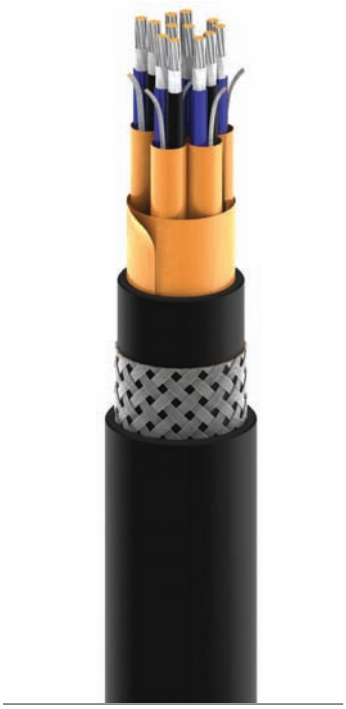
250V Instrumentation/control cable BFOU(I), BFCU(I)

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 **Individual screen**
Screened by copper or aluminium backed polyester tape with tinned copper drain wire

5 **Twisiting**
Two/Three insulated cores shall be twisted together to form a pair/triad

6 **Inner covering**
Halogen free thermoset compound, thickness according to IEC 60092-376

7 **Armour**
Tinned copper wire braid (O), Galvanized steel wire braid (C)

8 **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 S3/S7 BFOU(I)-M 2 X 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	Flame retardant
IEC 60332-1	Flame retardant
IEC 60332-3-22 Cat.A	Fluorine content test
IEC 60684-2	Halogen gas emission test
IEC 60754-1	pH and conductivity test
IEC 60754-2	Smoke emissoin test
IEC 61034-1,2	UV resistance (sunlight resistance)
UL 1581	Cold bending test (at -40℃)
CSA C 22.2 No.0.3	and cold impact (at -35℃) test at low temperature(option)


-40 to 90℃


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


Cold impact (-35℃)
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

150/250V

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

No. of pairs & cores (n x c)	Conductor		Insulation Thick	Inner Covering	Outer Diameter	Cable weight	Conductor Resistance(20℃)	Inductance
	Area	Overall dia.		Overall dia.	Nom.	Approx.		
	mm²	mm	mm	mm	mm	kg/km	max. Ω /km	mH/km
1 x 2	0.75	1.11	0.6	8.6	11.9	230	26.3	0.80
2 x 2	0.75	1.11	0.6	12.9	17.3	450	26.3	0.80
3 x 2	0.75	1.11	0.6	13.7	18.1	510	26.3	0.80
4 x 2	0.75	1.11	0.6	15.1	19.7	580	26.3	0.80
7 x 2	0.75	1.11	0.6	17.5	22.4	770	26.3	0.80
8 x 2	0.75	1.11	0.6	19.0	24.4	880	26.3	0.80
10 x 2	0.75	1.11	0.6	22.1	27.5	1,100	26.3	0.80
12 x 2	0.75	1.11	0.6	22.9	28.5	1,190	26.3	0.80
14 x 2	0.75	1.11	0.6	24.2	29.8	1,320	26.3	0.80
16 x 2	0.75	1.11	0.6	25.6	32.3	1,440	26.3	0.80
19 x 2	0.75	1.11	0.6	26.5	33.3	1,600	26.3	0.80
24 x 2	0.75	1.11	0.6	31.7	38.4	2,190	26.3	0.80
32 x 2	0.75	1.11	0.6	34.4	41.5	2,610	26.3	0.80
37 x 2	0.75	1.11	0.6	36.6	43.9	2,920	26.3	0.80

