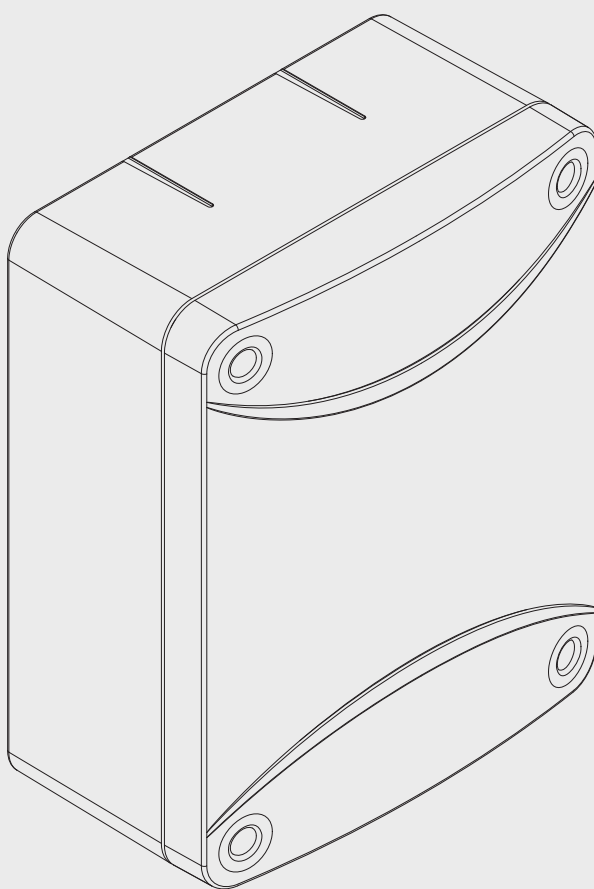
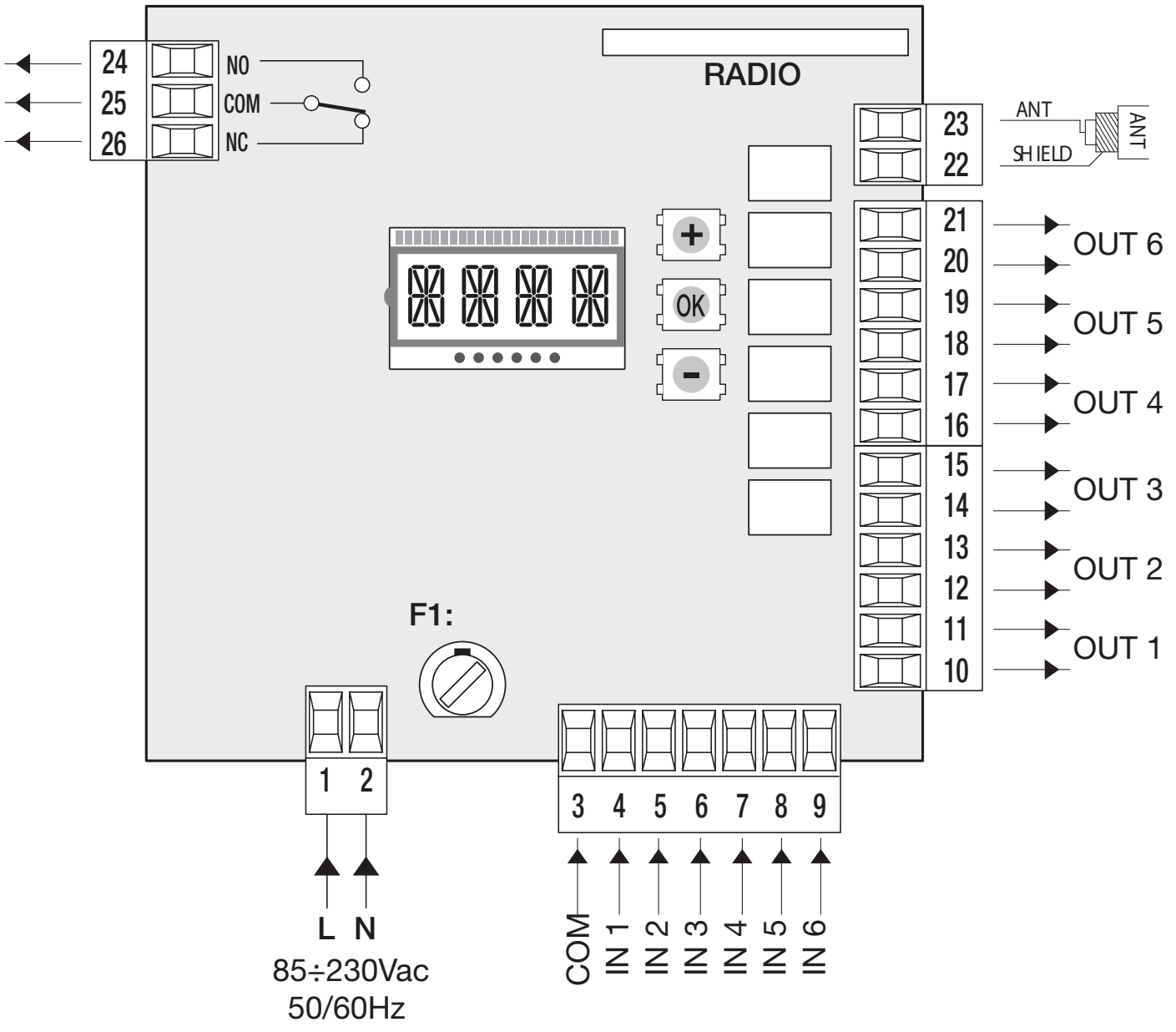


