

# CONTROL UNIT FOR HINGED SHUTTERS

# RHA2

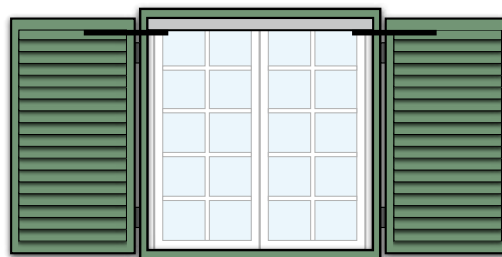
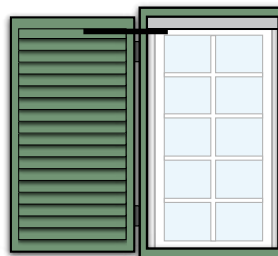


## TYPE OF INSTALLATION

Description	RHA2
Power supply	230 Vac / 50-60Hz
Power	45W max
Power consumption	0,05 A Standby
Control unit power	12 Vdc
Motor power supply	12 Vdc / 1,4 A
Motor absorption	1,7 A max
Energy saving	reduced consumption in stand-by and during use
Radio frequency	integrated, frequency 433 MHz
Number of motors	1 or 2
Torque / Thrust	35 Nm
Operating temperature	-20 ÷ 55°C
Degree of protection	IP20
Storable remote controls	100
ODS - Obstacle detection	Yes
Opening command	Yes
Closing command	Yes
Dead man command	Yes
Centralized opening command	Yes
Centralized closing command	Yes

### HINGED SHUTTER (single/double)

- One or two motors (single sash/double shutter); in case of double sash, the operation of one motor is delayed with respect to the other, according to the opening/closing phase (to handle the over/under shutter condition)
- Optional electro lock



 **USER MANUAL**

**BeeMatic**<sup>®</sup>  
HOME AUTOMATION

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## SUMMARY

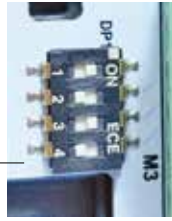
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## GENERAL SAFETY WARNINGS

1. Read the instructions carefully before proceeding with the control unit installation.
2. Keep these instructions for any future reference.
3. This product is designed and manufactured exclusively for the use intended and indicated in this document. Any other use not expressly indicated could affect the integrity of the product and/or represent a source of danger.
4. For the safety of all individuals, the instructions provided in this manual must be carefully followed. Incorrect installation or incorrect use of the product may cause serious personal injury.
5. Materials used for packaging should not be left within the reach of children, as they are potential sources of danger, and should be properly recycled.
6. AB TECNO SRL disclaims any responsibility for any consequences arising from improper use or use other than that for which the device was designed and built.
7. AB Tecno Srl is not responsible for non-compliance with current CE standards in the construction of the locks to be motorized or from other deformations that may occur during use.
8. Before starting the installation, check the integrity of the product.
9. Do not install the device in an explosive environment: the presence of flammable gases or fumes is a serious safety hazard.
10. Installation must be carried out in compliance with EN 12453 and EN 12445. For non-EEC countries, in order to achieve a sufficient and adequate level of safety, the above standards must be observed in addition to the individual national regulatory references.
11. Before carrying out any work on the system, disconnect any batteries and cut off the power supply.
12. It is advisable to provide a single-pole switch with contact opening distance of 3 mm or more on the automation power supply. The use of a 6A thermal-magnetic circuit breaker with a single-pole breaker is recommended.
13. Verify that there is a residual current circuit breaker with a 0.03A threshold upstream of the system.
14. Verify that the grounding system is properly made and connect the metal parts of the lock to it.
15. Handling of electronic parts should be done by wearing anti-static conductive wristbands.
16. Even automations that have an internal anti-crushing safety function shall in all cases require functional verification in accordance with the standards indicated in Section 10.
17. Safety devices (standard EN 12978) provide protection for possible danger areas from mechanical hazards related to movement, such as crushing, conveying, shearing and lifting. These devices must be installed properly considering regulations, the directives in force, the criteria of Good Technology, the installation environment, the operating logic of the system and the forces developed.
18. For each installation, we suggest using at least one warning light (ex flashing light), as well as a properly secured and clearly visible warning sign.
19. AB Tecno Srl disclaims any responsibility related to safety and proper operation of the automation, in case of use of components not manufactured by AB Tecno Srl for the realization of the system.
20. The installer must provide the User with all information related to the manual operation of the automation in case of emergency.
21. Do not allow children or others to stand near the system during operation.
22. Keep any remote control or pulse-giver device out of the reach of children to prevent possible inadvertent use of the automation.
23. The transit of persons and vehicles is permitted only and exclusively when the automation is fully open.
24. The User of the automation must refrain from any attempt to repair and/or direct intervention and refer only to qualified personnel. Otherwise, AB Tecno Srl declines all responsibility for any possible consequences.
25. Anything not expressly indicated in these instructions is not permitted.

