

## I. IDENTIFICATION DATA

Thesis name:	Minimal design of IO-Link device
Author's name:	Bc. Denys Postoialko
Type of thesis:	master
Faculty/Institute:	Faculty of Electrical Engineering (FEE)
Department:	Katedra elektrických pohonů a trakce
Thesis supervisor:	Ing. Filip Vodrážka
Supervisor's department:	SIEMENS, s.r.o.

## II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment	challenging
<i>Evaluation of thesis difficulty of assignment.</i>	
The assignment of this diploma thesis was a complete development of a device, that will be used in the SIEMENS company as a basis for future IO-Link device products. Part of the work was to process assigned requirements, project planning, development of schematic and PCB, device testing according to valid standards and creation of relevant documentation. As with any development of a new device, there was necessary not only usage of knowledge from studying but also the extension of the knowledge about the specifics of the given area and above all the ability to apply this information.	

Satisfaction of assignment	fulfilled
<i>Assess that handed thesis meets assignment. Present points of assignment that fell short or were extended. Try to assess importance, impact or cause of each shortcoming.</i>	
The submitted final thesis fulfills the assignment in its entirety.	

Activity and independence when creating final thesis	C - good.
<i>Assess that student had positive approach, time limits were met, conception was regularly consulted and was well prepared for consultations. Assess student's ability to work independently.</i>	
The student worked on this thesis continuously and systematically from the beginning of the project. The more problematic phase was only during the completion of the scheme, when the student could better respond to comments in the schematic review and thus reduce the total number of reviews. In some consultations, we have repeatedly discussed the same problem, so there is space for improvement.	

Technical level	A - excellent.
<i>Assess level of thesis specialty, use of knowledge gained by study and by expert literature, use of sources and data gained by experience.</i>	
The lack of knowledge beyond the scope of his studies was supplemented by a separate study of professional literature and relevant technical standards. He had also been able to apply this knowledge throughout all the work.	

Formal and language level, scope of thesis	B - very good.
<i>Assess correctness of usage of formal notation. Assess typographical and language arrangement of thesis.</i>	
Certain parts of the thesis could be less understandable due to excessive use of abbreviations. Except for minor mistakes, the whole text is easily readable and comprehensible.	

Selection of sources, citation correctness	A - excellent.
<i>Present your opinion to student's activity when obtaining and using study materials for thesis creation. Characterize selection of sources. Assess that student used all relevant sources. Verify that all used elements are correctly distinguished from own results and thoughts. Assess that citation ethics has not been breached and that all bibliographic citations are complete and in accordance with citation convention and standards.</i>	
The student had been looking for the necessary literature completely independently and used all relevant resources. I have no reservation about the use of quotes in the diploma thesis.	

## Additional commentary and evaluation

*Present your opinion to achieved primary goals of thesis, e.g. level of theoretical results, level and functionality of technical or software conception, publication performance, experimental dexterity etc.*

Mr. Denys Postoiako has created a functional prototype that passed most of the required tests. After the minor modification, it can meet all the prescribed tests by the standards and can therefore be further used as the basis for commercially produced products of SIEMENS.

## III. OVERALL EVALUATION, QUESTIONS FOR DEFENSE, CLASSIFICATION SUGGESTION

Mr. Denys Postoiako approached the production and testing of IO-Link device minimal design actively from the beginning of the entire project. He also took all the steps necessary to transform the table with the specified parameters into a prototype of a device the functionality of which he properly tested.

The student demonstrated his knowledge and skills to the extent that the device passed most of the demanding tests in the first design. Simultaneously he already work on the second design, which we expect to meet all the requirements.

I have no questions for defense.

I evaluate handed thesis with classification grade B - very good.

Date: 6.6.2017

Signature: