CAME

CAME.COM

FA01578-EN

Control panel for 24 V gearmotors

ZLX24MA

ZLX24MR

INSTALLATION MANUAL

EN English

GENERAL PRECAUTIONS FOR INSTALLERS

⚠ Important safety instructions.

⚠ Please follow all of these instructions. Improper installation may cause serious bodily harm.

⚠ Before continuing, please also read the general precautions for users.

Only use this product for its intended purpose. Any other use is hazardous. • The manufacturer cannot be held liable for any damage caused by improper, unreasonable or erroneous use. • This product has been designed to be assembled to partly completed machinery and/or equipment so as to build machinery as regulated by the Machinery Directive 2006/42/EC. • The final installation must comply with the Machinery Directive (2006/42/EC) and the European reference standards in force. • The manufacturer declines any liability for using non-original products, which would also void the warranty. • All operations indicated in this manual must be carried out exclusively by skilled and qualified personnel and in full compliance with the regulations in force. • The device must be installed, wired, connected and tested according to good professional practice, in compliance with the standards and laws in force. • Make sure the mains power supply is disconnected during all installation procedures. • All the components (e.g. actuators, photocells and sensitive edges) needed for the final installation to comply with the Machinery Directive (2006/42/EC) and with the reference harmonised technical standards are specified in the general CAME product catalogue or on the website www.came.com. • Check that the temperature ranges given are suitable for the installation site. • Make sure that no direct jets of water can wet the product at the installation site (sprinklers, water cleaners, etc.). • Make sure you have set up a suitable dual-pole cut-off device along the power supply that is compliant with the installation rules. It should completely cut off the power supply according to category III surcharge conditions. • Demarcate the entire site properly to prevent unauthorised personnel from entering, especially minors. • Use suitable protection to prevent any mechanical hazards due to persons loitering within the operating range of the operator. • The electrical cables must pass through special pipes, ducts and cable glands in order to guarantee adequate protection against mechanical damage. • The electrical cables must not touch any parts that may overheat during use (such as the motor and transformer).

• Before installation, check that the guided part is in good mechanical condition, and that it opens and closes correctly. • The product cannot be used to automate any guided part that includes a pedestrian gate, unless it can only be enabled when the pedestrian gate is secured. • Make sure that nobody can become trapped between the guided and fixed parts, when the guided part is set in motion. If you are automating a pedestrian gate that moves horizontally, this can be achieved if the corresponding distance is less than 8 mm. However, the distances indicated below are sufficient to avoid trapping the corresponding body parts:
- fingers, more than 25 mm;
- feet, more than 50 mm;
- head, more than 300 mm;
- for the entire body, more than 500 mm.

If you cannot achieve these distances, you will need to take suitable safety precautions. • All fixed controls must be clearly visible after installation, in a position that allows the guided part to be directly visible, but far away from moving parts. In the case of a hold-to-run control, this must be installed at a minimum height of 1.5 m from the ground and must not be accessible to the public. • Where operated with a hold-to-run control, install a STOP button to disconnect the main power supply to the operator, to block movement of the guided part. • If not already present, apply a permanent tag that describes how to use the manual release mechanism close to it. • Make sure that the operator has been properly adjusted and that the safety and protection devices and the manual release are working properly. • Before handing over to the final user, check that the system complies with the harmonised standards and the essential requirements of the Machinery Directive (2006/42/EC). • Any residual risks must be indicated clearly with proper signage affixed in visible areas, and explained to end users. • Put the machine's ID plate in a visible place when the installation is complete. • If the power supply cable is damaged, it must be immediately replaced by the manufacturer or by an authorised technical assistance centre, or in any case, by qualified staff, to prevent any risk.

• Keep this manual inside the technical folder along with the manuals of all the other devices used for your automation system. • Make sure to hand over to the end user all the operating manuals of the products that make up the final machinery. • 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 serviceinternational@came.com 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

☞ CAME S.p.A. employs an Environmental Management System at its premises. This system is certified and compliant with the UNI EN ISO 14001 standard to ensure that the environment is respected and safeguarded. Please continue safeguarding the environment. At CAME we consider it one of the fundamentals of our operating and market strategies. Simply follow these brief disposal guidelines:

♻ DISPOSING OF THE PACKAGING

The packaging materials (cardboard, plastic, etc.) can be disposed of easily as solid urban waste, separated for recycling. Before dismantling and disposing of the product, please always check the local laws in force.

DISPOSE OF THE PRODUCT RESPONSIBLY.

♻ DISPOSING OF THE PRODUCT

Our products are made of various materials. Most of these materials (aluminium, plastic, iron and electrical cables) are classified as solid urban waste. They can be separated for recycling and disposed of at authorised waste treatment plants. Other components (electronic boards, transmitter batteries, etc.) may contain pollutants.

These must be removed and disposed of by 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.

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

801QA-0050

ZLX24MA - Multifunction control panel, with 230 VAC power supply, for 24 V swing gates with two leaves, with programming display and signalling, safety device self-diagnostics, adaptive speed and torque technology, BUS CXN, 2 safety inputs and memory space for up to 250 users.

801QA-0070

ZLX24MR - Multifunction control panel, with 120 VAC power supply, for 24 V swing gates with two leaves, with programming display and signalling, safety device self-diagnostics, adaptive speed and torque technology, BUS CXN, 2 safety inputs and memory space for up to 250 users.

Technical data

MODELS	ZLX24MA	ZLX24MR
Power supply (V - 50/60 Hz)	230 AC	120 AC
Motor power supply (V)	36 DC	36 DC
Board power supply (V)	26 AC	26 AC
Standby consumption (W)	3	3
Power (W)	360	360
Transformer thermal protection (°C)	120	120
Colour	RAL 7040	RAL 7040
Operating temperature (°C)	-20 ÷ +55	-20 ÷ +55
Storage temperature (°C)*	-20 ÷ +70	-20 ÷ +70
Cycles/hour	20	20
Consecutive cycles	20	20
Protection rating (IP)	54	54
Insulation class	I	I
Average life (cycles)**	100.000	100.000