# ELECTRICAL CONNECTIONS AND BUTTONS

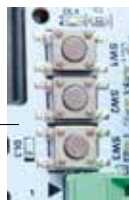
Carry out the setting of the dip-switches when the control unit is NOT POWERED



## DIP SWITCH CONFIGURATION

DIP	position	function
1	OFF	Single motor operation
	ON	Two-motor operation
2	OFF	Logic Open/Close
	ON	Step-by-step logic
3	OFF	Door Delay DISABLED
	ON	Door Delay ENABLED
4	OFF	Electro lock DISABLED
	ON	Electro lock ENABLED

## SETTING BUTTONS

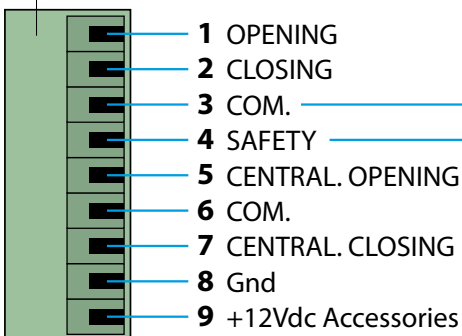


button	function
SW1	Setting end positions (optional function)
SW2	Torque/current selection
	Enabling Slowdown In limit switch setting
SW3	Remote control storage/erase



