

# NY / NAY

## Single Core (Cu or Al/PVC/PVC)

### APPLICATION

Power cables for energy supply are installed in open air, in underground, in water, indoors, in cable ducts, power stations for industry and distribution boards as well as in subscriber networks, where mechanical damages are not to be expected.

### STANDARD

VDE 0271/3.69

### VOLTAGE GRADE

U<sub>0</sub>/U (Um) : 0.6/1.0 (1.2) kV

Permissible Service Voltage: 0.72/1.2 kV

### COLOR

Insulated core : ■ (Black)

Sheath : ■ (Black or Other Colors available on request)

### CONSTRUCTION

**Conductor:** Solid/ Stranded Circular/ Compacted, Plain annealed Copper or Aluminium, Class-1 or Class-2 to IEC 60228

**Insulation:** PVC, PVC/A to IEC 60502-1

**Sheath:** PVC, ST-1 to IEC 60502-1



LOW VOLTAGE

### PHYSICAL DATA

| Nominal cross sectional area of conductor | Shape of Conductor | No. of strands & diameter of wire Cu/Al | Nominal thickness of insulation | Nominal thickness of sheath | Approx. Overall diameter | Approx. weight of cable |       |
|---|--------------------|---|---------------------------------|-----------------------------|--------------------------|-------------------------|-------|
|   |                    |   |                                 |                             |                          | Cu                      | Al    |
| Core x mm <sup>2</sup>                    | -                  | nos./mm                                 | mm                              | mm                          | mm                       | kg/km                   | kg/km |
| 1 x 1.5                                   | re                 | 1/1.38                                  | 0.8                             | 1.8                         | 6.6                      | 65                      | 56    |
| 1 x 1.5                                   | rm                 | 7/0.52                                  | 0.8                             | 1.8                         | 6.8                      | 68                      | 58    |
| 1 x 2.5                                   | re                 | 1/1.78                                  | 0.8                             | 1.8                         | 7.2                      | 80                      | 69    |
| 1 x 2.5                                   | rm                 | 7/0.68                                  | 0.8                             | 1.8                         | 7.4                      | 86                      | 71    |
| 1 x 4                                     | rm                 | 7/0.85                                  | 1.0                             | 1.8                         | 8.2                      | 113                     | 88    |
| 1 x 6                                     | rm                 | 7/1.04                                  | 1.0                             | 1.8                         | 8.7                      | 140                     | 102   |
| 1 x 10                                    | rm                 | 7/1.35                                  | 1.0                             | 1.8                         | 9.7                      | 190                     | 126   |
| 1 x 16                                    | rm                 | 7/1.70                                  | 1.0                             | 1.8                         | 10.7                     | 262                     | 158   |
| 1 x 16                                    | rm                 | 19/1.04                                 | 1.0                             | 1.8                         | 11.0                     | 268                     | 160   |
| 1 x 25                                    | rm                 | 7/2.14                                  | 1.2                             | 1.8                         | 12.4                     | 375                     | 216   |
| 1 x 25                                    | rm                 | 19/1.30                                 | 1.2                             | 1.8                         | 12.8                     | 385                     | 220   |
| 1 x 35                                    | rnc                | min. 6                                  | 1.2                             | 1.8                         | 13.7                     | 472                     | 262   |
| 1 x 50                                    | rnc                | min. 6                                  | 1.4                             | 1.8                         | 15.6                     | 610                     | 342   |
| 1 x 70                                    | rnc                | min. 12                                 | 1.4                             | 1.8                         | 17.3                     | 846                     | 425   |
| 1 x 95                                    | rnc                | min. 15                                 | 1.6                             | 1.8                         | 19.4                     | 1095                    | 542   |
| 1 x 120                                   | rnc                | min. 18/15                              | 1.6                             | 1.8                         | 21.0                     | 1338                    | 638   |
| 1 x 150                                   | rnc                | min. 18/15                              | 1.8                             | 1.8                         | 23.1                     | 1640                    | 790   |
| 1 x 185                                   | rnc                | min. 30                                 | 2.0                             | 2.0                         | 25.6                     | 2026                    | 954   |
| 1 x 240                                   | rnc                | min. 34/30                              | 2.2                             | 2.0                         | 28.6                     | 2640                    | 1194  |
| 1 x 300                                   | rnc                | min. 34/30                              | 2.4                             | 2.0                         | 31.3                     | 3250                    | 1451  |
| 1 x 400                                   | rnc                | min. 53                                 | 2.6                             | 2.2                         | 35.3                     | 4220                    | 1880  |
| 1 x 500                                   | rnc                | min. 53                                 | 2.8                             | 2.2                         | 38.0                     | 5283                    | 2320  |
| 1 x 630                                   | rnc                | min. 53                                 | 2.8                             | 2.2                         | 42.0                     | 6515                    | 2775  |
| 1 x 800                                   | rnc                | min. 53                                 | 2.8                             | 2.4                         | 46.2                     | 8162                    | 3190  |
| 1 x 1000                                  | rnc                | min. 53                                 | 3.0                             | 2.6                         | 51.1                     | 10285                   | 3350  |

### Characteristics



### Installation condition



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**Insulation:** PVC, PVC/A to IEC 60502-1

