

# NEK606 Caledonian Offshore & Marine Cables

## Fire Resistant Instrumentation Cables

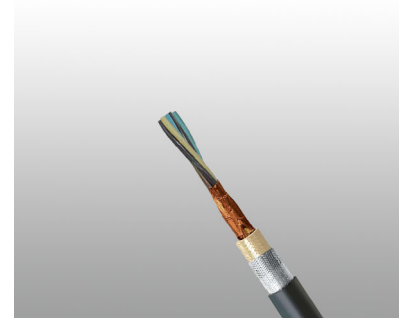


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### S104 (Formerly S4 or S4/S8) BFOU(c) 250V

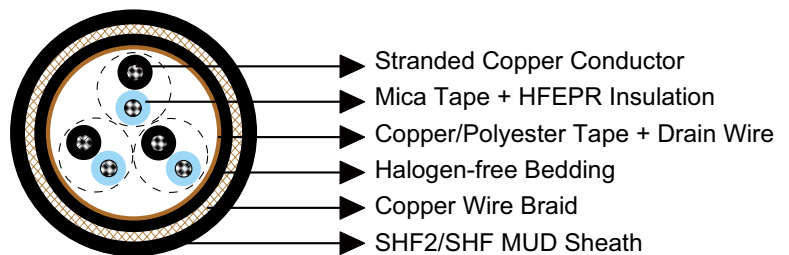
#### Applications

These cables are fire resistant, flame retardant, low smoke, halogen free and mud resistant, used for instrumentation, communication, control and alarm systems.



#### Standards

- IEC 60092-376
- IEC 60092-351
- IEC 60092-359
- IEC 60331-21
- IEC 60332-1
- IEC 60332-3-22
- IEC 60754-1,2
- IEC 61034-1,2
- NEK 606:2004



#### Construction

- **Conductors:** Circular tinned annealed stranded copper wire to IEC 60228 class 2 or class 5.
- **Insulation:** Mica tape + Halogen free EPR compound or Mica tape + XLPE.
- **Twinning:** Colour coded cores twisted together.
- **Collective Shielding:** Pairs/triples are layed up and collectively screened by copper backed polyester tape in contact with a stranded tinned copper drain wire. Pairs/triples are numbered with numbered tape or by numbers printed directly on the insulated conductors.
- **Bedding:** Halogen free compound.
- **Armour:** Tinned copper wire braid.
- **Outer Sheath:** Halogen free thermosetting compound, SHF2 (formerly TYPE S4). Halogen free MUD resistant thermosetting compound, SHF MUD (for formerly TYPE S4/S8), coloured grey (blue for intrinsically safe).





### Electrical Characteristics

Nominal Cross Section Area	mm <sup>2</sup>	0.75	1.0	1.5	2.5
Nominal Conductor Diameter	mm	1.1	1.3	1.6	2.0
Maximum Resistant@20°C	Ω/km	26.3	19.3	12.9	8.02
Mutual Capacitance	nF/km	75	80	85	95
Nominal Inductance@1KHz	MH/km	0.727	0.686	0.667	0.623
Maximum L/R@1KHz	μH/Ω	20	25	35	55
Operating Voltage	V	250	250	250	250

### Mechanical and Thermal Properties

- Bending Radius: 8×OD (during installation); 6×OD (fixed installed)
- Temperature Range: -20°C ~ +90°C

### Dimensions and Weight

Construction No. of elements×No. of cores in element×Cross section(mm <sup>2</sup> )	Nominal Insulation Thickness mm	Nominal Sheath Thickness mm		Nominal Overall Diameter mm	Nominal Weight kg/km
		Inner	Outer		
1×2×0.75	0.6	1.1	1.2	12.1	230
2×2×0.75	0.6	1.1	1.3	16.4	340
3×2×0.75	0.6	1.1	1.4	17.2	495
4×2×0.75	0.6	1.1	1.4	18.2	555
5×2×0.75	0.6	1.1	1.5	19.8	640
6×2×0.75	0.6	1.1	1.5	21.2	725
7×2×0.75	0.6	1.1	1.5	21.2	740
8×2×0.75	0.6	1.1	1.6	23.1	805
9×2×0.75	0.6	1.1	1.6	24.3	880
10×2×0.75	0.6	1.1	1.7	25.6	900
12×2×0.75	0.6	1.1	1.7	26.2	950
14×2×0.75	0.6	1.1	1.7	27.3	1035
15×2×0.75	0.6	1.1	1.8	29.2	1130
16×2×0.75	0.6	1.1	1.8	29.7	1175
18×2×0.75	0.6	1.1	1.9	31.3	1275
19×2×0.75	0.6	1.1	1.9	31.6	1315
20×2×0.75	0.6	1.2	2.0	33.3	1475
21×2×0.75	0.6	1.2	2.0	34.1	1530
23×2×0.75	0.6	1.2	2.0	34.6	1635
24×2×0.75	0.6	1.2	2.1	36.8	1730