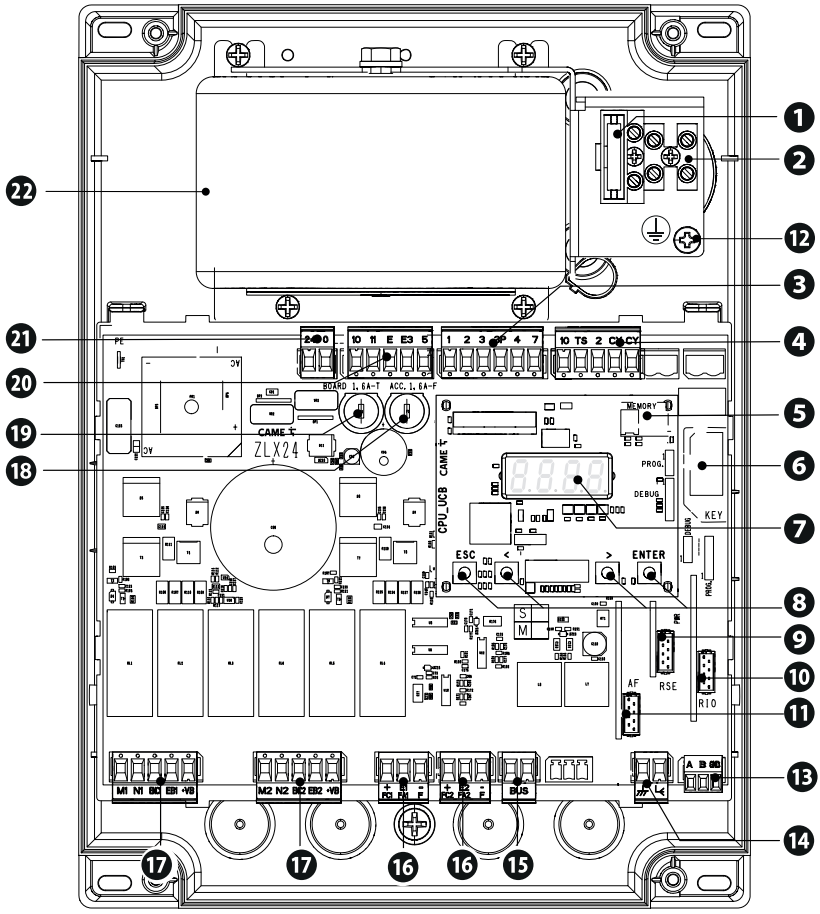
(*) Before installing the product, keep it at room temperature where it has previously been stored or transported at a very high or very low temperature.
(**) The average product life is a purely indicative estimate. It applies to compliant usage, installation and maintenance conditions. It is also influenced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

Fuse table

MODELS	ZLX24MA	ZLX24MR
Line fuse	3.15 A F	4 A F
Control-board fuse	1.6 A T	1.6 A T
Accessory fuse	1.6 A F	1.6 A F

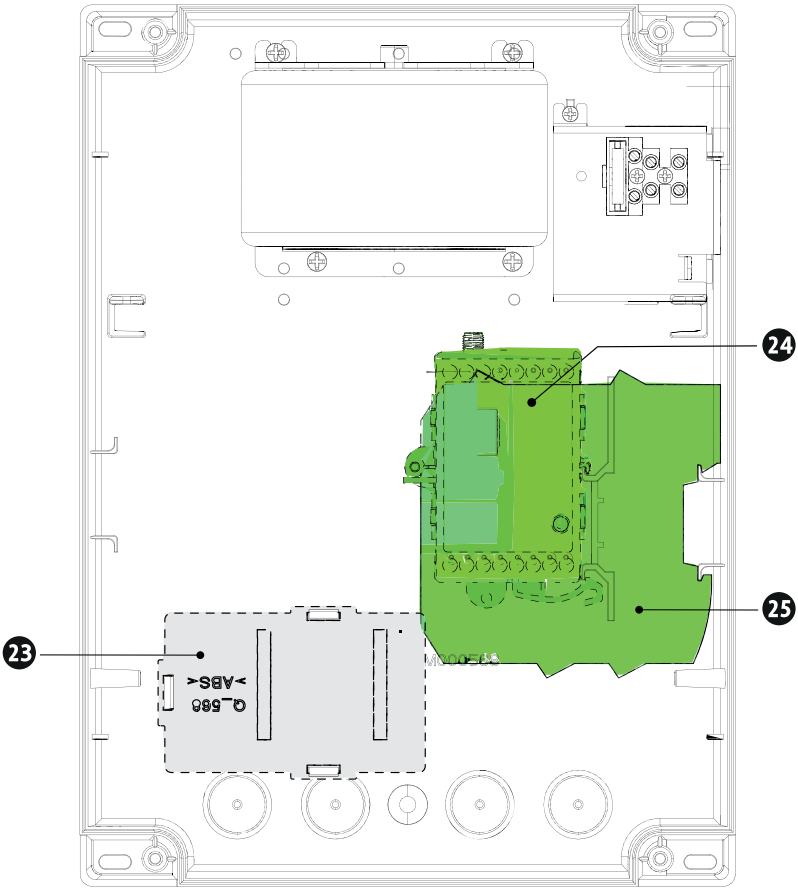
Description of parts

1. Line fuse
2. Power supply terminal block
3. Terminal board for connecting control devices
4. Terminal board for connecting the safety devices
5. Memory Roll card connector
6. Connector for CAME KEY
7. Display
8. Programming buttons
9. RSE card connector
10. RIO CONN card connector
11. Connector for plug-in radio frequency card (AF)
12. Earthing star point
13. Terminal board for CRP connection
14. Terminal board for connecting the antenna
15. Terminal board for BUS devices
16. Terminal boards for connecting micro limit switches and/or encoders
17. Terminal board for connecting the gearmotor with encoder or with slowdown switch and electric lock
18. Accessories fuse
19. Control board fuse
20. Terminal board for connecting the signalling devices
21. Terminal board for power supply to the control board
22. Transformer

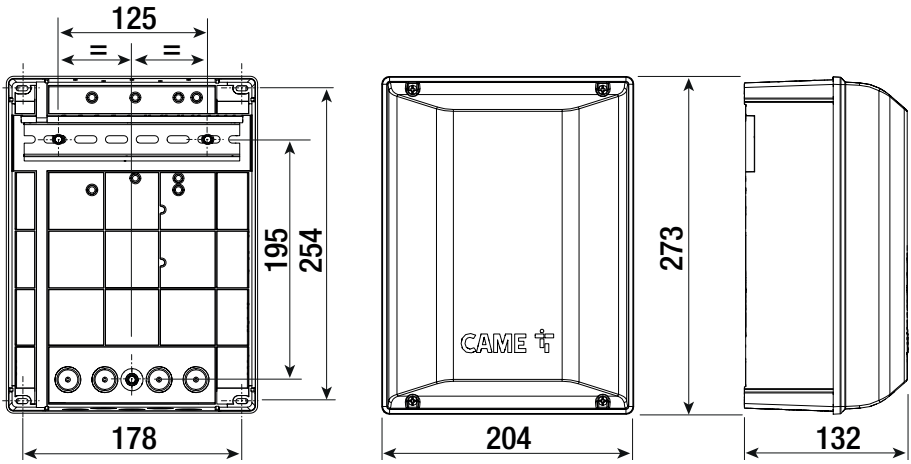


Optional accessories

23 RLB battery charger board (002RLB)
24 RGSM001 module (806SA-0010)
25 SMA module (009SMA)



Size



Cable types and minimum thicknesses

Cable length (m)	up to 20	from 20 to 30
Power supply 230 V AC	3G x 1.5 mm²	3G x 2.5 mm²
24 V AC/DC flashing beacon	2 x 0.5 mm²	2 x 0.5 mm²
TX Photocells	2 x 0.5 mm²	2 x 0.5 mm²
RX photocells	4 x 0.5 mm²	4 x 0.5 mm²
12 V DC electric lock	2 x 1 mm²	2 x 1.5 mm²
Command and control devices	*no. x 0.5 mm²	*no. x 0.5 mm²

* no. = see product assembly instructions

Warning: the cable cross-section is indicative and varies according to the motor power and cable length.

