

U₀/U(U_m)=38/66(72.5)KV-SINGLE-CORE CABLE

COPPER CONDUCTORS/ 15 mm XLPE INSULATION THICKNESS /LEAD screen /HDPE SHEATHED

| Nominal cross-sectional area | Overall diameter Φ approx | Net weight approx | Max resistance | | short circuit current of conductor for 1 sec. | charging current | Capacitance | Inductance | Inductance | Voltage drop at 50 HZ cos. ϕ 0.8 | |
|------------------------------|--------------------------------|-------------------|----------------|--------------|---|------------------|-------------|------------|------------|---------------------------------------|--------|
| | | | DC at 20°C | AC at 90°C | | | | trefoil | flat | trefoil | flat |
| mm ² | mm | kg/km | Ω /KM | Ω /KM | ka/km | Amp/km | μ f/km | mh/km | mh/km | V/A/km | V/A/km |
| 150 | 60.9 | 7802 | 0.1240 | 0.1590 | 21.45 | 1.44 | 0.121 | 0.458 | 0.504 | 0.421 | 0.444 |
| 185 | 63.7 | 8520 | 0.0991 | 0.1275 | 26.46 | 1.59 | 0.134 | 0.434 | 0.480 | 0.371 | 0.394 |
| 240 | 66.2 | 9373 | 0.0754 | 0.0975 | 34.32 | 1.73 | 0.145 | 0.417 | 0.463 | 0.326 | 0.350 |
| 300 | 68.7 | 10270 | 0.0601 | 0.0800 | 42.90 | 1.87 | 0.156 | 0.402 | 0.448 | 0.298 | 0.321 |
| 400 | 71.2 | 11523 | 0.0470 | 0.0630 | 57.20 | 2.00 | 0.168 | 0.389 | 0.435 | 0.271 | 0.294 |
| 500 | 75.2 | 12964 | 0.0366 | 0.0520 | 71.50 | 2.22 | 0.186 | 0.371 | 0.417 | 0.249 | 0.272 |
| 630 | 78.7 | 14659 | 0.0283 | 0.0415 | 90.09 | 2.40 | 0.201 | 0.359 | 0.405 | 0.230 | 0.253 |
| 800 | 82.7 | 16836 | 0.0221 | 0.0325 | 114.40 | 2.61 | 0.219 | 0.346 | 0.392 | 0.213 | 0.236 |
| 1000 | 90.7 | 19700 | 0.0176 | 0.0235 | 143.00 | 3.03 | 0.254 | 0.326 | 0.372 | 0.192 | 0.215 |
| 1200 | 94.2 | 22089 | 0.0151 | 0.0200 | 171.60 | 3.21 | 0.269 | 0.319 | 0.365 | 0.184 | 0.207 |

IN EGYPT 17 mm XLPE INSULATION THICKNESS

U₀/U(U_m)=38/66(72.5)KV-SINGLE-CORE CABLE

COPPER CONDUCTORS/ 15 mm XLPE INSULATION THICKNESS /CU screen /HDPE SHEATHED

| Nominal cross-sectional area | Overall diameter Φ approx | Net weight approx | Max resistance | | short circuit current of conductor for 1 sec. | charging current | Capacitance | Inductance | | Voltage drop at 50 HZ cos. ϕ 0.8 | |
|------------------------------|--------------------------------|-------------------|----------------|--------------|---|------------------|-------------|------------|-------|---------------------------------------|--------|
| | | | DC at 20°C | AC at 90°C | | | | trefoil | flat | trefoil | flat |
| mm ² | mm | kg/km | Ω /KM | Ω /KM | ka/km | Amp/km | μ f/km | mh/km | mh/km | V/A/km | V/A/km |
| 150 | 59.6 | 4365 | 0.1240 | 0.1590 | 21.45 | 1.44 | 0.121 | 0.454 | 0.500 | 0.454 | 0.500 |
| 185 | 62.4 | 4854 | 0.0991 | 0.1275 | 26.46 | 1.59 | 0.134 | 0.430 | 0.476 | 0.430 | 0.476 |
| 240 | 64.9 | 5502 | 0.0754 | 0.0975 | 34.32 | 1.73 | 0.145 | 0.413 | 0.459 | 0.413 | 0.459 |
| 300 | 67.4 | 6194 | 0.0601 | 0.0800 | 42.90 | 1.87 | 0.156 | 0.398 | 0.444 | 0.398 | 0.444 |
| 400 | 69.9 | 7242 | 0.0470 | 0.0630 | 57.20 | 2.00 | 0.168 | 0.385 | 0.431 | 0.385 | 0.431 |
| 500 | 73.9 | 8356 | 0.0366 | 0.0520 | 71.50 | 2.22 | 0.186 | 0.368 | 0.414 | 0.368 | 0.414 |
| 630 | 77.4 | 9765 | 0.0283 | 0.0415 | 90.09 | 2.40 | 0.201 | 0.355 | 0.401 | 0.355 | 0.401 |
| 800 | 81.4 | 11614 | 0.0221 | 0.0325 | 114.40 | 2.61 | 0.219 | 0.343 | 0.389 | 0.343 | 0.389 |
| 1000 | 89.4 | 13823 | 0.0176 | 0.0235 | 143.00 | 3.03 | 0.254 | 0.323 | 0.369 | 0.323 | 0.369 |
| 1200 | 92.9 | 15924 | 0.0151 | 0.0200 | 171.60 | 3.21 | 0.269 | 0.316 | 0.362 | 0.316 | 0.362 |

