



Configuration example of AEL-ZWAVE application

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↳ 4.- ELECTRICITY

INTRODUCTION

Nowadays is unthinkable have neither automatism nor device in our homes/companies which are able to carry out different task. Clearly that technology facilitates the life, reaching levels never before imagined. We have made an exponential jump, in particularly, with wireless home automation systems. We are in a “connected world” without cables, without frontiers. Nowadays is possible to control the temperature in our homes, switch on/off the lights with Smartphones, to know is someone has entered in our house and, all of these things, hundreds of kilometers away.

Z-WAVE devices allow to automate houses and building easily thanks to multiple sensors and actuators exiting in the market and its Wireless communication. Z-WAVE is a communication technology that Works in a frequency band of 868 MHz and a maximum of 30 meters away in perfect conditions. Z-WAVE Works as meshed network and each device works as emitter/receptor.



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 Automation Systems Application with Z-WAVE Technology, "AEL-ZWAVE", has been designed to study the most important devices used in home and building smart automation wireless systems with Z-WAVE technology. With this application users will learn to schedule, develop and wiring of Z-WAVE devices with different applications such as security systems, access control, fighting systems, illumination control, heating control, video surveillance and energy monitoring. For this purpose, this application has temperature sensors, presence sensors, shutter controllers, flooding sensors, lights control switches, brightness sensors, among others. After learning the concepts about basic concepts, the user will learn to develop scenes to simulate real situations such as energy management in a house, the configuration of an anti-intrusion system, the automation of the brightness according to the exterior illumination, the temperature control of a room, the surveillance with a video camera, etc.

For this purpose, the "AEL-ZWAVE" application consists of different elements that allow studying different fields with this technology:

- ZWAVE-AI. Z-WAVE Anti Intrusion System.
- ZWAVE-FFG. Z-WAVE Flooding, Fire and Gas Security System.
- ZWAVE-LC. Z-WAVE Lighting Control.
- ZWAVE-HC. Z-WAVE Heating Control.
- ZWAVE-VS. Z-WAVE Video Surveillance.
- ZWAVE-AC. Z-WAVE Access Control.
- ZWAVE-SC. Z-WAVE Shutter Control.

The purposes of each is detailed below:

- **ZWAVE-AI. Z-WAVE Anti Intrusion System.**

This Z-WAVE Anti Intrusion System consists of a conjunction of sensors and actuators which allow the user to configure an authentic anti intrusion system. For this, the Z-WAVE Anti Intrusion System consists includes a motion sensor, a door and window open sensor, a vibration sensor, a key pad to arm and disarm the alarm and a siren. With these elements, different intrusion situations can be simulated and the previously acquired knowledge about intrusion systems will be tested by the user.

- **ZWAVE-FFG. Z-WAVE Flood, Fire and Gas Security System.**

This Z-WAVE Flooding, Fire and Gas Security System consists of a conjunction of sensors and actuators which allow the user to configure an authentic security system for homes and other installations. For this, the Z-WAVE Flooding, Fire and Gas Security System includes several devices such as gas sensor, smoke sensor and flood sensor as well as different actuators that will warn and avoid major damages. The Z-WAVE Flooding, Fire and Gas Security System includes two actuators: a siren to warn us of danger events and a motorized valve for water and gas. With these elements could be simulated different events and the previously acquired knowledge about security systems will be tested by the user.

- **ZWAVE-LC. Z-WAVE Lighting Control.**

This Z-WAVE Lighting Control consists of a conjunction of sensors, actuators and loads which allow the user to simulate different events to program illumination control scenes and energy consumption. For this, the Z-WAVE Lighting Control includes a motion, temperatures and brightness multi sensor module whose purpose is to detect the presence of a person. With a properly scheduling, this sensor will activate/deactivate a lamp according to different conditions such as, for instance, day or night or if this lamp was turned on with a manual switch previously. Additionally, the Z-WAVE Lighting Control includes a commutator actuator, a remote control with 5 buttons, a commutation plug with energy measurement, a push button and a dimmer. In the other hand, this Z-WAVE Lighting Control has three types of loads: halogen lamp and led lamp to compare the energy consumption. The third load is a resistive component to be connected to the smart plug to monitor the energy consumption and on/off functions.

The Z-WAVE Lighting Control includes two actuators: a siren to warn us of danger events and a motorized valve for water and gas. With these elements could be simulated different events and the previously acquired knowledge about security systems will be tested by the user.

