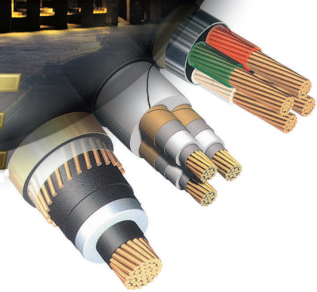




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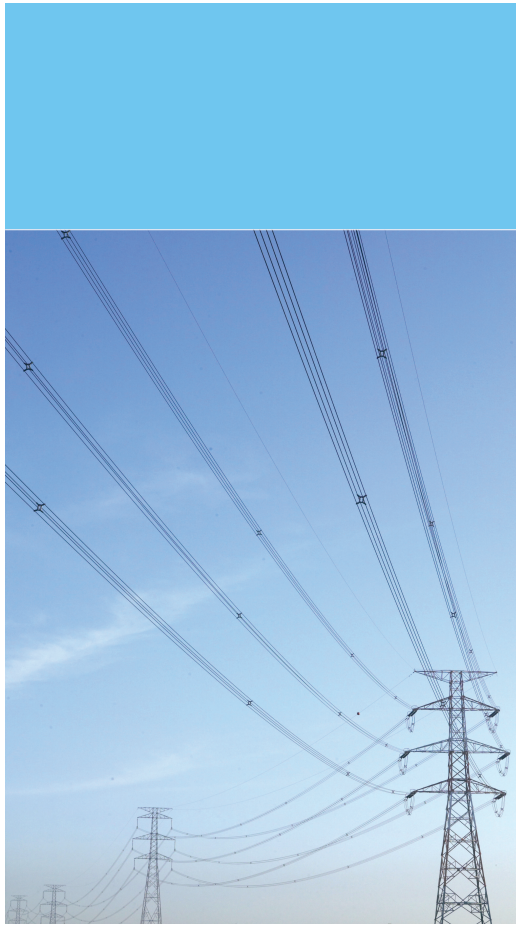
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GEON



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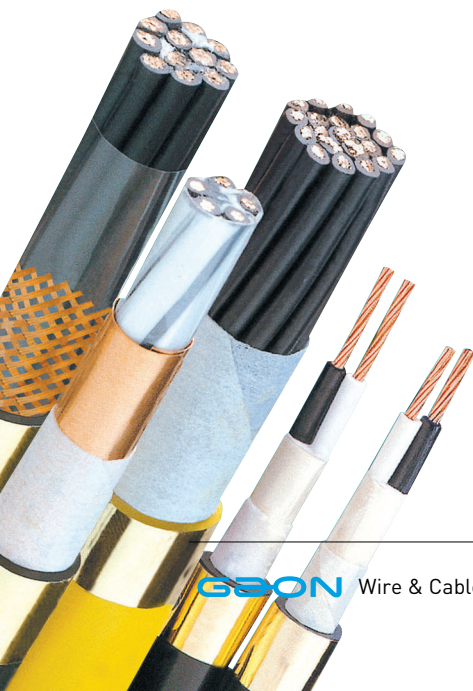
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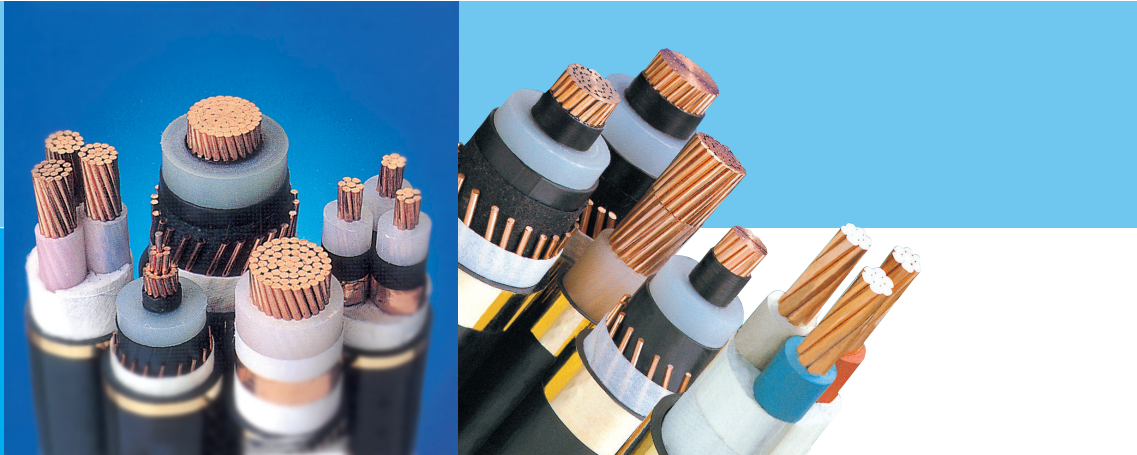
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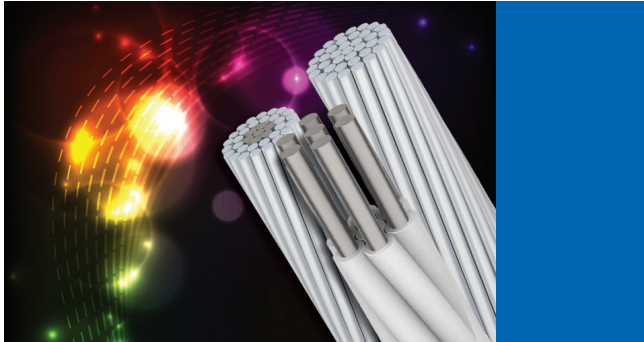
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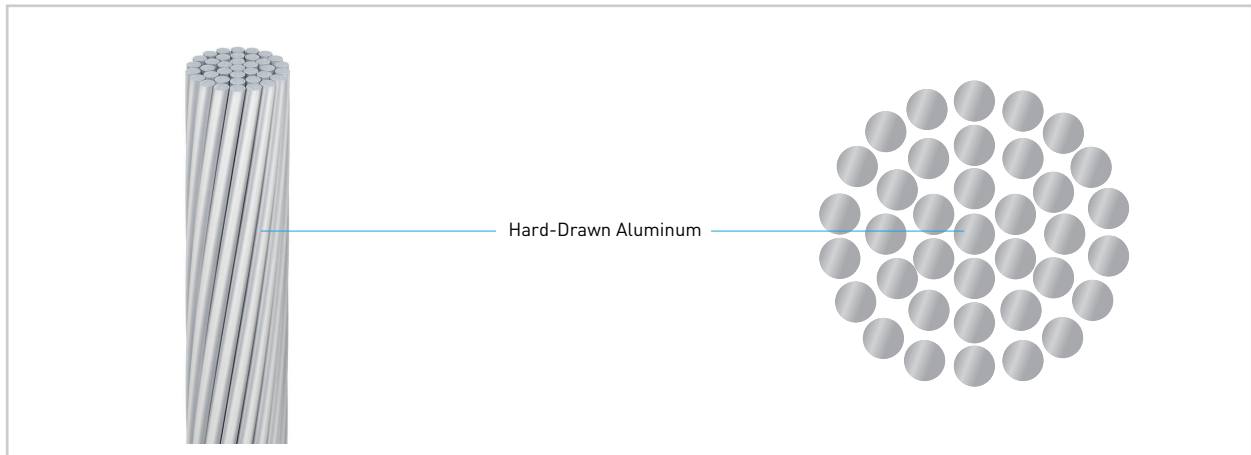
Bare Wire

- Stranded Hard-Drawn All Aluminum Conductor
- Stranded Hard-Drawn All Aluminum Conductor(AAC)
- Aluminum Conductor Steel Reinforced(ACSR)
- Aluminum Clad Steel Wire(AW)
- Stranded Aluminum Clad Steel Conductor(AWS)

Bare Wire

Stranded Hard-Drawn All Aluminum Conductor

(AAC)



IEC 61089(A1)

| Nom. Size | Construction | Calculated Area | Approx. Diameter | Standard Weight | Calculated Breaking Load | Calculated D.C Resistance at 20°C | Current Carrying Capacity |
|-----------------|--------------|-----------------|------------------|-----------------|--------------------------|-----------------------------------|---------------------------|
| mm ² | Nos./mm | mm ² | mm | kg/km | kN | Ω /km | A |
| 10 | 7/1.35 | 10.01 | 4.05 | 27.4 | 1.95 | 2.8643 | 76 |
| 16 | 7/1.71 | 16.08 | 5.12 | 43.8 | 3.04 | 1.7896 | 102 |
| 25 | 7/2.13 | 29.94 | 6.40 | 68.4 | 4.50 | 1.1453 | 136 |
| 40 | 7/2.70 | 40.08 | 8.09 | 109.4 | 6.80 | 0.7158 | 183 |
| 63 | 7/3.39 | 63.18 | 10.2 | 172.3 | 10.39 | 0.4545 | 245 |
| 100 | 19/2.59 | 100.10 | 12.9 | 274.8 | 17.00 | 0.2877 | 328 |
| 125 | 19/2.89 | 124.64 | 14.5 | 343.6 | 21.25 | 0.2302 | 379 |
| 160 | 19/3.27 | 159.57 | 16.4 | 439.8 | 26.40 | 0.1798 | 443 |
| 200 | 19/3.66 | 199.90 | 18.3 | 549.7 | 32.00 | 0.1439 | 511 |
| 250 | 19/4.09 | 249.63 | 20.5 | 687.1 | 40.00 | 0.1151 | 589 |
| 315 | 37/3.29 | 314.55 | 23.0 | 867.9 | 51.97 | 0.0916 | 681 |
| 400 | 37/3.71 | 399.98 | 26.0 | 1,102.0 | 64.00 | 0.0721 | 793 |
| 450 | 37/3.94 | 451.11 | 27.5 | 1,239.8 | 72.00 | 0.0641 | 853 |
| 500 | 37/4.15 | 500.48 | 29.0 | 1,377.6 | 80.00 | 0.0577 | 912 |
| 560 | 37/4.39 | 560.04 | 30.7 | 1,542.9 | 89.60 | 0.0515 | 978 |
| 630 | 61/3.36 | 631.30 | 32.6 | 1,738.3 | 100.80 | 0.0458 | 967 |
| 710 | 61/3.85 | 710.14 | 34.6 | 1,959.1 | 113.60 | 0.0407 | 1,131 |
| 800 | 61/4.09 | 801.43 | 36.8 | 2,207.4 | 128.00 | 0.0361 | 1,217 |
| 900 | 61/4.33 | 898.25 | 39.0 | 2,483.3 | 144.00 | 0.0321 | 1,304 |
| 1,000 | 61/4.57 | 1,000.58 | 41.1 | 2,759.2 | 160.00 | 0.0289 | 1,387 |

Stranded Hard-Drawn All Aluminum Conductor

(AAC)

ASTM B 231

| Code Name | Nom. Size | Stranding Class | Construction | Calculated Area | Approx. Diameter | Standard Weight | Calculated Breaking Load | Calculated D.C Resistance at 20°C | Current Carrying Capacity |
|-------------|-----------|-----------------|--------------|-----------------|------------------|-----------------|--------------------------|-----------------------------------|---------------------------|
| - | AWG/MCM | - | Nos./mm | mm ² | mm | kg/km | kgf | Ω /km | A |
| Peachbell | 6 | A | 7/1.554 | 13.28 | 4.66 | 36.60 | 255.95 | 2.171 | 91 |
| Rose | 4 | A | 7/1.961 | 21.14 | 5.88 | 58.29 | 407.58 | 1.364 | 122 |
| Iris | 2 | AA,A | 7/2.474 | 33.65 | 7.42 | 92.78 | 648.72 | 0.857 | 163 |
| Pansy | 1 | AA,A | 7/2.776 | 42.37 | 8.33 | 16.81 | 816.76 | 0.680 | 189 |
| Poppy | 1/0 | AA,A | 7/3.119 | 53.48 | 9.36 | 147.46 | 1,031.07 | 0.539 | 219 |
| Aster | 2/0 | AA,A | 7/3.503 | 67.46 | 10.51 | 186.00 | 1,300.58 | 0.427 | 254 |
| Phlox | 3/0 | AA,A | 7/3.932 | 85.00 | 11.80 | 234.35 | 1,638.64 | 0.339 | 295 |
| Oxlip | 4/0 | AA,A | 7/4.417 | 107.26 | 13.25 | 295.73 | 2,067.81 | 0.269 | 342 |
| Sneezewort | 250 | AA | 7/4.801 | 126.72 | 14.40 | 349.38 | 2,442.98 | 0.228 | 380 |
| Valerian | 250 | A | 19/2.913 | 126.63 | 14.57 | 349.12 | 2,112.76 | 0.228 | 381 |
| Daisy | 266.8 | AA | 7/4.961 | 135.31 | 14.88 | 373.05 | 2,608.52 | 0.213 | 396 |
| Laurel | 266.8 | A | 19/3.010 | 135.20 | 15.05 | 372.75 | 2,255.81 | 0.213 | 398 |
| Peony | 300 | A | 19/3.193 | 152.14 | 15.97 | 419.46 | 2,538.45 | 0.189 | 429 |
| Tulip | 336.4 | A | 19/3.381 | 170.58 | 16.91 | 470.31 | 2,846.17 | 0.169 | 461 |
| Daffodil | 350 | A | 19/3.447 | 177.31 | 17.24 | 488.85 | 2,958.37 | 0.163 | 472 |
| Canna | 397.5 | AA,A | 19/3.675 | 201.54 | 18.38 | 555.65 | 3,362.67 | 0.143 | 513 |
| Goldentuft | 450 | AA | 19/3.909 | 228.02 | 19.55 | 628.67 | 3,804.53 | 0.126 | 556 |
| Cosmos | 477 | AA | 19/4.023 | 241.51 | 20.12 | 665.87 | 4,029.68 | 0.119 | 576 |
| Syringa | 477 | A | 37/2.883 | 241.54 | 20.18 | 665.93 | 3,943.36 | 0.119 | 577 |
| Zinnia | 500 | AA | 19/4.120 | 253.30 | 20.60 | 698.37 | 4,226.34 | 0.114 | 593 |
| Hyacinth | 500 | A | 37/2.951 | 253.06 | 20.66 | 697.71 | 4,131.57 | 0.114 | 593 |
| Dahlia | 556.5 | AA | 19/4.346 | 281.85 | 21.73 | 777.09 | 4,702.72 | 0.102 | 636 |
| Mistletoe | 556.5 | AA,A | 37/3.114 | 281.79 | 21.80 | 776.92 | 4,600.59 | 0.102 | 636 |
| Meadowsweet | 600 | AA,A | 37/3.233 | 303.74 | 22.63 | 837.43 | 4,958.93 | 0.0949 | 666 |
| Orchid | 636 | AA,A | 37/3.330 | 322.24 | 23.31 | 888.44 | 5,260.96 | 0.0895 | 692 |
| Heuchera | 650 | AA | 37/3.368 | 329.64 | 23.58 | 908.83 | 5,381.72 | 0.0875 | 702 |
| Verbena | 700 | AA | 37/3.493 | 354.56 | 24.45 | 977.54 | 5,788.60 | 0.0813 | 735 |
| Flag | 700 | A | 61/2.720 | 354.45 | 24.48 | 977.25 | 5,820.82 | 0.0813 | 735 |
| Violet | 715.5 | AA | 37/3.533 | 362.73 | 24.73 | 1,000.06 | 5,921.94 | 0.0795 | 746 |
| Nasturtium | 715.5 | A | 61/2.751 | 362.58 | 24.76 | 999.65 | 5,954.26 | 0.0795 | 746 |
| Petunia | 750 | AA | 37/3.617 | 380.18 | 25.32 | 1,048.18 | 6,206.88 | 0.0758 | 768 |
| Cattail | 750 | A | 61/2.817 | 380.18 | 25.35 | 1,048.19 | 6,243.38 | 0.0758 | 769 |
| Arbutus | 795 | AA | 37/3.724 | 403.01 | 26.07 | 1,111.11 | 6,579.55 | 0.0715 | 797 |
| Lilac | 795 | A | 61/2.901 | 403.20 | 26.11 | 1,111.63 | 6,624.28 | 0.0715 | 797 |
| Coskscomb | 900 | AA | 37/3.962 | 456.16 | 27.73 | 1,257.67 | 7,447.42 | 0.0632 | 861 |

ASTM B 231

| Code Name | Nom. Size | Stranding Class | Construction | Calculated Area | Approx. Diameter | Standard Weight | Calculated Breaking Load | Calculated D.C Resistance at 20°C | Current Carrying Capacity |
|------------|-----------|-----------------|--------------|-----------------|------------------|-----------------|--------------------------|-----------------------------------|---------------------------|
| - | AWG/MCM | - | Nos./mm | mm ² | mm | kg/km | kgf | Ω /km | A |
| Snapdragon | 900 | A | 61/3.086 | 456.26 | 27.77 | 1,257.93 | 7,492.70 | 0.0632 | 862 |
| Magnolia | 954 | AA | 37/4.079 | 483.50 | 28.55 | 1,333.05 | 7,893.76 | 0.0596 | 894 |
| Goldenrod | 954 | A | 61/3.178 | 483.87 | 28.60 | 1,334.05 | 7,946.10 | 0.0596 | 894 |
| Hawkweed | 1,000 | AA | 37/4.176 | 506.77 | 29.23 | 1,397.20 | 8,273.66 | 0.0596 | 920 |
| Camellia | 1,000 | A | 61/3.251 | 506.35 | 29.26 | 1,396.05 | 8,315.34 | 0.0596 | 920 |
| Bluebell | 1,033 | AA | 37/4.244 | 523.41 | 29.71 | 1,443.07 | 8,543.30 | 0.0551 | 939 |
| Larkapur | 1,033 | A | 61/3.307 | 523.95 | 29.76 | 1,444.56 | 8,604.28 | 0.0550 | 940 |
| Marigold | 1,113 | AA,A | 61/3.432 | 564.31 | 30.89 | 1,555.82 | 9,267.04 | 0.0511 | 984 |
| Hawthorn | 1,192 | AA,A | 61/3.551 | 604.12 | 31.96 | 1,665.59 | 9,920.82 | 0.0447 | 1,026 |
| Narcissus | 1,272 | AA,A | 61/3.668 | 644.58 | 33.01 | 1,777.15 | 10,585.34 | 0.0447 | 1,068 |
| Columbine | 1,351 | AA,A | 61/3.780 | 684.55 | 34.02 | 1,887.34 | 11,241.64 | 0.0421 | 1,108 |
| Carnation | 1,431 | AA,A | 61/3.891 | 725.34 | 35.02 | 1,999.81 | 11,911.56 | 0.0397 | 1,148 |
| Gladiolus | 1,510 | AA,A | 61/3.998 | 765.78 | 35.98 | 2,111.31 | 12,575.69 | 0.0376 | 1,186 |
| Coreopsis | 1,590 | AA | 61/4.100 | 805.36 | 36.90 | 2,220.41 | 13,225.56 | 0.0358 | 1,222 |
| Jessamine | 1,750 | AA | 61/4.303 | 887.08 | 38.73 | 2,445.73 | 14,567.63 | 0.0325 | 1,294 |

Bare Wire

OPGW

Insulated Wire

Grounding Wire

Instrument Cable

Control Cable

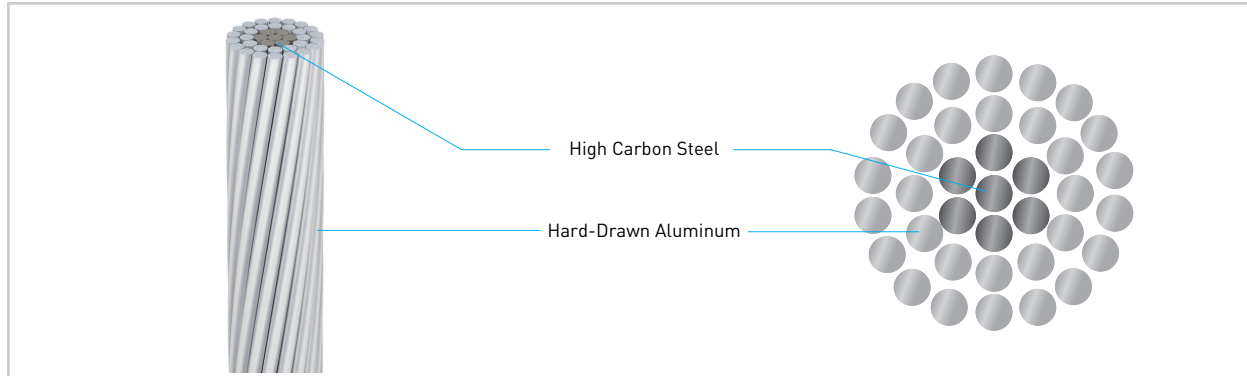
Power Cable

Reference

Installation

Aluminum Conductor Steel Reinforced

(ACSR)



IEC 61089(A1/S1A)

| Nom. Size | Construction | | Calculated Aluminum Area | Approx. Diameter | Standard Weight | Calculated Breaking Load | Calculated D.C Resistance at 20°C | Current Carrying Capacity |
|-----------------|--------------|---------|--------------------------|------------------|-----------------|--------------------------|-----------------------------------|---------------------------|
| | Aluminum | Steel | | | | | | |
| mm ² | Nos./mm | | mm ² | mm | kg/km | kN | Ω /km | A |
| 16 | 6/1.84 | 1/1.84 | 16.0 | 5.53 | 64.6 | 60.8 | 1.7934 | 100 |
| 25 | 6/2.30 | 1/2.30 | 25.0 | 6.91 | 100.9 | 9.13 | 1.1478 | 133 |
| 40 | 6/2.91 | 1/2.91 | 40.0 | 8.74 | 161.5 | 14.40 | 0.7174 | 180 |
| 63 | 6/3.66 | 1/3.66 | 63.1 | 11.0 | 254.4 | 21.63 | 0.4555 | 240 |
| 100 | 6/4.61 | 1/4.61 | 100.1 | 13.8 | 403.8 | 34.33 | 0.2869 | 322 |
| 125 | 18/2.97 | 1/2.97 | 124.7 | 14.9 | 397.9 | 29.17 | 0.2304 | 381 |
| 125 | 26/2.47 | 7/192 | 124.6 | 15.7 | 503.9 | 45.69 | 0.2310 | 387 |
| 160 | 18/3.36 | 1/3.36 | 159.6 | 16.8 | 509.3 | 36.18 | 0.1800 | 446 |
| 160 | 26/2.80 | 7/2.28 | 160.1 | 17.7 | 644.9 | 57.69 | 0.1805 | 452 |
| 200 | 18/3.76 | 1/3.76 | 199.9 | 18.8 | 636.7 | 44.22 | 0.1440 | 515 |
| 200 | 26/3.13 | 7/2.43 | 200.1 | 19.8 | 806.2 | 70.13 | 0.1444 | 522 |
| 250 | 22/3.08 | 7/2.11 | 249.5 | 21.6 | 880.6 | 68.72 | 0.1154 | 598 |
| 250 | 26/3.50 | 7/2.72 | 250.1 | 22.2 | 1,007.7 | 87.67 | 0.1155 | 602 |
| 315 | 45/2.99 | 7/1.99 | 316.0 | 23.9 | 1,039.6 | 79.03 | 0.0917 | 689 |
| 315 | 26/3.93 | 7/3.05 | 315.4 | 24.9 | 1,269.7 | 106.83 | 0.0917 | 698 |
| 400 | 45/3.36 | 7/2.24 | 399.0 | 26.9 | 1,320.1 | 98.36 | 0.0722 | 790 |
| 400 | 54/3.07 | 7/3.07 | 399.7 | 27.6 | 1,510.3 | 123.04 | 0.0723 | 797 |
| 450 | 45/3.57 | 7/2.38 | 450.4 | 28.5 | 1,485.2 | 107.47 | 0.0642 | 851 |
| 450 | 54/3.26 | 7/3.26 | 450.7 | 29.3 | 1,699.1 | 138.42 | 0.0643 | 859 |
| 500 | 45/3.76 | 7/2.51 | 499.7 | 30.1 | 1,650.2 | 119.41 | 0.0578 | 911 |
| 500 | 54/3.43 | 7/3.43 | 499.0 | 30.9 | 1,887.9 | 153.80 | 0.0578 | 919 |
| 560 | 45/3.98 | 7/2.65 | 559.8 | 31.8 | 1,848.2 | 133.74 | 0.0516 | 978 |
| 560 | 54/3.63 | 19/2.18 | 558.9 | 32.7 | 2,103.4 | 172.59 | 0.0516 | 988 |
| 630 | 45/4.22 | 7/2.81 | 629.4 | 33.8 | 2,079.2 | 150.45 | 0.0459 | 1,053 |
| 630 | 54/3.85 | 19/2.31 | 628.6 | 34.7 | 2,366.3 | 191.77 | 0.0459 | 1,064 |
| 710 | 45/4.48 | 7/2.99 | 709.3 | 35.9 | 2,343.2 | 169.56 | 0.0407 | 1,135 |
| 710 | 54/4.09 | 19/2.45 | 709.5 | 36.8 | 2,666.8 | 216.12 | 0.0407 | 1,147 |
| 800 | 54/4.34 | 19/2.61 | 798.8 | 39.1 | 3,004.9 | 243.52 | 0.0362 | 1,235 |

ASTM B 232

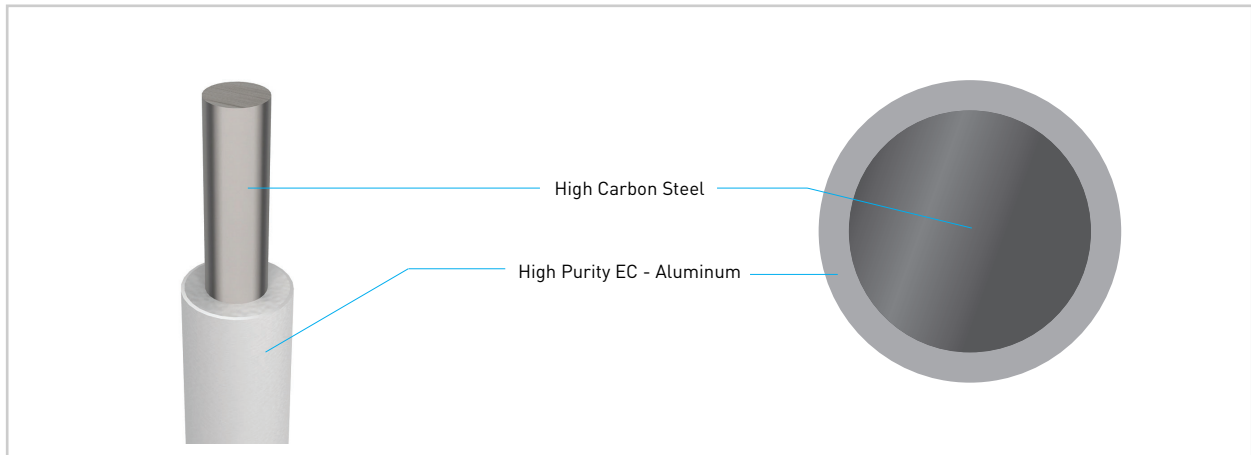
| Code Name | Nom. Size | Construction | | Calculated Aluminum Area | Approx. Diameter | Standard Weight | Calculated Breaking Load | Calculated D.C Resistance at 20°C | Current Carrying Capacity |
|-----------|-----------|--------------|----------|--------------------------|------------------|-----------------|--------------------------|-----------------------------------|---------------------------|
| | | Aluminum | Steel | | | | | | |
| - | AWG/MCM | Nos./mm | | mm ² | mm | kg/km | kgf | Ω /km | A |
| Turkey | 6 | 6/1.679 | 1/1.679 | 13.28 | 5.04 | 53.67 | 539.94 | 2.1595 | 89 |
| Swan | 4 | 6/2.118 | 1/2.118 | 21.14 | 6.35 | 85.41 | 844.71 | 1.3571 | 120 |
| Sparrow | 2 | 6/2.672 | 1/2.672 | 33.64 | 8.02 | 135.93 | 1,291.73 | 0.8527 | 161 |
| Robin | 1 | 6/3.000 | 1/3.000 | 42.41 | 9.00 | 171.35 | 1,615.87 | 0.6764 | 186 |
| Raven | 1/0 | 6/3.371 | 1/3.371 | 53.55 | 10.11 | 216.35 | 1,984.35 | 0.5357 | 216 |
| Quail | 2/0 | 6/3.782 | 1/3.782 | 67.40 | 11.35 | 272.33 | 2,400.98 | 0.4256 | 250 |
| Pigeon | 3/0 | 6/4.247 | 1/4.247 | 85.00 | 12.74 | 343.41 | 2,994.40 | 0.3375 | 290 |
| Penguin | 4/0 | 6/4.770 | 1/4.770 | 107.22 | 14.31 | 433.19 | 3,777.31 | 0.2676 | 337 |
| Waxwing | 266.8 | 18/3.091 | 1/3.091 | 135.07 | 15.46 | 430.78 | 3,113.00 | 0.2134 | 400 |
| Partridge | 266.8 | 26/2.573 | 7/2.002 | 135.19 | 16.30 | 546.67 | 5,118.90 | 0.2143 | 406 |
| Ostrich | 300 | 26/2.728 | 7/2.121 | 151.97 | 17.28 | 614.23 | 5,749.42 | 0.1906 | 437 |
| Merlin | 336.4 | 18/3.472 | 1/3.472 | 170.42 | 17.36 | 543.52 | 3,927.72 | 0.1692 | 464 |
| Linnet | 336.4 | 26/2.888 | 7/2.245 | 170.32 | 18.29 | 688.31 | 6,393.91 | 0.1701 | 470 |
| Oriole | 336.4 | 30/2.690 | 7/2.690 | 170.50 | 18.83 | 784.58 | 7,876.39 | 0.1703 | 474 |
| Chikadee | 397.5 | 18/3.774 | 1/3.774 | 201.36 | 18.87 | 642.18 | 4,506.82 | 0.1432 | 516 |
| Brant | 397.5 | 24/3.269 | 7/2.179 | 201.43 | 19.61 | 761.98 | 6,630.92 | 0.1438 | 521 |
| Ibis | 397.5 | 26/3.139 | 7/2.441 | 201.21 | 19.88 | 813.34 | 7,384.19 | 0.1440 | 523 |
| Lark | 397.5 | 30/2.924 | 7/2.924 | 201.45 | 20.47 | 927.02 | 9,249.01 | 0.1442 | 527 |
| Pelican | 477.0 | 18/4.135 | 1/4.135 | 241.72 | 20.68 | 770.91 | 5,318.59 | 0.1193 | 580 |
| Flicker | 477.0 | 24/3.581 | 7/2.388 | 241.72 | 21.49 | 914.59 | 7,799.74 | 0.1199 | 586 |
| Hawk | 477.0 | 26/3.439 | 7/2.675 | 241.51 | 21.78 | 976.40 | 8,865.69 | 0.1200 | 588 |
| Hen | 477.0 | 30/3.203 | 7/3.203 | 241.73 | 22.42 | 1,112.37 | 10,785.80 | 0.1201 | 592 |
| Osprey | 556.5 | 18/4.465 | 1/4.465 | 281.84 | 22.33 | 898.87 | 6,201.38 | 0.1023 | 640 |
| Parakeet | 556.5 | 24/3.868 | 7/2.578 | 282.02 | 23.21 | 1,066.76 | 8,988.20 | 0.1027 | 646 |
| Dove | 556.5 | 26/3.716 | 7/2.891 | 281.98 | 23.54 | 1,140.16 | 10,273.35 | 0.1027 | 649 |
| Eagle | 556.5 | 30/3.459 | 7/3.459 | 281.91 | 24.21 | 1,297.28 | 12,578.81 | 0.1030 | 654 |
| Peacock | 605.0 | 24/4.034 | 7/2.690 | 306.74 | 24.21 | 1,160.60 | 9,781.27 | 0.0944 | 682 |
| Squab | 605.0 | 26/3.874 | 7/3.012 | 306.47 | 24.53 | 1,238.68 | 11,141.36 | 0.0945 | 685 |
| Teal | 605.0 | 30/3.607 | 19/2.164 | 306.55 | 25.25 | 1,398.33 | 13,589.86 | 0.0947 | 689 |
| Kingbird | 636.0 | 18/4.775 | 1/4.775 | 322.34 | 23.88 | 1,028.02 | 7,092.38 | 0.0894 | 697 |
| Rook | 636.0 | 24/4.135 | 7/2.756 | 322.29 | 24.81 | 1,219.12 | 10,273.07 | 0.0899 | 704 |
| Grosbeak | 636.0 | 26/3.973 | 7/3.089 | 322.33 | 25.16 | 1,302.81 | 11,407.67 | 0.0899 | 707 |
| Egret | 636.0 | 30/3.698 | 19/2.220 | 322.21 | 25.89 | 1,470.50 | 14,295.77 | 0.0901 | 712 |
| Flamingo | 666.6 | 24/4.234 | 7/2.822 | 337.91 | 25.40 | 1,278.20 | 10,769.89 | 0.0857 | 726 |
| Gannet | 666.6 | 26/4.067 | 7/3.162 | 337.76 | 25.75 | 1,365.16 | 11,953.50 | 0.0858 | 728 |

ASTM B 232

| Code Name | Nom. Size | Construction | | Calculated Aluminum Area | Approx. Diameter | Standard Weight | Calculated Breaking Load | Calculated D.C Resistance at 20°C | Current Carrying Capacity |
|-----------|-----------|--------------|----------|--------------------------|------------------|-----------------|--------------------------|-----------------------------------|---------------------------|
| | | Aluminum | Steel | | | | | | |
| - | AWG/MCM | Nos./mm | | mm ² | mm | kg/km | kgf | Ω /km | A |
| Stilt | 715.5 | 24/4.387 | 7/2.924 | 362.77 | 26.32 | 1,372.25 | 11,562.41 | 0.0799 | 759 |
| Starling | 715.5 | 26/4.214 | 7/3.277 | 362.62 | 26.69 | 1,465.83 | 12,836.33 | 0.0799 | 762 |
| Redwing | 715.5 | 30/3.922 | 19/2.352 | 362.43 | 27.45 | 1,652.69 | 15,686.33 | 0.0801 | 767 |
| Cuckoo | 795.0 | 24/4.623 | 7/3.081 | 402.86 | 27.74 | 1,523.79 | 12,634.33 | 0.0719 | 811 |
| Drake | 795.0 | 26/4.442 | 7/3.454 | 402.92 | 28.13 | 1,628.65 | 14,261.54 | 0.0719 | 815 |
| Tern | 795.0 | 45/3.376 | 7/2.250 | 402.82 | 27.01 | 1,333.44 | 9,995.01 | 0.0719 | 793 |
| Condor | 795.0 | 54/3.081 | 7/3.081 | 402.59 | 27.73 | 1,522.66 | 12,756.23 | 0.0720 | 800 |
| Mallard | 795.0 | 30/4.135 | 19/2.482 | 402.87 | 28.95 | 1,838.39 | 17,456.77 | 0.0721 | 820 |
| Ruddy | 900.0 | 45/3.592 | 7/2.395 | 456.01 | 28.74 | 1,509.74 | 11,098.94 | 0.0635 | 858 |
| Canary | 900.0 | 54/3.279 | 7/3.279 | 456.00 | 29.51 | 1,724.65 | 14,448.47 | 0.0635 | 866 |
| Rail | 954.0 | 45/3.698 | 7/2.466 | 483.32 | 29.59 | 1,600.23 | 11,764.77 | 0.0599 | 891 |
| Cardinal | 954.0 | 54/3.376 | 7/3.376 | 483.38 | 30.38 | 1,828.20 | 15,315.95 | 0.0599 | 899 |
| Ortolan | 1033.5 | 45/3.848 | 7/2.565 | 523.33 | 30.78 | 1,732.45 | 12,540.73 | 0.0554 | 836 |
| Curlew | 1033.5 | 54/3.513 | 7/3.513 | 523.41 | 31.62 | 1,979.59 | 16,584.23 | 0.0553 | 946 |
| Bluejay | 1113.0 | 45/3.995 | 7/2.664 | 564.07 | 31.96 | 1,867.58 | 13,520.90 | 0.0514 | 981 |
| Finch | 1113.0 | 54/3.647 | 19/2.189 | 564.10 | 32.83 | 2,120.85 | 17,723.45 | 0.0516 | 986 |
| Bunting | 1192.5 | 45/4.135 | 7/2.756 | 604.30 | 33.08 | 2,000.44 | 14,480.00 | 0.0479 | 1,025 |

Aluminum Clad Steel Wire

(AW)



▼ 20.3[%IACS]

| Nom. Diameter | Min. Tensile Strength | Nom. Weight | Max. D.C Resistance at 20°C | Min. Thickness of Aluminum | Nom. Cross-Sectional Area |
|---------------|-----------------------|-------------|-----------------------------|----------------------------|---------------------------|
| mm | kg/mm ² | kg/km | Ω /km | mm | mm ² |
| 2.0 | 137 | 20.71 | 27.0344 | 0.10 | 3.15 |
| 2.2 | 137 | 25.06 | 22.3425 | 0.11 | 3.81 |
| 2.4 | 137 | 29.82 | 18.7739 | 0.12 | 4.53 |
| 2.5 | 137 | 32.35 | 17.3020 | 0.12 | 4.91 |
| 2.7 | 137 | 37.74 | 14.8337 | 0.13 | 5.73 |
| 2.9 | 137 | 43.53 | 12.8582 | 0.14 | 6.61 |
| 3.0 | 137 | 46.59 | 12.0153 | 0.15 | 7.07 |
| 3.2 | 137 | 53.01 | 10.5603 | 0.16 | 8.05 |
| 3.3 | 135 | 56.37 | 9.9300 | 0.16 | 8.56 |
| 3.5 | 135 | 63.41 | 8.8276 | 0.17 | 9.63 |
| 3.6 | 135 | 67.08 | 8.3440 | 0.18 | 10.18 |
| 3.8 | 135 | 74.74 | 7.4888 | 0.19 | 11.35 |
| 4.0 | 135 | 82.82 | 6.7586 | 0.20 | 12.57 |
| 4.2 | 135 | 91.31 | 6.1303 | 0.21 | 13.86 |

Bare Wire

OPGW

Insulated Wire

Grounding Wire

Instrument Cable

Control Cable

Power Cable

Reference

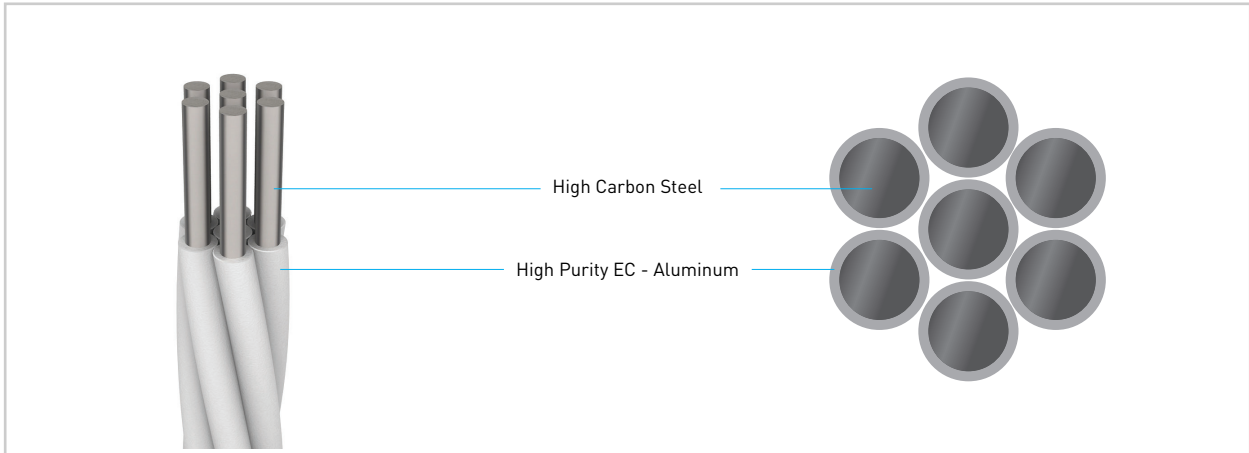
Installation

▼ 27(%IACS)

| Nom. Diameter | Min. Tensile Strength | Nom. Weight | Max. D.C Resistance at 20°C | Min. Thickness of Aluminum | Nom. Cross-Sectional Area |
|---------------|-----------------------|-------------|-----------------------------|----------------------------|---------------------------|
| mm | kg/mm ² | kg/km | Ω /km | mm | mm ² |
| 2.0 | 110 | 18.57 | 20.3529 | 0.14 | 3.15 |
| 2.2 | 110 | 22.47 | 16.7982 | 0.15 | 3.81 |
| 2.4 | 110 | 26.74 | 14.1152 | 0.16 | 4.53 |
| 2.5 | 110 | 29.02 | 13.0086 | 0.17 | 4.91 |
| 2.7 | 110 | 33.84 | 11.1528 | 0.18 | 5.73 |
| 2.9 | 110 | 39.04 | 9.6675 | 0.20 | 6.61 |
| 3.0 | 110 | 41.78 | 9.0337 | 0.21 | 7.07 |
| 3.2 | 110 | 47.54 | 7.9398 | 0.22 | 8.05 |
| 3.3 | 110 | 50.55 | 7.4659 | 0.23 | 8.56 |
| 3.5 | 110 | 56.87 | 6.6370 | 0.24 | 9.63 |
| 3.6 | 110 | 60.16 | 6.2734 | 0.25 | 10.18 |
| 3.8 | 110 | 67.03 | 5.6305 | 0.26 | 11.35 |
| 4.0 | 110 | 74.27 | 5.0815 | 0.28 | 12.57 |
| 4.2 | 110 | 81.88 | 4.6091 | 0.29 | 13.86 |
| 4.5 | 110 | 94.00 | 4.0150 | 0.30 | 15.91 |

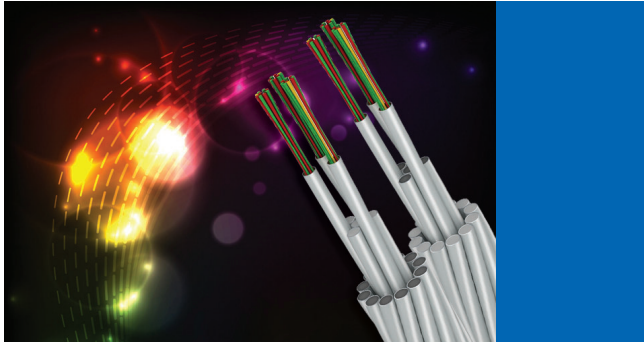
Stranded Aluminum Clad Steel Conductor

(AWS)



ASTM B 416

| Nom. Size | Stranding | Nom. Overall Diameter | Breaking Load | Nom. Weight | Max. D.C Resistance at 20°C | Nom. Cross-Sectional Area |
|-----------|-----------|-----------------------|---------------|-------------|-----------------------------|---------------------------|
| AWG | Nos./mm | mm | kgf | kg/km | Ω /km | mm ² |
| 37/5 | 37/4.620 | 32.36 | 64,770 | 4170 | 0.1394 | 620.6 |
| 37/6 | 37/4.115 | 28.70 | 54,520 | 3307 | 0.1758 | 492.2 |
| 37/7 | 37/3.665 | 25.65 | 45,670 | 2622 | 0.2216 | 390.3 |
| 37/8 | 37/3.264 | 22.83 | 38,190 | 2080 | 0.2794 | 309.5 |
| 37/9 | 37/2.906 | 20.35 | 30,250 | 1649 | 0.3524 | 245.5 |
| 37/10 | 37/2.588 | 18.11 | 24,010 | 1308 | 0.4443 | 194.6 |
| 19/5 | 19/4.620 | 23.11 | 33,270 | 2128 | 0.2699 | 318.7 |
| 19/6 | 19/4.114 | 20.57 | 27,980 | 1688 | 0.3403 | 252.7 |
| 19/7 | 19/3.665 | 18.31 | 23,460 | 1339 | 0.4292 | 200.4 |
| 19/8 | 19/3.264 | 16.31 | 19,610 | 1062 | 0.5411 | 159.0 |
| 19/9 | 19/2.906 | 14.53 | 15,550 | 842.0 | 0.6821 | 126.1 |
| 19/10 | 19/2.588 | 12.93 | 12,330 | 667.8 | 0.8603 | 99.93 |
| 7/5 | 7/4.620 | 13.87 | 12,260 | 781.2 | 0.7428 | 117.4 |
| 7/6 | 7/4.115 | 12.34 | 10,310 | 619.5 | 0.9197 | 93.09 |
| 7/7 | 7/3.665 | 11.00 | 8,645 | 491.1 | 1.1598 | 73.87 |
| 7/8 | 7/3.264 | 9.779 | 7,225 | 389.6 | 1.4627 | 58.56 |
| 7/9 | 7/2.906 | 8.702 | 5,728 | 308.9 | 1.8442 | 46.44 |
| 7/10 | 7/2.588 | 7.772 | 4,544 | 245.1 | 2.3255 | 36.82 |
| 7/11 | 7/2.304 | 6.909 | 3,603 | 194.4 | 2.9325 | 29.18 |
| 7/12 | 7/2.052 | 6.147 | 2,858 | 154.2 | 3.6976 | 23.16 |



OPGW

- OPGW(Optical Fiber Composite Overhead Ground Wire)
- Varieties in design
- Advantage of GAON OPGW
- Typical Construction & General Characteristics
- High Short Circuit Capacity Type(HC)
- High Tensile Strength Type(HS)

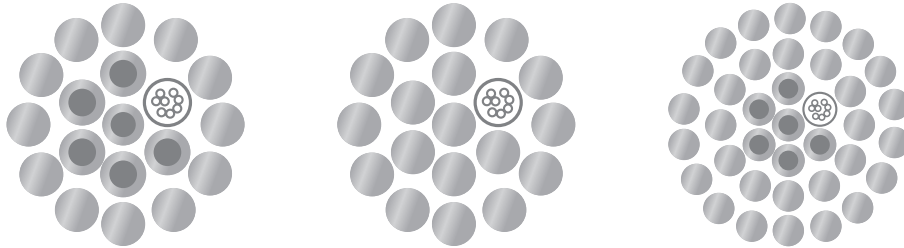
OPGW

Optical Fiber Composite
Overhead Ground Wire

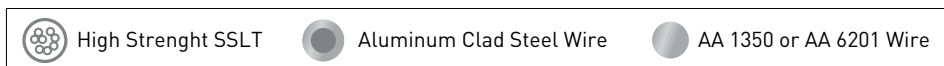
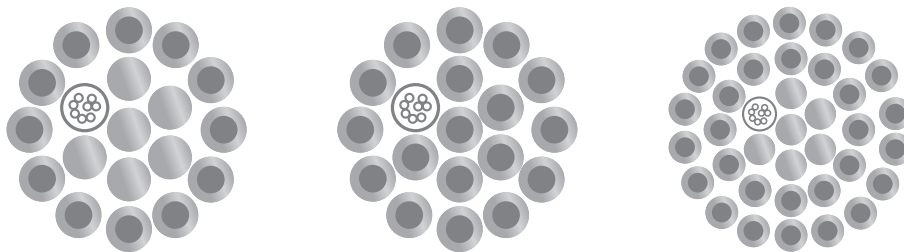
OPGW(Optical Fiber Composite Overhead Ground Wire)

1. Varieties in design

■ High Short Circuit Capacity Type(HC)



■ High Tensile Strength Type(HS)

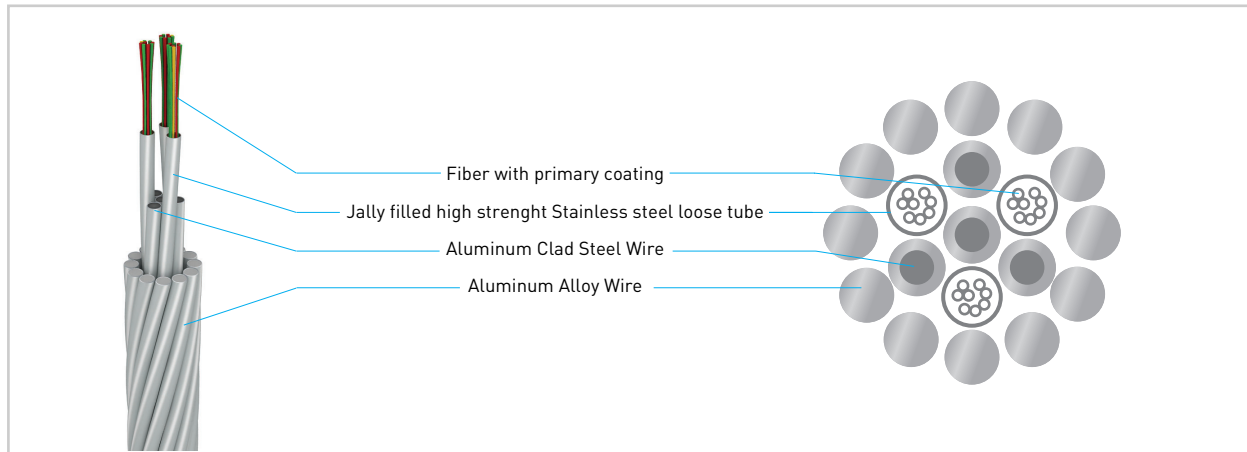


2. Advantage of GAON OPGW

- Less distortion and safe protection of optical fibers by pre-forming and back-turning of the wire during manufacturing
- No twist on the OPGW
- Easy loop construction on the tension towers
- Easy termination and splicing
- Small bending radius
- Very favorable comments from the onstallation teams
- GAON OPGW is based on the design of the high precision steel-wire rope, using aluminum clad steel and aluminum alloy single wires instead of steel wires.
- Stainless Steel Loose Tubes hermetic seal and protect the fibers within.
- GAON OPGW Containing 144 Fibers was tested according to the IEEE standard 1138, it passed without failure
- GAON OPGW undersized the stainless steel tube, the most critical component of the cable, relative to the other wires in the cable's first layer in order to allow for manufacturing tolerances and to ensure optimal crush resistance.