150/250V

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

No. of pairs & cores (n x c)	Conductor		Insulation Thick	Inner Covering	Outer Diameter	Cable weight	Conductor Resistance(20℃)	Inductance
	Area	Overall dia.		Overall dia.	Nom.	Approx.		
	mm²	mm	mm	mm	mm	kg/km	max. Ω /km	mH/km
1 x 2	1	1.29	0.6	9.0	12.5	240	19.3	0.75
2 x 2	1	1.29	0.6	13.5	18.3	490	19.3	0.75
3 x 2	1	1.29	0.6	14.4	19.2	550	19.3	0.75
4 x 2	1	1.29	0.6	15.9	20.8	640	19.3	0.75
7 x 2	1	1.29	0.6	18.4	23.7	860	19.3	0.75
8 x 2	1	1.29	0.6	20.1	25.8	980	19.3	0.75
10 x 2	1	1.29	0.6	23.3	29.1	1,220	19.3	0.75
12 x 2	1	1.29	0.6	24.1	30.6	1,350	19.3	0.75
14 x 2	1	1.29	0.6	25.5	32.0	1,480	19.3	0.75
16 x 2	1	1.29	0.6	27.0	34.6	1,640	19.3	0.75
19 x 2	1	1.29	0.6	27.9	35.3	1,810	19.3	0.75
24 x 2	1	1.29	0.6	33.5	40.7	2,500	19.3	0.75
32 x 2	1	1.29	0.6	36.3	44.4	2,980	19.3	0.75
37 x 2	1	1.29	0.6	39.0	46.5	3,400	19.3	0.75

Conductor area. (mm²)	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-pair, Mica tape,(HF-) EPR insulated, Individual screen, Halogen free Inner covering /Bedding, Braid armour, Halogen free SHF2 or SHF MUD Resistance Instrumentation/control cables(Flame and Fire resistant) BFOU(I), BFCU(I)

No. of pairs & cores (n x c)	Conductor		Insulation Thick	Inner Covering	Outer Diameter	Cable weight	Conductor Resistance(20℃)	Inductance
	Area	Overall dia.		Overall dia.	Nom.	Approx.		
	mm²	mm	mm	mm	mm	kg/km	max. Ω/km	mH/km
1 x 2	1.5	1.59	0.7	10.2	13.9	290	12.9	0.70
2 x 2	1.5	1.59	0.7	15.6	20.1	600	12.9	0.70
3 x 2	1.5	1.59	0.7	16.6	21.1	690	12.9	0.70
4 x 2	1.5	1.59	0.7	18.3	23.0	800	12.9	0.70
7 x 2	1.5	1.59	0.7	21.4	26.2	1,110	12.9	0.70
8 x 2	1.5	1.59	0.7	23.3	28.7	1,240	12.9	0.70
10 x 2	1.5	1.59	0.7	27.1	32.8	1,580	12.9	0.70
12 x 2	1.5	1.59	0.7	28.1	34.5	1,720	12.9	0.70
14 x 2	1.5	1.59	0.7	30.1	36.1	1,960	12.9	0.70
16 x 2	1.5	1.59	0.7	31.9	38.6	2,280	12.9	0.70
19 x 2	1.5	1.59	0.7	33.0	39.4	2,510	12.9	0.70
24 x 2	1.5	1.59	0.7	39.5	46.0	3,290	12.9	0.70
32 x 2	1.5	1.59	0.7	42.8	49.7	3,940	12.9	0.70
37 x 2	1.5	1.59	0.7	45.6	52.2	4,430	12.9	0.70

