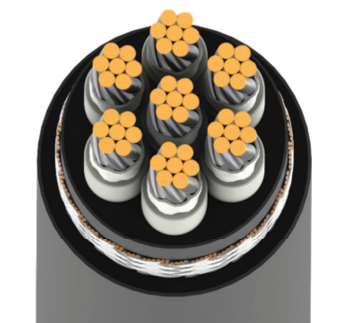


# 250V Instrumentation/control cable

# BFOU, BFCU

Halogen-free and/or Mud resistant cables for offshore installations



## Construction

- 1** Conductor  
Tinned annealed copper wire according to IEC 60228 Class 2 or Class 5
- 2** Fire proof layer  
Mica / Glass tape
- 3** Insulation  
HF EPR as per IEC 60092-360(351), thickness as per IEC 60092-376
- 4** Inner covering/Bedding  
Halogen free thermoset compound, thickness according to IEC 60092-376
- 5** Braid armour  
Tinned copper wire braid (O), Galvanized steel wire braid (C)
- 6** Outer sheath  
Halogen free thermoset compound SHF2 or halogen free MUD resistant thermoset compound SHF MUD complying with IEC 60092-360(359) and / or NEK 606.

### Marking

e.g. : S.E.C. 250V BFOU-M 2 X 0.75SQMM NEK 606 IEC 60332-3A IEC 60331 MUD SEOUL Year Length

## Applicable standards

NEK 606	Design standards
IEC 60092-350	Design standards
IEC 60092-352	Choice and installation of electric cables
IEC 60092-376	Design standards
IEC 60092-360(351, 359)	Insulating and sheathing materials
IEC 60331	Fire resisting test
IEC 60332-1	Flame retardant
IEC 60332-3-22 Cat.A	Flame retardant
IEC 60684-2	Fluorine content test
IEC 60754-1	Halogen gas emission test
IEC 60754-2	pH and conductivity test
IEC 61034-1,2	Smoke emission test
UL 1581	UV resistance (sunlight resistance)
CSA C 22.2 No.0.3	Cold bending test (at -40°C) and cold impact (at -35°C) test at low temperature(option)



-40 to 90 °C



Flame retardant  
IEC 60332-1 (single)  
IEC 60332-3, A (bunched)  
Fire retardant IEC 60331



Cold impact (-35 °C)  
CSA C22.2 No.0.3  
Special requirement



Halogen free



Weather  
Resistance to severe  
weather condition



Chemical attacks  
Resistance to  
chemicals



Mud  
Resistance to  
Mud



Oil  
Resistance to  
Enhanced oil

No. of Cores	Conductor		Insulation Thick mm	Inner Covering Overall dia. mm	Outer Diameter Nom. mm	Cable weight Approx. kg/km	CConductor Resistance(20°C) max. Ω/km	Inductance mH/km
	Area mm <sup>2</sup>	Overall dia. mm						
	2	0.75						
3	0.75	1.11	0.6	8.9	12.7	260	24.8	0.8
4	0.75	1.11	0.6	9.7	14.1	300	24.8	0.8
5	0.75	1.11	0.6	10.6	15.1	330	24.8	0.8
6	0.75	1.11	0.6	11.5	16.1	420	24.8	0.8
7	0.75	1.11	0.6	11.5	16.1	430	24.8	0.8
8	0.75	1.11	0.6	12.5	17.1	480	24.8	0.8
9	0.75	1.11	0.6	13.4	18.2	520	24.8	0.8
10	0.75	1.11	0.6	14.6	19.6	600	24.8	0.8
12	0.75	1.11	0.6	15.1	20.1	630	24.8	0.8
14	0.75	1.11	0.6	15.9	21.0	690	24.8	0.8
15	0.75	1.11	0.6	16.3	21.5	720	24.8	0.8
16	0.75	1.11	0.6	16.8	22.0	760	24.8	0.8
19	0.75	1.11	0.6	17.7	23.0	830	24.8	0.8
21	0.75	1.11	0.6	18.6	24.1	900	24.8	0.8
23	0.75	1.11	0.6	19.6	25.2	970	24.8	0.8
24	0.75	1.11	0.6	20.8	26.5	1,040	24.8	0.8
27	0.75	1.11	0.6	21.3	27.0	1,110	24.8	0.8
30	0.75	1.11	0.6	22.1	27.9	1,180	24.8	0.8
33	0.75	1.11	0.6	23.0	28.9	1,260	24.8	0.8
37	0.75	1.11	0.6	23.9	30.0	1,360	24.8	0.8
44	0.75	1.11	0.6	27.0	33.8	1,620	24.8	0.8

