

## Wire Sizing Table for AWG (American Wire Gauge) and Equivalent Metric Sizes

This table will help to determine the appropriate wire size for charging circuits in your PV power system in AWG or the equivalent metric size. The table shows the maximum one way wire distance the conductor will pass current. Cross-reference by wire gauge (AWG or MM2) and current (Amps) to find length in feet (blue column) or meters (orange column). For example, 2 Amps with #12 wire will run a maximum distance of 303.03 feet. And the equivalent wire gauge area (MM2), 3.31, for the same 2 Amps will run a maximum 92.36 meters.

| Amps | AWG    | MM2    | AWG    | MM2    | AWG    | MM2    | AWG     | MM2    |
|------|--------|--------|--------|--------|--------|--------|---------|--------|
|      | #14    | 2.08   | #12    | 3.31   | #10    | 5.26   | #8      | 8.36   |
| 1    | 382.17 | 116.49 | 606.06 | 184.73 | 967.74 | 294.97 | 1542.42 | 470.13 |
| 2    | 191.08 | 58.24  | 303.03 | 92.36  | 483.87 | 147.48 | 771.21  | 235.06 |
| 4    | 95.54  | 29.12  | 151.52 | 46.18  | 241.94 | 73.74  | 385.60  | 117.53 |
| 6    | 63.69  | 19.41  | 101.01 | 30.79  | 161.29 | 49.16  | 257.07  | 78.35  |
| 8    | 47.77  | 14.56  | 75.76  | 23.09  | 120.97 | 36.87  | 192.80  | 58.77  |
| 10   | 38.22  | 11.65  | 60.61  | 18.47  | 96.77  | 29.50  | 154.24  | 47.01  |
| 12   | 31.85  | 9.71   | 50.51  | 15.40  | 80.65  | 24.58  | 128.53  | 39.18  |
| 14   | 27.30  | 8.32   | 43.29  | 13.19  | 69.12  | 21.07  | 110.17  | 33.58  |
| 16   | 23.89  | 7.28   | 37.88  | 11.55  | 60.48  | 18.43  | 96.40   | 29.38  |
| 18   | 21.23  | 6.47   | 33.67  | 10.26  | 53.76  | 16.39  | 85.69   | 26.12  |
| 20   | 19.11  | 5.82   | 30.30  | 9.24   | 48.39  | 14.75  | 77.12   | 23.51  |
| 25   | 15.29  | 4.66   | 24.24  | 7.39   | 38.71  | 11.80  | 61.70   | 18.81  |
| 30   | 12.74  | 3.88   | 20.20  | 6.16   | 32.26  | 9.83   | 51.41   | 15.67  |
| 35   | 10.92  | 3.33   | 17.32  | 5.28   | 27.65  | 8.43   | 44.07   | 13.43  |
| 40   | 9.55   | 2.91   | 15.15  | 4.62   | 24.19  | 7.37   | 38.56   | 11.75  |
| 45   | 8.49   | 2.59   | 13.47  | 4.11   | 21.51  | 6.56   | 34.28   | 10.45  |
| 50   | 7.64   | 2.33   | 12.12  | 3.69   | 19.35  | 5.90   | 30.85   | 9.40   |
| 55   | 6.95   | 2.12   | 11.02  | 3.36   | 17.60  | 5.36   | 28.04   | 8.55   |
| 60   | 6.37   | 1.94   | 10.10  | 3.08   | 16.13  | 4.92   | 25.71   | 7.84   |
| 65   | 5.88   | 1.79   | 9.32   | 2.84   | 14.89  | 4.54   | 23.73   | 7.23   |
| 70   | 5.46   | 1.66   | 8.66   | 2.64   | 13.82  | 4.21   | 22.03   | 6.71   |
| 75   | 5.10   | 1.55   | 8.08   | 2.46   | 12.90  | 3.93   | 20.57   | 6.27   |
| 80   | 4.78   | 1.46   | 7.58   | 2.31   | 12.10  | 3.69   | 19.28   | 5.88   |
| 85   | 4.50   | 1.37   | 7.13   | 2.17   | 11.39  | 3.47   | 18.15   | 5.53   |
| 90   | 4.25   | 1.30   | 6.73   | 2.05   | 10.75  | 3.28   | 17.14   | 5.22   |
| 95   | 4.02   | 1.23   | 6.38   | 1.94   | 10.19  | 3.11   | 16.24   | 4.95   |
| 100  | 3.82   | 1.16   | 6.06   | 1.85   | 9.68   | 2.95   | 15.42   | 4.70   |
| 125  | 3.06   | 0.93   | 4.85   | 1.48   | 7.74   | 2.36   | 12.34   | 3.76   |
| 150  | 2.55   | 0.78   | 4.04   | 1.23   | 6.45   | 1.97   | 10.28   | 3.13   |
| 175  | 2.18   | 0.66   | 3.46   | 1.05   | 5.53   | 1.69   | 8.81    | 2.69   |
| 200  | 1.91   | 0.58   | 3.03   | 0.92   | 4.84   | 1.48   | 7.71    | 2.35   |
| 225  | 1.70   | 0.52   | 2.69   | 0.82   | 4.30   | 1.31   | 6.86    | 2.09   |
| 250  | 1.53   | 0.47   | 2.42   | 0.74   | 3.87   | 1.18   | 6.17    | 1.88   |
| 275  | 1.39   | 0.42   | 2.20   | 0.67   | 3.52   | 1.07   | 5.61    | 1.71   |
| 300  | 1.27   | 0.39   | 2.02   | 0.62   | 3.23   | 0.98   | 5.14    | 1.57   |
| 400  | 0.96   | 0.29   | 1.52   | 0.46   | 2.42   | 0.74   | 3.86    | 1.18   |

## Wire Sizing Table for AWG (American Wire Gauge) and Equivalent Metric Sizes

| Amps | AWG     | MM2    | AWG     | MM2     | AWG     | MM2     | AWG     | MM2     |
|------|---------|--------|---------|---------|---------|---------|---------|---------|
|      | #6      | 13.3   | #4      | 21.1    | #3      | 26.7    | #2      | 33.6    |
| 1    | 2443.99 | 744.93 | 3896.10 | 1187.53 | 4897.96 | 1492.90 | 6185.57 | 1885.36 |
| 2    | 1222.00 | 372.47 | 1948.05 | 593.77  | 2448.98 | 746.45  | 3092.78 | 942.68  |
| 4    | 611.00  | 186.23 | 974.03  | 296.88  | 1224.49 | 373.22  | 1546.39 | 471.34  |
| 6    | 407.33  | 124.15 | 649.35  | 197.92  | 816.33  | 248.82  | 1030.93 | 314.23  |
| 8    | 305.50  | 93.12  | 487.01  | 148.44  | 612.24  | 186.61  | 773.20  | 235.67  |
| 10   | 244.40  | 74.49  | 389.61  | 118.75  | 489.80  | 149.29  | 618.56  | 188.54  |
| 12   | 203.67  | 62.08  | 324.68  | 98.96   | 408.16  | 124.41  | 515.46  | 157.11  |
| 14   | 174.57  | 53.21  | 278.29  | 84.82   | 349.85  | 106.63  | 441.83  | 134.67  |
| 16   | 152.75  | 46.56  | 243.51  | 74.22   | 306.12  | 93.31   | 386.60  | 117.84  |
| 18   | 135.78  | 41.39  | 216.45  | 65.97   | 272.11  | 82.94   | 343.64  | 104.74  |
| 20   | 122.20  | 37.25  | 194.81  | 59.38   | 244.90  | 74.65   | 309.28  | 94.27   |
| 25   | 97.76   | 29.80  | 155.84  | 47.50   | 195.92  | 59.72   | 247.42  | 75.41   |
| 30   | 81.47   | 24.83  | 129.87  | 39.58   | 163.27  | 49.76   | 206.19  | 62.85   |
| 35   | 69.83   | 21.28  | 111.32  | 33.93   | 139.94  | 42.65   | 176.73  | 53.87   |
| 40   | 61.10   | 18.62  | 97.40   | 29.69   | 122.45  | 37.32   | 154.64  | 47.13   |
| 45   | 54.31   | 16.55  | 86.58   | 26.39   | 108.84  | 33.17   | 137.46  | 41.90   |
| 50   | 48.88   | 14.90  | 77.92   | 23.75   | 97.96   | 29.86   | 123.71  | 37.71   |
| 55   | 44.44   | 13.55  | 70.84   | 21.59   | 89.05   | 27.14   | 112.46  | 34.28   |
| 60   | 40.73   | 12.41  | 64.94   | 19.79   | 81.63   | 24.88   | 103.09  | 31.42   |
| 65   | 37.60   | 11.46  | 59.94   | 18.27   | 75.35   | 22.97   | 95.16   | 29.00   |
| 70   | 34.91   | 10.64  | 55.66   | 16.97   | 69.97   | 21.33   | 88.37   | 26.94   |
| 75   | 32.59   | 9.93   | 51.95   | 15.83   | 65.31   | 19.91   | 82.47   | 25.14   |
| 80   | 30.55   | 9.31   | 48.70   | 14.84   | 61.22   | 18.66   | 77.32   | 23.57   |
| 85   | 28.75   | 8.76   | 45.84   | 13.97   | 57.62   | 17.56   | 72.77   | 22.18   |
| 90   | 27.16   | 8.28   | 43.29   | 13.19   | 54.42   | 16.59   | 68.73   | 20.95   |
| 95   | 25.73   | 7.84   | 41.01   | 12.50   | 51.56   | 15.72   | 65.11   | 19.85   |
| 100  | 24.44   | 7.45   | 38.96   | 11.88   | 48.98   | 14.93   | 61.86   | 18.85   |
| 125  | 19.55   | 5.96   | 31.17   | 9.50    | 39.18   | 11.94   | 49.48   | 15.08   |
| 150  | 16.29   | 4.97   | 25.97   | 7.92    | 32.65   | 9.95    | 41.24   | 12.57   |
| 175  | 13.97   | 4.26   | 22.26   | 6.78    | 27.99   | 8.53    | 35.35   | 10.77   |
| 200  | 12.22   | 3.72   | 19.48   | 5.94    | 24.49   | 7.46    | 30.93   | 9.43    |
| 225  | 10.86   | 3.31   | 17.32   | 5.28    | 21.77   | 6.64    | 27.49   | 8.38    |
| 250  | 9.78    | 2.98   | 15.58   | 4.75    | 19.59   | 5.97    | 24.74   | 7.54    |
| 275  | 8.89    | 2.71   | 14.17   | 4.32    | 17.81   | 5.43    | 22.49   | 6.85    |
| 300  | 8.15    | 2.48   | 12.99   | 3.96    | 16.33   | 4.98    | 20.62   | 6.28    |
| 400  | 6.11    | 1.86   | 9.74    | 2.97    | 12.24   | 3.73    | 15.46   | 4.71    |

