



INCLUDED MODULES

ALI02. Domestic Main Power Supply

- Magneto-thermal protection.
- Differential protection.
- Single-phase plug and terminals.
- 2 lamps.
- 5 terminals.
- Mushroom security button.
- Removable key.

ALI03. AC Auxiliary Power Supply (24Vac)

- 230/24 Vac transformer.
- 4 terminals.

CTR02. Advanced Control Module

- 128 Inputs.
- 128 Outputs.
- Connection to computer via RS232.
- EPROM program.
- Programable easy language by computer.

CTR05. Power Module 72W

- 230 Vac, 50/60Hz.
- Output 24 Vdc, 3A.
- 72W.
- Protected power supply.

CTR07. Timers Module

- 128 week temporizers.
- Hour and date.
- Clock program for control modules.

CTR08. Inputs Module 24V.

- 16 digital inputs.
- 24 Vdc inputs.
- 1 Kohm inputs.

CTR11. Outputs Module 24V.

- 8 transistor outputs.
- 12-48 Vdc Outputs.
- Maximum output current 500mA.

CTR17. Infrared Remote Control for Control Modules

- Infrared comand control.
- 16 functions.
- Double pulsation program.
- 6 to 8 meters.

CTR18. Infrared Receptor

- Infrared comand control.
- 24 Vdc.
- 6 elements in series connection.

Continue...



ISO:9001-2000 Certificate of Approval. Reg. No. E204034



European Union Certificate



Certificates ISO 14001: 2004 and ECO-Management and Audit Scheme (environmental management)



Worlddidac Quality Charter Certificate Worlddidac Member

DET04. Flooding Detector (with probe)

- Flooding detection.
- Includes probe.
- 230 Vac, 50/60 Hz.
- Alarm output by inverter relay.
- Service and alarm leds.
- Buzzer for acoustic alarm.

DET09. Intrusion Detector for domestic control

- Intrusion detection.
- Led alarm.
- Power supply through control module.

VAR08. Monitor

- Standard TV.
- Connectable to control modules.
- Black and white or colour.

DET05. Gas Detector for domestic control

- Toxic gas detection.
- Butane, propane, methane.
- Led and sound alarm.
- 230 Vac, 50/60 Hz.
- Service led and test function.

DET10. Water Electro-valve

- NO contact for water supply control.
- Automatic resetting.
- 230 Vac, 50/60 Hz.
- Ip54.

DET06. Smoke Detector for domestic control

- Ionic Smoke detector.
- 230Vac, 50/60 Hz.
- Inverter relay alarm output no voltage.
- Service led and test function.
- Led and sound alarm.

DET12. Gas Electro-valve

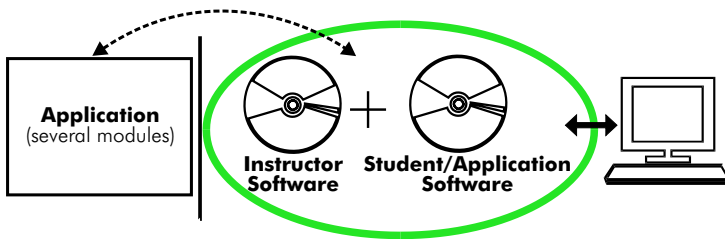
- NO contact for gas supply control.
- Automatic resetting.
- 230 Vac, 50/60 Hz.
- Ip54.

EXERCISES AND PRACTICAL POSSIBILITIES

Some Practical Possibilities:

- 1.- Assembly of the complete system with the smoke, flooding and gas detectors.
- 2.- Test of the station with smoke, flooding and gas detectors.
- 3.- To set the temporization and monitoring the results.
- 4.- Assembly of the complete system with infrared and intrusion detectors.
- 5.- Test of the station with infrared and intrusion detectors.
- 6.- Electro-valves activation.
- 7.- Wireless assembly of the sensor through infrared control

CAI. Computer Aided Instruction Software System

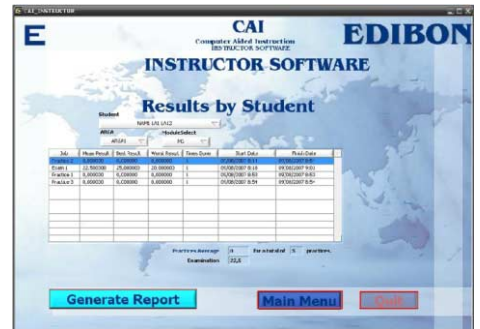


With no physical connection between application/module and computer, this complete package consists on an Instructor Software (INS/SOF) totally integrated with the Student/Application Software. Both are interconnected so that the teacher knows at any moment what is the theoretical and practical knowledge of the students. These, on the other hand, get a virtual instructor who helps them to deal with all the information on the subject of study.