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Construction No. of elements×No. of cores in element×Cross section(mm <sup>2</sup> )	Nominal Insulation Thickness mm	Nominal Sheath Thickness mm		Nominal Overall Diameter mm	Nominal Weight kg/km
		Inner	Outer		
27×2×0.75	0.6	1.2	2.1	37.5	1850
30×2×0.75	0.6	1.2	2.2	38.9	1965
33×2×0.75	0.6	1.2	2.2	40.3	2155
37×2×0.75	0.6	1.2	2.3	41.7	2325
1×3×0.75	0.6	1.1	1.2	12.6	255
2×3×0.75	0.6	1.1	1.4	17.7	545
3×3×0.75	0.6	1.1	1.4	18.3	585
4×3×0.75	0.6	1.1	1.5	19.7	670
5×3×0.75	0.6	1.1	1.5	21.2	770
6×3×0.75	0.6	1.1	1.6	23.5	900
7×3×0.75	0.6	1.1	1.6	23.5	935
8×3×0.75	0.6	1.1	1.7	25.2	1015
9×3×0.75	0.6	1.1	1.7	26.7	1135
10×3×0.75	0.6	1.1	1.8	28.7	1140
12×3×0.75	0.6	1.1	1.8	29.6	1230
14×3×0.75	0.6	1.1	1.9	31.0	1375
15×3×0.75	0.6	1.1	1.9	31.9	1455
16×3×0.75	0.6	1.2	2.0	33.3	1545
18×3×0.75	0.6	1.2	2.0	34.8	1690
19×3×0.75	0.6	1.2	2.0	35.1	1750
20×3×0.75	0.6	1.2	2.1	36.6	1985
21×3×0.75	0.6	1.2	2.1	37.3	2055
23×3×0.75	0.6	1.2	2.2	38.8	2215
24×3×0.75	0.6	1.2	2.2	39.5	2245
27×3×0.75	0.6	1.2	2.3	41.5	2435
30×3×0.75	0.6	1.2	2.3	43.3	2645
32×3×0.75	0.6	1.4	2.4	44.9	2840
1×2×1.0	0.6	1.1	1.2	12.5	245
2×2×1.0	0.6	1.1	1.4	17.2	375
3×2×1.0	0.6	1.1	1.4	17.9	550
4×2×1.0	0.6	1.1	1.4	19.0	615
5×2×1.0	0.6	1.1	1.5	20.6	710
6×2×1.0	0.6	1.1	1.6	22.4	820
7×2×1.0	0.6	1.1	1.6	22.4	845
8×2×1.0	0.6	1.1	1.6	24.1	905
9×2×1.0	0.6	1.1	1.7	25.7	995
10×2×1.0	0.6	1.1	1.7	26.8	1035
12×2×1.0	0.6	1.1	1.7	27.4	1095
14×2×1.0	0.6	1.1	1.8	28.9	1195
15×2×1.0	0.6	1.1	1.9	30.9	1305
16×2×1.0	0.6	1.1	1.9	31.4	1355
18×2×1.0	0.6	1.2	2.0	33.4	1500
19×2×1.0	0.6	1.2	2.0	33.7	1550





