Course code: SJÁ101
Teacher: Tomasz Miklis – Course is in English
Subject area: automation, electrical engineering
Course duration: 3 x 2h
Course dates: Wednesday 19. June 2013
Thursday 20. June 2013
Monday 24. June 2013
Price: 11.800 ISK

Introduction to practical domotics

Course description

SJÁ101 is focused on introducing the basic concepts of home automation (also called domotics). Fundamental knowledge and skills will be developed that will allow course participants to design and implement an automated home lighting system, garage gate regulator or remote hot tub control for summer house. The course will give its participants practical experience in setting up and programming the Schneider Electric Zelio smart relay systems.

Home automation is the residential extension of building automation. It is automation of the home, housework or household activity. Home automation may include centralized control of lighting, HVAC (heating, ventilation and air conditioning), appliances, security locks of gates and doors and other systems, to provide improved convenience, comfort, energy efficiency and security. [1]
Learning outcomes

After completing the course the trainee will be able to apply engineering methods to

- Design and program a simple home automation system using the Schneider Electric Zelio platform
- Program the Zelio smart relay with ZelioSoft programming software
- Be familiar with the basic concepts of PLC programming (Ladder logic and Function Block Diagram)
- Recognise and use the facts, concepts, principles and language of home automation (domotics)
- Appropriately define and use terms which have been introduced and apply them to new situations and examples where appropriate

Figure 1 Zelio Smart Relay Products Family

Teaching and lesson format

SJÁ101 is a trainee-oriented and competence-driven training. Moreover, tutor and teaching assistants are ready to support you at any time. Practical training in small groups, assignments and discussions will make this course a satisfactory experience for all attendees.

All participants of the course will have a hands-on experience with the smart relay technology, using the Zelio boards manufactured at Keilir Institute of Technology. Each participant will have an access to a PC with software required for the course, there’s no need to bring personal laptops.

The Faculty of Keilir Institute of Technology is a multidisciplinary research unit involved in training and research in technical solutions, ranging from Electromechanical Engineering over Chemical Engineering, Electronics, ICT and Renewable Energy.
Special offer from Fálkinn ehf.

Each course participant will be able to take advantage of a special offer on the Zelio products from Fálkinn ehf - the official distributor of Schneider Electric in Iceland.

Follow up courses

The SJÁ101 course will be followed up by other courses, building up on the fundamental knowledge acquired during this course. Dates and more information will be soon available on keilir.net website.

**SJÁ102 - HMI programming for home automation systems**
Designing and programming Human-Machine Interface (HMI) systems for domotics applications. Control and monitoring using mobile devices (iOS and Android platform).
Modbus communication.

**SJÁ103 - Advanced domotics applications**
Remote monitoring and control of domotics application using Ethernet and GPRS. Temperature and pressure measurements.

References