

# Cable conductors made of pure copper (Cu-ETP) according to DIN 48201 part 1



## Survey

| nominal cross section | calculated cross section | number of wires | diameter wire | diameter conductor | weight | calculated breaking load | continuous current-carrying capacity |
|-----------------------|--------------------------|-----------------|---------------|--------------------|--------|--------------------------|--------------------------------------|
| mm <sup>2</sup>       | mm <sup>2</sup>          |                 | mm            | mm                 | kg/km  | kN                       | A                                    |
| 10                    | 10.02                    | 7               | 1.35          | 4.1                | 90     | 4.02                     | 90                                   |
| 16                    | 15.89                    | 7               | 1.70          | 5.1                | 143    | 6.37                     | 125                                  |
| 25                    | 24.25                    | 7               | 2.10          | 6.3                | 218    | 9.72                     | 160                                  |
| 35                    | 34.36                    | 7               | 2.50          | 7.5                | 310    | 13.77                    | 200                                  |
| 50                    | 49.48                    | 7               | 3.00          | 9.0                | 446    | 19.84                    | 250                                  |
| 50                    | 48.35                    | 19              | 1.80          | 9.0                | 437    | 19.38                    | 250                                  |
| 70                    | 65.81                    | 19              | 2.10          | 10.5               | 596    | 26.38                    | 310                                  |
| 95                    | 93.27                    | 19              | 2.50          | 12.5               | 845    | 37.39                    | 380                                  |
| 120                   | 116.99                   | 19              | 2.80          | 14.0               | 1060   | 46.90                    | 440                                  |
| 150                   | 147.11                   | 37              | 2.25          | 15.8               | 1337   | 58.98                    | 510                                  |
| 185                   | 181.62                   | 37              | 2.50          | 17.5               | 1649   | 72.81                    | 585                                  |
| 240                   | 242.54                   | 61              | 2.25          | 20.3               | 2209   | 97.23                    | 700                                  |
| 300                   | 299.43                   | 61              | 2.50          | 22.5               | 2725   | 120.04                   | 800                                  |
| 400                   | 400.14                   | 61              | 2.89          | 26.0               | 3640   | 160.42                   | 960                                  |
| 500                   | 499.83                   | 61              | 3.23          | 29.1               | 4545   | 200.38                   | 1110                                 |

Remark: The outer layer has to be right handed (Z-rotation)

# Cable conductors made of bronze BzII (CuMg) according to DIN 48201 part 2



## Survey

| nominal cross section | calculated cross section | number of wires | diameter wire | diameter conductor | weight | calculated breaking load | continuous current-carrying capacity |
|-----------------------|--------------------------|-----------------|---------------|--------------------|--------|--------------------------|--------------------------------------|
| mm <sup>2</sup>       | mm <sup>2</sup>          |                 | mm            | mm                 | kg/km  | kN                       | A                                    |
| 10                    | 10.02                    | 7               | 1.35          | 4.1                | 90     | 5.88                     | 75                                   |
| 16                    | 15.89                    | 7               | 1.70          | 5.1                | 143    | 9.33                     | 100                                  |
| 25                    | 24.25                    | 7               | 2.10          | 6.3                | 218    | 14.24                    | 130                                  |
| 35                    | 34.36                    | 7               | 2.50          | 7.5                | 310    | 20.17                    | 160                                  |
| 50                    | 49.48                    | 7               | 3.00          | 9.0                | 446    | 28.58                    | 200                                  |
| 50                    | 48.35                    | 19              | 1.80          | 9.0                | 437    | 28.39                    | 200                                  |
| 70                    | 65.81                    | 19              | 2.10          | 10.5               | 596    | 38.64                    | 245                                  |
| 95                    | 93.27                    | 19              | 2.50          | 12.5               | 845    | 54.76                    | 305                                  |
| 120                   | 116.99                   | 19              | 2.80          | 14.0               | 1060   | 67.57                    | 350                                  |
| 150                   | 147.11                   | 37              | 2.25          | 15.8               | 1337   | 86.37                    | 410                                  |
| 185                   | 181.62                   | 37              | 2.50          | 17.5               | 1649   | 106.63                   | 465                                  |
| 240                   | 242.54                   | 61              | 2.25          | 20.3               | 2209   | 142.40                   | 560                                  |
| 300                   | 299.43                   | 61              | 2.50          | 22.5               | 2725   | 175.80                   | 635                                  |
| 400                   | 400.14                   | 61              | 2.89          | 26.0               | 3640   | 231.12                   | 765                                  |
| 500                   | 499.83                   | 61              | 3.23          | 29.1               | 4545   | 288.70                   | 880                                  |

Remark: The outer layer has to be right handed (Z-rotation)

Reference values for continuous current-carrying capacity are valid up to 60 Hz at the given wind velocity of 0.6 m/s and sun impact (for Germany) for a starting ambient temperature of 35 °C and a final temperature of the conductor of 70 °C. For special environmental conditions (calm) the values have to be reduced by about 30 %.

Other designs: for example international standards or customer specifications – on request