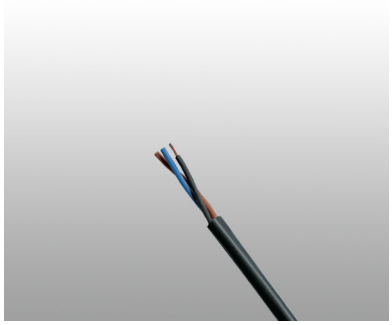
# P18 RU 0.6/1kV

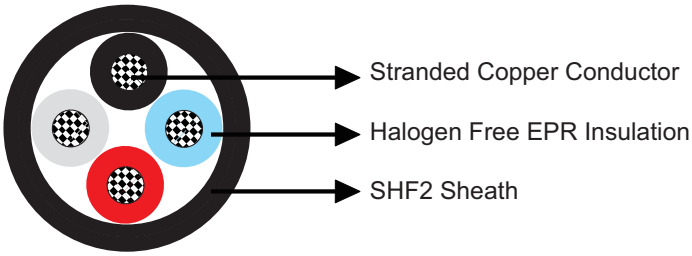
## Applications

These cables are flame retardant, low smoke and halogen free, used for control, power and lighting systems.



## Standards

- IEC 60092-353
- IEC 60092-351
- IEC 60092-359
- IEC 60332-1
- IEC 60332-3-22
- IEC 60754-1,2
- IEC 61034-1,2
- NEK 606:2004




## Construction

- **Conductors:** Tinned annealed stranded copper to IEC 60228 class 2.
- **Insulation:** Halogen-free EPR.
- **Outer Sheath:** Halogen free thermosetting compound, SHF2, coloured black.

## Electrical Characteristics

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Nominal Cross Section Area | mm² | 1.5 | 2.5 | 4 | 6 | 10 | 16 | 25 | 35 |
| Nominal Conductor Diameter | mm | 1.6 | 2.1 | 2.6 | 3.2 | 4 | 5.1 | 6.5 | 7.4 |
| Maximum DC Resistant@20℃ | Ω/km | 12.2 | 7.56 | 4.7 | 3.11 | 1.84 | 1.16 | 0.734 | 0.529 |
| Continuous Current Rating@45℃ 1 Core | A | 23 | 30 | 40 | 52 | 72 | 96 | 127 | 157 |
| Continuous Current Rating@45℃ 2 Core | A | 20 | 26 | 34 | 44 | 61 | 82 | 108 | 133 |
| Continuous Current Rating@45℃ 3&4 Core | A | 16 | 21 | 28 | 36 | 50 | 67 | 89 | 110 |
| Short Circuit Current 1s | A | 210 | 360 | 570 | 860 | 1430 | 2290 | 3580 | 5010 |
| 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 |

| Nominal Cross Section Area | mm² | 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℃ | Ω/km | 0.391 | 0.27 | 0.195 | 0.154 | 0.126 | 0.1 | 0.0762 | 0.0607 |
| Continuous Current Rating@45℃ 1 Core | A | 196 | 242 | 293 | 339 | 389 | 444 | 522 | 601 |
| Continuous Current Rating@45℃ 2 Core | A | 167 | 206 | 249 | 288 | 331 | 444 | 444 | 511 |
| Continuous Current Rating@45℃ 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: 8×OD (during installation); 6×OD (fixed installed)
- Temperature Range: -20℃ ~ +90℃