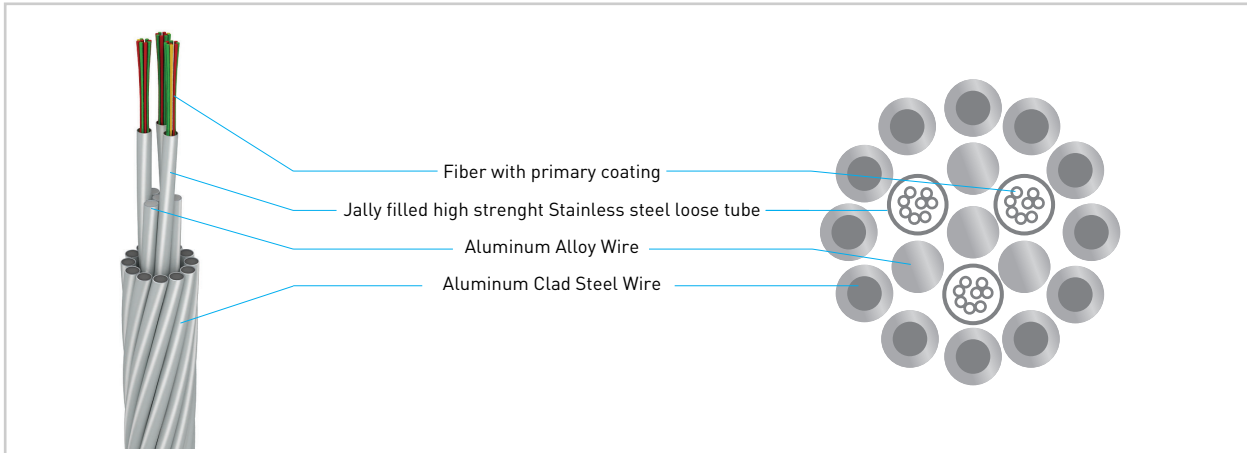
Typical Construction & General Characteristics

High Short Circuit Capacity Type(HC)



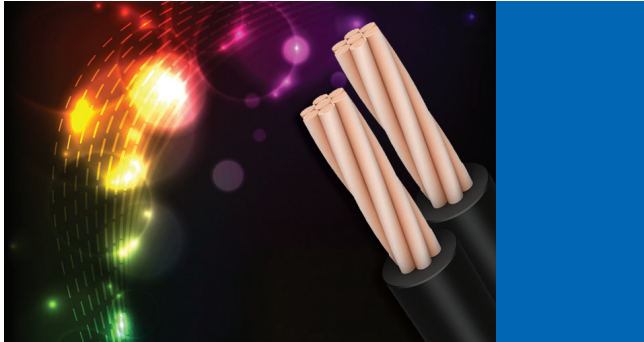
| ITEMS | | High Short Circuit Capacity Type(HC) | | | | |
|--|-------------------------|--------------------------------------|-------|-------|-------|--------|
| Size | mm ² | 38/13 | 59/20 | 79/26 | 97/32 | 129/43 |
| Max. Number of fibers (Total) | Nos. | 24 | 60 | 72 | 108 | 144 |
| Max. Number of fibers in one tube | Nos. | 8 | 20 | 24 | 36 | 48 |
| Max. Number of loose tube | Nos. | 3 | 3 | 3 | 3 | 3 |
| Overall diameter | mm | 10.0 | 12.5 | 14.5 | 16.0 | 18.5 |
| Al-Alloy cross section | mm ² | 38 | 59 | 79 | 97 | 129 |
| AW cross section | mm ² | 13 | 20 | 26 | 32 | 43 |
| Conducting cross section | mm ² | 41 | 64 | 86 | 105 | 140 |
| Total cross section | mm ² | 50 | 79 | 106 | 129 | 172 |
| Approx. Weight | kg/km | 240 | 347 | 450 | 535 | 700 |
| Modulus of elasticity | kN/mm ² | 83 | 83 | 83 | 83 | 83 |
| Bresking load | × 10 ⁻⁶ / °C | 18.1 | 18.1 | 18.1 | 18.1 | 18.1 |
| Thermal expansion coefficient | kN | 27 | 42 | 56 | 69 | 92 |
| Short circuit current (0.5s, at 40 ~180) | kA | 5.6 | 8.8 | 11.8 | 14.4 | 19.2 |
| Short circuit current (1.0s, at 40 ~180) | kA | 4.1 | 6.3 | 8.5 | 10.4 | 13.9 |
| Max. DC Resistance at 20°C | Ω /km | 0.78 | 0.50 | 0.37 | 0.31 | 0.23 |
| Min. Bending radius, at β < 120° | mm | 150 | 190 | 220 | 240 | 280 |
| Min. Bending radius, at β ≥ 120° | mm | 125 | 160 | 185 | 200 | 235 |

High Tensile Strength Type(HS)



| ITEMS | | High Tensile Strength Type(HS) | | | | |
|--|------------------------|--------------------------------|-------|-------|-------|--------|
| Size | mm ² | 13/38 | 20/59 | 26/79 | 32/97 | 43/129 |
| Max. Number of fibers (Total) | Nos. | 24 | 60 | 72 | 108 | 144 |
| Max. Number of fibers in one tube | Nos. | 8 | 20 | 24 | 36 | 48 |
| Max. Number of loose tube | Nos. | 3 | 3 | 3 | 3 | 3 |
| Overall diameter | mm | 10.0 | 12.5 | 14.5 | 16.0 | 18.5 |
| Al-Alloy cross section | mm ² | 13 | 20 | 26 | 32 | 43 |
| AW cross section | mm ² | 38 | 59 | 79 | 97 | 129 |
| Conducting cross section | mm ² | 22 | 34 | 46 | 56 | 75 |
| Total cross section | mm ² | 38 | 79 | 106 | 129 | 172 |
| Approx. Weight | kg/km | 340 | 505 | 660 | 795 | 1045 |
| Modulus of elasticity | kN/mm ² | 136 | 136 | 136 | 136 | 136 |
| Bresking load | × 10 ⁻⁶ /°C | 14.0 | 14.0 | 14.0 | 14.1 | 14.0 |
| Thermal expansion coefficient | kN | 50 | 79 | 106 | 129 | 172 |
| Short circuit current (0.5s, at 40 ~180) | kA | 3.4 | 5.3 | 7.1 | 8.7 | 11.6 |
| Short circuit current (1.0s, at 40 ~180) | kA | 2.4 | 3.8 | 5.1 | 6.3 | 8.4 |
| Max. DC Resistance at 20°C | Ω /km | 1.20 | 0.78 | 0.58 | 0.48 | 0.36 |
| Min. Bending radius, at β < 120° | mm | 150 | 190 | 220 | 240 | 280 |
| Min. Bending radius, at β ≥ 120° | mm | 125 | 160 | 185 | 200 | 235 |

■ The exact cable data depend upon the number of stranded loose tubes and documented separately for each project.



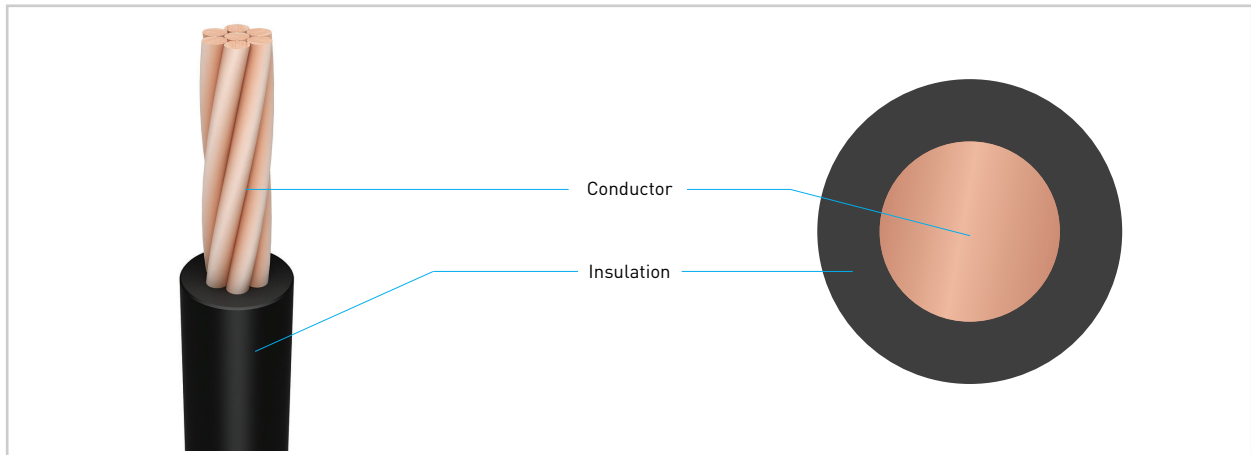
Insulated Wire

- 450/750V PVC Insulated Wire(450/750V IV)

Insulated
Wire

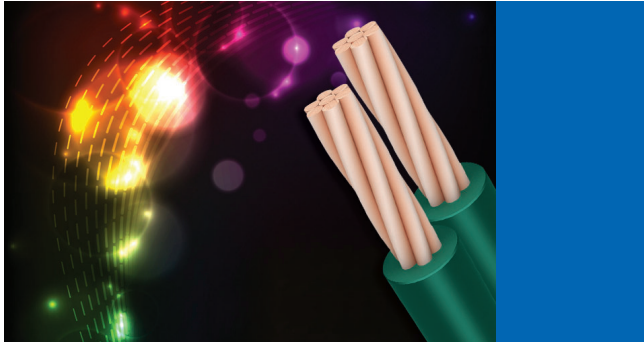
450/750V PVC Insulated Wire

(450/750V IV)



IEC 60227

| Conductor | | | Thickness of Insulated | Mean Overall Diameter (Upper Limit) | Max. Conductor Resistance | Test Voltage | Min. Insulation Resistance (70°C) | Reference | |
|----------------------|--------------------------|------------------|------------------------|-------------------------------------|---------------------------|--------------|-----------------------------------|----------------|-----------------|
| Cross Sectional Area | No. and Diameter of Wire | Outside Diameter | | | | | | Approx. Weight | Standard Length |
| mm ² | mm | mm | mm | mm | Ω /km | V | MΩ -km | kg/km | m |
| 1.5 | 1/1.38 | 1.38 | 0.7 | 3.3 | 12.1 | 2500 | 0.011 | 21 | 300(Coil) |
| 2.5 | 1/1.78 | 1.78 | 0.8 | 3.9 | 7.41 | 2500 | 0.010 | 32 | 300(Coil) |
| 4 | 1/2.25 | 2.25 | 0.8 | 4.4 | 4.61 | 2500 | 0.0085 | 47 | 300(Coil) |
| 1.5 | 7/0.53 | 1.59 | 0.7 | 3.4 | 12.1 | 2500 | 0.010 | 22 | 300(Coil) |
| 2.5 | 7/0.67 | 2.01 | 0.8 | 4.2 | 7.41 | 2500 | 0.009 | 34 | 300(Coil) |
| 4 | 7/0.85 | 2.55 | 0.8 | 4.8 | 4.61 | 2500 | 0.0077 | 50 | 300(Coil) |
| 6 | 7/1.04 | 3.12 | 0.8 | 5.4 | 3.08 | 2500 | 0.0065 | 70 | 300(Coil) |
| 10 | 7/1.35 | 4.05 | 1.0 | 6.8 | 1.83 | 2500 | 0.0065 | 117 | 300(Coil) |
| 16 | 7/1.7 | 5.1 | 1.0 | 8.0 | 1.15 | 2500 | 0.0050 | 177 | 300 |
| 25 | 7/2.14 | 6.42 | 1.2 | 9.8 | 0.727 | 2500 | 0.0050 | 277 | 300 |
| 35 | 7/2.52 | 7.56 | 1.2 | 11.0 | 0.524 | 2500 | 0.0040 | 374 | 300 |
| 50 | 19/1.78 | 8.9 | 1.4 | 13.0 | 0.387 | 2500 | 0.0045 | 504 | 300 |
| 70 | 19/2.14 | 10.7 | 1.4 | 15.0 | 0.268 | 2500 | 0.0035 | 709 | 300 |
| 95 | 19/2.52 | 12.6 | 1.6 | 17.0 | 0.193 | 2500 | 0.0035 | 979 | 300 |
| 120 | 37/2.03 | 14.21 | 1.6 | 19.0 | 0.153 | 2500 | 0.0032 | 1218 | 300 |
| 150 | 37/2.25 | 15.75 | 1.8 | 21.0 | 0.124 | 2500 | 0.0032 | 1498 | 300 |
| 185 | 37/2.52 | 17.64 | 2.0 | 23.5 | 0.0991 | 2500 | 0.0032 | 1878 | 300 |
| 240 | 61/2.25 | 20.25 | 2.0 | 26.6 | 0.0754 | 2500 | 0.0032 | 2438 | 300 |
| 300 | 61/2.52 | 22.68 | 2.4 | 29.5 | 0.0601 | 2500 | 0.0030 | 3080 | 300 |
| 400 | 61/2.85 | 25.65 | 2.6 | 33.5 | 0.0470 | 2500 | 0.0028 | 3924 | 300 |



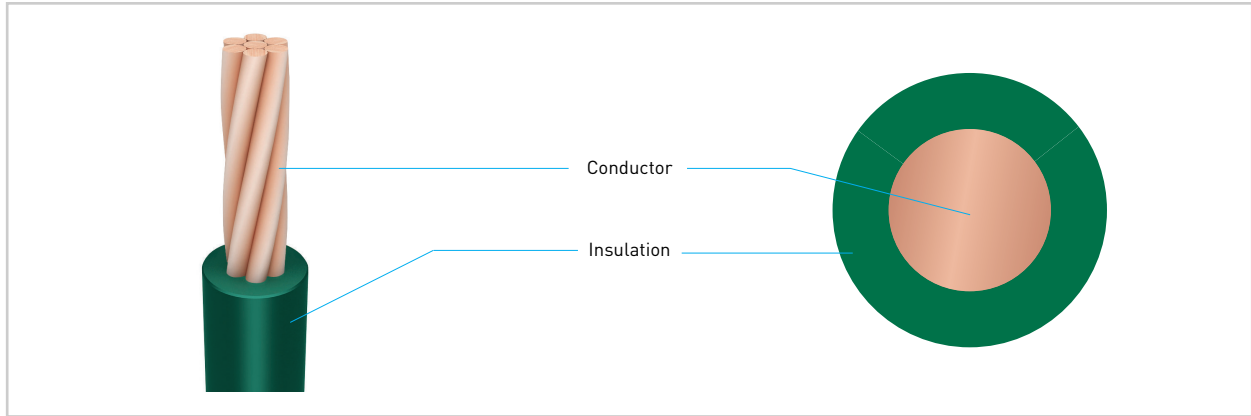
Grounding Wire(GV)

- Grounding Wire(GV)

Grounding
Wire(GV)

Grounding Wire

(GV)



| Conductor | | | Thickness of Insulated | Overall Diameter | Max. Conductor Resistance (20°C) | A.C. Test Voltage V/5min | Approx. Weight |
|----------------------|--------------------------|------------------|------------------------|------------------|----------------------------------|--------------------------|----------------|
| Cross-Sectional Area | No. and Diameter of Wire | Outside Diameter | | | | | |
| mm ² | mm | mm | mm | mm | Ω /km | | kg/km |
| 6 | 7/1.04 | 3.12 | 1.0 | 5.5 | 3.08 | 3500 | 80 |
| 10 | 7/1.35 | 4.05 | 1.0 | 6.5 | 1.83 | | 117 |
| 16 | 7/1.70 | 5.10 | 1.0 | 7.5 | 1.15 | | 177 |
| 25 | 7/2.14 | 6.42 | 1.2 | 9.5 | 0.727 | | 277 |
| 35 | 7/2.52 | 7.56 | 1.2 | 10.5 | 0.524 | | 374 |
| 50 | 19/1.78 | 8.90 | 1.4 | 13.5 | 0.387 | | 504 |
| 70 | 19/2.14 | 10.7 | 1.4 | 14.5 | 0.268 | | 709 |
| 95 | 19/2.52 | 12.6 | 1.6 | 17.0 | 0.193 | | 979 |
| 120 | 37/2.03 | 14.21 | 1.6 | 19.0 | 0.153 | | 1218 |
| 150 | 37/2.25 | 15.75 | 1.8 | 21.0 | 0.124 | | 1498 |
| 185 | 37/2.52 | 17.64 | 2.0 | 22.5 | 0.0991 | | 1878 |
| 240 | 61/2.25 | 20.25 | 2.2 | 26.0 | 0.0754 | | 2438 |
| 300 | 61/2.52 | 22.68 | 2.4 | 28.5 | 0.0601 | | 3080 |
| 16 | Compact | 4.7 | 1.0 | 7.5 | 1.15 | | 177 |
| 25 | | 5.9 | 1.2 | 9.0 | 0.727 | | 277 |
| 35 | | 7.0 | 1.2 | 10.0 | 0.524 | | 374 |
| 50 | | 8.1 | 1.4 | 11.5 | 0.387 | | 504 |
| 70 | | 9.6 | 1.4 | 13.0 | 0.268 | | 709 |
| 95 | | 11.5 | 1.6 | 15.5 | 0.193 | | 979 |
| 120 | | 13.0 | 1.6 | 17.0 | 0.153 | | 1218 |
| 150 | | 14.4 | 1.8 | 19.0 | 0.124 | 1498 | |
| 185 | | 16.0 | 2.0 | 21.0 | 0.0991 | 1878 | |
| 240 | | 18.3 | 2.2 | 23.5 | 0.0754 | 2438 | |
| 300 | 20.5 | 2.4 | 26.5 | 0.0601 | 3080 | | |



Instrument Cable

- Description
- 300/500V CU/PVC/AL-MYLAR/PVC
- 300/500V CU/PVC/AL-MYLAR/AL-MYLAR/PVC
- 300/500V CU/PVC/AL-MYLAR/PVC/SWA/PVC
- 300/500V CU/PVC/AL-MYLAR/AL-MYLAR/PVC/SWA/PVC
- 300/500V CU/PE/AL-MYLAR/PE/SWA/PVC
- 300/500V CU/PE/AL-MYLAR/AL-MYLAR/PE/SWA/PVC
- 300/500V CU/PE/AL-MYLAR/PVC/LEAD/PVC/SWA/PVC
- 300/500V CU/PE/AL-MYLAR/AL-MYLAR/PVC/LEAD/PVC/SWA/PVC

Instrument
Cable

Description

Conductors : The conductors shall be plain annealed Copper in accordance with BS 6360.

Insulation : Insulation shall be PVC type T11 as specified in BS 6746 and PE type 03 as specified in BS 6234.

Indivisual Screen : Each pair shall have a laminated screening tape. The minimum overlap shall be 25%.

Laying Up : The required number of pairs shall be assembled together using the reverse layer or reciprocating lay technique. The cable shall be so constructed that the pairs are in concentric layers.

Common Screen : Each pair shall have a laminated screening tape. The minimum overlap shall be 25%.

Bedding : An extruded bedding of type TM1 or type 6 black PVC compound in accordance with BS 6746 shall be applied over the binder tape.

Lead Sheath : An extruded sheath of lead alloy in accordance with BS 801 shall be applied over the PVC bedding

Separation Sheath : An extruded bedding of type TM1 black PVC compound in accordance with BS 6746 shall be applied over the lead sheath.

Armour : A single layer of galvanized steel wire armour of the size indicated in the appropriate table shall be applied spirally over the extruded PVC bedding. The galvanized steel wire shall comply with BS 1422.

Oversheath : An extruded oversheath of type TM1 PVC compound in accordance with BS 6746 shall be applied over the galvanized steel wire armour.

Bare Wire

OPGW

Insulated Wire

Grounding Wire

Instrument Cable

Control Cable

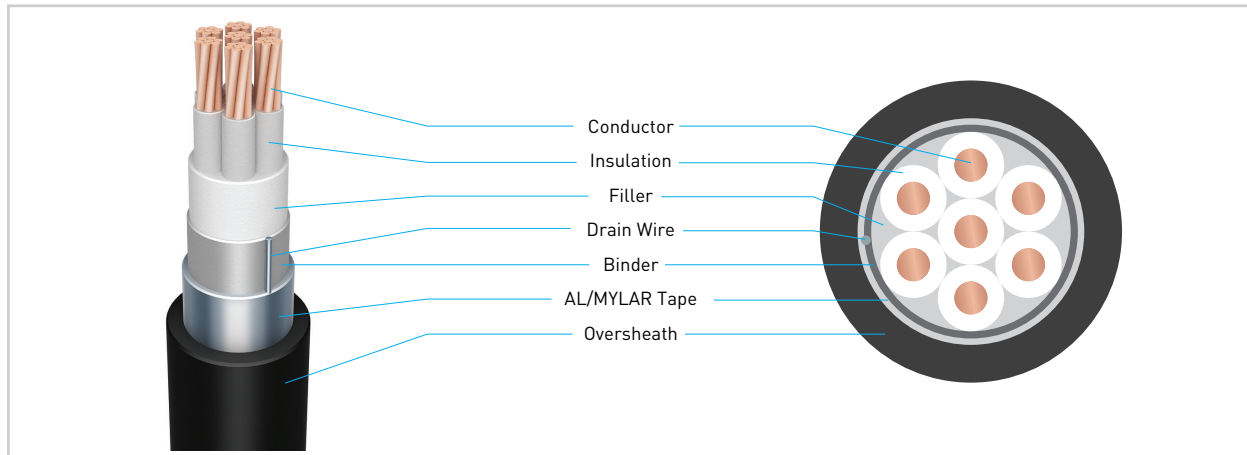
Power Cable

Reference

Installation

300/500V CU/PVC/AL-MYLAR/PVC

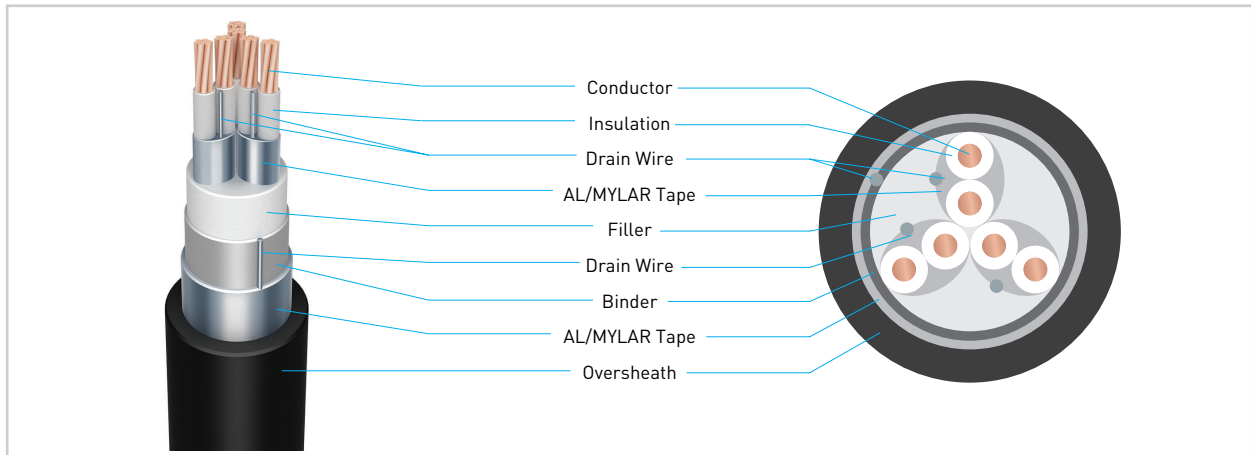
300/500V CVV-AMS



| No. of pairs | Conductor | | | Thickness of Insulation | | Thickness of Oversheath | Approx. Overall Diameter | Maximum Resistance of Conductor | Test Voltage | Approx. Weight |
|--------------|------------------------------|--------------------------|----------|-------------------------|--------|-------------------------|--------------------------|---------------------------------|--------------|----------------|
| | Nominal Cross-Sectional Area | No. and Diameter of Wire | Diameter | Nom. | Min. | | | | | |
| | | | | mm ² | No./mm | mm | mm | mm | mm | Ω /km |
| 1 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 0.8 | 7.3 | 12.3 | 1000 | 90 |
| 2 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 0.8 | 8.7 | 12.3 | 1000 | 170 |
| 5 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.2 | 15.4 | 12.3 | 1000 | 330 |
| 10 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.3 | 20.6 | 12.3 | 1000 | 610 |
| 15 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.5 | 24.2 | 12.3 | 1000 | 810 |
| 20 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.5 | 27.5 | 12.3 | 1000 | 1320 |
| 30 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.7 | 33.3 | 12.3 | 1000 | 1510 |
| 50 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 2.0 | 42.6 | 12.3 | 1000 | 2470 |

300/500V CU/PVC/AL-MYLAR/AL-MYLAR/PVC

300/500V CVV-I/C AMS



| No. of pairs | Conductor | | | Thickness of Insulation | | Thickness of Oversheath | Approx. Overall Diameter | Maximum Resistance of Conductor | Test Voltage | Approx. Weight |
|--------------|------------------------------|--------------------------|----------|-------------------------|--------|-------------------------|--------------------------|---------------------------------|--------------|----------------|
| | Nominal Cross-Sectional Area | No. and Diameter of Wire | Diameter | Nom. | Min. | | | | | |
| | | | | mm ² | No./mm | mm | mm | mm | mm | Ω /km |
| 2 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.2 | 13.7 | 12.3 | 1000 | 190 |
| 5 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.3 | 17.8 | 12.3 | 1000 | 430 |
| 10 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.5 | 25.5 | 12.3 | 1000 | 750 |
| 15 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.7 | 29.8 | 12.3 | 1000 | 1060 |
| 20 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.7 | 33.4 | 12.3 | 1000 | 1350 |
| 30 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 2.0 | 40.0 | 12.3 | 1000 | 2060 |
| 50 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 2.2 | 51.2 | 12.3 | 1000 | 3090 |

Bare Wire

OPGW

Insulated Wire

Grounding Wire

Instrument Cable

Control Cable

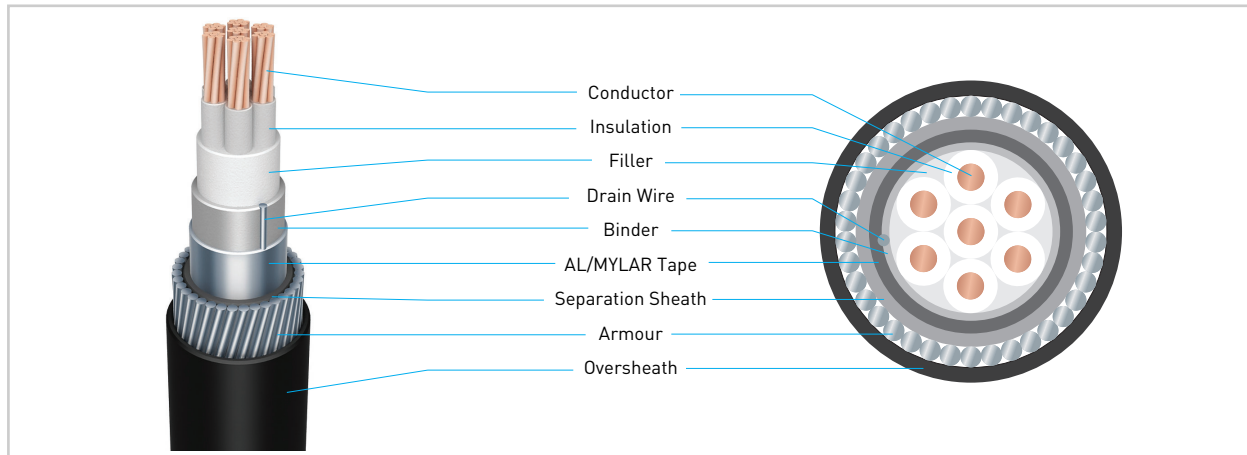
Power Cable

Reference

Installation

300/500V CU/PVC/AL-MYLAR/PVC/SWA/PVC

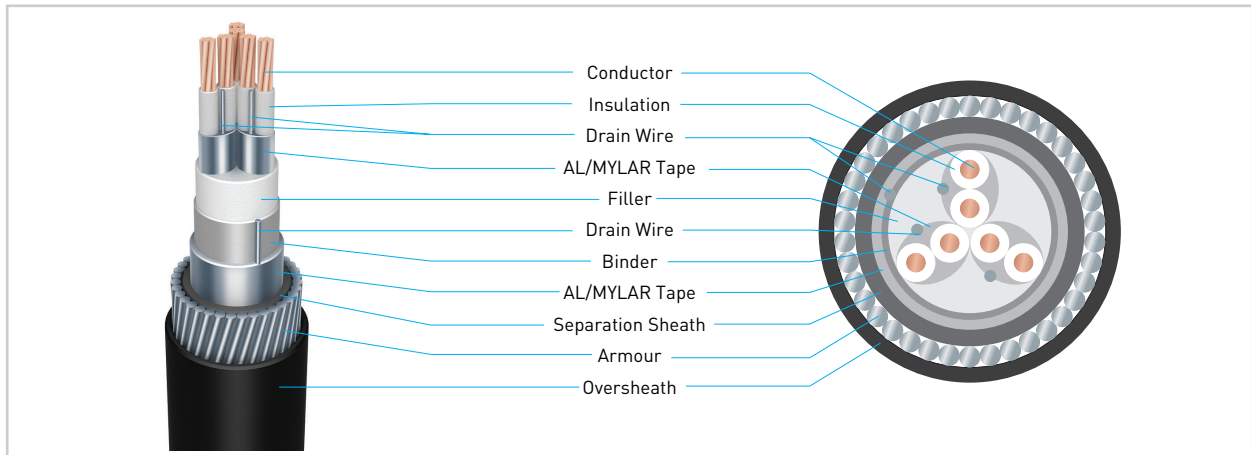
300/500V CVVWAV-AMS



| No. of pairs | Conductor | | | Thickness of Insulation | | Thickness of Bedding | Diameter of Armour | Thickness of Oversheath | Approx. Overall Diameter | Maximum Resistance of Conductor | Test Voltage | Approx. Weight |
|--------------|------------------------------|--------------------------|----------|-------------------------|--------|----------------------|--------------------|-------------------------|--------------------------|---------------------------------|--------------|----------------|
| | Nominal Cross-Sectional Area | No. and Diameter of Wire | Diameter | Nom. | Min. | | | | | | | |
| | | | | mm ² | No./mm | | | | | | | |
| 1 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 0.8 | 0.9 | 1.4 | 11.9 | 12.3 | 1000 | 340 |
| 2 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 0.8 | 0.9 | 1.4 | 13.3 | 12.3 | 1000 | 440 |
| 5 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.2 | 1.25 | 1.6 | 21.1 | 12.3 | 1000 | 910 |
| 10 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.3 | 1.6 | 1.8 | 27.4 | 12.3 | 1000 | 1610 |
| 15 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.5 | 1.6 | 1.9 | 31.2 | 12.3 | 1000 | 2160 |
| 20 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.5 | 1.6 | 2.0 | 34.7 | 12.3 | 1000 | 2360 |
| 30 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.7 | 2.0 | 2.1 | 41.5 | 12.3 | 1000 | 3310 |
| 50 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 2.0 | 2.5 | 2.4 | 52.4 | 12.3 | 1000 | 5100 |

300/500V CU/PVC/AL-MYLAR/AL-MYLAR/PVC/SWA/PVC

300/500V CVVWAV-I/C AMS



| No. of pairs | Conductor | | | Thickness of Insulation | | Thickness of Bedding | Diameter of Amour | Thickness of Oversheath | Approx. Overall Diameter | Maximum Resistance of Conductor | Test Voltage | Approx. Weight |
|--------------|------------------------------|--------------------------|----------|-------------------------|--------|----------------------|-------------------|-------------------------|--------------------------|---------------------------------|--------------|----------------|
| | Nominal Cross-Sectional Area | No. and Diameter of Wire | Diameter | Nom. | Min. | | | | | | | |
| | | | | mm ² | No./mm | | | | | | | |
| 2 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.2 | 1.25 | 1.6 | 19.4 | 12.3 | 1000 | 680 |
| 5 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.3 | 1.6 | 1.7 | 24.4 | 12.3 | 1000 | 1200 |
| 10 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.5 | 1.6 | 1.9 | 32.5 | 12.3 | 1000 | 1520 |
| 15 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.7 | 2.0 | 2.0 | 37.8 | 12.3 | 1000 | 2640 |
| 20 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.7 | 2.0 | 2.1 | 41.6 | 12.3 | 1000 | 3100 |
| 30 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 2.0 | 2.5 | 2.4 | 49.8 | 12.3 | 1000 | 4400 |
| 50 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 2.2 | 2.5 | 2.7 | 61.6 | 12.3 | 1000 | 5390 |

Bare Wire

OPGW

Insulated Wire

Grounding Wire

Instrument Cable

Control Cable

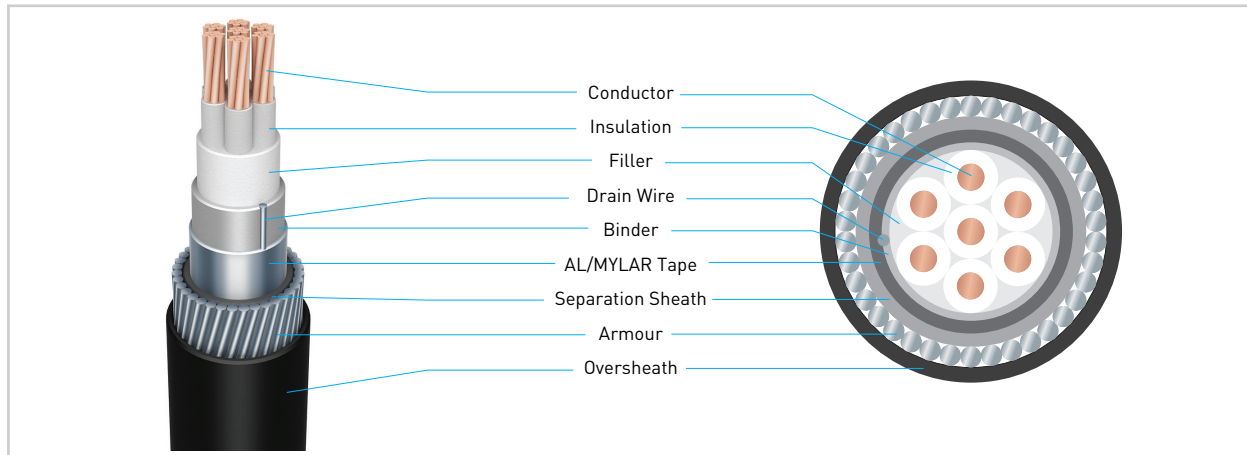
Power Cable

Reference

Installation

300/500V CU/PE/AL-MYLAR/PE/SWA/PVC

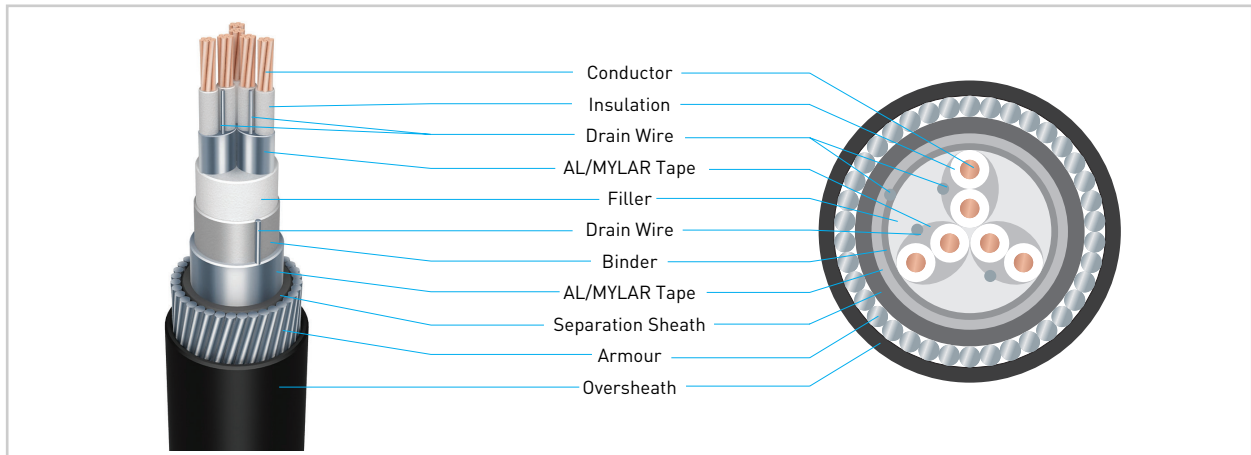
300/500V CEEWAV-AMS



| No. of pairs | Conductor | | | Thickness of Insulation | | Thickness of Bedding | Diameter of Armour | Thickness of Oversheath | Approx. Overall Diameter | Maximum Resistance of Conductor | Test Voltage | Approx. Weight |
|--------------|------------------------------|--------------------------|----------|-------------------------|--------|----------------------|--------------------|-------------------------|--------------------------|---------------------------------|--------------|----------------|
| | Nominal Cross-Sectional Area | No. and Diameter of Wire | Diameter | Nom. | Min. | | | | | | | |
| | | | | mm ² | No./mm | mm | mm | mm | mm | mm | Ω /km | V |
| 1 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 0.8 | 0.9 | 1.4 | 11.9 | 12.3 | 1000 | 300 |
| 2 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 0.9 | 0.9 | 1.4 | 13.3 | 12.3 | 1000 | 420 |
| 5 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.2 | 1.25 | 1.6 | 21.1 | 12.3 | 1000 | 870 |
| 10 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.3 | 1.6 | 1.8 | 27.4 | 12.3 | 1000 | 1540 |
| 15 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.5 | 1.6 | 1.9 | 31.2 | 12.3 | 1000 | 2100 |
| 20 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.5 | 1.6 | 2.0 | 35.5 | 12.3 | 1000 | 2230 |
| 30 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.7 | 2.0 | 2.1 | 41.5 | 12.3 | 1000 | 3130 |
| 50 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 2.0 | 2.5 | 2.4 | 52.4 | 12.3 | 1000 | 4880 |

300/500V CU/PE/AL-MYLAR/AL-MYLAR/PE/SWA/PVC

CEEWAV-I/C AMS



| No. of pairs | Conductor | | | Thickness of Insulation | | Thickness of Bedding | Diameter of Amour | Thickness of Oversheath | Approx. Overall Diameter | Maximum Resistance of Conductor | Test Voltage | Approx. Weight |
|--------------|------------------------------|--------------------------|----------|-------------------------|------|----------------------|-------------------|-------------------------|--------------------------|---------------------------------|--------------|----------------|
| | Nominal Cross-Sectional Area | No. and Diameter of Wire | Diameter | Nom. | Min. | | | | | | | |
| | mm ² | No./mm | mm | mm | mm | | | | | | | |
| 2 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.2 | 1.25 | 1.6 | 19.4 | 12.3 | 1000 | 670 |
| 5 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.3 | 1.6 | 1.7 | 24.4 | 12.3 | 1000 | 1160 |
| 10 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.5 | 1.6 | 1.9 | 32.5 | 12.3 | 1000 | 1470 |
| 15 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.7 | 2.0 | 2.0 | 37.8 | 12.3 | 1000 | 2560 |
| 20 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.7 | 2.0 | 2.1 | 41.6 | 12.3 | 1000 | 2980 |
| 30 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 2.0 | 2.5 | 2.5 | 49.8 | 12.3 | 1000 | 4220 |
| 50 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 2.2 | 2.5 | 2.7 | 61.6 | 12.3 | 1000 | 5110 |

Bare Wire

OPGW

Insulated Wire

Grounding Wire

Instrument Cable

Control Cable

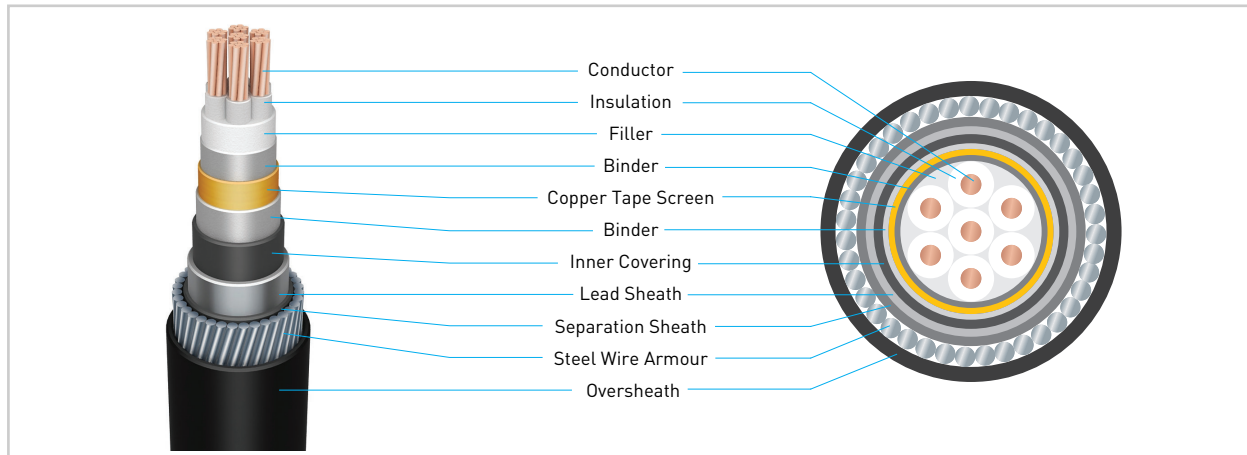
Power Cable

Reference

Installation

300/500V CU/PE/AL-MYLAR/PVC/LEAD/PVC/SWA/PVC

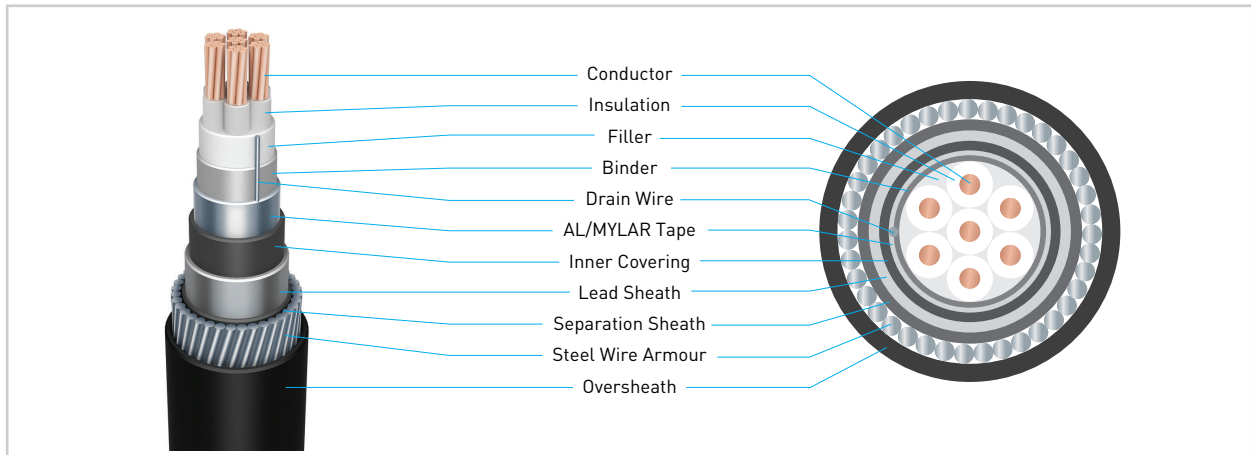
300/500V CELWAV-AMS



| No. of pairs | Conductor | | | Thickness of Insulation | | Thickness of Bedding | Thickness of Lead Sheath | Thickness of Bedding | Diameter of Amour | Thickness of Oversheath | Approx. Overall Diameter | Maximum Resistance of Conductor | Test Voltage | Approx. Weight |
|--------------|------------------------------|--------------------------|----------|-------------------------|--------|----------------------|--------------------------|----------------------|-------------------|-------------------------|--------------------------|---------------------------------|--------------|----------------|
| | Nominal Cross-Sectional Area | No. and Diameter of Wire | Diameter | Nom. | Min. | | | | | | | | | |
| | | | | mm ² | No./mm | | | | | | | | | |
| 1 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 0.8 | 1.1 | 0.8 | 0.9 | 1.5 | 15.9 | 12.3 | 1000 | 1150 |
| 2 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 0.9 | 1.1 | 0.8 | 1.25 | 1.5 | 18.0 | 12.3 | 1000 | 1380 |
| 5 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.2 | 1.2 | 1.0 | 1.6 | 1.7 | 26.4 | 12.3 | 1000 | 1930 |
| 10 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.3 | 1.3 | 1.0 | 1.6 | 1.9 | 32.2 | 12.3 | 1000 | 2700 |
| 15 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.5 | 1.4 | 1.2 | 2.0 | 2.0 | 37.4 | 12.3 | 1000 | 3950 |
| 20 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.5 | 1.5 | 1.2 | 2.0 | 2.1 | 41.1 | 12.3 | 1000 | 4480 |
| 30 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.7 | 1.7 | 1.4 | 2.5 | 2.3 | 49.1 | 12.3 | 1000 | 6350 |
| 50 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 2.0 | 2.0 | 1.6 | 2.5 | 2.6 | 60.0 | 12.3 | 1000 | 8670 |

300/500V CU/PE/AL-MYLAR/AL-MYLAR/PVC/LEAD/PVC/SWA/PVC

300/500V CELVWAV-I/C AMS



| No. of pairs | Conductor | | | Thickness of Insulation | | Thickness of Bedding | Thickness of Lead Sheath | Thickness of Bedding | Diameter of Armour | Thickness of Oversheath | Approx. Overall Diameter | Maximum Resistance of Conductor | Test Voltage | Approx. Weight |
|--------------|------------------------------|--------------------------|----------|-------------------------|--------|----------------------|--------------------------|----------------------|--------------------|-------------------------|--------------------------|---------------------------------|--------------|----------------|
| | Nominal Cross-Sectional Area | No. and Diameter of Wire | Diameter | Nom. | Min. | | | | | | | | | |
| | | | | mm ² | No./mm | | | | | | | | | |
| 2 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.2 | 1.1 | 1.0 | 1.6 | 1.7 | 24.5 | 12.3 | 1000 | 1340 |
| 5 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.3 | 1.2 | 1.0 | 1.6 | 1.8 | 29.0 | 12.3 | 1000 | 2210 |
| 10 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.5 | 1.5 | 1.2 | 2.0 | 2.1 | 39.1 | 12.3 | 1000 | 2990 |
| 15 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.7 | 1.6 | 1.2 | 2.0 | 2.2 | 43.8 | 12.3 | 1000 | 5030 |
| 20 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 1.7 | 1.7 | 1.4 | 2.5 | 2.3 | 49.2 | 12.3 | 1000 | 6060 |
| 30 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 2.0 | 1.9 | 1.4 | 2.5 | 2.4 | 56.6 | 12.3 | 1000 | 7860 |
| 50 | 1.5 | 7/0.53 | 1.59 | 0.6 | 0.5 | 2.2 | 2.2 | 1.6 | 2.5 | 2.9 | 69.6 | 12.3 | 1000 | 10800 |



Control Cable

- Description
- 0.6/1KV CU/PVC/PVC
- 0.6/1KV CU/PVC/PVC/SWA/PVC
- 0.6/1KV CU/PVC/CTS/PVC
- 0.6/1KV CU/PVC/CTS/PVC/SWA/PVC
- 0.6/1KV CU/PVC/AL-MYLAR/PVC
- 0.6/1KV CU/PVC/AL-MYLAR/PVC/SWA/PVC
- 0.6/1KV CU/PVC/AL-MYLAR/AL-MYLAR/PVC
- 0.6/1KV CU/PVC/AL-MYLAR/AL-MYLAR/PVC/SWA/PVC
- 0.6/1KV CU/PVC/PVC/LEAD/PVC/SWA/PVC
- 0.6/1KV CU/PVC/CTS/PVC/LEAD/PVC/SWA/PVC
- 0.6/1KV CU/PVC/AL-MYLAR/PVC/LEAD/PVC/SWA/PVC
- 0.6/1KV CU/PVC/AL-MYLAR/AL-MYLAR/PVC/LEAD/PVC/SWA/PVC
- Conductor Construction and D.C. Conductor Resistance

Control Cable

Description

Conductors : The conductors shall be class 2 of plain annealed Copper or Aluminum in accordance with IEC 60228.

Insulation : Insulation shall be PVC complying with test requirements of IEC 60502 & IEC 60811. XLPE insulation is available on request.

Individual Screen : Individual screen can be a helically applied aluminum foiled polyester tape with drain wire applied over each pair as per customer' s specification.

Laying Up : In case of multi core cables, the multi cores are laid up together with polypropylene yarn filler at the interstices between the cores. A binder e.g. polypropylene tape is wrapped round the assembly to form a compact circular cable during this process.

Common Screen : Screen can be a helically applied copper tape or aluminum foiled polyester tape with drain wire over assembly as per customer' s specification.

Inner Covering : Inner covering shall be non-hygroscopic extruded PVC as per IEC 60502. PE, TPE, LSZH (Low Smoke Zero Halogen) are available on request.

Lead Sheath : Lead sheath shall consist of a layer of extruded lead or lead alloy E.

Separation Sheath : Separation sheath shall be non-hygroscopic extruded PVC as per IEC 60502. PE or TPE are available on request.