# ESA BASIC

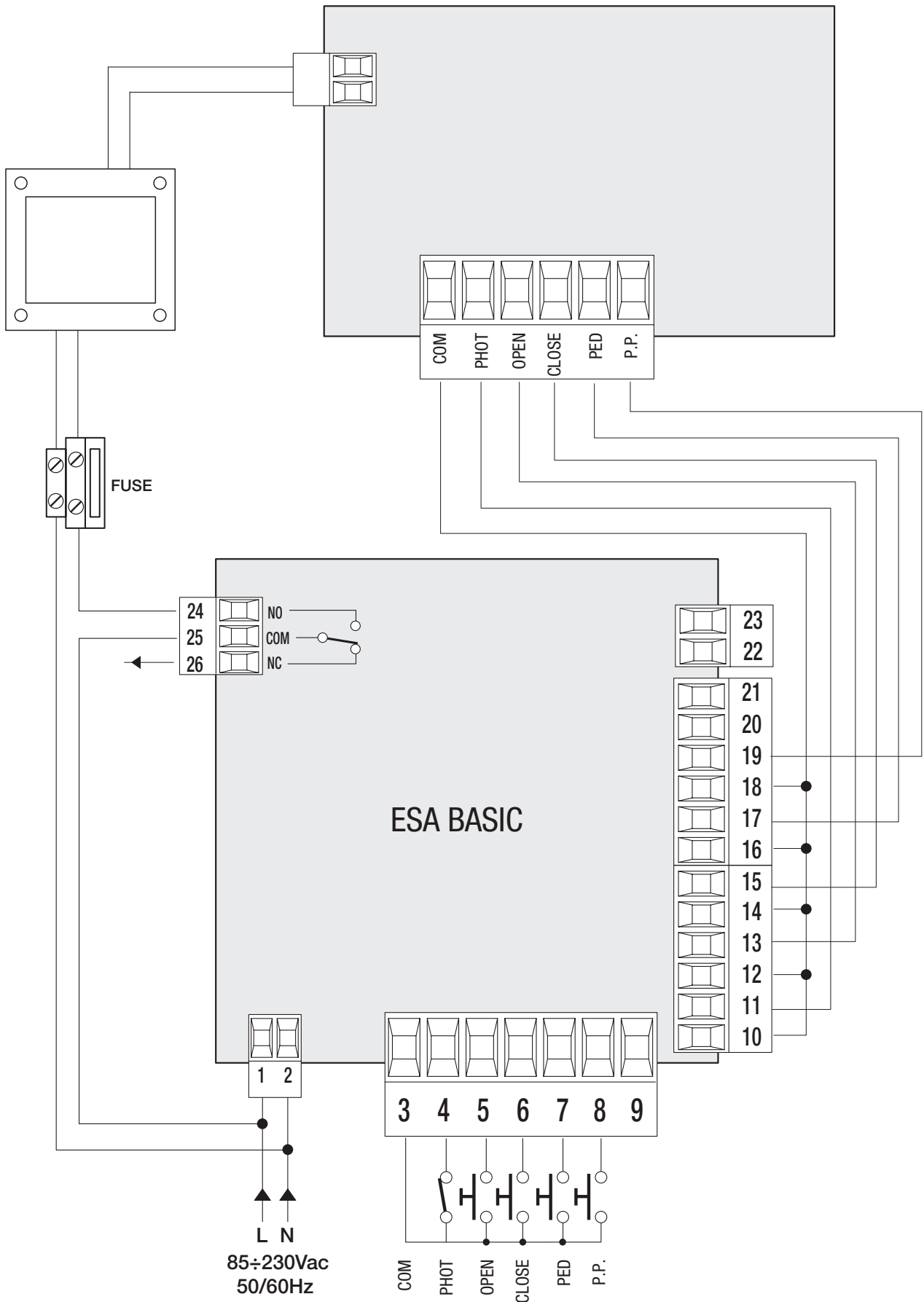


**BENINCA**<sup>®</sup>  
TECHNOLOGY TO OPEN





# ESEMPIO DI COLLEGAMENTO



## EC declaration of conformity

Manufacturer: **Automatismi Benincà SpA.**  
Address: Via Capitello, 45 - 36066 Sandrigo (VI) - Italia

Herewith declares that: energy-saving device **ESA BASIC.**  
complies with the following relevant provisions:  
EMC guidelines: **89/336/CCE, 93/68/CEE**  
Low voltage guidelines: **73/23/CEE, 93/68/CEE**

Benincà Luigi, Legal responsible.  
Sandrigo, 08/04/2010.



## WARNINGS

This manual has been especially written to be use by qualified fitters.

None of the information provide in this manual can be considered as being of interest for the end users.

Preserve this manual for future needs.

The technician has to furnish all the information related to the step by step function, the manual and the emergency function of the operator, and to deliver the manual to the final user.



Foresee on the supply net an onnipolar switch or selector with distance of the contacts equal or superior to 3 mms.

Verify that of the electrical system there is an awry differential interrupter and overcurrent protection.

Some typologies of installation require the connection of the shutter to be link at a conductive mass of the ground according to the regulations in force.

The electrical installation and the operating logic must comply with the regulations in force.

The leads fed with different voltages must be physically separate, or they must be suitably insulated with additional insulation of at least 1 mm.

The leads must be secured with an additional fixture near the terminals.

During installation, maintenance and repair, interrupt the power supply before opening the lid to access the electrical parts

Check all the connections again before switching on the power.

The unused N.C. inputs must be bridged.

The descriptions and the present illustrations in this manual are not binding. Leaving the essential characteristics of the product unchanged, the manufacturer reserves himself the right to bring any change of technical, constructive or commercial character without undertaking himself to update the present publication.

