

Minimum cross sections of protective conductors to the cross section of the phase conductors (as per DIN VDE 0100-540/05.86 – superseded by edition 11.91)

| 1 | | 2 | | 3 | | 4 | | 5 | |
|----------------------------------|------|---|--|----------------------------------|--|---------------------------|-----|---|--|
| Nominal cross sections | | | | | | | | | |
| Phase conductor ^{4) 5)} | | protective conductor or PEN conductor ¹⁾ | | | protective conductor ³⁾ laid separately | | | | |
| | | Insulated power cables | | 0.6/1-kV cable with 4 conductors | | protected mm ² | | unprotected ²⁾ mm ² | |
| mm ² | | mm ² | | mm ² | | Cu | Al | Cu | |
| to | 0.5 | 0.5 | | – | | 2.5 | – | 4 | |
| | 0.75 | 0.75 | | – | | 2.5 | – | 4 | |
| | 1 | 1 | | – | | 2.5 | – | 4 | |
| | 1.5 | 1.5 | | 1.5 | | 2.5 | – | 4 | |
| | 2.5 | 2.5 | | 2.5 | | 2.5 | – | 4 | |
| | 4 | 4 | | 4 | | 4 | – | 4 | |
| | 6 | 6 | | 6 | | 6 | – | 6 | |
| | 10 | 10 | | 10 | | 10 | – | 10 | |
| | 16 | 16 | | 16 | | 16 | 16 | 16 | |
| | 25 | 16 | | 16 | | 16 | 16 | 16 | |
| | 35 | 16 | | 16 | | 16 | 16 | 16 | |
| | 50 | 25 | | 25 | | 25 | 25 | 25 | |
| | 70 | 35 | | 35 | | 35 | 35 | 35 | |
| | 95 | 50 | | 50 | | 50 | 50 | 50 | |
| | 120 | 70 | | 70 | | 70 | 70 | 70 | |
| | 150 | 95 | | 95 | | 95 | 95 | 95 | |
| | 185 | 95 | | 95 | | 95 | 95 | 95 | |
| | 240 | – | | 120 | | 120 | 120 | 120 | |
| | 300 | – | | 150 | | 150 | 150 | 150 | |
| | 400 | – | | 240 | | 240 | 240 | 240 | |

1) PEN conductor $\geq 10 \text{ mm}^2$ Cu or $\geq 16 \text{ mm}^2$ Al.

2) Unprotected aluminium conductors may not be laid.

3) From an outside conductor cross section of $\geq 95 \text{ mm}^2$, bare conductors are preferred.

4) Minimum cross section for aluminium conductors: 16 mm^2 .

5) For minimum conductor cross sections for phase conductors and other conductors, see also DIN VDE 0100 Part 520.