CAME

CAME.COM

FA02037-EN

Outdoor multipurpose control panel

806RV-0060

806RV-0070

INSTALLATION MANUAL

EN English

GENERAL PRECAUTIONS FOR USERS

Read the instructions carefully before beginning the installation and carry out the procedures as specified by the manufacturer. • Installation, programming, commissioning and maintenance must only be carried out by qualified, expert technicians and in full compliance with the applicable law. • Before carrying out any cleaning or maintenance, or replacing any parts, disconnect the device from the power supply. • Only use this product for its intended purpose. Any other use is hazardous. • The product, in its original packaging supplied by the manufacturer, must only be transported in a closed environment (railway carriage, containers, closed vehicles). • If the product malfunctions, stop using it and contact customer services at https://www.came.com/global/en/contact-us or via the telephone number on the website. • The manufacture date is provided in the production batch printed on the product label. If necessary, contact us at https://www.came.com/global/en/contact-us. • The general conditions of sale are given in the official CAME price lists.

DISMANTLING AND DISPOSAL

Control boards, like other components such as transmitter batteries, may contain pollutants. These must be removed and taken to a local collection centre or an authorised waste disposal and recycling firm. It is always advisable to check the specific laws that apply in your area. DISPOSE OF THE PRODUCT RESPONSIBLY.
THE DATA AND INFORMATION IN THIS MANUAL MAY BE CHANGED AT ANY TIME AND WITHOUT NOTICE.
MEASUREMENTS ARE IN MILLIMETRES, UNLESS STATED OTHERWISE.

PRODUCT DATA AND INFORMATION

Key

📖 This symbol shows which parts to read carefully.

⚠ This symbol shows which parts describe safety issues.

☞ This symbol shows what to tell users.

📖 The measurements, unless otherwise stated, are in millimetres.

Description

806RV-0060
RBE 24 Plus - Outdoor multipurpose control panel IP54, 24 V AC-DC for managing CXN BUS transmitters and accessories up to 5000 different users, with a seven-segment programming display, 4 relay outputs, 4 inputs and a Quick&Easy advanced function for managing occasional users.

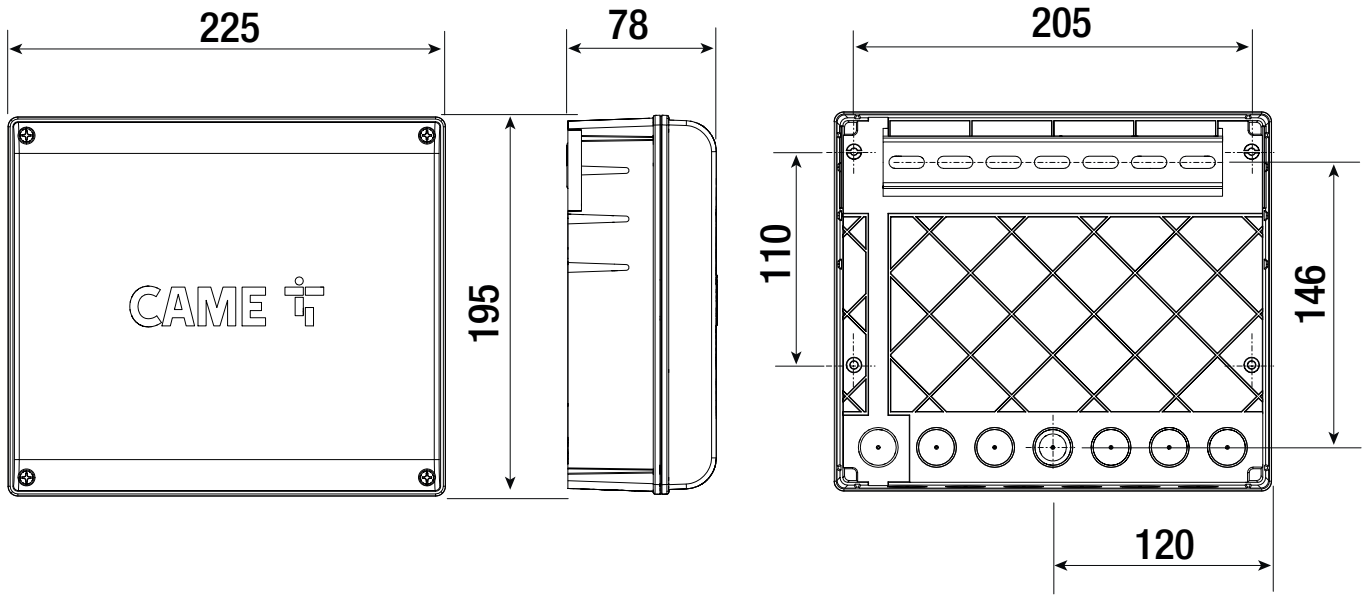
806RV-0070
RBE 230 Plus - Outdoor multipurpose control panel IP54, 120-230 V AC for managing CXN BUS transmitters and accessories up to 5000 different users, with a seven-segment programming display, 4 relay outputs, 4 inputs and a Quick&Easy advanced function for managing occasional users.

Technical data

MODELS	RBE 24 Plus	RBE 230 Plus
Power supply (V - 50/60 Hz)	24 - AC/DC	120/230 - AC
Power (W)	15	13.5
Number of input contacts	4	4
Number of output contacts	4	4
Relay contact rating with resistive load (A)	5	5
Relay contact rating with inductive load (A)	1.5	1.5
Incoming contact maximum voltage (V)	24	24
List of paired operators	4	4
CXN BUS	RCXN	RCXN
Relay contact maximum voltage (V)	230	230
Operating temperature (°C)	-20° ÷ +55°C	-20° ÷ +55°C
Storage temperature (°C)*	-25° ÷ +70°C	-25° ÷ +70°C
Protection rating (IP)	54	54
Insulation class	3	2
Type of installation	Outdoor / DIN rail	Outdoor / DIN rail
Average life (cycles)**	200000	200000

(*) Before installing the product, keep it at room temperature where it has previously been stored or transported at a very high or very low temperature.
(**) The average product life is a purely indicative estimate. It applies to compliant usage, installation and maintenance conditions. It is also influenced by other factors, such as climatic and environmental conditions.

Size

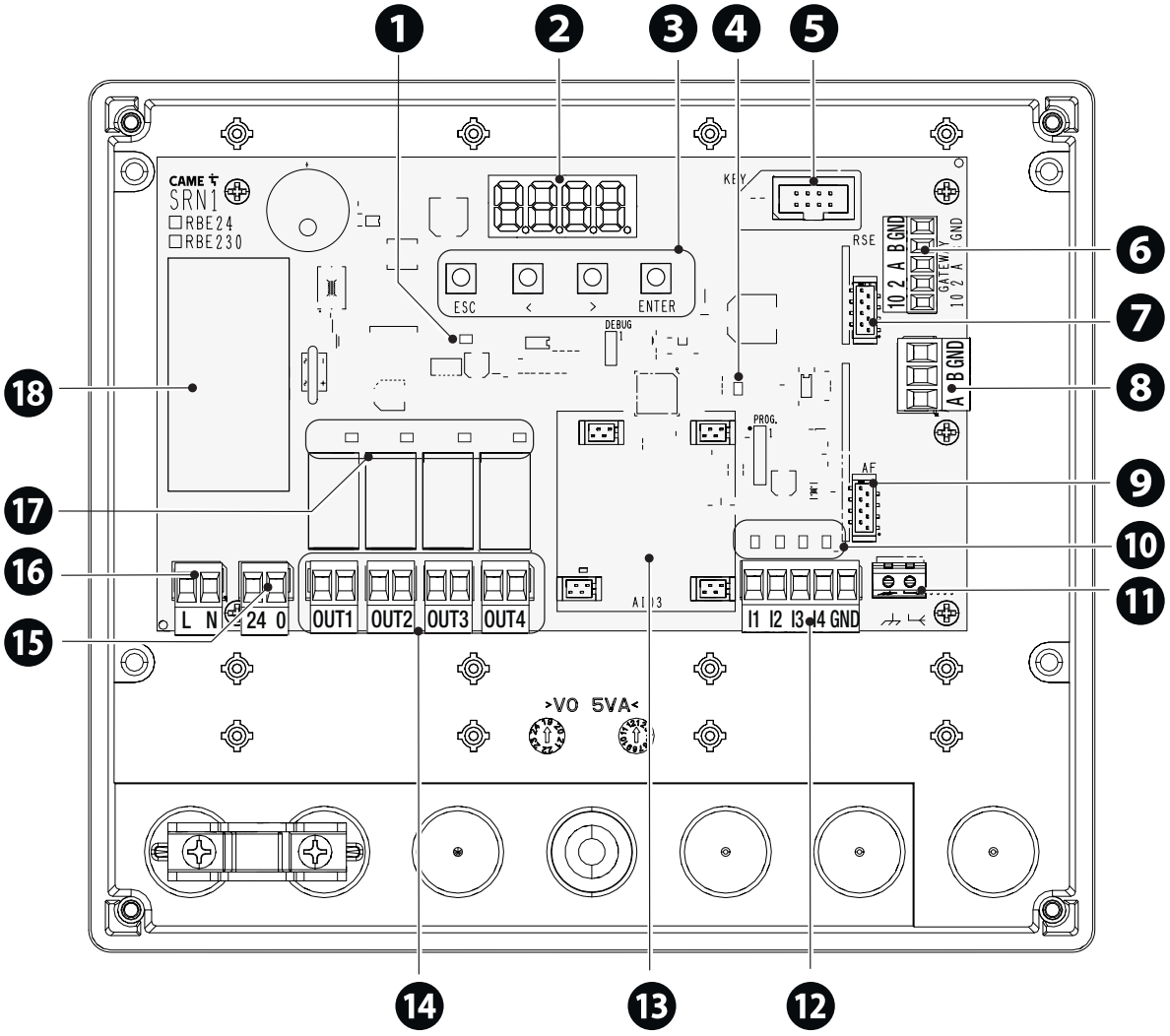


Description of parts

❶ Power LED
❷ Display
❸ Programming buttons
❹ Operating status signalling LED
❺ Connector for CAME KEY
❻ Terminal board for connecting the GSM Gateway module and Slave module
❼ RSE card connector
❽ Terminal board for connecting operators
❾ Connector for plug-in radio frequency card (AF)
❿ Input status signalling LEDs
⓫ Terminal board for connecting the antenna
⓬ Input terminals
⓭ Housing for RCXN module
⓮ Terminal board for output devices
⓯ Terminal board for 24 V power supply *
⓰ Terminal board for 230 V power supply **
⓱ Output status signalling LEDs
⓲ Auxiliary **

* RBE 24 model

** RBE 230 model



Cable types and minimum thicknesses

Cable length (m)	up to 20	from 20 to 30
Power supply 120/230 V AC	2 x 1.5 mm^2	2 x 1.5 mm^2
CXN BUS selectors	2 x 0.5 mm^2	2 x 0.5 mm^2

📖 When operating at 120/230 V and outdoors, use H05RN-F cables that are IEC 60245 (IEC 57) compliant; when indoors, use H05VV-F cables that are IEC 60227 (IEC 53) compliant; For power supplies up to 48 V, use FROR 20-22 II cables compliant with standard EN 50267-2-1 (CEI).

📖 To connect the antenna, use RG58 cable (up to 5 m).

📖 To connect to the CRP, use a UTP CAT5 cable (up to 1,000 m long).

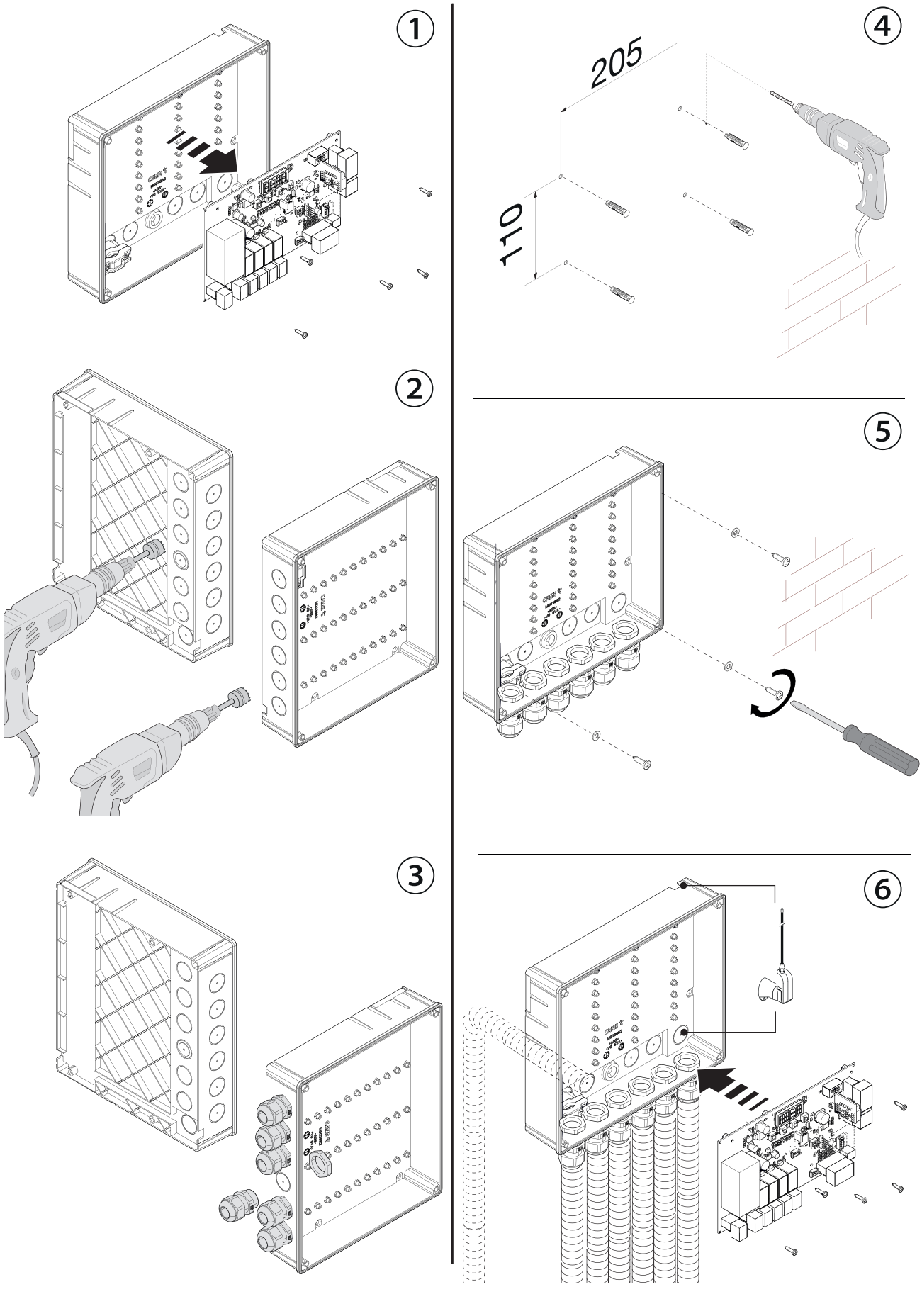
📖 If the cable lengths differ from those specified in the table, define the cable cross-sections according to the actual power draw of the connected devices and in line with regulation CEI EN 60204-1.

📖 For multiple, sequential loads along the same line, recalculate the values in the table according to the actual power draw and distances. For information on connecting products not covered in this manual, please see the documentation accompanying the products themselves.

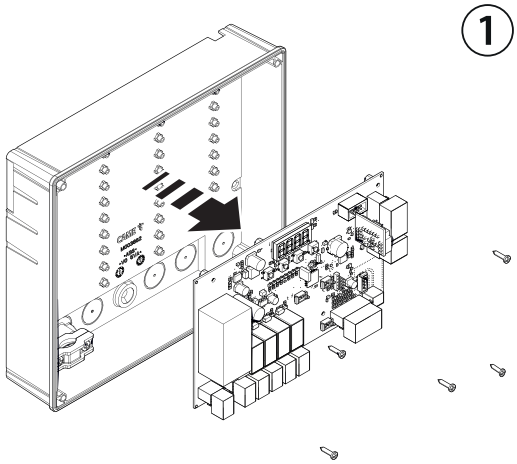
INSTALLATION

⚠ Before installing the control panel, remove the electronic board to avoid damage.

Standard



1



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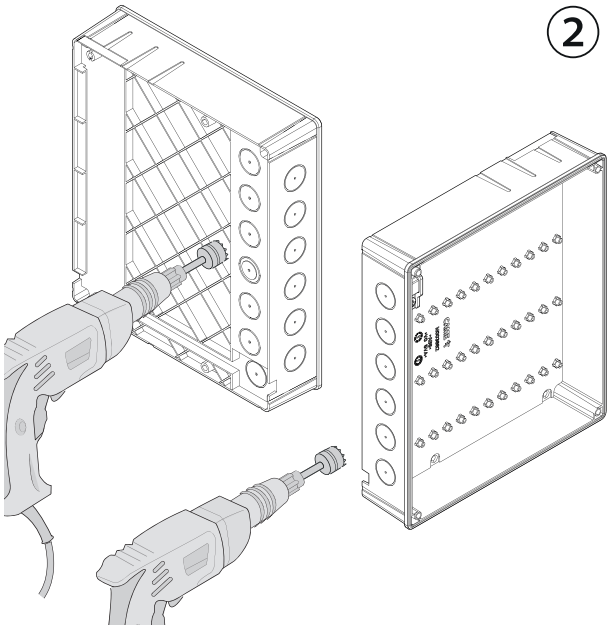

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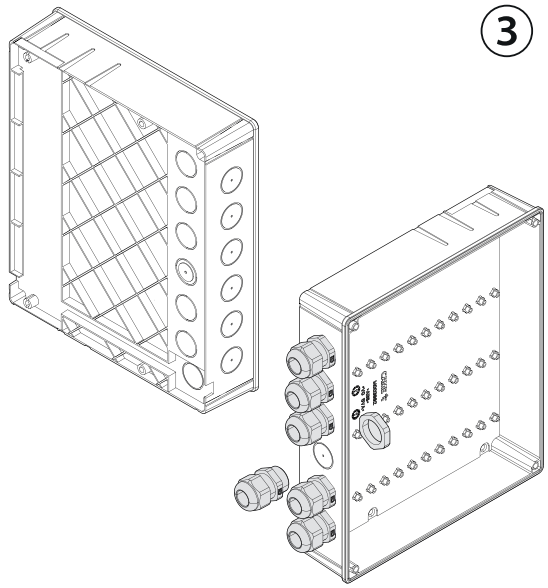

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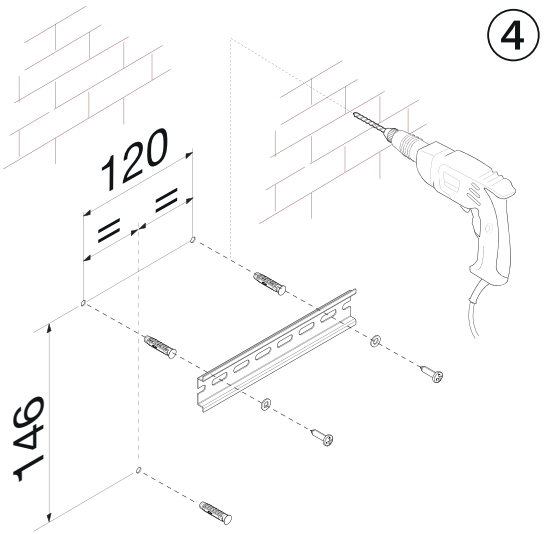

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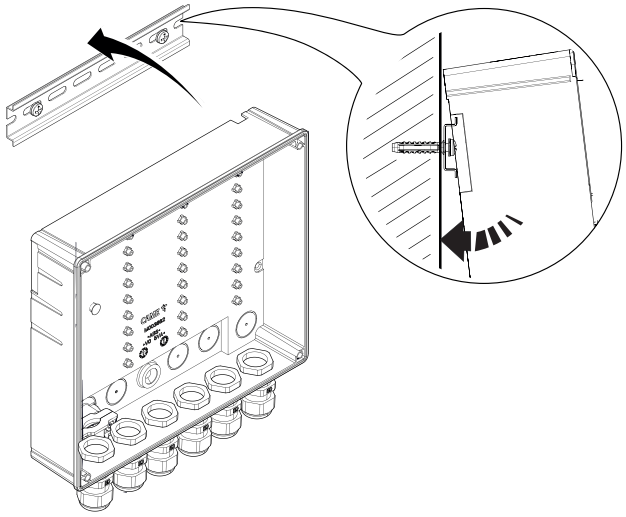

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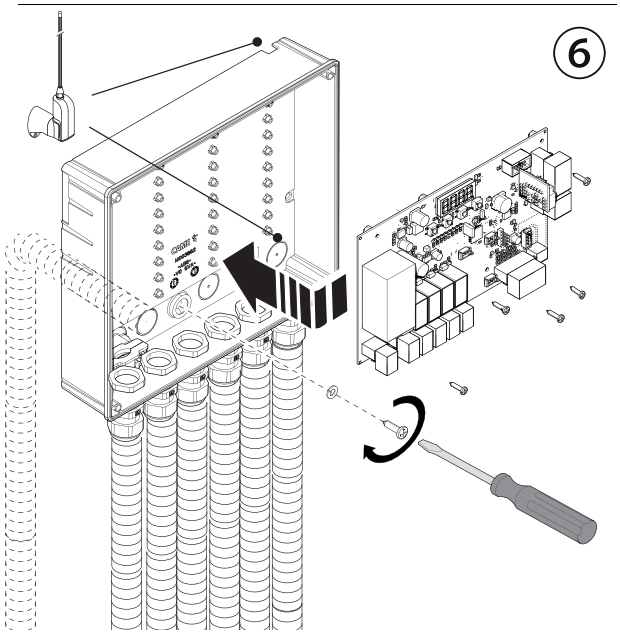
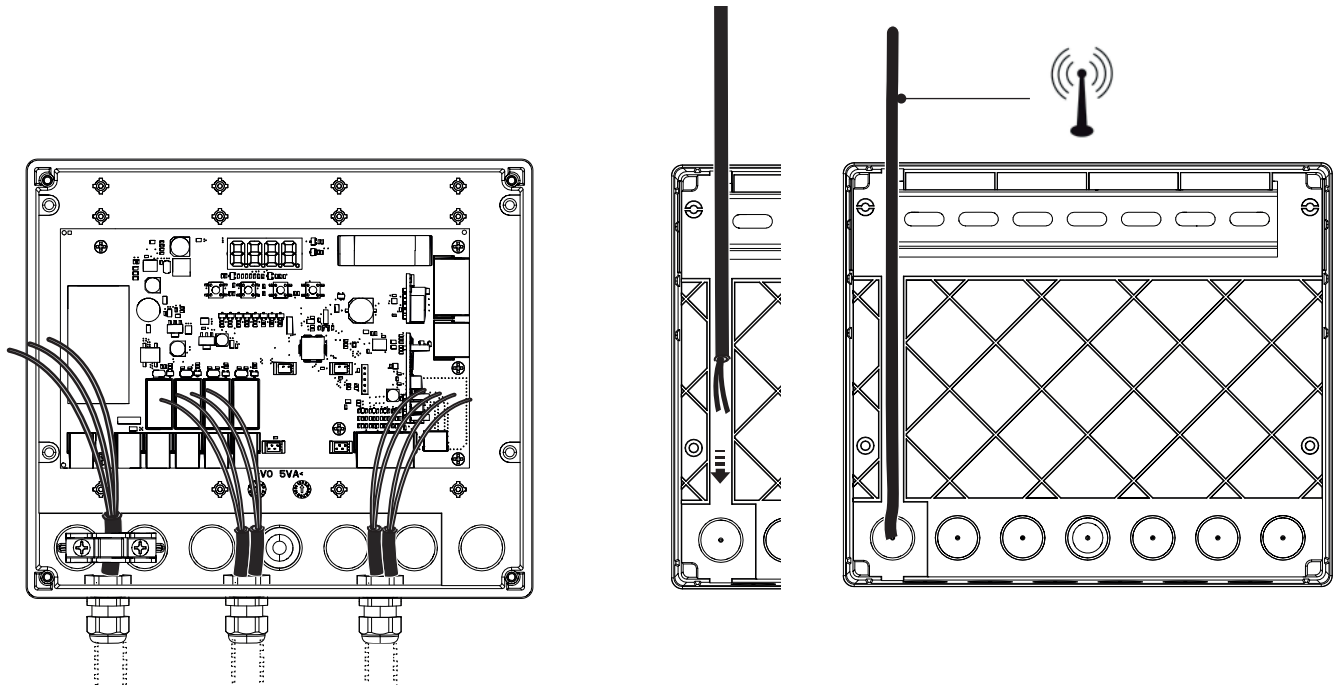


ELECTRICAL CONNECTIONS

Preparing the electrical cables

Connect all wires and cables in compliance with the law.

Use cable glands to connect the devices to the control panel. One of these must be used exclusively for the power supply cable.



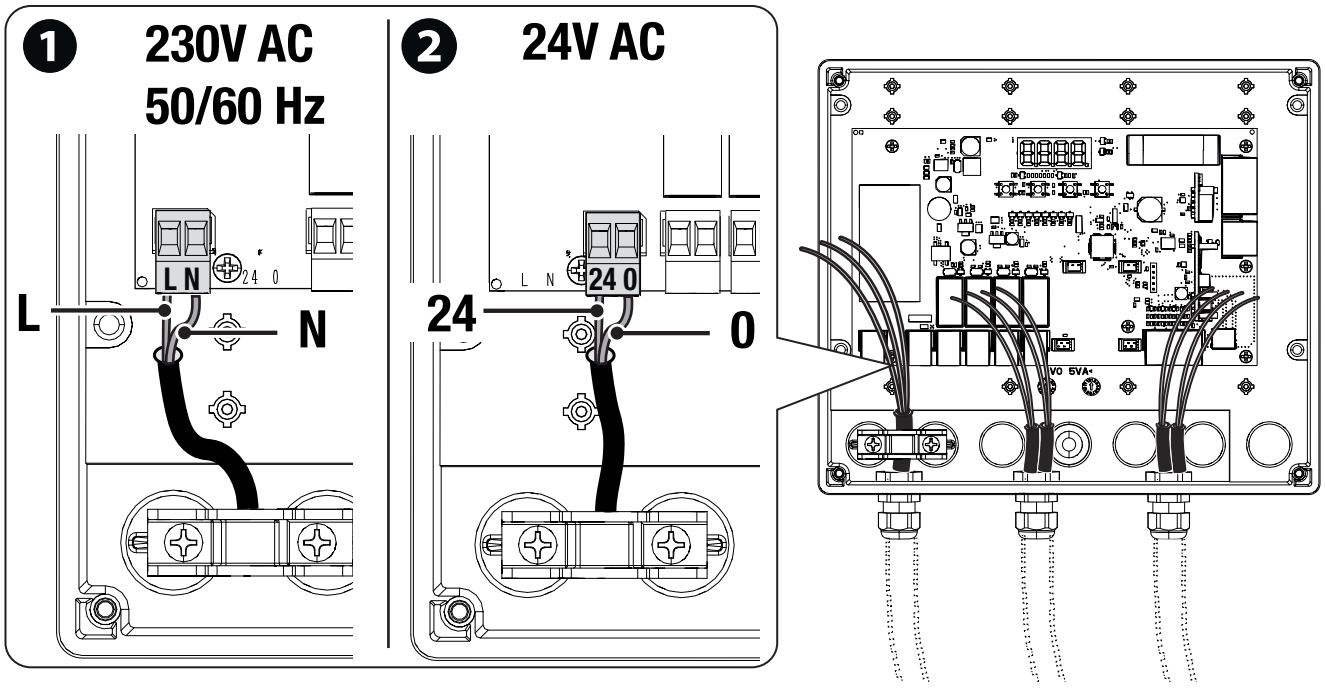
Power supply

❶ Connecting to the RBE 230 control panel (230 V AC - 50/60 Hz)

L -Phase
N -Neutral

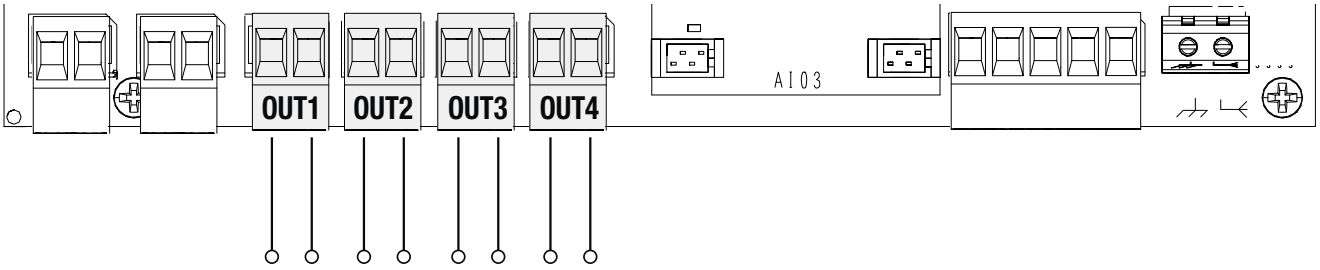
❷ Connecting to the RBE 24 control panel (24V AC/DC)

Terminal 24
Terminal 0



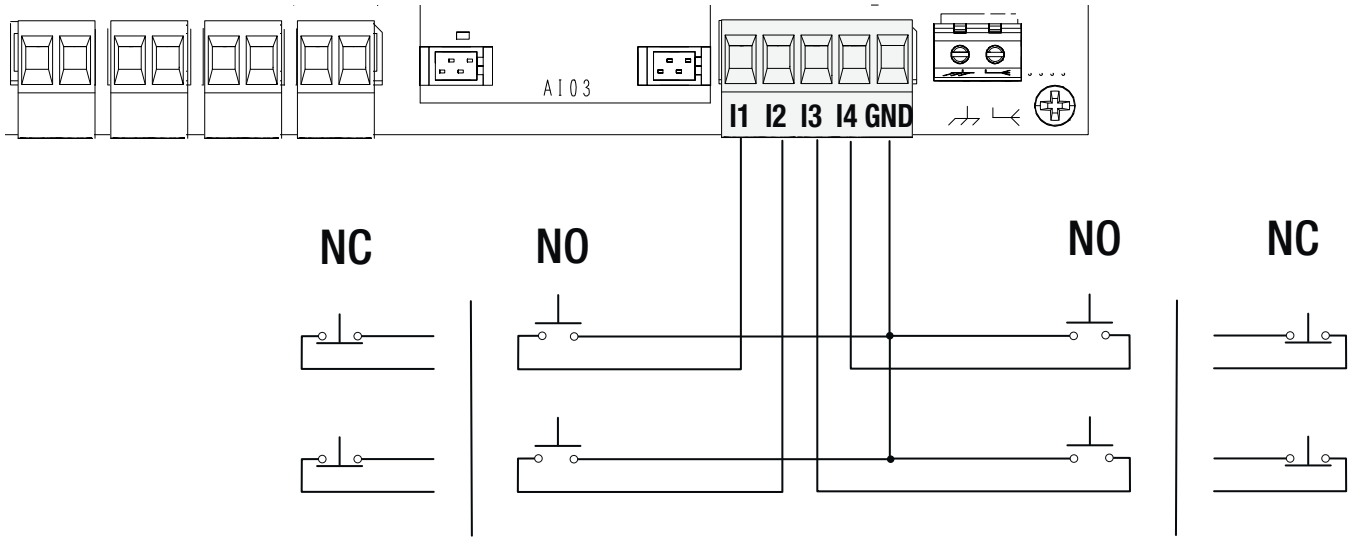
Output contact

The output contacts (OUT1, OUT2, OUT3 and OUT4) can be configured from the functions menu as open contacts (NO) or closed contacts (NC), or excluded.
Single contact current (5A - 230 V).



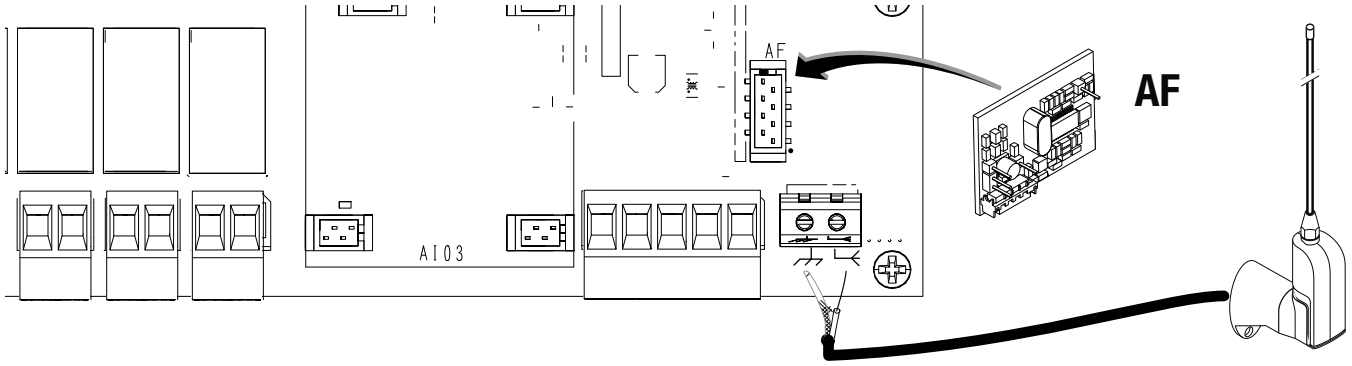
Input contact

Inputs can be used for reading statuses or controlling outputs (OUT1, OUT2, OUT3 and OUT4) and/or operators connected to (A-B-GND).
The input contacts (I1, I2, I3 and I4) can be configured from the functions menu as open contacts (NO) or closed contacts (NC), or disabled.



Connecting the antenna with the AF card for remote control

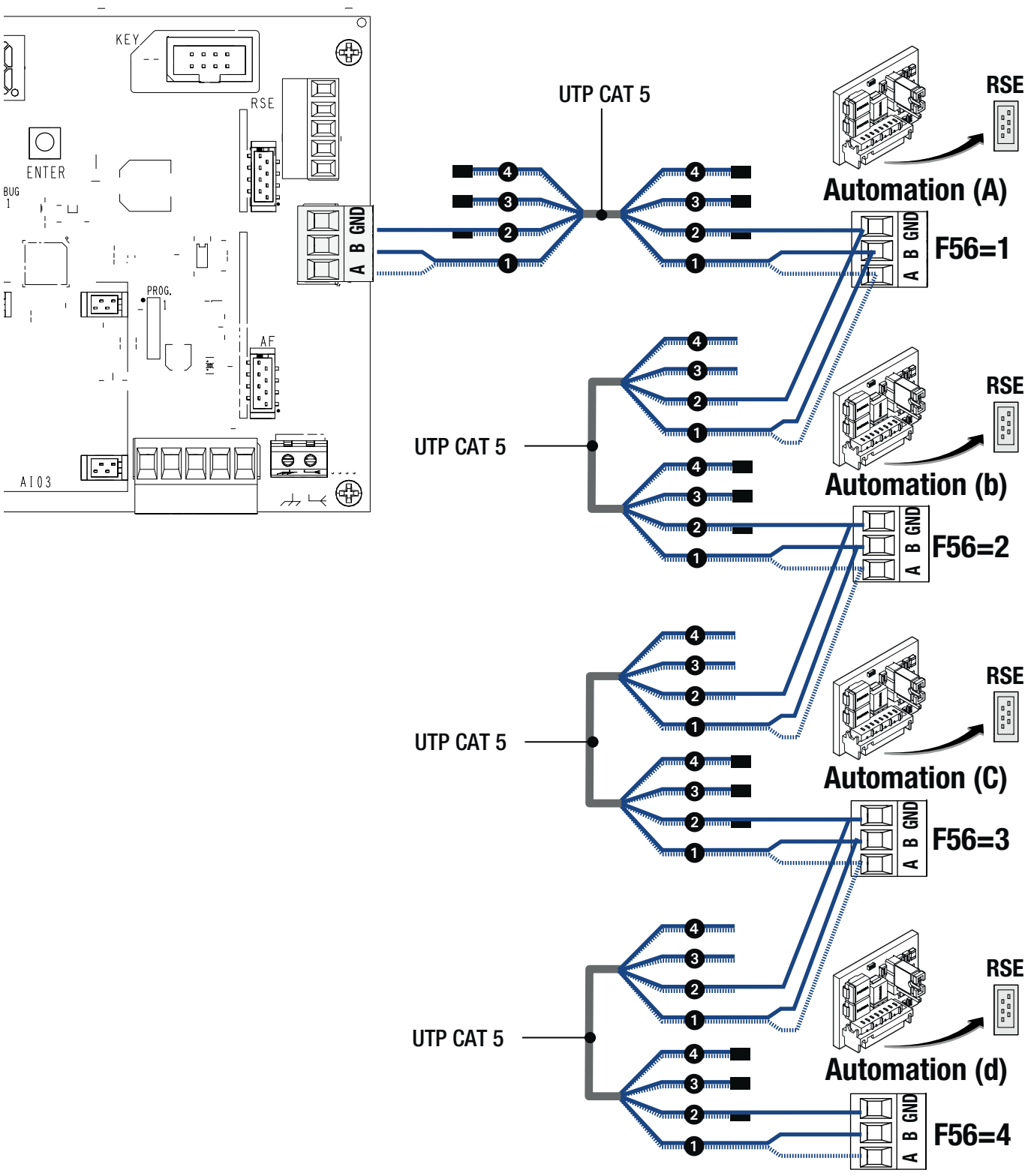
Connect the antenna to the dedicated terminal using a coaxial cable (e.g. TOP-RG58) and insert the AF card into the connector for controlling the operator with a transmitter.



CRP connection

CRP connection for controlling up to 4 operators.
Set a CRP address from 1 to 4 for each operator.
Insert an RSE card into all connected operators.

Use a twisted UTP CAT 5 cable.

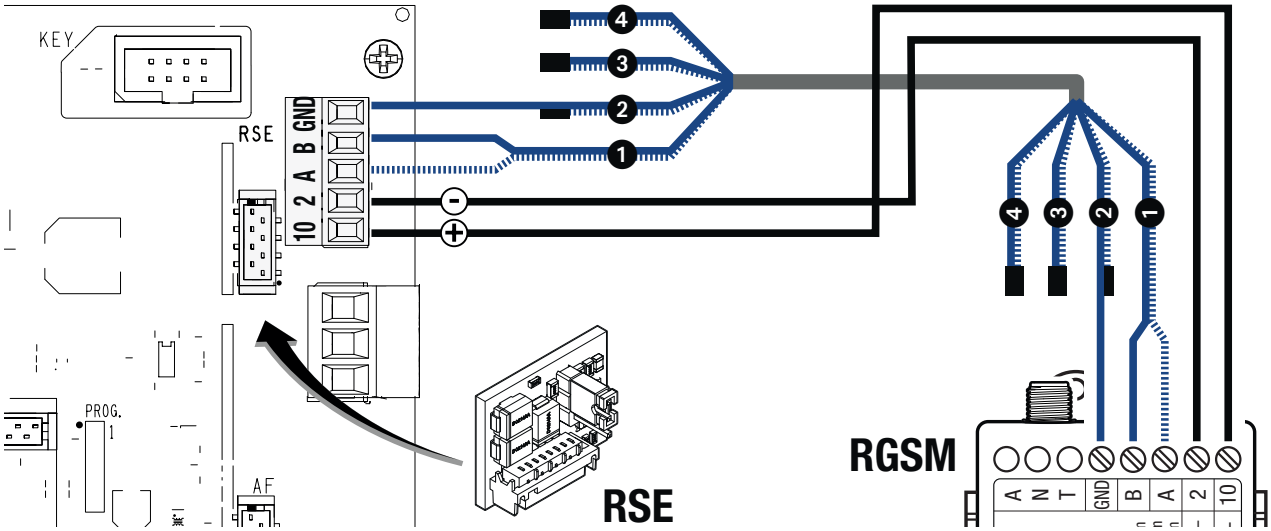


Remote connection

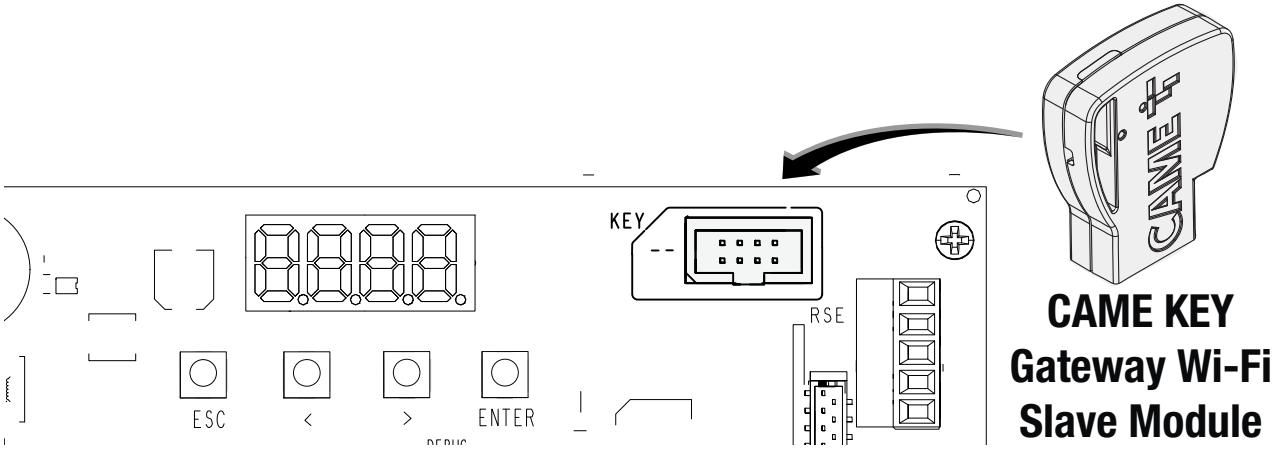
Connecting with GSM Gateway module (RGSM001/RGSM001S) for remote control of CAME accessories or operators with the CAMEConnect system. See the instruction manual for the accessory.

Insert the RSE board into the corresponding connector.

Use a twisted UTP CAT 5 cable.

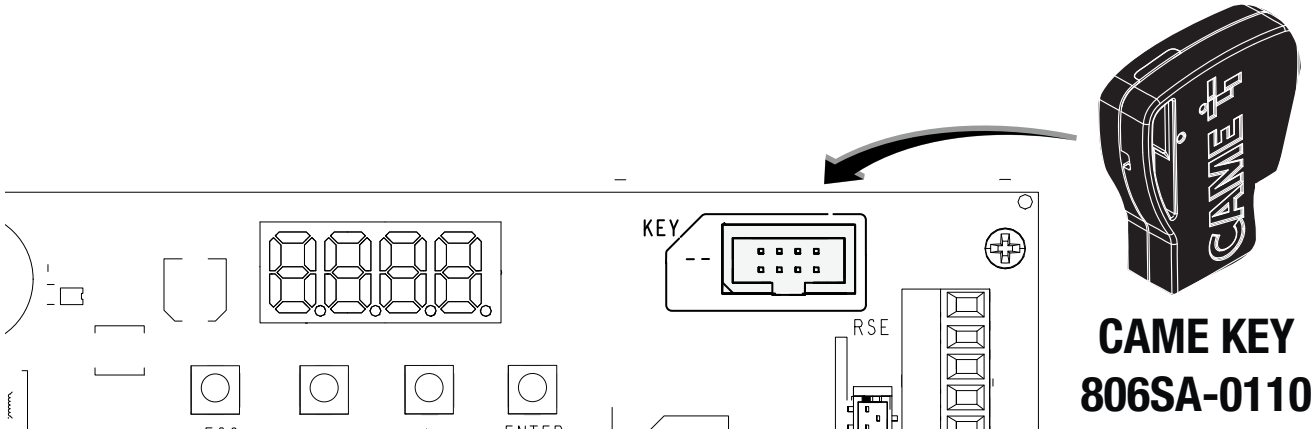


Connecting with Wi-Fi Gateway (806SA-0140) to connect the operator to the Cloud via Wi-Fi or Gateway AC Gateway (806SA-0200) for access control via the CAMEConnect system. See the instruction manual for the accessory.

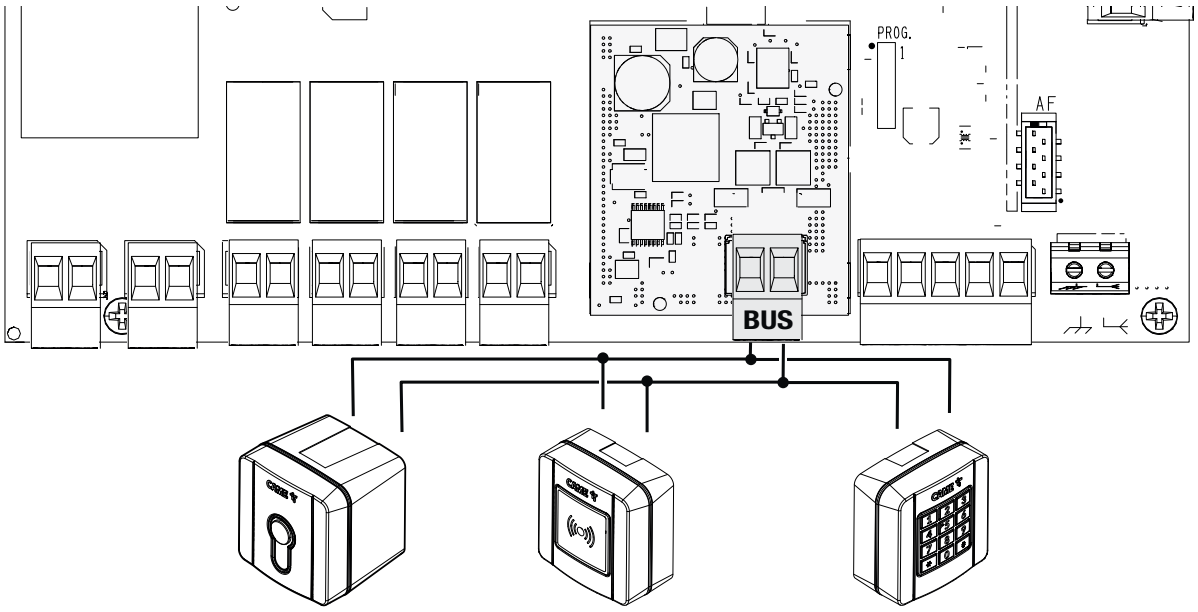


Local connection

Connecting with CAME KEY (806SA-0110) for configuring and controlling CAME operators compatible with the CRP protocol using a smartphone or tablet. See the accessory manual.



RCXN board (optional) for devices with BUS CXN system

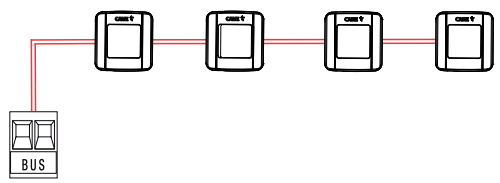


The CAME CXN system is a two-wire non-polarised communication BUS which allows you to connect all compatible CAME CXN devices.
Connection to the BUS can be in a chain, star or mixed formation.
Once the system has been wired, and after having set the address on each device, the function of each accessory can be configured on the control panel (RBE). This method allows you to configure the set-up immediately without having to work directly on the accessories and system wiring later.

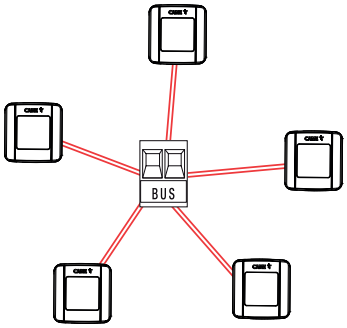
Cabling

❶ Chain connection
❷ Star connection
❸ Mixed connection

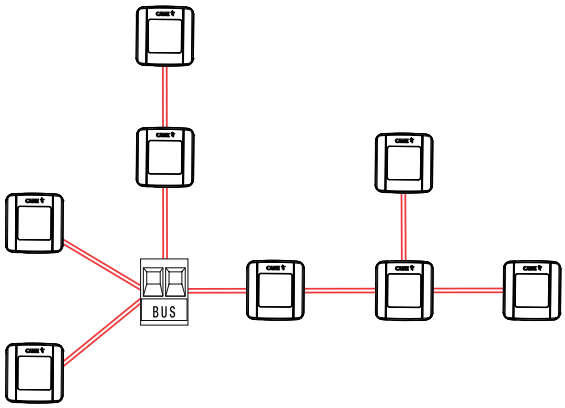
❶



❷



❸



Cable type

⚠ We recommend using a FROR 2x0.5mm² cable, maximum length from the control board: 50 m.

Single branch length (m)	max. 50 m
BUS cable	2 x 0.5 mm2

🕮 The total length of all branches can be a maximum of 150 m.

Maximum number of devices that can be connected, by type

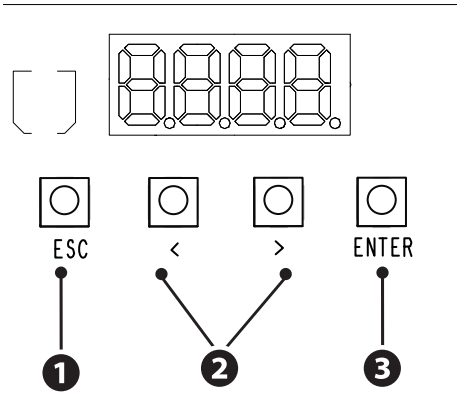
Type of device	Maximum number of devices per type
Keypad selectors / Transponder selectors / Key selectors	8
MIFARE selectors	4

BUS CXN device consumption

Scan the QR code to access an interactive table showing consumption data, and calculate the maximum number of BUS devices you can connect to the control panel.

🕮 BUS CXN device consumption is calculated in CXN units.

Programming button functions



❶ ESC button

The ESC button is used to perform the operations described below.
Exit the menu
Delete the changes
Go back to the previous screen

❷ < > buttons

The < > buttons are used to perform the operations described below.
Navigate the menu
Increase or decrease values

❸ ENTER button

The ENTER button is used to perform the operations described below.
Access menus
Confirm choice

Functions menu

Setting the type of outgoing contact
Associate the type of output contact with OUT1, OUT2, OUT3 and OUT4

F1	OUt.1 OUt.2 OUt.3 OUt.4	no = Normally open contact (NO) Default nc = normally closed contact (NC) OFF = Deactivated	

Output control mode
Associate an operating mode for the output contact with OUT1, OUT2, OUT3 and OUT4

📖 For the SEC (timed in seconds) and MIn (timed in minutes) parameters, set the duration of the command from 1 to 180.

F2	OUt.1 OUt.2 OUt.3 OUt.4	SEC = Timed in seconds (default) MIn = Timed in minutes bIS = Bistable* MAn = Hold-to-run	From 1 to 180 seconds From 1 and 180 minutes

* The output changes status with each command and maintains this status until the next command.

Setting the type of incoming contact
Associate the type of input contact with I1, I2, I3 and I4

F3	In .1 In .2 In .3 In .4	no = Normally open contact (NO) Default nc = normally closed contact (NC) OFF = Deactivated	

Associating an input with one or more outputs/operators

Associate one or more outputs and/or one or more operators with an input I1, I2, I3 or I4.

See the section <Example of a system with devices for controlling one or more outputs and/or operators>.

F4	In .1 In .2 In .3 In .4	1234 = Outputs 1, 2, 3 and 4 ---- = No output 1--- = Output 1 -2-- = Output 2 12-- = Outputs 1 and 2 --3- = Output 3 1-3- = Outputs 1 and 3 -23- = Outputs 2 and 3 123- = Outputs 1, 2 and 3 ---4 = Output 4 1--4 = Outputs 1 and 4 -2-4 = Outputs 2 and 4 12-4 = Outputs 1, 2 and 4 --34 = Outputs 3 and 4 1-34 = Outputs 1, 3 and 4 -234- = Outputs 2, 3 and 4	AbCd = All operators ---- = No operator A--- = Operator A -b-- = Operator b Ab-- = Operators A and b --C- = Operator C A-C- = Operators A and C -bC- = Operators b and C AbC- = Operators A, b and C ---d = Operator d A--d = Operators A and d -b-d = Operators b and d Ab-d = Operators A, b and d --Cd = Operators C and d A-Cd = Operators A, C and d -bCd = Operators b, C and d

CRP address

Assign a unique identification code (CRP address) to the RBE control board.

The function is used where there are multiple operators connected to the same communication BUS using the CRP protocol.

F56	1 to 254 (Default 1)		

Serial communication speed on RSE / Aut

Set the communication speed.
RSE = Gateway connection
Aut = Operator communication

F63	rSE Aut	0 = 1200 bps 1 = 2400 bps 2 = 4800 bps 3 = 9600 bps 4 = 14400 bps 5 = 19200 bps 6 = 38400 bps (default) 7 = 57600 bps 8 = 115200 bps	

Associating a BUS selector (keypad or transponder) with one or more outputs/operators

Associate a selector (keypad/transponder) with one or more outputs and/or one or more operators.

The function only appears if there are one or more BUS selectors connected to the RCXN board (not supplied).

b21 = Selector 1, b22 = Selector 2, ..., b28 = Selector 8

See the section <Example of a system with BUS selectors (keypad/transponder) for controlling one or more outputs and/or operators>.

b21 **b22** **b23** **b24** **b25** **b26** **b27** **b28**		1234 = Outputs 1, 2, 3 and 4 ---- = No output 1--- = Output 1 -2-- = Output 2 12-- = Outputs 1 and 2 --3- = Output 3 1-3- = Outputs 1 and 3 -23- = Outputs 2 and 3 123- = Outputs 1, 2 and 3 ---4 = Output 4 1--4 = Outputs 1 and 4 -2-4 = Outputs 2 and 4 12-4 = Outputs 1, 2 and 4 --34 = Outputs 3 and 4 1-34 = Outputs 1, 3 and 4 -234- = Outputs 2, 3 and 4	AbCd = All operators ---- = No operator A--- = Operator A -b-- = Operator b Ab-- = Operators A and b --C- = Operator C A-C- = Operators A and C -bC- = Operators b and C AbC- = Operators A, b and C ---d = Operator d A--d = Operators A and d -b-d = Operators b and d Ab-d = Operators A, b and d --Cd = Operators C and d A-Cd = Operators A, C and d -bCd = Operators b, C and d

Associating BUS key selector on one or more outputs/operators

Associate a key selector with one or more outputs and/or one or more operators.

📖 The function only appears if there are one or more BUS selectors connected to the RCXN board (not supplied).

📖 The main difference between a key selector and the other selectors is that the commands associated with the outputs and operators are divided into right rotation (rIG) and left rotation (LEF).

📖 b21 = Selector 1, b22 = Selector 2, ..., b28 = Selector 8

📖 See the section <Example of a system with BUS key selectors for controlling one or more outputs and/or operators>.

b21 **b22** **b23** **b24** **b25** **b26** **b27** **b28**	rIG LEF	1234 = Outputs 1, 2, 3 and 4 ---- = No output 1--- = Output 1 -2-- = Output 2 12-- = Outputs 1 and 2 --3- = Output 3 1-3- = Outputs 1 and 3 -23- = Outputs 2 and 3 123- = Outputs 1, 2 and 3 ---4 = Output 4 1--4 = Outputs 1 and 4 -2-4 = Outputs 2 and 4 12-4 = Outputs 1, 2 and 4 --34 = Outputs 3 and 4 1-34 = Outputs 1, 3 and 4 -234- = Outputs 2, 3 and 4	AbCd = All operators ---- = No operator A--- = Operator A -b-- = Operator b Ab-- = Operators A and b --C- = Operator C A-C- = Operators A and C -bC- = Operators b and C AbC- = Operators A, b and C ---d = Operator d A--d = Operators A and d -b-d = Operators b and d Ab-d = Operators A, b and d --Cd = Operators C and d A-Cd = Operators A, C and d -bCd = Operators b, C and d

New user

Register up to a maximum of 5000 users and assign one or more outputs and/or one of more operators to each one

📖 The parameters (AbCd) identifying the operators only appear if they are connected to the RBE control panel.

📖 The AF card that manages the transmitters must be inserted into the connector.

📖 See the section <New user> for information on how to insert it.

U1		1234 = Outputs 1, 2, 3 and 4 ---- = No output 1--- = Output 1 -2-- = Output 2 12-- = Outputs 1 and 2 --3- = Output 3 1-3- = Outputs 1 and 3 -23- = Outputs 2 and 3 123- = Outputs 1, 2 and 3 ---4 = Output 4 1--4 = Outputs 1 and 4 -2-4 = Outputs 2 and 4 12-4 = Outputs 1, 2 and 4 --34 = Outputs 3 and 4 1-34 = Outputs 1, 3 and 4 -234- = Outputs 2, 3 and 4	AbCd = All operators ---- = No operator A--- = Operator A -b-- = Operator b Ab-- = Operators A and b --C- = Operator C A-C- = Operators A and C -bC- = Operators b and C AbC- = Operators A, b and C ---d = Operator d A--d = Operators A and d -b-d = Operators b and d Ab-d = Operators A, b and d --Cd = Operators C and d A-Cd = Operators A, C and d -bCd = Operators b, C and d

Remove user

Remove one of the registered users.

📖 See the section <Remove user> for information on how to remove it.

U2	OFF = Cancel On = Run		

Remove all

Remove all registered users.

Select On and press the ENTER button. All stored users will appear in quick succession on the screen and, at the end, the wording [CLr] will show to confirm that all users have been deleted.

U3	OFF = Cancel On = Run		

Radio decoding

Choose the type of radio coding for the transmitters enabled to control the outputs or operators.
Select the coding from those available and press ENTER to confirm.

📖 If you choose the type of radio coding for the transmitters [Rolling code] or [TW key block], any transmitters with a different type of radio coding saved previously will be deleted.

U4	1 = All decoding (default) 2 = Rolling code 3 = TW key block		

Self-Learning Rolling

Save a new rolling code transmitter by activating acquisition from a rolling code transmitter that has already been saved. The saving and acquisition procedures are explained in the transmitter manual.

U8	OFF = Deactivated (Default) ON = Activated		

Scanning for new operators

Scan the terminals (A-B-GND) for newly connected operators.

📖 During scanning, the red LED remains on. Once the operation is complete, the LED switches off and starts flashing to indicate it is communicating with the operators. If an operator is not responding or is disconnected, the wording [OFF A/b/C/d] will appear on the display, according to the operator that has been disconnected.

A3	OFF = Cancel ON = Run		

Parameter reset

Restore to factory settings except for users.

A4	On = Run OFF = Cancel		

FW version

Display the firmware version.

H1	On = Run OFF = Cancel		

Enable password

Set a 4-digit password. The password will be requested to anyone who wants to access the main menu.

📖 See the section <Enable password> for information on how to do it.

H3	On = Run OFF = Cancel		

BUS device status

Show the status of all devices (key selectors, transponders and/or keypad) connected to the BUS and managed by the firmware in use.
Select the device from those available from d1 to d8 and press ENTER to view the status (x).
The status (x) can be:
ll = BUS address conflict (*)
o = Working
c = Working with alarm signal
F = Device in fault
- = No communication or not present
(*) Two or more selectors with the same address.

H4	d1.x d2.x d3.x d4.x d5.x d6.x d7.x d8.x		

Setting the clock

Set the date and time.

When the date and time are set, the clock is always shown on the display.

See the “Setting the clock” section.

H5	OFF (Cancel operation) ON (Run operation)		

Access log

Enable the access logs visible on CAMEConnect.

H6	OFF = Deactivated ON = Activated		

New user

The user can be associated with one or more outputs (OUT1, OUT2, OUT3 and/or OUT4) and one or more operators (where connected to the RBE control panel).

① Press the ENTER key to enter programming.

② Select the function U1 and press ENTER to confirm.

③ Choose one or more outputs from 1 = OUT1, 2 = OUT2, 3= OUT3 and 4 = OUT4 to associate with the user. Press Enter to confirm.

If there are one or more operators connected to the control panel (RBE) on A-B-GND, associate the operators and confirm with Enter.

The operators are controlled by the [Open] command only. If you want to use a different command, use CAMEConnect for advanced configuration.

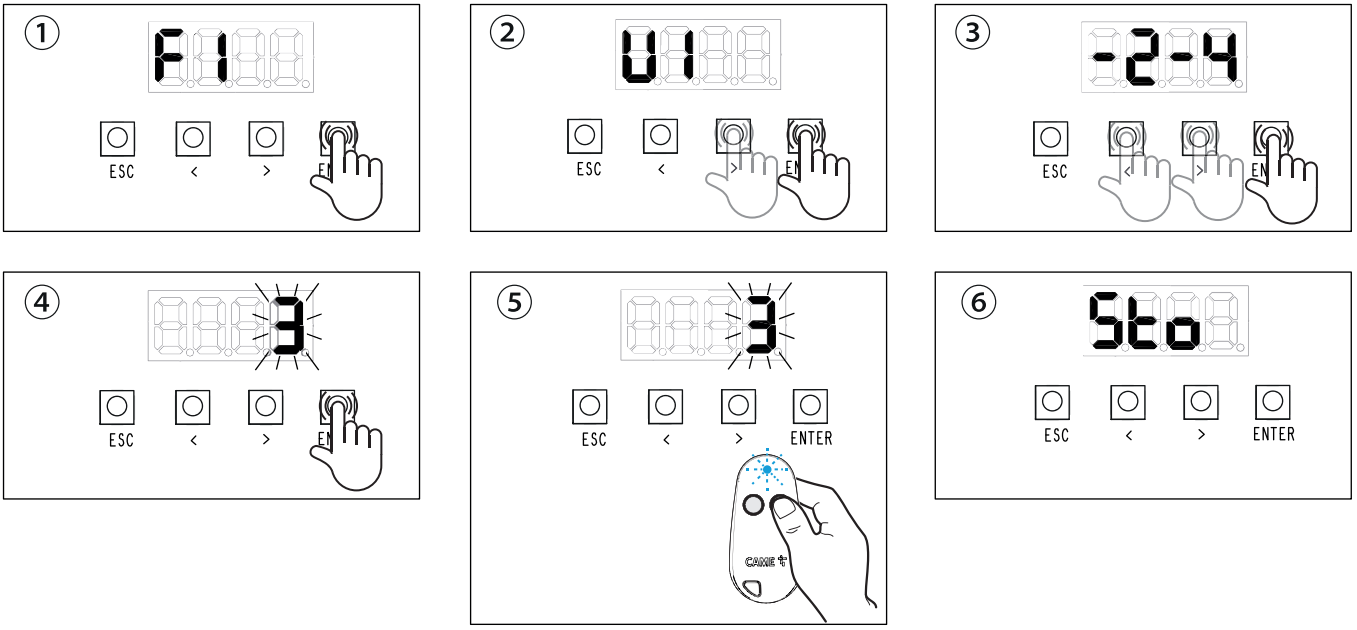
④ The first available position for storing will appear on the screen.