Armour : Armour shall be as per IEC 60502 of the following type:

- a) Round Wire Armour
- b) Double Tape Armour

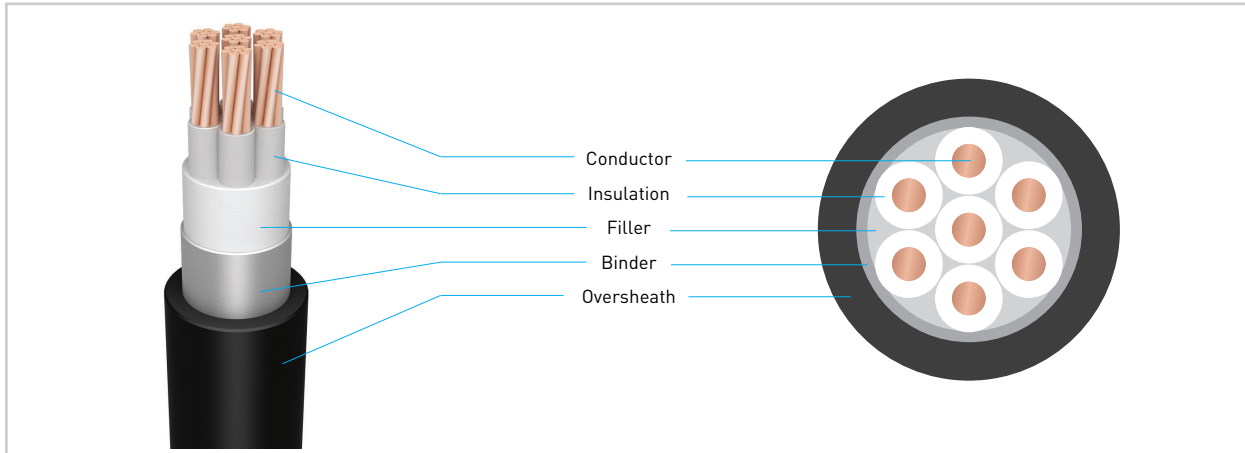
Armour material shall be galvanized steel for multi core cables and aluminum for single core cables. This is as per IEC 60502 recommendation.

Oversheath : Oversheath shall be extruded PVC/ST1 as per IEC 60502, special type of sheathing such as Flame retardant(FR-), Anti-termite(/AT), Anti-rodent(/AR) and Anti-vermin(/AV), etc. are available on request. PE or LSZH(HF- : Halogen free Flame retardant) are available on request

Fire proof layer : Fire proof layer shall be a mica tape between conductor and insulation if fire resistance in accordance with IEC 60331 is required for low voltage power or control cable.

0.6/1KV CU/PVC/PVC

0.6/1KV CVV



| No. of Cores | Conductor | | | Thickness of Insulation | Thickness of Oversheath | Approx. Overall Diameter | Maximum Resistance of Conductor | Test Voltage | Approx. Weight |
|--------------|------------------------------|-----------------------------------|----------|-------------------------|-------------------------|--------------------------|---------------------------------|--------------|----------------|
| | Nominal Cross-Sectional Area | No. and Diameter of Wire or Shape | Diameter | | | | | | |
| | mm ² | No./mm | mm | mm | mm | mm | Ω /km | V | kg/km |
| 2 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 11.0 | 12.1 | 3500 | 133 |
| 3 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 11.5 | 12.1 | 3500 | 160 |
| 4 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 12.5 | 12.1 | 3500 | 192 |
| 5 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 13.5 | 12.1 | 3500 | 229 |
| 6 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 14.5 | 12.1 | 3500 | 265 |
| 7 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 14.5 | 12.1 | 3500 | 280 |
| 8 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 15.5 | 12.1 | 3500 | 309 |
| 10 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 18.0 | 12.1 | 3500 | 393 |
| 12 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 18.5 | 12.1 | 3500 | 445 |
| 15 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 19.5 | 12.1 | 3500 | 516 |
| 20 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 22.0 | 12.1 | 3500 | 656 |
| 30 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 26.0 | 12.1 | 3500 | 926 |
| 2 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 12.0 | 7.41 | 3500 | 163 |
| 3 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 12.5 | 7.41 | 3500 | 203 |
| 4 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 13.5 | 7.41 | 3500 | 244 |
| 5 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 14.5 | 7.41 | 3500 | 290 |
| 6 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 15.5 | 7.41 | 3500 | 338 |
| 7 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 15.5 | 7.41 | 3500 | 365 |
| 8 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 16.5 | 7.41 | 3500 | 417 |
| 10 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 19.5 | 7.41 | 3500 | 512 |
| 12 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 20.0 | 7.41 | 3500 | 587 |
| 15 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 22.0 | 7.41 | 3500 | 685 |

| No. of Cores | Conductor | | | Thickness of Insulation | Thickness of Oversheath | Approx. Overall Diameter | Maximum Resistance of Conductor | Test Voltage | Approx. Weight |
|--------------|------------------------------|-----------------------------------|----------|-------------------------|-------------------------|--------------------------|---------------------------------|--------------|----------------|
| | Nominal Cross-Sectional Area | No. and Diameter of Wire or Shape | Diameter | | | | | | |
| | mm ² | No./mm | mm | | | | | | |
| 20 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 24.0 | 7.41 | 3500 | 866 |
| 30 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 28.0 | 7.41 | 3500 | 1253 |
| 2 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 14.0 | 4.61 | 3500 | 228 |
| 3 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 14.5 | 4.61 | 3500 | 287 |
| 4 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 16.0 | 4.61 | 3500 | 352 |
| 5 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 17.0 | 4.61 | 3500 | 418 |
| 6 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 18.5 | 4.61 | 3500 | 492 |
| 7 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 18.5 | 4.61 | 3500 | 536 |
| 8 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 20.0 | 4.61 | 3500 | 613 |
| 10 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 23.0 | 4.61 | 3500 | 770 |
| 12 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 24.0 | 4.61 | 3500 | 873 |
| 15 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 26.0 | 4.61 | 3500 | 1409 |
| 20 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 29.0 | 4.61 | 3500 | 1360 |
| 30 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 35.0 | 4.61 | 3500 | 1949 |
| 2 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 15.0 | 3.08 | 3500 | 284 |
| 3 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 16.0 | 3.08 | 3500 | 362 |
| 4 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 17.0 | 3.08 | 3500 | 451 |
| 5 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 18.5 | 3.08 | 3500 | 546 |
| 6 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 21.0 | 3.08 | 3500 | 646 |
| 7 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 21.0 | 3.08 | 3500 | 708 |
| 8 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 22.0 | 3.08 | 3500 | 801 |
| 10 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 26.0 | 3.08 | 3500 | 1005 |
| 12 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 27.0 | 3.08 | 3500 | 1161 |
| 15 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 29.0 | 3.08 | 3500 | 1606 |
| 20 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 32.0 | 3.08 | 3500 | 1821 |

Bare Wire

OPGW

Insulated Wire

Grounding Wire

Instrument Cable

Control Cable

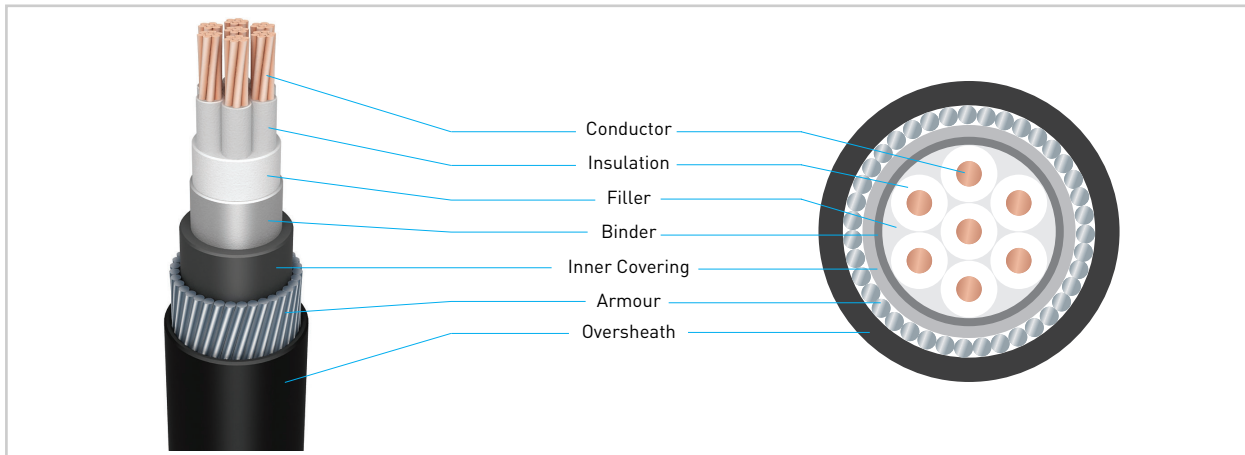
Power Cable

Reference

Installation

0.6/1KV CU/PVC/PVC/SWA/PVC

0.6/1KV CVVWAV



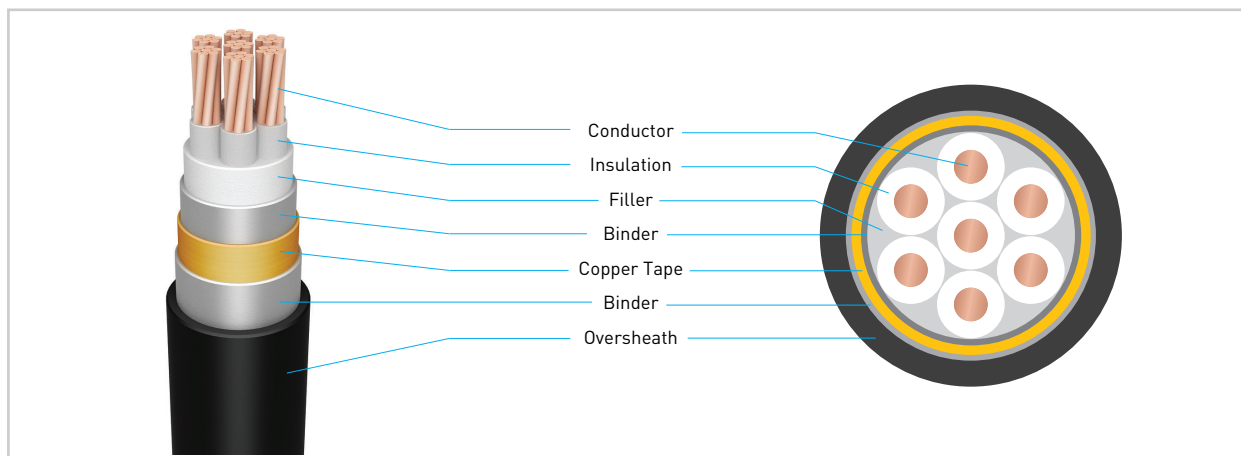
| No. of Cores | Conductor | | | Thickness of Insulation | Thickness of Inner Covering | Diameter of Armour | Thickness of Oversheath | Approx. Overall Diameter | Maximum Resistance of Conductor | Test Voltage | Approx. Weight |
|--------------|------------------------------|-----------------------------------|----------|-------------------------|-----------------------------|--------------------|-------------------------|--------------------------|---------------------------------|--------------|----------------|
| | Nominal Cross-Sectional Area | No. and Diameter of Wire or Shape | Diameter | | | | | | | | |
| | mm ² | No./mm | mm | mm | mm | mm | mm | mm | Ω /km | V | kg/km |
| 2 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 0.9 | 1.8 | 14.5 | 12.1 | 3500 | 360 |
| 3 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 0.9 | 1.8 | 15.0 | 12.1 | 3500 | 400 |
| 4 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 0.9 | 1.8 | 16.0 | 12.1 | 3500 | 450 |
| 5 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 0.9 | 1.8 | 17.0 | 12.1 | 3500 | 500 |
| 6 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 0.9 | 1.8 | 18.0 | 12.1 | 3500 | 560 |
| 7 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 0.9 | 1.8 | 18.0 | 12.1 | 3500 | 580 |
| 8 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.25 | 1.8 | 19.5 | 12.1 | 3500 | 740 |
| 10 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.25 | 1.8 | 22.0 | 12.1 | 3500 | 880 |
| 12 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.25 | 1.8 | 23.0 | 12.1 | 3500 | 940 |
| 15 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.25 | 1.8 | 24.0 | 12.1 | 3500 | 1050 |
| 20 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.6 | 1.8 | 27.0 | 12.1 | 3500 | 1400 |
| 30 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.6 | 1.8 | 31.0 | 12.1 | 3500 | 1820 |
| 2 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 0.9 | 1.8 | 15.5 | 7.41 | 3500 | 410 |
| 3 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 0.9 | 1.8 | 16.0 | 7.41 | 3500 | 460 |
| 4 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 0.9 | 1.8 | 17.0 | 7.41 | 3500 | 520 |
| 5 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 0.9 | 1.8 | 18.0 | 7.41 | 3500 | 590 |
| 6 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.25 | 1.8 | 19.5 | 7.41 | 3500 | 770 |
| 7 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.25 | 1.8 | 19.5 | 7.41 | 3500 | 800 |
| 8 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.25 | 1.8 | 21.0 | 7.41 | 3500 | 880 |
| 10 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.25 | 1.8 | 24.0 | 7.41 | 3500 | 1050 |
| 12 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.25 | 1.8 | 25.0 | 7.41 | 3500 | 1130 |
| 15 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.6 | 1.8 | 26.0 | 7.41 | 3500 | 1440 |

| No. of Cores | Conductor | | | Thickness of Insulation | Thickness of Inner Covering | Diameter of Armour | Thickness of Oversheath | Approx. Overall Diameter | Maximum Resistance of Conductor | Test Voltage | Approx. Weight |
|--------------|------------------------------|-----------------------------------|----------|-------------------------|-----------------------------|--------------------|-------------------------|--------------------------|---------------------------------|--------------|----------------|
| | Nominal Cross-Sectional Area | No. and Diameter of Wire or Shape | Diameter | | | | | | | | |
| | mm ² | No./mm | mm | | | | | | | | |
| 20 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.6 | 1.8 | 29.0 | 7.41 | 3500 | 1700 |
| 30 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.6 | 1.9 | 33.0 | 7.41 | 3500 | 2270 |
| 2 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 0.9 | 1.8 | 17.5 | 4.61 | 3500 | 520 |
| 3 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.25 | 1.8 | 19.0 | 4.61 | 3500 | 690 |
| 4 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.25 | 1.8 | 20.0 | 4.61 | 3500 | 790 |
| 5 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.25 | 1.8 | 21.0 | 4.61 | 3500 | 890 |
| 6 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.25 | 1.8 | 23.0 | 4.61 | 3500 | 1000 |
| 7 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.25 | 1.8 | 23.0 | 4.61 | 3500 | 1050 |
| 8 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.25 | 1.8 | 24.0 | 4.61 | 3500 | 1170 |
| 10 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.6 | 1.8 | 28.0 | 4.61 | 3500 | 1560 |
| 12 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.6 | 1.8 | 29.0 | 4.61 | 3500 | 1710 |
| 15 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.6 | 1.8 | 31.0 | 4.61 | 3500 | 1950 |
| 20 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.6 | 1.9 | 34.0 | 4.61 | 3500 | 2380 |
| 30 | 4 | 7/0.85 | 2.55 | 1.0 | 1.2 | 2.0 | 2.1 | 41.0 | 4.61 | 3500 | 3520 |
| 2 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.25 | 1.8 | 19.0 | 3.08 | 3500 | 700 |
| 3 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.25 | 1.8 | 20.0 | 3.08 | 3500 | 800 |
| 4 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.25 | 1.8 | 22.0 | 3.08 | 3500 | 930 |
| 5 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.25 | 1.8 | 23.0 | 3.08 | 3500 | 1070 |
| 6 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.6 | 1.8 | 25.0 | 3.08 | 3500 | 1350 |
| 7 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.6 | 1.8 | 25.0 | 3.08 | 3500 | 1410 |
| 8 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.6 | 1.8 | 27.0 | 3.08 | 3500 | 1560 |
| 10 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.6 | 1.8 | 31.0 | 3.08 | 3500 | 1900 |
| 12 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.6 | 1.8 | 32.0 | 3.08 | 3500 | 2070 |
| 15 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.6 | 1.9 | 34.0 | 3.08 | 3500 | 2410 |
| 20 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 2.0 | 2.1 | 38.0 | 3.08 | 3500 | 3200 |

Bare Wire
OPGW
Insulated Wire
Grounding Wire
Instrument Cable
Control Cable
Power Cable
Reference
Installation

0.6/1KV CU/PVC/CTS/PVC

0.6/1KV CVV-S



| No. of Cores | Conductor | | | Thickness of Insulation | Thickness of Oversheath | Approx. Overall Diameter | Maximum Resistance of Conductor | Test Voltage | Approx. Weight |
|--------------|------------------------------|-----------------------------------|----------|-------------------------|-------------------------|--------------------------|---------------------------------|--------------|----------------|
| | Nominal Cross-Sectional Area | No. and Diameter of Wire or Shape | Diameter | | | | | | |
| | mm ² | No./mm | mm | mm | mm | mm | Ω /km | V | kg/km |
| 2 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 11.5 | 12.1 | 3500 | 154 |
| 3 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 12.0 | 12.1 | 3500 | 182 |
| 4 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 13.0 | 12.1 | 3500 | 216 |
| 5 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 14.0 | 12.1 | 3500 | 256 |
| 6 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 15.0 | 12.1 | 3500 | 294 |
| 7 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 15.0 | 12.1 | 3500 | 309 |
| 8 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 16.0 | 12.1 | 3500 | 341 |
| 10 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 18.5 | 12.1 | 3500 | 431 |
| 12 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 19.0 | 12.1 | 3500 | 484 |
| 15 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 20.0 | 12.1 | 3500 | 558 |
| 20 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 23.0 | 12.1 | 3500 | 703 |
| 30 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 27.0 | 12.1 | 3500 | 983 |
| 2 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 12.5 | 7.41 | 3500 | 186 |
| 3 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 13.0 | 7.41 | 3500 | 227 |
| 4 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 14.5 | 7.41 | 3500 | 271 |
| 5 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 15.0 | 7.41 | 3500 | 319 |
| 6 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 16.0 | 7.41 | 3500 | 370 |
| 7 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 16.0 | 7.41 | 3500 | 398 |
| 8 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 17.0 | 7.41 | 3500 | 452 |
| 10 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 20.0 | 7.41 | 3500 | 554 |
| 12 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 21.0 | 7.41 | 3500 | 630 |
| 15 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 21.0 | 7.41 | 3500 | 732 |

| No. of Cores | Conductor | | | Thickness of Insulation | Thickness of Oversheath | Approx. Overall Diameter | Maximum Resistance of Conductor | Test Voltage | Approx. Weight |
|--------------|------------------------------|-----------------------------------|----------|-------------------------|-------------------------|--------------------------|---------------------------------|--------------|----------------|
| | Nominal Cross-Sectional Area | No. and Diameter of Wire or Shape | Diameter | | | | | | |
| | mm ² | No./mm | mm | | | | | | |
| 20 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 25.0 | 7.41 | 3500 | 930 |
| 30 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 29.0 | 7.41 | 3500 | 1331 |
| 2 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 14.5 | 4.61 | 3500 | 257 |
| 3 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 15.0 | 4.61 | 3500 | 317 |
| 4 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 16.5 | 4.61 | 3500 | 386 |
| 5 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 17.5 | 4.61 | 3500 | 454 |
| 6 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 19.0 | 4.61 | 3500 | 532 |
| 7 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 19.0 | 4.61 | 3500 | 576 |
| 8 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 21.0 | 4.61 | 3500 | 657 |
| 10 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 24.0 | 4.61 | 3500 | 822 |
| 12 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 25.0 | 4.61 | 3500 | 927 |
| 15 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 27.0 | 4.61 | 3500 | 1120 |
| 20 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 30.0 | 4.61 | 3500 | 1439 |
| 30 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 36.0 | 4.61 | 3500 | 1992 |
| 2 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 15.5 | 3.08 | 3500 | 315 |
| 3 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 16.5 | 3.08 | 3500 | 395 |
| 4 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 17.5 | 3.08 | 3500 | 488 |
| 5 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 19.0 | 3.08 | 3500 | 556 |
| 6 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 22.0 | 3.08 | 3500 | 691 |
| 7 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 22.0 | 3.08 | 3500 | 752 |
| 8 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 23.0 | 3.08 | 3500 | 849 |
| 10 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 27.0 | 3.08 | 3500 | 1063 |
| 12 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 27.0 | 3.08 | 3500 | 1207 |
| 15 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 29.0 | 3.08 | 3500 | 1460 |
| 20 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 33.0 | 3.08 | 3500 | 1876 |

Bare Wire

OPGW

Insulated Wire

Grounding Wire

Instrument Cable

Control Cable

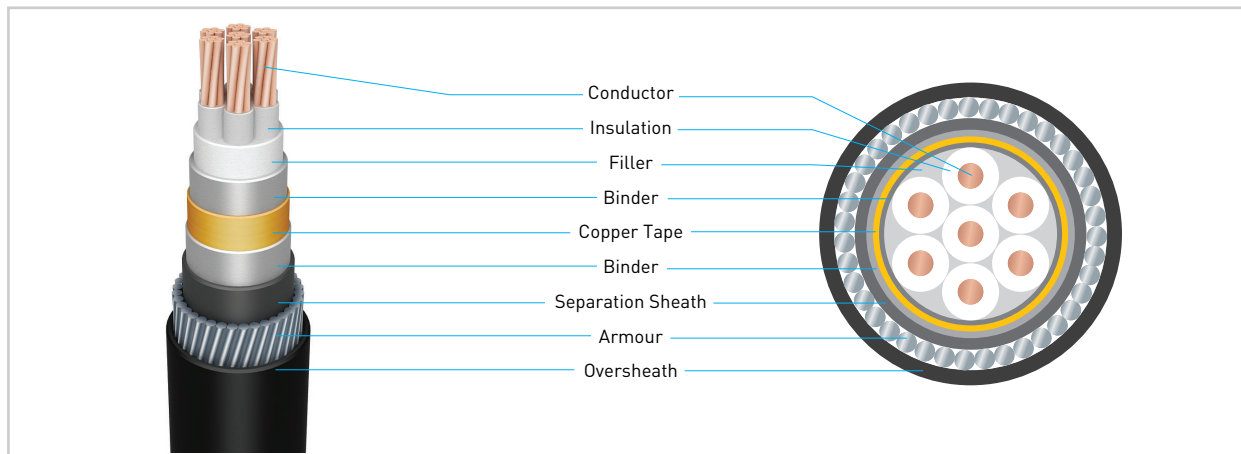
Power Cable

Reference

Installation

0.6/1KV CU/PVC/CTS/PVC/SWA/PVC

0.6/1KV CVVWAV-S



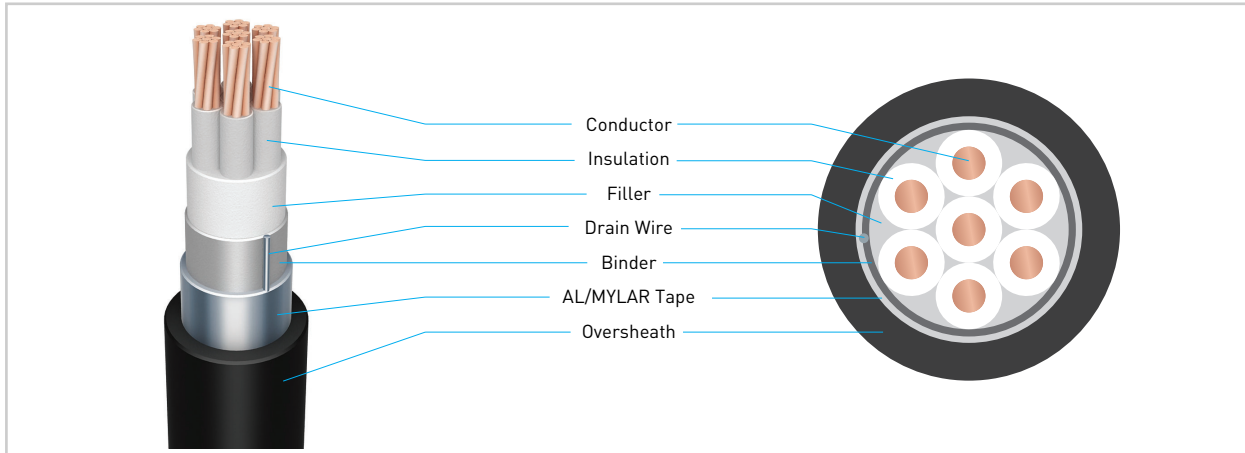
| No. of Cores | Conductor | | | Thickness of Insulation | Thickness of Inner Covering | Diameter of Armour | Thickness of Oversheath | Approx. Overall Diameter | Maximum Resistance of Conductor | Test Voltage | Approx. Weight |
|--------------|------------------------------|-----------------------------------|----------|-------------------------|-----------------------------|--------------------|-------------------------|--------------------------|---------------------------------|--------------|----------------|
| | Nominal Cross-Sectional Area | No. and Diameter of Wire or Shape | Diameter | | | | | | | | |
| | mm ² | No./mm | mm | mm | mm | mm | mm | mm | Ω /km | V | kg/km |
| 2 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 0.9 | 1.8 | 15.5 | 12.1 | 3500 | 420 |
| 3 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 0.9 | 1.8 | 16.0 | 12.1 | 3500 | 430 |
| 4 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.25 | 1.8 | 17.5 | 12.1 | 3500 | 580 |
| 5 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.25 | 1.8 | 18.5 | 12.1 | 3500 | 640 |
| 6 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.25 | 1.8 | 19.5 | 12.1 | 3500 | 700 |
| 7 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.25 | 1.8 | 19.5 | 12.1 | 3500 | 720 |
| 8 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.25 | 1.8 | 21.0 | 12.1 | 3500 | 780 |
| 10 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.25 | 1.8 | 23.0 | 12.1 | 3500 | 930 |
| 12 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.6 | 1.8 | 24.0 | 12.1 | 3500 | 1140 |
| 15 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.6 | 1.8 | 25.0 | 12.1 | 3500 | 1250 |
| 20 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.6 | 1.8 | 27.0 | 12.1 | 3500 | 1460 |
| 30 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.6 | 1.9 | 32.0 | 12.1 | 3500 | 1880 |
| 2 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.2 | 0.9 | 1.8 | 16.0 | 7.41 | 3500 | 460 |
| 3 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.2 | 1.25 | 1.8 | 17.5 | 7.41 | 3500 | 590 |
| 4 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.2 | 1.25 | 1.8 | 18.5 | 7.41 | 3500 | 660 |
| 5 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.2 | 1.25 | 1.8 | 19.5 | 7.41 | 3500 | 740 |
| 6 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.2 | 1.25 | 1.8 | 21.0 | 7.41 | 3500 | 810 |
| 7 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.2 | 1.25 | 1.8 | 21.0 | 7.41 | 3500 | 840 |
| 8 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.2 | 1.6 | 1.8 | 23.0 | 7.41 | 3500 | 1050 |
| 10 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.2 | 1.6 | 1.8 | 25.0 | 7.41 | 3500 | 1240 |
| 12 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.2 | 1.6 | 1.8 | 26.0 | 7.41 | 3500 | 1340 |
| 15 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.2 | 1.6 | 1.8 | 27.0 | 7.41 | 3500 | 1500 |

| No. of Cores | Conductor | | | Thickness of Insulation | Thickness of Inner Covering | Diameter of Armour | Thickness of Oversheath | Approx. Overall Diameter | Maximum Resistance of Conductor | Test Voltage | Approx. Weight |
|--------------|------------------------------|-----------------------------------|----------|-------------------------|-----------------------------|--------------------|-------------------------|--------------------------|---------------------------------|--------------|----------------|
| | Nominal Cross-Sectional Area | No. and Diameter of Wire or Shape | Diameter | | | | | | | | |
| | mm ² | No./mm | mm | | | | | | | | |
| 20 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.2 | 1.6 | 1.8 | 30.0 | 7.41 | 3500 | 1760 |
| 30 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.2 | 2.0 | 2.0 | 35.0 | 7.41 | 3500 | 2570 |
| 2 | 4 | 7/0.85 | 2.55 | 1.0 | 1.2 | 1.25 | 1.8 | 19.0 | 4.61 | 3500 | 680 |
| 3 | 4 | 7/0.85 | 2.55 | 1.0 | 1.2 | 1.25 | 1.8 | 19.5 | 4.61 | 3500 | 740 |
| 4 | 4 | 7/0.85 | 2.55 | 1.0 | 1.2 | 1.25 | 1.8 | 21.0 | 4.61 | 3500 | 840 |
| 5 | 4 | 7/0.85 | 2.55 | 1.0 | 1.2 | 1.25 | 1.8 | 22.0 | 4.61 | 3500 | 1070 |
| 6 | 4 | 7/0.85 | 2.55 | 1.0 | 1.2 | 1.6 | 1.8 | 24.0 | 4.61 | 3500 | 1190 |
| 7 | 4 | 7/0.85 | 2.55 | 1.0 | 1.2 | 1.6 | 1.8 | 24.0 | 4.61 | 3500 | 1230 |
| 8 | 4 | 7/0.85 | 2.55 | 1.0 | 1.2 | 1.6 | 1.8 | 26.0 | 4.61 | 3500 | 1360 |
| 10 | 4 | 7/0.85 | 2.55 | 1.0 | 1.2 | 1.6 | 1.8 | 29.0 | 4.61 | 3500 | 1620 |
| 12 | 4 | 7/0.85 | 2.55 | 1.0 | 1.2 | 1.6 | 1.8 | 30.0 | 4.61 | 3500 | 1760 |
| 15 | 4 | 7/0.85 | 2.55 | 1.0 | 1.2 | 1.6 | 1.9 | 32.0 | 4.61 | 3500 | 2040 |
| 20 | 4 | 7/0.85 | 2.55 | 1.0 | 1.2 | 2.0 | 2.0 | 36.0 | 4.61 | 3500 | 2690 |
| 30 | 4 | 7/0.85 | 2.55 | 1.0 | 1.2 | 2.0 | 2.2 | 42.0 | 4.61 | 3500 | 3580 |
| 2 | 6 | 7/1.04 | 3.12 | 1.0 | 1.2 | 1.25 | 1.8 | 20.0 | 3.08 | 3500 | 770 |
| 3 | 6 | 7/1.04 | 3.12 | 1.0 | 1.2 | 1.25 | 1.8 | 21.0 | 3.08 | 3500 | 850 |
| 4 | 6 | 7/1.04 | 3.12 | 1.0 | 1.2 | 1.25 | 1.8 | 22.0 | 3.08 | 3500 | 970 |
| 5 | 6 | 7/1.04 | 3.12 | 1.0 | 1.2 | 1.6 | 1.8 | 25.0 | 3.08 | 3500 | 1260 |
| 6 | 6 | 7/1.04 | 3.12 | 1.0 | 1.2 | 1.6 | 1.8 | 26.0 | 3.08 | 3500 | 1410 |
| 7 | 6 | 7/1.04 | 3.12 | 1.0 | 1.2 | 1.6 | 1.8 | 26.0 | 3.08 | 3500 | 1480 |
| 8 | 6 | 7/1.04 | 3.12 | 1.0 | 1.2 | 1.6 | 1.8 | 28.0 | 3.08 | 3500 | 1630 |
| 10 | 6 | 7/1.04 | 3.12 | 1.0 | 1.2 | 1.6 | 1.9 | 32.0 | 3.08 | 3500 | 1960 |
| 12 | 6 | 7/1.04 | 3.12 | 1.0 | 1.2 | 1.6 | 1.9 | 33.0 | 3.08 | 3500 | 2160 |
| 15 | 6 | 7/1.04 | 3.12 | 1.0 | 1.2 | 1.6 | 2.0 | 35.0 | 3.08 | 3500 | 2490 |
| 20 | 6 | 7/1.04 | 3.12 | 1.0 | 1.2 | 2.0 | 2.1 | 39.0 | 3.08 | 3500 | 3290 |

Bare Wire
OPGW
Insulated Wire
Grounding Wire
Instrument Cable
Control Cable
Power Cable
Reference
Installation

0.6/1KV CU/PVC/AL-MYLAR/PVC

0.6/1KV CVV-AMS



| No. of Cores | Conductor | | | Thickness of Insulation | Thickness of Oversheath | Approx. Overall Diameter | Maximum Resistance of Conductor | Test Voltage | Approx. Weight |
|--------------|------------------------------|-----------------------------------|----------|-------------------------|-------------------------|--------------------------|---------------------------------|--------------|----------------|
| | Nominal Cross-Sectional Area | No. and Diameter of Wire or Shape | Diameter | | | | | | |
| | mm ² | No./mm | mm | mm | mm | mm | Ω /km | V | kg/km |
| 2 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 11.0 | 12.1 | 3500 | 138 |
| 3 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 11.5 | 12.1 | 3500 | 166 |
| 4 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 12.5 | 12.1 | 3500 | 198 |
| 5 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 13.5 | 12.1 | 3500 | 235 |
| 6 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 14.5 | 12.1 | 3500 | 271 |
| 7 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 14.5 | 12.1 | 3500 | 286 |
| 8 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 15.5 | 12.1 | 3500 | 315 |
| 10 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 18.5 | 12.1 | 3500 | 451 |
| 12 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 18.0 | 12.1 | 3500 | 399 |
| 15 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 19.5 | 12.1 | 3500 | 522 |
| 20 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 22.0 | 12.1 | 3500 | 662 |
| 30 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 26.0 | 12.1 | 3500 | 932 |
| 2 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 12.0 | 7.41 | 3500 | 169 |
| 3 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 12.5 | 7.41 | 3500 | 209 |
| 4 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 13.5 | 7.41 | 3500 | 250 |
| 5 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 14.5 | 7.41 | 3500 | 296 |
| 6 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 15.5 | 7.41 | 3500 | 344 |
| 7 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 15.5 | 7.41 | 3500 | 371 |
| 8 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 16.5 | 7.41 | 3500 | 423 |
| 10 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 19.5 | 7.41 | 3500 | 518 |
| 12 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 20.0 | 7.41 | 3500 | 593 |
| 15 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 22.0 | 7.41 | 3500 | 691 |

| No. of Cores | Conductor | | | Thickness of Insulation | Thickness of Oversheath | Approx. Overall Diameter | Maximum Resistance of Conductor | Test Voltage | Approx. Weight |
|--------------|------------------------------|-----------------------------------|----------|-------------------------|-------------------------|--------------------------|---------------------------------|--------------|----------------|
| | Nominal Cross-Sectional Area | No. and Diameter of Wire or Shape | Diameter | | | | | | |
| | mm ² | No./mm | mm | | | | | | |
| 20 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 24.0 | 7.41 | 3500 | 872 |
| 30 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 28.0 | 7.41 | 3500 | 1259 |
| 2 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 14.0 | 4.61 | 3500 | 234 |
| 3 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 14.5 | 4.61 | 3500 | 293 |
| 4 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 16.0 | 4.61 | 3500 | 358 |
| 5 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 17.0 | 4.61 | 3500 | 424 |
| 6 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 18.5 | 4.61 | 3500 | 498 |
| 7 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 18.5 | 4.61 | 3500 | 542 |
| 8 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 20.0 | 4.61 | 3500 | 619 |
| 10 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 23.0 | 4.61 | 3500 | 776 |
| 12 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 24.0 | 4.61 | 3500 | 879 |
| 15 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 26.0 | 4.61 | 3500 | 1415 |
| 20 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 29.0 | 4.61 | 3500 | 1366 |
| 30 | 4 | 7/0.85 | 2.55 | 1.0 | 1.8 | 35.0 | 4.61 | 3500 | 1955 |
| 2 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 15.0 | 3.08 | 3500 | 290 |
| 3 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 16.0 | 3.08 | 3500 | 368 |
| 4 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 17.0 | 3.08 | 3500 | 457 |
| 5 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 18.5 | 3.08 | 3500 | 552 |
| 6 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 21.0 | 3.08 | 3500 | 652 |
| 7 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 21.0 | 3.08 | 3500 | 714 |
| 8 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 22.0 | 3.08 | 3500 | 807 |
| 10 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 26.0 | 3.08 | 3500 | 1011 |
| 12 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 27.0 | 3.08 | 3500 | 1167 |
| 15 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 29.0 | 3.08 | 3500 | 1612 |
| 20 | 6 | 7/1.04 | 3.12 | 1.0 | 1.8 | 32.0 | 3.08 | 3500 | 1827 |

Bare Wire

OPGW

Insulated Wire

Grounding Wire

Instrument Cable

Control Cable

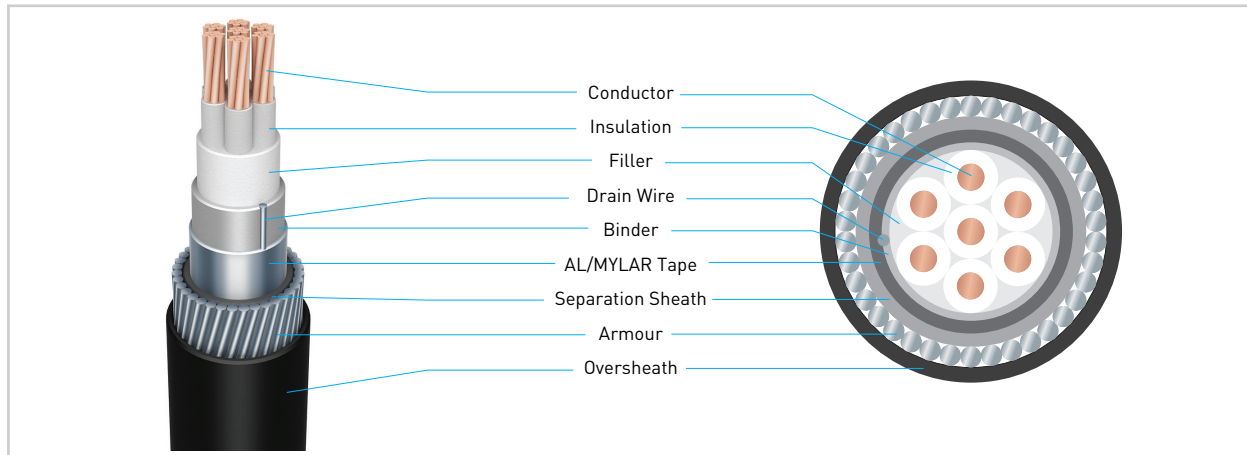
Power Cable

Reference

Installation

0.6/1KV CU/PVC/AL-MYLAR/PVC/SWA/PVC

0.6/1KV CVVWAV-AMS



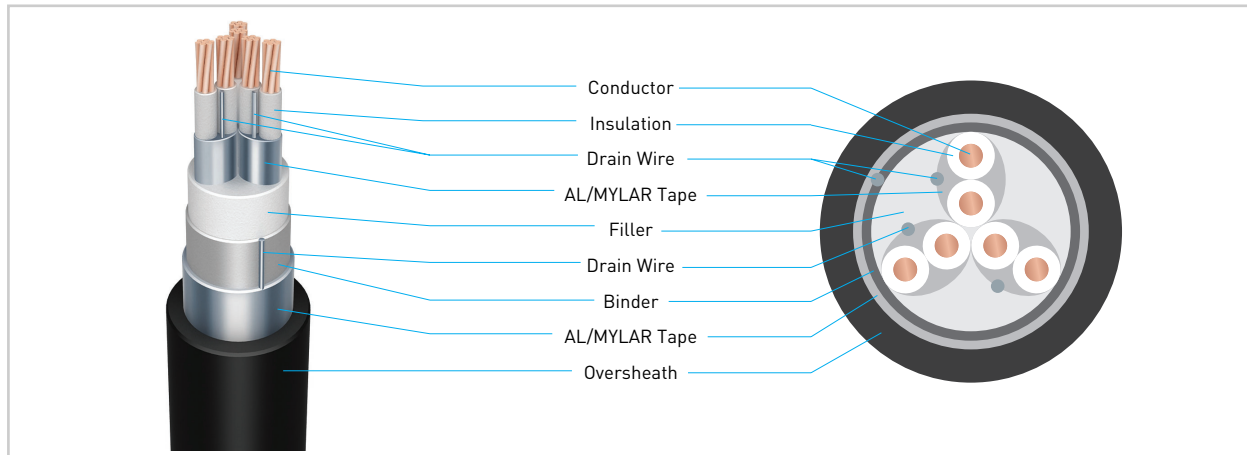
| No. of Cores | Conductor | | | Thickness of Insulation | Thickness of Inner Covering | Diameter of Armour | Thickness of Oversheath | Approx. Overall Diameter | Maximum Resistance of Conductor | Test Voltage | Approx. Weight |
|--------------|------------------------------|-----------------------------------|----------|-------------------------|-----------------------------|--------------------|-------------------------|--------------------------|---------------------------------|--------------|----------------|
| | Nominal Cross-Sectional Area | No. and Diameter of Wire or Shape | Diameter | | | | | | | | |
| | mm ² | No./mm | mm | mm | mm | mm | mm | mm | Ω /km | V | kg/km |
| 2 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 0.9 | 1.8 | 15.0 | 12.1 | 3500 | 390 |
| 3 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 0.9 | 1.8 | 15.5 | 12.1 | 3500 | 420 |
| 4 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.25 | 1.8 | 17.0 | 12.1 | 3500 | 560 |
| 5 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.25 | 1.8 | 18.0 | 12.1 | 3500 | 620 |
| 6 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.25 | 1.8 | 19.0 | 12.1 | 3500 | 680 |
| 7 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.25 | 1.8 | 19.0 | 12.1 | 3500 | 700 |
| 8 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.25 | 1.8 | 20.0 | 12.1 | 3500 | 770 |
| 10 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.25 | 1.8 | 22.0 | 12.1 | 3500 | 910 |
| 12 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.6 | 1.8 | 24.0 | 12.1 | 3500 | 1110 |
| 15 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.6 | 1.8 | 25.0 | 12.1 | 3500 | 1220 |
| 20 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.6 | 1.8 | 27.0 | 12.1 | 3500 | 1440 |
| 30 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.6 | 1.9 | 31.0 | 12.1 | 3500 | 1860 |
| 2 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.2 | 0.9 | 1.8 | 16.0 | 7.41 | 3500 | 440 |
| 3 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.2 | 1.25 | 1.8 | 17.0 | 7.41 | 3500 | 570 |
| 4 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.2 | 1.25 | 1.8 | 18.0 | 7.41 | 3500 | 640 |
| 5 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.2 | 1.25 | 1.8 | 19.0 | 7.41 | 3500 | 720 |
| 6 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.2 | 1.25 | 1.8 | 20.0 | 7.41 | 3500 | 790 |
| 7 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.2 | 1.25 | 1.8 | 20.0 | 7.41 | 3500 | 820 |
| 8 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.2 | 1.25 | 1.8 | 21.0 | 7.41 | 3500 | 900 |
| 10 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.2 | 1.6 | 1.8 | 25.0 | 7.41 | 3500 | 1220 |
| 12 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.2 | 1.6 | 1.8 | 26.0 | 7.41 | 3500 | 1310 |
| 15 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.2 | 1.6 | 1.8 | 27.0 | 7.41 | 3500 | 1470 |

| No. of Cores | Conductor | | | Thickness of Insulation | Thickness of Inner Covering | Diameter of Armour | Thickness of Oversheath | Approx. Overall Diameter | Maximum Resistance of Conductor | Test Voltage | Approx. Weight |
|--------------|------------------------------|-----------------------------------|----------|-------------------------|-----------------------------|--------------------|-------------------------|--------------------------|---------------------------------|--------------|----------------|
| | Nominal Cross-Sectional Area | No. and Diameter of Wire or Shape | Diameter | | | | | | | | |
| | mm ² | No./mm | mm | | | | | | | | |
| 20 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.2 | 1.6 | 1.8 | 29.0 | 7.41 | 3500 | 1740 |
| 30 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.2 | 1.6 | 2.0 | 34.0 | 7.41 | 3500 | 2300 |
| 2 | 4 | 7/0.85 | 2.55 | 1.0 | 1.2 | 1.25 | 1.8 | 18.5 | 4.61 | 3500 | 640 |
| 3 | 4 | 7/0.85 | 2.55 | 1.0 | 1.2 | 1.25 | 1.8 | 19.0 | 4.61 | 3500 | 710 |
| 4 | 4 | 7/0.85 | 2.55 | 1.0 | 1.2 | 1.25 | 1.8 | 21.0 | 4.61 | 3500 | 810 |
| 5 | 4 | 7/0.85 | 2.55 | 1.0 | 1.2 | 1.6 | 1.8 | 23.0 | 4.61 | 3500 | 1050 |
| 6 | 4 | 7/0.85 | 2.55 | 1.0 | 1.2 | 1.6 | 1.8 | 24.0 | 4.61 | 3500 | 1160 |
| 7 | 4 | 7/0.85 | 2.55 | 1.0 | 1.2 | 1.6 | 1.8 | 24.0 | 4.61 | 3500 | 1210 |
| 8 | 4 | 7/0.85 | 2.55 | 1.0 | 1.2 | 1.6 | 1.8 | 25.0 | 4.61 | 3500 | 1320 |
| 10 | 4 | 7/0.85 | 2.55 | 1.0 | 1.2 | 1.6 | 1.8 | 29.0 | 4.61 | 3500 | 1590 |
| 12 | 4 | 7/0.85 | 2.55 | 1.0 | 1.2 | 1.6 | 1.8 | 30.0 | 4.61 | 3500 | 1730 |
| 15 | 4 | 7/0.85 | 2.55 | 1.0 | 1.2 | 1.6 | 1.9 | 32.0 | 4.61 | 3500 | 1980 |
| 20 | 4 | 7/0.85 | 2.55 | 1.0 | 1.2 | 2.0 | 2.0 | 35.0 | 4.61 | 3500 | 2630 |
| 30 | 4 | 7/0.85 | 2.55 | 1.0 | 1.2 | 2.0 | 2.2 | 42.0 | 4.61 | 3500 | 3520 |
| 2 | 6 | 7/1.04 | 3.12 | 1.0 | 1.2 | 1.25 | 1.8 | 19.5 | 3.08 | 3500 | 720 |
| 3 | 6 | 7/1.04 | 3.12 | 1.0 | 1.2 | 1.25 | 1.8 | 21.0 | 3.08 | 3500 | 820 |
| 4 | 6 | 7/1.04 | 3.12 | 1.0 | 1.2 | 1.25 | 1.8 | 22.0 | 3.08 | 3500 | 950 |
| 5 | 6 | 7/1.04 | 3.12 | 1.0 | 1.2 | 1.6 | 1.8 | 24.0 | 3.08 | 3500 | 1220 |
| 6 | 6 | 7/1.04 | 3.12 | 1.0 | 1.2 | 1.6 | 1.8 | 26.0 | 3.08 | 3500 | 1370 |
| 7 | 6 | 7/1.04 | 3.12 | 1.0 | 1.2 | 1.6 | 1.8 | 26.0 | 3.08 | 3500 | 1440 |
| 8 | 6 | 7/1.04 | 3.12 | 1.0 | 1.2 | 1.6 | 1.8 | 27.0 | 3.08 | 3500 | 1590 |
| 10 | 6 | 7/1.04 | 3.12 | 1.0 | 1.2 | 1.6 | 1.9 | 31.0 | 3.08 | 3500 | 1910 |
| 12 | 6 | 7/1.04 | 3.12 | 1.0 | 1.2 | 1.6 | 1.9 | 32.0 | 3.08 | 3500 | 2110 |
| 15 | 6 | 7/1.04 | 3.12 | 1.0 | 1.2 | 1.6 | 2.0 | 34.0 | 3.08 | 3500 | 2430 |
| 20 | 6 | 7/1.04 | 3.12 | 1.0 | 1.2 | 2.0 | 2.1 | 39.0 | 3.08 | 3500 | 3240 |

Bare Wire
OPGW
Insulated Wire
Grounding Wire
Instrument Cable
Control Cable
Power Cable
Reference
Installation

0.6/1KV CU/PVC/AL-MYLAR/AL-MYLAR/PVC

0.6/1KV CVV-I/C AMS



| No. of Pairs | Conductor | | | Thickness of Insulation | Thickness of Oversheath | Approx. Overall Diameter | Maximum Resistance of Conductor | Test Voltage | Approx. Weight |
|--------------|------------------------------|-----------------------------------|----------|-------------------------|-------------------------|--------------------------|---------------------------------|--------------|----------------|
| | Nominal Cross-Sectional Area | No. and Diameter of Wire or Shape | Diameter | | | | | | |
| | mm ² | No./mm | mm | mm | mm | mm | Ω /km | V | kg/km |
| 2P | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 16 | 12.1 | 3500 | 260 |
| 3P | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 18 | 12.1 | 3500 | 346 |
| 4P | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 20 | 12.1 | 3500 | 418 |
| 5P | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 22 | 12.1 | 3500 | 496 |
| 10P | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.9 | 28 | 12.1 | 3500 | 890 |
| 15P | 1.5 | 7/0.53 | 1.59 | 0.8 | 2.0 | 34 | 12.1 | 3500 | 1229 |
| 20P | 1.5 | 7/0.53 | 1.59 | 0.8 | 2.2 | 39 | 12.1 | 3500 | 1590 |
| 2P | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 17 | 7.41 | 3500 | 319 |
| 3P | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 20 | 7.41 | 3500 | 427 |
| 4P | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 22 | 7.41 | 3500 | 524 |
| 5P | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 24 | 7.41 | 3500 | 627 |
| 10P | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.9 | 31 | 7.41 | 3500 | 1141 |
| 15P | 2.5 | 7/0.67 | 2.01 | 0.8 | 2.2 | 38 | 7.41 | 3500 | 1622 |
| 20P | 2.5 | 7/0.67 | 2.01 | 0.8 | 2.4 | 43 | 7.41 | 3500 | 2142 |

| No. of Triads | Conductor | | | Thickness of Insulation | Thickness of Oversheath | Approx. Overall Diameter | Maximum Resistance of Conductor | Test Voltage | Approx. Weight |
|---------------|------------------------------|-----------------------------------|----------|-------------------------|-------------------------|--------------------------|---------------------------------|--------------|----------------|
| | Nominal Cross-Sectional Area | No. and Diameter of Wire or Shape | Diameter | | | | | | |
| | mm ² | No./mm | mm | | | | | | |
| 2T | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 19 | 12.1 | 3500 | 260 |
| 3T | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 20 | 12.1 | 3500 | 346 |
| 4T | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 22 | 12.1 | 3500 | 418 |
| 5T | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.8 | 24 | 12.1 | 3500 | 496 |
| 10T | 1.5 | 7/0.53 | 1.59 | 0.8 | 2.0 | 34 | 12.1 | 3500 | 890 |
| 15T | 1.5 | 7/0.53 | 1.59 | 0.8 | 2.2 | 38 | 12.1 | 3500 | 1229 |
| 2T | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 20 | 7.41 | 3500 | 319 |
| 3T | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 21 | 7.41 | 3500 | 427 |
| 4T | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 23 | 7.41 | 3500 | 524 |
| 5T | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.8 | 25 | 7.41 | 3500 | 627 |
| 10T | 2.5 | 7/0.67 | 2.01 | 0.8 | 2.1 | 35 | 7.41 | 3500 | 1141 |

