 4mm.

Metal casing used for mechanical protection of cables should be efficiently protected against corrosion.

## 7. Installation of cables for fire properties

Cables must at least meet the flame retardant requirements. On board passenger ships, cargo-ships and mobile offshore units, where requirements are considered to be satisfied if the cables have characteristics complying with the cable bunch test IEC-Publication 60332-3, or fire stops are installed in accordance with the following recommendations: When cable complying with single-cable test, but not the cable-bunch-test, are installed, fire stops are to be provided in enclosed or semi-enclosed spaces except for cargo rooms and tunnels in cargo areas.

### a) For vertical cable runs

- with a max. distance between fire stops of two decks or 6 meters, unless installed in totally enclosed cable ducts
- at the main and emergency switchboard
- where cables enter into an engine control room
- at centralized control panels for propulsion machinery and essential auxiliaries
- at the entrance to cables ducts

### b) For horizontal cable runs.

- Fire stops shall be as specified in item a) above but the maximum distance between fire stops may be increased to 14m.

When choosing cable types special attention should be paid to reduce possible damage due to corrosion in case of a fire. Non-halogen free cables(materials) will give off corrosive gases during a fire.

The corrosion effect depends on the amount of halogens in the materials used.

Flame retardant cables are to give characteristics complying with the test requirements in IEC-Publication 60332-1, with amendments.

Fire resistant cables are to give characteristics complying with the requirements in IEC-Publication 60331.

## 8. Intrinsically safe installations

Cables and flexible cables for intrinsically safe circuits must have screen or similar of a conducting material and the outer sheath must be of an insulating material. A non-metallic outer sheath is, however, not required if the screen or armour consists of a corrosion resistant bronze alloy. Where there is no danger of interference from the external electrical or magnetic fields, short flexible cables may be used without screen.

### a) Associated equipment

Associated equipment(e.g.power supply units) shall be situated in a safe area or has protection as mentioned in "Explosion risk areas."

### b) Connection of equipment

Within limitations laid down in 3., ordinary non-explosion protected equipment may be connected to intrinsically safe equipment, provided that it is designed to meet regulations in other respects.

### c) Compliance with any limitations in the certificate

With intrinsically safe circuits special considerations must be given to ensure that the circuits characteristics (including connected equipment, cables, conductors etc.) satisfy any limitations in the test certificate.

Such limitations may be maximum values for capacitance and inductance etc. It is pointed out there is a danger of damage to i.s equipment when using normal equipment for insulation testing

### d) Adjacent location

Conductors for i.s safe circuits and conductors for non-i.s safe circuits shall not be run together in the same cable, flexible cable, conduit, cables bunch etc.

### e) Protection against electrical and magnetic fields

Where i.s circuits are exposed to magnetic or electrical field that may destroy the intrinsic safety of the system.

Precautions must be taken during installation. Such precautions may be:

- cables for i.s circuits and non-i.s circuits to be installed a minimum distance of 50mm apart.  
The minimum distance to heavy current cables using D.C with a high ripple content should be 300mm.
- cables for i.s circuits and non-i.s circuits to be separated panel of conducting material which is earthed.
- cables for i.s circuits to have effective transposition.

### f) Marking

The marking may be a marking plate or by colour marking of the cables when using colour marking, the colour should be light blue.

# Technical Information

## CORE IDENTIFICATION

### 1. High voltage power cables

The individual cores shall be identified by the colored semi-conducting tape or colored ribbon tape run longitudinally on the non-metallic part of insulation screening and the colour scheme shall be as follows:

- 1 core : Off-white (Grey)
- 3 core : Off-white (Grey), Black, Red, or Off-white(Grey), Red, Blue

### 2. Low voltage power and control cables

The insulated cores shall be identified by the color of insulation or by the number printed on insulated cores; as follows

#### 1) NEK-606 standard

- 1 core : Off-white(Grey) or Black
- 2core : Off-white, Black
- 3core : Off-white, Black, Red
- 4core : Off-white, Black, Red, Blue or Black, Off-white, Red, Green.
- 5core and above core: white number on black insulation or black number on white insulation
- Earth core : Green/Yellow (green base with yellow stripe)

#### 2) CENELEC harmonization document HD 308 S2

2C	-	-				2C	Blue	Brown			
3C	Green / Yellow	Blue	Brown			3C	-	Brown	Black	Grey	
4C	Green / Yellow	-	Brown	Black	Grey	4C	Blue	Brown	Black	Grey	
5C	Green / Yellow	Blue	Brown	Black	Grey	5C	Blue	Brown	Black	Grey	Black

### 3. Instrumentation and communication cables

Each pair/triad shall be identified as follows.

- Pairs : Black, Light blue or Black, White
- Triads : Black, Light blue, Brown or Black, White, Red

For identification of multi-pair/triad cables, pair/triad are identified by lapping of the numbered tape or by the number print directly on the each cores, and the number interval shall be 100mm or less.

The other color scheme may be applicable when purchaser required.

# Handling, Installation Method & Notice

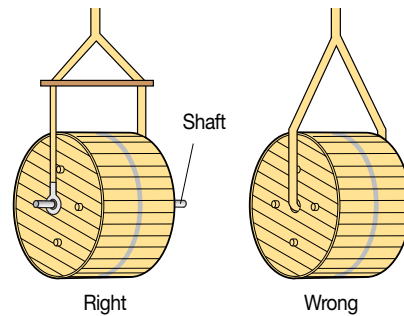
**O-Route®**  
NEK-606, IEC 60092-350, 353, 354, 376

## ■ Loading & Transportation

### 1. In case of a crane

Should transport by using standard rope and a shaft which is put in the center of drum.

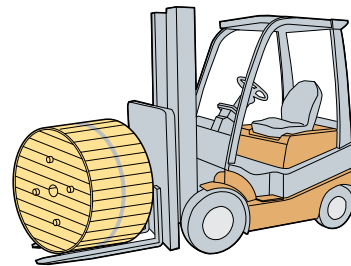
- \* Matters that requires attention
  - Placing it even with the ground.
  - Should move slowly and when it placedown, don't do sudden stop.



### 2. In case of a forklift

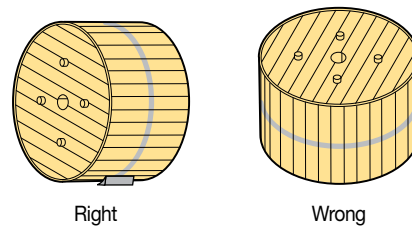
Drums should not be damaged by a forklift.

- \* Matters that requires attention:
  - Place the drum on the center of a fork.
  - The width of a fork should be longer than drum size.



## ■ Transportation and Unloading

- \* Matters that requires attention while handling cables.
  - Don't lie drums down.
  - Don't move it 20m longer when rolling it.
  - Don't use gimlets or something like sharp when moving.
  - Don't roll a damaged drum.
  - Don't roll at projecting surface.
  - Don't store drum near to stove and heater.



## Check point while handling cables(Storage)

### ■ Storage

- Don't leave the protecting packing materials and outside package until remove it for setting up cables.
- Should construct a fence to protect against damages by moving machines.
- Keep it inside or in depository when safekeeping in long term.  
(For reference, drums and packages can stand against dry whether outside the house)
- Must seal both sides of cables remaining in the drums the cap and heat-contracting tube so that moisture doesn't soak in after finishing the removal of exterior packing materials and cutting and installing cables.

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# Certificates Approved



Cert. of ISO 9001



Cert. of ISO 14001



Cert. of OHSAS 18001



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