## Dimensions and Weight

| Construction No. of cores×Cross section(mm²) | Nominal Insulation Thickness mm | Nominal Sheath Thickness mm | Nominal Overall Diameter mm | Nominal Weight kg/km |
|---|---|---|---|---|
| 1×1.5 | 1.0 | 1.0 | 6.0 | 60 |
| 1×2.5 | 1.0 | 1.0 | 6.5 | 80 |
| 1×4 | 1.0 | 1.0 | 7.1 | 110 |
| 1×6 | 1.0 | 1.0 | 7.6 | 130 |
| 1×10 | 1.0 | 1.1 | 8.5 | 165 |
| 1×16 | 1.0 | 1.1 | 9.8 | 235 |
| 1×25 | 1.2 | 1.2 | 11.7 | 355 |
| 1×35 | 1.2 | 1.2 | 12.8 | 455 |
| 1×50 | 1.4 | 1.3 | 14.4 | 595 |
| 1×70 | 1.4 | 1.4 | 16.3 | 805 |
| 1×95 | 1.6 | 1.5 | 18.7 | 1090 |
| 1×120 | 1.6 | 1.5 | 20.3 | 1345 |
| 1×150 | 1.8 | 1.6 | 22.4 | 1635 |
| 1×185 | 2.0 | 1.7 | 24.9 | 2075 |

| Construction No. of cores×Cross section(mm²) | Nominal Insulation Thickness mm | Nominal Sheath Thickness mm | Nominal Overall Diameter mm | Nominal Weight kg/km |
|---|---|---|---|---|
| 1×240 | 2.2 | 1.8 | 28.1 | 2660 |
| 1×300 | 2.4 | 1.9 | 30.8 | 3340 |
| 2×1.5 | 1.0 | 1.1 | 9.7 | 145 |
| 2×2.5 | 1.0 | 1.1 | 10.5 | 175 |
| 2×4 | 1.0 | 1.2 | 11.6 | 225 |
| 2×6 | 1.0 | 1.2 | 12.9 | 295 |
| 2×10 | 1.0 | 1.3 | 14.8 | 420 |
| 2×16 | 1.0 | 1.4 | 17.2 | 605 |
| 2×25 | 1.2 | 1.5 | 21.3 | 940 |
| 2×35 | 1.2 | 1.6 | 23.3 | 1185 |
| 2×50 | 1.4 | 1.8 | 26.9 | 1585 |
| 2×70 | 1.4 | 1.9 | 31.9 | 2280 |
| 2×95 | 1.6 | 2.1 | 36.9 | 3090 |
| 2×120 | 1.6 | 2.2 | 40.3 | 3780 |
| 2×150 | 1.8 | 2.4 | 44.7 | 4640 |
| 2×185 | 2.0 | 2.6 | 49.5 | 5750 |
| 2×240 | 2.2 | 2.8 | 56.1 | 7460 |
| 2×300 | 2.4 | 3.0 | 62.0 | 9265 |
| 3×1.5 | 1.0 | 1.1 | 10.3 | 165 |
| 3×2.5 | 1.0 | 1.2 | 11.1 | 205 |
| 3×4 | 1.0 | 1.2 | 12.5 | 280 |
| 3×6 | 1.0 | 1.3 | 13.6 | 360 |
| 3×10 | 1.0 | 1.3 | 16.0 | 530 |
| 3×16 | 1.0 | 1.4 | 18.5 | 770 |
| 3×25 | 1.2 | 1.6 | 22.9 | 1200 |
| 3×35 | 1.2 | 1.7 | 25.0 | 1525 |
| 3×50 | 1.4 | 1.8 | 28.7 | 2030 |
| 3×70 | 1.4 | 2.0 | 32.6 | 2765 |
| 3×95 | 1.6 | 2.2 | 37.6 | 3745 |
| 3×120 | 1.6 | 2.3 | 41.2 | 4640 |
| 3×150 | 1.8 | 2.5 | 45.7 | 5675 |
| 3×185 | 2.0 | 2.7 | 51.2 | 7200 |
| 3×240 | 2.2 | 3.0 | 57.5 | 9300 |
| 3×300 | 2.4 | 3.2 | 66.8 | 12080 |
| 4×1.5 | 1.0 | 1.2 | 11.2 | 200 |
| 4×2.5 | 1.0 | 1.2 | 12.4 | 255 |
| 4×4 | 1.0 | 1.3 | 13.7 | 340 |
| 4×6 | 1.0 | 1.3 | 15.2 | 455 |
| 4×10 | 1.0 | 1.4 | 17.5 | 665 |
| 4×16 | 1.0 | 1.5 | 20.4 | 970 |
| 4×25 | 1.2 | 1.7 | 25.5 | 1530 |
| 4×35 | 1.2 | 1.8 | 27.8 | 1955 |
| 4×50 | 1.4 | 2.0 | 31.9 | 2600 |