Bare Wire

OPGW

Insulated Wire

Grounding Wire

Instrument Cable

Control Cable

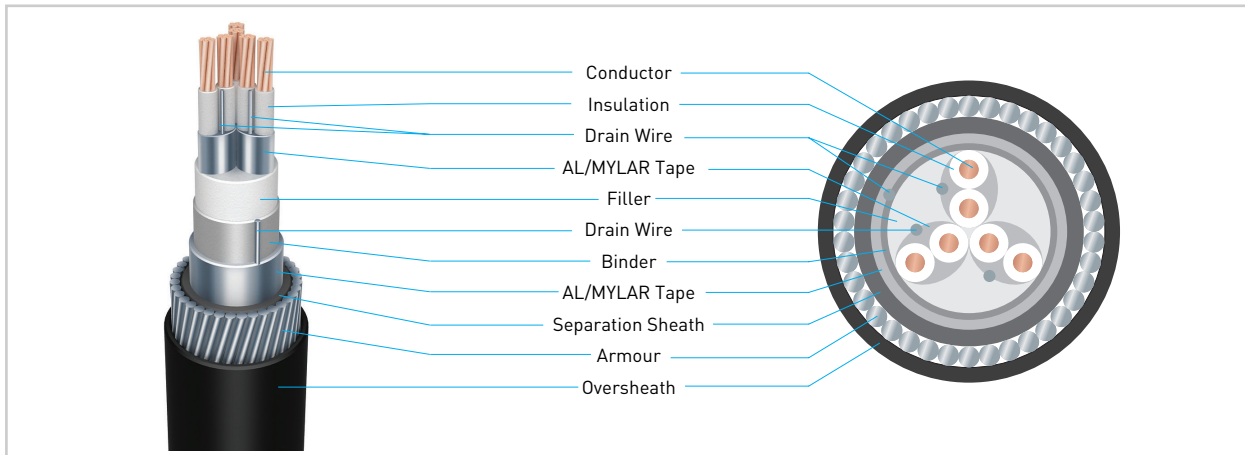
Power Cable

Reference

Installation

0.6/1KV CU/PVC/AL-MYLAR/AL-MYLAR/PVC/SWA/PVC

0.6/1KV CVVWAV-I/C AMS



| No. of Pairs | Conductor | | | Thickness of Insulation | Thickness of Inner Covering | Diameter of Armour | Thickness of Oversheath | Approx. Overall Diameter | Maximum Resistance of Conductor | Test Voltage | Approx. Weight |
|--------------|------------------------------|-----------------------------------|----------|-------------------------|-----------------------------|--------------------|-------------------------|--------------------------|---------------------------------|--------------|----------------|
| | Nominal Cross-Sectional Area | No. and Diameter of Wire or Shape | Diameter | | | | | | | | |
| | mm ² | No./mm | mm | mm | mm | mm | mm | mm | Ω /km | V | kg/km |
| 2P | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.25 | 1.8 | 20 | 12.1 | 3500 | 720 |
| 3P | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.6 | 1.8 | 24 | 12.1 | 3500 | 1010 |
| 4P | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.6 | 1.8 | 25 | 12.1 | 3500 | 1140 |
| 5P | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.6 | 1.8 | 27 | 12.1 | 3500 | 1280 |
| 6P | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.6 | 1.9 | 29 | 12.1 | 3500 | 1420 |
| 7P | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.6 | 1.9 | 29 | 12.1 | 3500 | 1570 |
| 8P | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.6 | 2.0 | 31 | 12.1 | 3500 | 1650 |
| 10P | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 2.0 | 2.1 | 35 | 12.1 | 3500 | 2150 |
| 12P | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 2.0 | 2.1 | 37 | 12.1 | 3500 | 2400 |
| 15P | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 2.0 | 2.3 | 41 | 12.1 | 3500 | 2750 |
| 20P | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 2.0 | 2.4 | 46 | 12.1 | 3500 | 3710 |

| No. of Triads | Conductor | | | Thickness of Insulation | Thickness of Inner Covering | Diameter of Armour | Thickness of Oversheath | Approx. Overall Diameter | Maximum Resistance of Conductor | Test Voltage | Approx. Weight |
|---------------|------------------------------|-----------------------------------|----------|-------------------------|-----------------------------|--------------------|-------------------------|--------------------------|---------------------------------|--------------|----------------|
| | Nominal Cross-Sectional Area | No. and Diameter of Wire or Shape | Diameter | | | | | | | | |
| | mm ² | No./mm | mm | | | | | | | | |
| 2T | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.6 | 1.8 | 24 | 12.1 | 3500 | 1050 |
| 3T | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.6 | 1.8 | 26 | 12.1 | 3500 | 1170 |
| 4T | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.6 | 1.8 | 28 | 12.1 | 3500 | 1340 |
| 5T | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.6 | 1.9 | 30 | 12.1 | 3500 | 1540 |
| 6T | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.6 | 2.0 | 32 | 12.1 | 3500 | 1740 |
| 7T | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.6 | 2.0 | 32 | 12.1 | 3500 | 1790 |
| 8T | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 2.0 | 2.1 | 35 | 12.1 | 3500 | 2250 |
| 10T | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 2.0 | 2.3 | 41 | 12.1 | 3500 | 2720 |
| 12T | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 2.0 | 2.3 | 42 | 12.1 | 3500 | 2950 |
| 15T | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 2.5 | 2.4 | 46 | 12.1 | 3500 | 3790 |
| 20T | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 2.5 | 2.6 | 51 | 12.1 | 3500 | 4590 |

Bare Wire

OPGW

Insulated Wire

Grounding Wire

Instrument Cable

Control Cable

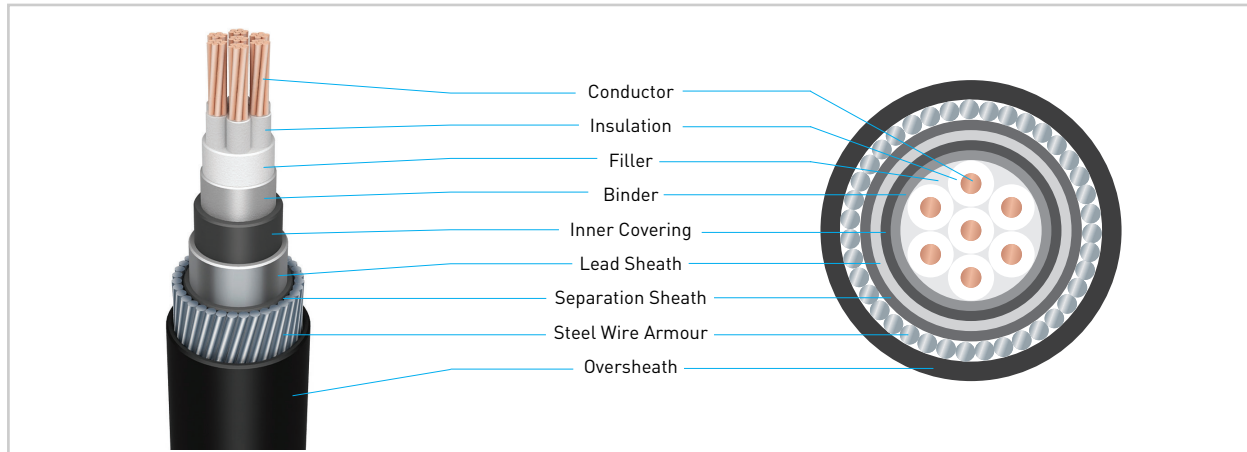
Power Cable

Reference

Installation

0.6/1KV CU/PVC/PVC/LEAD/PVC/SWA/PVC

0.6/1KV CVLVWAV



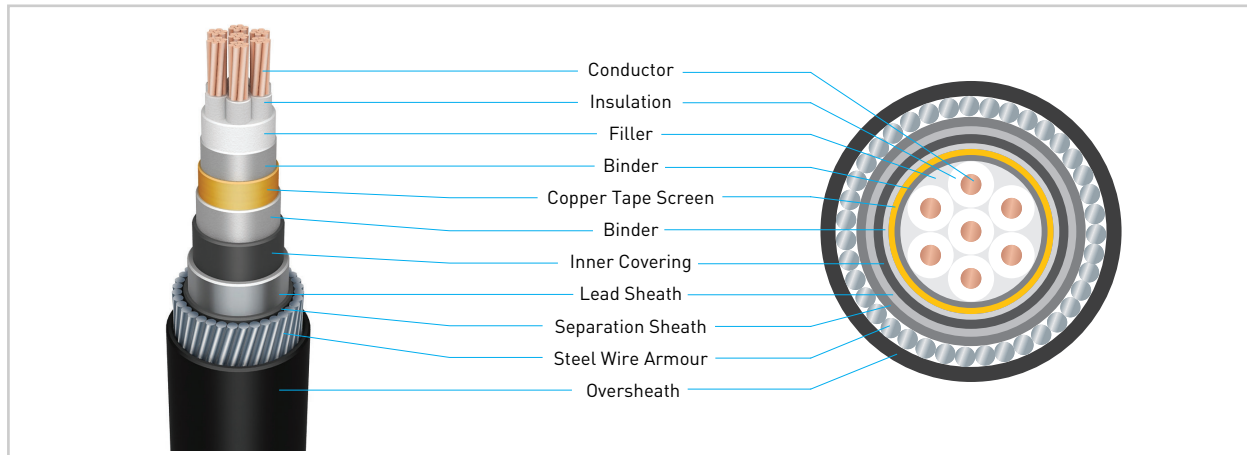
| No. of Cores | Conductor | | | Thickness of insulation | Thickness of inner covering | Thickness of Lead Sheath | Thickness of Separation Sheath | Diameter of Armour | Thickness of Oversheath | Approx. Overall Diameter | Approx. Weight |
|--------------|------------------------------|---------------------------|----------|-------------------------|-----------------------------|--------------------------|--------------------------------|--------------------|-------------------------|--------------------------|----------------|
| | Nominal Cross-Sectional Area | No. and diameter of wires | Diameter | | | | | | | | |
| C | mm ² | No./mm | mm | mm | mm | mm | mm | mm | mm | mm | kg/km |
| 2 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 20 | 1080 |
| 3 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 21 | 1140 |
| 4 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 22 | 1230 |
| 5 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 23 | 1340 |
| 6 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 24 | 1460 |
| 7 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 24 | 1480 |
| 8 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 25 | 1710 |
| 10 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 27 | 1970 |
| 12 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 28 | 2060 |
| 15 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 29 | 2250 |
| 20 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.9 | 32 | 2570 |
| 30 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.3 | 1.1 | 1.6 | 2.0 | 36 | 3310 |
| 2 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 21 | 1170 |
| 3 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 22 | 1250 |
| 4 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 23 | 1350 |
| 5 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 24 | 1490 |
| 6 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 25 | 1760 |
| 7 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 25 | 1780 |
| 8 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 27 | 1910 |
| 10 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 29 | 2230 |
| 12 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 30 | 2350 |
| 15 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.9 | 31 | 2600 |

| No. of Cores | Conductor | | | Thickness of Insulation | Thickness of inner covering | Thickness of Lead Sheath | Thickness of Separation Sheath | Diameter of Armour | Thickness of Oversheath | Approx. Overall Diameter | Approx. Weight |
|--------------|------------------------------|---------------------------|----------|-------------------------|-----------------------------|--------------------------|--------------------------------|--------------------|-------------------------|--------------------------|----------------|
| | Nominal Cross-Sectional Area | No. and Diameter of Wires | Diameter | | | | | | | | |
| C | mm ² | No./mm | mm | mm | mm | mm | mm | mm | mm | mm | kg/km |
| 20 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.3 | 1.0 | 1.6 | 1.9 | 34 | 3080 |
| 30 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.4 | 1.1 | 2.0 | 2.1 | 40 | 4270 |
| 2 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 23 | 1380 |
| 3 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 24 | 1490 |
| 4 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 26 | 1800 |
| 5 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 27 | 1970 |
| 6 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 28 | 2160 |
| 7 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 28 | 2210 |
| 8 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 30 | 2380 |
| 10 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.9 | 33 | 2800 |
| 12 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.3 | 1.0 | 1.6 | 1.9 | 34 | 3080 |
| 15 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.3 | 1.1 | 2.0 | 2.0 | 37 | 3700 |
| 20 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.4 | 1.1 | 2.0 | 2.1 | 41 | 4420 |
| 30 | 4 | 7/0.85 | 2.55 | 1.0 | 1.2 | 1.6 | 1.2 | 2.0 | 2.3 | 48 | 6000 |
| 2 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 24 | 1520 |
| 3 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 26 | 1810 |
| 4 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 27 | 2000 |
| 5 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 29 | 2220 |
| 6 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 30 | 2460 |
| 7 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 30 | 2520 |
| 8 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.9 | 31 | 2750 |
| 10 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.3 | 1.1 | 1.6 | 2.0 | 36 | 3370 |
| 12 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.3 | 1.1 | 2.0 | 2.0 | 38 | 3850 |
| 15 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.4 | 1.1 | 2.0 | 2.1 | 40 | 4450 |
| 20 | 6 | 7/1.04 | 3.12 | 1.0 | 1.2 | 1.5 | 1.2 | 2.0 | 2.3 | 45 | 5450 |

Bare Wire
OPGW
Insulated Wire
Grounding Wire
Instrument Cable
Control Cable
Power Cable
Reference
Installation

0.6/1KV CU/PVC/CTS/PVC/LEAD/PVC/SWA/PVC

0.6/1KV CVLVWAV-S



| No. of Cores | Conductor | | | Thickness of insulation | Thickness of inner covering | Thickness of Lead Sheath | Thickness of Separation Sheath | Diameter of Armour | Thickness of Oversheath | Approx. Overall Diameter | Approx. Weight |
|--------------|------------------------------|---------------------------|----------|-------------------------|-----------------------------|--------------------------|--------------------------------|--------------------|-------------------------|--------------------------|----------------|
| | Nominal Cross-Sectional Area | No. and diameter of wires | Diameter | | | | | | | | |
| C | mm ² | No./mm | mm | mm | mm | mm | mm | mm | mm | mm | kg/km |
| 2 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 20 | 1080 |
| 3 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 21 | 1140 |
| 4 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 22 | 1230 |
| 5 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 23 | 1340 |
| 6 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 24 | 1460 |
| 7 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 24 | 1480 |
| 8 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 26 | 1710 |
| 10 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 27 | 1970 |
| 12 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 28 | 2060 |
| 15 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 29 | 2250 |
| 20 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.9 | 32 | 2570 |
| 30 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.3 | 1.1 | 2.0 | 2.0 | 37 | 3310 |
| 2 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 21 | 1170 |
| 3 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 22 | 1250 |
| 4 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 23 | 1350 |
| 5 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 24 | 1490 |
| 6 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 26 | 1760 |
| 7 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 26 | 1780 |
| 8 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 27 | 1910 |
| 10 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 29 | 2230 |
| 12 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 30 | 2350 |
| 15 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.9 | 31 | 2600 |

| No. of Cores | Conductor | | | Thickness of Insulation | Thickness of inner covering | Thickness of Lead Sheath | Thickness of Separation Sheath | Diameter of Armour | Thickness of Oversheath | Approx. Overall Diameter | Approx. Weight |
|--------------|------------------------------|---------------------------|----------|-------------------------|-----------------------------|--------------------------|--------------------------------|--------------------|-------------------------|--------------------------|----------------|
| | Nominal Cross-Sectional Area | No. and Diameter of Wires | Diameter | | | | | | | | |
| C | mm ² | No./mm | mm | mm | mm | mm | mm | mm | mm | mm | kg/km |
| 20 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.3 | 1.0 | 1.6 | 2.0 | 34 | 3080 |
| 30 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.4 | 1.1 | 2.0 | 2.1 | 41 | 4270 |
| 2 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 23 | 1380 |
| 3 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 24 | 1490 |
| 4 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 26 | 1800 |
| 5 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 27 | 1970 |
| 6 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 29 | 2160 |
| 7 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 29 | 2210 |
| 8 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 30 | 2380 |
| 10 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.3 | 1.0 | 1.6 | 1.9 | 34 | 2800 |
| 12 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.3 | 1.0 | 1.6 | 1.9 | 35 | 3080 |
| 15 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.3 | 1.1 | 2.0 | 2.1 | 38 | 3700 |
| 20 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.4 | 1.1 | 2.0 | 2.2 | 42 | 4420 |
| 30 | 4 | 7/0.85 | 2.55 | 1.0 | 1.2 | 1.6 | 1.2 | 2.0 | 2.3 | 49 | 6000 |
| 2 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 25 | 1520 |
| 3 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 26 | 1810 |
| 4 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 27 | 2000 |
| 5 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 29 | 2220 |
| 6 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 30 | 2460 |
| 7 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 30 | 2520 |
| 8 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.9 | 32 | 2750 |
| 10 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.3 | 1.1 | 2.0 | 2.0 | 37 | 3370 |
| 12 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.3 | 1.1 | 2.0 | 2.1 | 38 | 3850 |
| 15 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.4 | 1.1 | 2.0 | 2.2 | 41 | 4450 |
| 20 | 6 | 7/1.04 | 3.12 | 1.0 | 1.2 | 1.5 | 1.2 | 2.0 | 2.3 | 46 | 5450 |

Bare Wire

OPGW

Insulated Wire

Grounding Wire

Instrument Cable

Control Cable

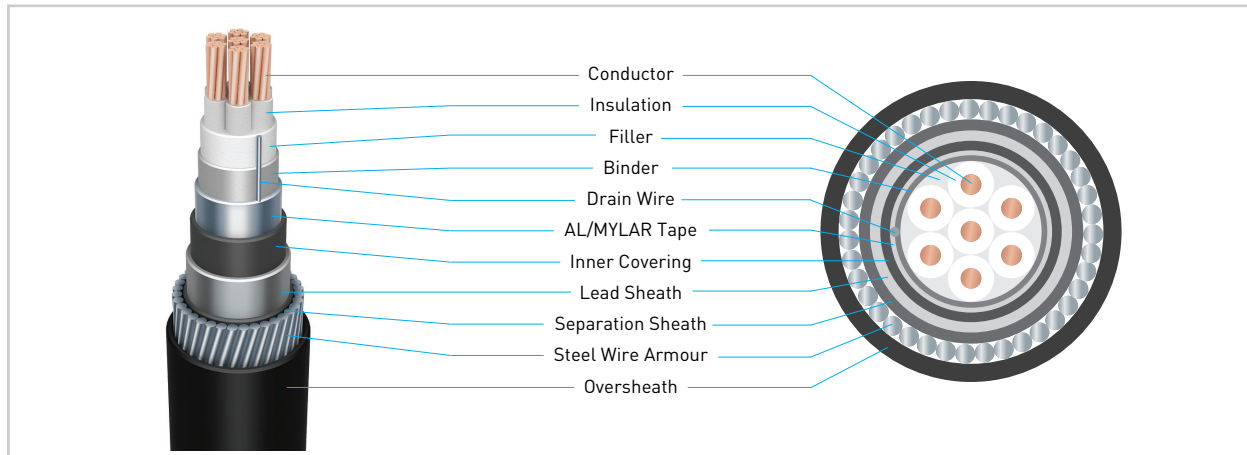
Power Cable

Reference

Installation

0.6/1KV CU/PVC/AL-MYLAR/PVC/LEAD/PVC/SWA/PVC

0.6/1KV CVLVWAV-AMS



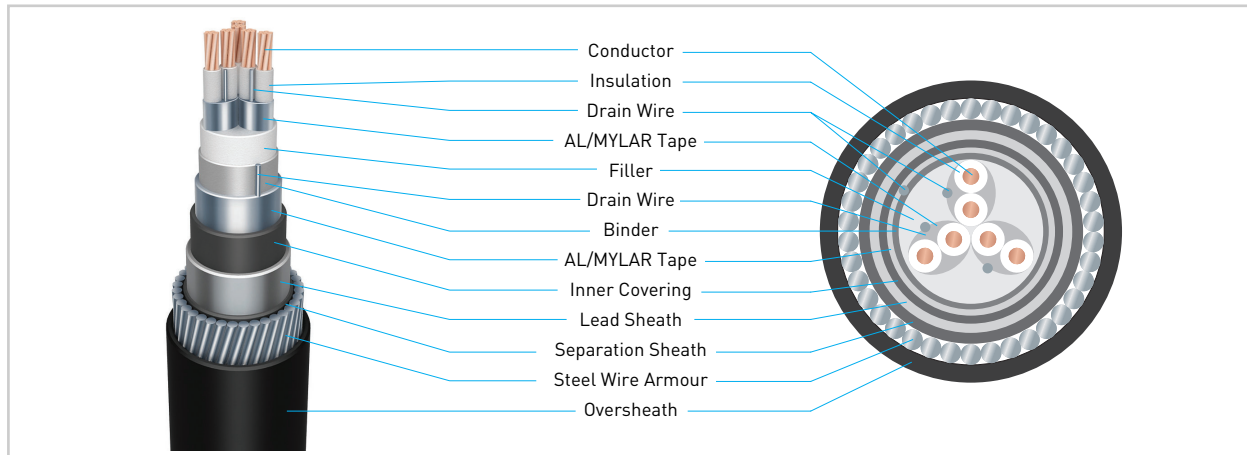
| No. of Cores | Conductor | | | Thickness of insulation | Thickness of inner covering | Thickness of Lead Sheath | Thickness of Separation Sheath | Diameter of Armour | Thickness of Oversheath | Approx. Overall Diameter | Approx. Weight |
|--------------|------------------------------|---------------------------|----------|-------------------------|-----------------------------|--------------------------|--------------------------------|--------------------|-------------------------|--------------------------|----------------|
| | Nominal Cross-Sectional Area | No. and diameter of wires | Diameter | | | | | | | | |
| C | mm ² | No./mm | mm | mm | mm | mm | mm | mm | mm | mm | kg/km |
| 2 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 20 | 1120 |
| 3 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 21 | 1180 |
| 4 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 22 | 1270 |
| 5 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 23 | 1380 |
| 6 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 24 | 1500 |
| 7 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 24 | 1520 |
| 8 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 25 | 1760 |
| 10 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 27 | 2020 |
| 12 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 28 | 2110 |
| 15 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 29 | 2290 |
| 20 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.9 | 32 | 2620 |
| 30 | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.3 | 1.1 | 1.6 | 2.0 | 36 | 3620 |
| 2 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 21 | 1210 |
| 3 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 22 | 1290 |
| 4 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 23 | 1400 |
| 5 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 24 | 1530 |
| 6 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 25 | 1800 |
| 7 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 25 | 1830 |
| 8 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 27 | 1960 |
| 10 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 29 | 2270 |
| 12 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 30 | 2390 |
| 15 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.9 | 31 | 2650 |

| No. of Cores | Conductor | | | Thickness of Insulation | Thickness of inner covering | Thickness of Lead Sheath | Thickness of Separation Sheath | Diameter of Armour | Thickness of Oversheath | Approx. Overall Diameter | Approx. Weight |
|--------------|------------------------------|---------------------------|----------|-------------------------|-----------------------------|--------------------------|--------------------------------|--------------------|-------------------------|--------------------------|----------------|
| | Nominal Cross-Sectional Area | No. and Diameter of Wires | Diameter | | | | | | | | |
| C | mm ² | No./mm | mm | mm | mm | mm | mm | mm | mm | mm | kg/km |
| 20 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.3 | 1.0 | 1.6 | 1.9 | 34 | 3150 |
| 30 | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.4 | 1.1 | 2.0 | 2.1 | 40 | 4330 |
| 2 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 23 | 1430 |
| 3 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 24 | 1530 |
| 4 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 26 | 1850 |
| 5 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 27 | 2020 |
| 6 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 28 | 2210 |
| 7 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 28 | 2260 |
| 8 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 30 | 2430 |
| 10 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.9 | 33 | 2960 |
| 12 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.3 | 1.0 | 1.6 | 1.9 | 34 | 3130 |
| 15 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.3 | 1.1 | 2.0 | 2.0 | 37 | 3780 |
| 20 | 4 | 7/0.85 | 2.55 | 1.0 | 1.0 | 1.4 | 1.1 | 2.0 | 2.1 | 41 | 4500 |
| 30 | 4 | 7/0.85 | 2.55 | 1.0 | 1.2 | 1.6 | 1.2 | 2.0 | 2.3 | 48 | 6070 |
| 2 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.2 | 1.0 | 1.25 | 1.8 | 24 | 1700 |
| 3 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 26 | 1850 |
| 4 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 27 | 2050 |
| 5 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 29 | 2270 |
| 6 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 30 | 2500 |
| 7 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 30 | 2570 |
| 8 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.2 | 1.0 | 1.6 | 1.9 | 31 | 2800 |
| 10 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.3 | 1.1 | 1.6 | 2.0 | 36 | 3680 |
| 12 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.3 | 1.1 | 2.0 | 2.0 | 38 | 3940 |
| 15 | 6 | 7/1.04 | 3.12 | 1.0 | 1.0 | 1.4 | 1.1 | 2.0 | 2.1 | 40 | 4510 |
| 20 | 6 | 7/1.04 | 3.12 | 1.0 | 1.2 | 1.5 | 1.2 | 2.0 | 2.3 | 45 | 5490 |

Bare Wire
OPGW
Insulated Wire
Grounding Wire
Instrument Cable
Control Cable
Power Cable
Reference
Installation

0.6/1KV CU/PVC/AL-MYLAR/AL-MYLAR/PVC/LEAD/PVC/SWA/PVC

0.6/1KV CVLVWAV-I/C AMS



| No. of Pairs | Conductor | | | Thickness of insulation | Thickness of inner covering | Thickness of Lead Sheath | Thickness of Separation Sheath | Diameter of Armour | Thickness of Oversheath | Approx. Overall Diameter | Approx. Weight |
|--------------|------------------------------|---------------------------|----------|-------------------------|-----------------------------|--------------------------|--------------------------------|--------------------|-------------------------|--------------------------|----------------|
| | Nominal Cross-Sectional Area | No. and diameter of wires | Diameter | | | | | | | | |
| C | mm ² | No./mm | mm | mm | mm | mm | mm | mm | mm | mm | kg/km |
| 2P | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 25 | 1700 |
| 3P | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 28 | 1950 |
| 4P | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 29 | 2140 |
| 5P | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 31 | 2380 |
| 6P | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.9 | 33 | 2610 |
| 7P | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.9 | 33 | 2640 |
| 8P | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.3 | 1.1 | 1.6 | 2.0 | 36 | 3030 |
| 10P | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.4 | 1.1 | 2.0 | 2.1 | 40 | 3760 |
| 12P | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.0 | 1.4 | 1.1 | 2.0 | 2.2 | 43 | 4130 |
| 15P | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.5 | 1.2 | 2.0 | 2.3 | 47 | 4850 |
| 20P | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.2 | 1.6 | 1.3 | 2.5 | 2.5 | 53 | 6290 |
| 30P | 1.5 | 7/0.53 | 1.59 | 0.8 | 1.4 | 1.8 | 1.4 | 2.5 | 2.7 | 62 | 8220 |
| 2P | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 27 | 1860 |
| 3P | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 29 | 2170 |
| 4P | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.2 | 1.0 | 1.6 | 1.8 | 31 | 2420 |
| 5P | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.3 | 1.0 | 1.6 | 1.9 | 34 | 2790 |
| 6P | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.3 | 1.1 | 2.0 | 2.0 | 37 | 3370 |
| 7P | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.3 | 1.1 | 2.0 | 2.0 | 37 | 3410 |
| 8P | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.4 | 1.1 | 2.0 | 2.1 | 40 | 3860 |
| 10P | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.0 | 1.5 | 1.2 | 2.0 | 2.2 | 44 | 4470 |
| 12P | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.2 | 1.5 | 1.2 | 2.0 | 2.3 | 47 | 4990 |
| 15P | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.2 | 1.6 | 1.3 | 2.5 | 2.5 | 53 | 6260 |
| 20P | 2.5 | 7/0.67 | 2.01 | 0.8 | 1.2 | 1.8 | 1.4 | 2.5 | 2.6 | 58 | 7660 |

Conductor Construction and D.C. Conductor Resistance

| Nominal Cross-Sectional Area | Conductor | | Approx. diameter | Maximum resistance of conductor | |
|------------------------------|--|----------|------------------|---------------------------------|----------|
| | Minimum number of wires in the conductor | | | Copper | Aluminum |
| | Copper | Aluminum | | | |
| mm ² | No. | | mm | (Ω /km) | |
| 1.5 | 7 | - | 1.59 | 12.1 | - |
| 2.5 | 7 | - | 2.01 | 7.41 | - |
| 4 | 7 | 7 | 2.55 | 4.61 | 7.41 |
| 6 | 7 | 7 | 3.12 | 3.08 | 4.61 |

10mm² and less : Solid or Circular non compacted

Test Voltage of insulation

| | |
|--|-------|
| Rated Voltage (U _o /U) (Kv) | 0.6/1 |
| Test Voltage r.m.s (KV) | 3.5 |

Bare Wire

OPGW

Insulated Wire

Grounding Wire

Instrument Cable

Control Cable

Power Cable

Reference

Installation



Power Cable

- Characteristics of Crosslinked Polyethylene
- Insulation Process of Gaon's Medium Voltage Cable
- Description
- Conductor Construction and D.C. Conductor Resistance
- Test Voltage of XLPE insulation
- 0.6/1KV CU(AL-)/XLPE/PVC
- 0.6/1KV CU(AL-)/XLPE/PVC/S(A)WA/PVC
- 0.6/1KV CU(AL-)/XLPE/PVC/DS(A)TA/PVC
- 1.8/3KV CU(AL-)/XLPE/PVC
- 1.8/3KV CU(AL-)/XLPE/PVC/S(A)WA, DS(A)TA/PVC
- 3.6/6KV CU(AL-)/XLPE/PVC
- 3.6/6KV CU(AL-)/XLPE/PVC/S(A)WA, DS(A)TA/PVC
- 6/10KV CU(AL-)/XLPE/PVC
- 6/10KV CU(AL-)/XLPE/PVC/S(A)WA, DS(A)TA/PVC
- 8.7/15KV CU(AL-)/XLPE/PVC
- 8.7/15KV CU(AL-)/XLPE/PVC/S(A)WA, DS(A)TA/PVC
- 12/20KV CU(AL-)/XLPE/PVC
- 12/20KV CU(AL-)/XLPE/PVC/S(A)WA, DS(A)TA/PVC
- 18/30KV CU(AL-)/XLPE/PVC
- 18/30KV CU(AL-)/XLPE/PVC/S(A)WA, DS(A)TA/PVC
- 0.6/1KV CU(AL-)/XLPE/PVC/LEAD/PVC/S(A)WA/PVC
- 1.8/3KV CU(AL-)/XLPE/PVC/LEAD/PVC/S(A)WA/PVC
- 3.6/6KV CU(AL-)/XLPE/PVC/LEAD/PVC/S(A)WA/PVC
- 6/10KV CU(AL-)/XLPE/PVC/LEAD/PVC/S(A)WA/PVC
- 8.7/15KV CU(AL-)/XLPE/PVC/LEAD/PVC/S(A)WA/PVC
- 12/20KV CU(AL-)/XLPE/PVC/LEAD/PVC/S(A)WA/PVC
- 18/30KV CU(AL-)/XLPE/PVC/LEAD/PVC/S(A)WA/PVC
- 0.6/1KV CU/MICA/XLPE/PVC/LEAD/PVC/S(A)WA/FR-PVC

Power Cable

Characteristics of Crosslinked Polyethylene

It is well known that polyethylene is superior in electrical characteristics and chemical resistances. But it has a defect of melting point at the temperature of 110°C. Crosslinked polyethylene, which results from a chemical process of “Cross-linking” of the molecular structure, has eliminated this defect of melting point. Due to its molecular structure, it has excellent ozone resistance and outstanding heat stability and resistance. The most popular way of “Cross-linking” process is to blend some peroxide(for example dicumyl peroxide)into polyethylene and extrude it around the conductor and heat it to a high temperature sufficient to activate the peroxide.

Insulation Process of Gaon’s Medium Voltage Cable

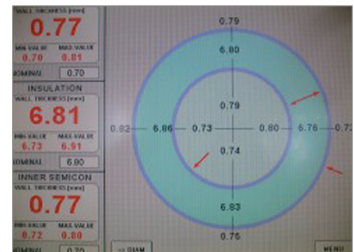
1. Triple Common Extrusion Head

- Excellent smoothness in boundary between semi-con. and insulation
 - Bump & Void Eliminated
 - Longer life expectancy of cable



2. Eccentricity Control of Insulation Thickness

- Excellent Thickness Control by Lazer Scanner
 - Safe and economic control of insulation thickness



3. Cleaned Raw Material by Cleaning Room

- 10,000 Class Clean Room(within 10,000EA Particle(0.5µm ↓) in inch³)
 - Perfect prevention of impurities



4. N₂ Gas Curing System for “Cross-Linking”

- Moisture Eliminated by Nitrogen Gas Curing



Description

Conductors : The conductors shall be class 2 of plain annealed Copper or Aluminum in accordance with IEC 60228.

Conductor Screen : Conductor screen shall be a layer of extruded semi-conducting compound. A separator may be applied between conductor and conductor screen.

Insulation : Insulation shall be crosslinked Polyethylene complying with test requirements of IEC 60502 & IEC 60811. The insulation is extruded and dry cured to meet the requirements and/or customer specification. A high degree of concentricity is assured through the use of x-ray monitoring device during extrusion. EPR insulation is available on request.

Insulation Screen : The insulation screen shall consist of a non metallic semi-conducting part in combination with a metallic part. The non-metallic part shall consist of a layer of extruded semi-conducting compound. Combination of semi-conducting compound and semi-conducting tape is available on request.

Metallic Screen : Metallic screen can be a helically applied copper tape or a number of copper wires applied with a lay or a combination of tape and wires applied over the semi-conducting screen. The metallic screen provides the earth fault current path and it is a cross section designed as per customer's specification.

Laying Up : In case of multi core cables, the multi cores are laid up together with polypropylene yarn filler at the interstices between the cores. A binder e.g. polypropylene tape is wrapped round the assembly to form a compact circular cable during this process.

Inner Covering : Inner covering shall be non-hygroscopic extruded PVC as per IEC 60502. PE, TPE, LSZH (Low Smoke Zero Halogen) are available on request.

Lead Sheath : Lead sheath shall consist of a layer of extruded lead or lead alloy E.

Separation Sheath : Separation sheath shall be non-hygroscopic extruded PVC as per IEC 60502. PE or TPE are available on request.

Armour : Armour shall be as per IEC 60502 of the following type:

- a) Round Wire Armour
- b) Double Tape Armour

Armour material shall be galvanized steel for multi core cables and aluminum for single core cables. This is as per IEC 60502 recommendation.

Oversheath : Oversheath shall be extruded PVC/ST1 as per IEC 60502, special type of sheathing such as Flame retardant(FR-), Anti-termite(/AT), Anti-rodent(/AR) and Anti-vermin(/AV), etc. are available on request. PE or LSZH(HF- : Halogen free Flame retardant) are available on request

Fire proof layer : Fire proof layer shall be a mica tape between conductor and insulation if fire resistance in accordance with IEC 60331 is required for low voltage power or control cable.

Conductor Construction and D.C. Conductor Resistance

| Nominal Cross-Sectional Area <small>mm²</small> | Conductor | | Approx. diameter <small>mm</small> | Maximum resistance of conductor <small>(Ω /km)</small> | |
|---|--|----------|---------------------------------------|---|----------|
| | Minimum number of wires in the conductor | | | Copper | Aluminum |
| | Copper | Aluminum | | | |
| | No. | | | | |
| 1.5 | 7 | - | 1.59 | 12.1 | - |
| 2.5 | 7 | - | 2.01 | 7.41 | - |
| 4 | 7 | 7 | 2.55 | 4.61 | 7.41 |
| 6 | 7 | 7 | 3.12 | 3.08 | 4.61 |
| 10 | 7 | 7 | 4.05 | 1.83 | 3.08 |
| 16 | 6 | 6 | 4.7 | 1.15 | 1.91 |
| 25 | 6 | 6 | 5.9 | 0.727 | 1.20 |
| 35 | 6 | 6 | 6.9 | 0.524 | 0.868 |
| 50 | 6 | 6 | 8.1 | 0.387 | 0.641 |
| 70 | 12 | 12 | 9.8 | 0.268 | 0.443 |
| 95 | 15 | 15 | 11.4 | 0.193 | 0.320 |
| 120 | 18 | 15 | 12.9 | 0.153 | 0.253 |
| 150 | 18 | 15 | 14.4 | 0.124 | 0.206 |
| 185 | 30 | 30 | 15.9 | 0.0991 | 0.164 |
| 240 | 34 | 30 | 18.3 | 0.0754 | 0.125 |
| 300 | 34 | 30 | 20.5 | 0.0601 | 0.100 |
| 400 | 53 | 53 | 23.2 | 0.0470 | 0.0778 |
| 500 | 53 | 53 | 26.4 | 0.0366 | 0.0605 |
| 630 | 53 | 53 | 30.2 | 0.0283 | 0.0469 |
| 800 | - | - | 34.4 | 0.0221 | 0.0367 |
| 1000 | - | - | 38.7 | 0.0176 | 0.0291 |

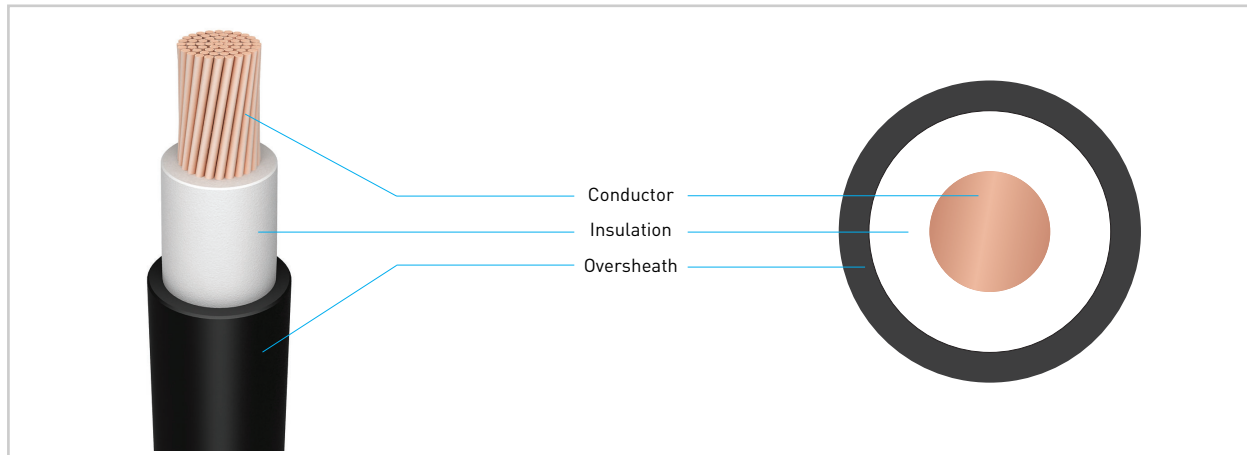
- 10mm² and less : Solid or Circular non compacted
- 16mm² ~ 630mm² : Circular compacted
- 800mm², 1000mm² : Circular segment compacted

Test Voltage of XLPE insulation

| Rated Voltage (U ₀ /U) (Kv) | 0.6/1 | 1.8/3 (1.9/3.3) | 3.6/6 (3.8/6.6) | 6/10 (6.35/11) | 8.7/15 | 12/20 (12.7/22) | 18/30 (19/33) |
|--|-------|--------------------|--------------------|-------------------|--------|--------------------|------------------|
| Test Voltage r.m.s (KV) | 3.5 | 6.5 | 12.5 | 21 | 30.5 | 42 | 63 |

0.6/1KV CU(AL-)/XLPE/PVC

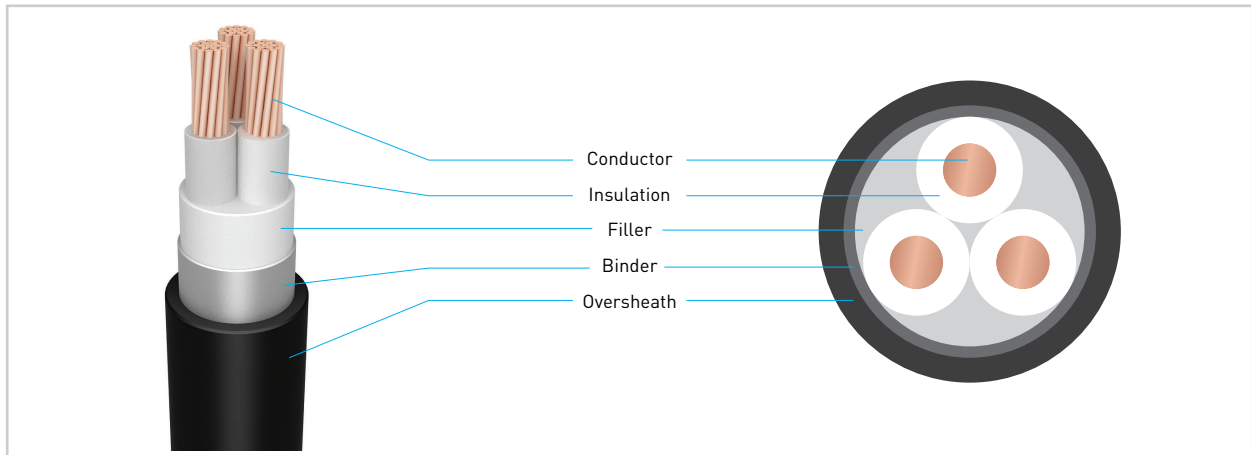
0.6/1KV (AL-)CV



| Nominal Cross-Sectional Area of Conductor | Thickness of Insulation | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | | | |
|---|-------------------------|-------------------------|-----|--------------------------|------|----------------|--------|------|--------|
| | | 1C | 2C | 1C | 2C | 1C | | 2C | |
| mm ² | mm | mm | | mm | | kg/km | | | |
| 1.5 | 0.7 | 1.4 | 1.8 | 6.3 | 11 | 53 | (-) | 127 | (-) |
| 2.5 | 0.7 | 1.4 | 1.8 | 6.7 | 12 | 65 | (-) | 153 | (-) |
| 4 | 0.7 | 1.4 | 1.8 | 7.2 | 13 | 81 | (60) | 197 | (160) |
| 6 | 0.7 | 1.4 | 1.8 | 7.8 | 14 | 108 | (70) | 252 | (210) |
| 10 | 0.7 | 1.4 | 1.8 | 9.4 | 17 | 155 | (90) | 357 | (250) |
| 16 | 0.7 | 1.4 | 1.8 | 10.0 | 18.5 | 210 | (120) | 487 | (300) |
| 25 | 0.9 | 1.4 | 1.8 | 12.0 | 22 | 315 | (160) | 720 | (420) |
| 35 | 0.9 | 1.4 | 1.8 | 13.0 | 24 | 414 | (200) | 943 | (530) |
| 50 | 1.0 | 1.4 | 1.8 | 14.5 | 27 | 542 | (250) | 1229 | (660) |
| 70 | 1.1 | 1.4 | 1.8 | 16.0 | 31 | 761 | (330) | 1702 | (870) |
| 95 | 1.1 | 1.5 | 1.9 | 18.5 | 35 | 1026 | (430) | 2285 | (1140) |
| 120 | 1.2 | 1.5 | 2.0 | 20.0 | 38 | 1279 | (520) | 2890 | (1400) |
| 150 | 1.4 | 1.6 | 2.2 | 22.0 | 43 | 1524 | (640) | 3475 | (1710) |
| 185 | 1.6 | 1.6 | 2.3 | 24.0 | 47 | 1872 | (780) | 4282 | (2110) |
| 240 | 1.7 | 1.7 | 2.5 | 27.0 | 53 | 2391 | (1000) | 5469 | (2740) |
| 300 | 1.8 | 1.8 | 2.6 | 30.0 | 58 | 3023 | (1230) | 6876 | (3360) |
| 400 | 2.0 | 1.9 | - | 34.0 | - | 3975 | (1550) | - | - |
| 500 | 2.2 | 2.0 | - | 37.0 | - | 4894 | (1950) | - | - |
| 630 | 2.4 | 2.2 | - | 42.0 | - | 6283 | (2580) | - | - |
| 800 | 2.6 | 2.3 | - | 46.0 | - | 8450 | (3200) | - | - |
| 1000 | 2.8 | 2.4 | - | 51.0 | - | 10530 | (3940) | - | - |

- () : Weight of Cable for Aluminum Conductor

- Weight can be different depending on item

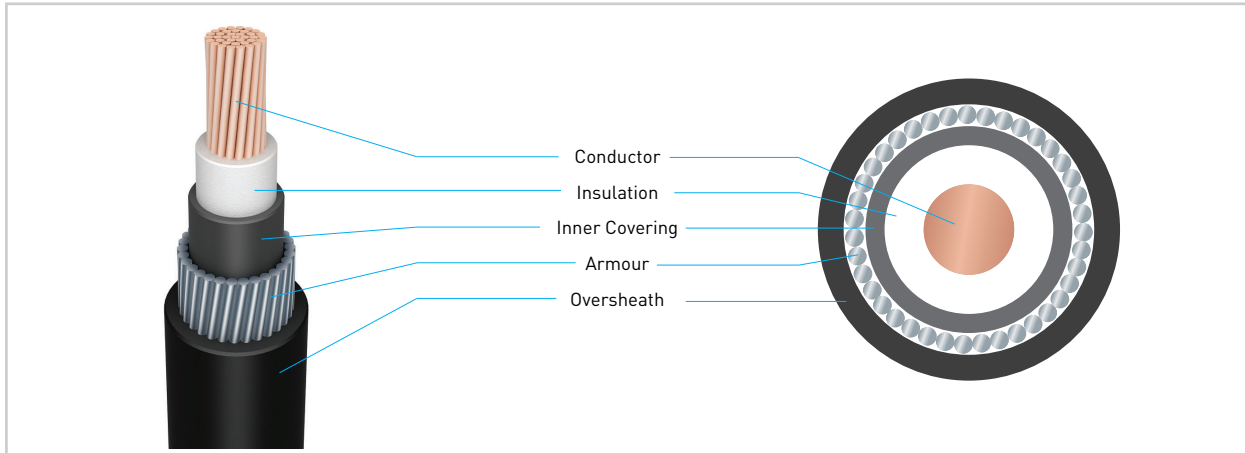


| Nominal Cross-Sectional Area of Conductor | Thickness of Insulation | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | | | |
|---|-------------------------|-------------------------|-----|--------------------------|----|----------------|--------|-------|--------|
| | | 3C | 4C | 3C | 4C | 3C | | 4C | |
| mm ² | mm | mm | | mm | | kg/km | | | |
| 1.5 | 0.7 | 1.8 | 1.8 | 11.5 | 14 | 148 | (-) | 179 | (-) |
| 2.5 | 0.7 | 1.8 | 1.8 | 12.5 | 15 | 189 | (-) | 226 | (-) |
| 4 | 0.7 | 1.8 | 1.8 | 13.5 | 16 | 245 | (180) | 305 | (220) |
| 6 | 0.7 | 1.8 | 1.8 | 14.5 | 18 | 321 | (220) | 397 | (260) |
| 10 | 0.7 | 1.8 | 1.8 | 18.0 | 20 | 464 | (290) | 585 | (350) |
| 16 | 0.7 | 1.8 | 1.8 | 19.5 | 22 | 649 | (360) | 816 | (440) |
| 25 | 0.9 | 1.8 | 1.8 | 23.0 | 26 | 975 | (520) | 1242 | (630) |
| 35 | 0.9 | 1.8 | 1.8 | 25.0 | 28 | 1287 | (620) | 1661 | (790) |
| 50 | 1.0 | 1.8 | 1.9 | 29.0 | 32 | 1693 | (820) | 2215 | (1020) |
| 70 | 1.1 | 1.9 | 2.0 | 33.0 | 37 | 2383 | (1200) | 3110 | (1410) |
| 95 | 1.1 | 2.0 | 2.1 | 37.0 | 41 | 3224 | (1440) | 4027 | (1570) |
| 120 | 1.2 | 2.1 | 2.3 | 41.0 | 45 | 4036 | (1780) | 5307 | (2270) |
| 150 | 1.4 | 2.3 | 2.4 | 46.0 | 50 | 4840 | (2200) | 6327 | (2780) |
| 185 | 1.6 | 2.4 | 2.6 | 50.0 | 55 | 5975 | (2720) | 7846 | (3480) |
| 240 | 1.7 | 2.6 | 2.8 | 57.0 | 62 | 7641 | (3540) | 10038 | (4490) |
| 300 | 1.8 | 2.7 | 3.0 | 62.0 | 68 | 9638 | (4340) | 12609 | (5510) |

- (-) : Weight of Cable for Aluminum Conductor
 - Weight can be different depending on item

