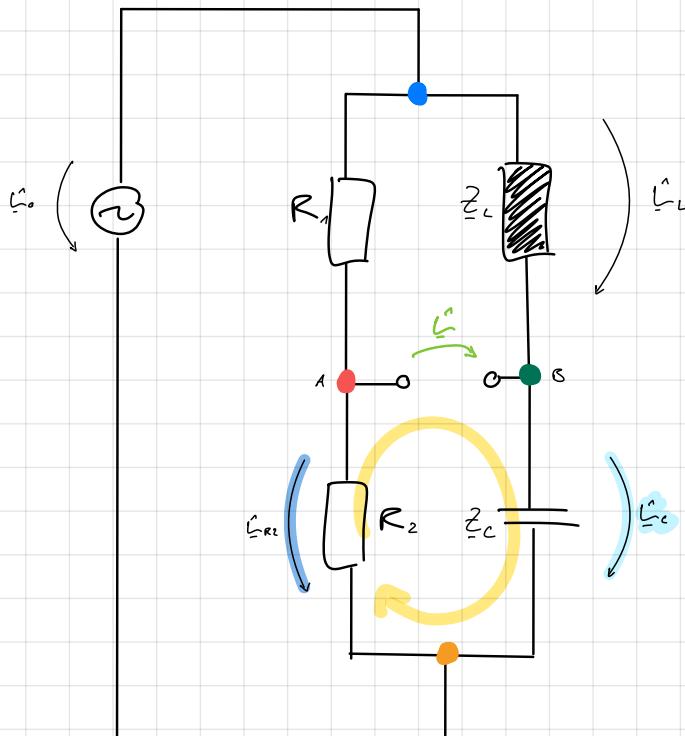


Bsp 1:

1) Schaltungsprinzip:



$$(1) \quad \text{MASCHENGLEICHUNG:} \quad U = U_{R2} - U_C$$

$$\begin{aligned} \text{SPANNUNGSTEILER:} \quad U_C &= U_0 \cdot \frac{Z_C}{Z_C + Z_L} \\ (\text{FÜR } U_C) \quad &= U_0 \cdot \frac{\frac{1}{j\omega C}}{\frac{1}{j\omega C} + j\omega L} \\ &= U_0 \cdot \frac{1}{1 - \omega^2 LC} \end{aligned}$$

$$\begin{aligned} \text{SPANNUNGSTEILER:} \quad U_{R2} &= U_0 \cdot \left(\frac{1}{Z} \right) \\ (\text{FÜR } U_{R2}) \quad & \quad \text{ZWEI GLEICHE WIDERSTÄNDE} \\ & \quad \frac{R}{R+R} = \frac{1}{2} \end{aligned}$$

$$\text{z(1):} \quad U = \frac{U_0}{2} - U_0 \cdot \frac{1}{1 - \omega^2 LC}$$

$$= U_0 \left[\frac{1}{2} - \frac{1}{1 - \omega^2 LC} \right]$$

QSP1 - 2 :

$$\int_{-\infty}^0 \underline{U} = \int_{-\infty}^0 \underline{U_0} \left[\frac{1}{2} - \frac{1}{1 - \omega^2 LC} \right] = -\frac{\underline{U_0}}{2}$$

$$\int_{-\infty}^0 \underline{U} = \int_{-\infty}^0 \underline{U_0} \left[\frac{1}{2} - \frac{1}{1 - \omega^2 LC} \right] = \frac{\underline{U_0}}{2}$$