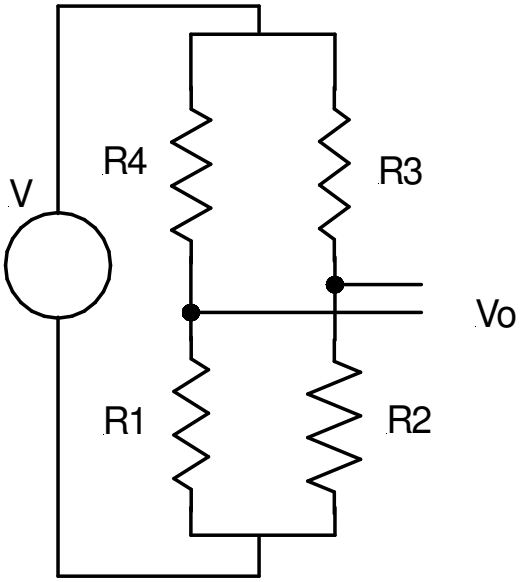
PUENTES DE MEDIDA



$$V_o = \left(\frac{R2}{R2+R3} - \frac{R1}{R1+R4} \right) V =$$

$$= \frac{\frac{R4}{R1} - \frac{R3}{R2}}{\left(1+\frac{R4}{R1}\right)\left(1+\frac{R3}{R2}\right)} V$$

Si $\frac{R4}{R1} = \frac{R3}{R2}$ $\quad \boxed{V_o = 0}$

Si R1= R2= R4= R (un solo elemento variable)
y R3=R(1+ δ)

$$\boxed{V_o = \frac{\delta V}{2(2+\delta)}}$$

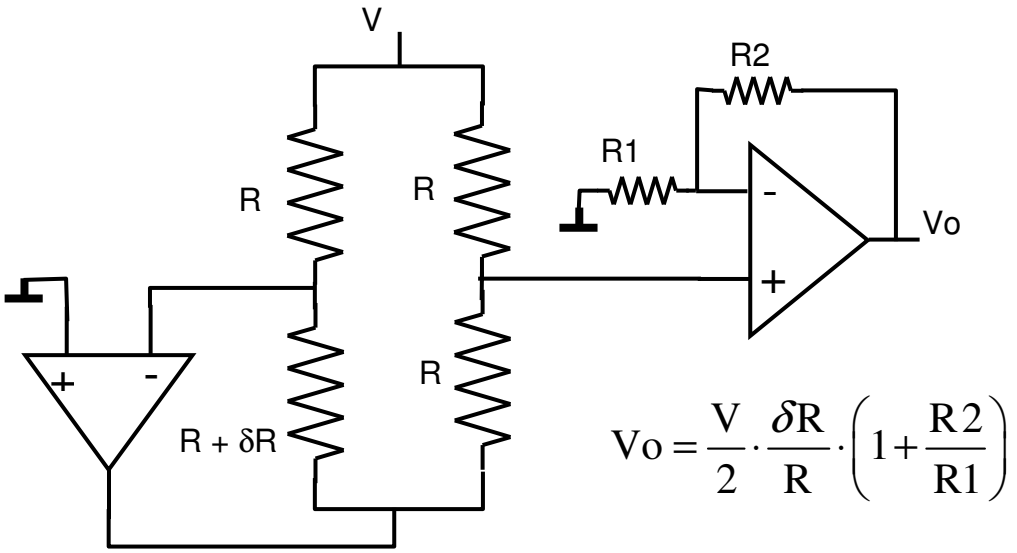
Si R2= R4= R
y R1= R3= R(1+δ) (mayor sensibilidad)

$$\boxed{V_o = \frac{1-(1+\delta)^2}{(2+\delta)^2} V \cong \frac{2\delta}{\delta+1} V}$$

Si R1= R4= R
y R2= R(1+δ)
R3= R(1-δ)