0.6/1KV CU(AL-)/XLPE/PVC/S(A)WA/PVC

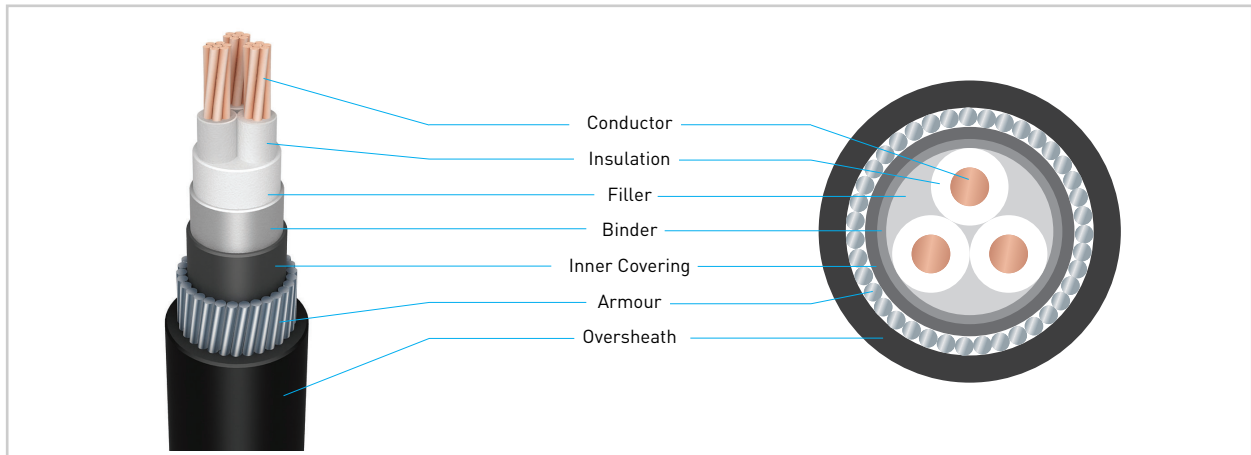
0.6/1KV (AL-)CV(A)WAV



| Nominal Cross-Sectional Area of Conductor | Thickness of Insulation | Thickness of Inner Covering | | Diameter of Armour | | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | | | |
|---|-------------------------|-----------------------------|-----|--------------------|------|-------------------------|-----|--------------------------|----|----------------|--------|------|--------|
| | | 1C | 2C | 1C | 2C | 1C | 2C | 1C | 2C | 1C | 2C | | |
| mm ² | mm | mm | | mm | | mm | | mm | | kg/km | | | |
| 1.5 | 0.7 | 1.0 | 1.0 | 1.6 | 0.9 | 1.8 | 1.8 | 14 | 15 | 180 | (-) | 360 | (-) |
| 2.5 | 0.7 | 1.0 | 1.0 | 1.6 | 0.9 | 1.8 | 1.8 | 14 | 15 | 200 | (-) | 380 | (-) |
| 4 | 0.7 | 1.0 | 1.0 | 1.6 | 1.25 | 1.8 | 1.8 | 15 | 16 | 220 | (200) | 460 | (440) |
| 6 | 0.7 | 1.0 | 1.0 | 1.6 | 1.25 | 1.8 | 1.8 | 15 | 17 | 250 | (220) | 640 | (500) |
| 10 | 0.7 | 1.0 | 1.0 | 1.6 | 1.25 | 1.8 | 1.8 | 16 | 20 | 320 | (250) | 780 | (580) |
| 16 | 0.7 | 1.0 | 1.0 | 1.6 | 1.25 | 1.8 | 1.8 | 17 | 21 | 380 | (280) | 930 | (650) |
| 25 | 0.9 | 1.0 | 1.0 | 1.6 | 1.6 | 1.8 | 1.8 | 19 | 26 | 510 | (350) | 1400 | (1140) |
| 35 | 0.9 | 1.0 | 1.0 | 1.6 | 1.6 | 1.8 | 1.8 | 20 | 28 | 630 | (410) | 1670 | (1310) |
| 50 | 1.0 | 1.0 | 1.0 | 1.6 | 1.6 | 1.8 | 1.8 | 21 | 31 | 770 | (480) | 2090 | (1530) |
| 70 | 1.1 | 1.0 | 1.0 | 1.6 | 2.0 | 1.8 | 2.0 | 23 | 35 | 1010 | (580) | 3010 | (1910) |
| 95 | 1.1 | 1.0 | 1.2 | 1.6 | 2.0 | 1.8 | 2.1 | 25 | 40 | 1290 | (700) | 3730 | (2580) |
| 120 | 1.2 | 1.0 | 1.2 | 1.6 | 2.0 | 1.8 | 2.2 | 26 | 43 | 1610 | (860) | 4460 | (3010) |
| 150 | 1.4 | 1.0 | 1.2 | 1.6 | 2.5 | 1.8 | 2.3 | 29 | 47 | 1920 | (1000) | 5740 | (3520) |
| 185 | 1.6 | 1.0 | 1.4 | 1.6 | 2.5 | 1.8 | 2.5 | 30 | 53 | 2330 | (1170) | 6820 | (4600) |
| 240 | 1.7 | 1.0 | 1.4 | 1.6 | 2.5 | 1.9 | 2.7 | 33 | 59 | 2980 | (1440) | 8150 | (5530) |
| 300 | 1.8 | 1.0 | 1.6 | 1.6 | 2.5 | 2.0 | 2.8 | 36 | 65 | 3630 | (1700) | 9840 | (6530) |
| 400 | 2.0 | 1.2 | - | 2.0 | - | 2.1 | - | 40 | - | 4670 | (2200) | - | - |
| 500 | 2.2 | 1.2 | - | 2.0 | - | 2.2 | - | 43 | - | 5840 | (2670) | - | - |
| 630 | 2.4 | 1.2 | - | 2.0 | - | 2.3 | - | 49 | - | 7800 | (3100) | - | - |
| 800 | 2.6 | 1.4 | - | 2.5 | - | 2.5 | - | 54 | - | 8000 | (3990) | - | - |
| 1000 | 2.8 | 1.4 | - | 2.5 | - | 2.7 | - | 59 | - | 9900 | (4810) | - | - |

- () : Weight of Cable for Aluminum Conductor

- Weight can be different depending on item

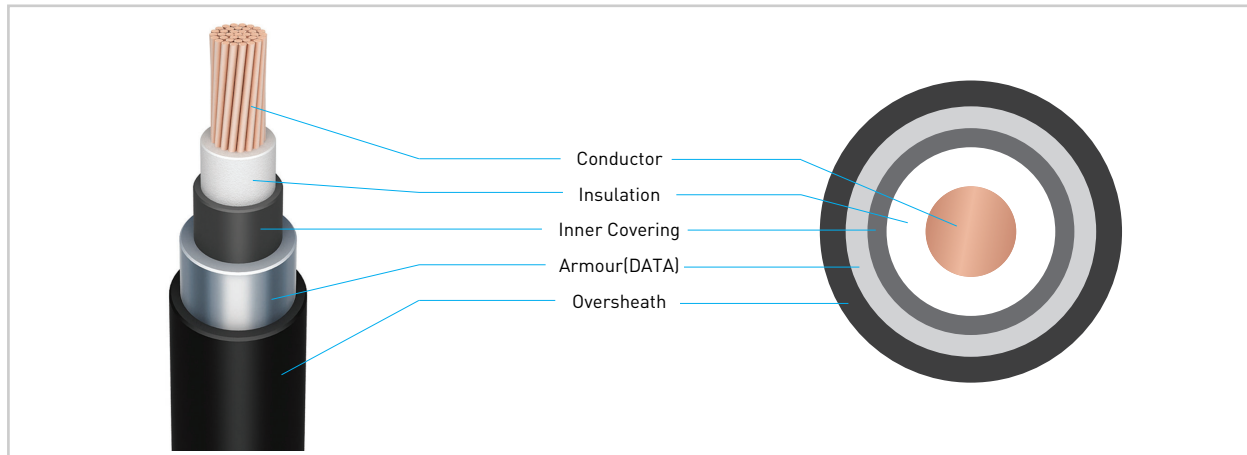


| Nominal Cross-Sectional Area of Conductor | Thickness of Insulation | Thickness of Inner Covering | | Diameter of Armour | | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | | | |
|---|-------------------------|-----------------------------|-----|--------------------|------|-------------------------|-----|--------------------------|----|----------------|--------|-------|--------|
| | | 3C | 4C | 3C | 4C | 3C | 4C | 3C | 4C | 3C | 4C | | |
| mm ² | mm | mm | | mm | | mm | | mm | | kg/km | | | |
| 1.5 | 0.7 | 1.0 | 1.0 | 0.9 | 0.9 | 1.8 | 1.8 | 15 | 16 | 340 | (-) | 440 | (-) |
| 2.5 | 0.7 | 1.0 | 1.0 | 0.9 | 0.9 | 1.8 | 1.8 | 16 | 17 | 420 | (-) | 570 | (-) |
| 4 | 0.7 | 1.0 | 1.0 | 1.25 | 1.25 | 1.8 | 1.8 | 17 | 18 | 600 | (480) | 670 | (530) |
| 6 | 0.7 | 1.0 | 1.0 | 1.25 | 1.25 | 1.8 | 1.8 | 18 | 19 | 700 | (550) | 840 | (610) |
| 10 | 0.7 | 1.0 | 1.0 | 1.25 | 1.25 | 1.8 | 1.8 | 20 | 22 | 900 | (640) | 1060 | (740) |
| 16 | 0.7 | 1.0 | 1.0 | 1.25 | 1.6 | 1.8 | 1.8 | 22 | 24 | 1270 | (740) | 1480 | (1090) |
| 25 | 0.9 | 1.0 | 1.0 | 1.6 | 1.6 | 1.8 | 1.8 | 27 | 29 | 1700 | (1250) | 2030 | (1140) |
| 35 | 0.9 | 1.0 | 1.0 | 1.6 | 1.6 | 1.8 | 1.9 | 30 | 32 | 2080 | (1450) | 2530 | (1650) |
| 50 | 1.0 | 1.0 | 1.0 | 1.6 | 2.0 | 1.9 | 2.0 | 32 | 35 | 2610 | (1740) | 3510 | (2280) |
| 70 | 1.1 | 1.0 | 1.2 | 2.0 | 2.0 | 2.0 | 2.1 | 37 | 41 | 3750 | (2400) | 4630 | (2900) |
| 95 | 1.1 | 1.2 | 1.2 | 2.0 | 2.0 | 2.2 | 2.3 | 42 | 46 | 4730 | (2920) | 5850 | (3460) |
| 120 | 1.2 | 1.2 | 1.4 | 2.0 | 2.5 | 2.3 | 2.5 | 46 | 52 | 6090 | (3430) | 7630 | (4540) |
| 150 | 1.4 | 1.4 | 1.4 | 2.5 | 2.5 | 2.5 | 2.6 | 52 | 56 | 7090 | (4450) | 8910 | (5350) |
| 185 | 1.6 | 1.4 | 1.4 | 2.5 | 2.5 | 2.6 | 2.8 | 56 | 62 | 8730 | (5450) | 10690 | (6310) |
| 240 | 1.7 | 1.4 | 1.6 | 2.5 | 2.5 | 2.8 | 3.0 | 63 | 69 | 10960 | (6250) | 13230 | (7710) |
| 300 | 1.8 | 1.6 | 1.6 | 2.5 | 2.5 | 3.0 | 3.2 | 69 | 76 | 12780 | (7250) | 16970 | (9620) |

- (-) : Weight of Cable for Aluminum Conductor
 - Weight can be different depending on item

0.6/1KV CU(AL-)/XLPE/PVC/DS(A)TA/PVC

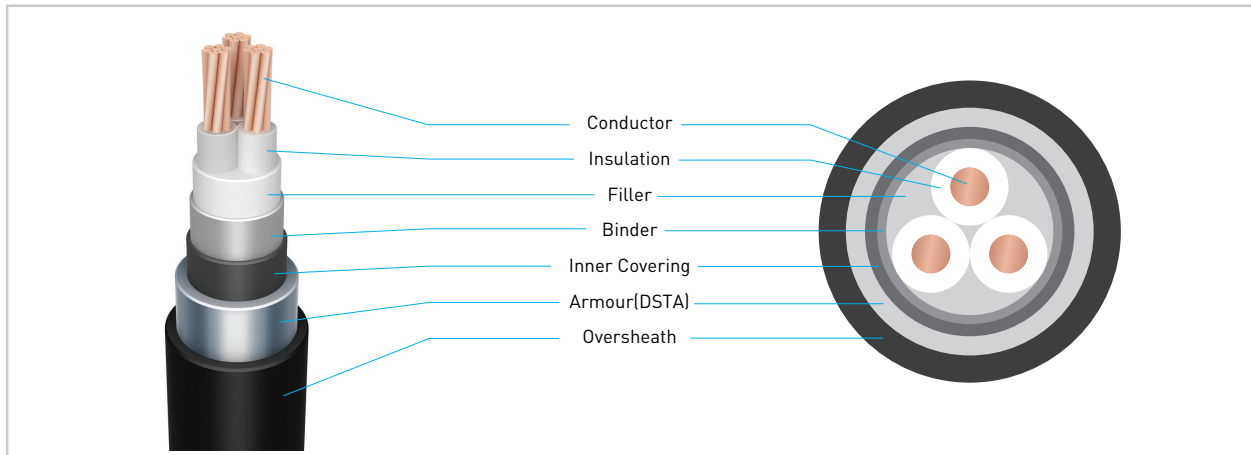
0.6/1KV (AL-)CV(A)/TAV



| Nominal Cross-Sectional Area of Conductor | Thickness of Insulation | Thickness of Inner Covering | | Diameter of Armour | | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | | | |
|---|-------------------------|-----------------------------|-----|--------------------|------|-------------------------|-----|--------------------------|----|----------------|--------|------|--------|
| | | 1C | 2C | 1C | 2C | 1C | 2C | 1C | 2C | 1C | 2C | | |
| mm ² | mm | mm | | mm | | mm | | mm | | kg/km | | | |
| 1.5 | 0.7 | 1.0 | 1.0 | 0.5 | 0.25 | 1.8 | 1.8 | 16 | 15 | 140 | (-) | 220 | (-) |
| 2.5 | 0.7 | 1.0 | 1.0 | 0.5 | 0.25 | 1.8 | 1.8 | 16 | 15 | 160 | (-) | 260 | (-) |
| 4 | 0.7 | 1.0 | 1.0 | 0.5 | 0.25 | 1.8 | 1.8 | 16 | 16 | 180 | (160) | 380 | (320) |
| 6 | 0.7 | 1.0 | 1.0 | 0.5 | 0.25 | 1.8 | 1.8 | 16 | 17 | 210 | (170) | 440 | (370) |
| 10 | 0.7 | 1.0 | 1.0 | 0.5 | 0.25 | 1.8 | 1.8 | 16 | 19 | 270 | (200) | 500 | (390) |
| 16 | 0.7 | 1.0 | 1.0 | 0.5 | 0.25 | 1.8 | 1.8 | 16 | 21 | 330 | (230) | 630 | (430) |
| 25 | 0.9 | 1.0 | 1.0 | 0.5 | 0.25 | 1.8 | 1.8 | 16 | 24 | 450 | (290) | 980 | (670) |
| 35 | 0.9 | 1.0 | 1.0 | 0.5 | 0.25 | 1.8 | 1.8 | 18 | 26 | 540 | (330) | 1220 | (790) |
| 50 | 1.0 | 1.0 | 1.0 | 0.5 | 0.25 | 1.8 | 1.8 | 19 | 29 | 680 | (390) | 1540 | (950) |
| 70 | 1.1 | 1.0 | 1.0 | 0.5 | 0.25 | 1.8 | 1.9 | 20 | 33 | 910 | (490) | 2080 | (1220) |
| 95 | 1.1 | 1.0 | 1.2 | 0.5 | 0.25 | 1.8 | 2.0 | 22 | 37 | 1180 | (590) | 2730 | (1540) |
| 120 | 1.2 | 1.0 | 1.2 | 0.5 | 0.5 | 1.8 | 2.2 | 23 | 43 | 1450 | (700) | 3870 | (2350) |
| 150 | 1.4 | 1.0 | 1.2 | 0.5 | 0.5 | 1.8 | 2.3 | 25 | 47 | 1750 | (820) | 4620 | (2750) |
| 185 | 1.6 | 1.0 | 1.4 | 0.5 | 0.5 | 1.8 | 2.4 | 27 | 52 | 2140 | (980) | 5640 | (3300) |
| 240 | 1.7 | 1.0 | 1.4 | 0.5 | 0.5 | 1.8 | 2.6 | 30 | 58 | 2750 | (1210) | 7150 | (4040) |
| 300 | 1.8 | 1.0 | 1.6 | 0.5 | 0.5 | 1.9 | 2.8 | 33 | 63 | 3390 | (1450) | 8730 | (4830) |
| 400 | 2.0 | 1.2 | - | 0.5 | - | 2.0 | - | 36 | - | 4290 | (1820) | - | - |
| 500 | 2.2 | 1.2 | - | 0.5 | - | 2.2 | - | 42 | - | 5630 | (2460) | - | - |
| 630 | 2.4 | 1.2 | - | 0.5 | - | 2.3 | - | 46 | - | 6800 | (2790) | - | - |
| 800 | 2.6 | 1.4 | - | 0.5 | - | 2.5 | - | 52 | - | 8860 | (3480) | - | - |
| 1000 | 2.8 | 1.4 | - | 0.5 | - | 2.6 | - | 57 | - | 10720 | (4240) | - | - |

- () : Weight of Cable for Aluminum Conductor

- Weight can be different depending on item

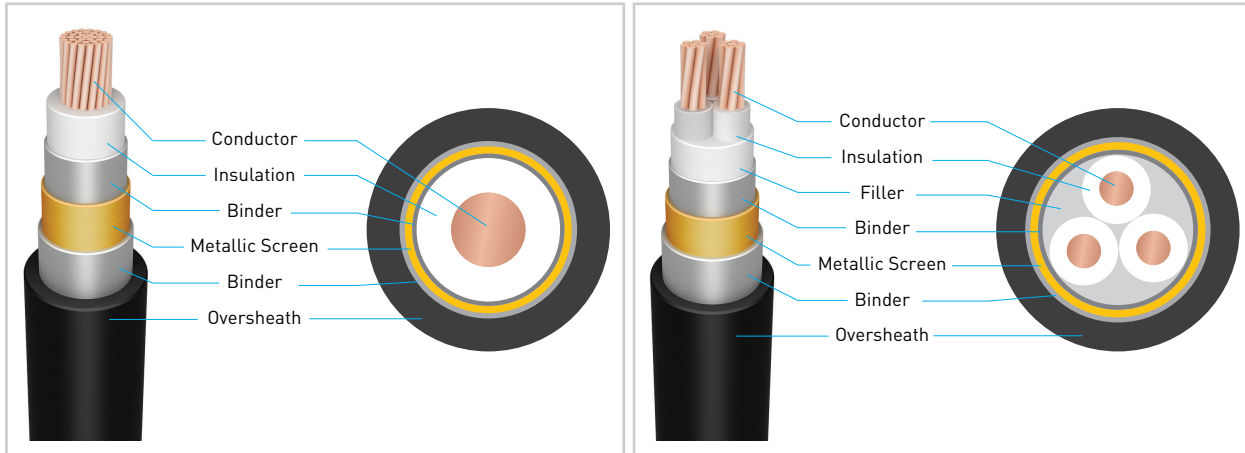


| Nominal Cross-Sectional Area of Conductor | Thickness of Insulation | Thickness of Inner Covering | | Diameter of Armour | | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | | | |
|---|-------------------------|-----------------------------|-----|--------------------|------|-------------------------|-----|--------------------------|----|----------------|--------|-------|--------|
| | | 3C | 4C | 3C | 4C | 3C | 4C | 3C | 4C | 3C | 4C | | |
| mm ² | mm | mm | | mm | | mm | | mm | | kg/km | | | |
| 1.5 | 0.7 | 1.0 | 1.0 | 0.25 | 0.25 | 1.8 | 1.8 | 15 | 16 | 260 | (-) | 290 | (-) |
| 2.5 | 0.7 | 1.0 | 1.0 | 0.25 | 0.25 | 1.8 | 1.8 | 16 | 17 | 360 | (-) | 410 | (-) |
| 4 | 0.7 | 1.0 | 1.0 | 0.25 | 0.25 | 1.8 | 1.8 | 17 | 18 | 430 | (350) | 500 | (400) |
| 6 | 0.7 | 1.0 | 1.0 | 0.25 | 0.25 | 1.8 | 1.8 | 18 | 19 | 520 | (410) | 610 | (460) |
| 10 | 0.7 | 1.0 | 1.0 | 0.25 | 0.25 | 1.8 | 1.8 | 20 | 22 | 610 | (430) | 750 | (490) |
| 16 | 0.7 | 1.0 | 1.0 | 0.25 | 0.25 | 1.8 | 1.8 | 22 | 23 | 880 | (580) | 1070 | (680) |
| 25 | 0.9 | 1.0 | 1.0 | 0.25 | 0.25 | 1.8 | 1.8 | 25 | 27 | 1240 | (780) | 1540 | (910) |
| 35 | 0.9 | 1.0 | 1.0 | 0.25 | 0.25 | 1.8 | 1.8 | 28 | 30 | 1660 | (930) | 1970 | (1110) |
| 50 | 1.0 | 1.0 | 1.0 | 0.25 | 0.25 | 1.8 | 1.9 | 31 | 33 | 2020 | (1130) | 2560 | (1370) |
| 70 | 1.1 | 1.0 | 1.2 | 0.25 | 0.25 | 2.0 | 2.1 | 35 | 39 | 2770 | (1480) | 3560 | (1850) |
| 95 | 1.1 | 1.2 | 1.2 | 0.5 | 0.5 | 2.1 | 2.3 | 41 | 45 | 4140 | (2350) | 5240 | (2860) |
| 120 | 1.2 | 1.2 | 1.4 | 0.5 | 0.5 | 2.3 | 2.4 | 45 | 50 | 5100 | (2820) | 6470 | (3440) |
| 150 | 1.4 | 1.4 | 1.4 | 0.5 | 0.5 | 2.4 | 2.6 | 50 | 55 | 6170 | (3350) | 7830 | (4080) |
| 185 | 1.6 | 1.4 | 1.4 | 0.5 | 0.5 | 2.5 | 2.7 | 55 | 60 | 7500 | (3980) | 9560 | (4870) |
| 240 | 1.7 | 1.4 | 1.6 | 0.5 | 0.5 | 2.7 | 2.9 | 61 | 68 | 9590 | (4930) | 12340 | (6130) |
| 300 | 1.8 | 1.6 | 1.6 | 0.5 | 0.5 | 2.9 | 3.1 | 67 | 74 | 11780 | (5920) | 15090 | (7270) |

- (-) : Weight of Cable for Aluminum Conductor
 - Weight can be different depending on item

1.8/3KV CU(AL-)/XLPE/PVC

1.8/3KV (AL-)CV



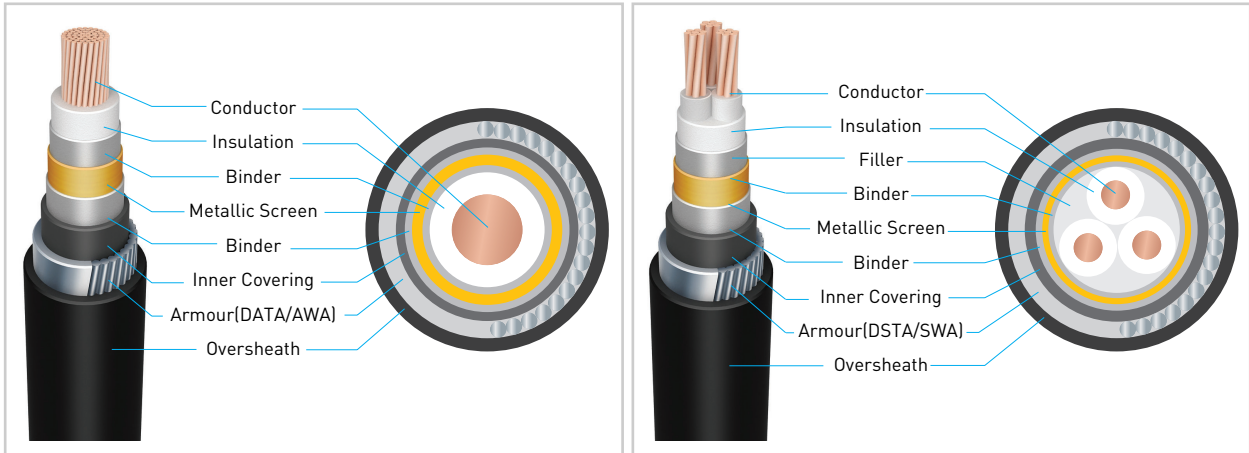
| Nominal Cross-Sectional Area of Conductor | Thickness of Insulation | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | | | |
|---|-------------------------|-------------------------|-----|--------------------------|----|----------------|--------|-------|--------|
| | | 1C | 3C | 1C | 3C | kg/km | | | |
| mm ² | mm | mm | | mm | | | | | |
| 10 | 2.0 | 1.4 | 1.8 | 12 | 23 | 210 | (150) | 670 | (480) |
| 16 | 2.0 | 1.4 | 1.8 | 13 | 25 | 270 | (170) | 860 | (560) |
| 25 | 2.0 | 1.4 | 1.8 | 14 | 27 | 370 | (210) | 1180 | (710) |
| 35 | 2.0 | 1.4 | 1.8 | 15 | 29 | 470 | (250) | 1530 | (810) |
| 50 | 2.0 | 1.4 | 1.9 | 16 | 32 | 600 | (300) | 1930 | (1030) |
| 70 | 2.0 | 1.5 | 2.0 | 18 | 36 | 820 | (390) | 2620 | (1330) |
| 95 | 2.0 | 1.5 | 2.2 | 20 | 40 | 1080 | (490) | 3490 | (1700) |
| 120 | 2.0 | 1.6 | 2.3 | 21 | 44 | 1340 | (590) | 4330 | (2060) |
| 150 | 2.0 | 1.6 | 2.4 | 23 | 47 | 1610 | (690) | 5220 | (2410) |
| 185 | 2.0 | 1.7 | 2.5 | 25 | 51 | 1990 | (830) | 6390 | (2880) |
| 240 | 2.0 | 1.8 | 2.7 | 28 | 57 | 2590 | (1050) | 10250 | (3650) |
| 300 | 2.0 | 1.8 | 2.8 | 30 | 62 | 3180 | (1250) | 12930 | (4390) |
| 400 | 2.0 | 1.9 | - | 33 | - | 4020 | (1550) | - | - |
| 500 | 2.2 | 2.0 | - | 36 | - | 5120 | (1950) | - | - |
| 630 | 2.4 | 2.2 | - | 42 | - | 6680 | (2580) | - | - |
| 800 | 2.6 | 2.3 | - | 46 | - | 8450 | (3200) | - | - |
| 1000 | 2.8 | 2.4 | - | 51 | - | 10530 | (3940) | - | - |

- () : Weight of Cable for Aluminum Conductor

- Weight can be different depending on item

1.8/3KV CU(AL-)/XLPE/PVC/S(A)WA, DS(A)TA/PVC

1.8/3KV (AL-)CV(A)WAV, (A)TAV



| Nominal Cross-Sectional Area of Conductor | Thickness of Insulation | Thickness of Separation Sheath | | Wire Armour | | | | | | | | Tape Armour | | | | | | | |
|---|-------------------------|--------------------------------|-----|--------------------|-----|-------------------------|-----|--------------------------|----|----------------|--------------|--------------------|------|-------------------------|-----|--------------------------|----|----------------|--------------|
| | | | | Diameter of Armour | | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | | Diameter of Armour | | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | |
| | | | | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C |
| mm ² | mm | mm | mm | mm | mm | mm | mm | mm | mm | kg/km | kg/km | mm | mm | mm | mm | mm | mm | kg/km | kg/km |
| 10 | 2.0 | 1.0 | 1.0 | 1.6 | 1.6 | 1.8 | 1.8 | 16 | 28 | 380 (320) | 1500 (1310) | 0.5 | 0.25 | 1.8 | 1.8 | 16 | 26 | 340 (270) | 950 (760) |
| 16 | 2.0 | 1.0 | 1.0 | 1.6 | 1.6 | 1.8 | 1.8 | 17 | 29 | 430 (330) | 1710 (1410) | 0.5 | 0.25 | 1.8 | 1.8 | 17 | 28 | 400 (300) | 1150 (850) |
| 25 | 2.0 | 1.0 | 1.0 | 1.6 | 1.6 | 1.8 | 1.9 | 18 | 32 | 540 (390) | 2130 (1660) | 0.5 | 0.25 | 1.8 | 1.8 | 18 | 31 | 510 (350) | 1490 (1020) |
| 35 | 2.0 | 1.0 | 1.0 | 1.6 | 1.6 | 1.8 | 1.9 | 19 | 34 | 660 (450) | 2590 (1860) | 0.5 | 0.25 | 1.8 | 1.9 | 19 | 33 | 620 (400) | 1920 (1190) |
| 50 | 2.0 | 1.0 | 1.2 | 1.6 | 2.0 | 1.8 | 2.1 | 20 | 39 | 800 (510) | 3370 (2480) | 0.5 | 0.25 | 1.8 | 2.0 | 20 | 36 | 760 (460) | 2430 (1530) |
| 70 | 2.0 | 1.0 | 1.2 | 1.6 | 2.0 | 1.8 | 2.2 | 22 | 43 | 1030 (610) | 4230 (2950) | 0.5 | 0.5 | 1.8 | 2.1 | 22 | 42 | 980 (560) | 3570 (2280) |
| 95 | 2.0 | 1.0 | 1.2 | 1.6 | 2.0 | 1.8 | 2.3 | 25 | 46 | 1420 (830) | 5240 (3450) | 0.5 | 0.5 | 1.8 | 2.3 | 24 | 46 | 1260 (670) | 4520 (2730) |
| 120 | 2.0 | 1.0 | 1.4 | 1.6 | 2.5 | 1.8 | 2.4 | 27 | 51 | 1700 (950) | 6720 (4450) | 0.5 | 0.5 | 1.8 | 2.4 | 25 | 50 | 1520 (770) | 5490 (3210) |
| 150 | 2.0 | 1.0 | 1.4 | 1.6 | 2.5 | 1.8 | 2.5 | 28 | 54 | 1990 (1060) | 7780 (4970) | 0.5 | 0.5 | 1.8 | 2.5 | 26 | 53 | 1800 (870) | 6450 (3640) |
| 185 | 2.0 | 1.0 | 1.4 | 1.6 | 2.5 | 1.8 | 2.7 | 30 | 58 | 2370 (1210) | 9170 (5660) | 0.5 | 0.5 | 1.8 | 2.6 | 28 | 57 | 2180 (1020) | 7710 (4200) |
| 240 | 2.0 | 1.0 | 1.6 | 1.6 | 2.5 | 1.9 | 2.8 | 33 | 65 | 3010 (1470) | 11440 (6770) | 0.5 | 0.5 | 1.8 | 2.8 | 31 | 63 | 2780 (1240) | 9840 (5170) |
| 300 | 2.0 | 1.0 | 1.6 | 1.6 | 2.5 | 2.0 | 3.0 | 35 | 70 | 3660 (1720) | 13660 (7800) | 0.5 | 0.5 | 1.9 | 2.9 | 33 | 68 | 3410 (1400) | 11680 (6020) |
| 400 | 2.0 | 1.2 | - | 2.0 | - | 2.1 | - | 39 | - | 4670 (2220) | - | 0.5 | - | 2.0 | - | 36 | - | 4290 (1820) | - |
| 500 | 2.2 | 1.2 | - | 2.0 | - | 2.2 | - | 43 | - | 5840 (2670) | - | 0.5 | - | 2.2 | - | 42 | - | 5630 (2460) | - |
| 630 | 2.4 | 1.2 | - | 2.0 | - | 2.4 | - | 50 | - | 7490 (3460) | - | 0.5 | - | 2.4 | - | 46 | - | 7490 (3460) | - |

- () : Weight of Cable for Aluminum Conductor
 - Weight can be different depending on item

Bare Wire

OPGW

Insulated Wire

Grounding Wire

Instrument Cable

Control Cable

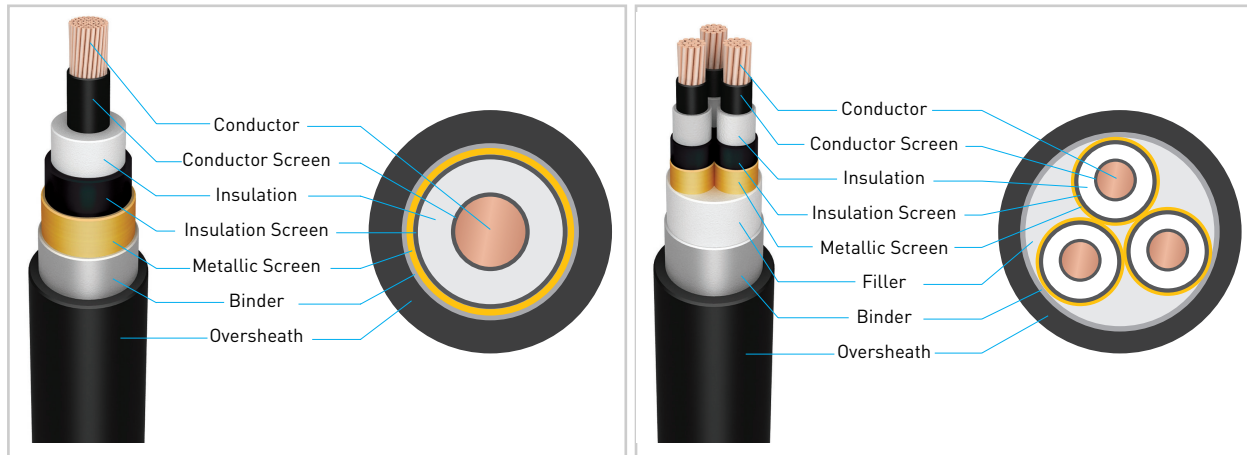
Power Cable

Reference

Installation

3.6/6KV CU(AL-)/XLPE/PVC

3.6/6KV (AL-)CV

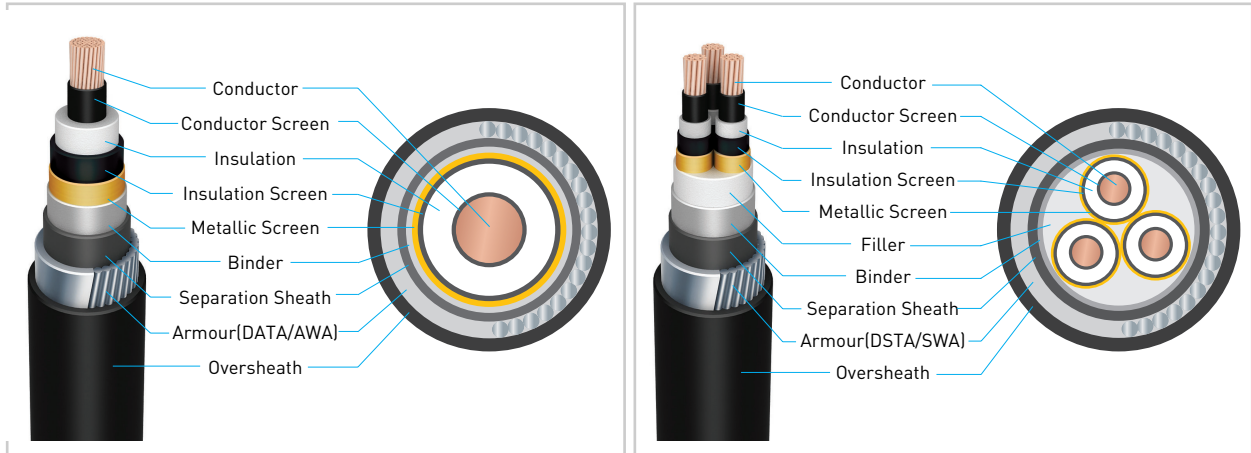


| Nominal Cross-Sectional Area of Conductor | Thickness of Insulation | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | | | |
|---|-------------------------|-------------------------|-----|--------------------------|----|----------------|--------|-------|--------|
| | | 1C | 3C | 1C | 3C | 1C | 3C | | |
| mm ² | mm | mm | | mm | | kg/km | | | |
| 10 | 2.5 | 1.4 | 1.9 | 14 | 27 | 320 | (260) | 1040 | (850) |
| 16 | 2.5 | 1.4 | 2.0 | 15 | 29 | 390 | (290) | 1270 | (970) |
| 25 | 2.5 | 1.5 | 2.0 | 16 | 32 | 500 | (350) | 1610 | (1140) |
| 35 | 2.5 | 1.5 | 2.1 | 18 | 34 | 610 | (400) | 1990 | (1330) |
| 50 | 2.5 | 1.5 | 2.2 | 20 | 39 | 760 | (470) | 2460 | (1570) |
| 70 | 2.5 | 1.6 | 2.3 | 22 | 41 | 990 | (560) | 3200 | (1910) |
| 95 | 2.5 | 1.7 | 2.5 | 24 | 46 | 1280 | (690) | 4140 | (2350) |
| 120 | 2.5 | 1.7 | 2.6 | 25 | 50 | 1540 | (790) | 5030 | (2750) |
| 150 | 2.5 | 1.8 | 2.7 | 27 | 52 | 1840 | (910) | 5960 | (3150) |
| 185 | 2.5 | 1.8 | 2.8 | 28 | 56 | 2220 | (1060) | 7190 | (3680) |
| 240 | 2.6 | 1.9 | 3.0 | 32 | 62 | 2870 | (1330) | 9310 | (4650) |
| 300 | 2.8 | 2.0 | 3.2 | 35 | 68 | 3530 | (1600) | 11460 | (5600) |
| 400 | 3.0 | 2.1 | - | 38 | - | 4420 | (1950) | - | - |
| 500 | 3.2 | 2.2 | - | 42 | - | 5560 | (2400) | - | - |
| 630 | 3.2 | 2.3 | - | 47 | - | 7020 | (2920) | - | - |
| 800 | 3.2 | 2.4 | - | 50 | - | 8900 | (3640) | - | - |
| 1000 | 3.2 | 2.6 | - | 55 | - | 11010 | (4120) | - | - |

- () : Weight of Cable for Aluminum Conductor
 - Weight can be different depending on item

3.6/6KV CU(AL-)/XLPE/PVC/S(A)WA, DS(A)TA/PVC

3.6/6KV (AL-)CV(A)WAV, (A)TAV



| Nominal Cross-Sectional Area of Conductor | Thickness of Insulation | Thickness of Separation Sheath | | Wire Armour | | | | | | | | Tape Armour | | | | | | | |
|---|-------------------------|--------------------------------|-----|--------------------|------|-------------------------|-----|--------------------------|----|----------------|---------------|--------------------|------|-------------------------|-----|--------------------------|----|----------------|--------------|
| | | | | Diameter of Armour | | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | | Diameter of Armour | | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | |
| | | | | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C |
| mm ² | mm | mm | mm | mm | mm | mm | mm | mm | mm | kg/km | kg/km | mm | mm | mm | mm | mm | mm | kg/km | kg/km |
| 10 | 2.5 | 1.2 | 1.2 | 1.6 | 2.0 | 1.8 | 2.1 | 21 | 37 | 550 (320) | 2440 (2250) | 0.5 | 0.25 | 1.8 | 2.0 | 19 | 33 | 480 (410) | 1420 (1230) |
| 16 | 2.5 | 1.2 | 1.2 | 1.6 | 2.0 | 1.8 | 2.2 | 21 | 38 | 630 (330) | 2730 (2440) | 0.5 | 0.5 | 1.8 | 2.1 | 20 | 36 | 550 (450) | 2040 (1740) |
| 25 | 2.5 | 1.2 | 1.2 | 1.6 | 2.0 | 1.8 | 2.3 | 24 | 41 | 850 (390) | 3220 (2750) | 0.5 | 0.5 | 1.8 | 2.2 | 21 | 38 | 670 (510) | 2470 (2010) |
| 35 | 2.5 | 1.2 | 1.2 | 1.6 | 2.5 | 1.8 | 2.4 | 25 | 44 | 980 (450) | 3690 (3040) | 0.5 | 0.5 | 1.8 | 2.3 | 22 | 41 | 790 (570) | 2900 (2250) |
| 50 | 2.5 | 1.2 | 1.3 | 1.6 | 2.5 | 1.8 | 2.5 | 26 | 47 | 1140 (510) | 4730 (3840) | 0.5 | 0.5 | 1.8 | 2.4 | 23 | 44 | 940 (640) | 3460 (2570) |
| 70 | 2.5 | 1.2 | 1.4 | 1.6 | 2.5 | 1.8 | 2.6 | 28 | 52 | 1400 (610) | 5730 (4440) | 0.5 | 0.5 | 1.8 | 2.5 | 25 | 48 | 1180 (750) | 4320 (3030) |
| 95 | 2.5 | 1.2 | 1.4 | 1.6 | 2.5 | 1.9 | 2.7 | 30 | 56 | 1710 (830) | 6840 (5050) | 0.5 | 0.5 | 1.8 | 2.6 | 27 | 52 | 1460 (880) | 5330 (3540) |
| 120 | 2.5 | 1.2 | 1.5 | 1.6 | 2.5 | 1.9 | 2.9 | 31 | 59 | 2010 (950) | 7980 (5710) | 0.5 | 0.5 | 1.8 | 2.8 | 28 | 56 | 1740 (990) | 6350 (4080) |
| 150 | 2.5 | 1.2 | 1.6 | 1.6 | 2.5 | 2.0 | 3.0 | 33 | 63 | 2330 (1060) | 9140 (6330) | 0.5 | 0.5 | 1.9 | 2.9 | 30 | 59 | 2050 (1120) | 7400 (4590) |
| 185 | 2.5 | 1.2 | 1.6 | 2.0 | 2.5 | 2.0 | 3.1 | 35 | 67 | 2830 (1210) | 10570 (7060) | 0.5 | 0.5 | 1.9 | 3.0 | 31 | 63 | 2440 (1280) | 8720 (5210) |
| 240 | 2.6 | 1.2 | 1.7 | 2.0 | 2.5 | 2.1 | 3.3 | 39 | 74 | 3540 (1470) | 13150 (8490) | 0.5 | 0.5 | 2.0 | 3.2 | 35 | 70 | 3120 (1580) | 11050 (6390) |
| 300 | 2.8 | 1.2 | 1.8 | 2.0 | 3.15 | 2.2 | 3.5 | 41 | 82 | 4250 (1720) | 16680 (10820) | 0.5 | 0.5 | 2.1 | 3.4 | 39 | 76 | 3950 (2010) | 13390 (7530) |
| 400 | 3.0 | 1.2 | - | 2.0 | - | 2.3 | - | 45 | - | 5220 (2220) | - | 0.5 | - | 2.3 | - | 42 | - | 4890 (2430) | - |
| 500 | 3.2 | 1.3 | - | 2.0 | - | 2.5 | - | 50 | - | 6640 (2670) | - | 0.5 | - | 2.4 | - | 46 | - | 6100 (2930) | - |
| 630 | 3.2 | 1.4 | - | 2.5 | - | 2.6 | - | 55 | - | 7990 (3460) | - | 0.5 | - | 2.5 | - | 52 | - | 7450 (3410) | - |

- () : Weight of Cable for Aluminum Conductor
 - Weight can be different depending on item

Bare Wire

OPGW

Insulated Wire

Grounding Wire

Instrument Cable

Control Cable

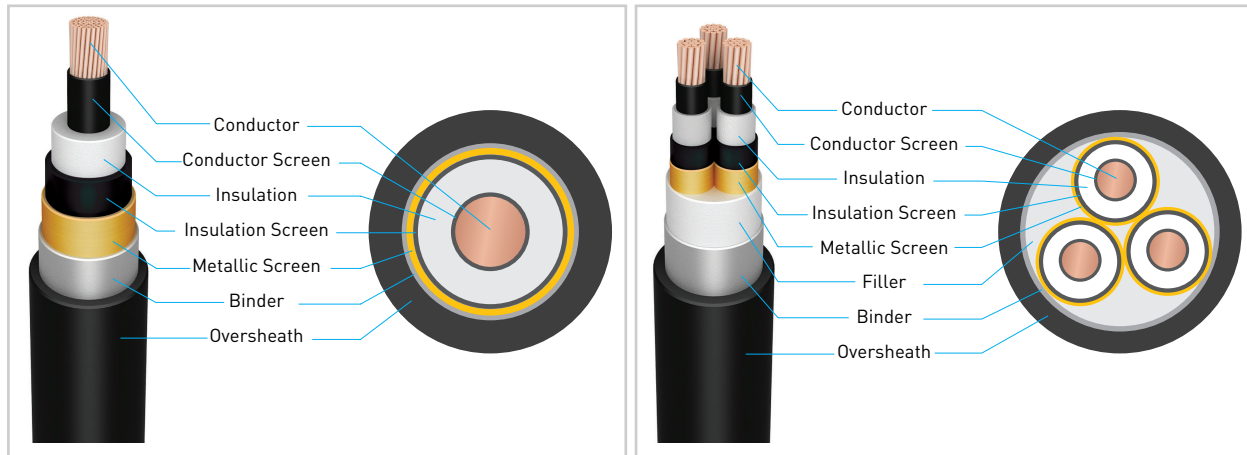
Power Cable

Reference

Installation

6/10KV CU(AL-)/XLPE/PVC

6/10KV (AL-)CV

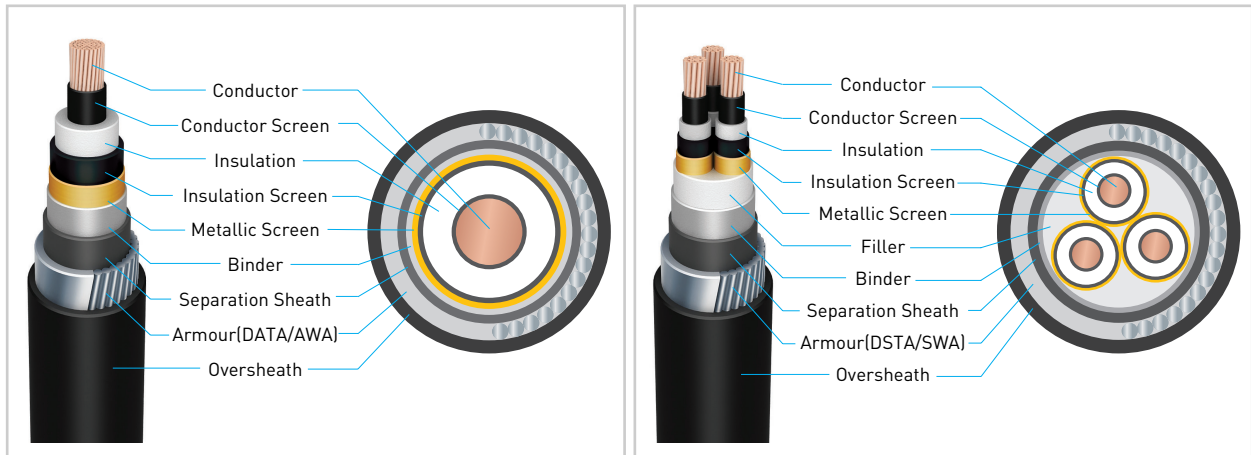


| Nominal Cross-Sectional Area of Conductor | Thickness of Insulation | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | | | |
|---|-------------------------|-------------------------|-----|--------------------------|----|----------------|--------|-------|--------|
| | | 1C | 3C | 1C | 3C | 1C | 3C | | |
| mm ² | mm | mm | | mm | | kg/km | | | |
| 16 | 3.4 | 1.5 | 2.1 | 19 | 36 | 460 | (360) | 1520 | (1230) |
| 25 | 3.4 | 1.5 | 2.2 | 20 | 39 | 270 | (420) | 1920 | (1140) |
| 35 | 3.4 | 1.6 | 2.3 | 21 | 42 | 700 | (480) | 2310 | (1330) |
| 50 | 3.4 | 1.6 | 2.4 | 22 | 44 | 840 | (550) | 2800 | (1570) |
| 70 | 3.4 | 1.7 | 2.5 | 24 | 48 | 1090 | (660) | 3580 | (1910) |
| 95 | 3.4 | 1.7 | 2.6 | 26 | 52 | 1370 | (780) | 4510 | (2350) |
| 120 | 3.4 | 1.8 | 2.7 | 27 | 56 | 1650 | (900) | 5430 | (2750) |
| 150 | 3.4 | 1.8 | 2.8 | 29 | 59 | 1940 | (1020) | 6370 | (3150) |
| 185 | 3.4 | 1.9 | 2.9 | 31 | 63 | 2340 | (1180) | 7640 | (3680) |
| 240 | 3.4 | 2.0 | 3.1 | 34 | 70 | 2990 | (1450) | 9840 | (4650) |
| 300 | 3.4 | 2.0 | 3.3 | 36 | 74 | 3620 | (2530) | 11830 | (5600) |
| 400 | 3.4 | 2.1 | - | 39 | - | 4490 | (2020) | - | - |
| 500 | 3.4 | 2.2 | - | 42 | - | 5610 | (2440) | - | - |
| 630 | 3.4 | 2.3 | - | 47 | - | 7170 | (3070) | - | - |
| 800 | 3.4 | 2.5 | - | 51 | - | 8980 | (3720) | - | - |
| 1000 | 3.4 | 2.6 | - | 57 | - | 11060 | (4480) | - | - |

- () : Weight of Cable for Aluminum Conductor
 - Weight can be different depending on item

