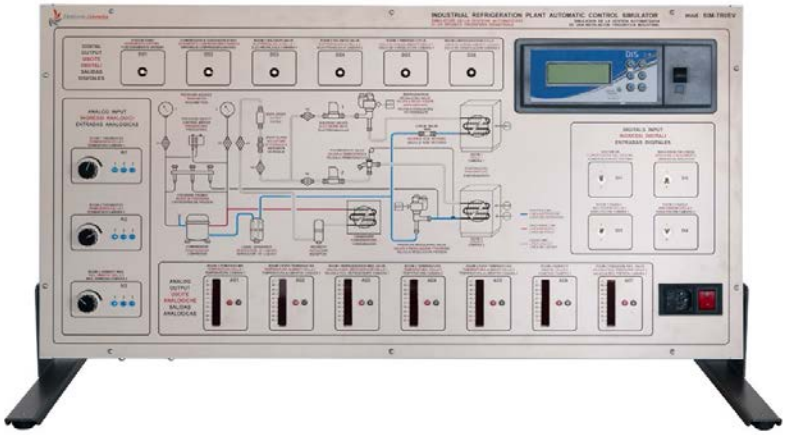
AUTOMATED CONTROL SIMULATOR OF AN INDUSTRIAL REFRIGERATION PLANT

Mod. SIM-TRI/EV



INTRODUCTION

This educational simulator is designed for the training in the sector of computer-aided control of industrial systems and it simulates the operation of an industrial refrigeration system with two cold rooms: one for frozen products (L.T.: low temperature) and the other for fresh vegetable products (M.T.: medium temperature). It is controlled by an industrial digital controller that automatically decides the actions to be performed according to the set parameters thus checking the system behaviour and the importance of the involved parameters, once fixed the set-point values of reference variables (air temperature in L.T. room, air temperature and relative humidity in M.T. room). When connected with a PC (supplied on demand) the simulator allows the supervision of the system by using a dynamic graphics.

TRAINING PROGRAM

Theoretical topics

- Studying on the psychrometric chart the air transformations at the evaporator at a cold room
- Analyzing the behaviour of a refrigeration system with a unique compressor/condenser set and double level of evaporation pressure
- How the difference between room temperature and evaporation temperature affects the relative humidity of a cold room for fresh food

Practical topics

- Analyzing the operation of an electronic expansion valve
- Analyzing the operation of an evaporation pressure regulator
- Proportional and ON/OFF control
- Testing ON/OFF or PI control logics

TECHNICAL SPECIFICATIONS

- Painted metallic framework
- Insulating material front panel representing the refrigeration system
- Web access controller, with remote LCD display, including:
  - 10 universal inputs,
  - 8 digital inputs,
  - 4 analog outputs,
  - 4 configurable outputs,
  - 7 digital outputs
  - PC connection via net cable
  - Controller access via Web browser
- 3 potentiometers with 2-mm holes for simulating the analog inputs
- 7 bargraph LEDs with 2-mm holes for simulating the analog outputs
- 4 switches for simulating the digital inputs
- 6 LEDs for simulating the digital outputs

Power supply:	230 Vac 50 Hz single-phase - 200 VA (Other voltage and frequency on request)
Dimensions:	80 x 40 x 12 cm
Net weight:	18 kg

SUPPLIED WITH

THEORETICAL-EXPERIMENTAL HANDBOOK

OPTIONAL

PERSONAL COMPUTER

 ELETTRONICA VENETA S.P.A. - 31045 Motta di Livenza (TV) Italy - Via Postumia 16 - Tel. +39 0422 765 802 - Fax +39 0422 861 901 - E-mail: export@elettronicaveneta.com