

INCLUDED MODULES

Application, in metallic box, including the following modules:

ALI02. Domestic Main Power Supply

- Magneto-thermal protection.
- Differential protection.
- Single -phase plug.
- 2 lamps.
- Terminals: L(line), N (neutral) and GND (ground).
- Security mushroom.
- Removable key with two positions (ON and OFF) that works as the main switch.

CTI10. Automatic of Stairs

- 3 or 4 wires connection.
- 45 seconds to 7 minutes.
- 230 Vac, 10 A.
- Ip20 protection.
- 2 positions.

INT21. Switch+Commutator Group+ Bell Push-Button (2 units)

- 1 One pole switch.
- 1 group commutator + bell pushbutton.
- 10 A.
- 250 Vac.
- Domestic use.

LAM08. 2 Lamp-holders + Incandescent Lamps 40W (2 units)

- 2 lampholders for incandescent bulbs.
- Two 40 W incandescent bulbs.
- Input and output terminals.

LAM13. 2 Low Consumption Fluorescent Lamps (2 units)

- 2 fluorescent lamps.
- 5 W.
- 250 lumens.
- With an integrated starter.

PRACTICAL POSSIBILITIES

Some practical possibilities:

- 1.- Identification of the elements of the main power supply.
- 2.- Checking the main power supply.
- 3.- Test of the set from two points with incandescent lamps.
- 4.- Test of the set from two points with fluorescent lamps.



ISO 9000: Quality Management
(for Design, Manufacturing,
Commercialization and After-sales service)



European Union Certificate
(total safety)

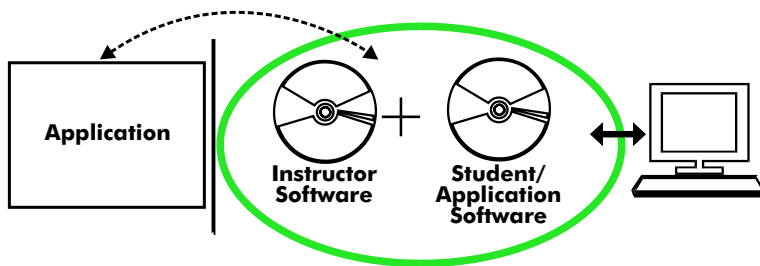


**Certificates ISO 14000 and
ECO-Management and Audit Scheme**
(environmental management)



**Worlddidac Quality Charter
Certificate**
(Worlddidac Member)

CAI. Computer Aided Instruction Software System

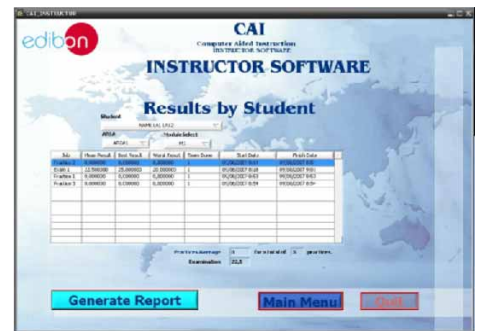


With no physical connection between the application and computer, this complete package consists on an Instructor Software (INS/SOF) totally integrated with the Student/Application Software. Both are interconnected so that the teacher knows at any moment what is the theoretical and practical knowledge 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 (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 (Student/Application Software).

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

Each application has its own Student Software package.

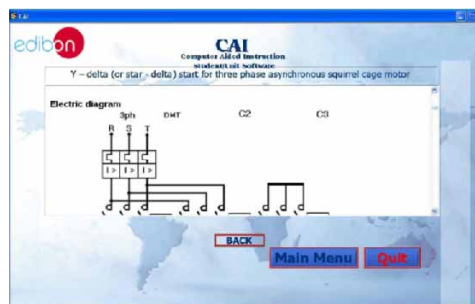
- The options are presented by pull-down menus and pop-up windows.
- Each Software Package contains:

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.

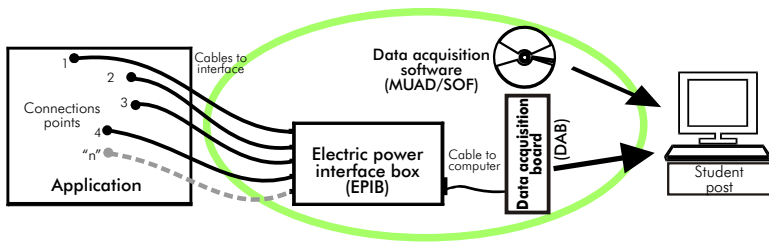
Guided Practices: presents several practices to be done, alongside the application, showing how to complete the exercises and practices.

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



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

MUAD. Electric Power Data Acquisition System



MUAD is the perfect link between the application 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 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 120 x 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: 250KSPS (Kilo samples per second).

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



EPIB

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)= ± 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 KS/s.

Output range(V)= ± 10.

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

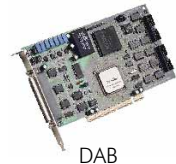
Digital Input/Output:

Number channels=24 inputs/outputs.

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

Timing: Counter/timers=2.

Resolution: Counter/timers: 32 bits.



DAB



MUAD/SOF

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

Data Acquisition Software with Graphic Representation:

Friendly graphical frame.

