

# NEK606 Caledonian Offshore & Marine Cables

## Fire Resistant Power and Control Cables



[www.caledonian-cables.co.uk](http://www.caledonian-cables.co.uk)

### P34 BFOU-HCF 0.6/1 kV

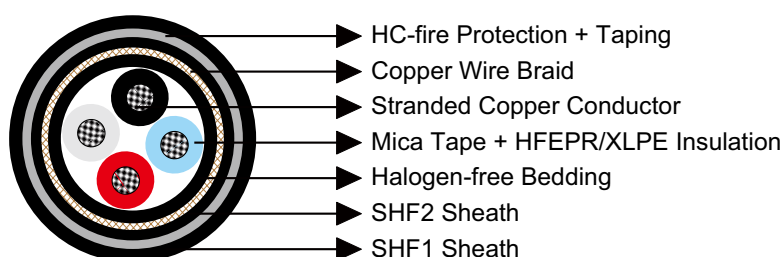
#### Applications

These cables are fire resistant, flame retardant, low smoke and halogen free, used for emergency control, power and lighting systems that need to be operational during a 1100°C hydrocarbon fire.



#### Standards

- IEC 60092-353
- 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:** Tinned annealed stranded compacted copper to IEC 60228 class 2.
- **Insulation:** Mica tape + Halogen free EPR/XLPE.
- **Bedding:** Halogen free compound.
- **Armour:** Tinned copper wire braid.
- **Outer Sheath1:** Halogen free thermosetting compound, SHF2.
- **HC-fire protection:** Extruded thermoplastic fire protection compound.
- **Taping:** Lapped glass fibre tape.
- **Outer Sheath2:** Flame retardant halogen-free thermoplastic compound, SHF1, coloured black.





### Electrical Characteristics

Nominal Cross Section Area	mm <sup>2</sup>	1.5	2.5	4	6	16	35
Nominal Conductor Diameter	mm	1.6	2.1	2.6	3.2	5.1	7.4
Maximum DC Resistant@20°C	Ω/km	12.2	7.56	4.7	3.11	1.16	0.529
Continuous Current Rating@45°C 1 Core	A	23	30	40	52	96	157
Continuous Current Rating@45°C 2 Core	A	20	26	34	44	82	133
Continuous Current Rating@45°C 3&4 Core	A	16	21	28	36	67	110
Short Circuit Current 1s	A	210	360	570	860	2290	5010
Operating Voltage	KV	0.6/1	0.6/1	0.6/1	0.6/1	0.6/1	0.6/1

Nominal Cross Section Area	mm <sup>2</sup>	50	70	95	120	150	185	240	300
Nominal Conductor Diameter	mm	8.7	10.3	12.2	13.8	15.1	17.0	19.6	21.9
Maximum DC Resistant@20°C	Ω/km	0.391	0.27	0.195	0.154	0.126	0.1	0.0762	0.0607
Continuous Current Rating@45°C 1 Core	A	196	242	293	339	389	444	522	601
Continuous Current Rating@45°C 2 Core	A	167	206	249	288	331	444	444	511
Continuous Current Rating@45°C 3&4 Core	A	137	169	205	237	272	311	365	421
Short Circuit Current 1s	A	7150	10020	13590	17170	21460	26470	34340	42930
Operating Voltage	KV	0.6/1	0.6/1	0.6/1	0.6/1	0.6/1	0.6/1	0.6/1	0.6/1

Note: For more than 4-cores, the current ratings may be calculated from the following formula ( $I_N = I_1 / \sqrt[3]{N}$ ),  $I_1$  = Current rating for 1-core, N = Number of cores.

### Ambient Temperature Correction Factors

Ambient Temperature Correction Factors	35	40	45	50	55	60	65	70	75	80
Rating Factor	1.1	1.05	1.0	0.94	0.88	0.82	0.74	0.67	0.58	0.47

### Mechanical and Thermal Properties

- Bending Radius: 20×OD (during installation); 12×OD (fixed installed)
- Temperature Range: -20°C ~ +90°C



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### Dimensions and Weight

Construction No. of cores×Cross section(mm <sup>2</sup> )	Nominal Insulation Thickness mm	Nominal Diameter Over Bedding mm	Nominal Diameter Over Sheath1 mm	Nominal Overall Diameter mm	Nominal Weight kg/km
1×50	1.4	15.0	18.5	45.5	2900
1×70	1.4	16.5	20.5	47.5	3300
1×95	1.6	18.5	23.0	50.5	3800
1×120	1.6	20.5	25.0	52.5	4260
1×150	1.8	23.0	27.0	54.5	4750
1×185	2.0	25.0	29.5	57.5	5380
1×240	2.2	28.0	32.5	66.0	7050
1×300	2.4	30.5	35.5	68.0	8000
2×1.5	1.0	10.0	13.0	40.5	1890
2×2.5	1.0	11.0	14.5	42.0	2080
3×1.5	1.0	10.5	14.0	42.0	2140
3×2.5	1.0	11.5	15.0	42.5	2200
3×4	1.0	13.0	16.5	43.0	2400
3×6	1.0	14.0	18.0	45.0	2600
3×16	1.0	18.5	23.0	50.0	3500
3×35	1.2	25.0	29.5	57.5	4840
3×70	1.4	33.0	39.0	72.0	8150
3×120	1.6	41.0	48.0	81.5	11300
3×150	1.8	46.0	54.5	88.5	13300
4×2.5	1.0	12.5	16.5	44.0	2300
4×6	1.0	15.5	19.5	47.5	2870
4×16	1.0	20.5	25.0	53.5	3830
7×1.5	1.0	14.0	17.5	44.5	2550
12×1.5	1.0	18.5	22.5	50.0	3140
27×1.5	1.0	26.5	31.0	64.5	5070
7×2.5	1.0	15.0	19.0	46.0	2760
12×2.5	1.0	20.5	24.5	52.0	3500

Note: For XLPE insulated cable, a thinner insulation thickness is applied.