With this Z-WAVE Lighting Control, the user can acquire the following learning: star-up and registration of the control central, connecting the tablet or smartphone (not included), programming of each device based on rules and preset scenes.

- **ZWAVE-HC. Z-WAVE Heating Control.**

This Z-WAVE Heating Control consists of a conjunction of temperature, motion and brightness sensors and a series of actuators which allow the user to simulate different events to program temperature control scenes. The Z-WAVE Heating Control includes radiator thermostats, a wall thermostat and an electric heating with electrical resistor. This set of elements allow us to study both electric and water heating systems.

With this Z-WAVE Heating Control, the user can acquire the following learning: star-up and registration of the control central, connecting the tablet or smartphone (not included), programming of each device based on rules and preset scenes.

- **ZWAVE-VS. Z-WAVE Video Surveillance.**

This Z-WAVE Video Surveillance consists of an outdoor wireless video camera which allow the user to simulate different events of video surveillance.

With this Z-WAVE Video Surveillance, the user can acquire the following learning: star-up and registration of the control central, connecting the tablet or smartphone (not included), programming of each device based on rules and preset scenes.

- **ZWAVE-AC. Z-WAVE Access Control.**

This Z-WAVE Access Control consists of an electronic lock which allows the user to simulate different access control events with the previous programming of the device. In addition, it is included a cutting edge video entry system with which the user will learn the most important aspects about installation, setting and star-up of these type of devices.

With this Z-WAVE Access Control, the user can acquire the following learning: star-up and registration of the control central, connecting the tablet or smartphone (not included), programming of each device based on rules and preset scenes.

- **ZWAVE-SC. Z-WAVE Shutter Control.**

This Z-WAVE Shutter Control consists of a shutter motor control module as well as a conjunction of push buttons which allow the control of it. In addition, the Z-WAVE Shutter Control includes a shutter simulator to show real situations.

With this Z-WAVE Shutter Control, the user can acquire the following learning: star-up and registration of the control central, connecting the tablet or smartphone (not included), programming of each device based on rules and preset scenes.

The "ZWAVE-UB" is the base unit of "AEL-ZWAVE" application.

The "ZWAVE-UB" unit includes the following elements:

- N-ALI02. Domestic Main Power Supply Module.
- N-ALI03. AC Auxiliary Power Supply (24 Vac) Module.
- N-ZCC01. Z-WAVE+ZigBee Control Central Module 1.
- N-ZCT01. Z-WAVE+ZigBee Controller with Touch Screen 1.

At least one of the following elements required to work with the "ZWAVE-UB" unit:

- ZWAVE-AI. Z-WAVE Anti Intrusion System.
 - N-ZSSK. Z-WAVE Security Systems Keypad Module.
 - N-ZMS. Z-WAVE Motion and Temperature Sensor Module.
 - N-ZDWS. Z-WAVE Door and Window Sensor Module.
 - N-ZBB. Z-WAVE Burglary Vibration Module.
 - N-ZINS. Z-WAVE Interior Siren Module.
- ZWAVE-FFG. Z-WAVE Flooding, Fire and Gas Security System.
 - N-ZMVC. Z-WAVE Motorized Valve Controller Module.
 - N-ZGS. Z-WAVE GLP Gas Sensor Module.
 - N-ZSSD. Z-WAVE Siren and Smoke Detector Module.
 - N-ZFS. Z-WAVE Flood Sensor Module.
 - N-ZINS. Z-WAVE Interior Siren Module.