## TECHNICAL DATA

Mains power supply	From 85 to 260 VAC 50/60 Hz
Protection level	IP40
Operating temperature	-20°C / +70°C
Radio receiver	433,92 MHz, incorporated and configurable
No. of codes storable in memory	512
Consumption in sleep mode	150 mW
Power contact range	16A/250Vac resistance load

# ENERGY-SAVING DEVICE ESA BASIC

## DESCRIPTION

ESA BASIC is a device which has been specially studied, designed and patented to allow for annual energy savings up to 250kW (indicative value for standard installation).

This equipment can be installed onto any new or already existing automatic systems, of any type whatsoever (sliding doors, swing doors, garage doors, etc.), manufactured by our company or by other producers.

Esa Basic can be also used in systems which are not intended for the automation of doors or gates (e.g. irrigation sprinklers, etc.). In any case, after installing ESA BASIC, the installer shall be responsible for the checking of the correct operation of the system.

The manufacturer shall not be deemed responsible for any malfunctions.

## OPERATION

Esa Basic must be connected between the mains power supply and the control unit.

The push-button controls (Step-by-step, STOP, OPEN, CLOSE, SERVICE MAN, PHOT, Etc.) must be disconnected from the control unit and connected to the ESA BASIC board (see Fig. 2).

The radio receiver codes must be removed from the receiver of the control unit and stored in the incorporated radio receiver memory (433.92MHz, rolling-code/fixed code/transmitters BYOU series) of the ESA BASIC card (prior check that the transmitter used are compatible).

The ESA BASIC card keeps the system in "SLEEP" mode for the time it is not used. Energy consumption is therefore reduced.

Only when the command is sent to the installation, the ESA BASIC card reactivates the system and sends the appropriate control signal to the control unit. After a pre-settable time, the system returns to the SLEEP mode.