6/10KV CU(AL-)/XLPE/PVC/S(A)WA, DS(A)TA/PVC

6/10KV (AL-)CV(A)WAV, (A)TAV



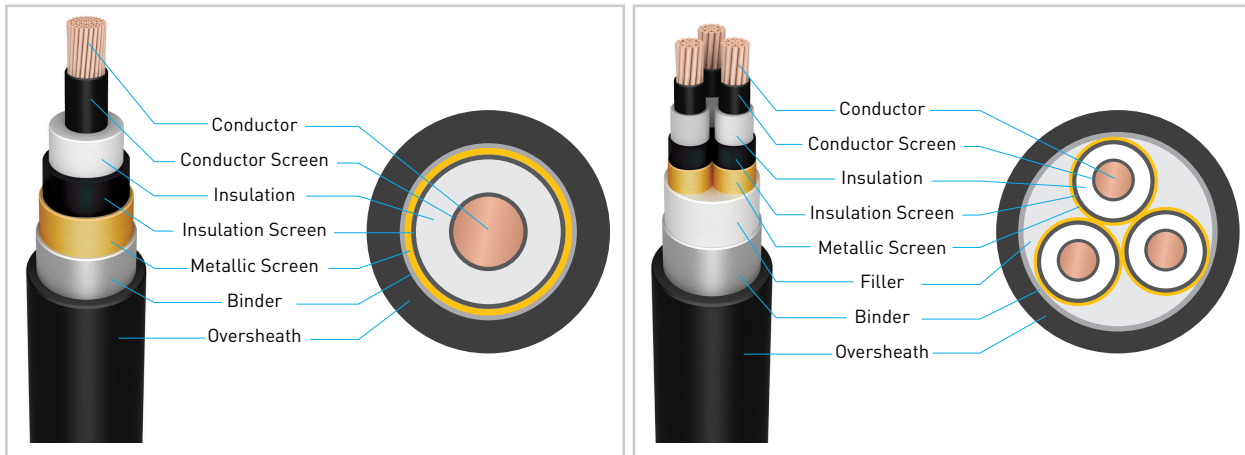
| Nominal Cross-Sectional Area of Conductor | Thickness of Insulation | Thickness of Separation Sheath | | Wire Armour | | | | | | | | Tape Armour | | | | | | | |
|---|-------------------------|--------------------------------|-----|--------------------|------|-------------------------|-----|--------------------------|----|----------------|---------------|--------------------|-----|-------------------------|-----|--------------------------|----|----------------|--------------|
| | | | | Diameter of Armour | | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | | Diameter of Armour | | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | |
| | | | | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C |
| mm ² | mm | mm | mm | mm | mm | mm | mm | mm | mm | kg/km | kg/km | mm | mm | mm | mm | mm | mm | kg/km | kg/km |
| 16 | 3.4 | 1.2 | 1.2 | 1.6 | 2.0 | 1.8 | 2.3 | 24 | 43 | 800 (710) | 3150 (2860) | 0.5 | 0.5 | 1.8 | 2.3 | 22 | 43 | 630 (530) | 2440 (2140) |
| 25 | 3.4 | 1.2 | 1.3 | 1.6 | 2.5 | 1.8 | 2.5 | 26 | 47 | 940 (790) | 4140 (3670) | 0.5 | 0.5 | 1.8 | 2.3 | 23 | 47 | 760 (600) | 2900 (2430) |
| 35 | 3.4 | 1.2 | 1.3 | 1.6 | 2.5 | 1.8 | 2.5 | 27 | 49 | 1070 (860) | 4640 (3990) | 0.5 | 0.5 | 1.8 | 2.4 | 24 | 49 | 880 (670) | 3350 (2690) |
| 50 | 3.4 | 1.2 | 1.4 | 1.6 | 2.5 | 1.8 | 2.6 | 28 | 52 | 1230 (940) | 5280 (4390) | 0.5 | 0.5 | 1.8 | 2.5 | 25 | 52 | 1030 (740) | 3920 (3030) |
| 70 | 3.4 | 1.2 | 1.4 | 1.6 | 2.5 | 1.9 | 2.8 | 30 | 56 | 1500 (1080) | 6290 (5010) | 0.5 | 0.5 | 1.8 | 2.7 | 27 | 56 | 1280 (850) | 4820 (3540) |
| 95 | 3.4 | 1.2 | 1.5 | 1.6 | 2.5 | 1.9 | 2.9 | 31 | 60 | 1810 (1230) | 7480 (5700) | 0.5 | 0.5 | 1.8 | 2.8 | 29 | 60 | 1570 (980) | 5090 (4090) |
| 120 | 3.4 | 1.2 | 1.6 | 1.6 | 2.5 | 2.0 | 3.0 | 33 | 64 | 2130 (1380) | 8610 (6330) | 0.5 | 0.5 | 1.9 | 2.9 | 31 | 64 | 1870 (1120) | 6910 (4630) |
| 150 | 3.4 | 1.2 | 1.6 | 2.0 | 2.5 | 2.0 | 3.1 | 35 | 67 | 2520 (1600) | 9730 (6920) | 0.5 | 0.5 | 1.9 | 3.0 | 32 | 67 | 2170 (1240) | 7930 (5110) |
| 185 | 3.4 | 1.2 | 1.7 | 2.0 | 2.5 | 2.1 | 3.2 | 37 | 71 | 2960 (1800) | 12230 (7720) | 0.5 | 0.5 | 2.0 | 3.1 | 34 | 71 | 2580 (1420) | 9340 (5820) |
| 240 | 3.4 | 1.2 | 1.8 | 2.0 | 3.15 | 2.2 | 3.4 | 40 | 79 | 3660 (2120) | 14770 (10110) | 0.5 | 0.5 | 2.1 | 3.3 | 37 | 79 | 3260 (1720) | 11660 (6690) |
| 300 | 3.4 | 1.2 | 1.9 | 2.0 | 3.15 | 2.3 | 3.6 | 43 | 84 | 4350 (2410) | 17170 (11310) | 0.5 | 0.5 | 2.2 | 3.5 | 40 | 84 | 4070 (2140) | 13890 (8030) |
| 400 | 3.4 | 1.2 | - | 2.0 | - | 2.4 | - | 46 | - | 5280 (2810) | - | 0.5 | - | 2.3 | - | 43 | - | 4970 (2510) | - |
| 500 | 3.4 | 1.3 | - | 2.5 | - | 2.5 | - | 50 | - | 6650 (3480) | - | 0.5 | - | 2.4 | - | 47 | - | 6160 (2990) | - |
| 630 | 3.4 | 1.4 | - | 2.5 | - | 2.6 | - | 56 | - | 8020 (3990) | - | 0.5 | - | 2.5 | - | 52 | - | 7480 (3450) | - |

- () : Weight of Cable for Aluminum Conductor

- Weight can be different depending on item

8.7/15KV CU(AL-)/XLPE/PVC

8.7/15KV (AL-)CV

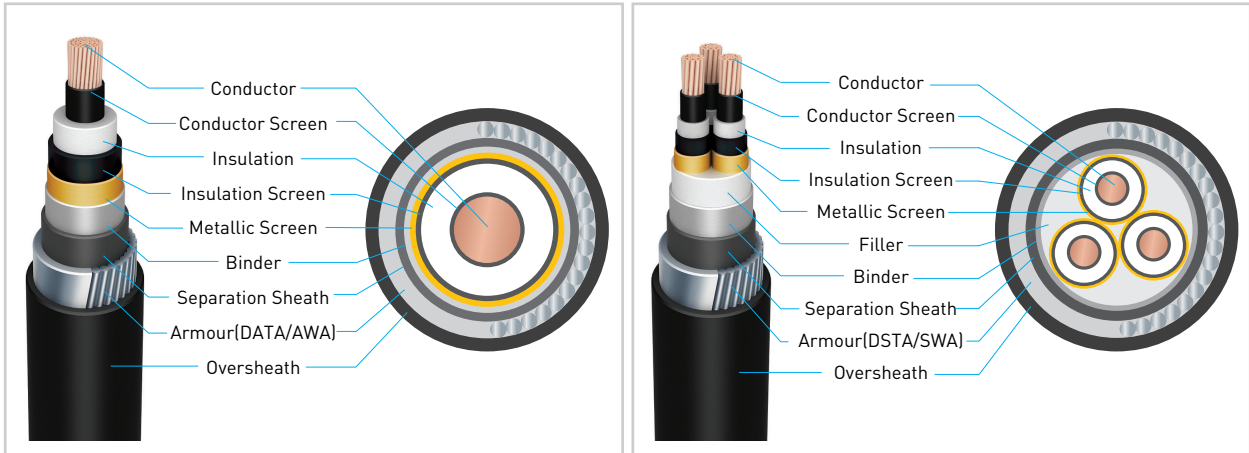


| Nominal Cross-Sectional Area of Conductor | Thickness of Insulation | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | |
|---|-------------------------|-------------------------|-----|--------------------------|----|----------------|---------------------|
| | | 1C | 3C | 1C | 3C | 1C | 3C |
| mm ² | mm | mm | | mm | | kg/km | |
| 25 | 4.5 | 1.6 | 2.4 | 22 | 45 | 670 | (520) 2280 (1810) |
| 35 | 4.5 | 1.7 | 2.4 | 24 | 47 | 800 | (590) 2680 (2030) |
| 50 | 4.5 | 1.7 | 2.5 | 25 | 50 | 950 | (660) 3190 (2290) |
| 70 | 4.5 | 1.7 | 2.7 | 27 | 54 | 1190 | (770) 4030 (2740) |
| 95 | 4.5 | 1.8 | 2.8 | 28 | 58 | 1490 | (900) 5000 (3210) |
| 120 | 4.5 | 1.9 | 2.9 | 30 | 61 | 1790 | (1030) 5930 (3660) |
| 150 | 4.5 | 1.9 | 3.0 | 32 | 64 | 2080 | (1150) 6920 (4110) |
| 185 | 4.5 | 2.0 | 3.1 | 33 | 68 | 2490 | (1330) 8190 (4680) |
| 240 | 4.5 | 2.0 | 3.3 | 36 | 76 | 3130 | (1590) 9880 (5720) |
| 300 | 4.5 | 2.1 | 3.4 | 39 | 80 | 3790 | (1850) 12470 (6610) |
| 400 | 4.5 | 2.2 | - | 43 | - | 4670 | (2200) - - |
| 500 | 4.5 | 2.3 | - | 45 | - | 5800 | (2630) - - |
| 630 | 4.5 | 2.4 | - | 50 | - | 7390 | (3290) - - |
| 800 | 4.5 | 2.5 | - | 54 | - | 9180 | (3930) - - |
| 1000 | 4.5 | 2.6 | - | 58 | - | 11310 | (4720) - - |

- () : Weight of Cable for Aluminum Conductor
 - Weight can be different depending on item

8.7/15KV CU(AL-)/XLPE/PVC/S(A)WA, DS(A)TA/PVC

8.7/15KV (AL-)CV(A)WAV, (A)TAV

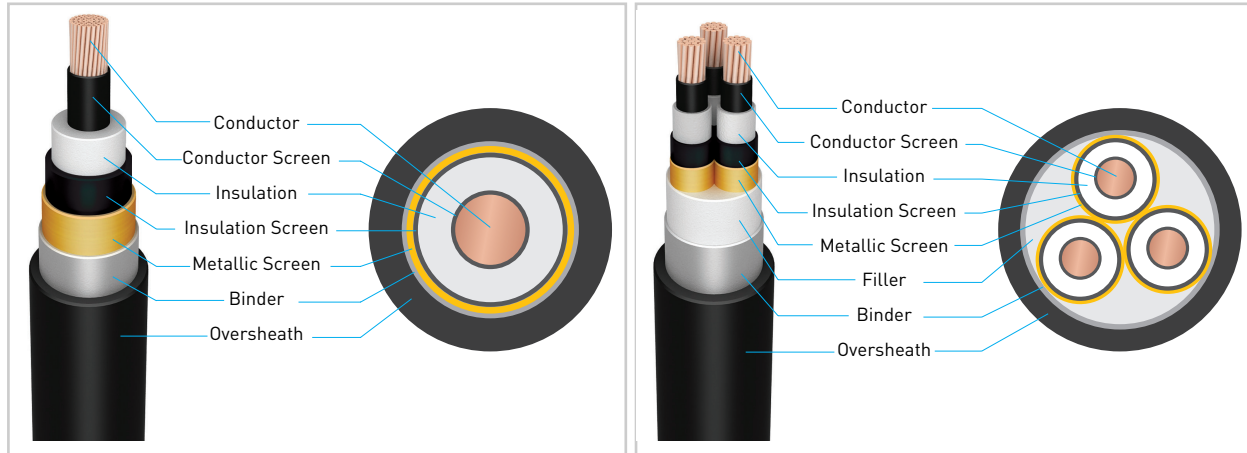


| Nominal Cross-Sectional Area of Conductor | Thickness of Insulation | Thickness of Separation Sheath | | Wire Armour | | | | | | | | Tape Armour | | | | | | | |
|---|-------------------------|--------------------------------|-----|--------------------|------|-------------------------|-----|--------------------------|----|----------------|---------------|--------------------|------|-------------------------|-----|--------------------------|----|----------------|--------------|
| | | | | Diameter of Armour | | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | | Diameter of Armour | | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | |
| | | | | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C |
| mm ² | mm | mm | mm | mm | mm | mm | mm | mm | mm | kg/km | kg/km | mm | mm | mm | mm | mm | mm | kg/km | kg/km |
| 25 | 4.5 | 1.2 | 1.4 | 1.6 | 2.5 | 1.8 | 2.6 | 28 | 53 | 1070 (910) | 4770 (4310) | 0.5 | 0.25 | 1.8 | 2.5 | 26 | 49 | 870 (710) | 3420 (2950) |
| 35 | 4.5 | 1.2 | 1.4 | 1.6 | 2.5 | 1.9 | 2.7 | 29 | 55 | 1210 (1000) | 5330 (4680) | 0.5 | 0.5 | 1.8 | 2.6 | 27 | 53 | 990 (780) | 3700 (3340) |
| 50 | 4.5 | 1.2 | 1.5 | 1.6 | 2.5 | 1.9 | 2.8 | 30 | 58 | 1380 (1090) | 6020 (5120) | 0.5 | 0.5 | 1.8 | 2.7 | 28 | 55 | 1150 (860) | 4200 (3610) |
| 70 | 4.5 | 1.2 | 1.5 | 1.6 | 2.5 | 1.9 | 2.9 | 32 | 62 | 1640 (1220) | 7050 (5780) | 0.5 | 0.5 | 1.9 | 2.8 | 30 | 59 | 1410 (990) | 5100 (4120) |
| 95 | 4.5 | 1.2 | 1.6 | 2.0 | 2.5 | 2.0 | 3.1 | 35 | 66 | 2070 (1480) | 8270 (6490) | 0.5 | 0.5 | 1.9 | 2.9 | 31 | 63 | 1720 (1130) | 6020 (4740) |
| 120 | 4.5 | 1.2 | 1.7 | 2.0 | 2.5 | 2.1 | 3.2 | 37 | 70 | 2390 (1640) | 9430 (7150) | 0.5 | 0.5 | 2.0 | 3.0 | 33 | 66 | 2020 (1270) | 7050 (5310) |
| 150 | 4.5 | 1.2 | 1.7 | 2.0 | 3.15 | 2.1 | 3.3 | 38 | 74 | 2710 (1780) | 11470 (8670) | 0.5 | 0.5 | 2.0 | 3.2 | 35 | 70 | 2330 (1410) | 8650 (5840) |
| 185 | 4.5 | 1.2 | 1.8 | 2.0 | 3.15 | 2.2 | 3.4 | 40 | 78 | 3150 (1990) | 13070 (9560) | 0.5 | 0.5 | 2.1 | 3.3 | 36 | 74 | 2740 (1580) | 10060 (6550) |
| 240 | 4.5 | 1.2 | 1.9 | 2.0 | 3.15 | 2.3 | 3.6 | 43 | 85 | 3870 (2330) | 15800 (11140) | 0.5 | 0.5 | 2.2 | 3.5 | 41 | 80 | 3590 (2050) | 12460 (7800) |
| 300 | 4.5 | 1.2 | 2.0 | 2.0 | 3.15 | 2.3 | 3.8 | 45 | 90 | 4550 (2610) | 18270 (12410) | 0.5 | 0.8 | 2.3 | 3.7 | 43 | 87 | 4270 (2330) | 15720 (9860) |
| 400 | 4.5 | 1.3 | - | 2.5 | - | 2.5 | - | 49 | - | 5690 (3220) | - | 0.5 | - | 2.4 | - | 46 | - | 5210 (2740) | - |
| 500 | 4.5 | 1.3 | - | 2.5 | - | 2.6 | - | 53 | - | 6960 (3800) | - | 0.5 | - | 2.5 | - | 50 | - | 6380 (3210) | - |
| 630 | 4.5 | 1.4 | - | 2.5 | - | 2.7 | - | 58 | - | 8280 (4240) | - | 0.5 | - | 2.6 | - | 56 | - | 7710 (3670) | - |

- () : Weight of Cable for Aluminum Conductor
 - Weight can be different depending on item

12/20KV CU(AL-)/XLPE/PVC

12/20KV (AL-)CV



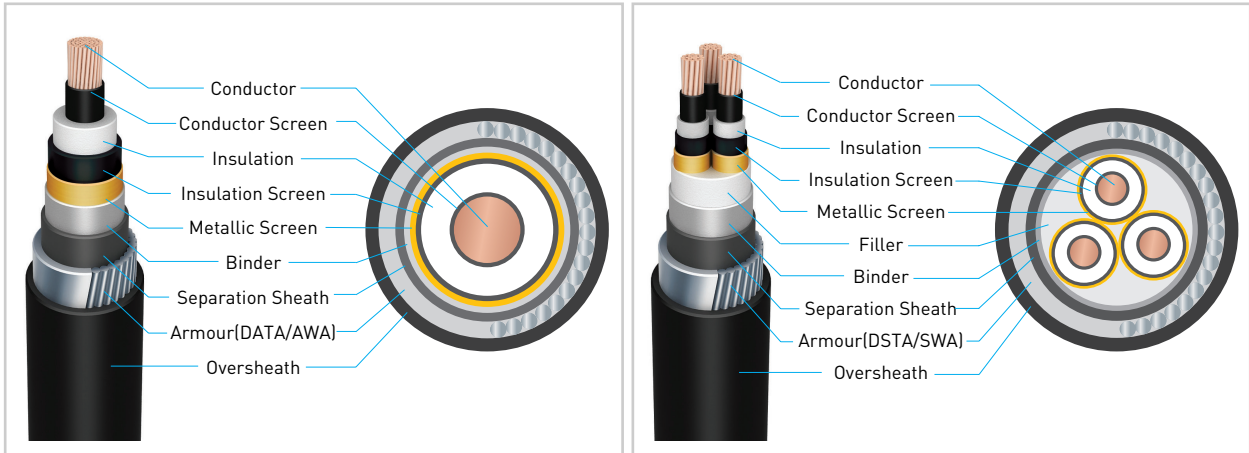
| Nominal Cross-Sectional Area of Conductor | Thickness of Insulation | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | | | |
|---|-------------------------|-------------------------|-----|--------------------------|----|----------------|--------|-------|--------|
| | | 1C | 3C | 1C | 3C | 1C | 3C | | |
| mm ² | mm | mm | | mm | | kg/km | | | |
| 35 | 5.5 | 1.7 | 2.6 | 26 | 53 | 910 | (700) | 3170 | (2520) |
| 50 | 5.5 | 1.8 | 2.7 | 28 | 56 | 1050 | (790) | 3550 | (2800) |
| 70 | 5.5 | 1.8 | 2.8 | 29 | 59 | 1300 | (900) | 4350 | (3240) |
| 95 | 5.5 | 1.9 | 3.0 | 30 | 63 | 1600 | (1050) | 5360 | (3730) |
| 120 | 5.5 | 1.9 | 3.1 | 33 | 66 | 1880 | (1170) | 6270 | (4200) |
| 150 | 5.5 | 2.0 | 3.2 | 34 | 69 | 2200 | (1310) | 7370 | (4700) |
| 185 | 5.5 | 2.1 | 3.3 | 36 | 73 | 2600 | (1480) | 8590 | (5300) |
| 240 | 5.5 | 2.1 | 3.4 | 39 | 78 | 3180 | (1770) | 10600 | (6390) |
| 300 | 5.5 | 2.2 | 3.6 | 41 | 87 | 3960 | (2040) | 13300 | (7250) |
| 400 | 5.5 | 2.3 | - | 45 | - | 4910 | (2410) | - | - |
| 500 | 5.5 | 2.4 | - | 48 | - | 5950 | (2860) | - | - |
| 630 | 5.5 | 2.5 | - | 51 | - | 7310 | (3540) | - | - |
| 800 | 5.5 | 2.6 | - | 53 | - | 9130 | (4190) | - | - |
| 1000 | 5.5 | 2.7 | - | 57 | - | 11250 | (4950) | - | - |

- () : Weight of Cable for Aluminum Conductor

- Weight can be different depending on item

12/20KV CU(AL-)/XLPE/PVC/S(A)WA, DS(A)TA/PVC

12/20KV (AL-)CV(A)WAV, (A)TAV



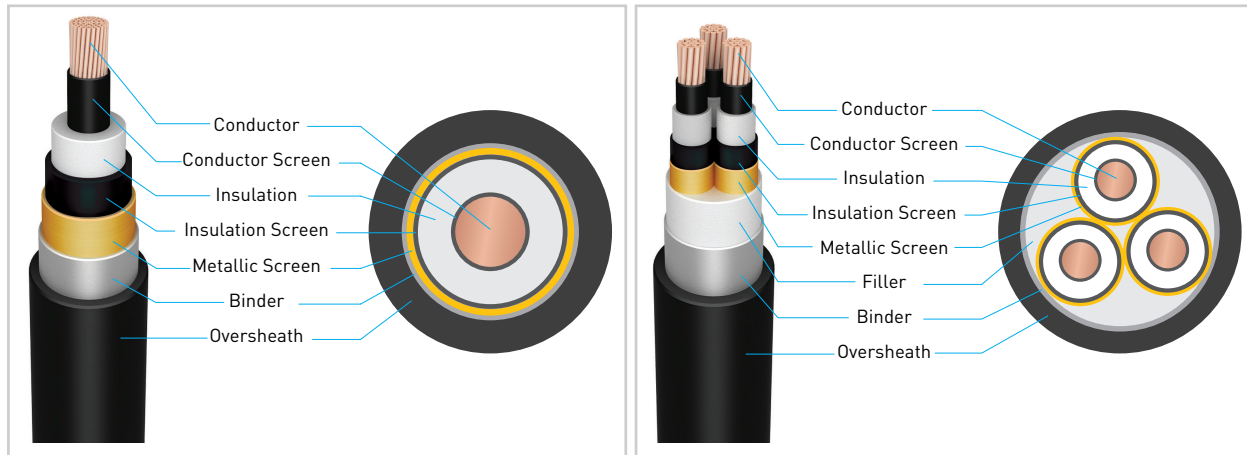
| Nominal Cross-Sectional Area of Conductor | Thickness of Insulation | Thickness of Separation Sheath | | Wire Armour | | | | | | | | Tape Armour | | | | | | | |
|---|-------------------------|--------------------------------|-----|--------------------|------|-------------------------|-----|--------------------------|----|----------------|---------------|--------------------|-----|-------------------------|-----|--------------------------|----|----------------|---------------|
| | | | | Diameter of Armour | | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | | Diameter of Armour | | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | |
| | | | | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C |
| mm ² | mm | mm | mm | mm | mm | mm | mm | mm | mm | kg/km | kg/km | mm | mm | mm | mm | mm | mm | kg/km | kg/km |
| 35 | 5.5 | 1.2 | 1.5 | 1.6 | 2.5 | 1.9 | 2.9 | 32 | 61 | 1370 (1150) | 6190 (5530) | 0.5 | 0.5 | 1.8 | 2.8 | 29 | 58 | 1120 (910) | 4570 (3920) |
| 50 | 5.5 | 1.2 | 1.6 | 1.6 | 2.5 | 2.0 | 3.0 | 33 | 64 | 1550 (1260) | 6870 (5980) | 0.5 | 0.5 | 1.9 | 2.9 | 31 | 61 | 1300 (1000) | 5180 (4290) |
| 70 | 5.5 | 1.2 | 1.6 | 2.0 | 2.5 | 2.0 | 3.1 | 36 | 68 | 1920 (1490) | 7940 (6650) | 0.5 | 0.5 | 1.9 | 3.0 | 32 | 65 | 1560 (1130) | 6110 (4820) |
| 95 | 5.5 | 1.2 | 1.7 | 2.0 | 2.5 | 2.1 | 3.2 | 38 | 72 | 2270 (1680) | 9150 (7370) | 0.5 | 0.5 | 2.0 | 3.1 | 34 | 69 | 1880 (1290) | 7230 (5440) |
| 120 | 5.5 | 1.2 | 1.8 | 2.0 | 3.15 | 2.1 | 3.4 | 39 | 77 | 2580 (1820) | 11310 (9040) | 0.5 | 0.5 | 2.0 | 3.2 | 36 | 72 | 2180 (1430) | 8310 (6040) |
| 150 | 5.5 | 1.2 | 1.8 | 2.0 | 3.15 | 2.2 | 3.5 | 41 | 80 | 2920 (1990) | 12630 (9820) | 0.5 | 0.5 | 2.1 | 3.3 | 39 | 76 | 2660 (1730) | 9430 (6620) |
| 185 | 5.5 | 1.2 | 1.9 | 2.0 | 3.15 | 2.2 | 3.6 | 42 | 84 | 3340 (2180) | 14190 (10680) | 0.5 | 0.5 | 2.2 | 3.4 | 40 | 80 | 3090 (1930) | 10870 (7360) |
| 240 | 5.5 | 1.2 | 2.0 | 2.0 | 3.15 | 2.3 | 3.8 | 45 | 92 | 4090 (2550) | 17000 (12340) | 0.5 | 0.8 | 2.3 | 3.7 | 43 | 88 | 3800 (2260) | 14370 (9710) |
| 300 | 5.5 | 1.3 | 2.1 | 2.5 | 3.15 | 2.4 | 3.9 | 49 | 97 | 4970 (3040) | 19630 (13770) | 0.5 | 0.8 | 2.3 | 3.8 | 46 | 93 | 4490 (2560) | 16690 (10830) |
| 400 | 5.5 | 1.3 | - | 2.5 | - | 2.5 | - | 52 | - | 5930 (3460) | - | 0.5 | - | 2.4 | - | 49 | - | 5420 (2950) | - |
| 500 | 5.5 | 1.4 | - | 2.5 | - | 2.6 | - | 56 | - | 7250 (4080) | - | 0.5 | - | 2.5 | - | 52 | - | 6640 (3640) | - |
| 630 | 5.5 | 1.5 | - | 2.5 | - | 2.7 | - | 60 | - | 8540 (4500) | - | 0.5 | - | 2.6 | - | 57 | - | 7940 (3910) | - |

- () : Weight of Cable for Aluminum Conductor

- Weight can be different depending on item

18/30KV CU(AL-)/XLPE/PVC

18/30KV (AL-)CV



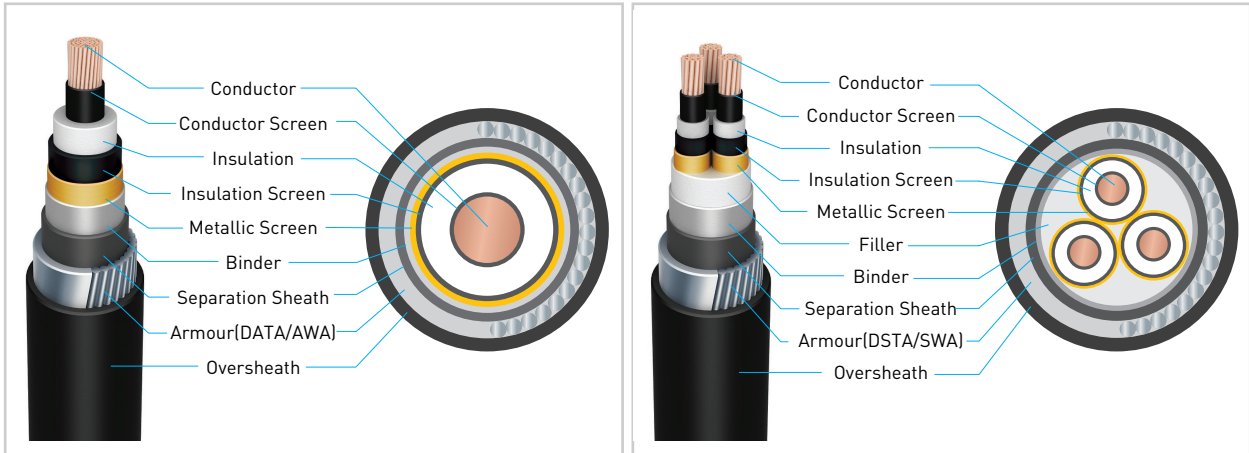
| Nominal Cross-Sectional Area of Conductor | Thickness of Insulation | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | | | |
|---|-------------------------|-------------------------|-----|--------------------------|----|----------------|--------|-------|--------|
| | | 1C | 3C | 1C | 3C | 1C | 3C | | |
| mm ² | mm | mm | | mm | | kg/km | | | |
| 50 | 8.0 | 2.0 | 3.1 | 34 | 68 | 1360 | (960) | 4700 | (4310) |
| 70 | 8.0 | 2.1 | 3.2 | 36 | 72 | 1610 | (1090) | 5570 | (4830) |
| 95 | 8.0 | 2.1 | 3.3 | 38 | 76 | 1910 | (1240) | 6600 | (5330) |
| 120 | 8.0 | 2.1 | 3.4 | 40 | 79 | 2140 | (1360) | 7570 | (5970) |
| 150 | 8.0 | 2.2 | 3.6 | 41 | 83 | 2540 | (1510) | 8760 | (6530) |
| 185 | 8.0 | 2.2 | 3.7 | 43 | 86 | 2930 | (1680) | 10060 | (7230) |
| 240 | 8.0 | 2.3 | 3.8 | 46 | 91 | 3560 | (1980) | 12800 | (8460) |
| 300 | 8.0 | 2.4 | 4.0 | 48 | 98 | 4280 | (2250) | 15400 | (9490) |
| 400 | 8.0 | 2.5 | - | 51 | - | 5350 | (2640) | - | - |
| 500 | 8.0 | 2.6 | - | 55 | - | 6430 | (3090) | - | - |
| 630 | 8.0 | 2.7 | - | 60 | - | 7810 | (3650) | - | - |
| 800 | 8.0 | 2.8 | - | 64 | - | 9670 | (4310) | - | - |
| 1000 | 8.0 | 3.0 | - | 68 | - | 11900 | (5120) | - | - |

- () : Weight of Cable for Aluminum Conductor

- Weight can be different depending on item

18/30KV CU(AL-)/XLPE/PVC/S(A)WA, DS(A)TA/PVC

18/30KV (AL-)CV(A)WAV, (A)TAV



| Nominal Cross-Sectional Area of Conductor | Thickness of Insulation | Thickness of Separation Sheath | | Wire Armour | | | | | | | | Tape Armour | | | | | | | |
|---|-------------------------|--------------------------------|-----|--------------------|------|-------------------------|-----|--------------------------|-----|----------------|---------------|--------------------|-----|-------------------------|-----|--------------------------|-----|----------------|---------------|
| | | | | Diameter of Armour | | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | | Diameter of Armour | | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | |
| | | | | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C |
| mm ² | mm | mm | mm | mm | mm | mm | mm | mm | mm | kg/km | kg/km | mm | mm | mm | mm | mm | mm | kg/km | kg/km |
| 50 | 8.0 | 1.2 | 1.8 | 2.0 | 3.15 | 2.2 | 3.4 | 41 | 79 | 2140 (1840) | 10360 (9470) | 0.5 | 0.5 | 2.1 | 3.3 | 37 | 77 | 1720 (1380) | 7160 (6270) |
| 70 | 8.0 | 1.2 | 1.8 | 2.0 | 3.15 | 2.2 | 3.5 | 43 | 82 | 2440 (2010) | 11500 (10210) | 0.5 | 0.5 | 2.1 | 3.4 | 40 | 81 | 2160 (1740) | 8170 (6880) |
| 95 | 8.0 | 1.2 | 1.9 | 2.0 | 3.15 | 2.3 | 3.7 | 44 | 85 | 2800 (2220) | 12960 (11170) | 0.5 | 0.5 | 2.2 | 3.5 | 42 | 85 | 2510 (1920) | 9390 (7600) |
| 120 | 8.0 | 1.2 | 2.0 | 2.0 | 3.15 | 2.3 | 3.8 | 46 | 90 | 3130 (2470) | 14270 (12000) | 0.5 | 0.8 | 2.3 | 3.7 | 44 | 90 | 2850 (2100) | 11620 (9050) |
| 150 | 8.0 | 1.3 | 2.0 | 2.5 | 3.15 | 2.4 | 3.9 | 49 | 94 | 3670 (2750) | 15590 (12780) | 0.5 | 0.8 | 2.3 | 3.8 | 46 | 93 | 3200 (2270) | 12830 (10020) |
| 185 | 8.0 | 1.3 | 2.1 | 2.5 | 3.15 | 2.5 | 4.0 | 51 | 98 | 4150 (2990) | 17330 (13820) | 0.5 | 0.8 | 2.4 | 3.9 | 47 | 97 | 3660 (2500) | 14430 (10920) |
| 240 | 8.0 | 1.3 | 2.2 | 2.5 | 3.15 | 2.5 | 4.2 | 54 | 104 | 4910 (3370) | 20200 (15540) | 0.5 | 0.8 | 2.4 | 4.1 | 50 | 104 | 4380 (2840) | 17110 (12450) |
| 300 | 8.0 | 1.4 | 2.3 | 2.5 | 3.15 | 2.6 | 4.3 | 56 | 110 | 5680 (3750) | 26940 (17000) | 0.5 | 0.8 | 2.5 | 4.2 | 53 | 109 | 5120 (3190) | 19580 (13720) |
| 400 | 8.0 | 1.4 | - | 2.5 | - | 2.7 | - | 59 | - | 6670 (4210) | - | 0.5 | - | 2.6 | - | 56 | - | 6090 (3620) | - |
| 500 | 8.0 | 1.5 | - | 2.5 | - | 2.8 | - | 63 | - | 8050 (4880) | - | 0.5 | - | 2.7 | - | 59 | - | 7340 (4170) | - |
| 630 | 8.0 | 1.6 | - | 2.5 | - | 3.0 | - | 66 | - | 9010 (5200) | - | 0.5 | - | 2.9 | - | 62 | - | 8400 (4520) | - |

- () : Weight of Cable for Aluminum Conductor
 - Weight can be different depending on item

Bare Wire

OPGW

Insulated Wire

Grounding Wire

Instrument Cable

Control Cable

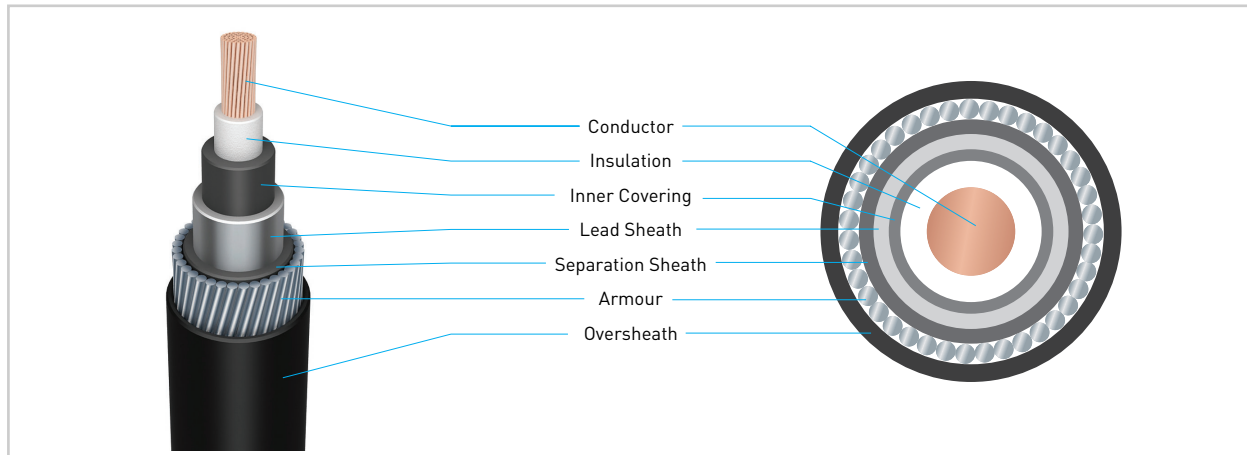
Power Cable

Reference

Installation

0.6/1KV CU(AL-)/XLPE/PVC/LEAD/PVC/S(A)WA/PVC

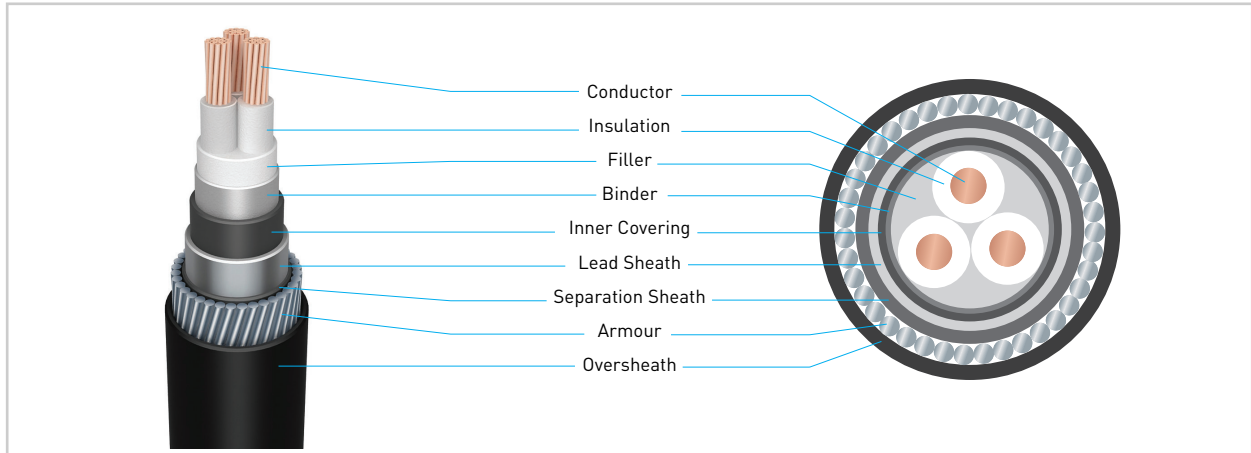
0.6/1KV (AL-)CLV(A)WAV



| Nominal Cross-Sectional Area | Thickness of insulation | Thickness of Inner Covering | | Thickness of Lead sheath | | Thickness of Separation sheath | | Thickness of Armour | | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | |
|------------------------------|-------------------------|-----------------------------|-----|--------------------------|-----|--------------------------------|-----|---------------------|------|-------------------------|-----|--------------------------|----|----------------|---------------|
| | | 1C | 2C | 1C | 2C | 1C | 2C | 1C | 2C | 1C | 2C | 1C | 2C | 1C | 2C |
| mm ² | mm | mm | | mm | | mm | | mm | | mm | | mm | | kg/km | |
| 1.5 | 0.7 | - | 1.0 | - | 1.2 | - | 1.0 | - | 1.25 | - | 1.8 | - | 22 | - | 1030 (-) |
| 2.5 | 0.7 | - | 1.0 | - | 1.2 | - | 1.0 | - | 1.25 | - | 1.8 | - | 22 | - | 1120 (-) |
| 4 | 0.7 | - | 1.0 | - | 1.2 | - | 1.0 | - | 1.25 | - | 1.8 | - | 22 | - | 1250 (-) |
| 6 | 0.7 | - | 1.0 | - | 1.2 | - | 1.0 | - | 1.25 | - | 1.8 | - | 23 | - | 1380 (-) |
| 10 | 0.7 | 1.0 | 1.0 | 1.2 | 1.2 | 1.0 | 1.0 | 1.6 | 1.6 | 1.8 | 1.8 | 23 | 26 | 830 (-) | 1760 (-) |
| 16 | 0.7 | 1.0 | 1.0 | 1.2 | 1.2 | 1.0 | 1.0 | 1.6 | 1.6 | 1.8 | 1.8 | 23 | 27 | 930 (830) | 2010 (1810) |
| 25 | 0.9 | 1.0 | 1.0 | 1.2 | 1.2 | 1.0 | 1.0 | 1.6 | 1.6 | 1.8 | 1.8 | 23 | 31 | 1140 (990) | 2500 (2190) |
| 35 | 0.9 | 1.0 | 1.0 | 1.2 | 1.2 | 1.0 | 1.0 | 1.6 | 1.6 | 1.8 | 1.9 | 24 | 33 | 1310 (1090) | 2900 (2470) |
| 50 | 1.0 | 1.0 | 1.0 | 1.2 | 1.3 | 1.0 | 1.1 | 1.6 | 2.0 | 1.8 | 2.0 | 25 | 37 | 1530 (1230) | 3780 (3190) |
| 70 | 1.1 | 1.0 | 1.0 | 1.2 | 1.4 | 1.0 | 1.1 | 1.6 | 2.0 | 1.8 | 2.2 | 27 | 42 | 1880 (1450) | 4770 (3910) |
| 95 | 1.1 | 1.0 | 1.2 | 1.2 | 1.5 | 1.0 | 1.2 | 1.6 | 2.0 | 1.8 | 2.3 | 29 | 47 | 2250 (1660) | 5900 (4700) |
| 120 | 1.2 | 1.0 | 1.2 | 1.3 | 1.6 | 1.0 | 1.3 | 1.6 | 2.5 | 1.8 | 2.4 | 31 | 52 | 2690 (1940) | 7490 (5980) |
| 150 | 1.4 | 1.0 | 1.2 | 1.3 | 1.7 | 1.0 | 1.3 | 1.6 | 2.5 | 1.9 | 2.6 | 33 | 56 | 3060 (2180) | 8630 (6860) |
| 185 | 1.6 | 1.0 | 1.4 | 1.4 | 1.8 | 1.0 | 1.4 | 1.6 | 2.5 | 2.0 | 2.7 | 35 | 61 | 3650 (2560) | 10240 (8450) |
| 240 | 1.7 | 1.0 | 1.4 | 1.5 | 2.0 | 1.1 | 1.5 | 2.0 | 2.5 | 2.1 | 2.9 | 39 | 67 | 4550 (3160) | 12430 (9620) |
| 300 | 1.8 | 1.0 | 1.6 | 1.5 | 2.1 | 1.1 | 1.6 | 2.0 | 2.5 | 2.2 | 3.1 | 41 | 73 | 5370 (3540) | 14860 (11180) |
| 400 | 2.0 | 1.2 | - | 1.6 | - | 1.2 | - | 2.0 | - | 2.3 | - | 46 | - | 6770 (4340) | - |
| 500 | 2.2 | 1.2 | - | 1.7 | - | 1.3 | - | 2.5 | - | 2.4 | - | 51 | - | 8310 (5430) | - |
| 630 | 2.4 | 1.2 | - | 1.8 | - | 1.4 | - | 2.5 | - | 2.6 | - | 56 | - | 10230 (6440) | - |

- () : Weight of Cable for Aluminum Conductor

- Weight can be different depending on item

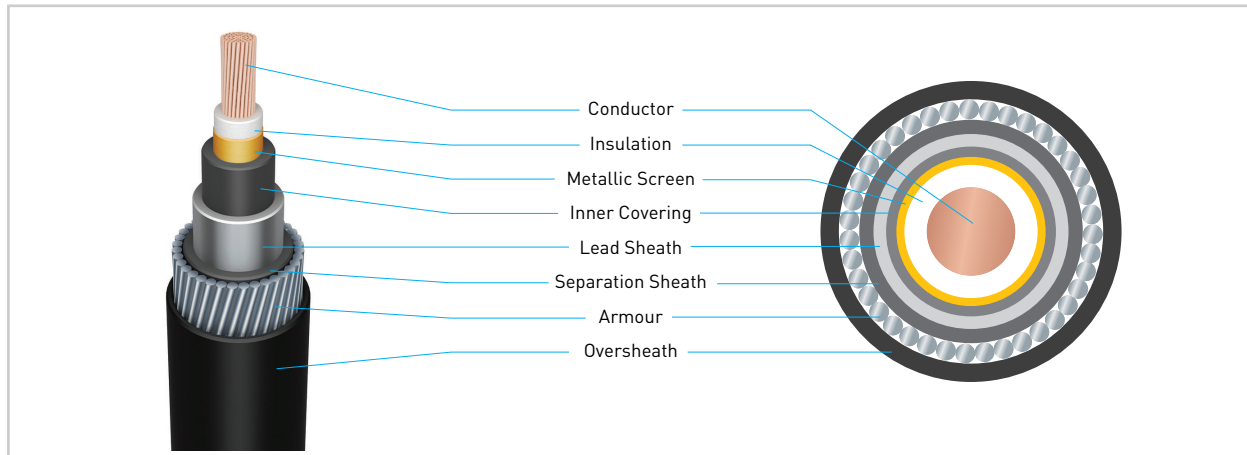


| Nominal Cross-Sectional Area | Thickness of insulation | Thickness of Inner Covering | | Thickness of Lead sheath | | Thickness of Separation sheath | | Thickness of Armour | | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | |
|------------------------------|-------------------------|-----------------------------|-----|--------------------------|-----|--------------------------------|-----|---------------------|------|-------------------------|-----|--------------------------|----|----------------|---------------|
| | | 3C | 4C | 3C | 4C | 3C | 4C | 3C | 4C | 3C | 4C | 3C | 4C | 3C | 4C |
| mm ² | mm | mm | | mm | | mm | | mm | | mm | | mm | | kg/km | |
| 1.5 | 0.7 | 1.0 | 1.0 | 1.2 | 1.2 | 1.0 | 1.0 | 1.25 | 1.25 | 1.8 | 1.8 | 22 | 22 | 1090 (-) | 1180 (-) |
| 2.5 | 0.7 | 1.0 | 1.0 | 1.2 | 1.2 | 1.0 | 1.0 | 1.25 | 1.25 | 1.8 | 1.8 | 22 | 23 | 1190 (-) | 1300 (-) |
| 4 | 0.7 | 1.0 | 1.0 | 1.2 | 1.2 | 1.0 | 1.0 | 1.25 | 1.25 | 1.8 | 1.8 | 23 | 24 | 1340 (-) | 1470 (-) |
| 6 | 0.7 | 1.0 | 1.0 | 1.2 | 1.2 | 1.0 | 1.0 | 1.25 | 1.6 | 1.8 | 1.8 | 24 | 26 | 1510 (-) | 1810 (-) |
| 10 | 0.7 | 1.0 | 1.0 | 1.2 | 1.2 | 1.0 | 1.0 | 1.6 | 1.6 | 1.8 | 1.8 | 27 | 28 | 1950 (-) | 2190 (-) |
| 16 | 0.7 | 1.0 | 1.0 | 1.2 | 1.2 | 1.0 | 1.0 | 1.6 | 1.6 | 1.8 | 1.8 | 28 | 30 | 2260 (1960) | 2550 (2160) |
| 25 | 0.9 | 1.0 | 1.0 | 1.2 | 1.3 | 1.0 | 1.0 | 1.6 | 1.6 | 1.9 | 1.9 | 32 | 34 | 2870 (2400) | 3390 (2760) |
| 35 | 0.9 | 1.0 | 1.0 | 1.3 | 1.3 | 1.0 | 1.1 | 1.6 | 2.0 | 1.9 | 2.1 | 35 | 38 | 3440 (2800) | 4310 (3450) |
| 50 | 1.0 | 1.0 | 1.0 | 1.4 | 1.5 | 1.1 | 1.2 | 2.0 | 2.0 | 2.1 | 2.2 | 39 | 42 | 4520 (3630) | 5420 (4230) |
| 70 | 1.1 | 1.2 | 1.2 | 1.5 | 1.6 | 1.2 | 1.2 | 2.0 | 2.0 | 2.2 | 2.3 | 44 | 48 | 5830 (4530) | 7000 (5280) |
| 95 | 1.1 | 1.2 | 1.2 | 1.6 | 1.7 | 1.3 | 1.3 | 2.5 | 2.5 | 2.4 | 2.5 | 50 | 54 | 7640 (5850) | 9200 (6810) |
| 120 | 1.2 | 1.2 | 1.4 | 1.7 | 1.8 | 1.3 | 1.4 | 2.5 | 2.5 | 2.5 | 2.7 | 54 | 60 | 9080 (6800) | 11090 (8060) |
| 150 | 1.4 | 1.4 | 1.4 | 1.8 | 1.9 | 1.4 | 1.5 | 2.5 | 2.5 | 2.7 | 2.9 | 59 | 65 | 10630 (7960) | 12920 (9360) |
| 185 | 1.6 | 1.4 | 1.4 | 1.9 | 2.1 | 1.5 | 1.6 | 2.5 | 2.5 | 2.8 | 3.0 | 64 | 71 | 12550 (9260) | 15540 (11150) |
| 240 | 1.7 | 1.6 | 1.6 | 2.1 | 2.3 | 1.6 | 1.7 | 2.5 | 2.5 | 3.1 | 3.3 | 71 | 78 | 15450 (11240) | 19150 (13540) |
| 300 | 1.8 | 1.6 | 1.6 | 2.1 | 2.4 | 1.7 | 1.8 | 2.5 | 3.15 | 3.2 | 3.5 | 77 | 86 | 18440 (12930) | 23900 (16560) |

- () : Weight of Cable for Aluminum Conductor
 - Weight can be different depending on item