The available positions are the ones with flashing numbers.

⑤ Within 10 seconds, send the code from the selector (transponder or keypad) or the transmitter.

⑥ [Sto] will appear on the screen for a few seconds to confirm the data has been stored.

Repeat the procedure to add other users.

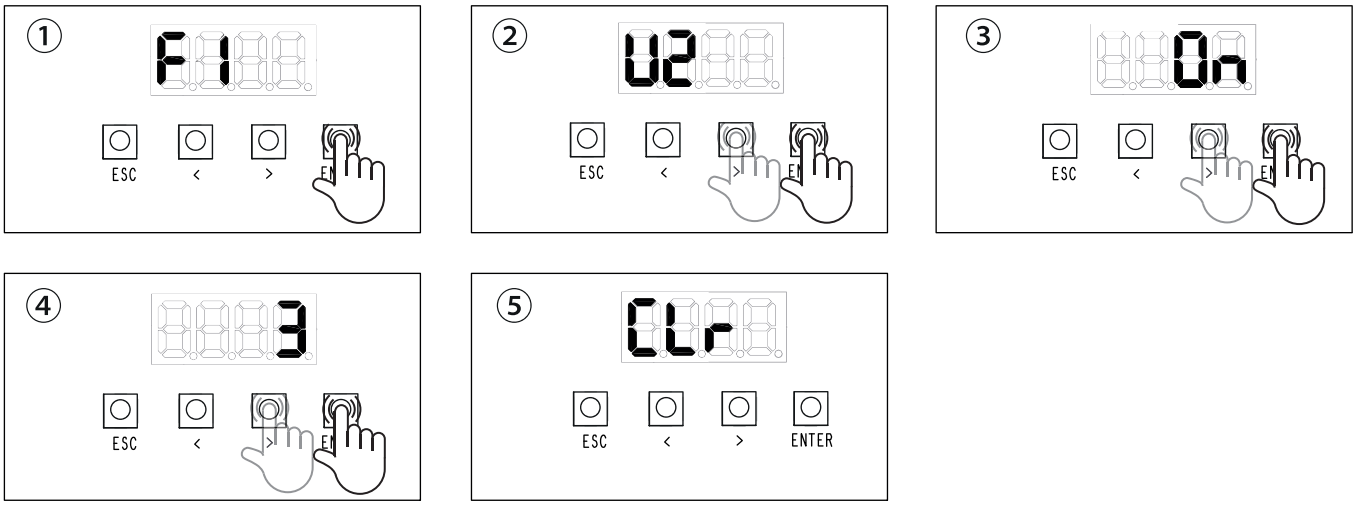


Remove user

① Press the ENTER key to enter programming.
② Select the function U2 and press ENTER to confirm.
③ Select On and press the ENTER button again.
④ Select the user to be deleted and press ENTER

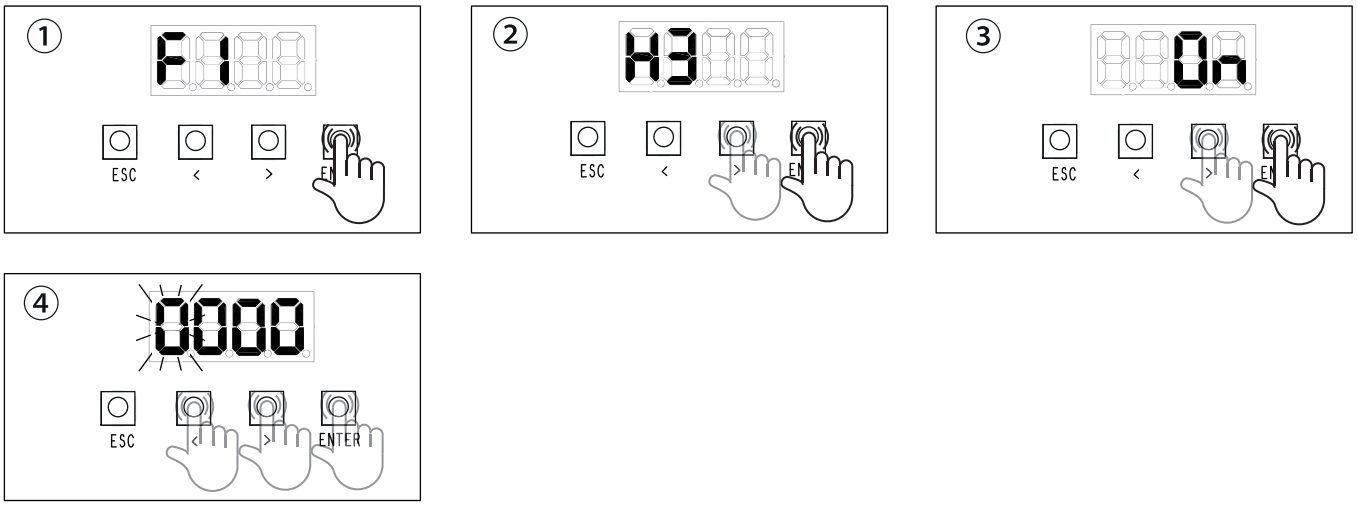
📖 Alternatively, you can select a user by sending a command from the associated device or transmitter.
⑤ [CLr] will appear on the screen for a few seconds to confirm the selected user has been deleted.

📖 The number associated with the deleted user will start flashing to indicate the position is available.
Once the operation is complete, repeat the procedure for another user or press the ESC button to exit the procedure.



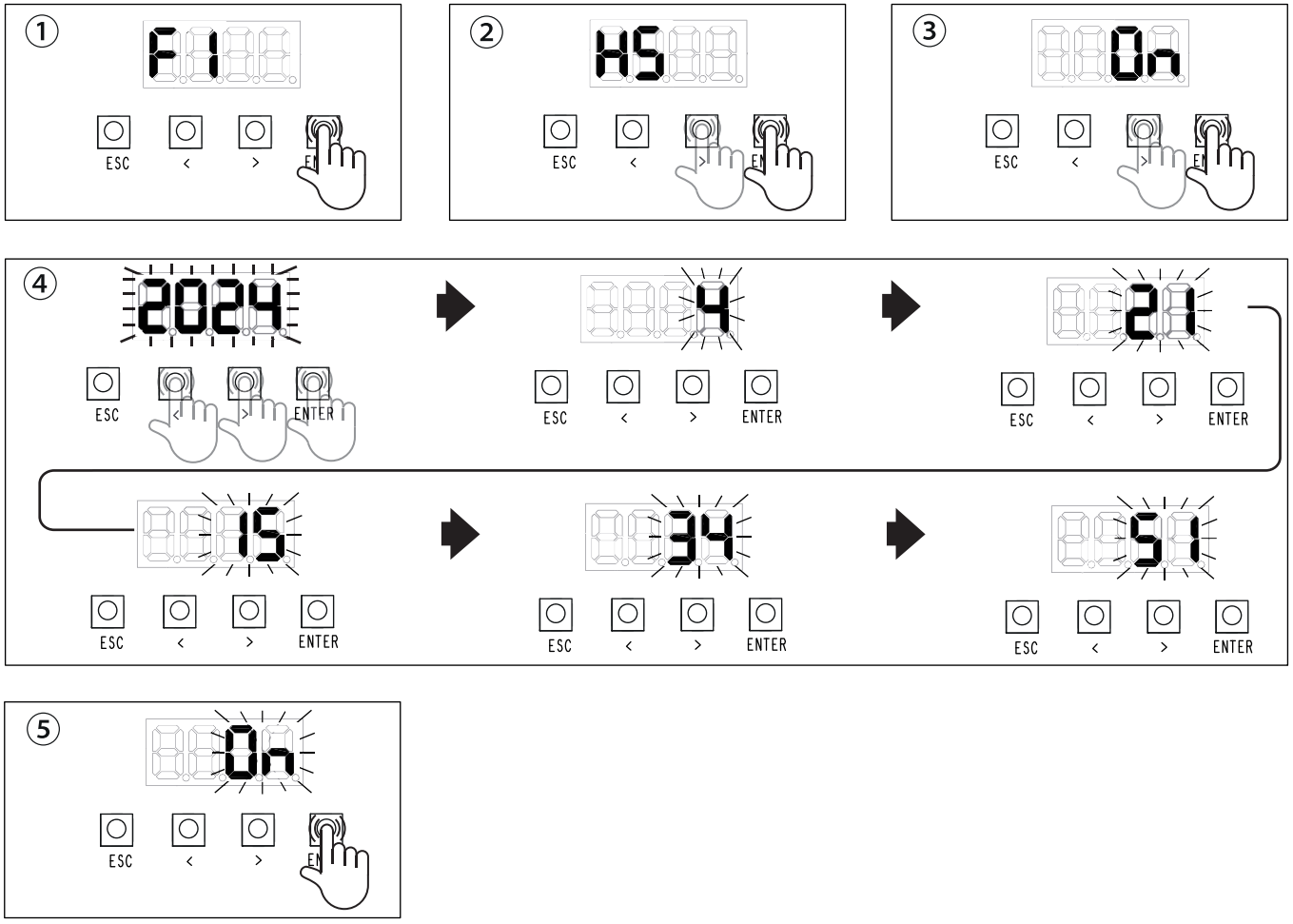
Setting the password

① Press the ENTER key to enter programming
② Select the function H3 and press ENTER to confirm.
③ Select On and press the ENTER button again.
④ Use the arrows and Enter to enter the password. Use the arrows to increase or decrease the number and Enter to confirm.
Repeat the enter password procedure.



Setting the clock

① Press the ENTER key to enter programming
② Select the function H5 and press ENTER to confirm.
③ Select On and press the ENTER button again.
④ Use the arrows and Enter to set the date (year, month and day) and then the time (hours, minutes and seconds).
⑤ [ON] will appear on the screen. Press ENTER to confirm the automatic DST.



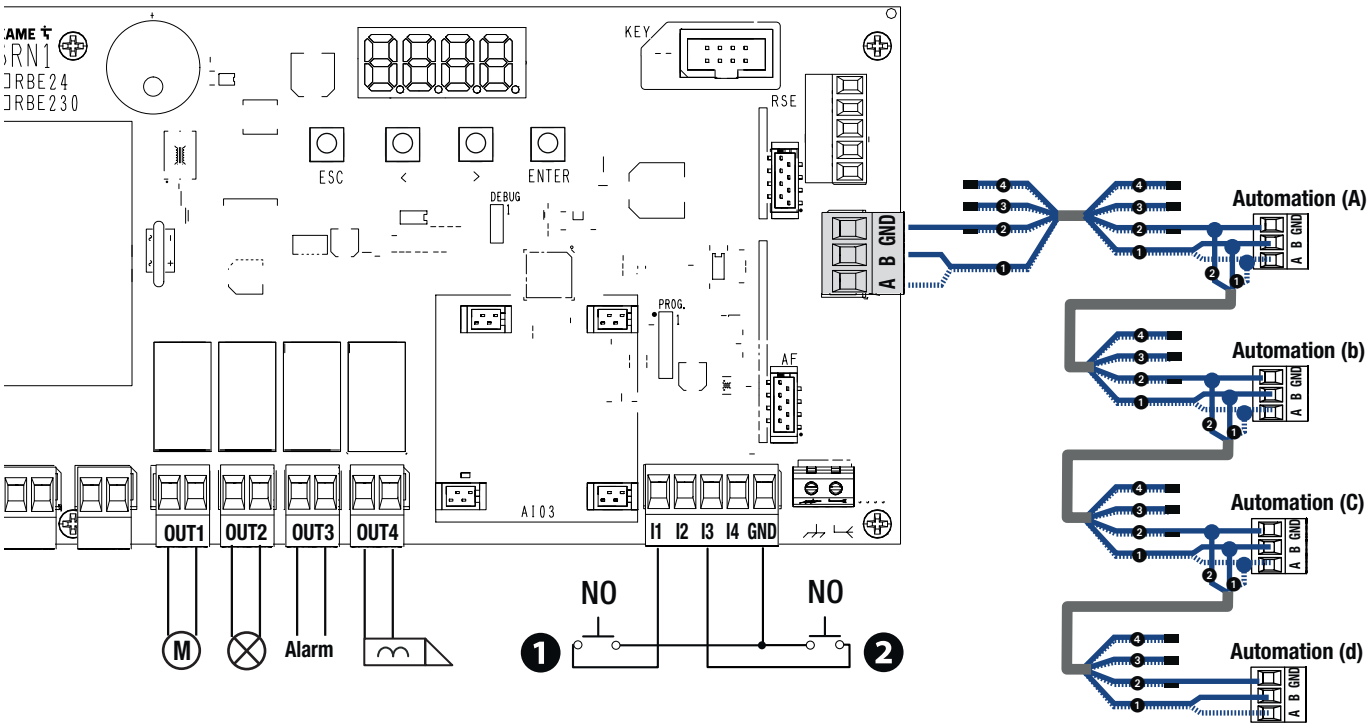
Example of a system with devices for controlling one or more outputs and/or operators

Connections

Connect the control devices to the inputs (I1 and I3), the devices to be controlled to the outputs (OUT1, OUT2, OUT3 and OUT4) and the operators to the terminals A-B-GND.