## WIRE DIAGRAM

The electric connections shown in Fig. 1 are described in the following table:

Terminals	Function	Description
1-2	Mains power supply	Input, mains power supply. ESA BASIC accepts power supply voltages ranging from 85 to 260 VAC.
3	COM	Common to all control inputs.
4-COM	IN 1	Input, contact of command 1. It is configurable for NO, NC or IST contact. It is preset as NO input by default.
5-COM	IN 2	Input, command contact 2. Same characteristics as input 1.
6-COM	IN 3	Input, command contact 3. Same characteristics as input 1.
7-COM	IN 4	Input, command contact 4. Same characteristics as input 1.
8-COM	IN 5	Input, command contact 5. Same characteristics as input 1.
9-COM	IN 6	Input, command contact 6. Same characteristics as input 1.
10-11	OUT 1	Output, channel 1. It replicates the status of input 1 or, alternatively, it can be matched to a radio transmitter.
12-13	OUT 2	Output, channel 2. It replicates the status of input 2 or, alternatively, it can be matched to a radio transmitter.
14-15	OUT 3	Output, channel 3. It replicates the status of input 3 or, alternatively, it can be matched to a radio transmitter.
16-17	OUT 4	Output, channel 4. It replicates the status of input 4 or, alternatively, it can be matched to a radio transmitter.
18-19	OUT 5	Output, channel 5. It replicates the status of input 5.
20-21	OUT 6	Output, channel 6. It replicates the status of input 6.
22-23	Antenna	Connection of the antenna to the incorporated radio-receiver module 22 SHIELD: Screen / 23 ANT: Control signal.
24-25-26	SLEEP output	Output, power supply of the control unit: 250Vac/16A maximum. Through this contact, the control unit is activated or deactivated by ESA BASIC.

## BYPASS MODE

The “Bypass” mode is entered by pressing keys + and – simultaneously.

**ON:** ESA BASIC keeps the control unit connected to it always on. In this way, parameters and logics of the control unit can be preset, thus avoiding that the control unit enters the SLEEP mode.

N.B.: when the BYPASS mode is ON, the wording “ON” is displayed.

**OFF:** ESA BASIC works regularly.

## HOW TO PROGRAMME

The programming of the various functions of the control unit is carried out by using the LCD display on the control unit and presetting the desired values in the programming menus described hereunder.

### USE OF THE PROGRAMMIN PUSH BUTTONS

Press OK to access the Main Menu (PAR>>LOG>>RADIO>>...) that can be selected by pressing keys + and -.

Select the Main Menu by pressing <OK> to access the desired Function Menu.

- To scroll the Function Menu from top to bottom, press the <+> key.
- To scroll the Function Menu from bottom to top, press the <-> key.
- By pressing the <OK> key, access is enabled to any possible presetting to be modified.
- The preset values can be changed by pressing <+> and <-> keys.
- If <OK> is pressed again, the value is programmed and <OK> is displayed.

See section “Programming Example”.

### NOTE:

If keys <+> and <-> are pressed simultaneously from a Function Menu, this allows to return to the upper menu without making any changes.

To speed up the increase/decrease of values, keep key <+> or key <-> pressed.

After waiting 30 seconds, the control unit exits the programming mode and switches the display off.

## PARAMETERS, LOGICS AND SPECIAL FUNCTIONS

The single functions available in the control unit are described in the following table.

	MENU	FUNCTION	MIN-MAX (Default)	MEMO
<b>PARAMETERS</b>	TOFF	Self-switching off time: when the preset time has elapsed, if the system is still in standby mode (powered control unit with motor stopped), ESA cuts off power to the control unit. If one of the N.C. inputs is kept open (e.g. photocell obscured), the self-switching off time will not be calculated until the input recovers its regular operating mode. <b>N.B.: preset a TOFF higher than the TCA time preset in the control unit.</b>	10-3600 sec (60)	
	ST01	Start Delay channel 1: delay between the activation of input 1 and its replication OUT 1 when the control unit is in SLEEP mode (this delay is the time required for the control unit to switch on and being able to receive a control signal sent by ESA).	0.1-15.0 sec (2,0)	
	ST02	Start Delay channel 2:		
	----	-----		
	ST06	Start Delay channel 6:		
	TCH1	The switch time of the channel 1 relay is preset.	0.1-90.0 sec (1,0)	
	TCH2	The switch time of the channel 2 relay is preset.		
	----	-----		
TCH6	The switch time of the channel 6 relay is preset.			

	MENU	FUNCTION	ON-OFF (Default)	MEMO
LOGIC	IN 1	Presetting of the channel status (normally open/ normally closed). IST: Channel preset as "Gate input status" See section "Gate input status". NO: Channel preset for a NO (normally open) input. NC: Channel preset for a NC (normally closed) input.	(NO)	
	IN 2	Presetting of channel 2 status Same options as channel 1.		
	----	-----		
	IN 6	Presetting of channel 6 status Same options as channel 1.		

