DESIGN, SIMULATION AND ANIMATION SOFTWARE FOR INDUSTRIAL AUTOMATION

Mod. SW-CAI/EV

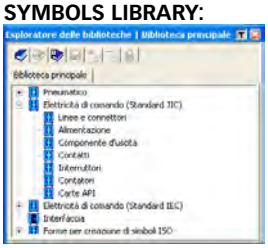
The software mod. SW-CAI/EV constitutes a very powerful educational tool to develop theoretical lessons and laboratory practical exercises. This software allows the user to design, simulate and animate circuits for the following technical fields:

- Pneumatics and Proportional Pneumatics
- Hydraulics and proportional hydraulics
- Electrical control (standard IEC, JIC)
- Digital Electronics
- Electrical engineering

It also allows:

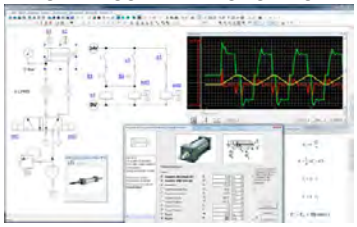
- Creating programs in Ladder logic for PLCs Siemens and Allen Bradley IEC 61131-3
- Creating Grafcet sequences
- Creating HMI and control panels interfaces
- Interfacing with the real circuit

SYMBOLS LIBRARY:



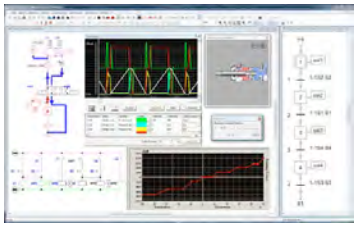
International symbols library for all the fields mentioned above, according to ISO, DIN, IEC, NEMA. The user is able to create partial or specific libraries to facilitate the design of new symbols. One important feature is the "Component Dimensioning" function, or the possibility to assign specific characteristics to the used symbols.

PNEUMATICS AND PROPORTIONAL PNEUMATICS



The library includes all the necessary symbols to design a pneumatic circuit: compressed air sources, single and double effect linear cylinders, limit switches, push buttons, valves, timer, motors, etc. it is possible to create open loop and closed loop control circuits.

OIL CONTROL HYDRAULICS AND



PROPORTIONAL OIL CONTROL HYDRAULICS

Complying with standards ISO 1219-1 and ISO 1219-2, the libraries of oil control hydraulics and proportional hydraulics include all the symbols of the components needed to assemble a circuit. A library includes hundreds of symbols such as directional valves, pumps, motors, engines, cylinders, etc…

ELECTRICAL CONTROL LOGICS

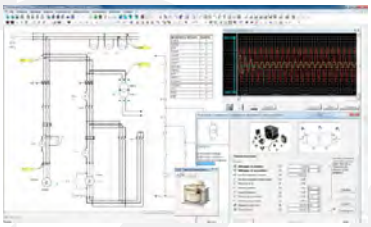
This library interacts with all the components of other libraries, and allows creating electrical control logic circuits. It is then possible to make electro-pneumatic projects. It includes push buttons, relays, coils, etc.

HMI AND CONTROL PANEL

This module allows to create animations and control panels. The graphical library contains several objects such as switches, push buttons, potentiometers, etc.

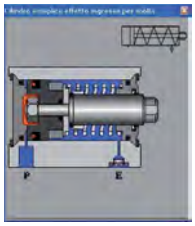
 ELETTRONICA VENETA S.P.A. - 31045 Motta di Livenza (TV) Italy - Via Postumia 16 - Tel. +39 0422 765 802 - Fax +39 0422 861 901 - E-mail: export@elettronicaveneta.com

ELECTRICAL ENGINEERING



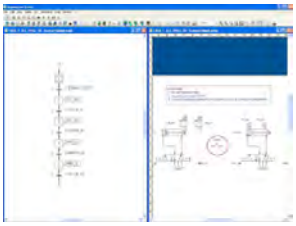
The Library offers a wide range of components to create electrical D.C and/or A.C. circuits. The user can modify the simulation parameters like the resistance, inductance, torque, frequency, mutual inductance of the rotor or mutual inductance stator of the motor, the constant of inertia etc. With this library you can draw a circuit, simulate its operation and look for possible errors before passing to its realization.

CUT-AWAY COMPONENTS ANIMATION



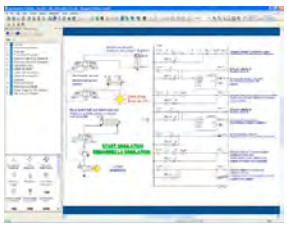
The 3D animated cut-away components show the internal operation of the devices. The animations are synchronized with the circuit simulation.

GRAFCET



This module allows the implementation of control structures according to IEC61131-3 standard. This universal method can be used together with other libraries to perform the control of complex pneumatics projects.
The Grafcet programming technique helps to develop complex automatic sequences and to test them before transferring them to the PLC. The programs developed with this software can be exported in a format compatible with Siemens S7 PLCs and in XML format.

PROGRAMMABLE LOGIC CONTROLLER (PLC)



This software has three libraries in LADDER logic that includes the symbols of the manufacturers: Allen Bradley™, Siemens™, and of standard IE61131-3. These libraries also contain the set of instructions for operating in LADDER logic, as well as contacts, timers, counters, mathematical functions, etc…
These libraries enable to write a program in LADDER logic and to simulate its operation and troubleshooting before it is transferred to the PLC.

DIGITAL ELECTRONICS

This library provides a wide range of standard logic components like inverter, logic ports, flip-flops, counters, scrolling registers, comparators, push buttons, LEDs, 7-segments display, multiplexer, etc.

PC SYSTEM REQUIREMENTS

- 2 USB ports
- O.S: Windows 7

SUPPLIED WITH

THEORETICAL-EXPERIMENTAL HANDBOOK
WITH INTRODUCTION TO THE EXERCISES

OPTIONAL

I/O INTERFACE:
INTERFACE BOARD Mod. C2-IO/EV