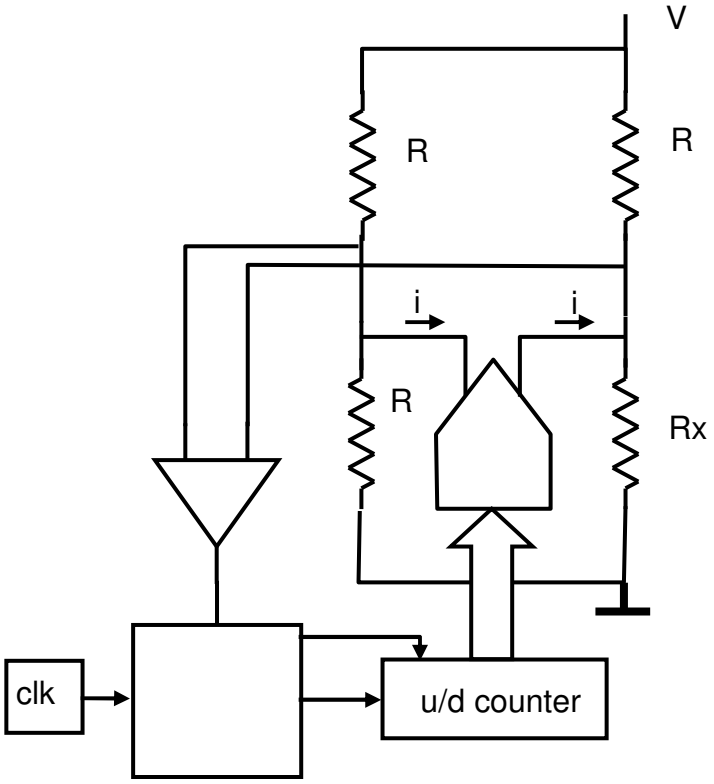
$$\boxed{V_o = \frac{\delta}{2} V}$$

LINEALIZACIÓN



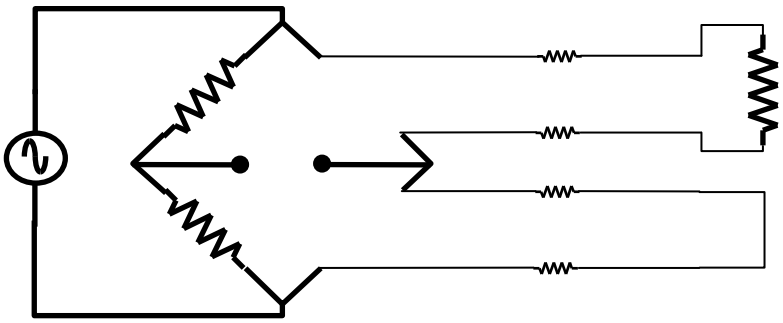
$$Vo = \frac{V}{2} \cdot \frac{\delta R}{R} \cdot \left(1 + \frac{R2}{R1}\right)$$

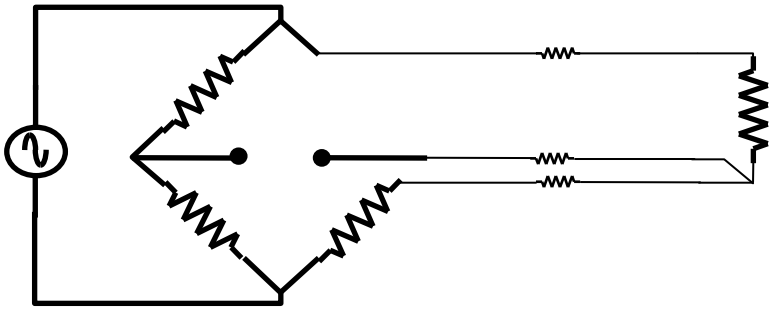
AUTOBALANCE

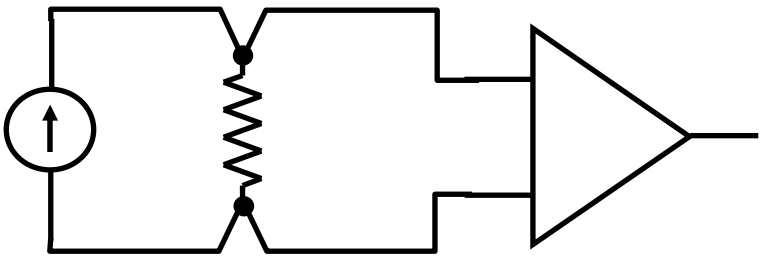


$$Rx = R \cdot \frac{V - iR}{V + 3iR}$$

CONFIGURACIONES

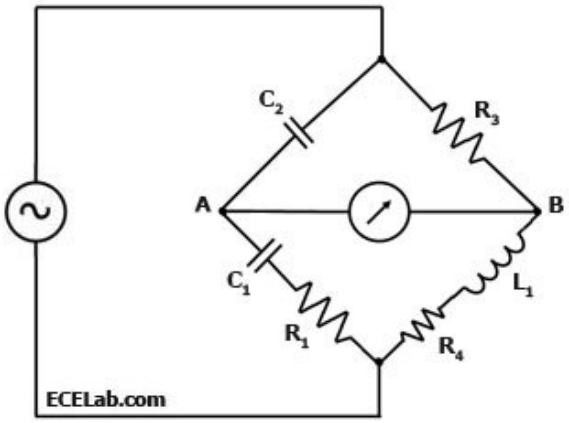






PUENTES DE IMPEDANCIA:

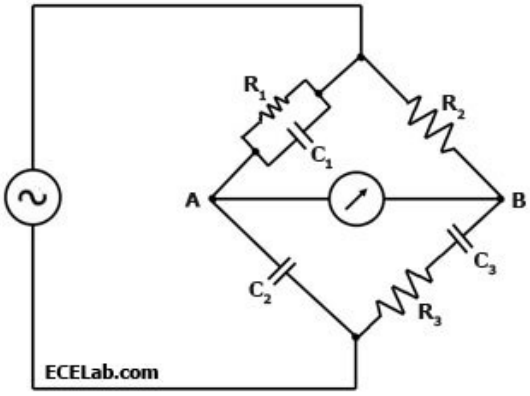
OWEN



$$L1 = C_2.R_3.R_1$$

$$R_4 = \frac{C_2.R_3}{C_1}$$

SCHERING

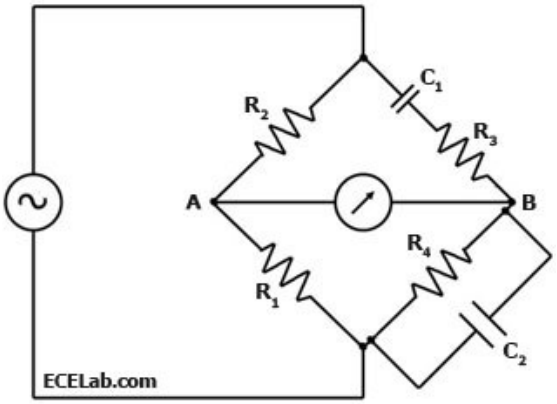


$$R_3 = \frac{C_1.R_2}{C_2}$$

$$C_3 = \frac{R_1.C_2}{R_2}$$

$$D = \omega.C_1.R_1$$

WIEN



$$f = \frac{1}{2\pi}.\sqrt{\frac{1}{R_3.R_4.C_1.C_2}}$$