General Description

- ZWAVE-LC. Z-WAVE Lighting Control.
 - N-ZMTB. Z-WAVE Motion, Temperature and Brightness Sensor Module.
 - N-ZPCM. Z-WAVE Plug with Consumption Measurement Module.
 - N-ZRPC. Z-WAVE Radio Remote Control with 5 push-buttons.
 - N-ZSS. Z-WAVE Surface Switch Module.
 - N-ZPB. Z-WAVE Push-Button Module.
 - N-ZILD. Z-WAVE Incandescent Lighting Dimmer Control Module.
 - N-LAM16. Halogen Lamp. (It is controlled with the DIMMER module).
 - N-ZVL. Z-WAVE Variable Led Lamp Module.
 - N-REF. Single Phase Fixed Resistor.
- ZWAVE-HC. Z-WAVE Heating Control.
 - N-ZTH. Z-WAVE Thermostat Module.
 - N-ZRVT. Z-WAVE Radiator Valve with Temperature Sensor Module.
 - N-ZMTBD. Z-WAVE Motion, Temperature, Brightness, Door Sensor Module.
 - EH. Electric Heating Unit.
- ZWAVE-VS. Z-WAVE Video Surveillance.
 - N-ZSC. Z-WAVE Surveillance Camera Module.
- ZWAVE-AC. Z-WAVE Access Control.
 - N-ZEL. Z-WAVE Electronic Lock Module.
 - N-ZVES. Z-WAVE Video Entry System Module.
- ZWAVE-SC. Z-WAVE Shutter Control.
 - N-ZMC. Z-WAVE Shutter Motor Controller Module.
 - N-ZPB. Z-WAVE Push-Button Module.
 - N-MRS. Motorized Roll-Up Shutter.

The "AEL-ZWAVE" includes the following elements:

- ZWAVE-UB. Automation Systems Application with Z-WAVE Technology Base Unit.
- ZWAVE-AI. Z-WAVE Anti Intrusion System.
- ZWAVE-FFG. Z-WAVE Flooding, Fire and Gas Security System.
- ZWAVE-LC. Z-WAVE Lighting Control.
- ZWAVE-HC. Z-WAVE Heating Control.
- ZWAVE-VS. Z-WAVE Video Surveillance.
- ZWAVE-AC. Z-WAVE Access Control.
- ZWAVE-SC. Z-WAVE Shutter Control.

Required element to operate with "ZWAVE-UB" unit:

- AEL-PC. PC with touch screen.

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

Option A:

This application needs the following racks:

- N-RACK-A (2 units).

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.

- **N-ALI02. Domestic Main Power Supply Module.**

Supply voltage (Single-Phase): 230 VAC, PH+N+G.

ON-OFF removable key.

Output Voltage Connections:

Two Single-Phase: 230 VAC.

Single-Phase supply hose connecting plug.

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

- **N-ALI03. AC Auxiliary Power Supply (24 Vac) Module.**

Supply voltage (Single-Phase): 230VAC PH+N+G.

Output voltage:

Single-Phase 24 VAC/12 VAC.

24 VDC.

0-24 VDC through potentiometer.

- **N-ZCC01. Z-WAVE+ZigBee Control Central Module 1.**

Wireless access to Z-WAVE networks.

Create custom scenes and sequences.

Compatibility with ZigBee protocol.

Control of a large number of devices connected at the same time.

- **N-ZCT01. Z-WAVE+ZigBee Controller with Touch Screen 1.**

Wireless access to Z-WAVE networks.

Create custom scenes and sequences.

Compatibility with ZigBee protocol.

Large number of integrated sensors compatible with most Z-WAVE devices.

Automation of device control options.

Touch screen.

- **N-ZSSK. Z-WAVE Security Systems Keypad Module.**

Wireless technology: Z-WAVE protocol.

Keyboard with Pincode for entrance control.

PIN codes with 4 to 10 digits.

PIN codes can be used to activate different scenes.

Acoustic feedback.

- **N-ZMS. Z-WAVE Motion and Temperature Sensor Module.**

Wireless Technology: Z-WAVE Protocol.

Wireless Motion Detector.

Detects movements with a passive infrared sensor.

Temperature measurement.

- **N-ZDWS. Z-WAVE Door and Window Sensor Module.**

Wireless Technology: Z-WAVE Protocol.

Offers enhancements to sabotage, with instant detection of opening or closing of doors, windows or furniture.

When activated for security functions, it allows accepting and sending security commands to other devices.

Simple linking to the Z-WAVE automation system or controller.

- **N-ZBB. Z-WAVE Burglary Vibration Module.**

Wireless Technology: Z-WAVE Protocol.

Detects any vibration or shock registered in the base on which the device is mounted.

The unit sends information to a controller or any other associated Z-WAVE device.

The device remains "asleep" unless an action is detected.

- **N-ZINS. Z-WAVE Interior Siren Module.**
 - Wireless Technology: Z-WAVE Protocol.
 - Provides different alarm sounds and a warning light.
 - Self-protection contact against tampering or sabotage.
- **N-ZMVC. Z-WAVE Motorized Valve Controller Module.**
 - Wireless Technology: Z-WAVE Protocol.
 - Consists of a motorized ball valve that automatically closes upon detection of fluid leakage or overflow.
 - Can be used for irrigation control.
 - The different states and/or events are sent to the Z-WAVE control unit.
- **N-ZGS. Z-WAVE GLP Gas Sensor Module.**
 - Wireless Technology: Z-WAVE Protocol.
 - Designed to avoid the risk of leakage of combustible gases (LPG).
 - The sensor will remain in alarm as long as the density of the natural gas or LPG derivative (LPG) exceeds the preset maximum alarm level.
- **N-ZSSD. Z-WAVE Siren and Smoke Detector Module.**
 - Wireless Technology: Z-WAVE Protocol.
 - It has an integrated siren function to alert of smoke detection.
 - Two-way wireless protocol with status messages.
- **N-ZFS. Z-WAVE Flood Sensor Module.**
 - Wireless Technology: Z-WAVE Protocol.
 - Warning of flooding due to water spillage, flooding or rapid temperature variation.
 - Audible alarm.
- **N-ZMTB. Z-WAVE Motion, Temperature and Brightness Sensor Module.**
 - Wireless Technology: Z-WAVE Protocol.
 - Wireless Motion Detector.
 - Detects movements with a passive infrared sensor.
 - Temperature measurement.
 - Light brightness measurement.
- **N-ZPCM. Z-WAVE Plug with Consumption Measurement Module.**
 - Wireless Technology: Z-WAVE Protocol.
 - Integrates directly into an electrical plug.
 - Measurement of power consumption of the connected load.
 - Local load control.
 - Instantaneous consumption and total consumption values are sent to the Z-WAVE Control Unit.
- **N-ZRPC Z-WAVE Radio Remote Control with 5 push-buttons.**
 - Wireless Technology: Z-WAVE Protocol.
 - Control via the basic ON/OFF command.
 - Control devices remotely by connecting this remote control to the Z-WAVE network.
- **N-ZSS. Z-WAVE Surface Switch Module.**
 - Wireless Technology: Z-WAVE Protocol.
 - Options as main domotic controller or as secondary Z-WAVE controller.
- **N-ZPB. Z-WAVE Push-Button Module.**
 - Wireless Technology: Z-WAVE Protocol.
 - Wireless control button.
 - It allows to control the devices of the Z-WAVE network and to carry out several scenes that take place in the domotic system.

- **N-ZILD. Z-WAVE Incandescent Lighting Dimmer Control Module.**

Wireless Technology: Z-WAVE Protocol.

Supports control of low-voltage halogen lamps with electronic transformer, dimmable compact fluorescent lights and dimmable LED bulbs.

It allows the creation of complex scenarios.

- **N-LAM16. Halogen Lamp.**

Nominal voltage: 230 VAC (PH+N).

Halogen lamp.

Power: 60 W.

- **N-ZVL. Z-WAVE Variable Led Lamp Module.**

Wireless Technology: Z-WAVE Protocol.

LED white light bulb that can be controlled remotely.

Adjustable brightness.

- **N-REF. Single-Phase Fixed Resistor.**

Value: 150 ohm.

Maximum power: 500 W.

Selector:

Position 0: circuit opened.

Position 1: circuit closed.

Current fuse: 2 A.

- **N-ZTH. Z-WAVE Thermostat Module.**

Wireless Technology: Z-WAVE Protocol.

Can be used with external temperature sensors.

Several scenarios can be programmed.

Integrated sensors.

Power regulator.

- **N-ZRVT. Z-WAVE Radiator Valve with Temperature Sensor Module.**

Wireless Technology: Z-WAVE Protocol.

The thermostatic head can use an external or integrated temperature sensor.

Compatible with any Z-WAVE controller.

Functional control of heating system and temperature.

Smart thermostatic head allows cooperation with other thermostatic heads, installed in several radiators.

- **N-ZMTBD. Z-WAVE Motion, Temperature, Brightness, Door Sensor Module.**

Wireless Technology: Z-WAVE Protocol.

Wireless Motion Detector.

Detects movements with a passive infrared sensor.

Temperature measurement.

Light brightness measurement.

Protection against theft and sabotage.

Motion and temperature alerts.

- **EH. Electric Heating Unit.**

Wireless Technology: Z-WAVE Protocol.

Thermoelectric emitter.

Smart self-programmable thermostat.

Programmable function for different events.

Thermostat with temperature sensors for internal temperature control.

- **N-ZSC. Z-WAVE Surveillance Camera Module.**
Wireless Technology: Z-WAVE Protocol.
Z-WAVE home automation controller with camera.
Day and night use.
Synchronized audio/video can be monitored.
With this controller, it is possible to control/monitor different Z-WAVE devices.
- **N-ZEL. Z-WAVE Electronic Lock Module.**
Wireless Technology: Z-WAVE Protocol.
Different adjustment possibilities for closing and opening.
Automatic Calibration.
Notifications of access and closing of the lock.
Complete activity record.
- **N-ZVES. Z-WAVE Video Entry System Module.**
Wireless Technology: Z-WAVE Protocol.
Remote access control and monitoring system.
Call notification that warns of the presence of a person.
Integrated motion detector allows adding a security function to the video door entry system.
Components: Speakers, microphone and dynamic camera.
- **N-ZMC. Z-WAVE Shutter Motor Controller Module.**
Wireless Technology: Z-WAVE Protocol.
Module type: receiver.
Installation in universal mechanism box.
Allows the control of motorized roller shutters manually or remotely or through the Control Unit in the Z-WAVE network.
- **N-ZPB. Z-WAVE Push-Button Module.**
Wireless Technology: Z-WAVE Protocol.
Wireless control button.
It allows to control the devices of the Z-WAVE network and to carry out several scenes that take place in the domotic system.
- **N-MRS. Motorized Roll-Up Shutter.**
Wireless Technology: Z-WAVE Protocol.
Serves to control shutters in the Z-WAVE system.
The unit is equipped with an anti-load safety system that works as a detector of the correct closing of the shutter.
- **AEL-PC. Touch Screen and Computer.**
Touch Screen:
Energy efficiency class: A.
Screen diagonal: 68.6 cm (27 inch (s)).
Power consumption (operating): 26 watts.
Annual energy consumption: 38 kWh.
Power consumption (standby / off) 0.49 watts.
Screen resolution: 1920 x 1080 pixels.
Computer:
Processor Number: Intel Core i7-6600U Processor (4M Cache, up to 3,40 GHz).
Cache: 4 MB Intel Smart Cache.
Clock speed: 2.6 GHz.
Of Cores/# of Threads: 2/4.
Max. TDP/Power: 15 W.
Memory Types: DDR4-2133, LPDDR3-1866, DDR3L-1600.
Graphics: Intel HD Graphics 530.Slot for PCI Express.
- **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

Some practical exercises with Anti Intrusion System "ZWAVE-AI":

- 1.- Setting of the keypad for security systems.
- 2.- Setting of the motion sensor module.
- 3.- Setting of the open door sensor module.
- 4.- Setting of the vibration sensor module.
- 5.- Setting of the siren.
- 6.- Star-up and registration of the control central, connecting the tablet or smartphone (not included), programming of each device based on rules and preset scenes.

Some practical exercises with Flooding, Fire and Gas Security System "ZWAVE-FFG":

- 7.- Setting of the motorized valve.
- 8.- Setting of the gas sensor module.
- 9.- Setting of the smoke detection module.
- 10.- Setting of the flood sensor module.
- 11.- Setting of the interior siren.
- 12.- Star-up and registration of the control central, connecting the tablet or smartphone (not included), programming of each device based on rules and preset scenes.

Some practical exercises with Lighting Control "ZWAVE-LC":

- 13.- Setting of the motion, temperature and brightness multi sensor module.
- 14.- Setting of the plug with energy measurement module.
- 15.- Setting of the smoke detection module.
- 16.- Setting of the 5 push-button remote controller.
- 17.- Setting of the surface commutation module.
- 18.- Setting of the dimmer module for illumination control.
- 19.- Setting of the led lamp module for illumination control.
- 20.- Star-up and registration of the control central, connecting the tablet or smartphone (not included), programming of each device based on rules and preset scenes.

Some practical exercises with Heating Control "ZWAVE-HC":

- 21.- Setting of the wall thermostat module.
- 22.- Setting of the electro thermostatic valve.
- 23.- Setting of the motion, temperature, brightness and door sensor module.

24.- Developing of real scenes with the electric heating module with fan.

25.- Star-up and registration of the control central, connecting the tablet or smartphone (not included), programming of each device based on rules and preset scenes.

Some practical exercises with Video Surveillance "ZWAVE-VS":

26.- Setting of the video surveillance module.

Some practical exercises with Access Control "ZWAVE-AC":

27.- Setting of the electronic lock module.

28.- Setting and start-up a cutting-edge video door entry system.

29.- Star-up and registration of the control central, connecting the tablet or smartphone (not included), programming of each device based on rules and preset scenes.

Some practical exercises with Shutter Control "ZWAVE-SC":

30.- Setting of the shutter controller.

31.- Manual control of rise and fall of shutter.

32.- Star-up and registration of the control central, connecting the tablet or smartphone (not included), programming of each device based on rules and preset scenes.

- Several other exercises can be done and designed by the user.

REQUIRED SERVICES

- Electrical supply: single-phase 200 VAC – 240 VAC/50 Hz or 110 VAC – 127 VAC/60 Hz, 2 kW.
- Internet.
- Computer.

DIMENSIONS AND WEIGHTS

ZWAVE-UB:

- Dimensions: 490 x 330 x 310 mm approx.
(19.29 x 12.99 x 12.20 inches approx.)
- Weight: 10 Kg approx.
(22 pounds approx.)

ZWAVE-AI:

- Dimensions: 490 x 330 x 310 mm approx.
(19.29 x 12.99 x 12.20 inches approx.)
- Weight: 10 Kg approx.
(22 pounds approx.)

ZWAVE-FFG:

- Dimensions: 490 x 330 x 310 mm approx.
(19.29 x 12.99 x 12.20 inches approx.)
- Weight: 10 Kg approx.
(22 pounds approx.)

ZWAVE-LC:

- Dimensions: 490 x 330 x 310 mm approx.
(19.29 x 12.99 x 12.20 inches approx.)
- Weight: 10 Kg approx.
(22 pounds approx.)

ZWAVE-HC:

- Dimensions: 490 x 330 x 310 mm approx.
(19.29 x 12.99 x 12.20 inches approx.)
- Weight: 10 Kg approx.
(22 pounds approx.)

ZWAVE-VS:

- Dimensions: 490 x 330 x 310 mm approx.
(19.29 x 12.99 x 12.20 inches approx.)
- Weight: 10 Kg approx.
(22 pounds approx.)

ZWAVE-AC:

- Dimensions: 490 x 330 x 310 mm approx.
(19.29 x 12.99 x 12.20 inches approx.)
- Weight: 10 Kg approx.
(22 pounds approx.)

ZWAVE-SC:

- Dimensions: 490 x 330 x 310 mm approx.
(19.29 x 12.99 x 12.20 inches approx.)
- Weight: 10 Kg approx.
(22 pounds approx.)

SIMILAR UNITS AVAILABLE

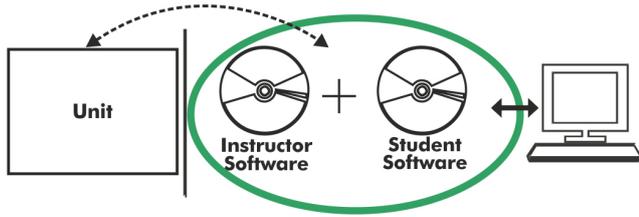
Offered in this catalog:

-AEL-ZWAVE. Automation Systems Application with Z-WAVE Technology.

Offered in other catalog:

- AEL-KNX1. KNX/EIB Shutter Control Application.
- AEL-KNX2. KNX/EIB Heating Control Application.
- AEL-KNX3. KNX/EIB Security Control Application.
- AEL-KNX4. KNX/EIB Lighting Control Application.
- AEL-KNX5. KNX/EIB Energy Management Application.

AEL-ZWAVE/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.

