

21/35KV Power Cables Three Cores Cables to IEC 60502

Three Core 21/35KV (Um=42KV) Dimensional Data

| Nom. Cross-Section Area | Nom. Insulation Thickness | Copper Tape Thickness | Copper Wire Screen Area* | Unarmoured Cables | | | | Steel Round-Wire Armoured Cables | | | | | |
|-------------------------|---------------------------|-----------------------|--------------------------|-----------------------|--------------------------|----------------|-------|----------------------------------|------------------|-----------------------|--------------------------|----------------|-------|
| | | | | Nom. Sheath Thickness | Approx. Overall Diameter | Approx. Weight | | Nom. Bedding Thickness | Armour Wire Size | Nom. Sheath Thickness | Approx. Overall Diameter | Approx. Weight | |
| | | | | | | CU | AL | | | | | CU | AL |
| mm ² | mm | mm | mm ² | mm | mm | kg/km | | mm | mm | mm | mm | kg/km | |
| 50 | 9.3 | 0.1 | 16 | 3.2 | 73.9 | 5320 | 4446 | 1.9 | 3.15 | 3.8 | 87.1 | 10970 | 10090 |
| 70 | 9.3 | 0.1 | 16 | 3.3 | 78.0 | 6166 | 4880 | 2.0 | 3.5 | 3.9 | 91.3 | 12220 | 10750 |
| 95 | 9.3 | 0.1 | 16 | 3.5 | 81.9 | 7144 | 5430 | 2.1 | 3.5 | 4.0 | 94.5 | 13560 | 11780 |
| 120 | 9.3 | 0.1 | 16 | 3.6 | 85.1 | 8232 | 6049 | 2.1 | 4.0 | 4.1 | 97.5 | 14880 | 13650 |
| 150 | 9.3 | 0.1 | 25 | 3.7 | 88.6 | 9273 | 6549 | 2.1 | 4.0 | 4.2 | 100.5 | 16150 | 14060 |
| 185 | 9.3 | 0.1 | 25 | 3.8 | 93.5 | 10845 | 7392 | 2.2 | 4.0 | 4.3 | 105.5 | 17840 | 14390 |
| 240 | 9.3 | 0.1 | 25 | 4.0 | 98.2 | 12675 | 8310 | 2.3 | 4.5 | 4.5 | 111.5 | 20410 | 15870 |
| 300 | 9.3 | 0.1 | 25 | 4.1 | 103.6 | 14960 | 9362 | 2.4 | 4.5 | 4.6 | 116.5 | 24100 | 18460 |
| 400 | 9.3 | 0.1 | 35 | 4.3 | 110.0 | 18055 | 10698 | 2.5 | 4.5 | 4.8 | 124.3 | 28680 | 20560 |

*Optional wire screen can be provided in combination of copper tapes. Nominal screen area, as stated in the table, can be supplied as standard.

| Nom. Cross-Section Area | Steel Flat Wire Armoured Cables | | | | | | Double Steel Tape Armoured Cables | | | | | |
|-------------------------|---------------------------------|------------------|-----------------------|--------------------------|----------------|-------|-----------------------------------|--|-----------------------|--------------------------|----------------|-------|
| | Nom. Bedding Thickness | Armour Wire Size | Nom. Sheath Thickness | Approx. Overall Diameter | Approx. Weight | | Nom. Bedding Thickness | No of Steel tapes x nom tape thickness | Nom. Sheath Thickness | Approx. Overall Diameter | Approx. Weight | |
| | | | | | CU | AL | | | | | CU | AL |
| mm ² | mm | mm | mm | mm | kg/km | | mm | mm | mm | mm | kg/km | |
| 50 | 1.9 | 0.8 | 3.3 | 80.5 | 9825 | 8986 | 1.9 | 2x0.5 | 3.5 | 82.5 | 9625 | 8786 |
| 70 | 2.0 | 0.8 | 3.6 | 85.5 | 11015 | 9769 | 2.0 | 2x0.8 | 3.8 | 87.6 | 10825 | 9569 |
| 95 | 2.1 | 0.8 | 3.8 | 88.5 | 12360 | 10580 | 2.1 | 2x0.8 | 3.9 | 90.5 | 12116 | 10327 |
| 120 | 2.1 | 0.8 | 3.9 | 91.5 | 13900 | 11715 | 2.1 | 2x0.8 | 4.0 | 94.5 | 13306 | 11110 |
| 150 | 2.1 | 0.8 | 4.0 | 94.8 | 15160 | 12440 | 2.1 | 2x0.8 | 4.1 | 97.5 | 14550 | 11830 |
| 185 | 2.2 | 0.8 | 4.1 | 99.5 | 17500 | 13450 | 2.2 | 2x0.8 | 4.2 | 101.7 | 16810 | 12765 |
| 240 | 2.3 | 0.8 | 4.2 | 104.1 | 19390 | 14890 | 2.3 | 2x0.8 | 4.4 | 107.5 | 18650 | 14150 |
| 300 | 2.4 | 0.8 | 4.4 | 109.5 | 21970 | 16280 | 2.4 | 2x0.8 | 4.6 | 112.8 | 21200 | 15500 |
| 400 | 2.5 | 0.8 | 4.6 | 116.3 | 25600 | 18430 | 2.5 | 2x0.8 | 4.8 | 118.8 | 24780 | 17600 |

Electrical Data

| Nom. Cross-Section Area | D C Resistance CU / AL | A C Resistance CU / AL | Short Circuit Rating of Conductor CU / AL 1 sec | Capacitance | Charging Current | Short Circuit Rating of Copper Wire Screen Per Core 1 sec | Short Circuit Rating of Copper Tape Screen Per Core 1 sec | Reactance | Inductance |
|-------------------------|---------------------------|---------------------------|--|-------------|---------------------|---|---|-----------|------------|
| mm ² | μΩ/m | μΩ/m | kA | pF/m | mA/m | kA | kA | μΩ/m | nH/m |
| 50 | 387/641 | 494/822 | 6.8/4.4 | 135 | 0.91 | 2.6 | 1.1 | 140 | 450 |
| 70 | 268/443 | 343/568 | 9.8/6.3 | 151 | 1.01 | 2.6 | 1.1 | 134 | 415 |
| 95 | 193/320 | 248/410 | 13.3/8.5 | 166 | 1.11 | 2.6 | 1.2 | 126 | 405 |
| 120 | 153/253 | 196/325 | 17.2/11.0 | 179 | 1.21 | 2.6 | 1.2 | 123 | 385 |
| 150 | 124/206 | 159/265 | 21.2/13.5 | 189 | 1.29 | 4.3 | 1.3 | 118 | 375 |
| 185 | 99.1/164 | 128/211 | 26.6/17.0 | 202 | 1.38 | 4.3 | 1.3 | 114 | 365 |
| 240 | 75.4/125 | 98/161 | 34.9/22.3 | 221 | 1.49 | 4.3 | 1.4 | 109 | 345 |
| 300 | 60.1/100 | 80/130 | 43.8/28.0 | 240 | 1.65 | 4.3 | 1.5 | 105 | 335 |
| 400 | 47.0/77.8 | 64/102 | 57.3/36.6 | 267 | 1.75 | 5.8 | 1.6 | 101 | 305 |