

# Lighting Application with Timer Switch

# AEL-AD5



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# INTRODUCTION

Nowadays, one of the most important points of the electric area at consumption level is the energy saving. One of the devices most used in community or collective environments is the timer applied to lighting.

A light timer is an electric switch used to control the lighting of stairs, corridors, halls, etc. A single action turns the lights on and keeps on long enough to go up or down the stairs. Then it turns off them automatically.









#### **GENERAL DESCRIPTION**

The Lighting Application with Timer Switch, "AEL-AD5", is designed with the aim to show the working of timer switches and other lighting switches. This application is formed by the following modules: a timed switch, a module with a switch, commutators group, a bell pushbutton, two modules with two incandescent lamps each one and a low consumption fluorescent module. With all of these devices the student can learn the working of timed switches applied to lighting, and simulate different situations to apply the automatic timed lighting and learn the wiring of these kinds of installations.

El AEL-AD5 includes the following modules:

- N-ALIO2. Domestic Main Power Supply.
- N-CTI10. Multi-function Timer.
- N-INT21. Switch + Commutators group + bell push-button. (2 units)
- N- LAM08. 2 Lamp holders + 2 Incandescent Lamps. (2 units)
- N-LAM13. 2 Low Consumption Fluorescents.

#### Expansion learning software:

In addition, Edibon provides expansion learning software (AEL-AD5/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-AD5 can be mounted on rack (option A) or on rail (option B):

#### Option A:

This application needs the following rack:

• N-RACK-A.

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 includ	es the following modules:
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### • N-ALI02. Domestic Main Power Supply.

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, 25 A, 30 mA AC 6 KA.

# • N-CTI10. Multi-function Timer.

Variable timing range.

Voltage supply 230 VAC.

• N-INT21. Switch + Commutators group + bell push-button. (2 units)

Voltage supply 230 VAC.

### • N- LAM08. 2 Lamp holders + 2 Incandescent Lamps. (2 units)

Voltage supply: 230 VCA (PH+N).

Two lamps.

Consumption: 40 W each one.

2 terminals each one.

#### • N-LAM13. 2 Low Consumption Fluorescents.

Voltage supply 230 VAC.

Nominal Power 30 W.

• 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-CTI10



N-INT21



N-LAM08



N-LAM13

- 1.- Indentify and measuring on the main power supply.
- 2.- Adjusting the opening time of the timed switch.
- 3.- Checking the working of the application with the incandescent lamps module.

# **REQUIRED SERVICES**

- Electrical supply: three-phase, 380V/50 Hz or 208V/60 Hz, 20 Kw.
- 4.- Checking the working of the application with the low consumption fluorescents module.

# DIMENSIONS AND WEIGHTS

AEL-AD5:	
-Dimensions	s: 640 x 320 x 920 mm approx.
-Weight:	(25.19 x 12.59 x 36.22 inches approx.)
	45 Kg approx.
	(99 pounds approx.)

# <u>Optional</u>

### AEL-AD5/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

#### <u>Optional</u>

#### 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

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



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