📖 When operating at 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.

📖 To connect the encoder, use a FRORPU 3 x 0.5 mm² cable or a cable supplied by CAME on request (item code 801XA-0020).

BUS cable table

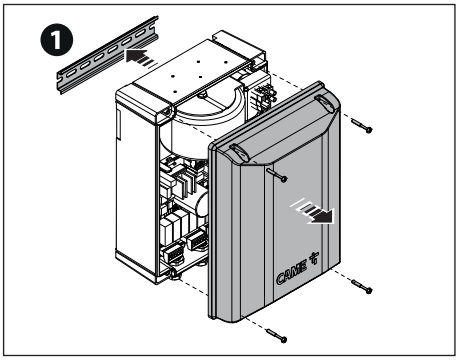
📖 We recommend using a FROR 2x1mm² cable, maximum length from the control board: 50 m.

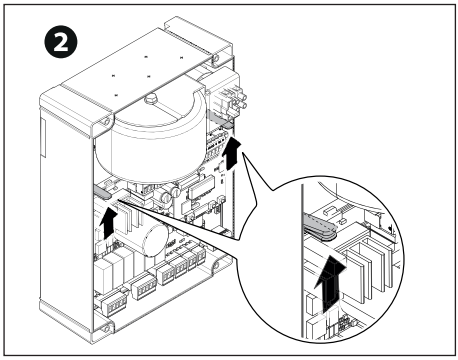
Single branch length (m)	max. 50 m
BUS cable	2 x 1 mm²

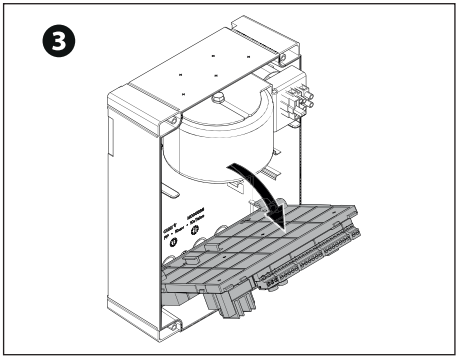
📖 The total length of all branches can be a maximum of 150 m.

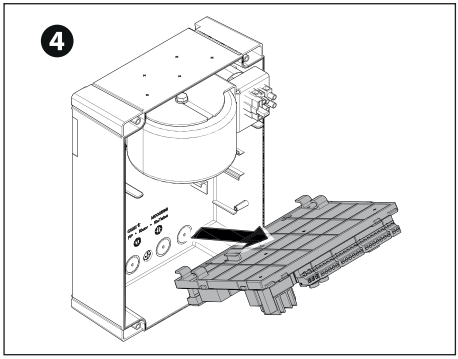
📖 The cable cannot be shielded.

