

Three phase Current

Please simulate the following assignment.

Assignment

Please, use a pc with pre-installed simulation software Multisim for this exercise. Familiarize yourself with the user interface and then create the electrical circuit shown below in Multisim.

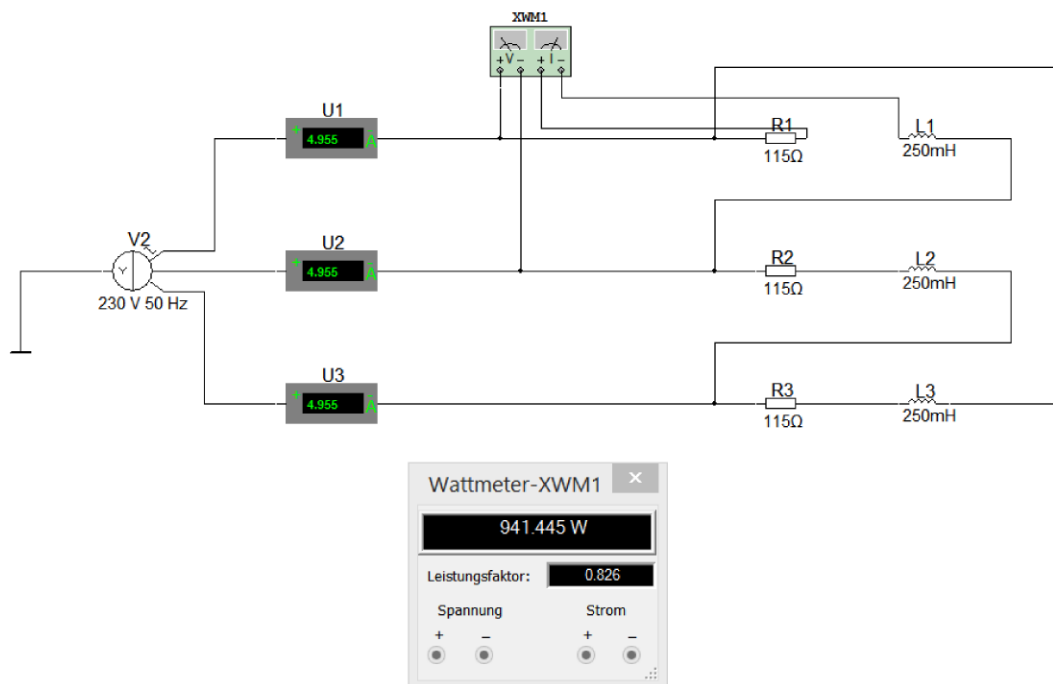
Components

To do this assignment you need:

- 1 PC or Notebook with MultiSim (you can get a virtual machine from your coach)

Circuit

The following circuit is used for the simulation.



Measurement

You have to do the following steps in order to prepare the measurement:

- Please extend the circuit with an amperemeter for every phase.
- Please start the simulation.
- Please measure the following electrical quantities using the ampere meters and the wattmeter: phase current I , active power P and power factor φ .
- Take a screenshot for documentation.
- Please use the measured values to calculate the missing quantities P , Q and S .
(Please consult [SEY14] chapter 6.12 *Wirkleistung*, 6.13 *Blindleistung* and chapter 6.15 *Scheinleistung*, *Leistungsfaktor* if you need a refresh of your knowledge).

Results

Please note your results here:

Bibliography

[SEY14]: SEYR, SIGURD and SCHWAIGER, HERBERT, 2014, Elektrotechnik Grundlagen mit angewandter Mathematik. Wien : Jugend & Volk. ISBN 978-3-7100-2873-1.