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 ↳ PRODUCTOS  
 ↳ 4.- ELECTRICIDAD

## INTRODUCTION

The students who begin their professional career as electrical installers, assemblers or electrical maintenance technicians require a hands-on learning with equipments that reflect faithfully the electrical installations in which they will work in the future. In the industrial field it is important that the electrician knows the different lamp types to install according to the illumination working conditions. Besides, the switch installation is equally important to control simply these lamps.



ISO 9001: Quality Management (for Design, Manufacturing, Commercialization and After-sales service)



European Union Certificate (total safety)



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



"Worlddidac Quality Charter" and Platinum Member of Worlddidac

## GENERAL DESCRIPTION

The Wiring Installation Training, Industrial Lighting Installations application "WIT-ILI", has been designed by Edibon for the formation at professional-practical level in the field of the installations, wiring and testing of the different industrial illumination lamps.

This application provides the future professionals with knowledge and essential skills on the assembly, installation, wiring and testing of industrial usage lamps as well as the light switches. This application also offers different kits to provide experience in the installation of numerous lighting types such as fluorescent lamp, mercury vapor lamp, high pressure sodium vapor lamp, low pressure sodium vapor lamp, metal halide lamp, incandescent lamp and LED lamp.

To acquire a complete knowledge, the system includes a specific manual in which is explained, at theoretical-practical level, the aspects concerning to the installation procedures and wiring of these installations.

The WIT-ILI application includes the following elements:

- FP-STR. Assembly Frame with Safe Electrical Power Supply.
- FP-KIT-4. Wiring Installation Kit.
- FP-KIT-10. Tubes and Fittings for Channelling Wiring Kit.
- FP-KIT-32. Switches Kit.
- FP-KIT-33. Lighting Regulation Kit.
- FP-KIT-34. Lighting Relays Kit.
- FP-KIT-37. Fluorescent Ceiling Fixture Kit (2 units).
- FP-KIT-38. Mercury Vapor Lamps Kit.
- FP-KIT-39. High Pressure Sodium Vapor Lamps Kit.
- FP-KIT-40. Low Pressure Sodium Vapor Lamps Kit.
- FP-KIT-41. Metal Halide Lamps Kit.
- FP-KIT-42. Incandescent Lamps Kit.
- FP-KIT-43. LED Lamps Kit.

Required elements:

- CHER. Tool Box.

Recommended elements:

- MED65. Digital Multimeter.
- FP-KIT-10/B. Rigid Tube Kit.
- FP-KIT-5. Measuring Kit.

## SPECIFICATIONS

The WIT-III application includes the following elements:

- **FP-STR. Assembly Frame with Safe Electrical Power Supply.**

Aluminum structure:

Three aluminum struts.

Easy assembly of components via hammer head screws.

Possibility of simultaneous work of several students.

Four swiveling casters to facilitate the movement.

Dimensions:

Structure height: 1800 mm.

Useful working height: 1000 mm.

Width: 1500 mm.

Three-Phase connection plug.

Safe electric box:

Differential magnetothermal, 4 poles, 25A, 300mA AC 6KA.

Emergency stop mushroom (230/400V AC).

5-wire hose for connection to frame.

Signal lamp of voltage presence. Armature voltage: 200V DC.

- **FP-KIT-4. Wiring Installation Kit.**

100 meters of grey wire of 1.5 mm<sup>2</sup>.

100 meters of brown wire of 1.5 mm<sup>2</sup>.

100 meters of black wire of 1.5 mm<sup>2</sup>.

100 meters of green/yellow wire of de 1.5 mm<sup>2</sup>.

25 meters of screened wire.

- **FP-KIT-10. Tubes and Fittings for Channeling Wiring Kit.**

PVC electrical conduit for wiring installation, 20 m.

7 x Electrical box.

Cable guide.

20 x PMA cable clamp, 20 mm.

- **FP-KIT-32. Switches Kit.**

2 x Switch.

2 x Double switch.

2 x Commutator.

2 x Push-button.

Cross switch.

- **FP-KIT-33. Lighting Regulation Kit.**

Dimmer for LED lamps.