With the INS/SOF. Classroom Management Software Package (Instructor Software), the Teacher has a whole range of options, among them:

- Organize Students by Classes and Groups.
 - Create easily new entries or delete them.
 - Create data bases with student information.
 - Analyze results and make statistical comparisons.
 - Print reports.
 - Develop own examinations.
 - Detect student's progress and difficulties.
- ...and many other facilities.

Examples of the Software screens



The Instructor Software is the same for all the applications, and working in network configuration, allows controlling all the students in the classroom.

A.../SOF Computer Aided Instruction Software Packages (Student/Application Software).

It explains how to use the application or the module, run the experiments and what to do at any moment.

Each application has its own Student Software package.

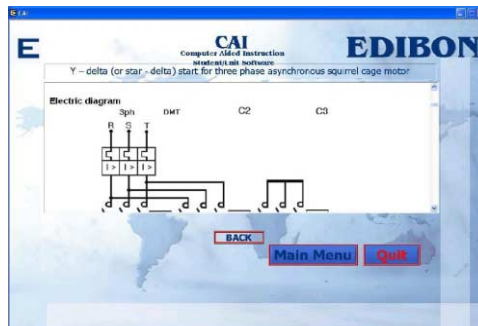
- The options are presented by pull-down menus and pop-up windows.
- Each Software Package contains:

Theory: that gives the student the theoretical background for a total understanding of the studied subject.

Exercises: divided by thematic areas and chapters to check out that the theory has been understood.

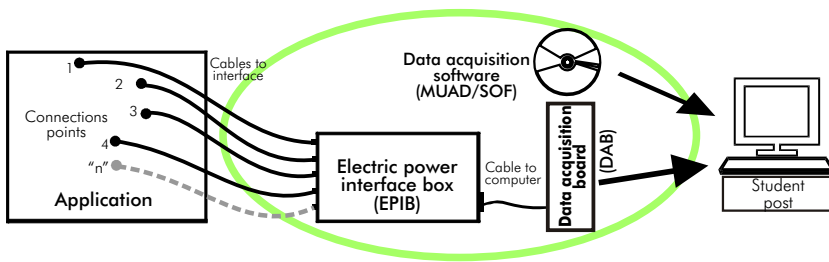
Guided Practices: presents several practices to be done, alongside the applications/modules, showing how to complete the exercises and practices.

Exams: set of questions presented to test the obtained knowledge.



* Software is available in English and Spanish. Any other language available on request.

MUAD. Power Data Acquisition System



MUAD is the perfect link between the application/module and the PC. MUAD is a continuous data acquisition system with virtual instrumentation, that measures, analyzes and represents the parameters involved in the process.

MUAD allows voltage and current acquisition and measurement, data processing, frequency spectrum and all the functions of a digital oscilloscope.

We easily connect the Electric Power Interface Box (EPIB) to the application/module with the supplied cables (there are several connection points placed for it). The EPIB is connected to the PC through the Data Acquisition Board (DAB), and by using the Data Acquisition with Virtual Instrumentation Software, the student can get results from the undertaken experiment/practice, see them on the screen and work with them.

The MUAD system allows voltage and current measurement and acquisition, data processing, frequency spectrum and the functions of a digital oscilloscope.

This MUAD System includes EPIB + DAB + MUAD/SOF:

1) Hardware :

1.1) EPIB. **Electric power interface box** (dimensions: 300x 120x 180 mm. approx.):

Interface that carries out the conditioning of the diverse signals that can be acquired in a process, for their later treatment and visualisation.

In the front panel, the elements are separated in two parts: left-hand part to VOLTAGE sensors, and right-hand part corresponds with CURRENT sensors.

Analog Input Channels:

8 analog input channels. Sampling range: 250 KSPS (Kilo samples per second).

4 Tension sensors AC/DC, 400V. 4 Current sensors.

1.2) DAB. **Data acquisition board** :

PCI Data acquisition board (National Instruments) to be placed in a computer slot.

Bus PCI.

Analog input:

Number of **channels= 16** single-ended or 8 differential.

Resolution= 16 bits, 1 in 65536.

Sampling rate up to: 250 KSPS (Kilo samples per second).

Input range (V)= $\pm 10V$.

Data transfers=DMA, interrupts, programmed I/O.

Number of DMA channels=6.

