

$$\frac{1}{C} \int i \cdot dt + L \cdot \frac{di}{dt} + R \cdot i = 0 \quad | \text{ Differentiation}$$

$$\frac{1}{C} \cdot i + L \cdot \frac{d^2i}{dt^2} + R \cdot \frac{di}{dt} = 0 \quad | : L \text{ und sortieren}$$

$$\frac{d^2i}{dt^2} + \frac{R}{L} \cdot \frac{di}{dt} + \frac{1}{LC} \cdot i = 0 \quad \left| \frac{R}{L} = \delta; \frac{1}{LC} = \omega_0^2 \right.$$

$$\ddot{i} + \delta \dot{i} + \omega_0^2 i = 0$$

(9.18)