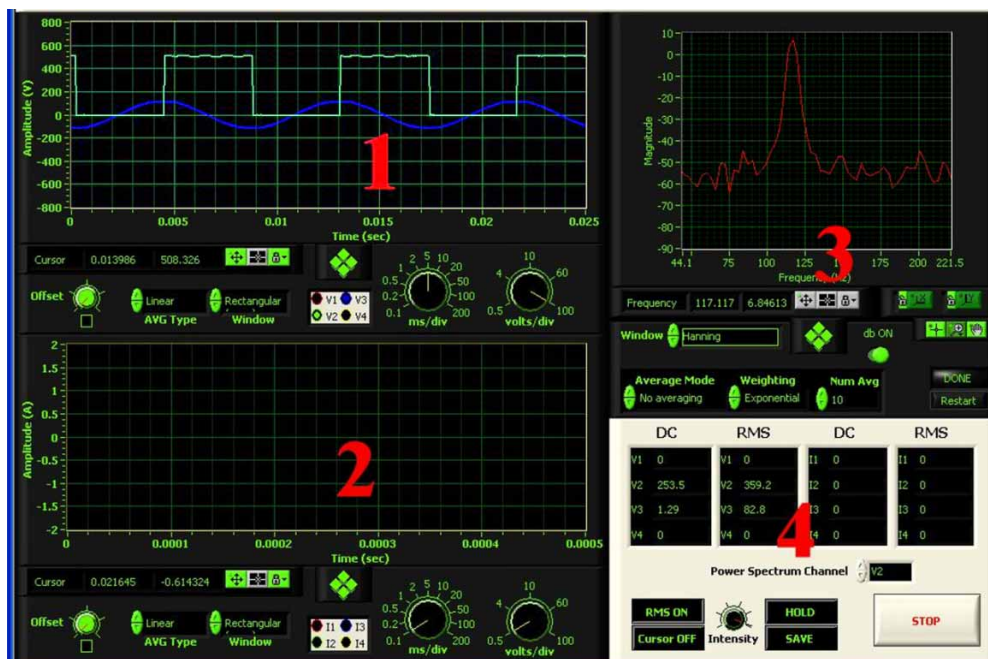
Compatible with actual Windows operating systems.

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.

Software Main Screen



1.- Voltage channels section

2.- Current channels section

3.- Power spectrum section

4.- General control panel section

Manuals:

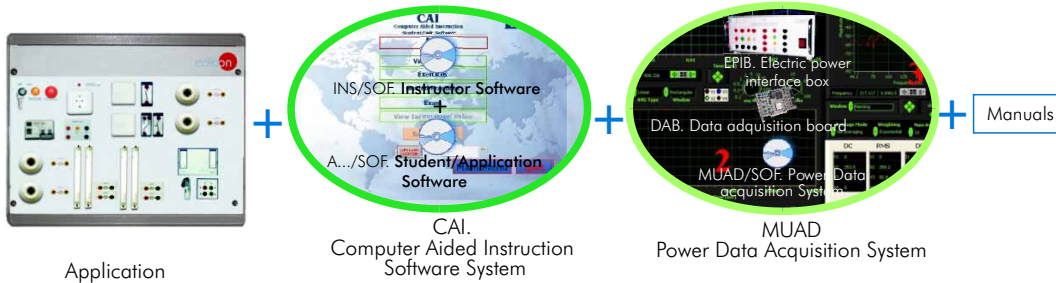
Manuals are developed following the SELF-TEACHING principle, thus facilitating to the utmost student's productivity when completing the practices/exercises. 8 Manuals are supplied with the application.

Accessories:

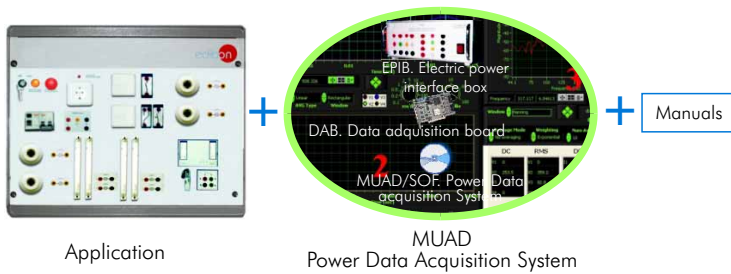
With the the application will be supplied a safety wires kit for doing all practices (CABD), net cable, adaptors, etc, for normal operation.

Working possibilities:

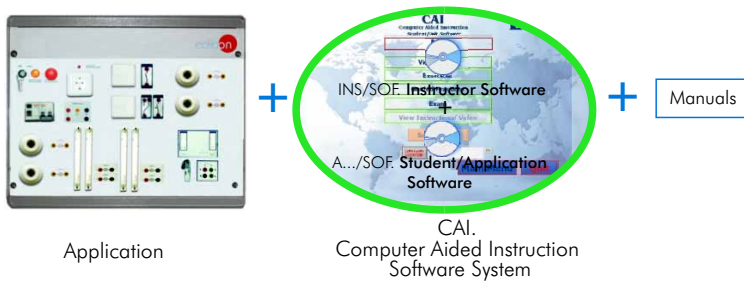
1) Working possibility CAI + MUAD (EDIBON complete system)



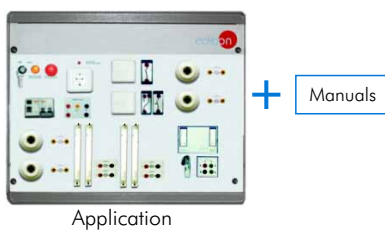
2) Working possibility MUAD



3) Working possibility CAI



4) Simplest Working possibility



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



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REPRESENTATIVE: