2 - Electrical Circuits

AC

See Alternating Current.

Alternating Current (ac) [245]

Alternating Current (ac) waveforms are time-varying symmetrical signals, alternating between two prescribed levels in a set time sequence.

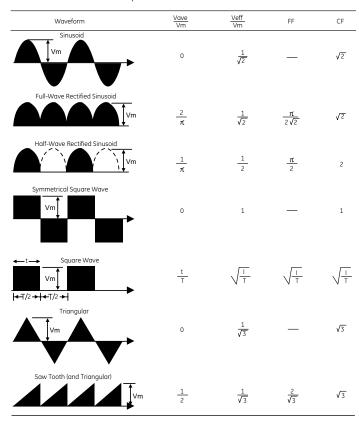


Table 2.1 – Alternating Waveform Characteristics

American Wire Gage (AWG) [245]

The wire table was designed primarily to standardize the size of wire produced by manufacturers throughout the United

States. For every drop in three gage numbers, the area is doubled, and for every drop in 10 gage numbers, the area increases by a factor of 10. The AWG sizes are shown for solid round copper wire. A column indicating the maximum allowable current in amperes, as determined by the National Fire Protection Association, is also shown.

	AWG #	Area (CM)	Ω/1,000 ft at 20 degrees C	Maximum Allowable Current for RHW Insulation (A)*
4/0) (3/0) (2/0) (1/0)	0000 000 00 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	211,600 167,810 133,080 105,530 83,694 66,373 52,634 41,742 33,102 26,250 20,816 16,509 13,094 10,381 8,234.00 6,529.00 5,178.40 4,106.80 3,256.70 2,582.90 2,048.20 1,624.30 1,288.10 1,021.50	0.049 0.0618 0.078 0.0983 0.124 0.1563 0.197 0.2485 0.3133 0.3951 0.4982 0.6282 0.7921 0.9989 1.26 1.588 2.003 2.525 3.184 4.016 5.064 6.385 8.051 10.15 810.1 642.4 509.45 404.01 320.4 254.1 201.5 159.79 126.72 100.5	230 200 175 150 130 115 100 85 - 65 - 50 - 30 - 20 - 15 12.80 16.14 20.36 25.67 32.37 40.81 51.47 64.90 81.83 103.2

^{*}Not more then three conductors in raceway, cable, or direct burial.

Table 2.2 – AWG Sizes

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