

PX024 "COMPUTER CONTROL OF A REFRIGERATION SYSTEM"

PRESENTATION OF THE PROJECTX-FINAL LEVEL 1.

FOR USE IN THIS CORE AREA: general and particular.

- ▶ GENERAL / KNOWLEDGE: Electronic, Refrigeration
- ▶ PARTICULAR / ACTIVITIES: Design, Drawing and Assembly

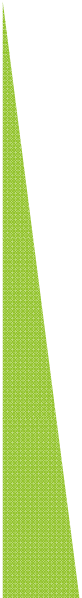


LEARNING OUTCOMES. Common to be shared.

- ▶ 1. 38.5-Draw diagrams of electrical facilities by applying the rules and conventions of graphic representation.
- ▶ 2. 38.9-Mount simple automatic systems with PLCs, interpreting diagrams and verifying the implementation of control programs
- ▶ 3. 39.5-Draw maps and diagrams of the facilities, interpreting and applying the specific symbols and conventions for graphic representation.
- ▶ 4. 123.3-Draw blueprints of thermal and liquid installations, applying conventional symbology and design programmes

DURATION

- ▶ Theory: 10 hours
- ▶ Practice: 50 hours



THEORETICAL OBJECTIVES AND ACTIVITIES

OBJECTIVES

- ▶ 1. Identify the components of a refrigeration control system.
- ▶ 2. Know the operation parameters, control and protection of a refrigeration system.
- ▶ 3. Identify the characteristics of electrical connection of the control elements.
- ▶ 4. Design the connection of the cooling and control elements.

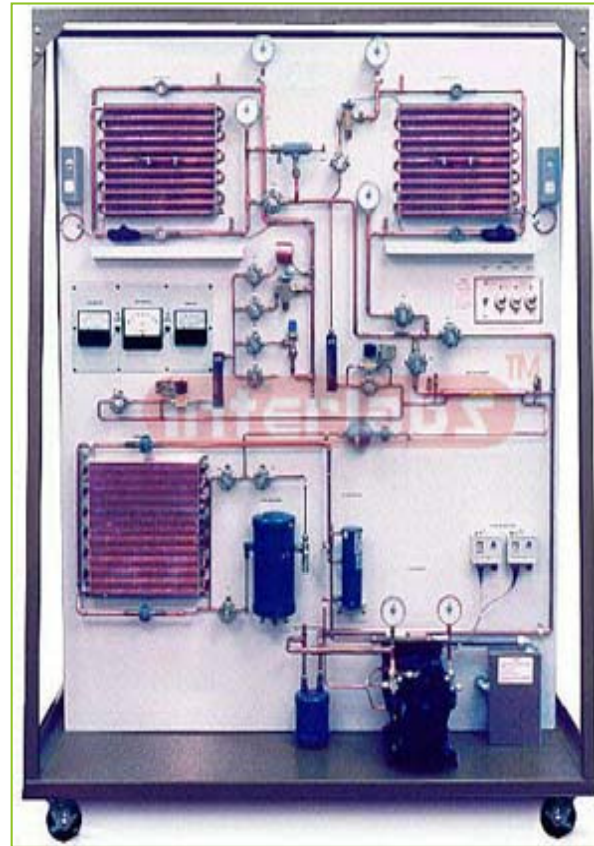
ACTIVITIES

- ▶ 1. Evaluation questionnaire.
- ▶ 2. Multi-choice test.
- ▶ 3. Training exercises with a computer programme.
- ▶ 4. Develop a user`s manual.

PRACTICE.

Brief description.

- ▶ With a cooling system as a reference, the student will design and assemble the control system from a PLC and a commercial software (Eliwell), and he will make its implementation. He will also conduct performance tests, energy efficiency and control through a web application.



PRACTICE. Activities.

1. Performance of the basic and operation diagrams of a refrigeration installation.
2. Development of the wiring diagram of this installation.
3. Assembly of the system and interconnecting the different devices with the PLC.
4. Assignment of the operating parameters to the computer diagrams.
5. Test operation and control of the parameters.
6. Data acquisition to evaluate the energy efficiency of the installation.