Dimmer for incandescent lamps.

RLC/LED/CFL universal regulator.

- **FP-KIT-34. Lighting Relays Kit.**

Timer relay.

Switch relay:

Coil voltage: 230V AC.

Commutator relay:

Coil voltage: 24V DC.

24V DC power supply.

- **FP-KIT-37. Fluorescent Ceiling Fixture Kit (2 units).**

2 x 8W lineal fluorescent tube (with tube holder).

- **FP-KIT-38. Mercury Vapor Lamps Kit.**

2 x Mercury vapor lamp.

Nominal voltage: 230V AC.

Approximate power: 250 W.

- **FP-KIT-39. High Pressure Sodium Vapor Lamps Kit.**

2 x High pressure sodium vapor lamp.

Nominal voltage: 230V AC.

Approximate power: 250 W.

- **FP-KIT-40. Low Pressure Sodium Vapor Lamps Kit.**

2 x Low pressure sodium vapor lamp.

Nominal voltage: 230V AC.

Approximate power: 250 W.

- **FP-KIT-41. Metal Halide Lamps Kit.**

2 x Metal halide lamp.

Nominal voltage: 230V AC.

Approximate power: 150 W.

- **FP-KIT-42. Incandescent lamps kit.**

4 x Double throw lighting switch.

4 x Encapsulated halogen lamp, 230 V.

230 VAC single phase socket.

2 x Commutator switch.

- **FP-KIT-43. LED Lamps Kit.**

2 x High pressure sodium vapor lamp.

Nominal voltage: 230V AC.

Approximate power: 20 W.

Required elements:

• **CHER. Tool Box.**

- Crimper.
- Tin.
- Meter.
- Insulation tape.
- Heat shrink.
- Voltage tester screwdriver.
- Cross-head screwdriver and flat-head screwdriver.
- Allen keys.
- Soldering iron.
- Rubber hammer.
- Wire terminals and Connection terminals.
- Flanges.
- Wire cutter.
- Screw Clamp Terminals.
- Wire stripper.

Recommended elements:

• **MED65. Digital Multimeter.**

This module has a digital multimeter of about 3 ½ digits, with double-jack ending cables of about 4 mm to facilitate interconnections.

With this digital multimeter we will be able to measure:

- Voltage.
- Current.
- Resistance.
- Capacitors capacity.
- Temperature.

• **FP-KIT-10/B. Rigid Tube Kit.**

- 20 m PVC Rigid Tube.
- 10 x Threaded connector.
- 5 x Elbow for conducts clamping.

• **FP-KIT-5. Measuring Kit.**

Clamp Meter:

Clamp for alternating/direct current measurements contactless.

The clamp can measure:

- Current.
- Voltage.
- Resistance.

A voltage and continuity tester:

Voltage range: 12-690V AC.

Phases rotating detection in three-phase systems.

Polarity tester.

• **All necessary cables to realize the practical exercises are included.**

**Cables and Accessories**, for normal operation.

**Manuals:**

This unit is **supplied with the following manuals:** Required Services, Assembly and Installation, Starting-up, Safety, Maintenance & Practices Manuals.

## EXERCISES AND PRACTICAL POSSIBILITIES

- 1.- Wiring, installation lighting and adjustment for the fluorescent ceiling fixture.
  - 2.- Wiring and lighting of the mercury vapor lamp.
  - 3.- Wiring and lighting of the high pressure sodium vapor lamp.
  - 4.- Wiring and lighting of the low pressure sodium vapor lamp.
  - 5.- Wiring and lighting of the metal halide lamp.
  - 6.- Wiring, lighting and adjustment of the incandescent lamp.
  - 7.- Wiring, lighting and adjustment of the LED lamp.
  - 8.- Wiring and lighting of one lamp switched by one switch.
  - 9.- Wiring and lighting of one lamp switched by two switches.
  - 10.- Wiring and lighting of one lamp switched by one double switch.
  - 11.- Wiring and lighting of two lamp switched by one double switch.
  - 12.- Wiring and lighting of one lamp switched by one commutator.
  - 13.- Wiring and lighting of two lamp switched by one commutator.
  - 14.- Wiring and lighting of a lamp controlled from more than two points.
  - 15.- Wiring and timed lighting of stair light controlled from one point.
  - 16.- Wired and timed lighting of the stair light controlled from two points.
- Several other exercises can be done and designed by the user.