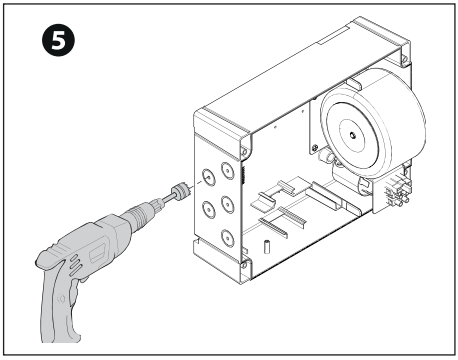
Preparing the control panel





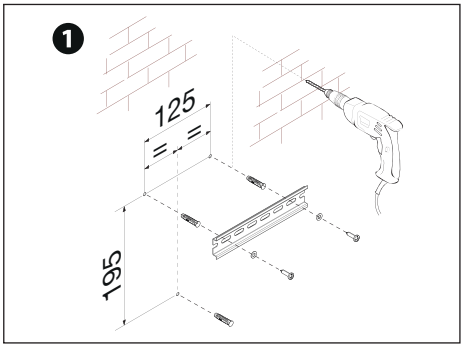


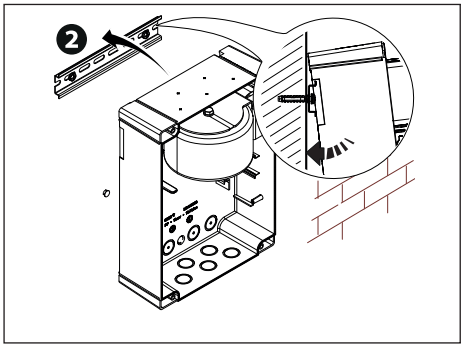


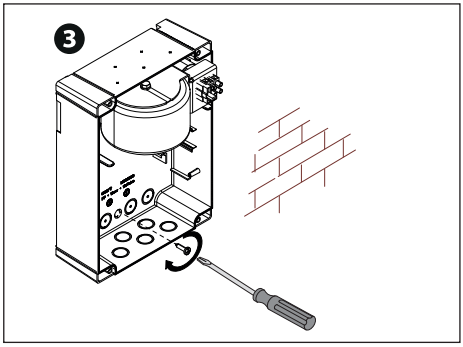


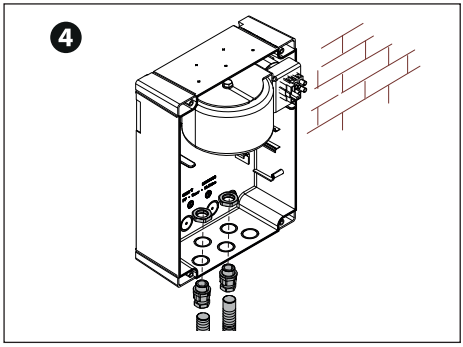
Fastening the control panel

DIN rail

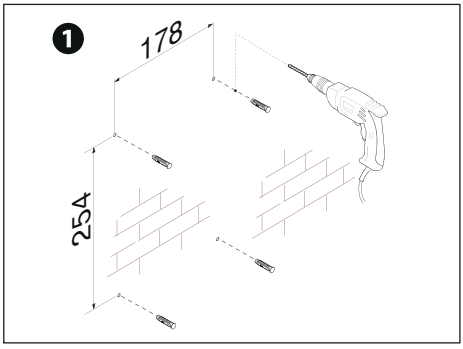


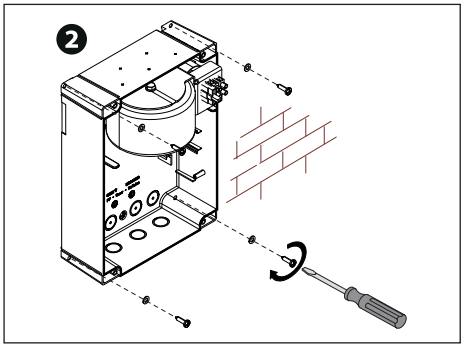






Standard



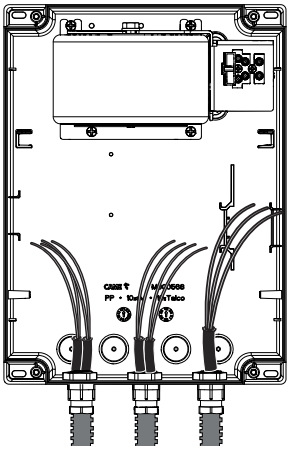


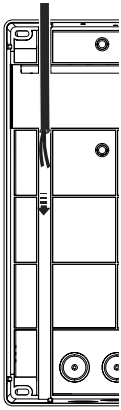
ELECTRICAL CONNECTIONS

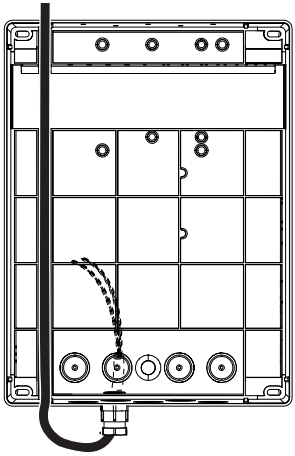
Preparing the electrical cables

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.





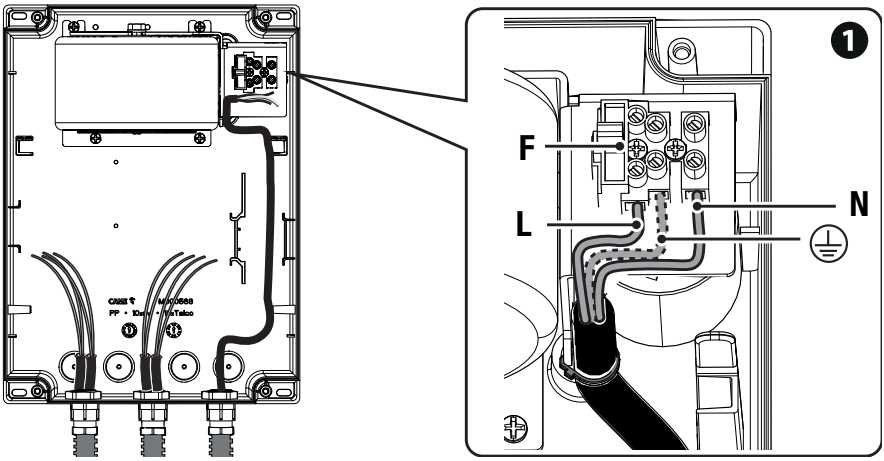


Power supply

❶ Connecting to the mains (230/120 V AC - 50/60 Hz)

F - Line fuse
L - Phase
N - Neutral
⏚ Earth

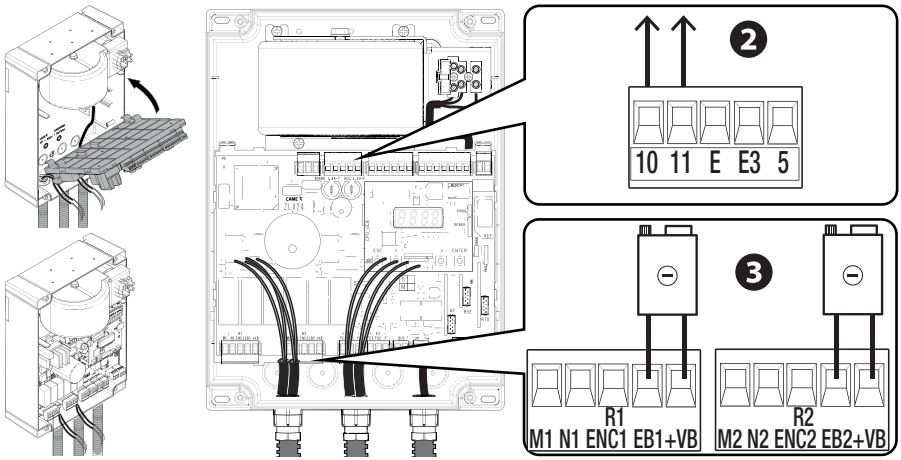
📖 **The strap used to fix the cables is not supplied.**



❷ Power supply output for accessories

The output normally delivers 26 V AC.
The output delivers 24 V DC (10+, 11-) when the batteries start operating, if they are installed.

❸ Connection to one or two electric locks 12 V AC/DC - max 15 W



Maximum capacity of contacts

The total power of the outputs listed below must not exceed the maximum output power [Accessories]

Device	Output	Power supply (V)	Maximum power (W)
Accessories	10 - 11	26 AC	20
Additional light	10 - E3	26 AC	10
Flashing beacon	10 - E	26 AC	10
Operator status warning light	10 - 5	26 AC	3

The outputs deliver 24 V DC when the batteries start operating, if they are installed.

Device	Output	Power supply (V)	Power (W)
BUS CXN	BUS	15 DC	15

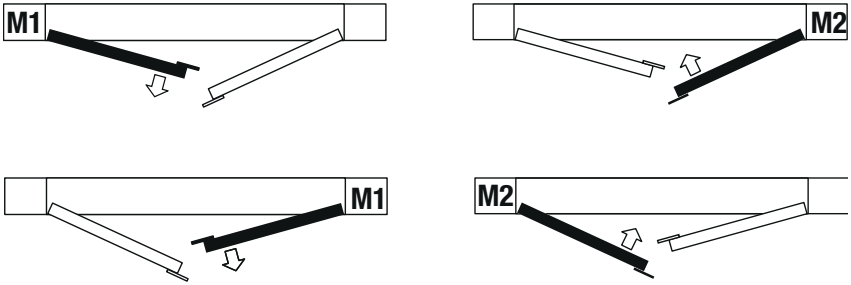
Do not connect anything other than CAME BUS accessories.