Conductor area. (mm <sup>2</sup> )	Capacitance (mF/km)		Inductance (mH/km)	
	Shielded	Unshielded	Shielded	Unshielded
0.75	90	80	0.80	0.80
1.0	100	85	0.75	0.75
1.5	115	110	0.70	0.70
2.5	135	110	0.67	0.67

**150/250V**

Multi-core, Mica tape, (HF-) EPR insulated, Halogen free Inner covering/Bedding, Braid armour, Halogen free SHF2 or SHF MUD Resistance Instrumentation/control cables(Flame and Fire resistant) BFOU, BFCU

No. of Cores	Conductor		Insulation Thick mm	Inner Covering Overall dia. mm	Outer Diameter Nom. mm	Cable weight Approx. kg/km	Conductor Resistance(20°C) max. Ω/km	Inductance mH/km
	Area mm <sup>2</sup>	Overall dia. mm						
	2	1						
3	1	1.29	0.6	9.3	13.2	280	18.2	0.75
4	1	1.29	0.6	10.1	14.6	320	18.2	0.75
5	1	1.29	0.6	11.1	15.6	400	18.2	0.75
6	1	1.29	0.6	12.1	16.7	460	18.2	0.75
7	1	1.29	0.6	12.1	16.7	470	18.2	0.75
8	1	1.29	0.6	13.1	17.8	520	18.2	0.75
9	1	1.29	0.6	14.1	18.9	580	18.2	0.75
10	1	1.29	0.6	15.3	20.4	650	18.2	0.75
12	1	1.29	0.6	15.8	20.9	700	18.2	0.75
14	1	1.29	0.6	16.7	21.9	770	18.2	0.75
15	1	1.29	0.6	17.1	22.4	800	18.2	0.75
16	1	1.29	0.6	17.6	22.9	840	18.2	0.75
19	1	1.29	0.6	18.6	24.0	920	18.2	0.75
21	1	1.29	0.6	19.6	25.1	1,000	18.2	0.75
23	1	1.29	0.6	20.6	26.3	1,080	18.2	0.75
24	1	1.29	0.6	21.9	27.7	1,170	18.2	0.75
27	1	1.29	0.6	22.4	28.2	1,240	18.2	0.75
30	1	1.29	0.6	23.2	29.2	1,320	18.2	0.75
33	1	1.29	0.6	24.2	30.2	1,420	18.2	0.75
37	1	1.29	0.6	25.1	31.3	1,530	18.2	0.75
44	1	1.29	0.6	28.8	35.4	1,880	18.2	0.75

Conductor area. (mm <sup>2</sup> )	Capacitance (mF/km)		Inductance (mH/km)	
	Shielded	Unshielded	Shielded	Unshielded
0.75	90	80	0.80	0.80
1.0	100	85	0.75	0.75
1.5	115	110	0.70	0.70
2.5	135	110	0.67	0.67

# 150/250V

Multi-core, Mica tape, (HF-) EPR insulated, Halogen free Inner covering/Bedding, Braid armour, Halogen free SHF2 or SHF MUD Resistance Instrumentation/control cables(Flame and Fire resistant) BFOU, BFCU