### REQUIRED SERVICES

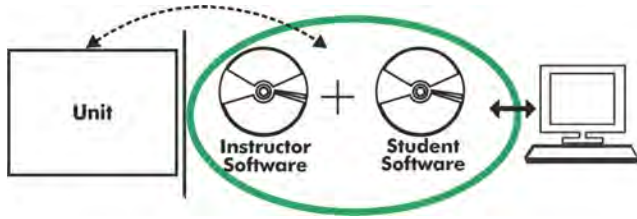
- Electrical supply: three-phase, 380V/50 Hz or 208V/60 Hz, 3 kW.

### DIMENSIONS AND WEIGHTS

WIT-ILI:

- Dimensions: 1500 x 400 x 1800 mm approx.  
(78.74 x 15.75 x 78.74 inches approx.)
- Weight: 80 Kg approx.  
(220 pounds approx.)

**WIT-ILI/ICAI. Interactive Computer Aided Instruction Software System:**



With no physical connection between unit and computer, this complete software package consists of an Instructor Software (EDIBON Classroom Manager -ECM-SOF) totally integrated with the Student Software (EDIBON Student Labsoft -ESL-SOF). Both are interconnected so that the teacher knows at any moment what is the theoretical and practical knowledge of the students.

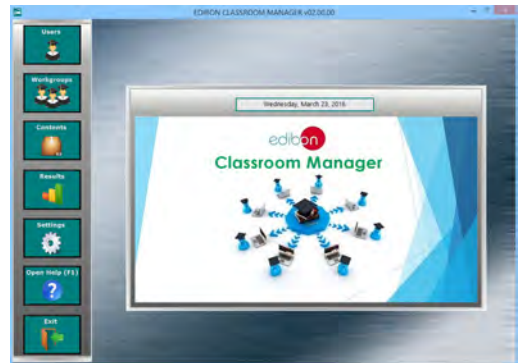
**Instructor Software**

- ECM-SOF. EDIBON Classroom Manager (Instructor Software).

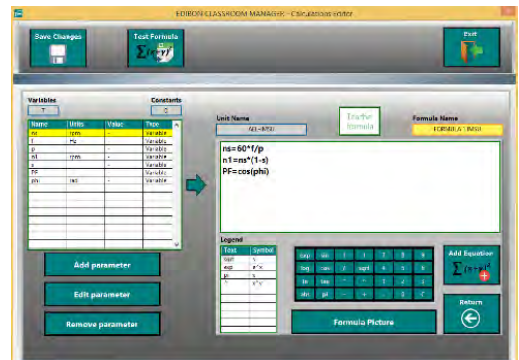
ECM-SOF is the application that allows the Instructor to register students, manage and assign tasks for workgroups, create own content to carry out Practical Exercises, choose one of the evaluation methods to check the Student knowledge and monitor the progression related to the planned tasks for individual students, workgroups, units, etc... so the teacher can know in real time the level of understanding of any student in the classroom.

Innovative features:

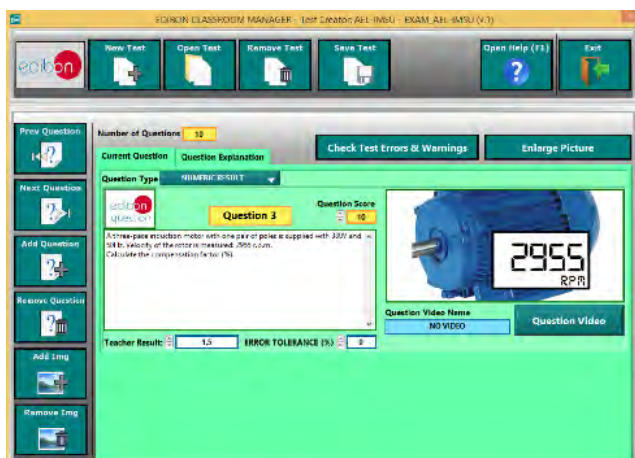
- User Data Base Management.
- Administration and assignment of Workgroup, Task and Training sessions.
- Creation and Integration of Practical Exercises and Multimedia Resources.
- Custom Design of Evaluation Methods.
- Creation and assignment of Formulas & Equations.
- Equation System Solver Engine.
- Updatable Contents.
- Report generation, User Progression Monitoring and Statistics.



