

## I. IDENTIFICATION DATA

<b>Thesis title:</b>	<b>Arc detector in DC grids</b>
<b>Author's name:</b>	<b>Vukosavljević Valerija</b>
<b>Type of thesis :</b>	master
<b>Faculty/Institute:</b>	Faculty of Electrical Engineering (FEE)
<b>Department:</b>	Department of Measurement
<b>Thesis reviewer:</b>	Ing. Ondřej Fidra
<b>Reviewer's department:</b>	Department of Measurement

## II. EVALUATION OF INDIVIDUAL CRITERIA

<b>Assignment</b>	<b>challenging</b>
<i>How demanding was the assigned project?</i>	
The aim of the thesis was to design a prototype system (HW and SW) that detects DC arc in DC grids realized in a microcontroller with digital signal processing.	

<b>Fulfilment of assignment</b>	<b>fulfilled with minor objections</b>
<i>How well does the thesis fulfil the assigned task? Have the primary goals been achieved? Which assigned tasks have been incompletely covered, and which parts of the thesis are overextended? Justify your answer.</i>	
The assignment was fulfilled with minor objections. The thesis represents the working prototype of the detector. Some areas of the thesis needed more work (ex., HW design, frontend SW, optimisation of MCU FW).	

<b>Activity and independence when creating final thesis</b>	<b>A - excellent.</b>
<i>Assess whether the student had a positive approach, whether the time limits were met, whether the conception was regularly consulted and whether the student was well prepared for the consultations. Assess the student's ability to work independently.</i>	
The student was very active during the development, and the communication was very good. She planned weekly based meetings and used online platforms to share her results and ask questions.	

<b>Technical level</b>	<b>D - satisfactory.</b>
<i>Is the thesis technically sound? How well did the student employ expertise in his/her field of study? Does the student explain clearly what he/she has done?</i>	
The technical level of the thesis is satisfactory. The firmware for the microcontroller needs to be modified to achieve better results. There is more place to experiment with other detection techniques and different hardware. There are also undercomes about the design of the prototype. Overall, the prototype was created and tested with positive results.	

<b>Formal level and language level, scope of thesis</b>	<b>C - good.</b>
<i>Are formalisms and notations used properly? Is the thesis organized in a logical way? Is the thesis sufficiently extensive? Is the thesis well-presented? Is the language clear and understandable? Is the English satisfactory?</i>	
The thesis is written formally and properly. The level of English language is very good. Some of the problematics is discussed in wrongly chosen chapters, making them unclear (ex.: SW chapter and Results chapter).	

<b>Selection of sources, citation correctness</b>	<b>B - very good.</b>
<i>Does the thesis make adequate reference to earlier work on the topic? Was the selection of sources adequate? Is the student's original work clearly distinguished from earlier work in the field? Do the bibliographic citations meet the standards?</i>	
The study materials and references are adequately selected. In the beginning, the student did research on the state of the art correctly. There could be more references aimed in circuit development.	

**Additional commentary and evaluation (optional)**

*Comment on the overall quality of the thesis, its novelty and its impact on the field, its strengths and weaknesses, the utility of the solution that is presented, the theoretical/formal level, the student's skillfulness, etc.*

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**III. OVERALL EVALUATION, QUESTIONS FOR THE PRESENTATION AND DEFENSE OF THE THESIS, SUGGESTED GRADE**

*Initially, the student needed to gain extensive experience designing complex devices comprising HW design and SW development. The thesis proves that developing a complex device with all the components can be learned and trained. I believe that the student gained a lot of experience and got an overall view of product development.*

The grade that I award for the thesis is **C - good**.

Date: **16.6.2023**

Signature: