



NEK606 Caledonian Offshore & Marine Cables

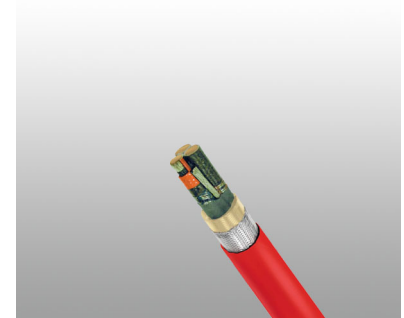
Fire Resistant Medium Voltage Power Cables

www.caledonian-cables.co.uk

P6 or P6/P13 BFOU 3.6/6kV

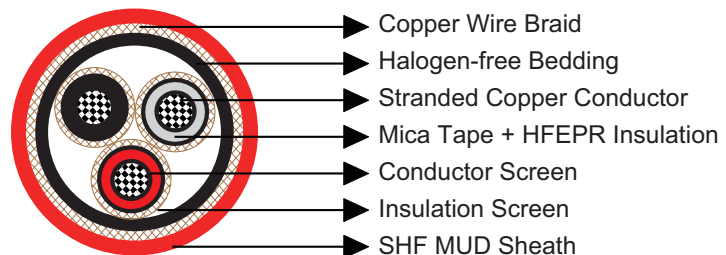
Applications

These cables are fire resistant, flame retardant, low smoke, halogen free and mud resistant, used for fixed installation for medium voltage power.



Standards

- IEC 60092-354
- 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 to IEC 60228 class 2.
- **Conductor Screen:** Semi conducting material.
- **Insulation:** Mica tape + Halogen free EPR.
- **Insulation Screen:** Semi conducting material and tinned copper wire braid.
- **Bedding:** Halogen free compound.
- **Armour:** Tinned copper wire braid.
- **Outer Sheath:** Halogen free thermosetting compound, SHF2 (for TYPE P6), or halogen free mud resistant thermosetting compound, SHF MUD (for TYPE P6/P13), coloured red.



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Electrical Characteristics

| | | | | | | | | |
|---------------------------------------|-----------------|-------|-------|-------|-------|-------|-------|-------|
| Nominal Cross Section Area | mm ² | 25 | 35 | 50 | 70 | 95 | 120 | 150 |
| Nominal Conductor Diameter | mm | 6.5 | 7.4 | 8.7 | 10.3 | 12.2 | 13.8 | 15.1 |
| Maximum DC Resistant@20°C | Ω/km | 0.734 | 0.529 | 0.391 | 0.27 | 0.195 | 0.154 | 0.126 |
| Continuous Current Rating@45°C 1 Core | A | 127 | 157 | 196 | 242 | 293 | 339 | 389 |
| Continuous Current Rating@45°C 3 Core | A | 89 | 110 | 137 | 169 | 205 | 237 | 272 |
| Short Circuit Current 1s | A | 3580 | 5010 | 7150 | 10020 | 13590 | 17170 | 21460 |
| Operating Voltage | KV | 3.6/6 | 3.6/6 | 3.6/6 | 3.6/6 | 3.6/6 | 3.6/6 | 3.6/6 |

| | | | | | | | |
|---------------------------------------|-----------------|-------|--------|--------|--------|--------|--------|
| Nominal Cross Section Area | mm ² | 185 | 240 | 300 | 400 | 500 | 630 |
| Nominal Conductor Diameter | mm | 17.0 | 19.6 | 21.9 | 24.5 | 27.5 | 32.3 |
| Maximum DC Resistant@20°C | Ω/km | 0.1 | 0.0762 | 0.0607 | 0.0475 | 0.0369 | 0.0286 |
| Continuous Current Rating@45°C 1 Core | A | 444 | 522 | 601 | 690 | 780 | 890 |
| Continuous Current Rating@45°C 3 Core | A | 311 | 365 | 421 | 483 | 546 | 623 |
| Short Circuit Current 1s | A | 26470 | 34340 | 42930 | 57230 | 71540 | 90140 |
| Operating Voltage | KV | 3.6/6 | 3.6/6 | 3.6/6 | 8.7/15 | 8.7/15 | 8.7/15 |

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: 15×OD (during installation); 9×OD (fixed installed)
- Temperature Range: -20°C ~ +90°C

Dimensions and Weight

| Construction No. of cores×Cross section(mm ²) | Nominal Insulation Thickness mm | Nominal Sheath Thickness mm | | Nominal Overall Diameter mm | Nominal Weight kg/km |
|---|---------------------------------------|--------------------------------|-------|-----------------------------------|-------------------------|
| | | Inner | Outer | | |
| 1×16 | 2.5 | 1.0 | 1.6 | 24.8 | 950 |
| 1×25 | 2.5 | 1.0 | 1.6 | 26.3 | 1110 |





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| Construction No. of cores×Cross section(mm ²) | Nominal Insulation Thickness mm | Nominal Sheath Thickness mm | | Nominal Overall Diameter mm | Nominal Weight kg/km |
|---|---------------------------------------|--------------------------------|-------|-----------------------------------|-------------------------|
| | | Inner | Outer | | |
| 1×35 | 2.5 | 1.0 | 1.7 | 27.6 | 1260 |
| 1×50 | 2.5 | 1.0 | 1.7 | 29.1 | 1460 |
| 1×70 | 2.5 | 1.0 | 1.8 | 30.9 | 1740 |
| 1×95 | 2.5 | 1.0 | 1.9 | 33.2 | 2110 |
| 1×120 | 2.5 | 1.0 | 1.9 | 34.9 | 2430 |
| 1×150 | 2.5 | 1.2 | 2.0 | 36.9 | 2890 |
| 1×185 | 2.5 | 1.2 | 2.1 | 39.1 | 3370 |
| 1×240 | 2.6 | 1.2 | 2.2 | 42.2 | 4100 |
| 1×300 | 2.8 | 1.2 | 2.3 | 44.7 | 4810 |
| 1×400 | 3.0 | 1.4 | 2.5 | 48.1 | 5810 |
| 1×500 | 3.2 | 1.4 | 2.6 | 52.1 | 7030 |
| 1×630 | 3.2 | 1.4 | 2.8 | 56.5 | 8630 |
| 3×16 | 2.5 | 1.2 | 2.3 | 48.2 | 3550 |
| 3×25 | 2.5 | 1.2 | 2.4 | 51.5 | 4180 |
| 3×35 | 2.5 | 1.4 | 2.5 | 54.7 | 4820 |
| 3×50 | 2.5 | 1.4 | 2.6 | 57.4 | 5490 |
| 3×70 | 2.5 | 1.4 | 2.8 | 61.6 | 6590 |
| 3×95 | 2.5 | 1.6 | 2.9 | 66.2 | 7920 |
| 3×120 | 2.5 | 1.6 | 3.1 | 70.1 | 9150 |
| 3×150 | 2.5 | 1.6 | 3.2 | 74.0 | 10460 |
| 3×185 | 2.5 | 1.6 | 3.4 | 78.6 | 12010 |
| 3×240 | 2.6 | 1.8 | 3.6 | 86.3 | 14690 |
| 3×300 | 2.8 | 1.8 | 3.9 | 92.3 | 17130 |