Gearmotors

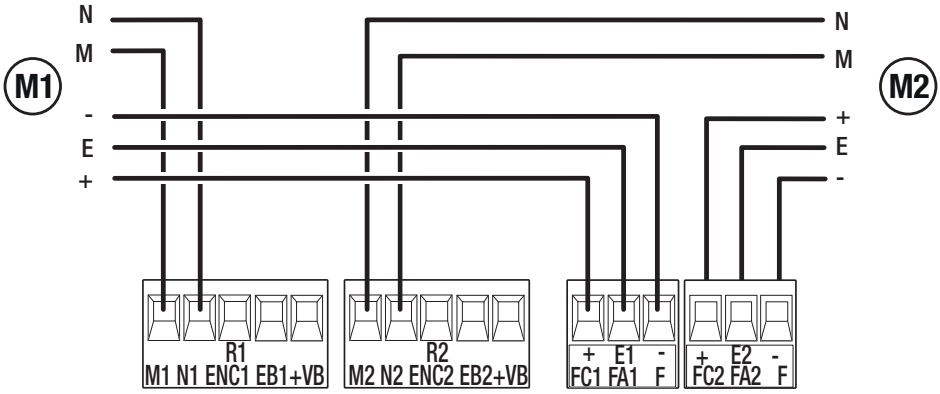
M1 =Gearmotor delayed while opening

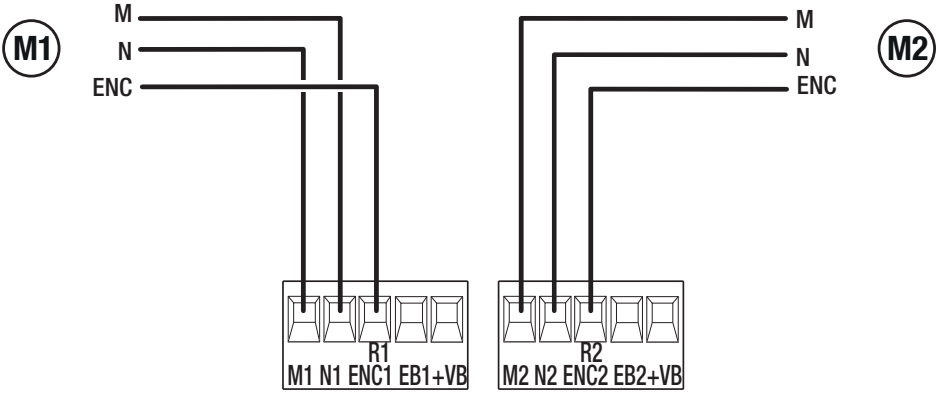
M2 =Gearmotor delayed while closing

Where there is only one gearmotor in the system, make the electrical connections on the gearmotor (M2).

