

**ELECTRICAL  
POWER  
FORMULA  
GUIDE**



**LIBERTY**  
MILITARY HOUSING

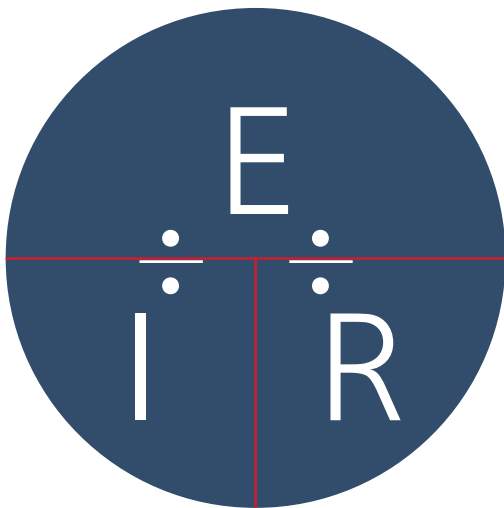
■ **Ohm's Law & Electrical Power Formula**

$$E = I \times R$$

E = Volts

I = Amps

R = Resistance

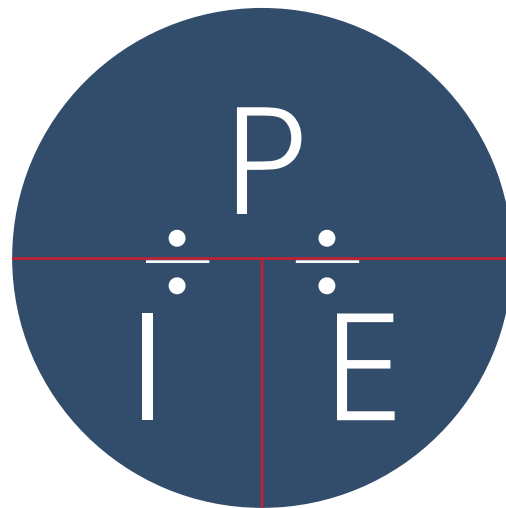


$$P = I \times E$$

P = Watts(Power)

I = Amps

E = Volts



Notes:

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## ■ Conductor Application Sizing Chart

20 AWG		Telephone wiring is usually 20 or 22 AWG
18 AWG	7 amperes	Low-voltage wiring for thermostats, chimes, security, remote control, home automation systems, etc. For these types of installations, 18 or 20 AWG conductors can be used depending on the connected load and length of circuit.
16 AWG	10 amperes	Same applications as above. Good for long runs to minimize voltage drop.
14 AWG	15 amperes	Typical lighting branch circuits
12 AWG	20 amperes	Small-appliance branch-circuits for the receptacles in kitchens and dining rooms. Also laundry receptacles and workshop receptacles. Often used as the "home run" for lighting branch-circuits. Some water heaters.
10 AWG	30 amperes	Most clothes dryers, built-in ovens, cook tops, central air conditioners, some water heaters, and heat pumps.
8 AWG	40 amperes	Ranges, ovens, heat pumps, some large clothes dryers, large central air conditioners, and heat pumps
6 AWG	50 amperes	Electric furnaces and heat pumps.
4 AWG	70 amperes	Electric furnaces and feeders to sub-panels.
3 AWG and larger	100 amperes	Main service-entrance conductors, feeders to sub-panels, electric furnaces.

### Notes:

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