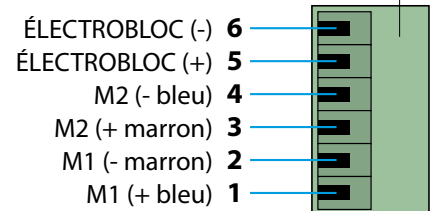
ELECTRIC CONNECTION  
~ 230VAC

### TERMINAL BLOCK INPUTS

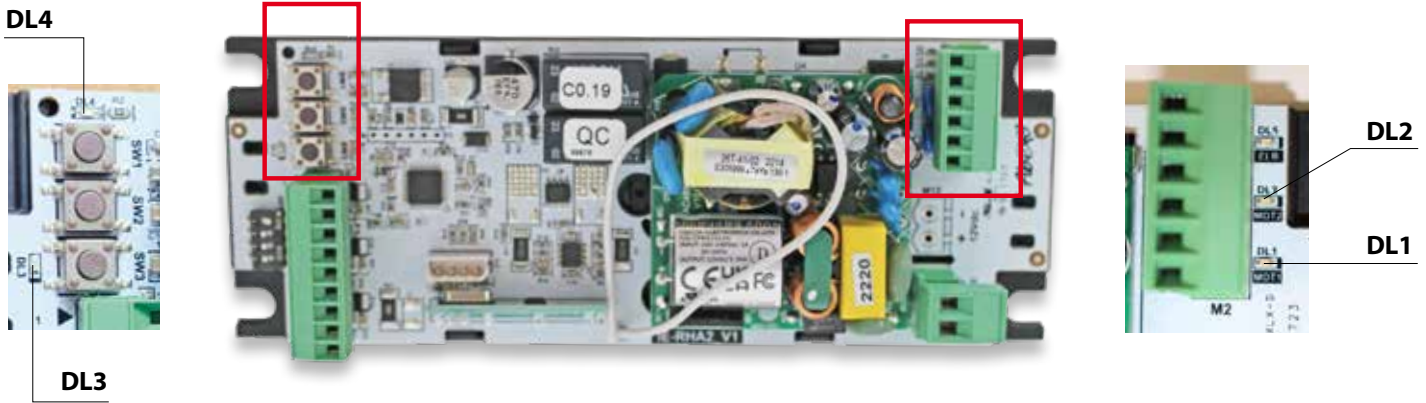


In the case of safeties not installed, jumper terminals 3 and 4

### TERMINAL BLOCK EXITS

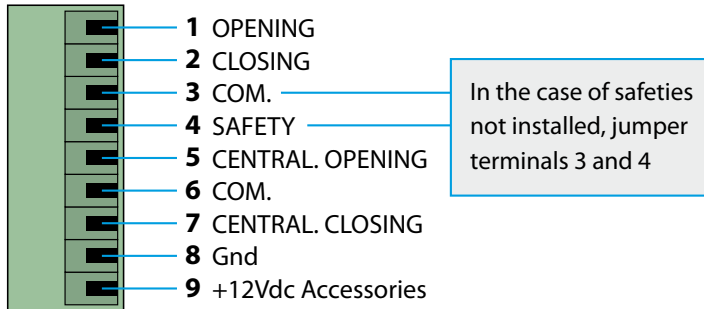


# LED SIGNALS



LED	colour	function	
<b>DL1</b>	Green	Motor 1 running	
<b>DL2</b>	Yellow	Motor 2 running	
<b>DL3</b>	Red	Multifunction	
		STANDARD flashing > Long every 0.8s	XXXXXX__
		Safety active > Short blinking every 0.8s	X_____
		Flashing phases of SETUP COMMANDS (SW3) > Double blink every 0.8s	X_X_____
		Flashing phases of MECHANICAL SETUP. (SW1) > Triple blink every 1.2s	X_X_X_____
		CONFIRMED settings > Lit for 1.6s	XXXXXXXXXXXXXXXXXX
Setting FAILED > Fast blinking for 1.6s	X_X_X_X_X_X_X_X_X_X		
		5 brightness levels to indicate 5 tripping current thresholds	
<b>DL4</b>	Blue	12V power supply present	

## INPUT FEATURES AND OPERATION LOGIC



### INPUT FEATURES

#### (1) OPENING

Enabling terminals 1 and 3, N.O.:

- Activates opening motors
- If the motor current is above the threshold, a stop is executed

#### (2) CLOSING

Activation of terminals 2 and 3, N.O.:

- Activates the motors in closing
- If motor power is higher than threshold performs a stop

#### (5)(7) CENTRALIZED OPENING and CLOSING

Activates terminals 5 and 6 (centralized opening), terminals 6 and 7 (centralized closing), N.O.:

Same functionality as the OPEN and CLOSE inputs are switchable with other control units allowing centralization of commands.

The inputs are already equipped with decoupling device.

#### (3)(4) SAFETY

Activation terminals 3 and 4, N.O.:

- Disables the motor (if active)
- With active input, the commands for Opening and Closing are disabled

### OPERATION LOGIC

#### “STEP-BY-STEP” LOGIC

- Single command on Open or Close input, in sequence as: OPEN - STOP - CLOSE - STOP - ...
- Stop on motor current
- Stop on total drive time (180sec)

#### “OPEN/CLOSE” LOGIC

- Single separate Open and Close commands; movement proceeds automatically in the direction related to the Open or Close command received
- Stop on any command to follow
- Stop on total actuation time (180sec)

## INSTALLATION SET UP

- 1) Before powering up the control unit, set the Dip Switches for the chosen features
- 2) After the first power up, it is necessary to proceed with the installation procedures:
  - Memorizing the first remote control, see page 8 chapter **MANAGING REMOTE CONTROLS** (or use START 1 or 2 commands)
  - Setting the functionality of the automatism (Limit switch adjustment, optimal limit switch adjustment, for slowdown control, etc.).

## SLOWDOWN ADJUSTMENT

- System on, red LED with standard flashing –
- Press **SW1** for at least 4 seconds
- Red LED with mechanical set up flashing L-L-----L
  - a) Press **SW2** enable or disable SLOW DOWN process, each press changes one of the 2 possibilities:
    - » Red led one long blink (1.5 sec.) > Slowdown ENABLED
    - » Red led one short blink (0.5 sec.) > Slowdown DISABLED
  - b) Pressing **SW1** for at least 4 seconds saves the setting:
    - » Red LED with standard flashing –
    - » Procedure completed
  - c) Pressing **SW3** cancels the procedure; the setting remains as before:
    - » Red LED with standard flashing –
    - » Procedure aborted



<https://is.gd/2YjuPv>

Frame the QRcode and watch the video tutorial for **Enabling and Disabling Slowdown**

## LIMIT SWITCH ADJUSTMENT

- System on, red LED with standard flashing –
- Select "Closing" to bring the leaves to the fully closed position
- Press **SW1** for at least 4 seconds
- Red LED with mechanical set up flashing L-L-----L
  - a) Select "Opening" - wait until fully open
  - b) Select "Closing" - wait until fully closed
  - c) Pressing **SW1** for at least 4 seconds saves the setting:
    - » Red LED with standard flashing –
    - » Procedure completed
  - d) Pressing **SW3** cancels the procedure; the setting remains as before:
    - » Red LED with standard flashing –
    - » Procedure aborted