1.8/3KV CU(AL-)/XLPE/PVC/LEAD/PVC/S(A)WA/PVC

1.8/3KV (AL-)CLV(A)WAV



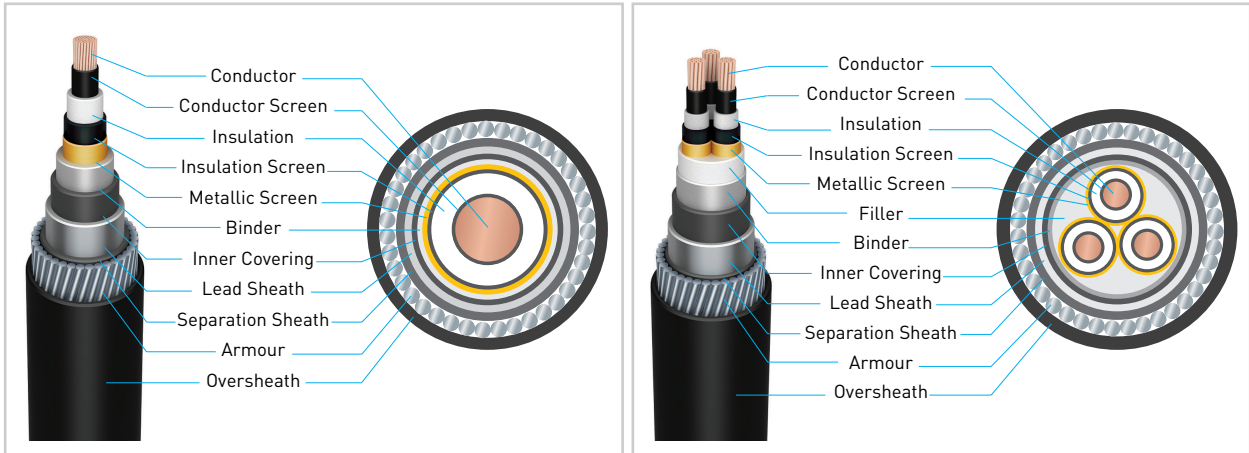
| Nominal Cross-Sectional Area | Thickness of insulation | Thickness of Inner Covering | | Thickness of Lead sheath | | Thickness of Separation sheath | | Thickness of Armour | | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | |
|------------------------------|-------------------------|-----------------------------|-----|--------------------------|-----|--------------------------------|-----|---------------------|-----|-------------------------|-----|--------------------------|----|----------------|---------------|
| | | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C |
| mm ² | mm | mm | | mm | | mm | | mm | | mm | | mm | | kg/km | |
| 10 | 2.0 | 1.0 | 1.0 | 1.2 | 1.2 | 1.0 | 1.0 | 1.6 | 1.6 | 1.8 | 1.9 | 23 | 32 | 1060 (-) | 2610 (-) |
| 16 | 2.0 | 1.0 | 1.0 | 1.2 | 1.3 | 1.0 | 1.0 | 1.6 | 1.6 | 1.8 | 1.9 | 23 | 34 | 1160 (1060) | 3000 (2700) |
| 25 | 2.0 | 1.0 | 1.0 | 1.2 | 1.3 | 1.0 | 1.1 | 1.6 | 2.0 | 1.8 | 2.1 | 24 | 38 | 1330 (1180) | 3830 (3360) |
| 35 | 2.0 | 1.0 | 1.0 | 1.2 | 1.4 | 1.0 | 1.1 | 1.6 | 2.0 | 1.8 | 2.2 | 26 | 41 | 1510 (1300) | 4510 (3870) |
| 50 | 2.0 | 1.0 | 1.2 | 1.2 | 1.5 | 1.0 | 1.2 | 1.6 | 2.0 | 1.8 | 2.3 | 27 | 45 | 1710 (1420) | 5400 (4500) |
| 70 | 2.0 | 1.0 | 1.2 | 1.2 | 1.6 | 1.0 | 1.3 | 1.6 | 2.5 | 1.8 | 2.4 | 29 | 50 | 2050 (1620) | 7060 (5770) |
| 95 | 2.0 | 1.0 | 1.2 | 1.3 | 1.7 | 1.0 | 1.3 | 1.6 | 2.5 | 1.8 | 2.5 | 31 | 54 | 2500 (1900) | 8510 (6720) |
| 120 | 2.0 | 1.0 | 1.4 | 1.3 | 1.8 | 1.0 | 1.4 | 1.6 | 2.5 | 1.9 | 2.7 | 33 | 59 | 2860 (2110) | 10050 (7770) |
| 150 | 2.0 | 1.0 | 1.4 | 1.4 | 1.9 | 1.0 | 1.5 | 1.6 | 2.5 | 1.9 | 2.8 | 35 | 62 | 3270 (2390) | 11380 (8710) |
| 185 | 2.0 | 1.0 | 1.4 | 1.4 | 2.0 | 1.1 | 1.5 | 2.0 | 2.5 | 2.0 | 2.9 | 37 | 66 | 3830 (2740) | 13110 (9830) |
| 240 | 2.0 | 1.0 | 1.6 | 1.5 | 2.1 | 1.1 | 1.6 | 2.0 | 2.5 | 2.1 | 3.1 | 40 | 72 | 4610 (3220) | 15760 (11550) |
| 300 | 2.0 | 1.0 | 1.6 | 1.5 | 2.3 | 1.1 | 1.7 | 2.0 | 2.5 | 2.2 | 3.3 | 42 | 78 | 5420 (3600) | 18890 (13380) |
| 400 | 2.0 | 1.2 | - | 1.6 | - | 1.2 | - | 2.0 | - | 2.3 | - | 46 | - | 6760 (4330) | - |
| 500 | 2.2 | 1.2 | - | 1.7 | - | 1.3 | - | 2.5 | - | 2.4 | - | 51 | - | 8320 (5340) | - |
| 630 | 2.4 | 1.2 | - | 1.8 | - | 1.4 | - | 2.5 | - | 2.6 | - | 56 | - | 10220 (6530) | - |

- () : Weight of Cable for Aluminum Conductor

- Weight can be different depending on item

3.6/6KV CU(AL-)/XLPE/PVC/LEAD/PVC/S(A)WA/PVC

3.6/6KV (AL-)CLV(A)WAV

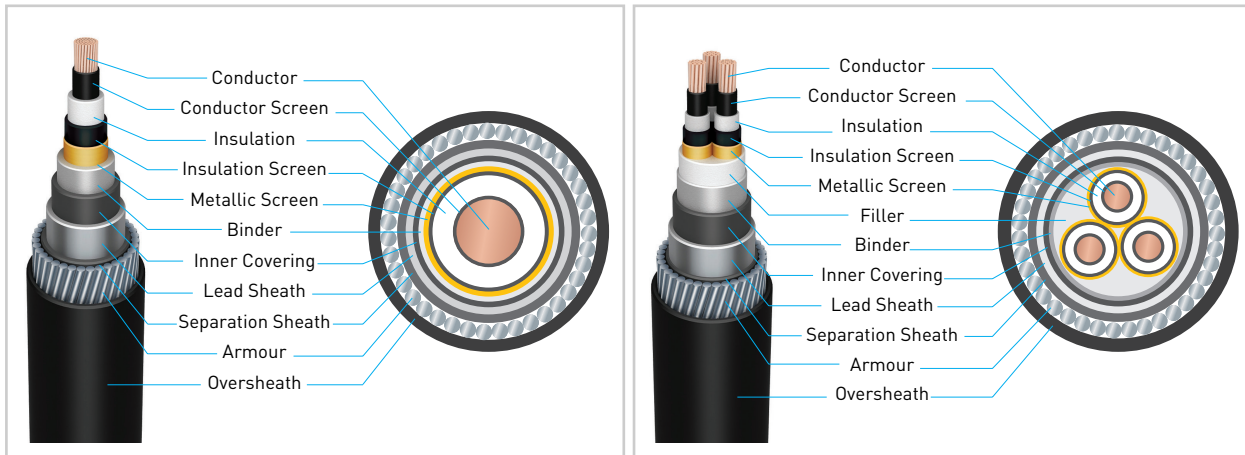


| Nominal Cross-Sectional Area | Thickness of insulation | Thickness of Inner Covering | | Thickness of Lead sheath | | Thickness of Separation sheath | | Thickness of Armour | | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | |
|------------------------------|-------------------------|-----------------------------|-----|--------------------------|-----|--------------------------------|-----|---------------------|------|-------------------------|-----|--------------------------|----|----------------|---------------|
| | | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C |
| mm ² | mm | mm | | mm | | mm | | mm | | mm | | mm | | kg/km | |
| 10 | 2.5 | 1.0 | 1.2 | 1.2 | 1.5 | 1.0 | 1.2 | 1.6 | 2.0 | 1.8 | 2.3 | 25 | 42 | 1410 (-) | 4420 (-) |
| 16 | 2.5 | 1.0 | 1.2 | 1.2 | 1.6 | 1.0 | 1.2 | 1.6 | 2.0 | 1.8 | 2.3 | 27 | 45 | 1520 (1420) | 4860 (4560) |
| 25 | 2.5 | 1.0 | 1.2 | 1.2 | 1.6 | 1.0 | 1.3 | 1.6 | 2.5 | 1.8 | 2.5 | 28 | 49 | 1720 (1560) | 5980 (5510) |
| 35 | 2.5 | 1.0 | 1.2 | 1.3 | 1.7 | 1.0 | 1.3 | 1.6 | 2.5 | 1.8 | 2.6 | 30 | 52 | 1960 (1750) | 6780 (6140) |
| 50 | 2.5 | 1.0 | 1.4 | 1.3 | 1.8 | 1.0 | 1.4 | 1.6 | 2.5 | 1.9 | 2.7 | 31 | 55 | 2200 (1900) | 7830 (6940) |
| 70 | 2.5 | 1.0 | 1.4 | 1.4 | 1.9 | 1.0 | 1.5 | 1.6 | 2.5 | 1.9 | 2.8 | 33 | 60 | 2630 (2200) | 9250 (7960) |
| 95 | 2.5 | 1.0 | 1.4 | 1.4 | 2.0 | 1.1 | 1.5 | 2.0 | 2.5 | 2.0 | 2.9 | 35 | 64 | 3120 (2530) | 10820 (9030) |
| 120 | 2.5 | 1.0 | 1.6 | 1.5 | 2.1 | 1.1 | 1.6 | 2.0 | 2.5 | 2.1 | 3.1 | 37 | 68 | 3620 (2860) | 12480 (10210) |
| 150 | 2.5 | 1.0 | 1.6 | 1.5 | 2.2 | 1.1 | 1.7 | 2.0 | 2.5 | 2.1 | 3.2 | 39 | 72 | 3960 (3080) | 13940 (11280) |
| 185 | 2.5 | 1.0 | 1.6 | 1.5 | 2.3 | 1.2 | 1.7 | 2.0 | 3.15 | 2.2 | 3.3 | 41 | 77 | 4480 (3390) | 16680 (13390) |
| 240 | 2.6 | 1.2 | 1.6 | 1.6 | 2.4 | 1.2 | 1.9 | 2.0 | 3.15 | 2.3 | 3.5 | 45 | 84 | 5430 (4040) | 19730 (15520) |
| 300 | 2.8 | 1.2 | 1.8 | 1.7 | 2.6 | 1.3 | 2.0 | 2.5 | 3.15 | 2.4 | 3.7 | 49 | 91 | 6620 (4800) | 23500 (17990) |
| 400 | 3.0 | 1.2 | - | 1.8 | - | 1.3 | - | 2.5 | - | 2.5 | - | 53 | - | 8070 (5640) | - |
| 500 | 3.2 | 1.4 | - | 1.9 | - | 1.4 | - | 2.5 | - | 2.7 | - | 57 | - | 9660 (6680) | - |
| 630 | 3.2 | 1.4 | - | 2.0 | - | 1.5 | - | 2.5 | - | 2.8 | - | 62 | - | 11590 (7800) | - |

- () : Weight of Cable for Aluminum Conductor
 - Weight can be different depending on item

6/10KV CU(AL-)/XLPE/PVC/LEAD/PVC/S(A)WA/PVC

6/10KV (AL-)CLV(A)WAV



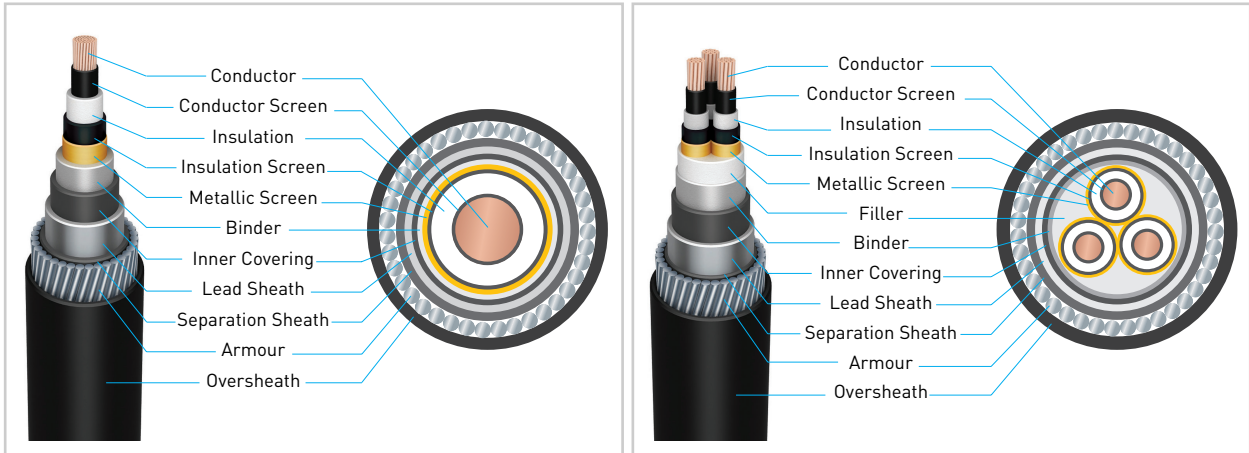
| Nominal Cross-Sectional Area | Thickness of insulation | Thickness of Inner Covering | | Thickness of Lead sheath | | Thickness of Separation sheath | | Thickness of Armour | | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | |
|------------------------------|-------------------------|-----------------------------|-----|--------------------------|-----|--------------------------------|-----|---------------------|------|-------------------------|-----|--------------------------|----|----------------|---------------|
| | | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C |
| mm ² | mm | mm | | mm | | mm | | mm | | mm | | mm | | kg/km | |
| 16 | 3.4 | 1.0 | 1.2 | 1.3 | 1.7 | 1.0 | 1.3 | 1.6 | 2.5 | 1.8 | 2.5 | 29 | 51 | 1770 (1670) | 6140 (5840) |
| 25 | 3.4 | 1.0 | 1.2 | 1.3 | 1.8 | 1.0 | 1.4 | 1.6 | 2.5 | 1.9 | 2.6 | 30 | 54 | 1970 (1820) | 7010 (6530) |
| 35 | 3.4 | 1.0 | 1.4 | 1.3 | 1.8 | 1.0 | 1.4 | 1.6 | 2.5 | 1.9 | 2.7 | 32 | 57 | 2160 (1950) | 7810 (7170) |
| 50 | 3.4 | 1.0 | 1.4 | 1.4 | 1.9 | 1.0 | 1.5 | 1.6 | 2.5 | 1.9 | 2.8 | 33 | 60 | 2470 (2170) | 8780 (7880) |
| 70 | 3.4 | 1.0 | 1.4 | 1.4 | 2.0 | 1.1 | 1.6 | 2.0 | 2.5 | 2.0 | 3.0 | 35 | 64 | 2930 (2500) | 10300 (9010) |
| 95 | 3.4 | 1.0 | 1.6 | 1.5 | 2.1 | 1.1 | 1.6 | 2.0 | 2.5 | 2.1 | 3.1 | 37 | 69 | 3450 (2850) | 12010 (10220) |
| 120 | 3.4 | 1.0 | 1.6 | 1.5 | 2.2 | 1.1 | 1.7 | 2.0 | 2.5 | 2.1 | 3.2 | 39 | 73 | 3840 (3080) | 13600 (11330) |
| 150 | 3.4 | 1.0 | 1.6 | 1.5 | 2.3 | 1.2 | 1.8 | 2.0 | 3.15 | 2.2 | 3.4 | 41 | 78 | 4220 (3340) | 16120 (13360) |
| 185 | 3.4 | 1.2 | 1.6 | 1.6 | 2.4 | 1.2 | 1.8 | 2.0 | 3.15 | 2.3 | 3.5 | 44 | 82 | 4900 (3810) | 17980 (14700) |
| 240 | 3.4 | 1.2 | 1.8 | 1.7 | 2.5 | 1.2 | 1.9 | 2.0 | 3.15 | 2.3 | 3.7 | 46 | 88 | 5770 (4370) | 21090 (16890) |
| 300 | 3.4 | 1.2 | 1.8 | 1.7 | 2.7 | 1.3 | 2.0 | 2.5 | 3.15 | 2.5 | 3.8 | 50 | 94 | 5820 (5000) | 24540 (19030) |
| 400 | 3.4 | 1.2 | - | 1.8 | - | 1.3 | - | 2.5 | - | 2.6 | - | 54 | - | 8220 (5790) | - |
| 500 | 3.4 | 1.4 | - | 1.9 | - | 1.4 | - | 2.5 | - | 2.7 | - | 58 | - | 9730 (6760) | - |
| 630 | 3.4 | 1.4 | - | 2.0 | - | 1.5 | - | 2.5 | - | 2.8 | - | 62 | - | 11670 (7880) | - |

- () : Weight of Cable for Aluminum Conductor

- Weight can be different depending on item

8.7/15KV CU(AL-)/XLPE/PVC/LEAD/PVC/S(A)WA/PVC

8.7/15KV (AL-)CLVWAV



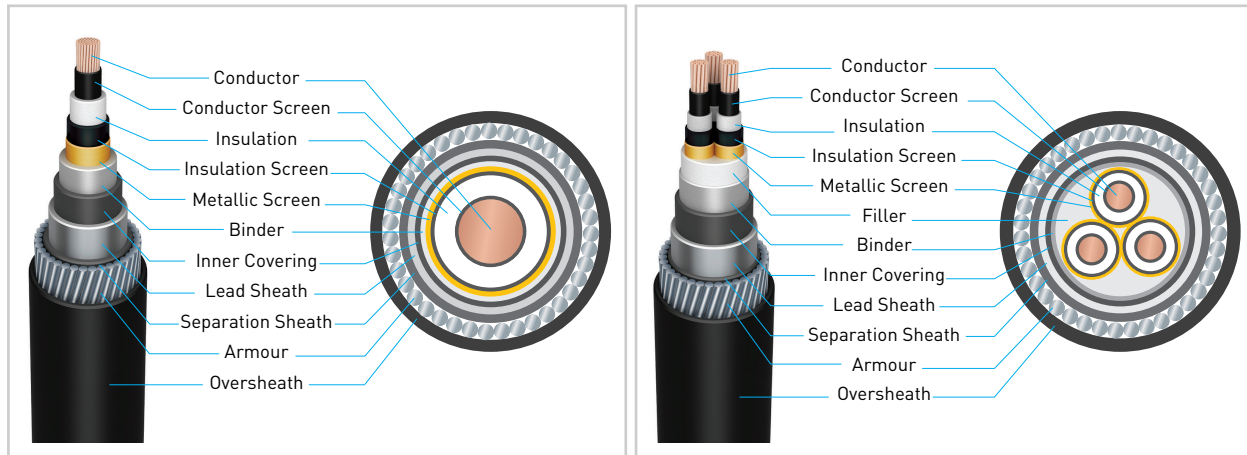
| Nominal Cross-Sectional Area | Thickness of insulation | Thickness of Inner Covering | | Thickness of Lead sheath | | Thickness of Separation sheath | | Thickness of Armour | | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | |
|------------------------------|-------------------------|-----------------------------|-----|--------------------------|-----|--------------------------------|-----|---------------------|------|-------------------------|-----|--------------------------|----|----------------|---------------|
| | | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C |
| mm ² | mm | mm | | mm | | mm | | mm | | mm | | mm | | kg/km | |
| 25 | 4.5 | 1.0 | 1.4 | 1.4 | 1.9 | 1.1 | 1.5 | 1.6 | 2.5 | 1.9 | 2.8 | 33 | 60 | 2290 (2130) | 8230 (7760) |
| 35 | 4.5 | 1.0 | 1.4 | 1.4 | 2.0 | 1.1 | 1.5 | 1.6 | 2.5 | 2.0 | 2.9 | 34 | 63 | 2510 (2290) | 9120 (8480) |
| 50 | 4.5 | 1.0 | 1.4 | 1.4 | 2.1 | 1.1 | 1.6 | 2.0 | 2.5 | 2.1 | 3.0 | 36 | 66 | 2830 (2230) | 10165 (9270) |
| 70 | 4.5 | 1.0 | 1.6 | 1.5 | 2.2 | 1.1 | 1.7 | 2.0 | 2.5 | 2.1 | 3.1 | 38 | 70 | 3300 (2870) | 11870 (10580) |
| 95 | 4.5 | 1.0 | 1.6 | 1.5 | 2.3 | 1.1 | 1.7 | 2.0 | 2.5 | 2.2 | 3.3 | 40 | 74 | 3740 (3140) | 13560 (11760) |
| 120 | 4.5 | 1.0 | 1.6 | 1.6 | 2.4 | 1.2 | 1.8 | 2.0 | 3.15 | 2.2 | 3.4 | 42 | 79 | 4250 (3500) | 16160 (13890) |
| 150 | 4.5 | 1.2 | 1.6 | 1.6 | 2.4 | 1.2 | 1.9 | 2.0 | 3.15 | 2.3 | 3.6 | 44 | 83 | 4700 (3810) | 17550 (14890) |
| 185 | 4.5 | 1.2 | 1.8 | 1.7 | 2.5 | 1.2 | 1.9 | 2.0 | 3.15 | 2.3 | 3.7 | 46 | 88 | 5330 (4240) | 19720 (16440) |
| 240 | 4.5 | 1.2 | 1.8 | 1.7 | 2.7 | 1.3 | 2.0 | 2.5 | 3.15 | 2.5 | 3.9 | 50 | 94 | 6310 (4910) | 23020 (18810) |
| 300 | 4.5 | 1.2 | 1.8 | 1.8 | 2.8 | 1.3 | 2.1 | 2.5 | 3.15 | 2.5 | 4.0 | 53 | 99 | 7300 (5470) | 26300 (20790) |
| 400 | 4.5 | 1.4 | - | 1.9 | - | 1.4 | - | 2.5 | - | 2.7 | - | 57 | - | 8850 (6420) | - |
| 500 | 4.5 | 1.4 | - | 2.0 | - | 1.5 | - | 2.5 | - | 2.8 | - | 61 | - | 10320 (7350) | - |
| 630 | 4.5 | 1.4 | - | 2.1 | - | 1.5 | - | 2.5 | - | 2.9 | - | 65 | - | 12310 (8520) | - |

- () : Weight of Cable for Aluminum Conductor

- Weight can be different depending on item

12/20KV CU(AL-)/XLPE/PVC/LEAD/PVC/S(A)WA/PVC

12/20KV (AL-)CLVWAV



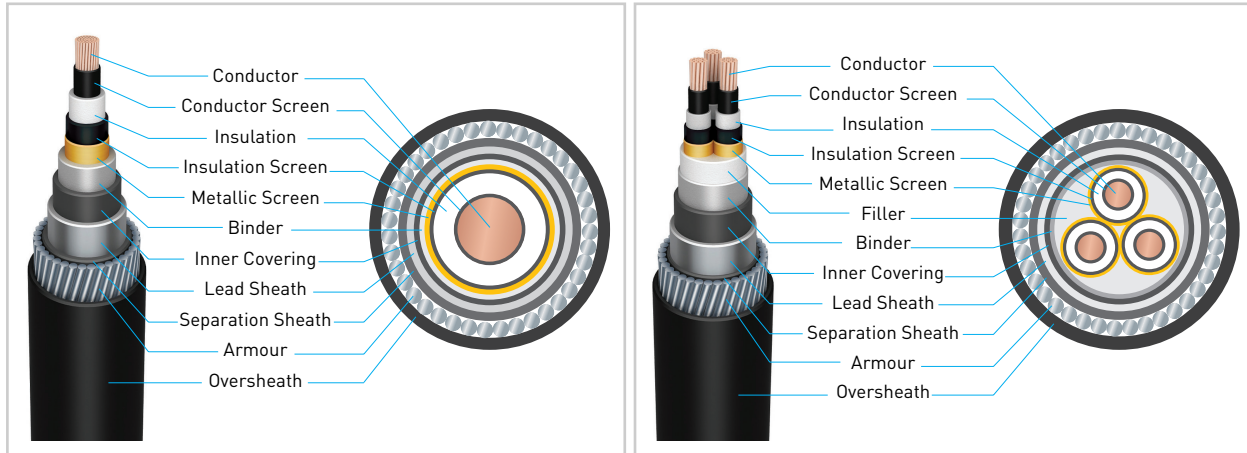
| Nominal Cross-Sectional Area | Thickness of insulation | Thickness of Inner Covering | | Thickness of Lead sheath | | Thickness of Separation sheath | | Thickness of Armour | | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | |
|------------------------------|-------------------------|-----------------------------|-----|--------------------------|-----|--------------------------------|-----|---------------------|------|-------------------------|-----|--------------------------|-----|----------------|---------------|
| | | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C |
| mm ² | mm | mm | | mm | | mm | | mm | | mm | | mm | | kg/km | |
| 35 | 5.5 | 1.0 | 1.6 | 1.5 | 2.1 | 1.1 | 1.6 | 2.0 | 2.5 | 2.1 | 3.1 | 37 | 68 | 2920 (2710) | 10390 (9750) |
| 50 | 5.5 | 1.0 | 1.6 | 1.5 | 2.2 | 1.1 | 1.7 | 2.0 | 2.5 | 2.1 | 3.2 | 38 | 71 | 3170 (2870) | 11490 (10590) |
| 70 | 5.5 | 1.0 | 1.6 | 1.5 | 2.3 | 1.2 | 1.8 | 2.0 | 3.15 | 2.2 | 3.4 | 40 | 77 | 3570 (3140) | 14030 (12730) |
| 95 | 5.5 | 1.2 | 1.6 | 1.6 | 2.4 | 1.2 | 1.8 | 2.0 | 3.15 | 2.3 | 3.5 | 43 | 81 | 4200 (3600) | 15830 (14030) |
| 120 | 5.5 | 1.2 | 1.6 | 1.6 | 2.5 | 1.2 | 1.9 | 2.0 | 3.15 | 2.3 | 3.6 | 43 | 85 | 4600 (3850) | 17580 (15300) |
| 150 | 5.5 | 1.2 | 1.8 | 1.7 | 2.6 | 1.3 | 2.0 | 2.0 | 3.15 | 2.4 | 3.7 | 47 | 89 | 5300 (4410) | 19410 (16740) |
| 185 | 5.5 | 1.2 | 1.8 | 1.7 | 2.7 | 1.3 | 2.0 | 2.5 | 3.15 | 2.5 | 3.8 | 50 | 93 | 5830 (4740) | 21480 (18190) |
| 240 | 5.5 | 1.2 | 1.8 | 1.8 | 2.8 | 1.3 | 2.1 | 2.5 | 3.15 | 2.5 | 4.0 | 52 | 99 | 6750 (5360) | 24590 (20380) |
| 300 | 5.5 | 1.2 | 1.8 | 1.8 | 2.9 | 1.4 | 2.2 | 2.5 | 3.15 | 2.6 | 4.2 | 56 | 104 | 7660 (5840) | 28000 (22490) |
| 400 | 5.5 | 1.4 | - | 1.9 | - | 1.4 | - | 2.5 | - | 2.7 | - | 59 | - | 9180 (6750) | - |
| 500 | 5.5 | 1.4 | - | 2.0 | - | 1.5 | - | 2.5 | - | 2.8 | - | 63 | - | 10660 (7690) | - |
| 630 | 5.5 | 1.4 | - | 2.1 | - | 1.6 | - | 2.5 | - | 3.0 | - | 67 | - | 12750 (8960) | - |

- () : Weight of Cable for Aluminum Conductor

- Weight can be different depending on item

18/30KV CU(AL-)/XLPE/PVC/LEAD/PVC/S(A)WA/PVC

18/30KV (AL-)CLVWAV



| Nominal Cross-Sectional Area | Thickness of insulation | Thickness of Inner Covering | | Thickness of Lead sheath | | Thickness of Separation sheath | | Thickness of Armour | | Thickness of Overseath | | Approx. Overall Diameter | | Approx. Weight | |
|------------------------------|-------------------------|-----------------------------|-----|--------------------------|-----|--------------------------------|-----|---------------------|------|------------------------|-----|--------------------------|-----|----------------|---------------|
| | | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C | 1C | 3C |
| mm ² | mm | mm | | mm | | mm | | mm | | mm | | mm | | kg/km | |
| 50 | 8.0 | 1.2 | 1.6 | 1.6 | 2.5 | 1.2 | 1.9 | 2.0 | 3.15 | 2.3 | 3.6 | 45 | 85 | 4050 (3760) | 15990 (15100) |
| 70 | 8.0 | 1.2 | 1.8 | 1.7 | 2.6 | 1.3 | 2.0 | 2.5 | 3.15 | 2.4 | 3.8 | 48 | 90 | 4780 (4350) | 17980 (16680) |
| 95 | 8.0 | 1.2 | 1.8 | 1.7 | 2.7 | 1.3 | 2.1 | 2.5 | 3.15 | 2.5 | 3.9 | 50 | 94 | 5280 (4680) | 20010 (18220) |
| 120 | 8.0 | 1.2 | 1.8 | 1.8 | 2.8 | 1.3 | 2.1 | 2.5 | 3.15 | 2.5 | 4.0 | 52 | 98 | 5850 (5090) | 21860 (19580) |
| 150 | 8.0 | 1.2 | 1.8 | 1.8 | 2.9 | 1.4 | 2.2 | 2.5 | 3.15 | 2.6 | 4.1 | 54 | 102 | 6290 (5410) | 23650 (20980) |
| 185 | 8.0 | 1.2 | 1.8 | 1.9 | 3.0 | 1.4 | 2.2 | 2.5 | 3.15 | 2.7 | 4.3 | 56 | 106 | 7010 (5920) | 25970 (22690) |
| 240 | 8.0 | 1.4 | 2.0 | 1.9 | 3.1 | 1.4 | 2.4 | 2.5 | 3.15 | 2.7 | 4.5 | 59 | 113 | 7890 (6500) | 29550 (25340) |
| 300 | 8.0 | 1.4 | 2.0 | 2.0 | 3.3 | 1.5 | 2.4 | 2.5 | 3.15 | 2.8 | 4.6 | 62 | 118 | 9010 (7190) | 33320 (27810) |
| 400 | 8.0 | 1.4 | - | 2.1 | - | 1.6 | - | 2.5 | - | 3.0 | - | 66 | - | 10670 (8240) | - |
| 500 | 8.0 | 1.4 | - | 2.2 | - | 1.6 | - | 2.5 | - | 3.1 | - | 69 | - | 12220 (9240) | - |
| 630 | 8.0 | 1.6 | - | 2.3 | - | 1.7 | - | 2.5 | - | 3.2 | - | 74 | - | 14400 (10610) | - |

- () : Weight of Cable for Aluminum Conductor
 - Weight can be different depending on item

Bare Wire

OPGW

Insulated Wire

Grounding Wire

Instrument Cable

Control Cable

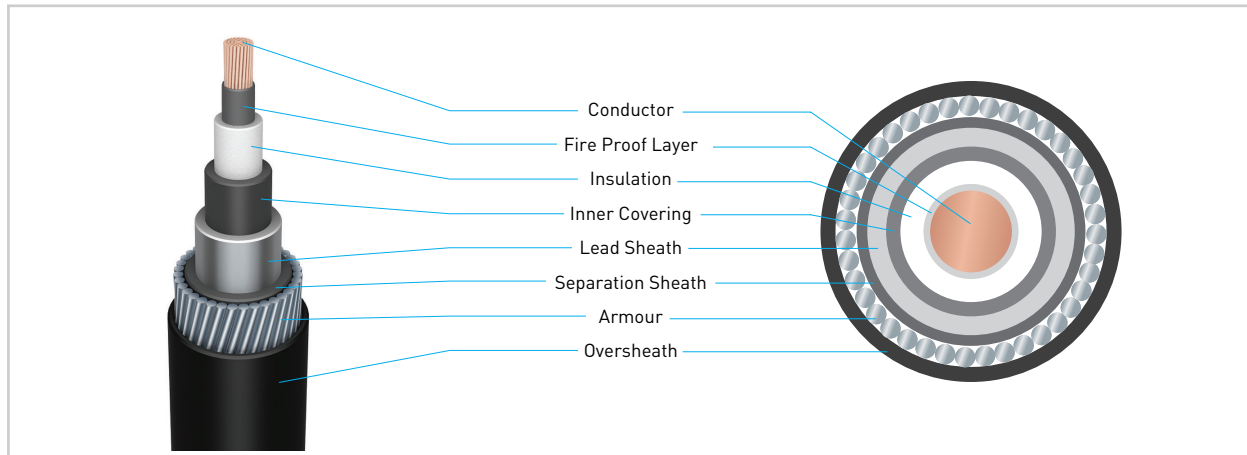
Power Cable

Reference

Installation

0.6/1KV CU/MICA/XLPE/PVC/LEAD/PVC/S(A)WA/PVC

0.6/1KV FR-CLV(A)WAV

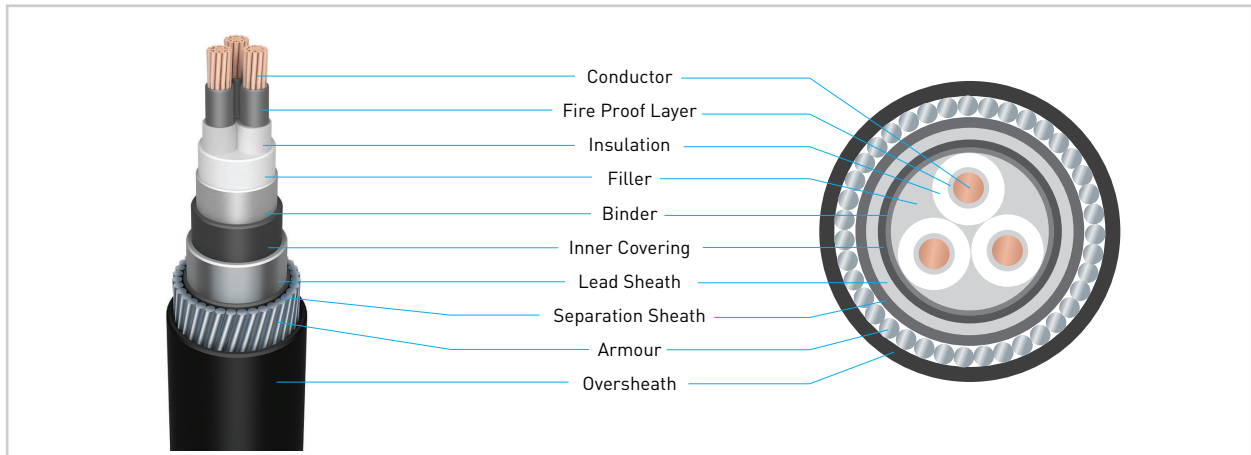


IEC 60331

| Nominal Cross-Sectional Area | Thickness of insulation | Thickness of Inner Covering | | Thickness of Lead sheath | | Thickness of Separation sheath | | Thickness of Armour | | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | |
|------------------------------|-------------------------|-----------------------------|-----|--------------------------|-----|--------------------------------|-----|---------------------|------|-------------------------|-----|--------------------------|----|----------------|-------|
| | | 1C | 2C | 1C | 2C | 1C | 2C | 1C | 2C | 1C | 2C | 1C | 2C | 1C | 2C |
| mm ² | mm | mm | | mm | | mm | | mm | | mm | | mm | | kg/km | |
| 1.5 | 0.7 | - | 1.0 | - | 1.2 | - | 1.0 | - | 1.25 | - | 1.8 | - | 22 | - | 1240 |
| 2.5 | 0.7 | - | 1.0 | - | 1.2 | - | 1.0 | - | 1.25 | - | 1.8 | - | 23 | - | 1330 |
| 4 | 0.7 | - | 1.0 | - | 1.2 | - | 1.0 | - | 1.25 | - | 1.8 | - | 24 | - | 1450 |
| 6 | 0.7 | - | 1.0 | - | 1.2 | - | 1.0 | - | 1.6 | - | 1.8 | - | 26 | - | 1750 |
| 10 | 0.7 | 1.7 | 1.0 | 1.2 | 1.2 | 1.0 | 1.0 | 1.6 | 1.6 | 1.8 | 1.8 | 23 | 28 | 1070 | 2000 |
| 16 | 0.7 | 1.5 | 1.0 | 1.2 | 1.2 | 1.0 | 1.0 | 1.6 | 1.6 | 1.8 | 1.8 | 23 | 29 | 1120 | 2200 |
| 25 | 0.9 | 1.0 | 1.0 | 1.2 | 1.2 | 1.0 | 1.0 | 1.6 | 1.6 | 1.8 | 1.9 | 24 | 32 | 1240 | 2730 |
| 35 | 0.9 | 1.0 | 1.0 | 1.2 | 1.3 | 1.0 | 1.0 | 1.6 | 1.6 | 1.8 | 2.0 | 25 | 35 | 1410 | 3240 |
| 50 | 1.0 | 1.0 | 1.0 | 1.2 | 1.4 | 1.0 | 1.1 | 1.6 | 2.0 | 1.8 | 2.1 | 26 | 39 | 1630 | 4150 |
| 70 | 1.1 | 1.0 | 1.0 | 1.2 | 1.5 | 1.0 | 1.2 | 1.6 | 2.0 | 1.8 | 2.2 | 28 | 43 | 1960 | 5150 |
| 95 | 1.1 | 1.0 | 1.2 | 1.2 | 1.6 | 1.0 | 1.2 | 1.6 | 2.0 | 1.8 | 2.4 | 30 | 48 | 2340 | 6330 |
| 120 | 1.2 | 1.0 | 1.2 | 1.3 | 1.7 | 1.0 | 1.3 | 1.6 | 2.5 | 1.9 | 2.5 | 32 | 53 | 2790 | 8000 |
| 150 | 1.4 | 1.0 | 1.2 | 1.3 | 1.8 | 1.0 | 1.4 | 1.6 | 2.5 | 1.9 | 2.7 | 34 | 57 | 3140 | 9200 |
| 185 | 1.6 | 1.0 | 1.4 | 1.4 | 1.9 | 1.1 | 1.5 | 2.0 | 2.5 | 2.0 | 2.8 | 37 | 63 | 3840 | 10800 |
| 240 | 1.7 | 1.0 | 1.4 | 1.5 | 2.0 | 1.1 | 1.6 | 2.0 | 2.5 | 2.1 | 3.0 | 40 | 68 | 4650 | 12900 |
| 300 | 1.8 | 1.0 | 1.6 | 1.5 | 2.2 | 1.2 | 1.7 | 2.0 | 2.5 | 2.2 | 3.2 | 42 | 74 | 5500 | 15500 |
| 400 | 2.0 | 1.2 | - | 1.7 | - | 1.2 | - | 2.0 | - | 2.3 | - | 47 | - | 7040 | - |
| 500 | 2.2 | 1.2 | - | 1.7 | - | 1.3 | - | 2.5 | - | 2.5 | - | 52 | - | 8480 | - |
| 630 | 2.4 | 1.2 | - | 1.8 | - | 1.4 | - | 2.5 | - | 2.6 | - | 57 | - | 10390 | - |

- () : Weight of Cable for Aluminum Conductor

- Weight can be different depending on item



| Nominal Cross-Sectional Area | Thickness of insulation | Thickness of Inner Covering | | Thickness of Lead sheath | | Thickness of Separation sheath | | Thickness of Armour | | Thickness of Oversheath | | Approx. Overall Diameter | | Approx. Weight | |
|------------------------------|-------------------------|-----------------------------|-----|--------------------------|-----|--------------------------------|-----|---------------------|------|-------------------------|-----|--------------------------|----|----------------|-------|
| | | 3C | 4C | 3C | 4C | 3C | 4C | 3C | 4C | 3C | 4C | 3C | 4C | 3C | 4C |
| mm ² | mm | mm | | mm | | mm | | mm | | mm | | mm | | kg/km | |
| 1.5 | 0.7 | 1.0 | 1.0 | 1.2 | 1.2 | 1.0 | 1.0 | 1.25 | 1.25 | 1.8 | 1.8 | 23 | 24 | 1090 | 1250 |
| 2.5 | 0.7 | 1.0 | 1.0 | 1.2 | 1.2 | 1.0 | 1.0 | 1.25 | 1.6 | 1.8 | 1.8 | 24 | 26 | 1190 | 1710 |
| 4 | 0.7 | 1.0 | 1.0 | 1.2 | 1.2 | 1.0 | 1.0 | 1.6 | 1.6 | 1.8 | 1.8 | 26 | 27 | 1340 | 1900 |
| 6 | 0.7 | 1.0 | 1.0 | 1.2 | 1.2 | 1.0 | 1.0 | 1.6 | 1.6 | 1.8 | 1.8 | 27 | 29 | 1510 | 2110 |
| 10 | 0.7 | 1.0 | 1.0 | 1.2 | 1.2 | 1.0 | 1.0 | 1.6 | 1.6 | 1.8 | 1.8 | 29 | 31 | 1950 | 2490 |
| 16 | 0.7 | 1.0 | 1.0 | 1.2 | 1.2 | 1.0 | 1.0 | 1.6 | 1.6 | 1.8 | 1.9 | 30 | 32 | 2260 | 2810 |
| 25 | 0.9 | 1.0 | 1.0 | 1.3 | 1.3 | 1.0 | 1.1 | 1.6 | 2.0 | 1.9 | 2.0 | 34 | 38 | 2870 | 3960 |
| 35 | 0.9 | 1.0 | 1.0 | 1.3 | 1.4 | 1.1 | 1.1 | 2.0 | 2.0 | 2.1 | 2.1 | 38 | 41 | 3440 | 4740 |
| 50 | 1.0 | 1.0 | 1.2 | 1.4 | 1.5 | 1.1 | 1.2 | 2.0 | 2.0 | 2.2 | 2.3 | 41 | 45 | 4520 | 5850 |
| 70 | 1.1 | 1.2 | 1.2 | 1.5 | 1.6 | 1.2 | 1.3 | 2.0 | 2.5 | 2.3 | 2.5 | 46 | 51 | 5830 | 7900 |
| 95 | 1.1 | 1.2 | 1.2 | 1.6 | 1.8 | 1.3 | 1.4 | 2.5 | 2.5 | 2.5 | 2.6 | 52 | 56 | 7640 | 9800 |
| 120 | 1.2 | 1.2 | 1.4 | 1.7 | 1.9 | 1.4 | 1.5 | 2.5 | 2.5 | 2.6 | 2.8 | 56 | 62 | 9080 | 11750 |
| 150 | 1.4 | 1.4 | 1.4 | 1.9 | 2.0 | 1.4 | 1.6 | 2.5 | 2.5 | 2.8 | 3.0 | 61 | 67 | 10630 | 13630 |
| 185 | 1.6 | 1.4 | 1.6 | 2.0 | 2.1 | 1.5 | 1.6 | 2.5 | 2.5 | 2.9 | 3.1 | 66 | 73 | 12550 | 16150 |
| 240 | 1.7 | 1.6 | 1.6 | 2.1 | 2.3 | 1.7 | 1.8 | 2.5 | 3.15 | 3.1 | 3.3 | 73 | 82 | 15450 | 20630 |
| 300 | 1.8 | 1.6 | 1.6 | 2.3 | 2.5 | 1.8 | 1.9 | 3.15 | 3.15 | 3.4 | 3.6 | 81 | 89 | 18440 | 27800 |

- Weight can be different depending on item



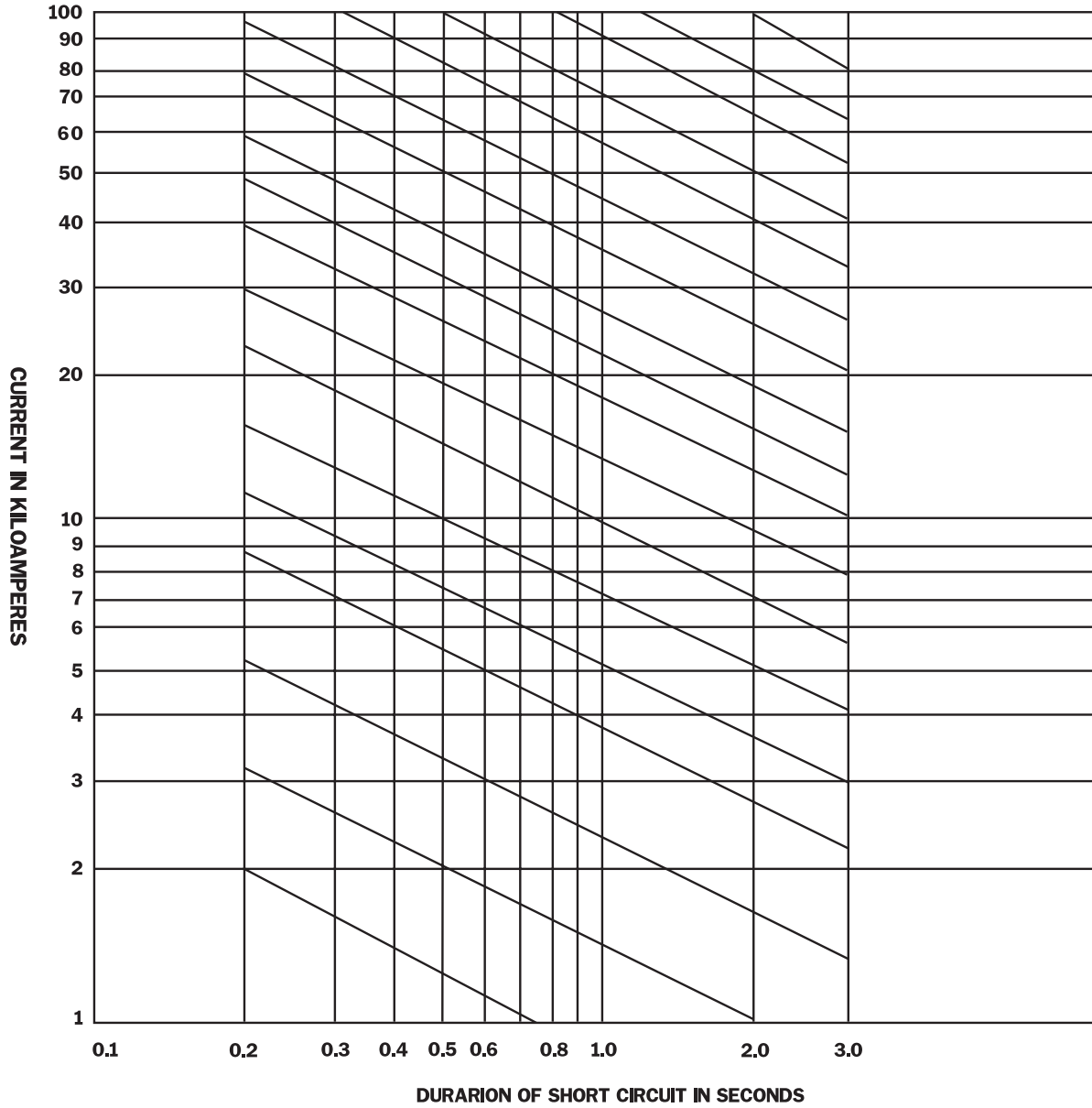
Reference

- Short Circuit Current Carrying Capacity of XLPE Cable (Copper Conductor)
- Short Circuit Current Carrying Capacity of XLPE Cable (Aluminum Conductor)
- Reference Methods of Installation (IEC 60364-5-523)
- Current Carrying Capacity in Amperes in air (IEC 60364-5-523)
- Current Carrying Capacity in Amperes in air (IEC 60364-5-523)
- Correction Factors for Cables in Air
- Correction Factors for Cables in the Ground
- Current Carrying Capacity in Amperes (IEC 60502-2)
- Current Carrying Capacity in Amperes (IEC 60502-2)
- Correction Factors
- IEC 60331 Fire resistant test
- IEC 60332-3 Flame retardant test
- IEC 61034 Smoke density test
- IEC 60754-2 Measuring pH and conductivity test

Reference

Short Circuit Current Carrying Capacity of XLPE Cable

Copper Conductor

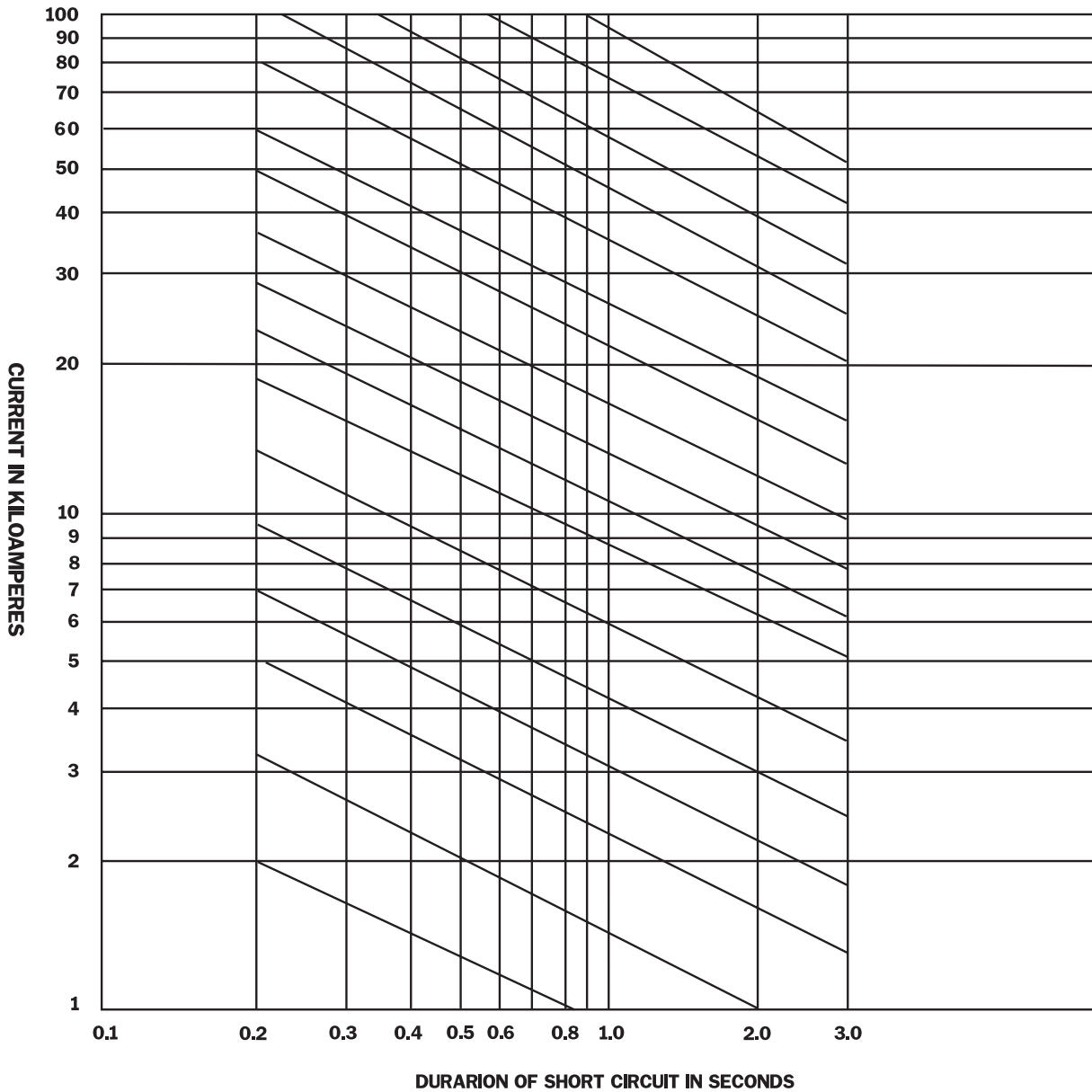


$$I_s = \sqrt{\frac{0.115 \log \frac{T_2 + 234.5}{T_1 + 234.5}}{t}} \quad A = \frac{0.141}{\sqrt{t}} A$$

- I : Short Circuit Current(kA)
- A : Cross-Sectional Area of Conductor(mm²)
- T₁ : Operation Temperature(90°C)
- T₂ : Short Circuit Temperature(250°C)
- t : Short Circuit Duration(Sec.)