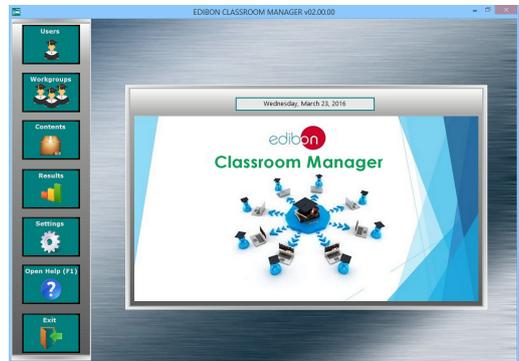
Instructor Software

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

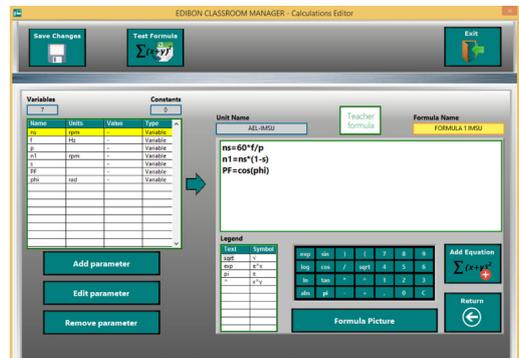
ECM-SOF is the application that allows the Instructor to register students, manage and assign tasks for workgroups, create own content to carry out Practical Exercises, choose one of the evaluation methods to check the Student knowledge and monitor the progression related to the planned tasks for individual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

Innovative features:

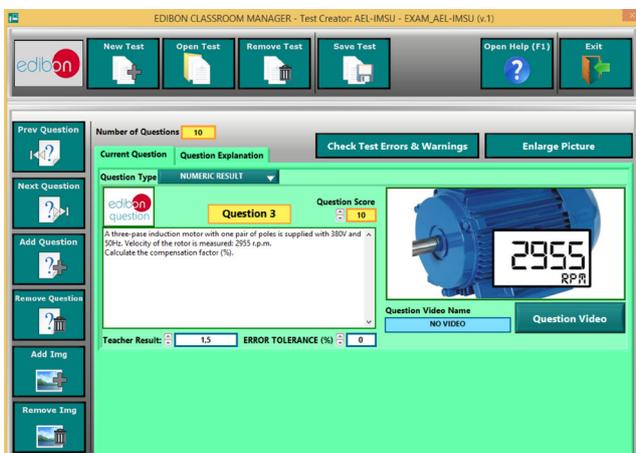
- User Data Base Management.
- Administration and assignment of Workgroup, Task and Training sessions.
- Creation and Integration of Practical Exercises and Multimedia Resources.
- Custom Design of Evaluation Methods.
- Creation and assignment of Formulas & Equations.
- Equation System Solver Engine.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



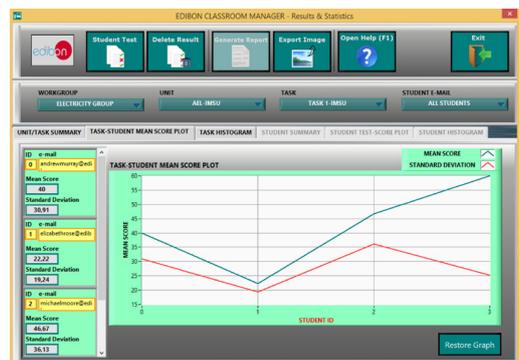
ECM-SOF. EDIBON Classroom Manager (Instructor Software) Application Main Screen



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:

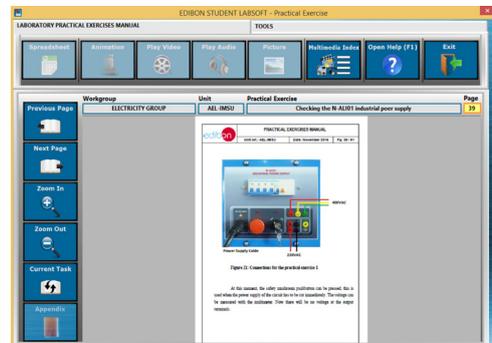
- Student Log-In & Self-Registration.
- Existing Tasks checking & Monitoring.
- Default contents & scheduled tasks available to be used from the first session.
- Practical Exercises accomplishment by following the Manual provided by EDIBON.
- Evaluation Methods to prove your knowledge and progression.
- 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



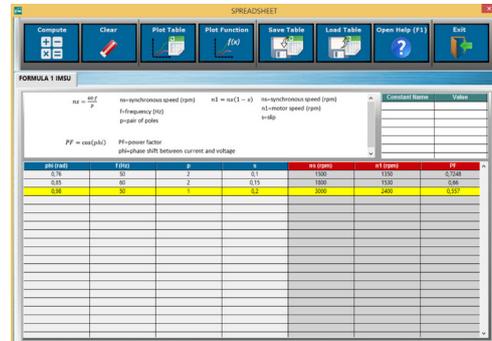
ESL-SOF. EDIBON Student LabSoft (Student Software) Application Main Screen



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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Edition: ED01/20
 Date: February/2020

REPRESENTATIVE:

