

INDEPENDENT ELEMENTS & CONTROLS



Reg No:- 1997/016570/23
HEATING ELEMENTS, THERMOCOUPLES AND CONTROLLERS

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REFERENCE DATA

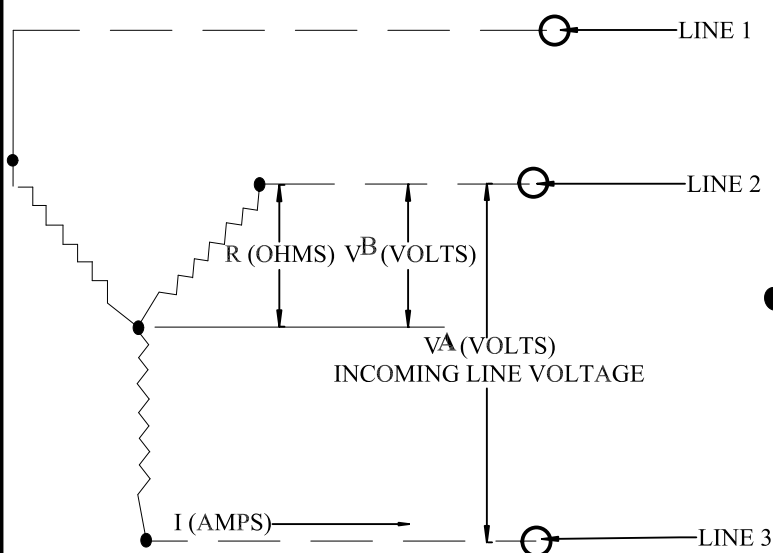
TEMPERATURE:- $^{\circ}\text{C} = 5/9 \times (^{\circ}\text{F} - 32)$ or $^{\circ}\text{F} = 9/5 \times (^{\circ}\text{C}) + 32$
 $\text{K} = (^{\circ}\text{F} + 460) / 1,8$ or $^{\circ}\text{K} = ^{\circ}\text{C} + 273$
 $^{\circ}\text{R} = ^{\circ}\text{F} + 460$

CONVERSION FACTORS:-

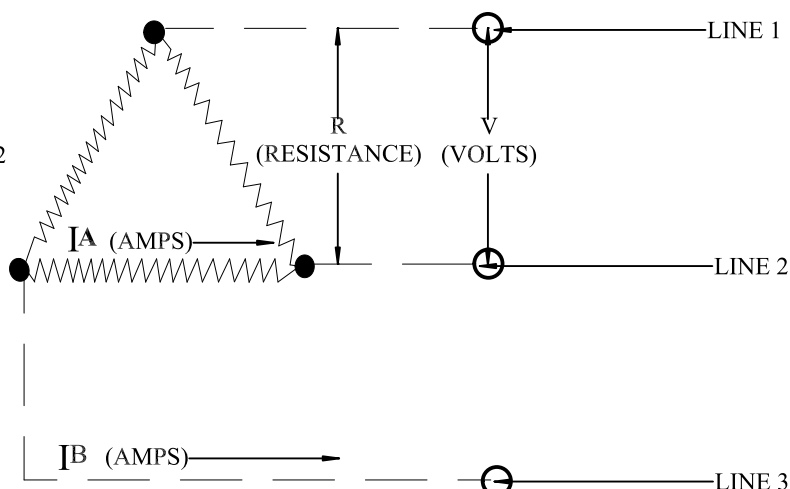
1KW= 1000W	1mm = ,03937 INCHES	1Kg = 2,205 Ib
3412BTU=1KW/HR	1m = 39,37 INCHES	1g = 0,002205 Ib
1HP=0,746KW	1 INCH = 2,54cm	1 US Gal = 0,1337 Cu Ft
1 BOILER H.P = 9,8 KW	1KM = 0,6214 MILES	1 US Gal = 3,785 Litres

3 PHASE ELECTRICAL CALCULATIONS

3 PHASE STAR (BALANCED LOAD)



3 PHASE DELTA (BALANCED LOAD)



$$\text{TOTAL WATTS (W)} = \sqrt{3} (1,73) \times V^A \times I$$

$$\text{RESISTANCE (R)} = \frac{V^B}{I}$$

$$V^A (\text{VOLTS}) = \frac{V^B}{\sqrt{3} (1,73)}$$

$$I (\text{AMPS}) = \frac{W}{\sqrt{3} (1,73) \times V^A}$$

$$V^B = \frac{V^A}{\sqrt{3} (1,73)}$$

$$\text{TOTAL WATTS (W)} = \sqrt{3} (1,73) \times V^B \times I$$

$$I^A (\text{AMPS}) = \frac{V}{R}$$

$$V (\text{VOLTS}) = \frac{W}{\sqrt{3} (1,73) \times I^B}$$

$$I^B (\text{AMPS}) = \frac{W}{\sqrt{3} (1,73) \times V}$$