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Construction No. of elements×No. of cores in element×Cross section(mm <sup>2</sup> )	Nominal Insulation Thickness mm	Nominal Sheath Thickness mm		Nominal Overall Diameter mm	Nominal Weight kg/km
		Inner	Outer		
20×2×1.0	0.6	1.2	2.0	35.0	1685
21×2×1.0	0.6	1.2	2.1	36.5	1850
23×2×1.0	0.6	1.2	2.1	37.0	1975
24×2×1.0	0.6	1.2	2.2	38.9	1990
27×2×1.0	0.6	1.2	2.2	39.6	2135
30×2×1.0	0.6	1.2	2.2	40.9	2300
33×2×1.0	0.6	1.2	2.3	42.5	2495
37×2×1.0	0.6	1.4	2.4	44.3	2735
1×3×1.0	0.6	1.1	1.2	13.0	280
2×3×1.0	0.6	1.1	1.4	18.0	550
3×3×1.0	0.6	1.1	1.4	18.7	600
4×3×1.0	0.6	1.1	1.5	20.0	690
5×3×1.0	0.6	1.1	1.6	22.4	880
6×3×1.0	0.6	1.1	1.6	24.6	1020
7×3×1.0	0.6	1.1	1.6	24.6	1060
8×3×1.0	0.6	1.1	1.7	26.4	1150
9×3×1.0	0.6	1.1	1.8	28.2	1305
10×3×1.0	0.6	1.1	1.8	30.2	1290
12×3×1.0	0.6	1.1	1.9	31.3	1435
14×3×1.0	0.6	1.2	1.9	32.9	1605
15×3×1.0	0.6	1.2	2.0	34.0	1720
16×3×1.0	0.6	1.2	2.0	35.0	1765
18×3×1.0	0.6	1.2	2.1	37.2	2050
19×3×1.0	0.6	1.2	2.1	37.5	2120
20×3×1.0	0.6	1.2	2.2	38.7	2300
21×3×1.0	0.6	1.2	2.2	39.4	2380
23×3×1.0	0.6	1.2	2.2	40.8	2515
24×3×1.0	0.6	1.2	2.3	41.7	2575
27×3×1.0	0.6	1.2	2.3	43.7	2815
30×3×1.0	0.6	1.4	2.4	46.1	3125
32×3×1.0	0.6	1.4	2.5	47.5	3310
1×2×1.5	0.7	1.1	1.3	14.3	335
2×2×1.5	0.7	1.1	1.5	20.5	740
3×2×1.5	0.7	1.1	1.5	21.2	805
4×2×1.5	0.7	1.1	1.6	22.9	945
5×2×1.5	0.7	1.1	1.6	24.8	1095
6×2×1.5	0.7	1.1	1.8	27.8	1300
7×2×1.5	0.7	1.1	1.8	27.8	1355
8×2×1.5	0.7	1.1	1.8	29.6	1455
9×2×1.5	0.7	1.1	1.9	31.7	1660
10×2×1.5	0.7	1.1	2.0	34.4	1680
12×2×1.5	0.7	1.1	2.0	35.5	1855
14×2×1.5	0.7	1.2	2.1	37.6	2150



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		Inner	Outer		
15×2×1.5	0.7	1.2	2.2	38.9	2300
16×2×1.5	0.7	1.2	2.2	40.0	2415
18×2×1.5	0.7	1.2	2.3	42.0	2630
19×2×1.5	0.7	1.2	2.3	42.4	2725
20×2×1.5	0.7	1.2	2.3	43.5	2940
21×2×1.5	0.7	1.2	2.4	44.9	3110
23×2×1.5	0.7	1.2	2.5	46.7	3400
24×2×1.5	0.7	1.2	2.5	47.5	3360
27×2×1.5	0.7	1.4	2.6	50.0	3710
30×2×1.5	0.7	1.4	2.7	52.3	4060
32×2×1.5	0.7	1.4	2.7	53.8	4285
33×2×1.5	0.7	1.4	2.5	48.5	3245
37×2×1.5	0.7	1.4	2.6	50.2	3515
1×3×1.5	0.7	1.1	1.3	14.3	335
2×3×1.5	0.7	1.1	1.5	20.5	740
3×3×1.5	0.7	1.1	1.5	21.2	805
4×3×1.5	0.7	1.1	1.6	22.9	945
5×3×1.5	0.7	1.1	1.6	24.8	1095
6×3×1.5	0.7	1.1	1.8	27.8	1300
7×3×1.5	0.7	1.1	1.8	27.8	1355
8×3×1.5	0.7	1.1	1.8	29.6	1455
9×3×1.5	0.7	1.1	1.9	31.7	1660
10×3×1.5	0.7	1.2	2.0	34.4	1680
12×3×1.5	0.7	1.2	2.0	35.5	1855
14×3×1.5	0.7	1.2	2.1	37.6	2150
15×3×1.5	0.7	1.2	2.2	38.9	2300
16×3×1.5	0.7	1.2	2.2	40.0	2405
18×3×1.5	0.7	1.2	2.3	42.0	2630
19×3×1.5	0.7	1.2	2.3	42.4	2710
20×3×1.5	0.7	1.2	2.3	43.5	2940
21×3×1.5	0.7	1.4	2.4	44.9	3110
23×3×1.5	0.7	1.4	2.5	46.7	3400
24×3×1.5	0.7	1.4	2.5	47.5	3430
27×3×1.5	0.7	1.4	2.6	50.0	3710
30×3×1.5	0.7	1.4	2.7	52.3	4060
32×3×1.5	0.7	1.4	2.7	53.8	4285
1×2×2.5	0.7	1.1	1.3	14.5	335
2×2×2.5	0.7	1.1	1.5	20.4	740
3×2×2.5	0.7	1.1	1.5	21.3	800
4×2×2.5	0.7	1.1	1.6	22.8	930
5×2×2.5	0.7	1.1	1.6	24.7	1075
6×2×2.5	0.7	1.1	1.7	26.9	1245
7×2×2.5	0.7	1.1	1.7	26.9	1290





