



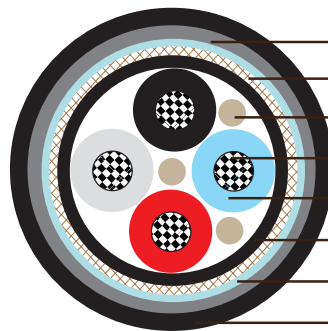
## Water Blocked P5 or P5/P12 BFOU 0.6/1KV

### Applications

These cables are partially water blocked, fire resistant, flame retardant, low smoke, halogen free and mud resistant, used for control, power and lighting systems.

### 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
- VG 95218 part 29



- SHF2/SHF MUD Inner Sheath
- Copper Wire Braid
- Water Blocking Fillers
- Stranded Copper Conductor
- Mica Tape + HFEP/ XLPE Insulation
- Halogen-free Bedding
- Water Blocking tape
- Polyurethane Outer Sheath

### Construction

- **Conductors:** Tinned annealed stranded compacted copper to IEC 60228 class 2.
- **Insulation:** Mica tape + Halogen free EPR/Mica tape + XLPE.
- **Filler:** Water blocking fillers, if required.
- **Bedding:** Halogen free compound, PETP wrapping tape will be applied over the bedding, if required.
- **Armour:** Tinned copper wire braid, PETP wrapping tape will be applied over the braiding, if required.
- **Water Blocking Elements:** Water blocking tape and strings for providing longitudinal water tightness.
- **Inner Sheath:** Halogen free thermosetting compound, SHF2 (for TYPE P5). Halogen free, mud resistant thermosetting compound, SHF MUD (for TYPE P5/P12), coloured black.
- **Outer Sheath:** Polyurethane for providing transversal water tightness, PE is optional, but can not meet low smoke standard.





## Electrical Characteristics

|  |                 |       |       |       |       |       |        |        |        |        |
|--|-----------------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| Nominal Cross Section Area                 | mm <sup>2</sup> | 1.5   | 2.5   | 4     | 6     | 10    | 16     | 25     | 35     | 50     |
| Nominal Conductor Diameter                 | mm              | 1.6   | 2.1   | 2.6   | 3.2   | 4     | 5.1    | 6.5    | 7.4    | 8.7    |
| Maximum DC Resistant@20°C                  | Ω/km            | 12.2  | 7.56  | 4.7   | 3.11  | 1.84  | 1.16   | 0.734  | 0.529  | 0.391  |
| Continuous Current Rating@45°C<br>1 Core   | A               | 23    | 30    | 40    | 52    | 72    | 96     | 127    | 157    | 196    |
| Continuous Current Rating@45°C<br>2 Core   | A               | 20    | 26    | 34    | 44    | 61    | 82     | 108    | 133    | 167    |
| Continuous Current Rating@45°C<br>3&4 Core | A               | 16    | 21    | 28    | 36    | 50    | 67     | 89     | 110    | 137    |
| Short Circuit Current 1s                   | A               | 210   | 360   | 570   | 860   | 1430  | 2290   | 3580   | 5010   | 7150   |
| 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  | 0.6/1  |
| Nominal Cross Section Area                 | mm <sup>2</sup> | 70    | 95    | 120   | 150   | 185   | 240    | 300    | 400    | 630    |
| Nominal Conductor Diameter                 | mm              | 10.3  | 12.2  | 13.8  | 15.1  | 17.0  | 19.6   | 21.9   | 24.6   | 32.5   |
| Maximum DC Resistant@20°C                  | Ω/km            | 0.27  | 0.195 | 0.154 | 0.126 | 0.1   | 0.0762 | 0.0607 | 0.0475 | 0.0286 |
| Continuous Current Rating@45°C<br>1 Core   | A               | 242   | 293   | 339   | 389   | 444   | 522    | 601    | 690    | 890    |
| Continuous Current Rating@45°C<br>2 Core   | A               | 206   | 249   | 288   | 331   | 444   | 444    | 511    | 587    | 757    |
| Continuous Current Rating@45°C<br>3&4 Core | A               | 169   | 205   | 237   | 272   | 311   | 365    | 421    | 483    | 623    |
| Short Circuit Current 1s                   | A               | 10020 | 13590 | 17170 | 21460 | 26470 | 34340  | 42930  | 57230  | 90140  |
| 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  | 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:** 8×OD (during installation); 6×OD (fixed installed)
- **Temperature Range:** -20°C ~ +90°C