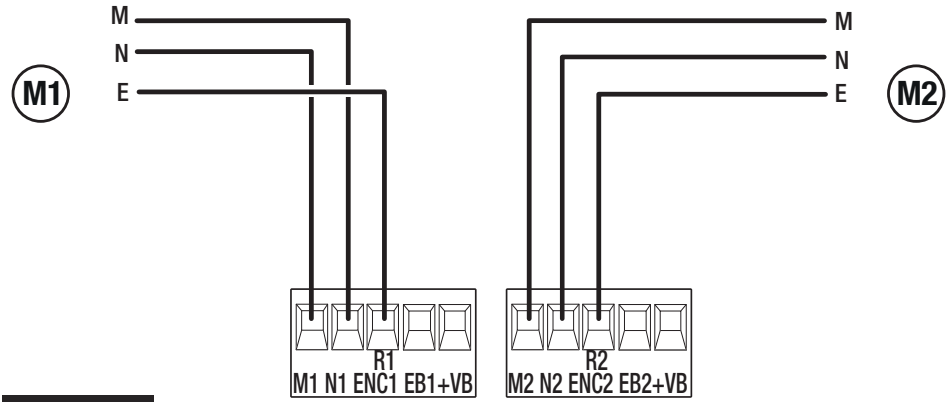


Gearmotor with encoder

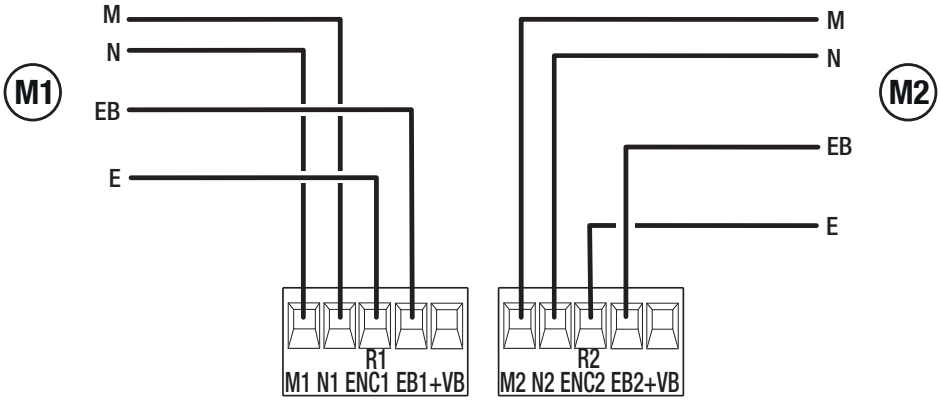




ATS / AX0 / FTX / FAST-70 / AMICO / AXI

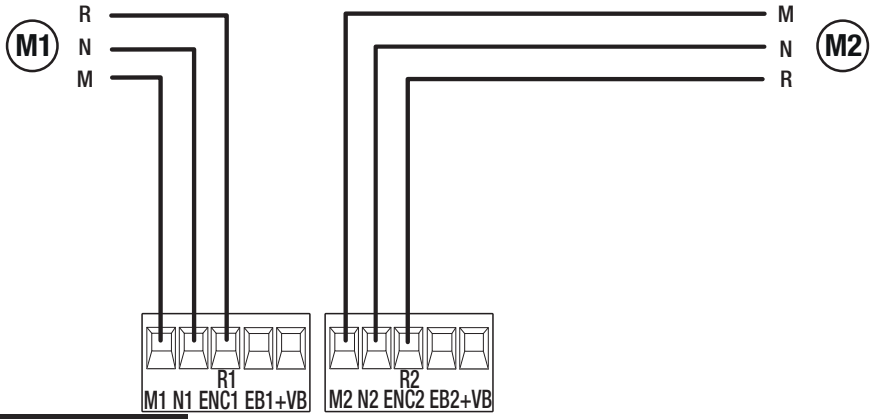


STYLO-RME

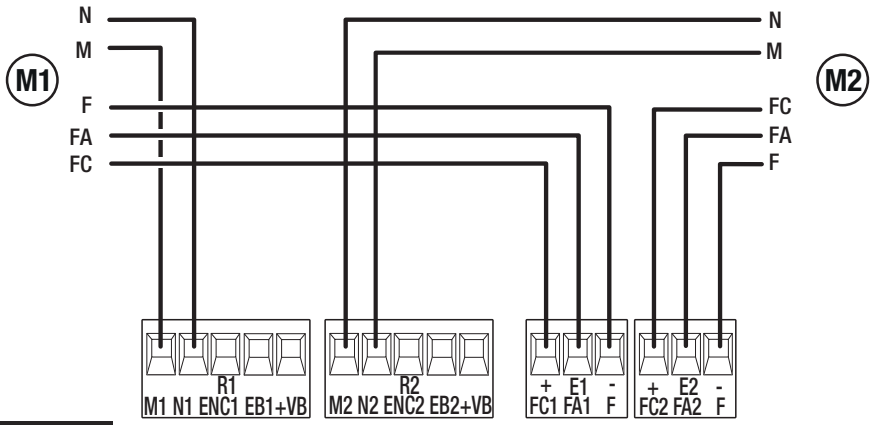


STYLO-ME

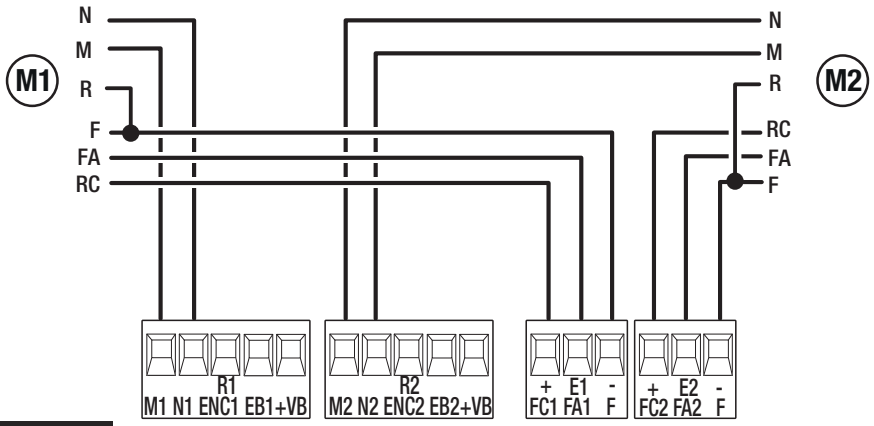
Gearmotors with slowdown switches



A3024N / A5024N



FROG-A24



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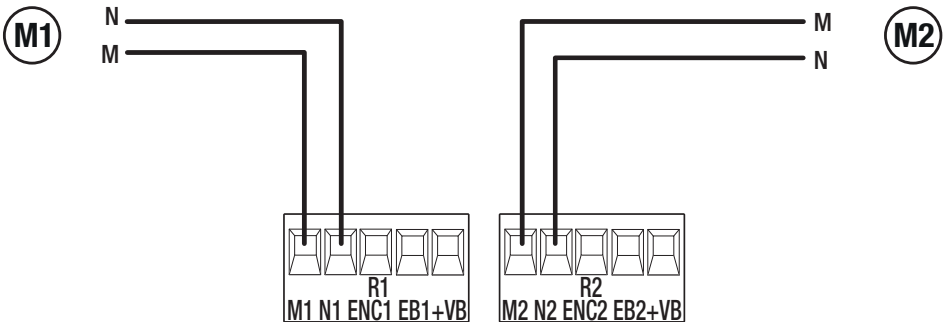
Gearmotors without encoder



Devices with BUS CXN system

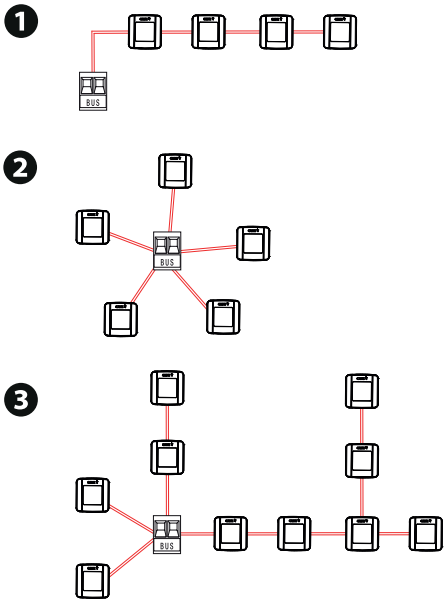
The CXN CAME system is a two-wire non-polarised communication BUS which allows you to connect up all compatible CAME devices.

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. This method allows you to configure the set-up immediately without having to do so later and intervene directly on the accessories and system wiring.

Cabling

1. Chain connection
2. Star connection
3. Mixed connection



Cable type

⚠ **We recommend using a FROR 2x1mm² cable, maximum length from the control board: 50 m.**

Single branch length (m)	max. 50 m
BUS cable	2 x 1 mm²

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

📖 **The cable cannot be shielded.**

Maximum number of devices that can be connected, by type

Type of device	Maximum number of devices per type
Selectors	7
Photocell pairs	8
Flashing beacons	2

Command and control devices

❶ STOP button (NC contact)

Stop the gate and exclude automatic closing. Use a control device to resume movement.

📖 **When the contact is being used, it must be activated during programming.**

❷ Control device (NO contact)

OPEN ONLY function

📖 **When the [HOLD-TO-RUN] function is active, the control device must be connected during OPENING.**

❸ Control device (NO contact)

PARTIAL OPENING or PEDESTRIAN OPENING function

📖 **See [Adjusting partial opening] function.**

❹ Control device (NO contact)

CLOSE ONLY function

📖 **When the [HOLD-TO-RUN] function is active, the control device must be connected during CLOSING.**

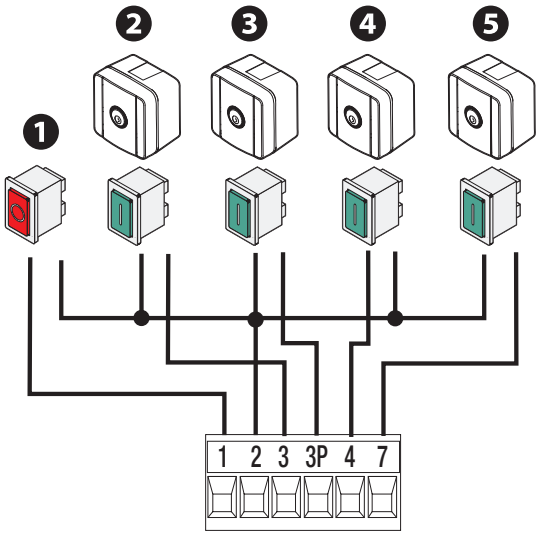
❺ Control device (NO contact)

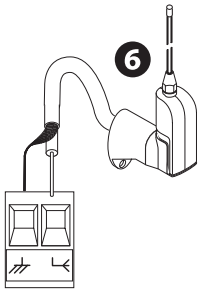
OPEN-CLOSE function

OPEN-STOP-CLOSE-STOP function

📖 **See control function 2-7.**

❻ Antenna with RG58 cable





Signalling devices

❶ Flashing beacon

It flashes when the operator opens and closes.

