



# INDEPENDENT ELEMENTS & CONTROLS

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HEATING ELEMENTS, THERMOCOUPLES AND CONTROLLERS

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## VARIATIONS OF OHMS ( $\Omega$ ) LAW

V= VOLTS  
W = WATT  
A = AMPERES  
OHMS =  $\Omega$

### WATTS

$$\text{WATTS} = \frac{\text{VOLTS}^2}{\text{OHMS}}$$

$$\text{WATTS} = \text{AMPS}^2 \times \text{OHMS}$$

$$\text{WATTS} = \text{VOLTS} \times \text{AMPS}$$

### AMPERES

$$\text{AMPS} = \frac{\text{VOLTS}}{\text{OHMS}}$$

$$\text{AMPS} = \frac{\text{WATTS}}{\text{VOLTS}}$$

$$\text{AMPS} = \sqrt{\frac{\text{WATTS}}{\text{OHMS}}}$$

### VOLTS

$$\text{VOLTS} = \sqrt{\text{WATTS} \times \text{OHMS}}$$

$$\text{VOLTS} = \frac{\text{WATTS}}{\text{AMPS}}$$

$$\text{VOLTS} = \text{AMPS} \times \text{OHMS}$$

### OHMS

$$\text{OHMS} = \frac{\text{VOLTS}}{\text{AMPS}}$$

$$\text{OHMS} = \frac{\text{VOLTS}^2}{\text{WATTS}}$$

$$\text{OHMS} = \frac{\text{WATTS}}{\text{AMPS}^2}$$

