



Hodnocení bakalářské práce oponentem

Název práce:	Smart metering and injection coil implementation for smart grid diagnostics		
Student:	Mohamed SAIF ELDIN SALIH ABDOON	Std. číslo:	E11B0002P
Oponent:	Ing. Jan Bartovský		

Kritéria hodnocení práce oponentem	Max. body	Přidělené body
Splnění zadání práce (posuzuje se i stupeň kvality splnění)	25	22
Odborná úroveň práce	50	43
Interpretace výsledků a jejich diskuze, příp. aplikace	15	13
Formální zpracování práce, dodržování norem	10	7

Hodnocení obsahu a kvality práce, připomínky:


This bachelor thesis deals with two important issues of Smart Grids, namely the implementation of Wireless M-BUS and the design of injection coils for Power Line Communication. The first two chapters of the thesis thoroughly describe the Wireless M-BUS protocol, its comparison to other similar protocols, such as ZigBee, and its practical implementation on an embedded device. The description of implementation includes appropriate frequency configuration and its verification by spectrum analyzer. The second part of thesis describes calculation of solenoid and Rogowski injection coils. The latter was also simulated using Pspice. In conclusion the thesis is written with good technical criteria and proves that the author has both high programming and technical skills according to the bachelor degree. I recommend acceptance of the thesis for defense with the excellent grade.

Dotazy oponenta k práci:

- 1) One of your major tasks was the implementation of the WM-BUS protocol in embedded device. What communication speed did you achieve? Is it sufficient for the intended application of smart metering?
- 2) The other part of the thesis focuses on the design of injection coils. Are there any commercial injection coils available to purchase? Are those suitable for your application?

Bakalářskou práci hodnotím klasifikací **výborně** (podle klasifikační stupnice dané směrnicí děkana FEL)

Dne: 18.6.2014


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podpis oponenta práce