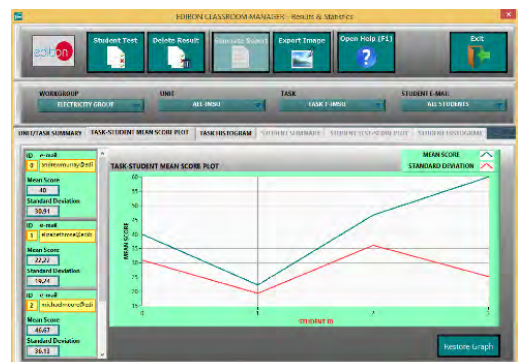
ECM-SOF. EDIBON Classroom Manager (Instructor Software) Application Main Screen



ECAL. EDIBON Calculations Program Package - Formula Editor Screen



ETTE. EDIBON Training Test & Exam Program Package - Main Screen with Numeric Result Question



ERS. EDIBON Results & Statistics Program Package - Student Scores Histogram



**Student Software**

- ESL-SOF. **EDIBON Student Labsoft (Student Software)**.

ESL-SOF is the application addressed to the Students that helps them to understand theoretical concepts by means of practical exercises and to prove their knowledge and progression by performing tests and calculations in addition to Multimedia Resources. Default planned tasks and an Open workgroup are provided by EDIBON to allow the students start working from the first session. Reports and statistics are available to know their progression at any time, as well as explanations for every exercise to reinforce the theoretically acquired technical knowledge.

Innovative features:

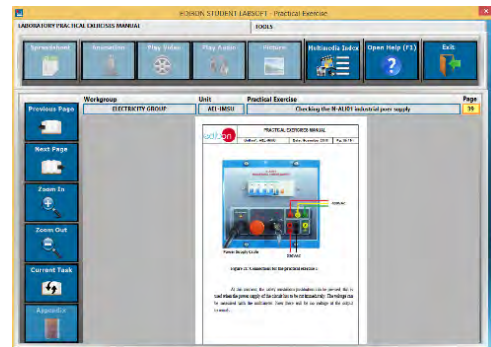
- Student Log-In & Self-Registration.
- Existing Tasks checking & Monitoring.
- Default contents & scheduled tasks available to be used from the first session.
- Practical Exercises accomplishment by following the Manual provided by EDIBON.
- Evaluation Methods to prove your knowledge and progression.
- Test self-correction.
- Calculations computing and plotting.
- Equation System Solver Engine.
- User Monitoring Learning & Printable Reports.
- Multimedia-Supported auxiliary resources.

For more information see ICAI catalogue. Click on the following link:

[www.edibon.com/en/files/expansion/ICAI/catalog](http://www.edibon.com/en/files/expansion/ICAI/catalog)



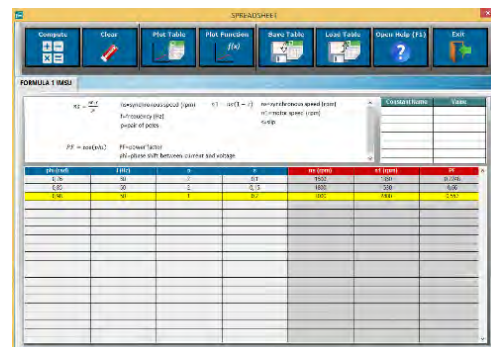
ESL-SOF. EDIBON Student LabSoft (Student Software) Application Main Screen



EPE. EDIBON Practical Exercise Program Package Main Screen



ERS. EDIBON Results & Statistics Program Package - Question Explanation



ECAL. EDIBON Calculations Program Package Main Screen

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



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REPRESENTATIVE:

