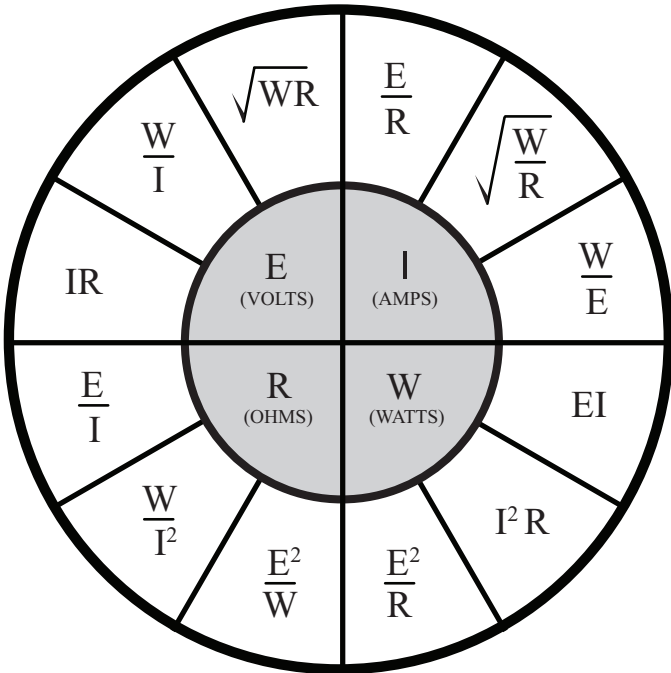


# Technical Information: Electrical Charts and Conversions

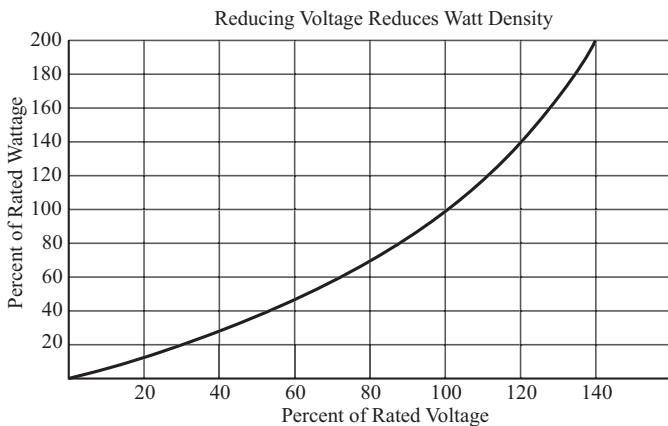
## Ohm's Law



## Amperage Conversion Table

Watts	Volts - Single Phase			Volts - 3 Phase Balanced Load		
	120	240	480	240	480	Watts
100	.83	.42	.21	.24	.13	100
150	1.25	.63	.31	.36	.18	150
200	1.67	.83	.42	.49	.25	200
250	2.08	1.04	.52	.61	.30	250
300	2.50	1.25	.63	.73	.37	300
350	2.92	1.46	.73	.85	.43	350
400	3.33	1.67	.84	.97	.49	400
450	3.75	1.88	.93	1.10	.55	450
500	4.17	2.08	1.04	1.20	.60	500
600	5.00	2.50	1.25	1.45	.73	600
700	5.83	2.92	1.46	1.70	.85	700
800	6.67	3.33	1.67	1.93	.97	800
900	7.5	3.75	1.87	2.17	1.09	900
1000	8.33	4.17	2.10	2.41	1.21	1000
1100	9.17	4.58	2.30	2.65	1.33	1100
1200	10.0	5.00	2.51	2.90	1.45	1200
1250	10.4	5.21	2.61	3.10	1.55	1250
1300	10.8	5.42	2.71	3.13	1.57	1300
1400	11.7	5.83	2.91	3.38	1.69	1400
1500	12.5	6.25	3.12	3.62	1.82	1500
1600	13.3	6.67	3.34	3.86	1.93	1600
1700	14.2	7.08	3.54	4.10	2.05	1700
1800	15.0	7.5	3.75	4.34	2.17	1800
1900	15.8	7.92	3.96	4.58	2.29	1900
2000	16.7	8.33	4.17	4.82	2.41	2000
2200	18.3	9.17	4.59	5.30	2.65	2200
2500	20.8	10.4	5.21	6.10	3.05	2500
2750	23.0	11.5	5.73	6.63	3.32	2750
3000	25.0	12.5	6.25	7.23	3.62	3000
3500	29.2	14.6	7.30	8.45	4.23	3500
4000	33.3	16.7	8.33	9.64	4.82	4000
4500	37.5	18.8	9.38	10.84	5.42	4500
5000	41.7	20.8	10.42	12.1	6.1	5000
6000	50.0	25.0	12.50	14.50	7.25	6000
7000	58.3	29.2	14.59	16.9	8.5	7000
8000	66.7	33.3	16.67	19.3	9.65	8000
9000	75.0	37.5	18.75	21.7	10.85	9000
10000	83.3	41.7	20.85	24.1	12.1	10000

## Wattage Change with Voltage Change



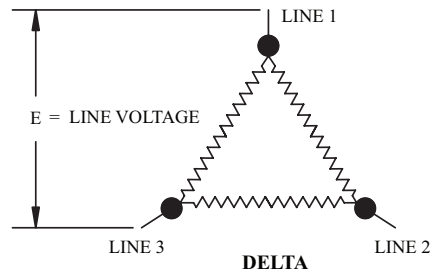
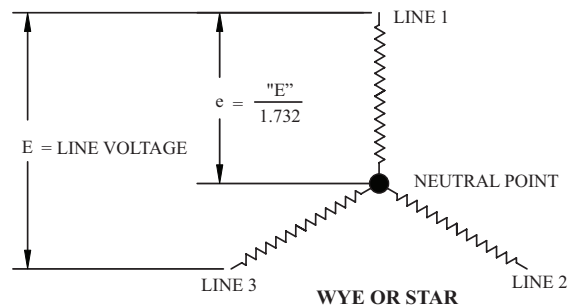
## Percent Rated Watts on Reduced Voltage

230-volt heater on 208 volts	- 82%
240 volt heater on 208 volts	- 75%
480-volt heater on 277 volts	- 33%
480-volt heater on 440 volts	- 84%
480-volt heater on 318 volts	- 44%
550-volt heater on 480 volts	- 76%

$$W_2 = W_1 \times \left(\frac{e_2}{e_1}\right)^2$$

$W_2$  = New wattage output  
 $W_1$  = Rated wattage  
 $e_2$  = Applied voltage  
 $e_1$  = Rated voltage

## Three Phase Circuits



If elements are designed for 3-phase Delta connection, wattage output may be reduced by 1/3 by reconnecting to 3-phase WYE.

For current in 3-phase circuits  $I = \frac{W}{E \times 1.732}$

For resistance in 3-phase circuit (across any two terminals)  $R = \frac{E^2}{\frac{1}{2}W}$