## Dimensions and Weight

| Construction<br>No. of<br>cores×Cross<br>section(mm <sup>2</sup> ) | Nominal<br>Insulation<br>Thickness<br>mm | Nominal<br>Bedding<br>Thickness<br>mm | Nominal<br>Inner Sheath<br>Thickness<br>mm | Nominal<br>Outer Sheath<br>Thickness<br>mm | Nominal Overall<br>Diameter<br>mm | Nominal Weight<br>kg/km |
|--|--|---------------------------------------|--|--|-----------------------------------|-------------------------|
| 1×1.5  | 1.0                                      | 1.1                                   | 1.1  | 1.0  | 11.3±2                            | 152                     |
| 1×2.5  | 1.0                                      | 1.1                                   | 1.1  | 1.0  | 11.7±2                            | 168                     |
| 1×4  | 1.0                                      | 1.1                                   | 1.1  | 1.0  | 12.4±2                            | 231                     |
| 1×6  | 1.0                                      | 1.1                                   | 1.1  | 1.0  | 12.9±2                            | 263                     |
| 1×10   | 1.0                                      | 1.1                                   | 1.2  | 1.0  | 14.7±2                            | 326                     |
| 1×16   | 1.0                                      | 1.1                                   | 1.2  | 1.0  | 15.9±2                            | 410                     |
| 1×25   | 1.2                                      | 1.1                                   | 1.3  | 1.2  | 18.7±2                            | 614                     |
| 1×35   | 1.2                                      | 1.1                                   | 1.3  | 1.2  | 19.6±2                            | 725                     |
| 1×50   | 1.4                                      | 1.1                                   | 1.4  | 1.2  | 21.4±2                            | 935                     |
| 1×70   | 1.4                                      | 1.1                                   | 1.4  | 1.2  | 23.0±2                            | 1166                    |
| 1×95   | 1.6                                      | 1.1                                   | 1.5  | 1.4  | 25.9±2                            | 1512                    |
| 1×120  | 1.6                                      | 1.2                                   | 1.6  | 1.4  | 27.8±2                            | 1822                    |
| 1×150  | 1.8                                      | 1.2                                   | 1.7  | 1.4  | 29.8±2                            | 2163                    |
| 1×185  | 2.0                                      | 1.2                                   | 1.7  | 1.4  | 32.2±2                            | 2672                    |
| 1×240  | 2.2                                      | 1.2                                   | 1.8  | 1.6  | 35.8±2                            | 3329                    |
| 1×300  | 2.4                                      | 1.2                                   | 1.9  | 1.6  | 38.5±2                            | 4106                    |
| 1×400  | 2.4                                      | 1.4                                   | 2.1  | 1.6  | 44.2±2                            | 5355                    |
| 1×630  | 2.8                                      | 1.4                                   | 2.3  | 1.6  | 51.7±2                            | 8043                    |
| 2×1.5  | 1.0                                      | 1.1                                   | 1.2  | 1.0  | 16.2±2                            | 326                     |
| 2×2.5  | 1.0                                      | 1.1                                   | 1.3  | 1.0  | 17.1±2                            | 378                     |
| 2×4  | 1.0                                      | 1.1                                   | 1.3  | 1.0  | 18.6±2                            | 494                     |
| 2×6  | 1.0                                      | 1.1                                   | 1.4  | 1.0  | 19.9±2                            | 583                     |
| 2×10   | 1.0                                      | 1.1                                   | 1.4  | 1.0  | 21.9±2                            | 740                     |
| 2×16   | 1.0                                      | 1.1                                   | 1.5  | 1.0  | 24.5±2                            | 1034                    |
| 2×25   | 1.2                                      | 1.2                                   | 1.6  | 1.2  | 28.8±2                            | 1428                    |
| 2×35   | 1.2                                      | 1.2                                   | 1.7  | 1.2  | 30.8±2                            | 1701                    |
| 2×50   | 1.4                                      | 1.2                                   | 1.9  | 1.2  | 34.8±2                            | 2405                    |
| 2×70   | 1.4                                      | 1.2                                   | 2.1  | 1.2  | 40.4±2                            | 3423                    |
| 2×95   | 1.6                                      | 1.2                                   | 2.3  | 1.4  | 44.4±2                            | 4106                    |
| 2×120  | 1.6                                      | 1.4                                   | 2.4  | 1.4  | 48.1±2                            | 4946                    |
| 2×150  | 1.8                                      | 1.4                                   | 2.6  | 1.4  | 52.5±2                            | 5954                    |
| 2×185  | 2.0                                      | 1.4                                   | 2.7  | 1.4  | 57.1±2                            | 7182                    |
| 2×240  | 2.2                                      | 1.6                                   | 3.0  | 1.6  | 64.7±2                            | 9230                    |
| 2×300  | 2.4                                      | 1.6                                   | 3.2  | 1.6  | 71.0±2                            | 11162                   |
| 3×1.5  | 1.0                                      | 1.1                                   | 1.3  | 1.0  | 16.8±2                            | 362                     |
| 3×2.5  | 1.0                                      | 1.1                                   | 1.3  | 1.0  | 18.2±2                            | 467                     |
| 3×4  | 1.0                                      | 1.1                                   | 1.3  | 1.0  | 19.4±2                            | 557                     |