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Construction No. of elements×No. of cores in element×Cross section(mm <sup>2</sup> )	Nominal Insulation Thickness mm	Nominal Sheath Thickness mm		Nominal Overall Diameter mm	Nominal Weight kg/km
		Inner	Outer		
8×2×2.5	0.7	1.1	1.8	29.3	1405
9×2×2.5	0.7	1.1	1.9	31.3	1585
10×2×2.5	0.7	1.2	2.0	33.2	1605
12×2×2.5	0.7	1.2	2.0	34.0	1745
14×2×2.5	0.7	1.2	2.0	35.6	1920
15×2×2.5	0.7	1.2	2.2	38.8	2205
16×2×2.5	0.7	1.2	2.2	39.4	2230
18×2×2.5	0.7	1.2	2.3	41.5	2500
19×2×2.5	0.7	1.2	2.3	41.9	2590
20×2×2.5	0.7	1.2	2.3	43.5	2815
21×2×2.5	0.7	1.4	2.4	45.2	2990
23×2×2.5	0.7	1.4	2.4	45.8	3215
24×2×2.5	0.7	1.4	2.5	48.2	3270
27×2×2.5	0.7	1.4	2.6	49.4	3515
30×2×2.5	0.7	1.4	2.6	51.0	3810
33×2×2.5	0.7	1.4	2.7	53.1	4145
37×2×2.5	0.7	1.4	2.8	54.9	4500
1×3×2.5	0.7	1.1	1.3	15.1	385
2×3×2.5	0.7	1.1	1.5	22.0	880
3×3×2.5	0.7	1.1	1.6	23.0	990
4×3×2.5	0.7	1.1	1.6	24.6	1150
5×3×2.5	0.7	1.1	1.7	26.9	1350
6×3×2.5	0.7	1.1	1.8	30.0	1595
7×3×2.5	0.7	1.1	1.8	30.0	1670
8×3×2.5	0.7	1.1	1.9	32.2	1820
9×3×2.5	0.7	1.2	2.0	34.8	2105
10×3×2.5	0.7	1.2	2.1	37.9	2190
12×3×2.5	0.7	1.2	2.2	39.2	2455
14×3×2.5	0.7	1.2	2.2	40.9	2715
15×3×2.5	0.7	1.2	2.3	42.3	2905
16×3×2.5	0.7	1.2	2.3	43.5	3060
18×3×2.5	0.7	1.4	2.4	46.1	3380
19×3×2.5	0.7	1.4	2.5	46.7	3530
20×3×2.5	0.7	1.4	2.5	47.9	3800
21×3×2.5	0.7	1.4	2.5	48.9	3950
23×3×2.5	0.7	1.4	2.6	50.9	4290
24×3×2.5	0.7	1.4	2.6	51.8	4325
27×3×2.5	0.7	1.4	2.7	54.5	4745
30×3×2.5	0.7	1.6	2.9	57.7	5300
32×3×2.5	0.7	1.6	2.9	59.3	5595