



$$e(t) = 220\sqrt{2} \sin(\underbrace{2\pi \cdot 50}_\omega t + 0^\circ) \text{ V} \Rightarrow$$

$$E = 220\sqrt{2} \cdot e^{j0^\circ} \text{ V}$$

OHMS LAG $\Rightarrow I = \frac{E}{Z_{TOT}}$ DÄR

$$Z_{TOT} = \frac{(R + j\omega L) \cdot \frac{1}{j\omega C}}{R + j\omega L + \frac{1}{j\omega C}} =$$

$$= \frac{R + j\omega L}{j\omega C R - \omega^2 C L + 1} =$$

$$= \frac{8 + j6}{0,4 + j0,8} = \frac{10 e^{j37^\circ}}{0,89 \cdot e^{j63,4^\circ}}$$

$$= 11,2 e^{-j26,4^\circ} \Omega$$

$$\text{ALLTSÄ : } I = \frac{220\sqrt{2} e^{j0^\circ}}{11,2 \cdot e^{-j26,4^\circ}} = 19,6\sqrt{2} e^{j26,4^\circ} \text{ A}$$

$$\Rightarrow i(t) = 19,6\sqrt{2} \sin(2\pi \cdot 50 t + 26,4^\circ) \text{ A}$$

$$I = \frac{\hat{i}}{\sqrt{2}} \Rightarrow I = 19,6 \text{ A}$$