❷ Additional light

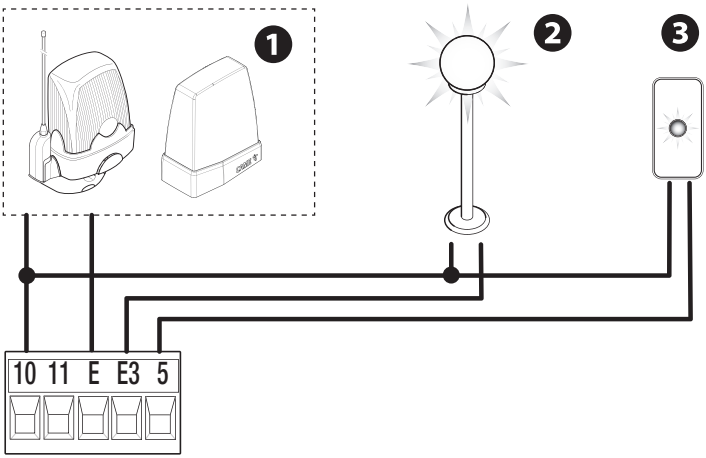
It increases the light in the manoeuvring area.

📖 **See [Additional light] function.**

❸ Operator status warning light

It notifies the user of the operator status.

📖 **See function [Passage-open warning light].**



Safety devices

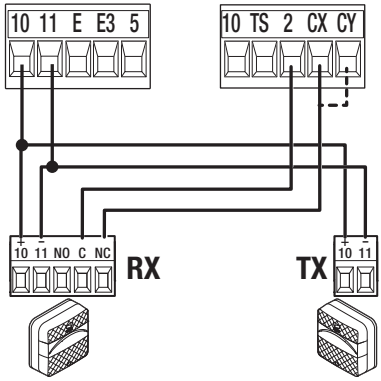
During programming, configure the type of action that must be performed by the device connected to the input.
Connect the safety devices to the CX and/or CY inputs.

If used, the contacts CX CY must be configured during programming.

For systems with multiple pairs of photocells, please see the manual for the relevant accessory.

DELTA photocells

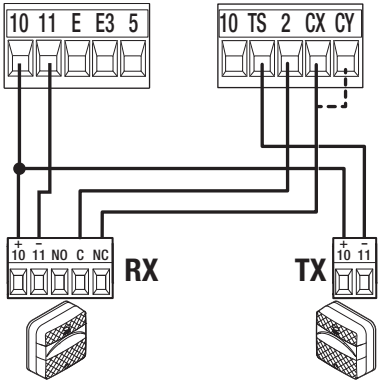
Standard connection



DELTA photocells

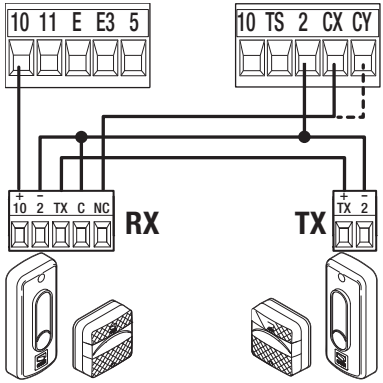
Connection with safety test

See [Safety devices test] function.



DIR / DELTA-S photocells

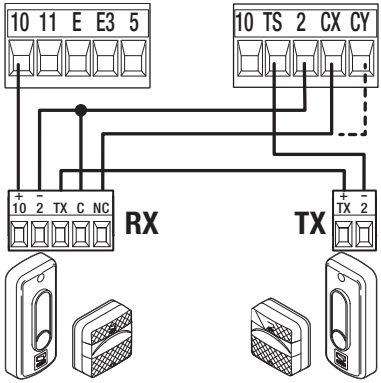
Standard connection



DIR / DELTA-S photocells

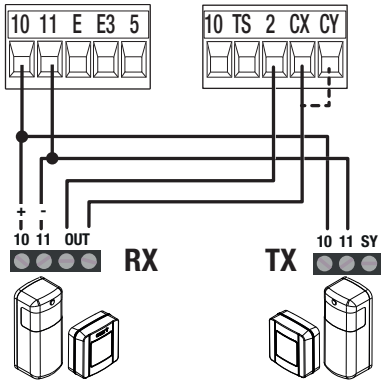
Connection with safety test

See [Safety devices test] function.



DXR - DLX photocell

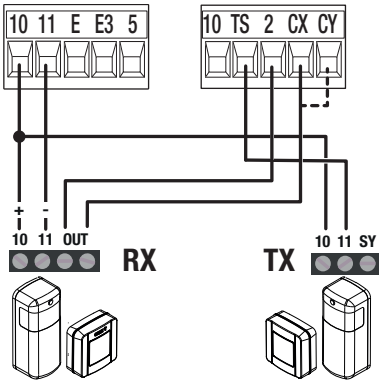
Standard connection



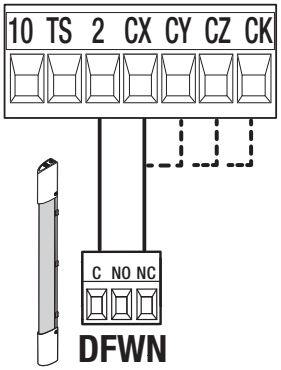
DXR - DLX photocell

Connection with safety test

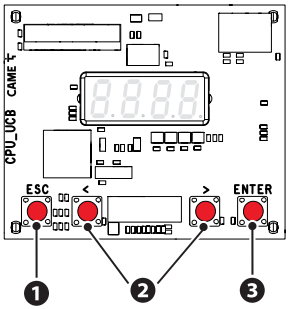
See [Safety devices test] function.



DFWN sensitive edge



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

Outside the menu, the ESC key stops the gate and the < > keys open and close the gate.

Getting started

📖 **Once the electrical connections have been made, proceed with commissioning. Only skilled and qualified staff may perform this operation.**

Make sure that there are no obstacles in the way.

Power up the device and begin programming.

Start programming with the functions indicated below.

