Laboratory Report

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| Subject of the exercise: | **Measuring electrical power** (Exercise 4) |
| **Students’ names:** | <Name 1>, <Name 2>, ... |
| **Course and group No.:** | <Course No.>, <Group No.> |
| **Supervisor:** | <Name> |
| **Date:** | <Month>, <Day>, <Year> |
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**Applied instruments:**

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| Digital oscilloscope | Agilent 54622A | <serial number> |
| Function generator | Agilent 33220A | <serial number> |
| Electronic power meter | Hameg HM8115 | <serial number> |
| Adjustable power supply | Metrel MA-4804 | <serial number> |
| Hall-probe current meter | Hameg HZ-56 | <serial number> |
| Digital multimeter (6½ digit) | Agilent 33401A | <serial number> |
| Resistance and Capacitance Decade Boksz | IET Labs RCS500 | <serial number> |
| R-L-C circuit | VIK-II-04 | <serial number> |
| Transformer | VIK-01-03 | -- |
| Light sources |  |  |
| Prepared extension wire |  |  |

Measurement tasks

1. Use of the Hall-probe current meter

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1. Measurement of different power quantities of the R-L-C net excited by si-nusoidal voltage

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1. Measurement of different power quantities of the R-L-C net excited by gen-eral periodic voltage

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1. Measurement of different power quantities of the R-L-C net excited by an AC power supply

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1. using electronic power meter;

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1. using digital oscilloscope

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1. Measurement of different power quantities of light sources excited by the mains

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1. traditional or halogen incandescent lamp;

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1. compact fluorescent lamp or LED lamp

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1. Measurement of the distortion factor of the mains and the crest factor of the current

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1. Error analysis

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*Optional measurement task:*

1. Measurement of different power quantities of a personal computer

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