Analog output:

Number of **channels=2**.

Resolution= 16 bits, 1 in 65536.

Maximum output rate up to: 833 KSPS

Output range(V)= ± 10 .

Data transfers=DMA, interrupts, programmed I/O.

Digital Input/Output:

Number **channels=24**inputs/outputs.

D0 or DI Sample Clock frequency: 0 to 1 MHz.

Timing: **Counter/timers=2**.

Resolution: Counter/timers: 32 bits.

2) MUAD/SOF. **Data acquisition software** :

Data Acquisition Software with Graphic Representation:

Amicable graphical frame.

Compatible with actual Windows operating systems.

Configurable software allowing the representation of temporal evolution of the different signals.

Visualization of a tension of the circuits on the computer screen.

Sampling velocity up to 250 KSPS. (Kilo samples per second) guaranteed.



EPIB

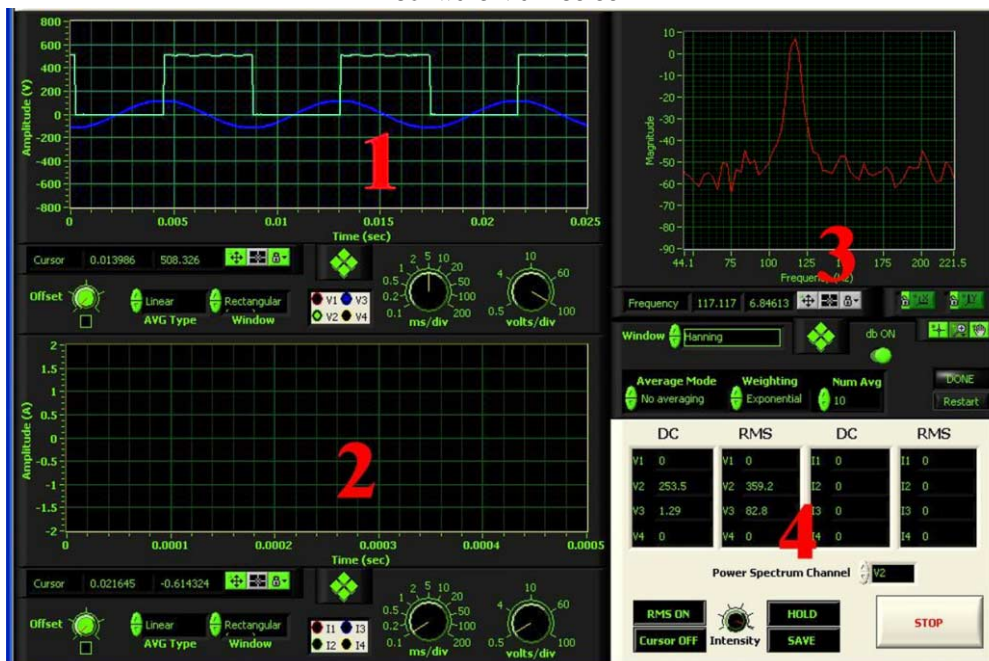


DAB



MUAD/SOF

Software Main Screen



- 1.- Voltage channels section
- 2.- Current channels section
- 3.- Power spectrum section
- 4.- General control panel section

Manuals and Accessories

Manuals:

Manuals are developed following the SELF-TEACHING principle, thus facilitating to the utmost student's productivity when completing the practices/exercises. 8 Manuals are supplied with each application.

Accessories:

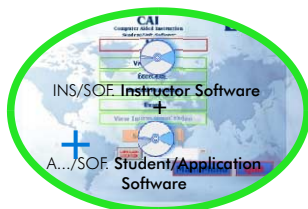
With the each application will be supplied a safety wires kit for doing all practices (CABD), net cable, adaptors, etc, for normal operation.

Working possibilities:

1) Working possibility CAI + MUAD (EDIBON complete system)



Application



CAI.
Computer Aided Instruction
Software System

+



MUAD
Power Data Acquisition System

+

Manuals

2) Working possibility MUAD



Application

+



MUAD
Power Data Acquisition System

+

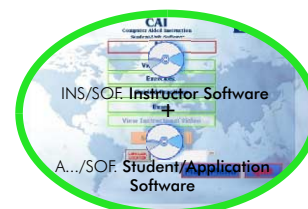
Manuals

3) Working possibility CAI



Application

+



CAI.
Computer Aided Instruction
Software System

+

Manuals

4) Simplest Working possibility



Application

+

Manuals

* Specifications subject to change without previous notice, due to the convenience of improvements of the product.



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REPRESENTATIVE: