

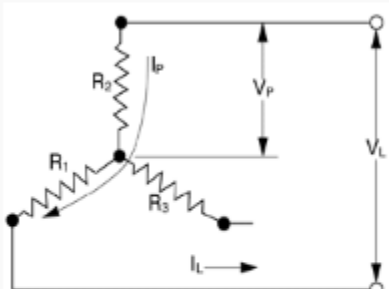
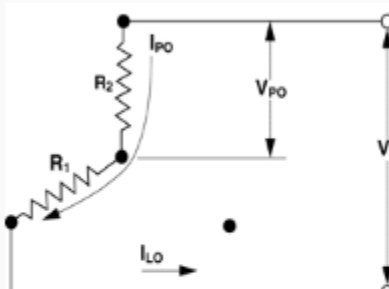
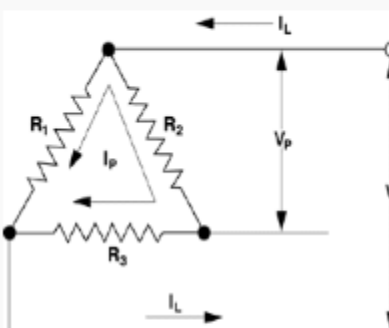
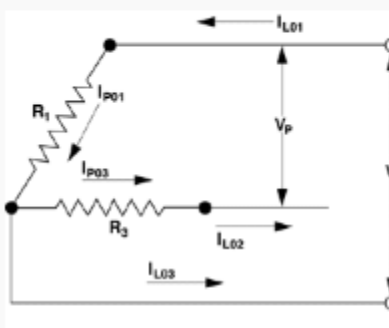


Typical 3-Phase Wiring Diagrams and Equations

Definitions

For Both Wye and Delta (Balanced Loads)	Wye and Delta Equivalent
<p>V_P = Phase Voltage</p> <p>V_L = Line Voltage</p> <p>I_P = Phase Current</p> <p>I_L = Line Current</p> <p>$R = R_1 = R_2 = R_3$ = Resistance of each branch</p> <p>W = Wattage</p>	<p>$W_{\text{DELTA}} = 3 W_{\text{WYE}}$</p> <p>$W_{\text{ODELTA}} = \frac{3}{4} W_{\text{DELTA}}$</p> <p>$W_{\text{OWYE}} = \frac{1}{2} W_{\text{WYE}}$</p>

Equations

3-Phase Wye (Balanced Load)	3-Phase Open Wye (No Neutral)
	
<p style="text-align: center;">Equations For Wye Only</p> $I_p = I_L$ $V_p = V_L / 1.73$ $W_{WYE} = V_L^2 / R = 3(V_p^2) / R$ $W_{WYE} = 1.73 V_L I_L$	<p style="text-align: center;">Equations For Open Wye Only (No Neutral)</p> $I_{p0} = I_{L0}$ $V_{p0} = V_L / 2$ $W_{OWYE} = \frac{1}{2} (V_L^2 / R)$ $W_{OWYE} = 2 (V_{p0}^2 / R)$ $W_{OWYE} = V_L I_{L0}$
3-Phase Delta (Balanced Load)	3-Phase Open Delta
	
<p style="text-align: center;">Equations For Delta Only</p> $I_p = I_L / 1.73$ $V_p = V_L$ $W_{DELTA} = 3(V_L^2) / R$ $W_{DELTA} = 1.73 V_L I_L$	<p style="text-align: center;">Equations For Open Delta Only</p> $V_p = V_L$ $I_{p01} = I_{p03} = I_{L02}$ $I_{L03} = 1.73 I_{p01}$ $W_{ODELTA} = 2 (V_L^2 / R)$