## Wire Sizing Table for AWG (American Wire Gauge) and Equivalent Metric Sizes

| Amps | AWG     | MM2     | AWG     | MM2     | AWG      | MM2     | AWG      | MM2     |
|------|---------|---------|---------|---------|----------|---------|----------|---------|
|      | #1      | 42.4    | #1/0    | 53.5    | #2/0     | 67.4    | #3/0     | 85      |
| 1    | 7792.21 | 2375.07 | 9836.07 | 2998.03 | 12409.51 | 3782.42 | 15665.80 | 4774.94 |
| 2    | 3896.10 | 1187.53 | 4918.03 | 1499.02 | 6204.76  | 1891.21 | 7832.90  | 2387.47 |
| 4    | 1948.05 | 593.77  | 2459.02 | 749.51  | 3102.38  | 945.61  | 3916.45  | 1193.73 |
| 6    | 1298.70 | 395.84  | 1639.34 | 499.67  | 2068.25  | 630.40  | 2610.97  | 795.82  |
| 8    | 974.03  | 296.88  | 1229.51 | 374.75  | 1551.19  | 472.80  | 1958.22  | 596.87  |
| 10   | 779.22  | 237.51  | 983.61  | 299.80  | 1240.95  | 378.24  | 1566.58  | 477.49  |
| 12   | 649.35  | 197.92  | 819.67  | 249.84  | 1034.13  | 315.20  | 1305.48  | 397.91  |
| 14   | 556.59  | 169.65  | 702.58  | 214.15  | 886.39   | 270.17  | 1118.99  | 341.07  |
| 16   | 487.01  | 148.44  | 614.75  | 187.38  | 775.59   | 236.40  | 979.11   | 298.43  |
| 18   | 432.90  | 131.95  | 546.45  | 166.56  | 689.42   | 210.14  | 870.32   | 265.27  |
| 20   | 389.61  | 118.75  | 491.80  | 149.90  | 620.48   | 189.12  | 783.29   | 238.75  |
| 25   | 311.69  | 95.00   | 393.44  | 119.92  | 496.38   | 151.30  | 626.63   | 191.00  |
| 30   | 259.74  | 79.17   | 327.87  | 99.93   | 413.65   | 126.08  | 522.19   | 159.16  |
| 35   | 222.63  | 67.86   | 281.03  | 85.66   | 354.56   | 108.07  | 447.59   | 136.43  |
| 40   | 194.81  | 59.38   | 245.90  | 74.95   | 310.24   | 94.56   | 391.64   | 119.37  |
| 45   | 173.16  | 52.78   | 218.58  | 66.62   | 275.77   | 84.05   | 348.13   | 106.11  |
| 50   | 155.84  | 47.50   | 196.72  | 59.96   | 248.19   | 75.65   | 313.32   | 95.50   |
| 55   | 141.68  | 43.18   | 178.84  | 54.51   | 225.63   | 68.77   | 284.83   | 86.82   |
| 60   | 129.87  | 39.58   | 163.93  | 49.97   | 206.83   | 63.04   | 261.10   | 79.58   |
| 65   | 119.88  | 36.54   | 151.32  | 46.12   | 190.92   | 58.19   | 241.01   | 73.46   |
| 70   | 111.32  | 33.93   | 140.52  | 42.83   | 177.28   | 54.03   | 223.80   | 68.21   |
| 75   | 103.90  | 31.67   | 131.15  | 39.97   | 165.46   | 50.43   | 208.88   | 63.67   |
| 80   | 97.40   | 29.69   | 122.95  | 37.48   | 155.12   | 47.28   | 195.82   | 59.69   |