| Construction No. of cores×Cross section(mm²) | Nominal Insulation Thickness mm | Nominal Sheath Thickness mm | Nominal Overall Diameter mm | Nominal Weight kg/km |
|---|---|---|---|---|
| 4×70 | 1.4 | 2.1 | 36.3 | 3540 |
| 4×95 | 1.6 | 2.4 | 42.0 | 4815 |
| 4×120 | 1.6 | 2.5 | 46.0 | 5965 |
| 4×150 | 1.8 | 2.7 | 53.5 | 7720 |
| 4×185 | 2.0 | 2.9 | 59.2 | 9570 |
| 4×240 | 2.2 | 3.2 | 67.3 | 12480 |
| 4×300 | 2.4 | 3.5 | 74.6 | 15870 |
| 5×1.5 | 1.0 | 1.2 | 13.1 | 245 |
| 6×1.5 | 1.0 | 1.3 | 14.4 | 275 |
| 7×1.5 | 1.0 | 1.3 | 14.4 | 285 |
| 8×1.5 | 1.0 | 1.4 | 16.9 | 380 |
| 9×1.5 | 1.0 | 1.4 | 18.1 | 395 |
| 10×1.5 | 1.0 | 1.4 | 18.4 | 435 |
| 12×1.5 | 1.0 | 1.4 | 19.0 | 485 |
| 14×1.5 | 1.0 | 1.5 | 20.2 | 565 |
| 16×1.5 | 1.0 | 1.5 | 21.3 | 615 |
| 19×1.5 | 1.0 | 1.6 | 22.6 | 715 |
| 20×1.5 | 1.0 | 1.6 | 23.8 | 780 |
| 23×1.5 | 1.0 | 1.7 | 25.9 | 905 |
| 24×1.5 | 1.0 | 1.7 | 26.6 | 920 |
| 27×1.5 | 1.0 | 1.7 | 27.2 | 985 |
| 30×1.5 | 1.0 | 1.8 | 28.4 | 1110 |
| 33×1.5 | 1.0 | 1.8 | 29.5 | 1190 |
| 37×1.5 | 1.0 | 1.9 | 30.8 | 1315 |
| 44×1.5 | 1.0 | 2.0 | 34.8 | 1560 |
| 5×2.5 | 1.0 | 1.3 | 14.3 | 305 |
| 6×2.5 | 1.0 | 1.3 | 15.6 | 360 |
| 7×2.5 | 1.0 | 1.3 | 15.6 | 390 |
| 8×2.5 | 1.0 | 1.4 | 18.4 | 495 |
| 9×2.5 | 1.0 | 1.5 | 19.9 | 505 |
| 10×2.5 | 1.0 | 1.5 | 20.2 | 570 |
| 12×2.5 | 1.0 | 1.5 | 20.9 | 625 |
| 14×2.5 | 1.0 | 1.5 | 21.9 | 735 |
| 16×2.5 | 1.0 | 1.6 | 23.3 | 810 |
| 19×2.5 | 1.0 | 1.6 | 24.6 | 935 |
| 20×2.5 | 1.0 | 1.7 | 26.1 | 1035 |
| 23×2.5 | 1.0 | 1.8 | 28.4 | 1205 |
| 24×2.5 | 1.0 | 1.8 | 29.2 | 1220 |
| 27×2.5 | 1.0 | 1.8 | 29.9 | 1295 |
| 30×2.5 | 1.0 | 1.9 | 31.1 | 1475 |
| 33×2.5 | 1.0 | 1.9 | 32.3 | 1585 |
| 37×2.5 | 1.0 | 2.0 | 33.8 | 1730 |
| 44×2.5 | 1.0 | 2.2 | 38.4 | 2100 |