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[enquiry@shipboard-cables.com](mailto:enquiry@shipboard-cables.com) or [kitty@shipboard-cables.com](mailto:kitty@shipboard-cables.com)



| Construction<br>No. of<br>cores×Cross<br>section(mm <sup>2</sup> ) | Nominal<br>Insulation<br>Thickness<br>mm | Nominal<br>Bedding<br>Thickness<br>mm | Nominal<br>Inner Sheath<br>Thickness<br>mm | Nominal<br>Outer Sheath<br>Thickness<br>mm | Nominal Overall<br>Diameter<br>mm | Nominal Weight<br>kg/km |
|--|--|---------------------------------------|--|--|-----------------------------------|-------------------------|
| 3×6  | 1.0                                      | 1.1                                   | 1.4  | 1.0  | 20.7±2                            | 667                     |
| 3×10   | 1.0                                      | 1.1                                   | 1.5  | 1.0  | 23.1±2                            | 872                     |
| 3×16   | 1.0                                      | 1.1                                   | 1.5  | 1.0  | 25.7±2                            | 1218                    |
| 3×25   | 1.2                                      | 1.2                                   | 1.7  | 1.2  | 30.5±2                            | 1722                    |
| 3×35   | 1.2                                      | 1.2                                   | 1.8  | 1.2  | 32.6±2                            | 2079                    |
| 3×50   | 1.4                                      | 1.2                                   | 2.0  | 1.2  | 36.7±2                            | 2888                    |
| 3×70   | 1.4                                      | 1.2                                   | 2.2  | 1.2  | 41.4±2                            | 3859                    |
| 3×95   | 1.6                                      | 1.4                                   | 2.4  | 1.4  | 47.5±2                            | 5203                    |
| 3×120  | 1.6                                      | 1.4                                   | 2.5  | 1.4  | 51.1±2                            | 6337                    |
| 3×150  | 1.8                                      | 1.4                                   | 2.7  | 1.4  | 56.0±2                            | 7723                    |
| 3×185  | 2.0                                      | 1.6                                   | 2.9  | 1.4  | 62.3±2                            | 9476                    |
| 3×240  | 2.2                                      | 1.6                                   | 3.2  | 1.6  | 69.7±2                            | 12170                   |
| 3×300  | 2.4                                      | 1.8                                   | 3.4  | 1.6  | 75.8±2                            | 14427                   |
| 4×1.5  | 1.0                                      | 1.1                                   | 1.3  | 1.0  | 18.4±2                            | 420                     |
| 4×2.5  | 1.0                                      | 1.1                                   | 1.3  | 1.0  | 19.3±2                            | 530                     |
| 4×4  | 1.0                                      | 1.1                                   | 1.4  | 1.0  | 20.8±2                            | 651                     |
| 4×6  | 1.0                                      | 1.1                                   | 1.4  | 1.0  | 22.1±2                            | 788                     |
| 4×10   | 1.0                                      | 1.1                                   | 1.5  | 1.0  | 24.7±2                            | 1034                    |
