Basic AC Terminology

A: Amperage, amps, current.

AC: Alternating Current.
An electric current that periodically reverses its direction. The standard frequency used by utilities in the U.S. is 60 cycles per second (60Hz). In Europe and other parts of the world it is 50 cycles per second (50Hz). Aircraft power is typically 400Hz.

Ground:
Safety Ground, Earth.
A conducting connection, whether intentional or accidental, between a circuit or piece of equipment and earth, or some body serving as earth. A place of zero electrical potential.

Hot: Refers to the Leg of an electrical circuit that is not at ground potential. See Leg.

Hz: Hertz. Frequency. 1 divided by the period. 1 period of a full size wave. 1Hz=1cycle=1second.
60Hz = $1/60$ = .0166666 seconds = 1 period of a 60Hz size wave.

L: Line, Phase A, Phase B, Phase C. See Leg.

L-L: Line to Line, Refers to measurement made between two Legs, usually Vac rms, or phase angle.

L-N: Line to Neutral, Refers to measurement made between one Leg and Neutral, usually Vac rms or phase angle.

KVA: KiloVA (Volts Amps), {1kVA = 1,000VA} , VA divided by 1000.

KHz: KiloHertz. {1kHz = 1,000Hz} , Hertz divided by 1000.

Leg: Phase A, Phase B, Phase C. Line.
A current carrying conductor intended to deliver power from the source to the load. Normally at an electrical potential other than ground.

N: Neutral

Neutral:
A current carrying conductor intended to deliver power from the source to the load. Normally tied to ground.

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Phase:

Phase A, Phase B, Phase C. Leg. Line.
Conductor of electrical equipment that's associated with one of the separate phases of an alternating current power system.
Relative Measurement describing the temporal relationship between two waves with the same frequency. Measured in degrees, 0 – 360 degrees.

Phase Angle:

Measured in degrees, 0 – 360. Difference, a relative relationship, in time between two legs of an electrical system.

Power Factor: PF.

Relationship of Watts ("Active" or "Real" Power) to VA.
Inductive loads such as motors will cause the current to lag, Lagging Power Factor.
Capacitive loads such a power supplies will cause the current to lead, Leading Power Factor.
Resistive loads, loads that are completely resistive will have "unity power factor", or a power factor of 1.0 . This is where the current draw completely and truly follows the AC Voltage sine wave.
Some power supplies have "Power Factor Correction" (PFC) circuits in their inputs to force the current to follow the voltage sine wave.
These circuits will improve the power factor from .60 to .99 .
Low Power Factor increases losses in the power distribution networks and causes less efficient use of generation capacity.
PF = W / VA

Behlman's Units are rated to handle any power factor load and are not derated at low power factors.

V: Voltage, volts, EMF(Electro Magnetic Force).

VA: Volts Amps. Apparent Power.
The Product of Volts rms x Amps rms, which is a unit of measure of power without respect to Power Factor.

Vac: Voltage alternating current.

Watts: Real Power, Active Power, True Power.
Unit of power, when at unity power factor = Volts x Amps. Actual Power available for useful work. W = VA x PF

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