<https://is.gd/McwGN3>

Frame the QRcode and watch the video tutorial for **Limit Switch Programming**

Returns to unconfigured system condition:

- System on, red LED with standard flashing
- Press **SW1** on board for at least 4 seconds
- Red LED with mechanical set up flashing L-L-----L
- Release **SW1**
- Press **SW1** on board for at least 4 seconds
- Red LED with standard flashing
- Release **SW1**
- Procedure completed

## MAXIMUM TORQUE/CURRENT SETTING (5 INTERVENTION THRESHOLDS)

- System on, red LED with standard flashing –
- Press **SW2** on board for at least 4 seconds
- LED flashing with intensity equal to current level set. Five current levels are available, lowest with lowest LED light.
  - a) Pressing **SW1** selects the highest current, if already at maximum it starts from the lowest
  - b) Pressing **SW2** for at least 4 seconds saves the setting:
    - » Red LED with standard flashing –
    - » Procedure completed
  - c) Pressing **SW3** cancels the procedure; the setting remains as before:
    - » Red LED with standard flashing –
    - » Procedure aborted



<https://is.gd/vF3qdV>

Frame the QRcode and watch the video tutorial for **Maximum Torque/Current Adjustment**

## "WINDPROOF/DEAD MAN OPERATION" LOGIC

**WARNING:** Use wall-mounted release pushbuttons. Do not use hold-to-run switches to prevent the control unit from continuing to operate in dead man mode, even when it is not necessary.

Pressing and holding the open button, close button, remote control for at least 2s enters the WIND /DEAD MAN mode of operation. To complete the opening/closing phase, the relevant button must be kept pressed (dead man).

Working in dead man mode, the set torque/current thresholds are not taken into account, and therefore it is possible, for example in special windy conditions, to complete the opening/closing

## "AIR CHANGE" FUNCTION

This function (present in control units with software version E0.00 and later) allows the 2 leaves to be pulled together to have air exchange, even if the leaf delay (DIP3-ON) has been set.

It is necessary to have performed limit switch learning during installation (see p.7).

With the shutters closed, the open button is pressed and resumed as soon as the first shutter reaches the desired position. Automatically, the second shutter will reach the position of the first, approaching it.

## REMOTE CONTROL MANAGEMENT

### FIRST REMOTE CONTROL STORAGE

- System on, red LED with standard flashing –
- Press **SW3** on board for at least 4 seconds
- Red LED with command setup flashing –
- Release **SW3**
- The following steps must begin within tSETUP seconds, otherwise the procedure stops (return to normal operation)
- Select an **open** or **close** key on remote control **B**
- Red LED with normal flashing –
- Procedure completed



<https://is.gd/oFIPpN>  
Frame the QRcode and watch the video tutorial for **Programming first EGO-HOME remote control on RHA2 central unit**

### STORING ADDITIONAL REMOTE CONTROLS

The procedure can be performed as for the first remote control (from card) or remotely with a remote control **A** already stored and a remote control **B** to be added:

- System on, red LED with standard flashing –
- Select the **storage** key on remote control **A** for at least 10 seconds: *special key or key combination*
- The following steps must start within tSETUP seconds, otherwise the procedure stops (return to normal operation)
- Select an **open** or **close** key on remote control **B**
- Red LED with normal flashing –
- Procedure completed

### SINGLE REMOTE CONTROL CANCELLATION *(If required)*

Need two stored remote controls, for safety, since the procedure is done only remotely; remote control **A** will remain active after the procedure, remote control **B** will be deleted from the storage list:

- System on, red LED with standard flashing –
- Select **storage** button on remote control **A** for at least 10 seconds – : special key or key combination
- The following steps must start within tSETUP seconds, otherwise the procedure stops (return to normal operation)
- Select an **open** or **close** key on remote control **B** for at least 10 seconds
- Red LED with normal flashing –
- Procedure completed

### COMPLETE ERASURE OF REMOTE CONTROLS

The procedure is possible only with access to the board, for safety:

- System on, red LED with standard flashing –
- Press **SW3** on board for at least 4 seconds
- Red LED with command setup flashing –
- Release **SW3**
- The following steps must begin within tSETUP seconds, otherwise the procedure is aborted
- Press **SW3** on board for at least 4 seconds
- Red LED with cancellation confirmation blinking –
- Release **SW3**
- Red LED with normal blinking –
- Procedure completed



<https://is.gd/0x9CBQ>  
Frame the QRcode and watch the video tutorial for **Remote Control Cancellation on RHA2 central unit**