No. of Cores	Conductor		Insulation Thick mm	Inner Covering Overall dia. mm	Outer Diameter Nom. mm	Cable weight Approx. kg/km	Conductor Resistance(20°C) max. Ω/km	Inductance mH/km
	Area mm <sup>2</sup>	Overall dia. mm						
	2	1.5						
3	1.5	1.59	0.7	10.1	14.2	330	12.2	0.7
4	1.5	1.59	0.7	11.0	15.2	410	12.2	0.7
5	1.5	1.59	0.7	12.1	16.4	480	12.2	0.7
6	1.5	1.59	0.7	13.2	17.5	530	12.2	0.7
7	1.5	1.59	0.7	13.2	17.5	550	12.2	0.7
8	1.5	1.59	0.7	14.3	18.7	620	12.2	0.7
9	1.5	1.59	0.7	15.4	20.0	690	12.2	0.7
10	1.5	1.59	0.7	16.8	21.5	790	12.2	0.7
12	1.5	1.59	0.7	17.4	22.1	840	12.2	0.7
14	1.5	1.59	0.7	18.4	23.1	920	12.2	0.7
15	1.5	1.59	0.7	18.9	23.7	970	12.2	0.7
16	1.5	1.59	0.7	19.4	24.2	1,020	12.2	0.7
19	1.5	1.59	0.7	20.5	25.4	1,130	12.2	0.7
21	1.5	1.59	0.7	21.6	26.6	1,230	12.2	0.7
23	1.5	1.59	0.7	22.7	27.8	1,320	12.2	0.7
24	1.5	1.59	0.7	24.1	29.4	1,440	12.2	0.7
27	1.5	1.59	0.7	24.7	30.0	1,520	12.2	0.7
30	1.5	1.59	0.7	25.7	31.0	1,630	12.2	0.7
33	1.5	1.59	0.7	26.7	32.1	1,760	12.2	0.7
37	1.5	1.59	0.7	27.8	33.7	1,900	12.2	0.7
44	1.5	1.59	0.7	31.8	38.1	2,440	12.2	0.7

Conductor area, (mm <sup>2</sup> )	Capacitance (mF/km)		Inductance (mH/km)	
	Shielded	Unshielded	Shielded	Unshielded
0.75	90	80	0.80	0.80
1.0	100	85	0.75	0.75
1.5	115	110	0.70	0.70
2.5	135	110	0.67	0.67

**150/250V**

Multi-core, Mica tape, (HF-) EPR insulated, Halogen free Inner covering/Bedding, Braid armour, Halogen free SHF2 or SHF MUD Resistance Instrumentation/control cables(Flame and Fire resistant) BFOU, BFCU

No. of Cores	Conductor		Insulation Thick mm	Inner Covering Overall dia. mm	Outer Diameter Nom. mm	Cable weight Approx. kg/km	Conductor Resistance(20°C) max. Ω/km	Inductance mH/km
	Area mm <sup>2</sup>	Overall dia. mm						
	2	2.5						
3	2.5	2.01	0.7	11.0	15.2	430	7.56	0.67
4	2.5	2.01	0.7	12.1	16.3	500	7.56	0.67
5	2.5	2.01	0.7	13.2	17.6	560	7.56	0.67
6	2.5	2.01	0.7	14.5	18.9	650	7.56	0.67
7	2.5	2.01	0.7	14.5	18.9	680	7.56	0.67
8	2.5	2.01	0.7	15.7	20.2	750	7.56	0.67
9	2.5	2.01	0.7	17.0	21.6	840	7.56	0.67
10	2.5	2.01	0.7	18.5	23.3	960	7.56	0.67
12	2.5	2.01	0.7	19.2	24.0	1,050	7.56	0.67
14	2.5	2.01	0.7	20.2	25.1	1,150	7.56	0.67
15	2.5	2.01	0.7	20.8	25.7	1,200	7.56	0.67
16	2.5	2.01	0.7	21.4	26.4	1,270	7.56	0.67
19	2.5	2.01	0.7	22.6	27.7	1,420	7.56	0.67
21	2.5	2.01	0.7	23.8	29.0	1,550	7.56	0.67
23	2.5	2.01	0.7	25.1	30.4	1,670	7.56	0.67
24	2.5	2.01	0.7	26.7	32.1	1,810	7.56	0.67
27	2.5	2.01	0.7	27.3	33.2	1,930	7.56	0.67
30	2.5	2.01	0.7	28.8	34.4	2,130	7.56	0.67
33	2.5	2.01	0.7	29.9	36.1	2,280	7.56	0.67
37	2.5	2.01	0.7	31.1	37.4	2,590	7.56	0.67
44	2.5	2.01	0.7	35.2	41.8	3,090	7.56	0.67

Conductor area. (mm <sup>2</sup> )	Capacitance (mF/km)		Inductance (mH/km)	
	Shielded	Unshielded	Shielded	Unshielded
0.75	90	80	0.80	0.80
1.0	100	85	0.75	0.75
1.5	115	110	0.70	0.70
2.5	135	110	0.67	0.67