| 4×16   | 1.0                                      | 1.2                                   | 1.6  | 1.0  | 27.9±2                            | 1470                    |
| 4×25   | 1.2                                      | 1.2                                   | 1.8  | 1.2  | 33.1±2                            | 2095                    |
| 4×35   | 1.2                                      | 1.2                                   | 1.9  | 1.2  | 35.5±2                            | 2562                    |
| 4×50   | 1.4                                      | 1.4                                   | 2.0  | 1.2  | 40.6±2                            | 3602                    |
| 4×70   | 1.4                                      | 1.4                                   | 2.2  | 1.2  | 45.1±2                            | 4830                    |
| 4×95   | 1.6                                      | 1.6                                   | 2.4  | 1.4  | 52.2±2                            | 6442                    |
| 4×120  | 1.6                                      | 1.6                                   | 2.5  | 1.4  | 56.4±2                            | 7891                    |
| 4×150  | 1.8                                      | 1.6                                   | 2.9  | 1.4  | 61.8±2                            | 9461                    |
| 4×185  | 2.0                                      | 1.6                                   | 3.1  | 1.4  | 67.5±2                            | 11550                   |
| 4×240  | 2.2                                      | 1.8                                   | 3.4  | 1.6  | 76.3±2                            | 14868                   |
| 4×300  | 2.4                                      | 1.8                                   | 3.7  | 1.6  | 83.9±2                            | 18428                   |
| 5×1.5  | 1.0                                      | 1.1                                   | 1.4  | 1.0  | 19.7±2                            | 536                     |
| 6×1.5  | 1.0                                      | 1.1                                   | 1.4  | 1.0  | 21.0±2                            | 572                     |
| 7×1.5  | 1.0                                      | 1.1                                   | 1.4  | 1.0  | 21.0±2                            | 620                     |
| 8×1.5  | 1.0                                      | 1.1                                   | 1.5  | 1.0  | 23.8±2                            | 751                     |
| 9×1.5  | 1.0                                      | 1.1                                   | 1.6  | 1.0  | 25.3±2                            | 756                     |
| 10×1.5   | 1.0                                      | 1.1                                   | 1.6  | 1.0  | 25.6±2                            | 830                     |
| 12×1.5   | 1.0                                      | 1.2                                   | 1.6  | 1.0  | 26.3±2                            | 924                     |
| 14×1.5   | 1.0                                      | 1.2                                   | 1.7  | 1.0  | 27.5±2                            | 1013                    |
| 16×1.5   | 1.0                                      | 1.2                                   | 1.7  | 1.0  | 28.7±2                            | 1087                    |
| 19×1.5   | 1.0                                      | 1.2                                   | 1.7  | 1.0  | 29.4±2                            | 1244                    |
| 20×1.5   | 1.0                                      | 1.2                                   | 1.8  | 1.0  | 31.5±2                            | 1323                    |