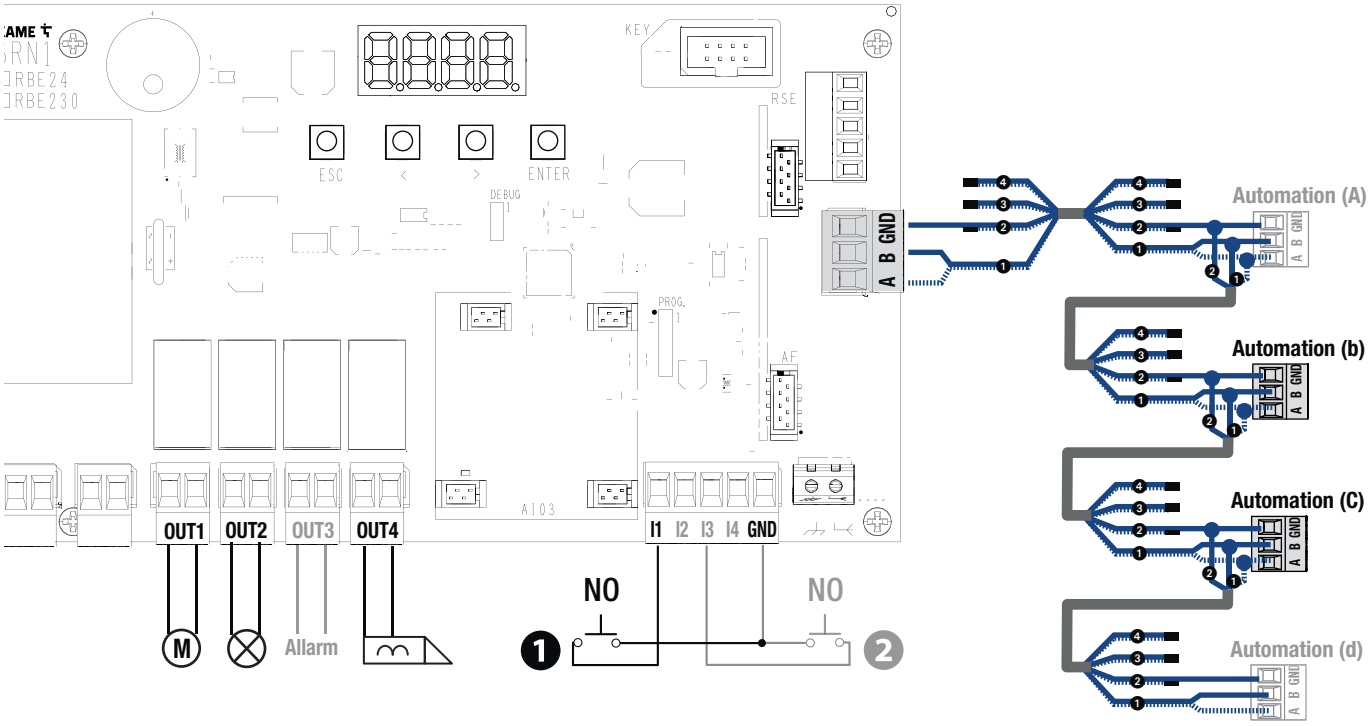
📖 All operators require a 002RSE card to be controlled.

📖 The inputs can be polarised as normally open contacts (NO) or normally closed contacts (NC). See function F3.

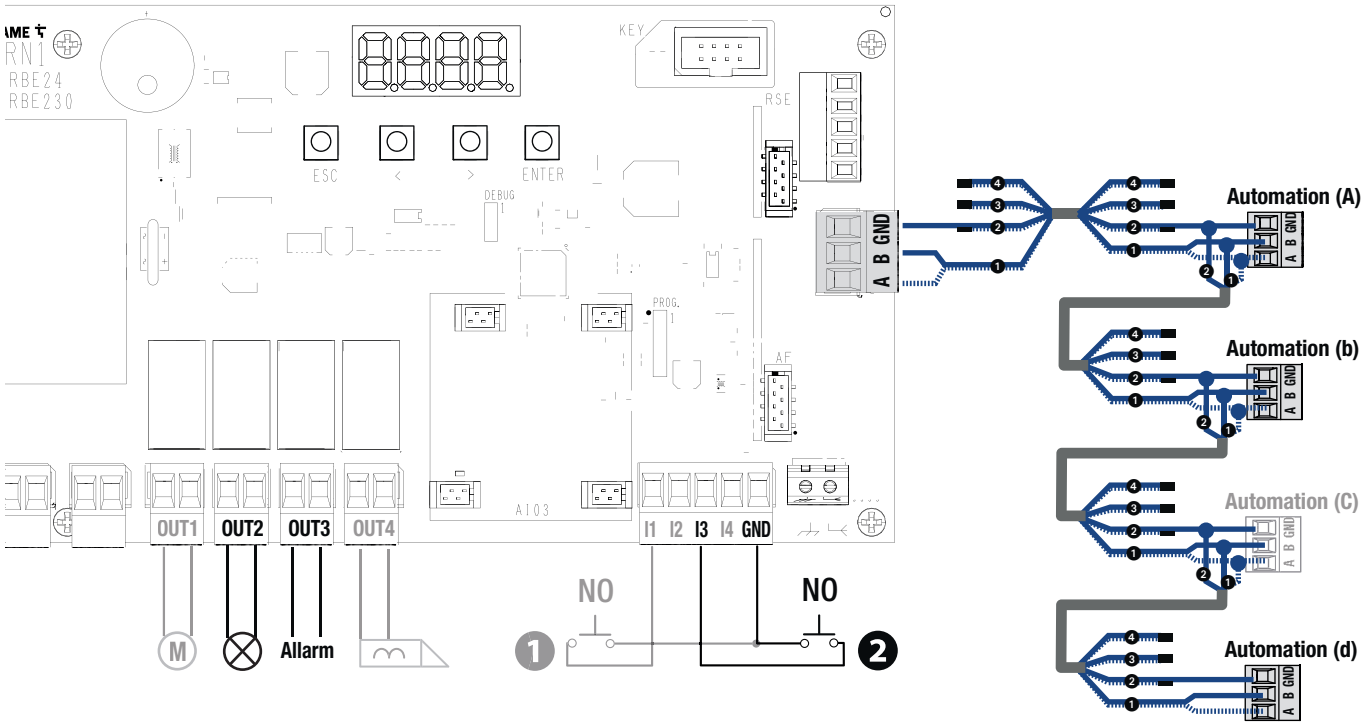


Operation

Imagine the ❶ device connected to input I1 commands the outputs OUT1, OUT2 and OUT4 and the operators b and C.



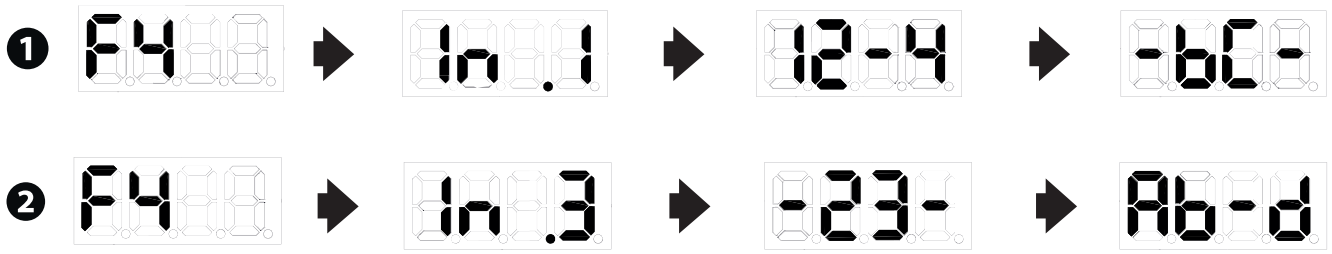
Also imagine that the ❷ device connected to input I3 commands the outputs OUT2 and OUT3 and the operators A, b and d.



Configuration

From the RBE control panel, use the programming buttons to associate the outputs and the operators with the devices connected to the inputs.

📖 Each output and operator can be managed by multiple inputs.

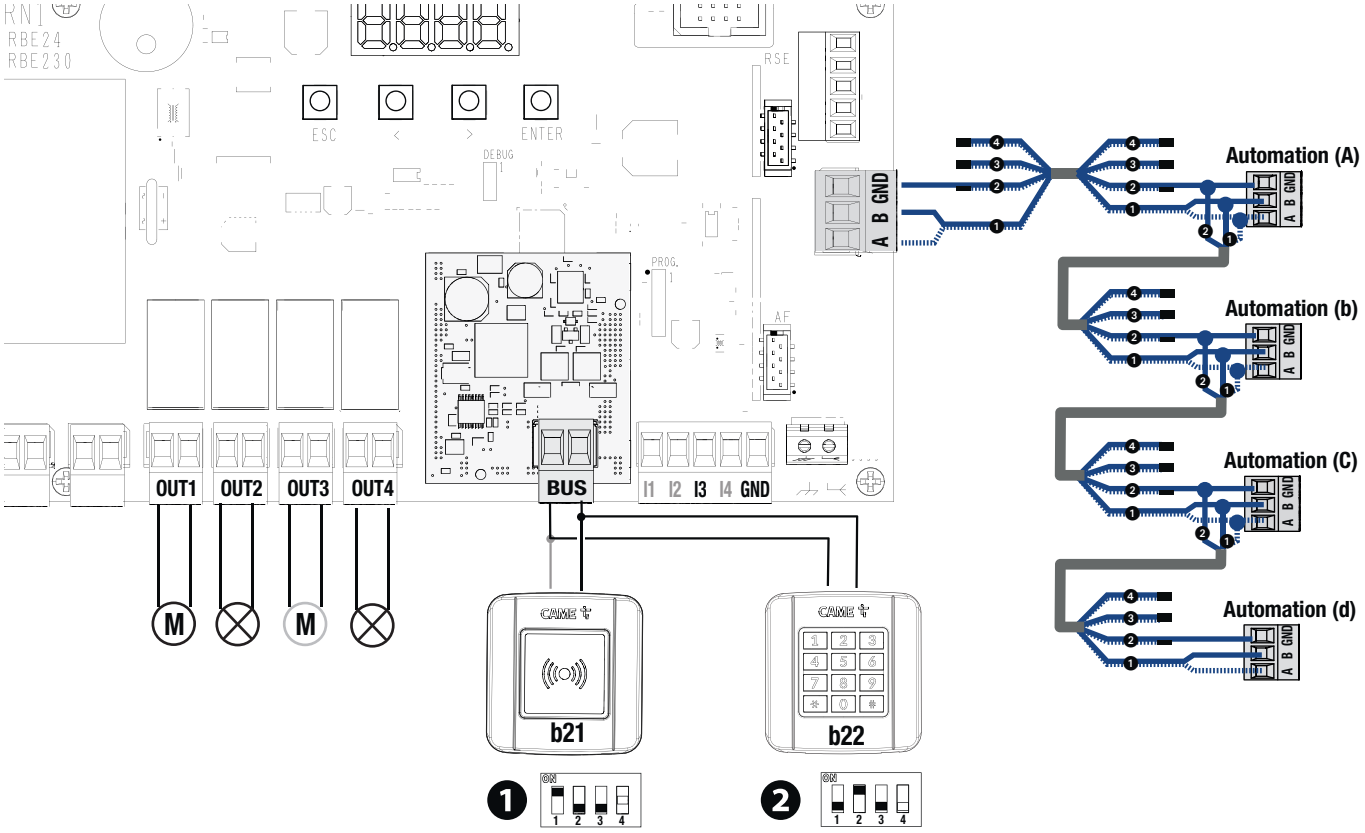


Example of a system with BUS selectors for controlling one or more outputs and/or operators

Connections

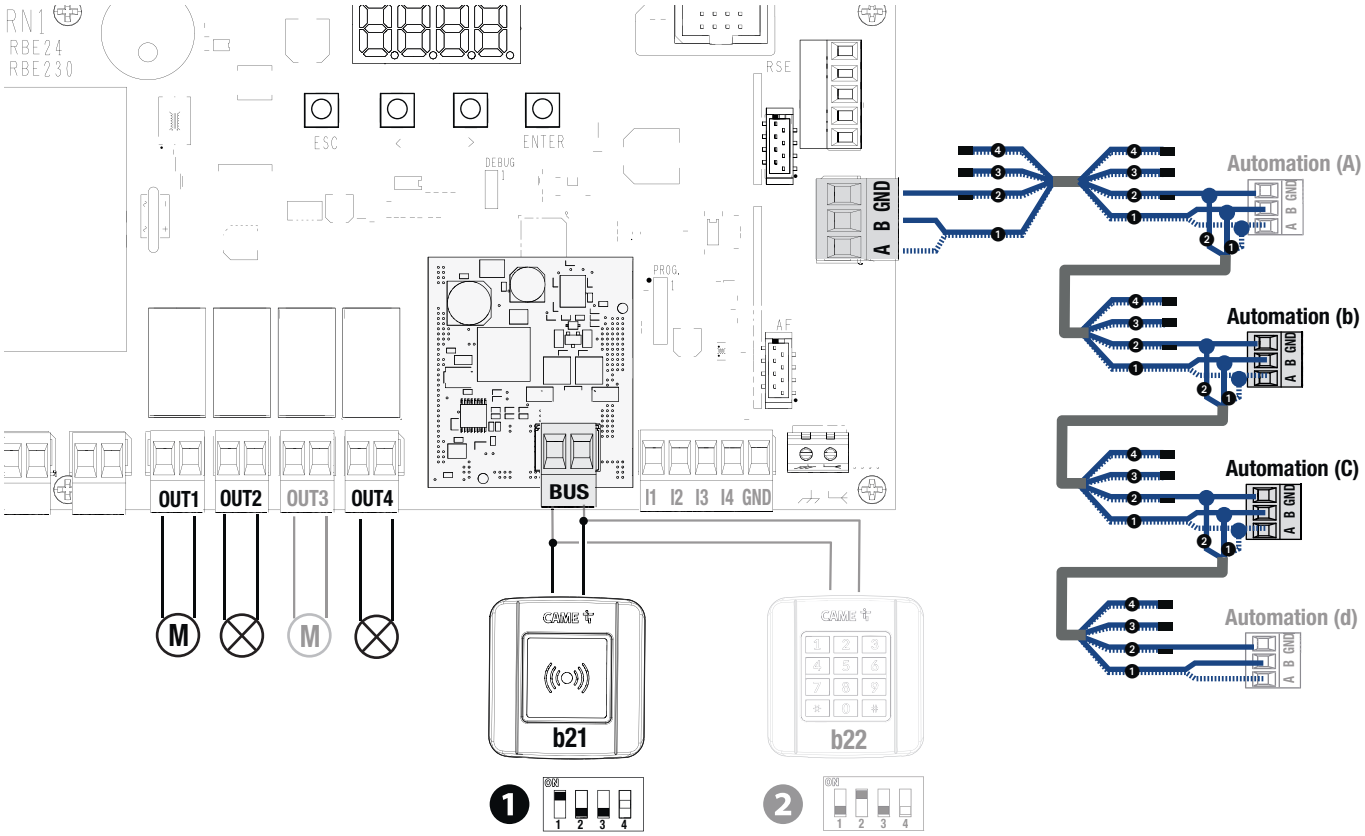
Insert the RCXN board (not supplied) into the corresponding connector on the receiving module.
Connect the selectors (keypad and/or transponder) to the BUS terminal on the RCXN board (maximum 8 selectors).

Set a different address for each selector using DIP switches 1, 2 and 3. Please see the selector manual for more information.

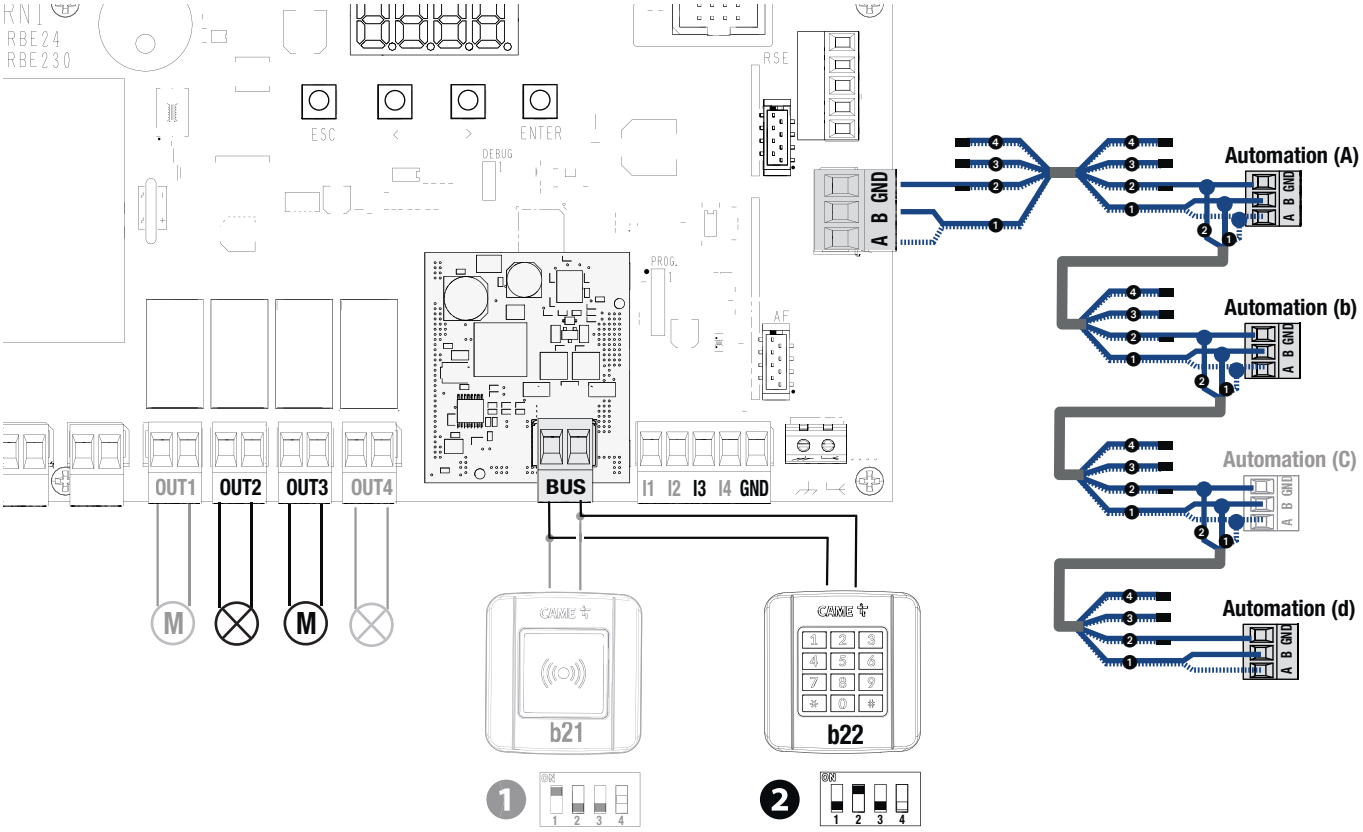


Operation

Imagine the ❶ selector commands the outputs OUT1, OUT2 and OUT4 and the operators b and C.



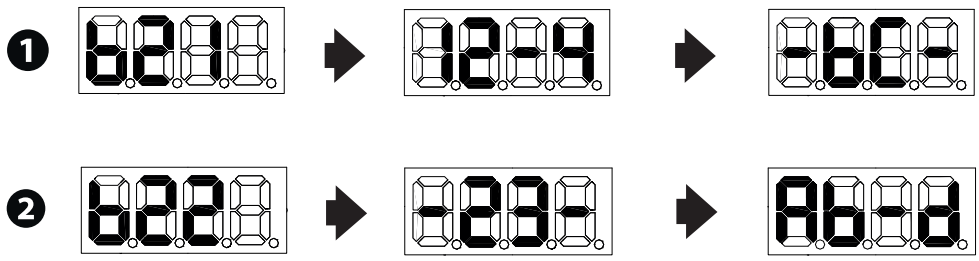
Also imagine the ❷ selector commands the outputs OUT2 and OUT3 and the operators A, b and d.



Configuration

From the RBE control panel, use the programming buttons to associate the outputs and the operators with the selectors.

📖 Each output and operator can be managed by multiple inputs.

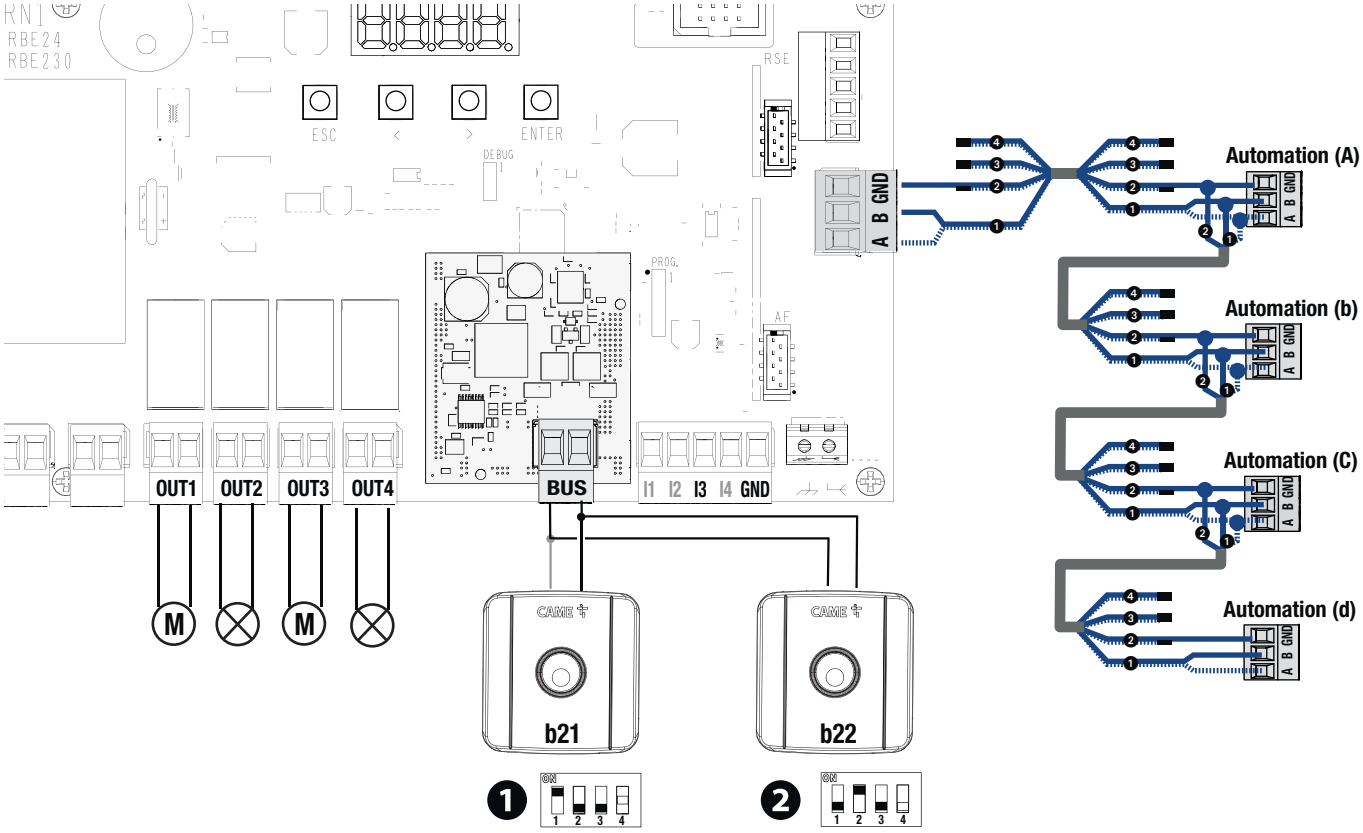


Example of a system with BUS key selectors for controlling one or more outputs and/or operators

Connections

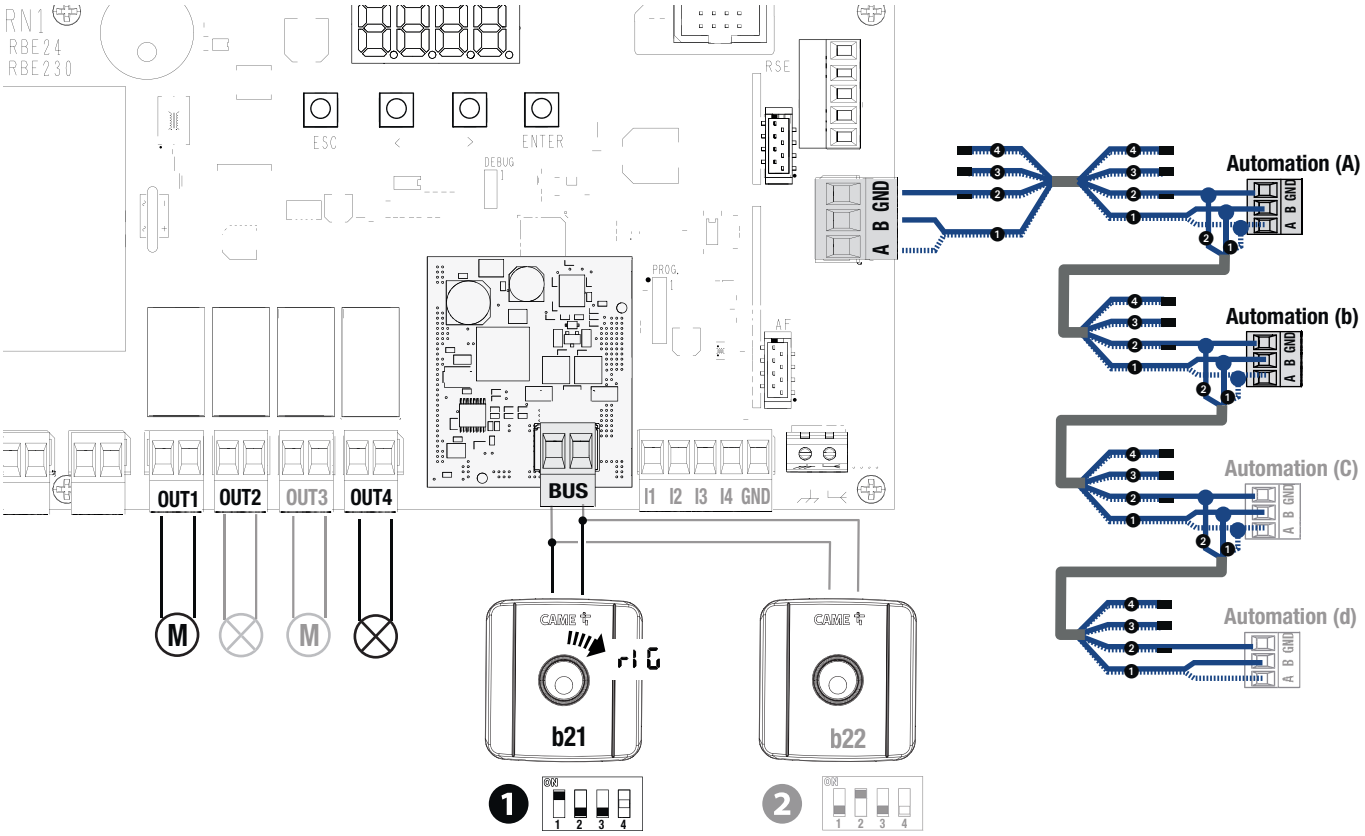
Insert the RCXN board (not supplied) into the corresponding connector on the receiving module.
Connect the key selectors to the BUS terminal on the RCXN board (maximum 8 selectors).

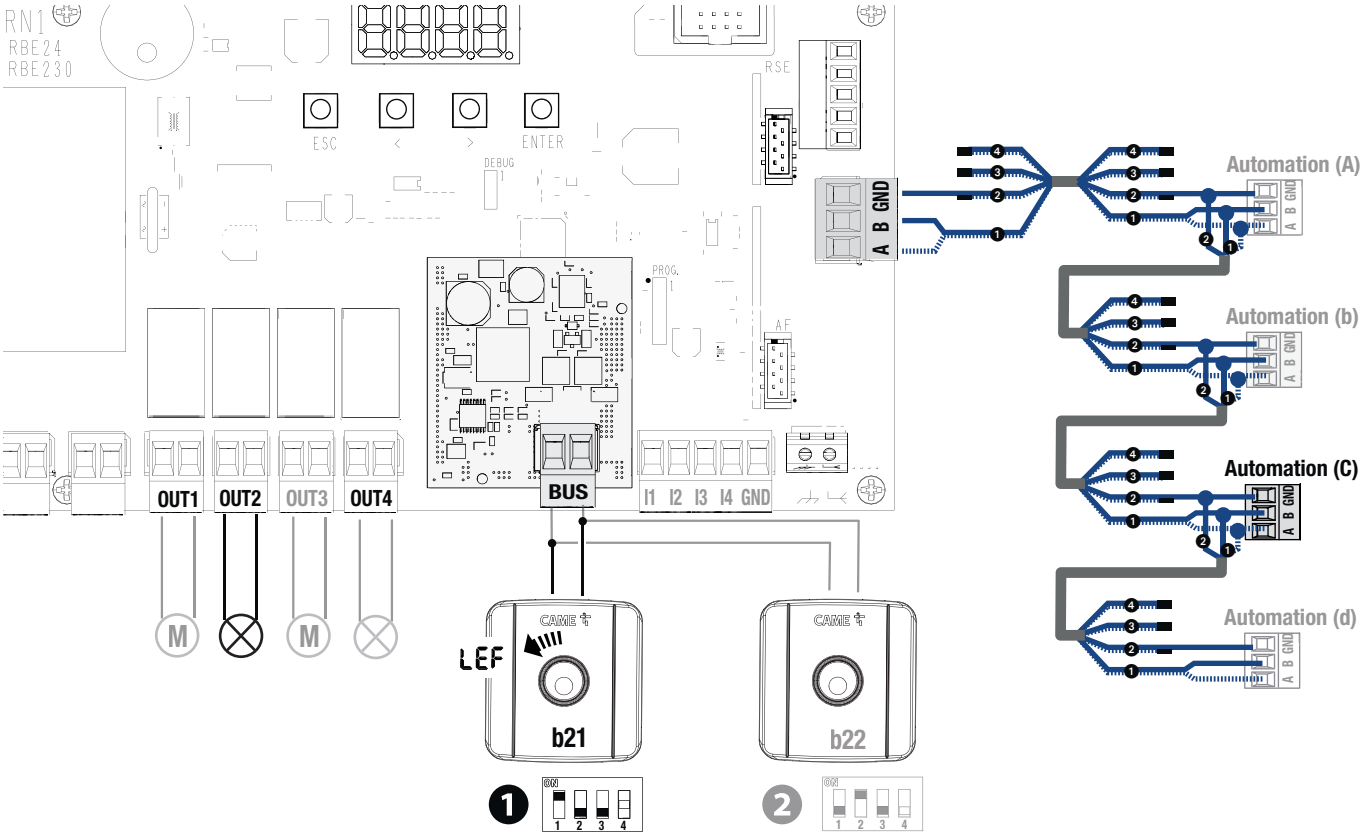
Set a different address for each selector using DIP switches 1, 2 and 3. Please see the selector manual for more information.



