Exercise 1. A harmonic varying voltage V(t) is applied to a circuit and the corresponding current I(t) is measured and shown in figure 1. Determine the amplitudes U_0 and I_0 of respectively the voltage and the current. Find also the phase–shift $\phi = \phi_U - \phi_I$ between voltage and current. Determine the complex impedance in real/imaginary form and in polar form. What is the period, the frequency and the cyclic frequency? Draw the phasor diagram at time t = 0.



Figur 1