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|--|--|---------------------------------------|--|--|-----------------------------------|-------------------------|
| 23×1.5   | 1.0                                      | 1.2                                   | 1.9  | 1.0  | 33.8±2                            | 1507                    |
| 24×1.5   | 1.0                                      | 1.2                                   | 2.0  | 1.0  | 35.2±2                            | 1586                    |
| 27×1.5   | 1.0                                      | 1.2                                   | 2.0  | 1.0  | 35.9±2                            | 1696                    |
| 30×1.5   | 1.0                                      | 1.2                                   | 2.0  | 1.0  | 36.9±2                            | 1822                    |
| 32×1.5   | 1.0                                      | 1.4                                   | 2.0  | 1.0  | 37.5±2                            | 1890                    |
| 33×1.5   | 1.0                                      | 1.4                                   | 2.0  | 1.0  | 38.7±2                            | 2037                    |
| 37×1.5   | 1.0                                      | 1.4                                   | 2.0  | 1.0  | 40.0±2                            | 2195                    |
| 44×1.5   | 1.0                                      | 1.4                                   | 2.3  | 1.0  | 44.6±2                            | 2583                    |
| 5×2.5  | 1.0                                      | 1.1                                   | 1.4  | 1.0  | 20.8±2                            | 625                     |
| 6×2.5  | 1.0                                      | 1.1                                   | 1.4  | 1.0  | 22.4±2                            | 683                     |
| 7×2.5  | 1.0                                      | 1.1                                   | 1.4  | 1.0  | 22.4±2                            | 735                     |
| 8×2.5  | 1.0                                      | 1.1                                   | 1.5  | 1.0  | 25.5±2                            | 830                     |
| 9×2.5  | 1.0                                      | 1.1                                   | 1.6  | 1.0  | 27.1±2                            | 903                     |
| 10×2.5   | 1.0                                      | 1.1                                   | 1.6  | 1.0  | 27.4±2                            | 1003                    |
| 12×2.5   | 1.0                                      | 1.2                                   | 1.6  | 1.0  | 28.1±2                            | 1097                    |
| 14×2.5   | 1.0                                      | 1.2                                   | 1.7  | 1.0  | 29.3±2                            | 1218                    |
| 16×2.5   | 1.0                                      | 1.2                                   | 1.8  | 1.0  | 30.8±2                            | 1328                    |
| 19×2.5   | 1.0                                      | 1.2                                   | 1.8  | 1.0  | 31.6±2                            | 1517                    |
| 20×2.5   | 1.0                                      | 1.2                                   | 1.9  | 1.0  | 33.8±2                            | 1622                    |
| 23×2.5   | 1.0                                      | 1.4                                   | 2.0  | 1.0  | 36.7±2                            | 1895                    |
| 24×2.5   | 1.0                                      | 1.4                                   | 2.0  | 1.0  | 37.8±2                            | 1943                    |
| 27×2.5   | 1.0                                      | 1.4                                   | 2.0  | 1.0  | 37.4±2                            | 2069                    |
| 30×2.5   | 1.0                                      | 1.4                                   | 2.1  | 1.0  | 40.1±2                            | 2347                    |
| 33×2.5   | 1.0                                      | 1.4                                   | 2.2  | 1.0  | 41.6±2                            | 2510                    |
| 37×2.5   | 1.0                                      | 1.4                                   | 2.3  | 1.0  | 43.2±2                            | 2741                    |
| 44×2.5   | 1.0                                      | 1.4                                   | 2.4  | 1.0  | 48.2±2                            | 3229                    |



Standard



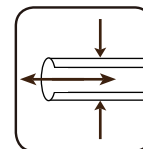
Standard



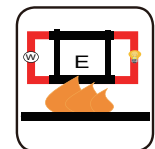
Standard



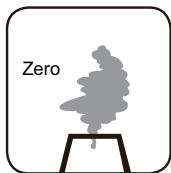
Standard



Water Tightness  
VG 95218-29



Circuit Integrity  
IEC 60331-21



Halogen Free  
IEC60754-1



Low Corrosivity  
IEC60754-2



Low Smoke Emission  
IEC 61034-1&2



Flame Retardancy  
IEC60332-1



Reduced Fire Propagation  
IEC60332-3-22