	MENU	FUNCTION	
RADIO	ADD	OUT 1	Outputs 1/2/3/4 can be activated by a radio transmitter. Select the desired output, the receiver awaits for ( PUSH ) a transmitter code to be assigned to the channel. Press the transmitter key to be assigned to the output. If the code is valid, it will be memorised and OK is displayed on the monitor. If the code is not valid, the message ERRR is displayed.
		OUT 2	
		OUT 3	
		OUT 4	
	CODE	ROLL	The reception of variable transmitter codes is enabled/disabled (default ON).
		BYOU	The reception of BYOU transmitter is enabled/disabled (default ON).
		FIX	The reception of programmable transmitter is enabled/disabled (default ON).
	CLR	If this function is selected, the receiver waits for ( PUSH ) a transmitter code to be erased from memory. If the code is valid, it will be erased and OK is displayed on the monitor. If the code is not valid, or it is not in memory, the message ERRR is displayed.	
	RES	The receiver memory is totally erased. When the wording PUSH is displayed, the operation must be confirmed. (During reset, the RES wording flashes. At end of reset, OK is displayed).	

MENU	FUNCTION
TAR	Measurement of the current consumption in standby (powered control unit with stopped motor). The operation needs to be confirmed. During measurement, the wording MIS flashes. At conclusion of the operation, the system returns to TAR Menu. The value is memorised and used by ESA-BASIC as reference of consumption in stand-by, for the counting of the TOFF time. In order not to have an incorrect reading, the measurement shall be at motor stopped.
IOUT	The value (expressed in Amperes) of the output current that ESA-BASIC supplies to the control unit is displayed.
RES	RESET. WARNING!: Restore ESA-BASIC to default values. With the first pressure of the <PG> push button, the message PUSH is displayed. If the push button is pressed again, the message PROG is displayed and then OK is displayed at end of reset. Note: The transmitter codes are not erased from the receiver.

## TYPICAL INSTALLATION

- 1 Connect the SLEEP power supply output (24/25/26) upstream with respect to the power supply of the control unit. Usually, the NO contact (24/25) should be connected in series to the mains power supply (L), as indicated in Fig. 2.
- 2 Connect all normally open contacts (N.O.) and normally closed contacts (N.C), as described hereunder:  
All the commands with N.O. contact must be connected to IN inputs of the ESA BASIC card. Connect the OUT outputs corresponding to the inputs of the control unit.  
Example: connect the Step-by-Step push button to IN 1 input (3/4), if otherwise preset, preset IN 1 as N.O. input, connect the output OUT 1 (10/11) to the Step-by-Step input of the control unit.  
Connect the N.C. devices, which allow the TCA recharge (usually photocells), to an IN input of ESA BASIC, which will therefore preset as NC input. Connect the OUT output corresponding to the control unit input. The other NC inputs can be connected indifferently to the control unit or ESA BASIC.
- 3 With gate stopped, calibrate the system through the TAR function.

**It is mandatory to erase all radio controls stored in the receiver from the control unit and memorise them in the receiver of ESA BASIC. The antenna of the control unit should be therefore disconnected and connected to the special inputs 22/23.**

**The NC contacts of a safety edge shall be in any case connected to the special input of the control unit.**

## GATE STATUS INPUT

One or more inputs can be preset in "GATE STATUS INPUT" mode.

In the input preset in this way, a NO contact can be connected, such as the SCA\* output contact of the control unit or the NO contact of a limit switch.

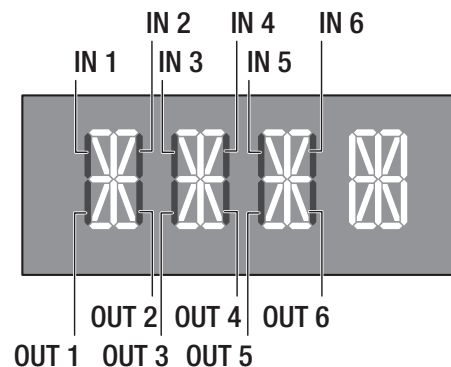
In this mode, ESA BASIC causes the control unit to enter the SLEEP mode only if the contact returns to the NO (normally open) status.

This might be useful in the event, for example, the TCA (automatic closure) is not activated.

\*Use voltage-free contacts only. If the contacts are powered, use decoupling relays.

## DIAGNOSTICS

During the normal operation, the LCD display shows the status of inputs and outputs, as per diagram. When an input/output is activated, the related segment of the LCD display switches on.



## WASTE DISPOSAL

If the product must be dismantled, it must be disposed according to regulations in force regarding the differentiated waste disposal and the recycling of components (metals, plastics, electric cables, etc.). For this operation it is advisable to call your installer or a specialised company.