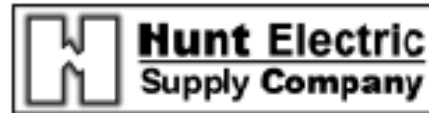


## Useful Information



### Common Electrical Terms

Ampere (I)	= unit of current or rate of flow of electricity
Volt (E)	= unit of electromotive force
Ohm (R)	= unit of resistance Ohms law - $I = \frac{E}{R}$ (d-c or 100% p-f)
Megohm	= 1,000,000 ohms
Volt Amperes (va)	= unit of apparent power = $E \times I$ (single phase) = $E \times I \times 1.73$ (3 Phase)
Kilovolt Amperes (kva)	= 1000 volt-amperes
Watt (w)	= unit of true power = $va \times p-f$ = .00134 hp
Kilowatt (kw)	= 1000 watts
Power Factor (p-f)	= ratio of true to apparent power = $\frac{w}{va}$ or $\frac{kw}{kva}$
Wattour (whr)	= unit of electrical work = one watt for one hour = 3413 Bu = 2655 ft. lbs.
Kilowatt Hour (kwhr)	= 1000 wattours
Horsepower (hp)	= measure of time rate of doing work = equivalent of raising 33,000 lbs. one ft. in one minute = 746 watts
Demand Factor	= ratio of maximum demand to the total connected load
Diversity Factor	= ratio of the sum of individual maximum demands of the various subdivisions of a system to the maximum demand of the whole system
Load Factor	= ratio of the average load over a designated period of time to the peak load occurring in that period

### How to Compute Power Factor

Determining watts:  $p-f = \frac{\text{watts}}{\text{volts} \times \text{amperes}}$

1. From wattour meter. Watts = rpm of disc x 60 x kh where kh is meter constant printed on face or nameplate of meter. If metering transformers are used, above must be multiplied by the transformer ratios.

2. Directly from wattmeter reading.

Where:

Volts = line voltage as measured by voltmeter

Amps = current measured in line wire (not neutral) by ammeter.

#### Temperature Conversions

$F^{\circ} \text{ to } C^{\circ} = \frac{F^{\circ} - 32^{\circ}}{1.8}$   
 $C^{\circ} \text{ to } F^{\circ} = \frac{C^{\circ} \times 1.8}{1} + 32^{\circ}$

C°	-15	-10	-5	0	5	10	15	20
F°	5	14	23	32	41	50	59	68

C°	25	30	35	40	45	50	55	60
F°	77	86	95	104	113	122	131	140

C°	65	70	75	80	85	90	95	100
F°	149	158	167	176	185	194	203	212

1 inch	= 2.54 centimeters
1kiloinch	= 2.20 lbs.
1 square inch	= 1,273.200 circular mills
1 circular mill	= .785 square mill
1 btu	= 778 ft lbs
	= 252 calories
1 year	= 8.760 hours