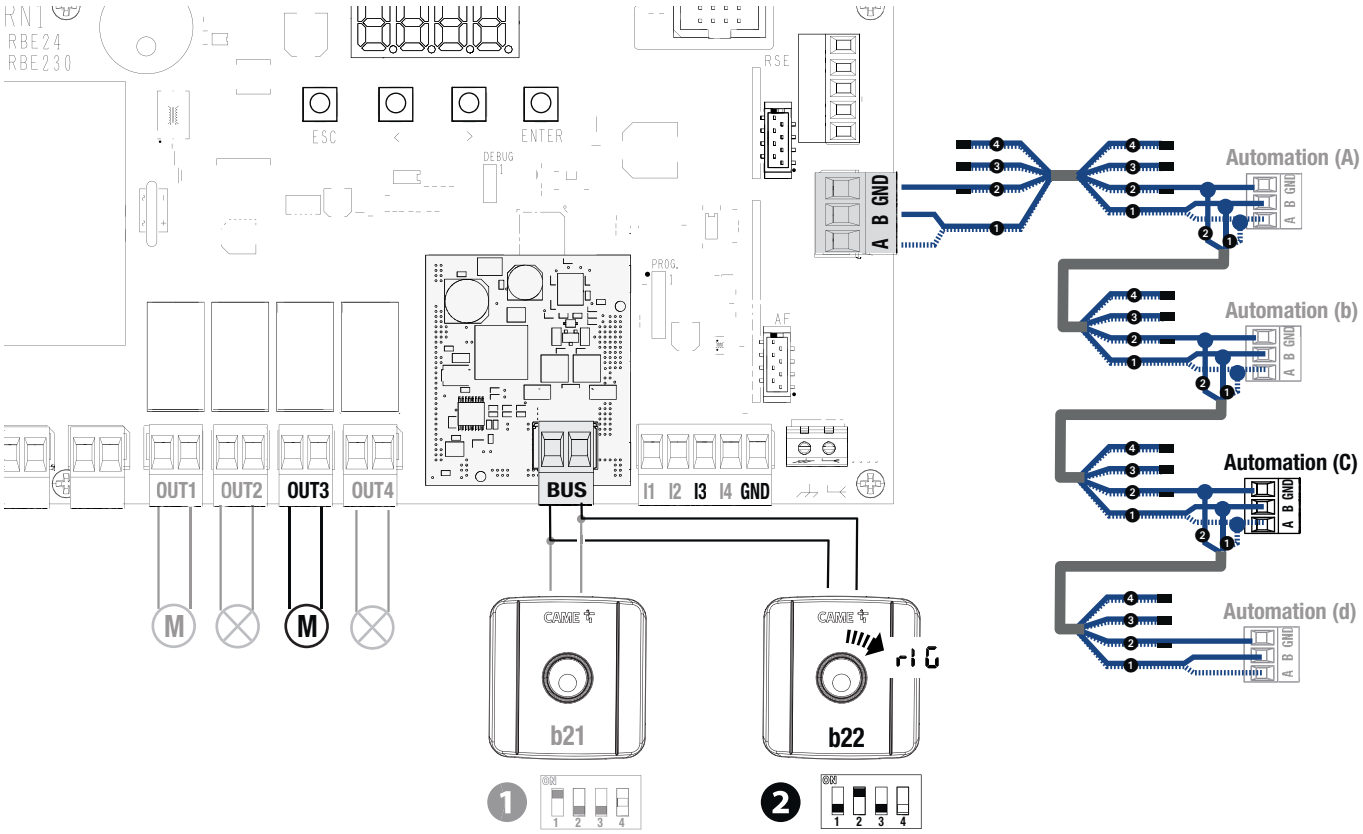
Operation

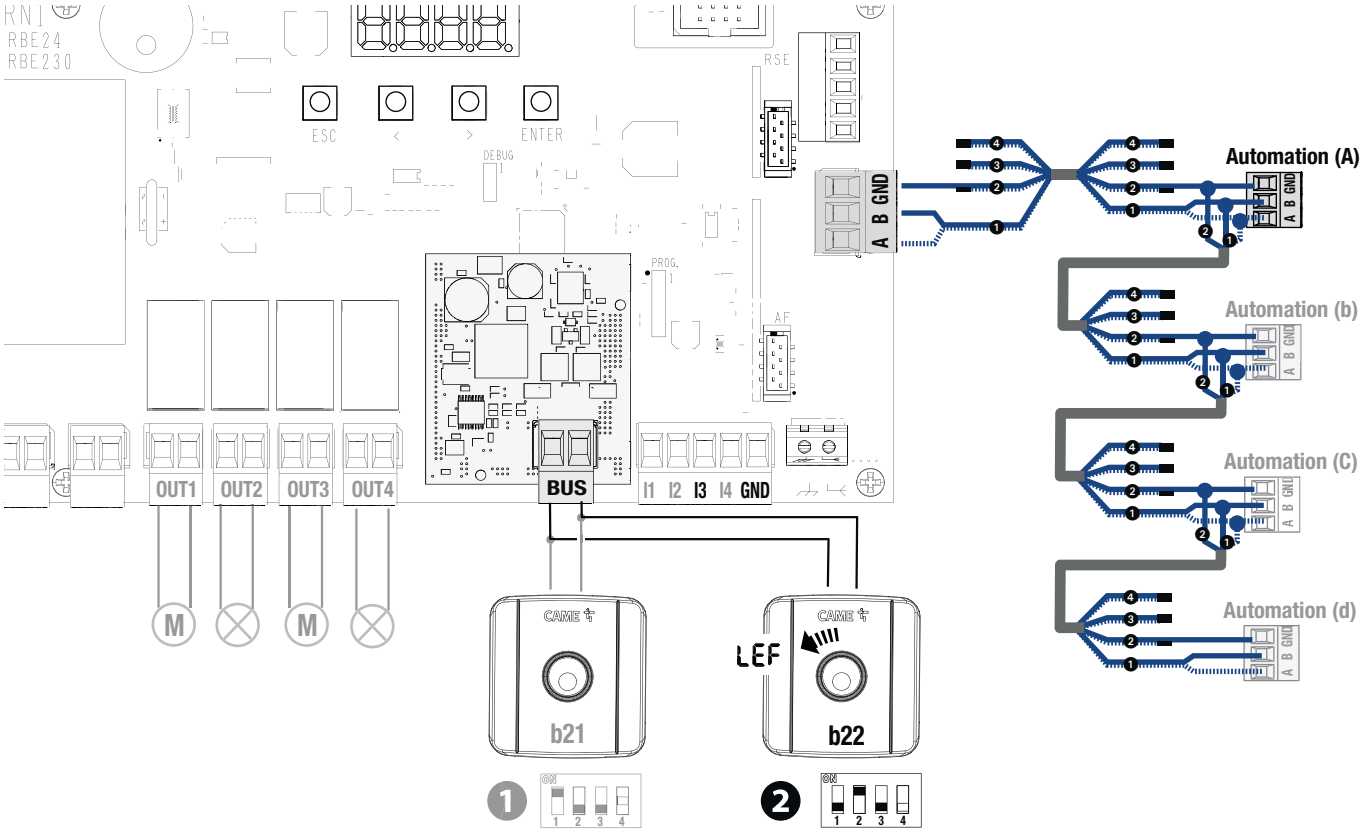
Imagine the ❶ selector is configured as follows:
- key with clockwise rotation (rIG) associated with controlling the outputs OUT1 and OUT4 and the operators A and b;
- key with anti-clockwise rotation (LEF) associated with controlling the output OUT2 and operator C.





Imagine the ❷ selector is configured as:
- key with clockwise rotation (rIG) associated with controlling the output OUT3 and operator C;
- key with anti-clockwise rotation (LEF) associated with controlling operator A.



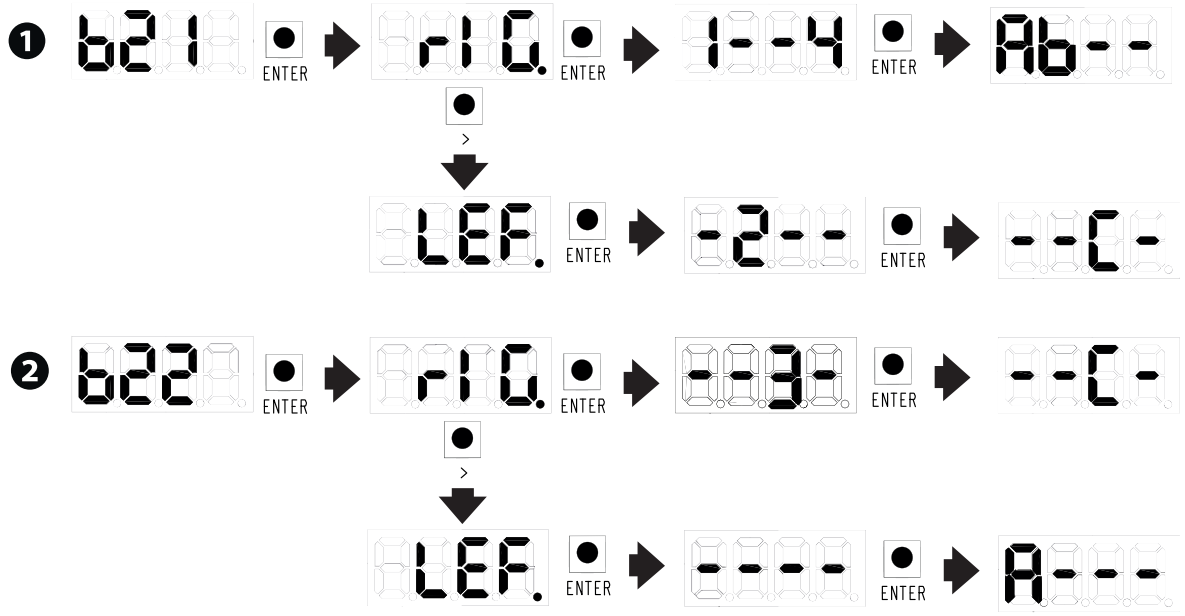


Configuration

From the RBE control panel, use the programming buttons to associate the outputs and the operators with the selectors.

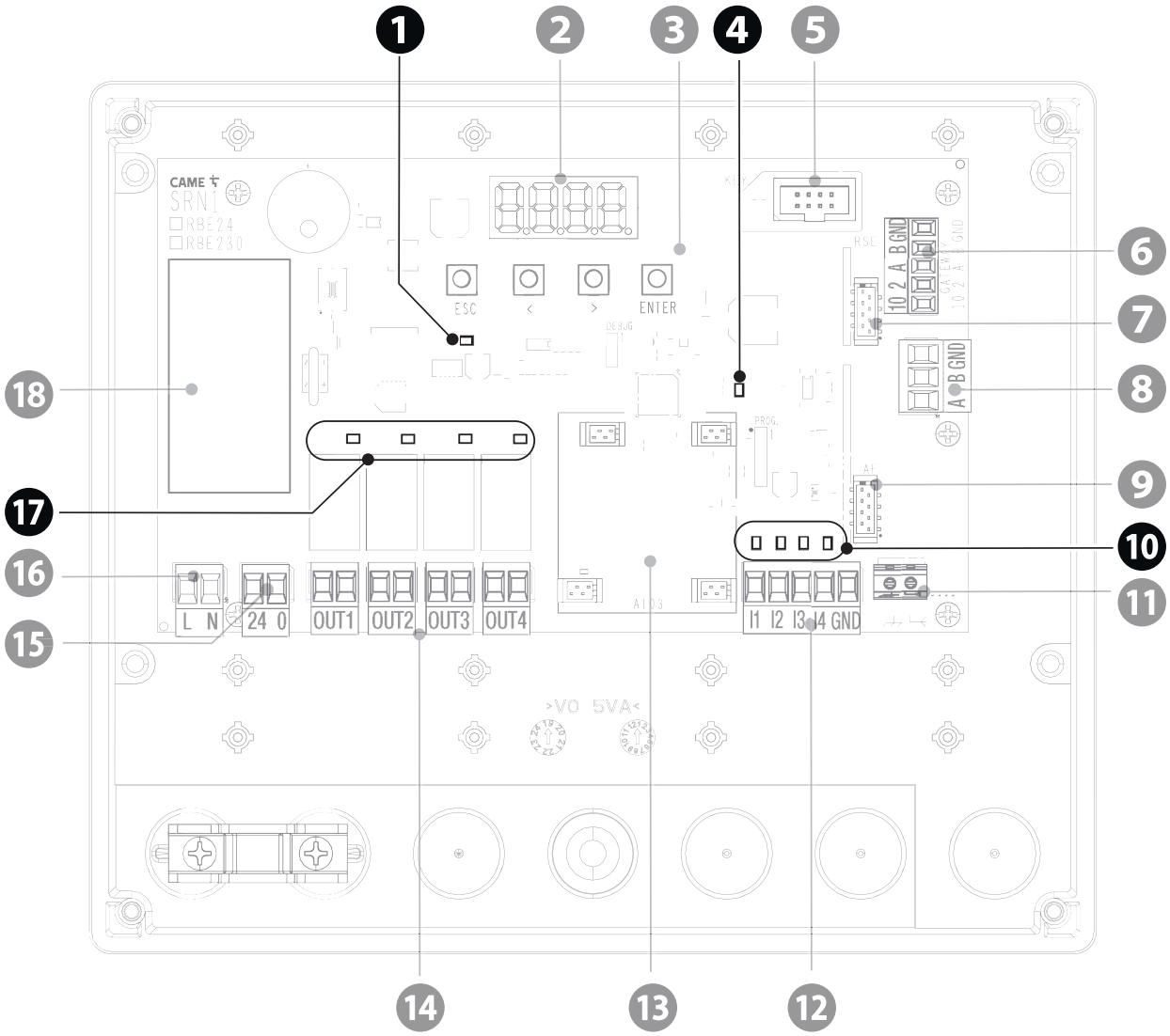
📖 Outputs/operators can be assigned according to the key turning direction.

📖 Each output and operator can be managed by multiple inputs.



LED status key

-	Type	Colour	Status
❶	Voltage present signalling LED	Green on	Control board powered up
		Green off	Control board not powered up
❹	Communication status signalling LED	Red on	Scanning for operators connected to terminal A-B-GND
		Red flashing	Communicating with operators connected to terminal A-B-GND
		Green on (1 sec.)	User recognised
		Flashing blue	Communicating with the Gateway
❿	Input status signalling LEDs	Green on	Input closed
		Green off	Input open
⓱	Outputs status signalling LEDs	Green on	Output closed
		Green off	Output open



ERROR MESSAGES

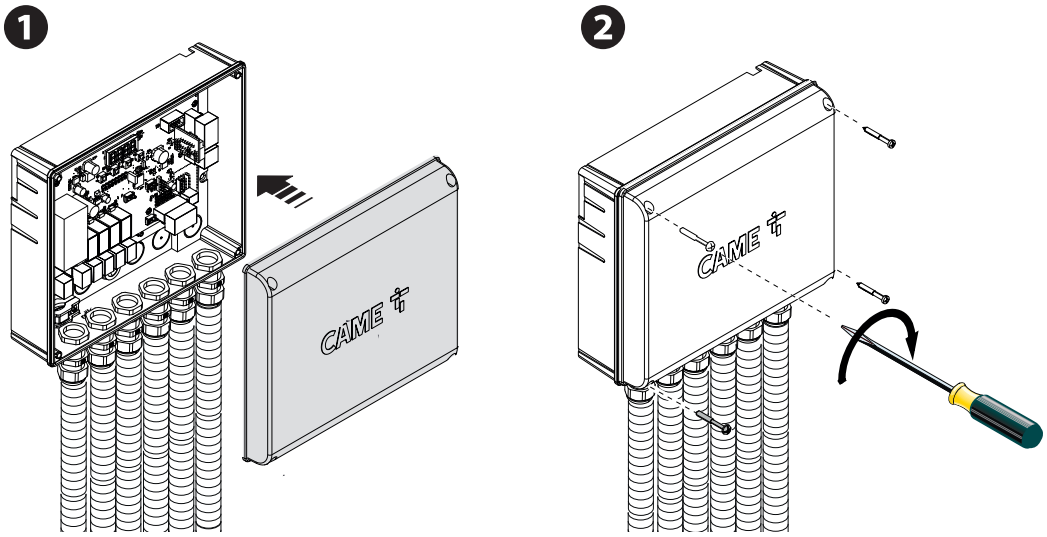
E15	Incompatible transmitter error
E25	Address settings error on BUS devices

NOTICES

OffA	Error communicating with operator A
Offb	Error communicating with operator b
OffC	Error communicating with operator C
Offd	Error communicating with operator d

FINAL OPERATIONS

Before closing up the casing, check that the cable inlets are sealed to stop insects getting in and to prevent damp.



⚠

AFFIX THE PRODUCT LABEL FROM THE BOX HERE

CAME

CAME.COM

CAME S.P.A.
Via Martiri della Libertà, 15
31030 Dosson di Casier
Treviso – Italy
Tel. (+39) 0422 4940
Fax (+39) 0422 4941