| 85   | 91.67   | 27.94   | 115.72  | 35.27   | 145.99   | 44.50   | 184.30   | 56.17   |
| 90   | 86.58   | 26.39   | 109.29  | 33.31   | 137.88   | 42.03   | 174.06   | 53.05   |
| 95   | 82.02   | 25.00   | 103.54  | 31.56   | 130.63   | 39.82   | 164.90   | 50.26   |
| 100  | 77.92   | 23.75   | 98.36   | 29.98   | 124.10   | 37.83   | 156.66   | 47.75   |
| 125  | 62.34   | 19.00   | 78.69   | 23.98   | 99.28    | 30.26   | 125.33   | 38.20   |
| 150  | 51.95   | 15.83   | 65.57   | 19.99   | 82.73    | 25.22   | 104.44   | 31.83   |
| 175  | 44.53   | 13.57   | 56.21   | 17.13   | 70.91    | 21.61   | 89.52    | 27.29   |
| 200  | 38.96   | 11.88   | 49.18   | 14.99   | 62.05    | 18.91   | 78.33    | 23.87   |
| 225  | 34.63   | 10.56   | 43.72   | 13.33   | 55.15    | 16.81   | 69.63    | 21.22   |
| 250  | 31.17   | 9.50    | 39.34   | 11.99   | 49.64    | 15.13   | 62.66    | 19.10   |
| 275  | 28.34   | 8.64    | 35.77   | 10.90   | 45.13    | 13.76   | 56.97    | 17.36   |
| 300  | 25.97   | 7.92    | 32.79   | 9.99    | 41.37    | 12.61   | 52.22    | 15.92   |
| 400  | 19.48   | 5.94    | 24.59   | 7.50    | 31.02    | 9.45    | 39.16    | 11.94   |

## Wire Sizing Table for AWG (American Wire Gauge) and Equivalent Metric Sizes

| Amps | AWG      | MM2     |
|------|----------|---------|
|      | #4/0     | 107     |
| 1    | 19736.84 | 6015.79 |
| 2    | 9868.42  | 3007.89 |
| 4    | 4934.21  | 1503.95 |
| 6    | 3289.47  | 1002.63 |
| 8    | 2467.11  | 751.98  |
| 10   | 1973.68  | 601.58  |
| 12   | 1644.74  | 501.32  |
| 14   | 1409.77  | 429.70  |
| 16   | 1233.55  | 375.99  |
| 18   | 1096.49  | 334.21  |
| 20   | 986.84   | 300.79  |
| 25   | 789.47   | 240.63  |
| 30   | 657.89   | 200.52  |
| 35   | 563.91   | 171.88  |
| 40   | 493.42   | 150.39  |
| 45   | 438.60   | 133.69  |
| 50   | 394.74   | 120.32  |
| 55   | 358.85   | 109.38  |
| 60   | 328.95   | 100.26  |
| 65   | 303.64   | 92.55   |
| 70   | 281.95   | 85.94   |
| 75   | 263.16   | 80.21   |
| 80   | 246.71   | 75.20   |
| 85   | 232.20   | 70.77   |
| 90   | 219.30   | 66.84   |
| 95   | 207.76   | 63.33   |
| 100  | 197.37   | 60.16   |
| 125  | 157.89   | 48.12   |
| 150  | 131.58   | 40.11   |
| 175  | 112.78   | 34.38   |
| 200  | 98.68    | 30.08   |
| 225  | 87.72    | 26.74   |
| 250  | 78.95    | 24.06   |
| 275  | 71.77    | 21.88   |
| 300  | 65.79    | 20.05   |
| 400  | 49.34    | 15.04   |