

## **Engineering and Technical Teaching Equipment**

# Wireless Intrusion Detection Application (RF)

AEL-AD23



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#### INTRODUCTION

Nowadays, people have been frequently forced to install intrusion detection systems at home due to the lack of security. There are many types of intrusion detection systems. Generally, they are devices that detect movement, sound or vibrations to send an alarm.









#### **GENERAL DESCRIPTION**

The Wireless Intrusion Detection Application (RF), "AEL-AD23", is designed with the aim to understand the operation of a wireless intrusion detection system. For that, this application includes a wireless presence detector that works via infrared radiation, detecting temperature changes, a panic pushbutton to use in emergency situations and a wireless receptor that receives the signals from all sensors. In order to check the operation of these devices, the application also includes a pilot light module and a bell and buzzer module, which can be activated by the sensors. Thus, the user can check different types of intrusion alarms.

The AEL-AD23 includes the following modules:

- N-ALIO2. Domestic Main Power Supply.
- N-ALI03. AC Auxiliary Power Supply.
- N-DET13. Wireless Intrusion Detector RF.
- N-DET14. Wireless Panic Push-Button RF.
- N-DET15. Wireless One Channel Receptor RF.
- N-SEL01. Light Signaling Beacons.
- N-TIM05. Bell + Buzzer.

Expansion learning software:

In addition, Edibon provides expansion learning software (AEL-AD23/ICAI) to reinforce knowledge about this field.

This software is formed by:

- ECM-SOF. EDIBON Classroom Manager (Instructor Software).
- ESL-SOF. EDIBON Student Labsoft (Student Software).

The application AEL-AD23 can be mounted on rack (option A) or on rail (option B):

Option A:

This application needs the following racks:

• N-RACK-M.

Optionally the AEL-WBR. Electrical Workbench (Rack) can be supplied to place the rack/s.

Option B:

This application can be mounted on rail.

Optionally the AEL-WBC. Electrical Workbench (Rail) can be supplied to mount the modules.

The application includes the following modules:

• N-ALIO2. Domestic Main Power Supply.

Voltage supply (Single-Phase): 230 VAC, PH+N+G.

ON-OFF removable key.
Output Voltage Connections:
Two Single-Phase: 230 VAC.

Single-Phase supply wire connecting plug.

Differential magnetothermal, 2 poles, 25 A, 30 mA AC 6 KA.



Voltage supply (Single-Phase): 230 VAC PH+N+G.

Output voltage:

Single-Phase 24 VAC/12 VAC.

24 VDC.

0 - 24 VDC through potentiometer.

#### • N-DET13. Wireless Intrusion Detector RF.

Vision angle: 90°.

Frequency: 433.92 MHz.

Voltage supply: battery of 3.6 VDC.

Max. Area 12 x 12 m.

Status LED.

#### • N-DET14. Wireless Panic Push-button RF.

Frequency 433.92 MHz.

Voltage supply: battery of 12 VDC.

Battery status LED.

Working temperature  $0-49^{\circ}C$ .

Dimensions: 32 x 53 x 17 mm.

#### • N-DET15. Wireless 1-channel Receptor RF.

Communication with 10 transmitter modules.

Frequency: 433.92 MHz. Voltage supply: 12 VDC. One alarm output.

One tamper output.

Dimensions: 110 x 63 x 25 mm.

#### • N-SEL01. Light Signaling Beacons.

Two pilots, yellow and red.

Voltage supply: 230 VAC.

#### • N-TIM05. **Bell + Buzzer.**

Voltage supply: 230 VAC.

Bell sound 70 dB.

Buzzer sound 80 dB.

### • 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.



N-ALIO2



N-ALIO:



N-DET13



N-DET14



N-DET15



N-SEL01



N-TIMO!

#### **EXERCISES AND PRACTICAL POSSIBILITIES**

- 1.- Checking and measuring on the main power supply.
- 2.- Checking the working of the auxiliary power supply.
- 3.- Checking the working of the bell + buzzer module using as acoustic alarm.
- 4.- Checking the working of the light signaling beacons module, using as visual alarm.
- 5.- Checking the working of the wireless emergency pushbutton.
- 6.- Use of the alarms with the wireless intrusion detector.
- 7.- Real application of a wireless intrusion detection system.

#### **REQUIRED SERVICES**

#### **DIMENSIONS AND WEIGHTS**

- Electrical supply: single phase, 230 V./50 Hz. or 115 V./60 Hz.

AEL-AD23:

- Dimensions: 640 x 320 x 670 mm approx.

(25.19 x 12.59 x 26.37 inches approx.)

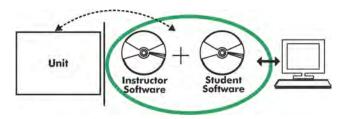
- Weight: 60 Kg approx.

(132 pounds approx.)

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#### **Optional**

#### **AEL-AD23/ICAI.** Interactive Computer Aided Instruction Software System:



With no physical connection between unit and computer (PC), 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.

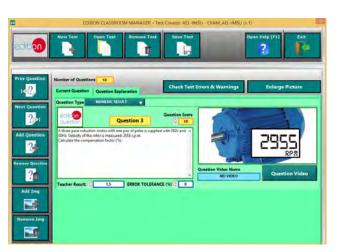
#### **Instructor Software**

- 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.



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



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



ECAL. EDIBON Calculations Program Package - Formula Editor Screen



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

#### Student Software

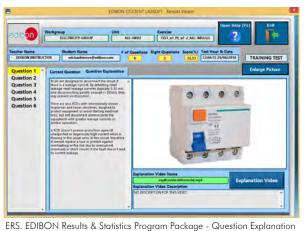
#### - ESL-SOF. EDIBON Student Labsoft (Student Software).

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



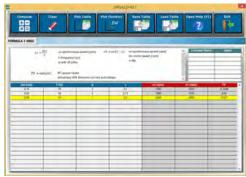
ERS. EDIBON Results & Statistics Program Package - Question Explanation



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



EPE. EDIBON Practical Exercise Program Package Main Screen



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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Edition: ED01/17 Date: November/2017