Short Circuit Current Carrying Capacity of XLPE Cable

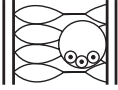
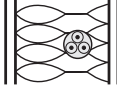
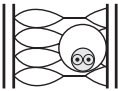
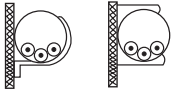
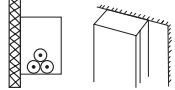
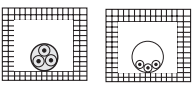
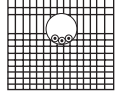
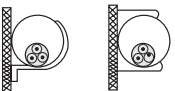
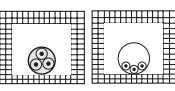
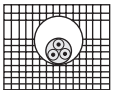

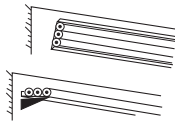




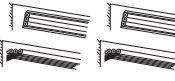


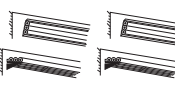

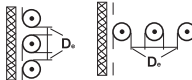

Aluminum Conductor



$$I_s = \sqrt{\frac{0.0486 \log \frac{T_2 + 234.5}{T_1 + 234.5}}{t}} \quad A = \frac{0.0927}{\sqrt{t}} \quad A$$

- I : Short Circuit Current(kA)
- A : Cross-Sectional Area of Conductor(mm²)
- T₁ : Operation Temperature(90°C)
- T₂ : Short Circuit Temperature(250°C)
- t : Short Circuit Duration(Sec.)













Reference Methods of Installation (IEC 60364-5-523)

| Symbol | Reference Methods of Installation | |
|--------|---|--|
| A1 | <ul style="list-style-type: none"> - Insulated conductors in conduit in a thermally insulated wall  | <p>Room</p> <ul style="list-style-type: none"> - Multi-core cable direct in a thermally insulated wall  |
| A2 | <ul style="list-style-type: none"> - Multi-core cable in conduit in a thermally insulated wall  | |
| B1 | <ul style="list-style-type: none"> - Insulated conductors or single-core cables in conduit on a wooden or masonry wall, or spaced less than 0.3 times conduit diameter from it  | <ul style="list-style-type: none"> - Insulated conductors or single-core cables in cable trunking on a wooden wall  |
| | <ul style="list-style-type: none"> - Single-core or multi-core cable in a building void - Insulated conductor in conduit in a building void  | <ul style="list-style-type: none"> - Insulated conductors or single-core cable in conduit in masonry wall  |
| B2 | <ul style="list-style-type: none"> - Multi-core cables in conduit on a wooden or masonry wall, or spaced less than 0.3 times conduit diameter from it  | <ul style="list-style-type: none"> - Single-core or multi-core cable in a building void - Insulated conductor in conduit in a building void  |
| | <ul style="list-style-type: none"> - Multi-core cable in conduit in masonry wall  | |
| C | <ul style="list-style-type: none"> - Single-core or multi-core cable on a wooden wall (Fixed on or spaced less than 0.3 times cable diameter from a wooden wall)  | <ul style="list-style-type: none"> - On unperforated tray  |
| | <ul style="list-style-type: none"> - Single-core or multi-core cable direct in masonry  | |
| D | <ul style="list-style-type: none"> - Single-core or multi-core cable in conduit or in cable ducting in the ground  | <ul style="list-style-type: none"> - Single-core or multi-core cables in the ground  |
| E | <ul style="list-style-type: none"> - Multi-core cable in free air (Spaced more than 0.3 times cable diameter from a wall)  | <ul style="list-style-type: none"> - On perforated tray or on brackets or on a wire mesh  |
| | <ul style="list-style-type: none"> - On ladder  | |
| F | <ul style="list-style-type: none"> - Single-core cable in free air (Spaced more than 0.3 times cable diameter from a wall)  | <ul style="list-style-type: none"> - On perforated tray or on brackets or on a wire mesh  |
| | <ul style="list-style-type: none"> - On ladder  | |
| G | <ul style="list-style-type: none"> - Single-core cables spaced in free air  | <ul style="list-style-type: none"> - Bare or insulated conductors on insulators  |






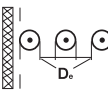
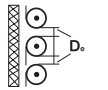
Current Carrying Capacity in Amperes in air (IEC 60364-5-523)

- Voltage : Below 0.6/1KV
- Temperature : In air 30°C, In ground 20°C,
- Insulation : XLPE

Unit : A

| Size mm ² | Number of Loaded Conductors and Type of Insulation | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|--|---|---|---|---|
| | A1 | | A2 | | B1 | | B2 | | C | | D | |
| |  |  |  |  |  |  |  |  |  |  |  |  |
| Two Load | Three Load | Two Load | Three Load | Two Load | Three Load | Two Load | Three Load | Two Load | Three Load | Two Load | Three Load | |
| 1.5 | 19 | 17 | 18.5 | 16.5 | 23 | 20 | 22 | 19.5 | 24 | 22 | 26 | 22 |
| 2.5 | 26 | 23 | 25 | 22 | 31 | 28 | 30 | 26 | 33 | 30 | 34 | 29 |
| 4 | 35 | 31 | 33 | 30 | 42 | 37 | 40 | 35 | 45 | 40 | 44 | 37 |
| 6 | 45 | 40 | 42 | 38 | 54 | 48 | 51 | 44 | 58 | 52 | 56 | 46 |
| 10 | 61 | 54 | 57 | 51 | 75 | 66 | 69 | 60 | 80 | 71 | 73 | 61 |
| 16 | 81 | 73 | 77 | 68 | 100 | 88 | 91 | 80 | 107 | 96 | 95 | 79 |
| 25 | 106 | 95 | 99 | 89 | 133 | 117 | 119 | 105 | 138 | 119 | 121 | 101 |
| 35 | 131 | 117 | 121 | 109 | 164 | 144 | 146 | 128 | 171 | 147 | 146 | 122 |
| 50 | 158 | 141 | 145 | 130 | 198 | 175 | 175 | 154 | 209 | 179 | 173 | 144 |
| 70 | 200 | 179 | 183 | 164 | 253 | 222 | 221 | 194 | 269 | 229 | 213 | 178 |
| 95 | 241 | 216 | 220 | 197 | 306 | 269 | 265 | 233 | 328 | 278 | 252 | 211 |
| 120 | 278 | 249 | 253 | 227 | 354 | 312 | 305 | 268 | 382 | 322 | 287 | 240 |
| 150 | 318 | 285 | 290 | 259 | - | - | - | - | 441 | 371 | 324 | 271 |
| 185 | 362 | 324 | 329 | 295 | - | - | - | - | 506 | 424 | 363 | 304 |
| 240 | 424 | 380 | 386 | 346 | - | - | - | - | 599 | 500 | 419 | 351 |
| 300 | 486 | 435 | 442 | 396 | - | - | - | - | 693 | 576 | 474 | 396 |

Unit : A

| Size mm ² | Number of Loaded Conductors and Type of Insulation | | | | | | |
|-------------------------|---|---|---|---|---|---|---|
| | Multi-Core Cable | | Single-Core Cable | | | | |
| | E | E | F | F | F | G | G |
| |  |  |  |  |  |  |  |
| Two Load Conductor | Three Load Conductor | Two Load Conductor Touching | Three Load Conductor Trefoil | Three Load Conductor Flat Touching | Three Load Conductor Flat Spaced | Three Load Conductor Flat Spaced | |
| 1.5 | 26 | 23 | - | - | - | - | - |
| 2.5 | 36 | 32 | - | - | - | - | - |
| 4 | 49 | 42 | - | - | - | - | - |
| 6 | 63 | 54 | - | - | - | - | - |
| 10 | 86 | 75 | - | - | - | - | - |
| 16 | 115 | 100 | - | - | - | - | - |
| 25 | 149 | 127 | 161 | 135 | 141 | 182 | 161 |
| 35 | 185 | 158 | 200 | 169 | 176 | 226 | 201 |
| 50 | 225 | 192 | 242 | 207 | 216 | 275 | 246 |
| 70 | 289 | 246 | 310 | 268 | 279 | 353 | 318 |
| 95 | 352 | 298 | 377 | 328 | 342 | 430 | 389 |
| 120 | 410 | 346 | 437 | 383 | 400 | 500 | 454 |
| 150 | 473 | 399 | 504 | 444 | 464 | 577 | 527 |
| 185 | 542 | 456 | 575 | 510 | 533 | 661 | 605 |
| 240 | 641 | 538 | 679 | 607 | 634 | 781 | 719 |
| 300 | 741 | 621 | 783 | 703 | 736 | 902 | 833 |
| 400 | - | - | 940 | 823 | 868 | 1085 | 1008 |
| 500 | - | - | 1083 | 946 | 998 | 1253 | 1169 |
| 630 | - | - | 1254 | 1088 | 1151 | 1454 | 1362 |

Bare Wire

OPGW

Insulated Wire

Grounding Wire

Instrument Cable

Control Cable

Power Cable













Reference

Installation






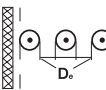
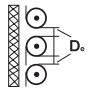
Current Carrying Capacity in Amperes in air (IEC 60364-5-523)

- Voltage : Below 0.6/1KV
- Temperature : In air 30°C, In ground 20°C,
- Insulation : PVC

Unit : A

| Size mm ² | Number of Loaded Conductors and Type of Insulation | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|--|---|---|---|---|
| | A1 | | A2 | | B1 | | B2 | | C | | D | |
| |  |  |  |  |  |  |  |  |  |  |  |  |
| Two Load | Three Load | Two Load | Three Load | Two Load | Three Load | Two Load | Three Load | Two Load | Three Load | Two Load | Three Load | |
| 1.5 | 14.5 | 13.5 | 14 | 13 | 17.5 | 15.5 | 16.5 | 15 | 19.5 | 17.5 | 22 | 18 |
| 2.5 | 19.5 | 18 | 18.5 | 17.5 | 24 | 21 | 23 | 20 | 27 | 24 | 29 | 24 |
| 4 | 26 | 24 | 25 | 23 | 32 | 28 | 30 | 27 | 36 | 32 | 38 | 31 |
| 6 | 34 | 31 | 32 | 29 | 41 | 36 | 38 | 34 | 46 | 41 | 47 | 39 |
| 10 | 46 | 42 | 43 | 39 | 57 | 50 | 52 | 46 | 63 | 57 | 63 | 52 |
| 16 | 61 | 56 | 57 | 52 | 76 | 68 | 69 | 62 | 85 | 76 | 81 | 67 |
| 25 | 80 | 73 | 75 | 68 | 101 | 89 | 90 | 80 | 112 | 96 | 104 | 86 |
| 35 | 99 | 89 | 92 | 83 | 125 | 110 | 111 | 99 | 138 | 119 | 125 | 103 |
| 50 | 119 | 108 | 110 | 99 | 151 | 134 | 133 | 118 | 168 | 144 | 148 | 122 |
| 70 | 151 | 136 | 139 | 125 | 192 | 171 | 168 | 149 | 213 | 184 | 183 | 151 |
| 95 | 182 | 164 | 167 | 150 | 232 | 207 | 201 | 179 | 258 | 223 | 216 | 179 |
| 120 | 210 | 188 | 192 | 172 | 269 | 239 | 232 | 206 | 299 | 259 | 246 | 203 |
| 150 | 240 | 216 | 219 | 196 | - | - | - | - | 344 | 299 | 278 | 230 |
| 185 | 273 | 245 | 248 | 223 | - | - | - | - | 392 | 341 | 312 | 258 |
| 240 | 321 | 286 | 291 | 261 | - | - | - | - | 461 | 403 | 361 | 297 |
| 300 | 367 | 328 | 334 | 298 | - | - | - | - | 530 | 464 | 408 | 336 |

Unit : A

| Size mm ² | Number of Loaded Conductors and Type of Insulation | | | | | | |
|-------------------------|---|---|---|---|---|---|---|
| | Multi-Core Cable | | Single-Core Cable | | | | |
| | E | E | F | F | F | G | G |
| |  |  |  |  |  |  |  |
| Two Load Conductor | Three Load Conductor | Two Load Conductor Touching | Three Load Conductor Trefoil | Three Load Conductor Flat Touching | Three Load Conductor Flat Spaced | Three Load Conductor Flat Spaced | |
| 1.5 | 22 | 18.5 | - | - | - | - | - |
| 2.5 | 30 | 25 | - | - | - | - | - |
| 4 | 40 | 34 | - | - | - | - | - |
| 6 | 51 | 43 | - | - | - | - | - |
| 10 | 70 | 60 | - | - | - | - | - |
| 16 | 94 | 80 | - | - | - | - | - |
| 25 | 119 | 101 | 131 | 110 | 114 | 146 | 130 |
| 35 | 148 | 126 | 162 | 137 | 143 | 181 | 162 |
| 50 | 180 | 153 | 196 | 167 | 174 | 219 | 197 |
| 70 | 232 | 196 | 251 | 216 | 225 | 281 | 254 |
| 95 | 282 | 238 | 304 | 264 | 275 | 341 | 311 |
| 120 | 328 | 276 | 352 | 308 | 321 | 396 | 362 |
| 150 | 376 | 319 | 406 | 356 | 372 | 456 | 419 |
| 185 | 434 | 364 | 463 | 409 | 427 | 521 | 480 |
| 240 | 514 | 430 | 546 | 485 | 507 | 615 | 459 |
| 300 | 593 | 497 | 629 | 561 | 587 | 709 | 659 |
| 400 | - | - | 754 | 656 | 689 | 852 | 795 |
| 500 | - | - | 868 | 749 | 789 | 982 | 920 |
| 630 | - | - | 1005 | 855 | 905 | 1138 | 1070 |

Bare Wire

OPGW

Insulated Wire

Grounding Wire

Instrument Cable

Control Cable

Power Cable

Reference

Installation

Correction Factors for Cables in Air

■ Ambient Temperature

| Ambient Temperature(°C) | 10 | 15 | 20 | 25 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| PVC Insulation | 1.22 | 1.17 | 1.12 | 1.06 | 0.94 | 0.87 | 0.79 | 0.71 | 0.61 | 0.50 | - | - | - | - |
| XLPE Insulation | 1.15 | 1.12 | 1.08 | 1.04 | 0.96 | 0.91 | 0.87 | 0.82 | 0.76 | 0.71 | 0.65 | 0.58 | 0.50 | 0.41 |

■ Groups of More Than One Circuit or More Than One Multi-Core Cable

| Arrangement (Cables Touching) | Number of Circuits or Multi-Core Cables | | | | | | | | | |
|--|---|------|------|------|------|------|------|------|------|--|
| | 1 | 2 | 3 | 4 | 6 | 9 | 12 | 16 | 20 | |
| Bunched in Air, on a Surface, Embedded or Enclosed | 1.00 | 0.80 | 0.70 | 0.65 | 0.57 | 0.50 | 0.45 | 0.41 | 0.38 | |
| Single Layer on wall, Floor or Unperforated Tray | 1.00 | 0.85 | 0.79 | 0.75 | 0.72 | 0.70 | - | - | - | |
| Single Layer Fixed Directly Under a wooden Ceiling | 0.95 | 0.81 | 0.72 | 0.68 | 0.64 | 0.61 | - | - | - | |
| Single Layer on a Perforated Horizontal or Vertical Tray | 1.00 | 0.88 | 0.82 | 0.77 | 0.73 | 0.72 | - | - | - | |
| Single Layer on a Ladder Support or Cleats etc. | 1.00 | 0.87 | 0.82 | 0.80 | 0.79 | 0.78 | - | - | - | |

Correction Factors for Cables in the Ground

■ Ground Temperature

| Ground Temperature(°C) | 10 | 15 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 |
|------------------------|------|------|------|------|------|------|------|------|------|------|-----|------|------|------|
| PVC Insulation | 1.1 | 1.05 | 0.95 | 0.89 | 0.84 | 0.77 | 0.71 | 0.63 | 0.55 | 0.45 | - | - | - | - |
| XLPE Insulation | 1.07 | 1.04 | 0.96 | 0.93 | 0.89 | 0.85 | 0.8 | 0.76 | 0.71 | 0.65 | 0.6 | 0.53 | 0.46 | 0.38 |

■ Soil Thermal Resistivity(for Buried Duct)

| Thermal Resistivity K.m/W | 1 | 1.5 | 2 | 2.5 | 3 |
|---------------------------|-----|-----|------|-----|------|
| Correction Factor | 1.8 | 1.1 | 1.05 | 1 | 0.96 |

| Cable to Cable Clearance | Duct to Duct Clearance | | | | |
|--|------------------------|---------------------|--------|-------|------|
| | Cables Touching | One Cables Diameter | 0.125m | 0.25m | 0.5m |
| Number of Circuit (Single Cores Cables or Multi-Core Cable) | | | | | |
| 2 | 0.75 | 0.80 | 0.85 | 0.90 | 0.90 |
| 3 | 0.65 | 0.70 | 0.75 | 0.80 | 0.85 |
| 4 | 0.60 | 0.60 | 0.70 | 0.75 | 0.80 |
| 5 | 0.55 | 0.55 | 0.65 | 0.70 | 0.80 |
| 6 | 0.50 | 0.55 | 0.60 | 0.70 | 0.80 |

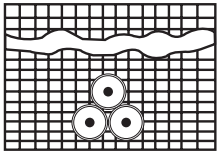
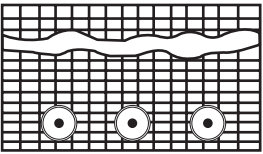
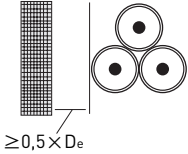
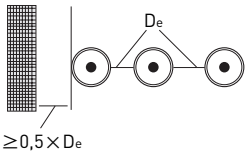
■ Duct to Duct Clearance

| | Duct to Duct Clearance | | | |
|--|------------------------|-------|------|------|
| | Duct Touching | 0.25m | 0.5m | 1.0m |
| Number of Circuit (Single Cores Cables or Multi-Core Cable) | | | | |
| 2 | 0.85 | 0.90 | 0.95 | 0.95 |
| 3 | 0.75 | 0.85 | 0.90 | 0.95 |
| 4 | 0.70 | 0.80 | 0.85 | 0.90 |
| 5 | 0.65 | 0.80 | 0.85 | 0.90 |
| 6 | 0.60 | 0.80 | 0.80 | 0.90 |
| Number of Circuit (Single Cores Cables or Multi-Core Cable) | | | | |
| 2 | 0.8 | 0.9 | 0.9 | 0.95 |
| 3 | 0.7 | 0.8 | 0.85 | 0.9 |
| 4 | 0.65 | 0.75 | 0.8 | 0.9 |
| 5 | 0.60 | 0.7 | 0.8 | 0.9 |
| 6 | 0.60 | 0.7 | 0.8 | 0.9 |

Current Carrying Capacity in Amperes (IEC 60502-2)

- Temperature : 20°C(Ground), 30°C(Air)
- Laying Depth : 0.8m
- Thermal Resistivity of Ground : 1.5K-m/W
- Spacing Between Cables laid in Flat Formation : 2 Times Cable Overall Diameter

■ 3.6/6KV ~18/30KV Single Core Cables with XLPE Insulation

| Conductor Size mm ² | Buried Direct in the Ground | | In Air | |
|-----------------------------------|---|---|--|---|
| | Trefoil | Flat Spaced | Trefoil | Flat Spaced |
| |  |  |  |  |
| Copper | | | | |
| 16 | 109 | 113 | 125 | 150 |
| 25 | 140 | 144 | 163 | 196 |
| 35 | 166 | 172 | 196 | 238 |
| 50 | 196 | 203 | 238 | 286 |
| 70 | 239 | 246 | 296 | 356 |
| 95 | 285 | 293 | 361 | 434 |
| 120 | 323 | 332 | 417 | 500 |
| 150 | 361 | 366 | 473 | 559 |
| 185 | 406 | 410 | 543 | 637 |
| 240 | 469 | 470 | 641 | 745 |
| 300 | 526 | 524 | 735 | 846 |
| 400 | 590 | 572 | 845 | 938 |
| Aluminum | | | | |
| 16 | 84 | 88 | 97 | 116 |
| 25 | 108 | 112 | 127 | 153 |
| 35 | 129 | 134 | 154 | 185 |
| 50 | 152 | 157 | 184 | 222 |
| 70 | 186 | 192 | 230 | 278 |
| 95 | 221 | 229 | 280 | 338 |
| 120 | 252 | 260 | 324 | 391 |
| 150 | 281 | 288 | 368 | 440 |
| 185 | 317 | 324 | 424 | 504 |
| 240 | 367 | 373 | 502 | 593 |
| 300 | 414 | 419 | 577 | 677 |
| 400 | 470 | 466 | 673 | 769 |

Current Carrying Capacity in Amperes (IEC 60502-2)

■ 3.6/6KV ~ 18/30KV Three Core Cables with XLPE Insulation

| Conductor Size mm ² | Unarmoured | | Armoured | |
|-----------------------------------|-------------------------|--------|-------------------------|--------|
| | Buried Direct in Ground | In Air | Buried Direct in Ground | In Air |
| | | | | |
| Copper | | | | |
| 16 | 101 | 87 | 101 | 110 |
| 25 | 129 | 112 | 129 | 143 |
| 35 | 153 | 133 | 154 | 172 |
| 50 | 181 | 158 | 181 | 205 |
| 70 | 221 | 193 | 220 | 253 |
| 95 | 262 | 231 | 263 | 307 |
| 120 | 298 | 264 | 298 | 352 |
| 150 | 334 | 297 | 332 | 397 |
| 185 | 377 | 336 | 374 | 453 |
| 240 | 434 | 390 | 431 | 529 |
| 300 | 489 | 441 | 482 | 599 |
| 400 | 553 | 501 | 541 | 683 |
| Aluminum | | | | |
| 16 | 78 | 67 | 78 | 85 |
| 25 | 100 | 87 | 100 | 111 |
| 35 | 119 | 103 | 119 | 133 |
| 50 | 140 | 122 | 140 | 159 |
| 70 | 171 | 150 | 171 | 196 |
| 95 | 203 | 179 | 204 | 2389 |
| 120 | 232 | 205 | 232 | 274 |
| 150 | 260 | 231 | 259 | 309 |
| 185 | 294 | 262 | 293 | 354 |
| 240 | 340 | 305 | 338 | 415 |
| 300 | 384 | 346 | 380 | 472 |
| 400 | 438 | 398 | 432 | 545 |

Correction Factors

■ Ambient Air Temperature

| Ambient Temperature(°C) | 20 | 25 | 35 | 40 | 45 | 50 | 55 | 60 |
|-------------------------|------|------|------|------|------|------|------|------|
| XLPE Insulation | 1.08 | 1.04 | 0.96 | 0.91 | 0.87 | 0.82 | 0.76 | 0.71 |

■ Ambient Ground Temperature

| Ambient Temperature(°C) | 10 | 15 | 25 | 30 | 35 | 40 | 45 | 50 |
|-------------------------|------|------|------|------|------|------|------|------|
| XLPE Insulation | 1.07 | 1.04 | 0.96 | 0.93 | 0.89 | 0.85 | 0.80 | 0.76 |

■ Depth of Laying for Direct Buried Cables

| Depth of Laying m | | 0.5 | 0.6 | 1 | 1.25 | 1.5 | 1.75 | 2 | 2.5 | 3 |
|--------------------|---------|------|------|------|------|------|------|------|------|------|
| Single Core Cables | ≤ 185SQ | 1.04 | 1.02 | 0.98 | 0.96 | 0.95 | 0.94 | 0.93 | 0.91 | 0.90 |
| | > 185SQ | 1.06 | 1.04 | 0.97 | 0.95 | 0.93 | 0.91 | 0.9 | 0.88 | 0.86 |
| Three Core Cables | | 1.04 | 1.03 | 0.98 | 0.96 | 0.95 | 0.94 | 0.93 | 0.91 | 0.90 |

■ Soil Thermal Resistivity(for Buried Single-Core Cables)

| Nominal Area of Conductor mm ² | Thermal Resistivity K.m/W | | | | | | | |
|--|---------------------------|------|------|------|------|------|------|--|
| | 0.7 | 0.8 | 0.9 | 1 | 2 | 2.5 | 3 | |
| 16 | 1.29 | 1.24 | 1.19 | 1.15 | 0.89 | 0.82 | 0.75 | |
| 25 | 1.30 | 1.25 | 1.20 | 1.16 | 0.89 | 0.81 | 0.75 | |
| 35 | 1.30 | 1.25 | 1.21 | 1.16 | 0.89 | 0.81 | 0.75 | |
| 50 | 1.32 | 1.26 | 1.21 | 1.16 | 0.89 | 0.81 | 0.74 | |
| 70 | 1.33 | 1.27 | 1.22 | 1.17 | 0.89 | 0.81 | 0.74 | |
| 95 | 1.34 | 1.28 | 1.22 | 1.18 | 0.89 | 0.80 | 0.74 | |
| 120 | 1.34 | 1.28 | 1.22 | 1.18 | 0.88 | 0.80 | 0.74 | |
| 150 | 1.35 | 1.28 | 1.23 | 1.18 | 0.88 | 0.80 | 0.74 | |
| 185 | 1.35 | 1.29 | 1.23 | 1.18 | 0.88 | 0.80 | 0.74 | |
| 240 | 1.36 | 1.29 | 1.23 | 1.18 | 0.88 | 0.80 | 0.73 | |
| 300 | 1.36 | 1.30 | 1.24 | 1.19 | 0.88 | 0.80 | 0.73 | |
| 400 | 1.37 | 1.30 | 1.24 | 1.19 | 0.88 | 0.79 | 0.73 | |

■ Soil Thermal Resistivity(for Buried Three-Core Cables)

| Nominal Area of Conductor mm ² | Thermal Resistivity K.m/W | | | | | | |
|--|---------------------------|--------|------|------|------|------|------|
| | 0.7 | 0.80.8 | 0.9 | 1 | 2 | 2.5 | 3 |
| 16 | 1.23 | 1.19 | 1.19 | 1.13 | 0.91 | 0.84 | 0.78 |
| 25 | 1.24 | 1.20 | 1.20 | 1.13 | 0.91 | 0.84 | 0.78 |
| 35 | 1.25 | 1.21 | 1.21 | 1.13 | 0.91 | 0.83 | 0.78 |
| 50 | 1.25 | 1.21 | 1.21 | 1.14 | 0.91 | 0.83 | 0.77 |
| 70 | 1.26 | 1.21 | 1.22 | 1.14 | 0.90 | 0.83 | 0.77 |
| 95 | 1.26 | 1.22 | 1.22 | 1.14 | 0.90 | 0.83 | 0.77 |
| 120 | 1.26 | 1.22 | 1.22 | 1.14 | 0.90 | 0.83 | 0.77 |
| 150 | 1.27 | 1.22 | 1.23 | 1.15 | 0.90 | 0.83 | 0.77 |
| 185 | 1.27 | 1.23 | 1.23 | 1.15 | 0.90 | 0.83 | 0.77 |
| 240 | 1.28 | 1.23 | 1.23 | 1.15 | 0.90 | 0.83 | 0.77 |
| 300 | 1.28 | 1.23 | 1.24 | 1.15 | 0.90 | 0.82 | 0.77 |
| 400 | 1.28 | 1.23 | 1.24 | 1.15 | 0.90 | 0.82 | 0.76 |

■ Group Rating Factors of Three-Core Cables in Horizontal Formation Laid Direct in the Ground

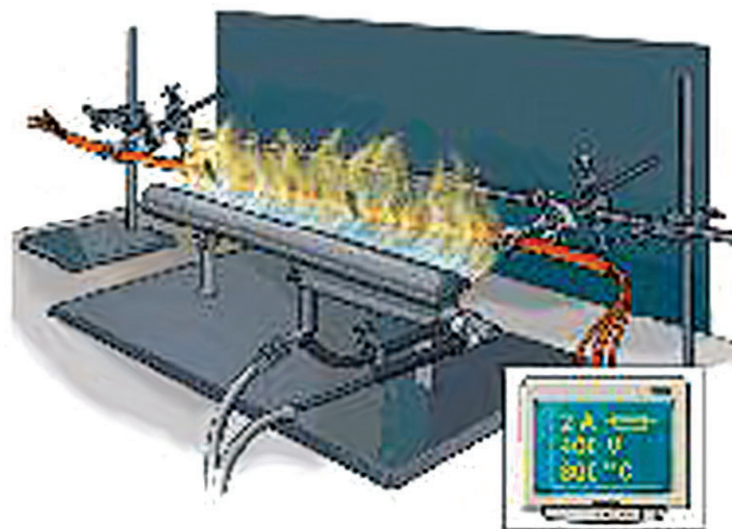
| Number of Cables in Group | Spacing Between Cable Centres | | | | |
|---------------------------|-------------------------------|------|------|------|------|
| | Touching | 0.2m | 0.4m | 0.6m | 0.8m |
| 2 | 0.80 | 0.86 | 0.90 | 0.90 | 0.94 |
| 3 | 0.69 | 0.77 | 0.82 | 0.86 | 0.89 |
| 4 | 0.62 | 0.82 | 0.79 | 0.93 | 0.87 |
| 5 | 0.57 | 0.68 | 0.76 | 0.81 | 0.85 |
| 6 | 0.54 | 0.65 | 0.74 | 0.80 | 0.84 |

■ Group Rating Factors of Three-Phase Circuits of Single-Cables Laid Direct in the Ground

| Number of Cables in Group | Spacing Between Cable Centres | | | | |
|---------------------------|-------------------------------|------|------|------|------|
| | Touching | 0.2m | 0.4m | 0.6m | 0.8m |
| 2 | 0.73 | 0.83 | 0.88 | 0.90 | 0.92 |
| 3 | 0.60 | 0.73 | 0.79 | 0.83 | 0.86 |
| 4 | 0.54 | 0.68 | 0.75 | 0.80 | 0.84 |
| 5 | 0.49 | 0.63 | 0.72 | 0.78 | 0.82 |
| 6 | 0.46 | 0.61 | 0.70 | 0.76 | 0.81 |

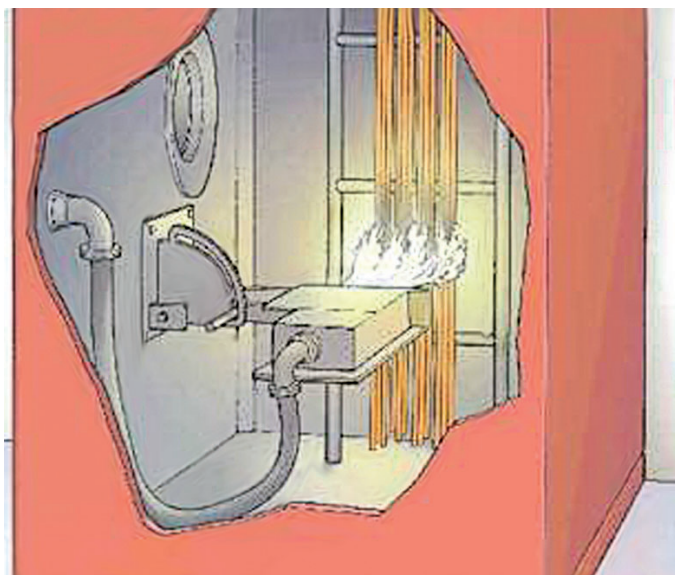
IEC 60331 Fire resistant test

| Category | IEC 60331 |
|-----------------------------|--|
| Scope | The test apparatus to be used for testing cables required to maintain circuit integrity when subject to fire alone where the test condition is based upon a flame with a controlled heat output corresponding to a temperature of at least 750°C |
| Type of Burner | Verification procedure for burner system |
| Length of sample | Not less than 1200mm |
| Mounting of the test sample | Horizontal mount of single cable |
| Flame application time | 90min |
| Acceptance criteria | The voltage is maintained (No fuse fails or circuit-breaker is interrupted) A conductor does not rupture (the lamp is not extinguished) |



IEC 60332-3 Flame retardant test

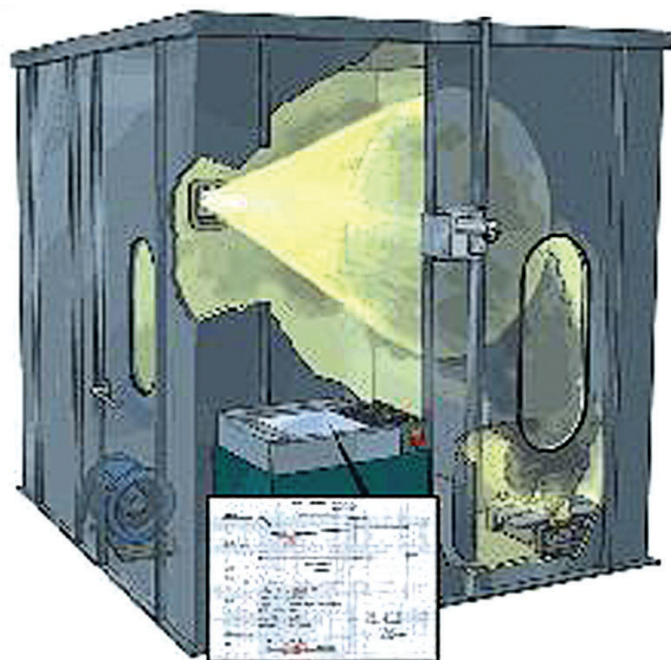
| Category | A | B | C |
|----------------------------|---|----------------------|----------------------|
| | IEC 60332-3-22 | IEC 60332-3-23 | IEC 60332-3-24 |
| Type of tray | Ladder | | |
| Type of Burner | Ribbon burner | | |
| Test chamber | Width : 1m, Depth : 2m, Height : 4m The back and sides of the test chamber shall be thermally insulate to give a coefficient of heat transfer of approximately 0.7W/ m ² °K. | | |
| Air supply | A means of supplying a controlled air flow through the chamber shall be fitted | | |
| Heat of combustion | 70,000Btu/h | | |
| Flow rate | Air : 77.7±4.8ℓ /min Propane : 13.5±0.5ℓ /min | | |
| Test samples | 7 liters per meter | 3.5 liters per meter | 1.5 liters per meter |
| Mounting of th test sample | Maximum width of s single layer shall be 300mm (in case of A F, if necessary 600mm) Over 35SQ : the space between each test piece of one layer shall be 0.5times the cable diameter (Max. 20mm) 35SQ and below : Touching formation | | |
| | Front side of ladder | Front side of ladder | Front side of ladder |
| Positioning of burner | 75mm from surface of the cable, 600mm above the floor | | |
| Flame application time | 40 min. | 40 min. | 20 min. |
| Performance requirement | maximum extent of the charred portion : Not reached a height exceeding 2.5m above the bottom edge of the burner | | |
| Test environment | External wind speed : less than 8m/s, temperature of the inside walls : 5~40°C | | |



IEC 61034 Smoke density test

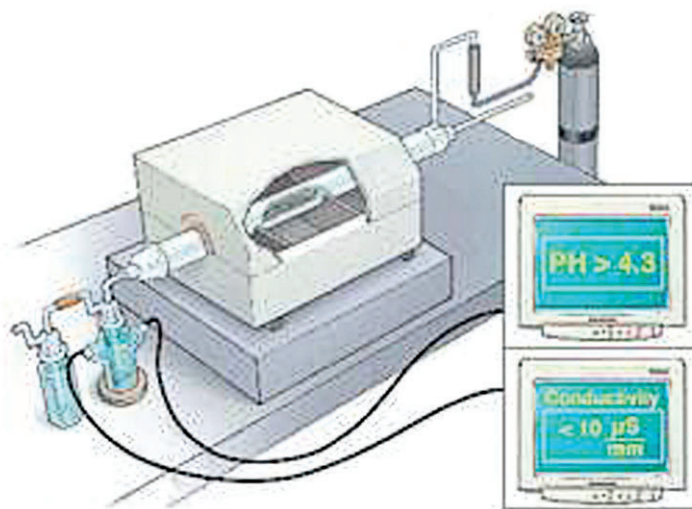
| Category | IEC 61034 | | |
|-----------------------------|--|----|---------------------|
| Test chamber | Height : 3000 ± 30mm Width : 3000 ± 30mm Depth : 3000 ± 30mm | | |
| Type of Burner | Gas burner | | |
| Length of sample | 1.00m ± 0.05mm | | |
| Mounting of the test sample | Horizontal mount of single cable | | |
| Number of test pieces | D ≤ 10 | mm | Under consideration |
| | 10 < D ≤ 20 | mm | 3 |
| | 20 < D ≤ 40 | mm | 2 |
| | D > 40 | mm | 1 |
| Evaluation of test results | The requirement shall be given in the relevant cable specification (If no value is given in the relevant cable specification, it is recommended that a minimum value of 60% is adopted) | | |

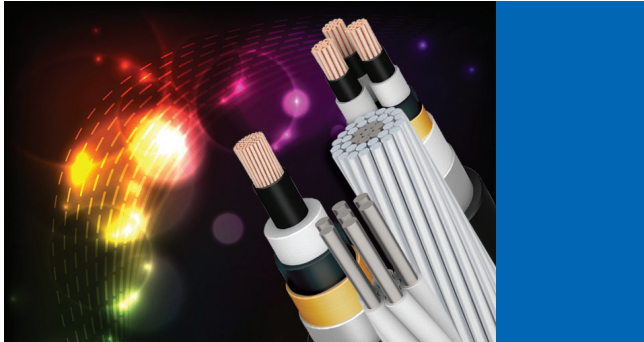
(D is Cable diameter)



IEC 60754-2 Measuring pH and conductivity test

| Category | IEC 60754-2 |
|----------------------------|--|
| Combustion boat | Long : 45 ~ 100mm Wide : 12 ~ 30mm Deep : 5 ~ 10mm |
| Test pieces | 1000mg ± 5mg |
| Conditioning of sample | The samples shall be stored for at least 16h at a temperature of (23±2)°C and a relative humidity of (50±5)% |
| Evaluation of test results | The pH meter shall be calibrated as proposed by the instrument supplier. (The weighted pH value should not be less than 4.3 when related to 1 litre of water) |





Installation

- Laying
- Protection of Cables
- Cable Jointing
- Minimum Bending Radius and Permissible Maximum Pulling Tension
- Side Wall Pressure to Cable
- Removal of Sheath or Tape
- Cleaning the Surface of Insulation
- Applying of Self Adhesive Tape
- Water proof Treatment for Out-Door Termination

Installation

Installation

1. Laying

In accordance with the general regulation concerning electrical installation, cables are to be laid in trenches of a minimum depth of 0.60m

When it is not possible to carry out a burying depth of 0.6m or when crossing railways, local railway main roads and busy roads, the cables are protected by a continuous sheath, generally in metal, fibre-cement or sandstone tube, the inner diameter of which is at least equal to 2.5 times that of the cable.

Cable trench width must be sufficient to permit satisfactory execution of the work.

According to requirements, various other models of laying may be considered, among which: laying in ducts or cellular premanufactured pipeworks, on racks in building, etc...

Each of them must be individually studied and the method of laying will be taken into consideration for the making out of the cable operating conditions

2. Protection of cables

The laid cables are protected all along their route by a covering of durable and resistant materials intended to protect them against tools during further excavations.

The protective covering must run over the cables. It is made in such a way that no continuous longitudinal joint angle with the cable is realized. This protection generally consists of bricks, cable covers of appropriate shape or of concrete slabs separated by a thick layer of sand or sifted earth.

Taking into account the increasing extension of networks and the constant increase of excavator equipment, it is highly advisable to proceed with the most complete and accurate marking possible of the cable route. Where this method of marking can not be used, all the dimension figures of the markers necessary for the transfer of the route of the ground are to be indicated on the site drawing

3. Cable jointing

If this is not carried out with the maximum of care by a skilled staff and by means of appropriated material, every junction box or end box is weak point in the network.

We recommend the use of good quality accessories, the difference in cost between such and those of inferior quality is usually insignificant as compared with the value of the cable and it is therefore short-term policy to provide expensive cables with cheap accessories.

As for the cable route, it is advisable to mark carefully the location of joints both on the ground and in the drawings. With this in mind, we can provide length indicated cable.

These indication allows to determine the length of a cable between two successive joints and, from that, the total length of the cable laid.

Installation

4. Minimum bending radius and permissible maximum pulling tension

For safety installation without damaging electrical and physical properties, the following minimum bending radius and permissible maximum pulling tension must be observed:

■ Minimum bending radius

| Type of Cable | Number of Core | Single Core | | Multi Core Conductor |
|--------------------------------|----------------|-----------------|-----------------------------------|----------------------|
| | | Round Conductor | Four Segmental Stranded Conductor | |
| 600V Cable | | 8D | 12D | 6D |
| 3,300V Cable and Higher | | 10D | 12D | 8D |
| Triplex Type Cable | | - | - | 8D |
| Corrugated Metal Armored Cable | | 10D | 12D | 8D |
| Wire Armored Cable | | 10D | 12D | 8D |
| Lead Armored Cable | | 10D | 12D | 8D |

■ Permissible maximum pulling tension

| Pulling Tool | Material of Conductor | Single Core Permissible Maximum Pulling Tension(kg) |
|--------------|-----------------------|---|
| Pulling Eye | Copper | $7 \times (\text{Number of Core}) \times (\text{Cross-Sectional Area of Conductor})$ |
| | Aluminum | $4 \times (\text{Number of Core}) \times (\text{Cross-Sectional Area of Conductor})$ |
| Cable Grip | Copper & Aluminum | The Same as Using the Pulling Eye, But the Maximum Tension Should be Less than Two Tons |

* Note : When cable grip is used, it should cover more than 500mm in length of the cable end and be bound to the cable sheath.

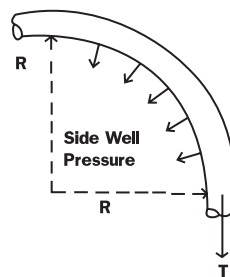
5. Side wall pressure to cable

Permissible maximum side wall pressure to the cable at bending point during installation is 500kg/m.

Side wall pressure to cable

T: Pulling tension(kg)

R: Bending radius(m) $= \frac{T}{R}$



Installation

6. Removal of sheath or tape

Special care must be taken not to harm the insulation when removing the sheath or tapes with a knife otherwise it may result in a dielectric breakdown.

7. Cleaning the surface of insulation

The surface of insulation should be cleaned to avoid a flash over at the cable termination or joint.

8. Applying of self adhesive tape

When applying a self adhesive tape after jointing or terminating of XLPE cable, stretch it properly about 1.2times as long as the original one. If it is overstretched crack may occur on the tape in the long run and if not stretched properly, tape will be adhered between each layer.

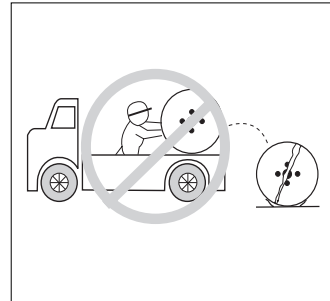
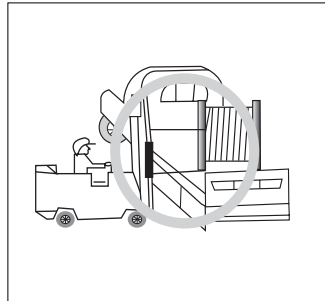
9. Water proof treatment for out-door termination

For out-door termination water proof treatment is necessary to avoid the water penetrating into the cable end and special care must be taken to apply tapes end terminals

Installation

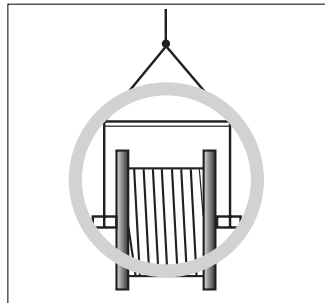
- When unloading reels from a truck, lower reels carefully using hoist or a forklift truck. Never drop reels.

If reels must be rolled, roll in opposite direction of the cable wraps to keep cable from loosening on the reels

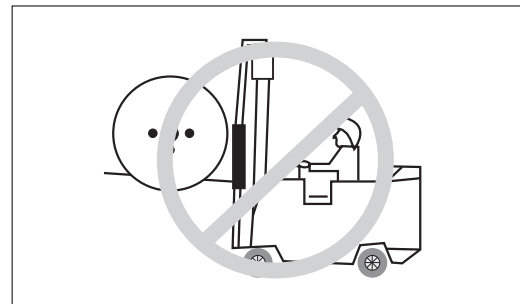
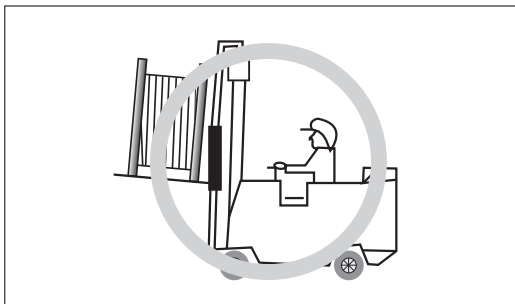


- When using a hoist, install a mandrel through the reel arbor holes and attach a sling. Use a spreader bar approximately 6 inches longer than the overall reel width placed between the sling ends just above the reel flanges.

This will prevent bending the reel flanges and mashing the cable.



- If a forklift is used, approach the reel from the flange side. Position the forks so that the reel is lifted by both reel flanges. Do not allow the lift forks to contact the cable. Care must be taken by the fork lift operator not to make sudden turns or stops.



- Cable shipped on pallets should be stored indoors if possible. Cable shipped on wooden or metal reels may be stored outdoors. When selecting a storage site, consideration should be given to:

- Traffic patterns during off-loading
- Grade and condition of the soil or pavement
- Protection from vehicle damage during the time in storage
- Environmental conditions such as exposure to heat, corrosive chemicals, etc.

Installation

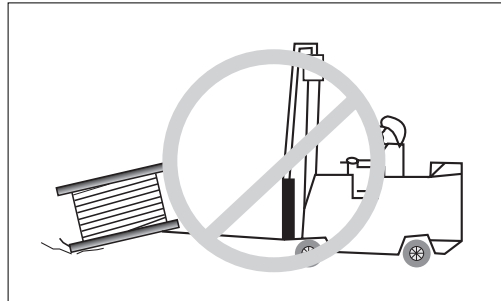
- Cable reels should be stored on hard surfaces resting on the flanges edge (flanges vertical).

Align reels flanges to flange and, if possible, arrange so that first in is first out. Multiple reels stacked on top of each other ("pancake" storage), or storing reels flat (flanges horizontal) is not recommended for bare conductor or medium voltage cable.

The weight of the stack can total thousands of pounds creating an enormous load on the bottom reel.

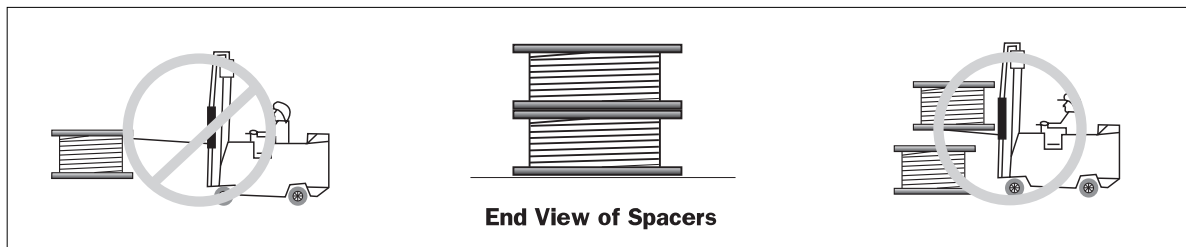
Also, damage to the reel and/or cable will likely occur when the reel is flipped for transit.

A concentration of stress on the reel flange may cause it to break and subsequently damage the cable.



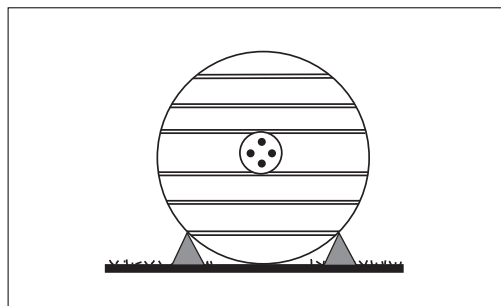
- If cable reels must be pancaked or stored in vertical racks, do not lift the reel by the top flange. Spacers placed under the bottom flange and between reels (two 2x4's placed wide side up) create a space to insert the forks and lift the reel without damaging the cable.

If nails are used to secure the spacers, make sure the nails do not go through the flange and into the cable.



- For extended storage of bare or insulated cables (spare cable, etc.) reels should be stored cradled between railroad ties, power poles or crossarms. Size and spacing of the supports should raise the flange above the ground.

This helps keep the flanges from decaying and prevents the reels from rolling. At temporary storage sites where soil may be soft, preservative treated plywood sheets may be used to keep reel flanges from sinking into the ground.



- When possible, the reel wrap or lagging supplied on the reels should be replaced to help protect the cable from inadvertent damage.

Under extreme environmental conditions, other measures may be necessary. To prevent entrance of water, cable ends should be sealed with plastic end caps. Electrical tape does not offer a sufficient seal.

When lengths are cut, cable ends should be immediately resealed and secured.



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