**Sheath:** PVC, ST-1 to IEC 60502-1



### ELECTRICAL DATA

| Nominal cross sectional area of conductor | Shape of Conductor | Max. D.C resistance of conductor at 20 °C |           | Current Carrying Capacity in Ground at 30°C |         |             |         | Current Carrying Capacity in Air at 35°C |          |           |          |
|---|--------------------|---|-----------|---|---------|-------------|---------|--|----------|-----------|----------|
|   |                    | Copper                                    | Aluminium | Copper                                      |         | Aluminium   |         | Copper                                   |          | Aluminium |          |
|   |                    |   |           | Direct laid                                 | In duct | Direct laid | In duct | Open                                     | In pipes | Open      | In pipes |
| Core x mm <sup>2</sup>                    | -                  | W/km                                      | W/km      | amp   | amp     | amp         | amp     | amp                                      | amp      | amp       | amp      |
| 1 x 1.5                                   | re                 | 12.1                                      | 18.1      | 27  | 20      | -           | -       | 22                                       | 17       | -         | -        |
| 1 x 1.5                                   | rm                 | 12.1                                      | 18.1      | 27  | 20      | -           | -       | 22                                       | 17       | -         | -        |
| 1 x 2.5                                   | re                 | 7.41                                      | 12.1      | 36  | 30      | -           | -       | 30                                       | 23       | -         | -        |
| 1 x 2.5                                   | rm                 | 7.41                                      | 12.1      | 36  | 30      | -           | -       | 30                                       | 23       | -         | -        |
| 1 x 4                                     | rm                 | 4.61                                      | 7.41      | 47  | 36      | 37          | 29      | 39                                       | 29       | 31        | 23       |
| 1 x 6                                     | rm                 | 3.08                                      | 4.61      | 59  | 45      | 48          | 36      | 50                                       | 36       | 41        | 29       |
| 1 x 10                                    | rm                 | 1.83                                      | 3.08      | 78  | 60      | 60          | 46      | 69                                       | 50       | 53        | 38       |
| 1 x 16                                    | rm                 | 1.15                                      | 1.91      | 100   | 76      | 78          | 60      | 94                                       | 67       | 73        | 51       |
| 1 x 16                                    | rm                 | 1.15                                      | 1.91      | 100   | 76      | 78          | 60      | 94                                       | 67       | 73        | 51       |
| 1 x 25                                    | rm                 | 0.727                                     | 1.20      | 130   | 101     | 101         | 80      | 125                                      | 89       | 97        | 68       |
| 1 x 25                                    | rm                 | 0.727                                     | 1.20      | 130   | 101     | 101         | 90      | 125                                      | 89       | 97        | 68       |
| 1 x 35                                    | rmc                | 0.524                                     | 0.868     | 155   | 119     | 120         | 93      | 160                                      | 114      | 124       | 87       |
| 1 x 50                                    | rmc                | 0.387                                     | 0.641     | 185   | 144     | 144         | 114     | 195                                      | 138      | 151       | 105      |
| 1 x 70                                    | rmc                | 0.268                                     | 0.443     | 225   | 175     | 175         | 138     | 245                                      | 171      | 190       | 130      |
| 1 x 95                                    | rmc                | 0.193                                     | 0.320     | 270   | 211     | 210         | 167     | 300                                      | 204      | 232       | 153      |
| 1 x 120                                   | rmc                | 0.153                                     | 0.253     | 310   | 243     | 240         | 190     | 350                                      | 242      | 272       | 184      |
| 1 x 150                                   | rmc                | 0.124                                     | 0.206     | 350   | 275     | 270         | 216     | 405                                      | 280      | 314       | 212      |
| 1 x 185                                   | rmc                | 0.0991                                    | 0.164     | 390   | 306     | 302         | 240     | 460                                      | 320      | 357       | 244      |
| 1 x 240                                   | rmc                | 0.0754                                    | 0.125     | 450   | 351     | 349         | 275     | 555                                      | 386      | 430       | 292      |
| 1 x 300                                   | rmc                | 0.0601                                    | 0.100     | 515   | 402     | 386         | 306     | 640                                      | 448      | 448       | 304      |
| 1 x 400                                   | rmc                | 0.0470                                    | 0.0778    | 585   | 453     | 439         | 345     | 770                                      | 546      | 540       | 374      |
| 1 x 500                                   | rmc                | 0.0366                                    | 0.0605    | 680   | 526     | 510         | 400     | 900                                      | 643      | 630       | 440      |
| 1 x 630                                   | rmc                | 0.0283                                    | 0.0469    | 800   | 615     | 600         | 467     | 1030                                     | 740      | 721       | 510      |
| 1 x 800                                   | rmc                | 0.0221                                    | 0.0367    | 945   | 724     | 708         | 550     | 1160                                     | 836      | 812       | 575      |
| 1 x 1000                                  | rmc                | 0.0176                                    | 0.0291    | 1095  | 835     | 821         | 630     | 1310                                     | 949      | 917       | 655      |

Current ratings are valid for cables laid under defined conditions at page no. 165. For current ratings at deviated conditions, apply correction factor as given on page no. 165-170.

### Characteristics



### Installation condition