IN EGYPT 17 mm XLPE INSULATION THICKNESS

U_o/U(U_m)=38/66(72.5)KV-SINGLE-CORE CABLE - COPPER CONDUCTORS

| Current carrying capacity | | | | | | | | | | | | | | |
|------------------------------|---------------------------|-------------------|----------------------|-------------------|----------------------|-------------------|----------------------|---------------------------|-------------------|----------------------|-------------------|----------------------|-------------------|----------------------|
| Nominal cross-sectional area | cables in ground at 25 °C | | | | cables in air 35 °C | | | cables in ground at 35 °C | | | | cables in air 45 °C | | |
| | solid-bonded sheaths | | cross-bonded sheaths | | solid-bonded sheaths | | cross bonded sheaths | solid-bonded sheaths | | cross-bonded sheaths | | solid-bonded sheaths | | cross-bonded sheaths |
| | trefoil touching | axial space 0.15m | axial space 0.15m | axial space 0.45m | trefoil touching | axial space 0.15m | axial space 0.15m | trefoil touching | axial space 0.15m | axial space 0.15m | axial space 0.45m | trefoil touching | axial space 0.15m | axial space 0.15m |
| mm ² | trefoil | flat | flat | flat | trefoil | flat | flat | trefoil | flat | flat | flat | trefoil | flat | flat |
| 150 | 376 | 484 | 400 | 438 | 473 | 516 | 529 | 346 | 445 | 368 | 403 | 426 | 464 | 476 |
| 185 | 424 | 430 | 453 | 497 | 540 | 589 | 608 | 390 | 396 | 417 | 457 | 486 | 530 | 547 |
| 240 | 489 | 490 | 525 | 577 | 633 | 689 | 719 | 450 | 451 | 483 | 531 | 570 | 620 | 647 |
| 300 | 550 | 544 | 593 | 654 | 722 | 783 | 827 | 506 | 500 | 546 | 602 | 650 | 705 | 744 |
| 400 | 622 | 604 | 675 | 748 | 832 | 896 | 963 | 572 | 556 | 621 | 688 | 749 | 806 | 867 |
| 500 | 701 | 668 | 767 | 853 | 955 | 1022 | 1119 | 645 | 615 | 706 | 785 | 860 | 920 | 1007 |
| 630 | 784 | 730 | 868 | 971 | 1090 | 1154 | 1295 | 721 | 672 | 799 | 893 | 981 | 1039 | 1166 |
| 800 | 865 | 786 | 972 | 1096 | 1229 | 1290 | 1489 | 796 | 723 | 894 | 1008 | 1106 | 1161 | 1340 |
| 1000 | 955 | 856 | 1166 | 1341 | 1100 | 1150 | 1720 | 879 | 788 | 1073 | 1234 | 990 | 1035 | 1548 |
| 1200 | 998 | 892 | 1288 | 1523 | 1240 | 1540 | 1880 | 918 | 821 | 1185 | 1401 | 1116 | 1386 | 1692 |

Thermal resistivity of soil 1.2 °C m/w

Depth of laying 1 m