150/250V

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

No. of pairs & cores (n x c)	Conductor		Insulation Thick	Inner Covering	Outer Diameter	Cable weight	Conductor Resistance(20℃)	Inductance
	Area	Overall dia.		Overall dia.	Nom.	Approx.		
	mm²	mm	mm	mm	mm	kg/km	max. Ω/km	mH/km
1 x 2	2.5	2.01	0.7	11.0	14.8	380	8.02	0.67
2 x 2	2.5	2.01	0.7	17.1	21.7	710	8.02	0.67
3 x 2	2.5	2.01	0.7	18.2	22.8	810	8.02	0.67
4 x 2	2.5	2.01	0.7	20.1	24.9	970	8.02	0.67
7 x 2	2.5	2.01	0.7	23.5	28.5	1,340	8.02	0.67
8 x 2	2.5	2.01	0.7	25.7	31.7	1,530	8.02	0.67
10 x 2	2.5	2.01	0.7	30.3	36.2	1,990	8.02	0.67
12 x 2	2.5	2.01	0.7	31.4	37.6	2,300	8.02	0.67
14 x 2	2.5	2.01	0.7	33.2	39.4	2,540	8.02	0.67
16 x 2	2.5	2.01	0.7	35.2	42.6	2,820	8.02	0.67
19 x 2	2.5	2.01	0.7	36.4	43.5	3,150	8.02	0.67
24 x 2	2.5	2.01	0.7	43.6	50.3	4,120	8.02	0.67
32 x 2	2.5	2.01	0.7	47.3	54.9	4,970	8.02	0.67
37 x 2	2.5	2.01	0.7	50.7	57.6	5,700	8.02	0.67

Conductor area. (mm²)	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-pair, Mica tape,(HF-) EPR insulated, Individual screen, Halogen free Inner covering /Bedding, Braid armour, Halogen free SHF2 or SHF MUD Resistance Instrumentation/control cables(Flame and Fire resistant) BFOU(I), BFCU(I)

No. of triples & cores (n x c)	Conductor		Insulation Thick	Inner Covering	Outer Diameter	Cable weight	Conductor Resistance(20℃)	Inductance
	Area	Overall dia.		Overall dia.	Nom.	Approx.		
	mm²	mm	mm	mm	mm	kg/km	max. Ω /km	mH/km
1 x 3	0.75	1.11	0.6	9.1	12.6	260	26.3	0.80
2 x 3	0.75	1.11	0.6	14.2	18.6	530	26.3	0.80
3 x 3	0.75	1.11	0.6	15.2	19.6	600	26.3	0.80
4 x 3	0.75	1.11	0.6	16.7	21.3	700	26.3	0.80
7 x 3	0.75	1.11	0.6	19.9	26.1	970	26.3	0.80
8 x 3	0.75	1.11	0.6	21.7	27.8	1,100	26.3	0.80
10 x 3	0.75	1.11	0.6	25.2	28.2	1,380	26.3	0.80
12 x 3	0.75	1.11	0.6	26.1	31.6	1,520	26.3	0.80
14 x 3	0.75	1.11	0.6	27.6	34.7	1,670	26.3	0.80
16 x 3	0.75	1.11	0.6	29.7	35.7	1,900	26.3	0.80
19 x 3	0.75	1.11	0.6	31.4	37.2	2,240	26.3	0.80
24 x 3	0.75	1.11	0.6	37.1	40.3	2,860	26.3	0.80
32 x 3	0.75	1.11	0.6	40.7	48.8	3,480	26.3	0.80

150/250V

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

No. of triples & cores (n x c)	Conductor		Insulation Thick	Inner Covering	Outer Diameter	Cable weight	Conductor Resistance(20℃)	Inductance
	Area	Overall		Overall dia.	Nom.	Approx.		
			mm	mm	mm	kg/km	max. Ω /km	mH/km
1 x 3	1	1.29	0.6	9.1	13.0	260	19.3	0.75
2 x 3	1	1.29	0.6	15.4	19.4	610	19.3	0.75
3 x 3	1	1.29	0.6	16.0	20.5	660	19.3	0.75
4 x 3	1	1.29	0.6	17.6	22.2	780	19.3	0.75
7 x 3	1	1.29	0.6	20.9	27.3	1,080	19.3	0.75
8 x 3	1	1.29	0.6	22.8	29.1	1,230	19.3	0.75
10 x 3	1	1.29	0.6	26.6	29.5	1,560	19.3	0.75
12 x 3	1	1.29	0.6	27.6	33.1	1,710	19.3	0.75
14 x 3	1	1.29	0.6	29.5	35.3	1,940	19.3	0.75
16 x 3	1	1.29	0.6	31.3	37.8	2,270	19.3	0.75
19 x 3	1	1.29	0.6	33.1	38.9	2,530	19.3	0.75
24 x 3	1	1.29	0.6	39.6	42.2	3,310	19.3	0.75
32 x 3	1	1.29	0.6	43.0	51.6	3,960	19.3	0.75

Conductor area. (mm²)	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-pair, Mica tape,(HF-) EPR insulated, Individual screen, Halogen free Inner covering /Bedding, Braid armour, Halogen free SHF2 or SHF MUD Resistance Instrumentation/control cables(Flame and Fire resistant) BFOU(I), BFCU(I)

No. of triples & cores (n x c)	Conductor		Insulation Thick	Inner Covering	Outer Diameter	Cable weight	Conductor Resistance(20℃)	Inductance
	Area	Overall dia.		Overall dia.	Nom.	Approx.		
	mm²	mm	mm	mm	mm	kg/km	max. Ω/km	mH/km
1 x 3	1.5	1.59	0.7	10.1	14.6	300	12.9	0.70
2 x 3	1.5	1.59	0.7	16.9	21.3	700	12.9	0.70
3 x 3	1.5	1.59	0.7	18.9	22.5	870	12.9	0.70
4 x 3	1.5	1.59	0.7	20.4	24.6	980	12.9	0.70
7 x 3	1.5	1.59	0.7	24.4	30.3	1,400	12.9	0.70
8 x 3	1.5	1.59	0.7	26.6	32.8	1,600	12.9	0.70
10 x 3	1.5	1.59	0.7	31.5	37.4	2,180	12.9	0.70
12 x 3	1.5	1.59	0.7	32.6	39.4	2,380	12.9	0.70
14 x 3	1.5	1.59	0.7	34.5	41.1	2,660	12.9	0.70
16 x 3	1.5	1.59	0.7	36.5	42.7	2,950	12.9	0.70
19 x 3	1.5	1.59	0.7	39.1	44.0	3,390	12.9	0.70
24 x 3	1.5	1.59	0.7	46.3	47.2	4,360	12.9	0.70
32 x 3	1.5	1.59	0.7	50.7	57.9	5,320	12.9	0.70

150/250V

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

No. of triples & cores (n x c)	Conductor		Insulation Thick	Inner Covering	Outer Diameter	Cable weight	Conductor Resistance(20℃)	Inductance
	Area	Overall dia.		Overall dia.	Nom.	Approx.		
	mm²	mm	mm	mm	mm	kg/km	max. Ω/km	mH/km
1 x 3	2.5	2.01	0.7	11.2	15.6	410	8.02	0.67
2 x 3	2.5	2.01	0.7	19.0	23.1	860	8.02	0.67
3 x 3	2.5	2.01	0.7	20.3	24.4	1,000	8.02	0.67
4 x 3	2.5	2.01	0.7	22.9	26.7	1,240	8.02	0.67
7 x 3	2.5	2.01	0.7	26.8	33.5	1,740	8.02	0.67
8 x 3	2.5	2.01	0.7	29.7	35.8	2,030	8.02	0.67
10 x 3	2.5	2.01	0.7	34.7	40.8	2,690	8.02	0.67
12 x 3	2.5	2.01	0.7	36.0	41.2	2,980	8.02	0.67
14 x 3	2.5	2.01	0.7	38.0	45.3	3,320	8.02	0.67
16 x 3	2.5	2.01	0.7	40.7	46.7	3,780	8.02	0.67
19 x 3	2.5	2.01	0.7	43.1	48.1	4,250	8.02	0.67
24 x 3	2.5	2.01	0.7	51.5	52.1	5,570	8.02	0.67
32 x 3	2.5	2.01	0.7	55.9	63.5	6,790	8.02	0.67

Conductor area, (mm²)	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