A1 Motor type

F46 Number of motors

A2 Motor test
> open the M2 leaf
< open the M1 leaf
📖 **Check that both leaves open. If they do not, invert M and N on the relevant terminal.**

F2 CX input

F3 CY input

F72 Limit-switch function*

F73 Input type FC/FA**

A8 Motor power**

A3 Travel calibration

***Only with end-of-travel microswitches used.**

****Only with generic motor [Function A1 set at 0].**

📖 **If "A1" scrolls across the display, this means the type of motor must be set before any other parameters can be modified.**

📖 **If "A3" scrolls across the display, calibrate the travel. The panel does not accept motion commands, except for the motor test (A2).**

📖 **Complete programming and check the warning and safety devices are working properly.**

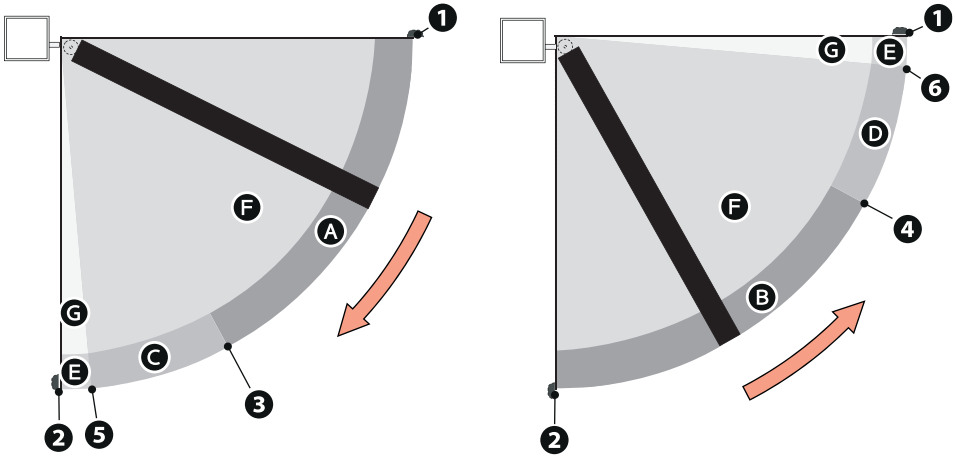
📖 **After powering up the system, the first manoeuvre is always to open the gate Wait for the manoeuvre to be completed.**

📖 **Press the ESC button or STOP button immediately in the event of any faults, malfunctions, strange noises or vibrations, or unexpected behaviour in the system.**

Diagrams showing leaf speed, slowdown and approach points

1. Closing limit-switch
2. Opening limit-switch
3. Opening slowdown point
4. Closing slowdown point
5. Opening approach point
6. Closing approach point

A. Opening speed
B. Closing speed
C. Opening slowdown speed
D. Closing slowdown speed
E. Approach speed (fixed)
F. Invert-motion zone in case of obstructions
G. Stop-motion zone in case of obstructions

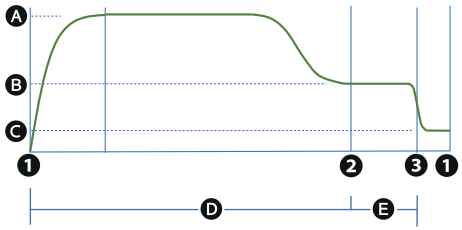


Graph showing speed curves during movement, slowdown and approach.

📖 **Moving between the various speeds always involves a gentle acceleration/slowdown slope.**

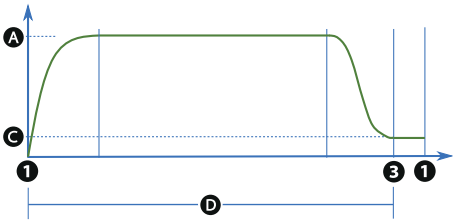
Using slowdown space (slowdown space > 0)

📖 **With a slowdown space greater than 0, the obstruction detector, when near the approach points, is more sensitive, as per the impact testing.**



A. Opening or closing speed
B. Opening or closing slowdown speed
C. Approach speed (fixed)
D. Obstruction travel sensitivity
E. Slowdown obstruction sensitivity
1. Opening or closing limit-switch
2. Opening or closing slowdown point
3. Opening or closing approach point

Without using slowdown space (slowdown space = 0)



A Opening or closing speed
C Approach speed (fixed)
D Obstruction travel sensitivity
1 Opening or closing limit-switch
3 Opening or closing approach point

Virtual encoder

For gearmotors without an encoder or with the encoder deactivated, travel is managed using a VIRTUAL ENCODER.

ALWAYS calibrate the travel, as with motors with an encoder.

If, during calibration (no encoder), the panel does not automatically detect the strike plate signalling a change of status on the display (in the order CL1, CL2, OP2, OP1), repeat the operation as follows:

- Close M1 and "CL1" appears on the display. When it hits the strike plate, press the ENTER button.
- Close M2 and "CL2" appears on the display. When it hits the strike plate, press the ENTER button.
- Open M2 and "OP2" appears on the display. When it hits the strike plate, press the ENTER button.
- Open M1 and "OP1" appears on the display. When it hits the strike plate, press the ENTER button.
- The "calibration completed" symbol shows on the display, followed by the message "SER", to signal the encoder is deactivated.

Deactivating the encoder results in lower accuracy on slowdown points, approach points and obstacle detection. With AST control on slowdown deactivated, the gate will behave in the same way on both approach and slowdown and the detection of an obstacle will be interpreted as a travel end point.

Managing the travel and related parameters is done in the same way as described for motors with an encoder.

Functions menu

Total stop

Activate or deactivate input 2-1. If it is activated, the input is used as a normally closed contact.

With the input open, this function excludes all commands, including any automatic closing.

F1	OFF (Default) ON

CX input

Associate a function with the CX input.

F2	OFF (Default) C1 = Reopen while closing (photocells) C2 = Reclose while opening (photocells) C3 = Partial stop Only with [Automatic close] activated. C4 = Obstacle standby (photocells) C7 = Reopen while closing (sensitive edges) C8 = Reclose while opening (sensitive edges) C13 = Reopen while closing, with immediate stop once the obstruction has been removed, even if the gate is not in motion r7 = Reopen while closing (sensitive edges with 8K2 resistor) r8 = Reclose while opening (sensitive edges with 8K2 resistor) 2r7 = Reopen while closing (pair of sensitive edges with 8K2 resistor) 2r8 = Reclose while opening (pair of sensitive edges with 8K2 resistor)

CY input

Associate a function with the CY input.

F3	OFF (Default) C1 = Reopen while closing (photocells) C2 = Reclose while opening (photocells) C3 = Partial stop Only with [Automatic close] activated. C4 = Obstacle standby (photocells) C7 = Reopen while closing (sensitive edges) C8 = Reclose while opening (sensitive edges) C13 = Reopen while closing, with immediate stop once the obstruction has been removed, even if the gate is not in motion r7 = Reopen while closing (sensitive edges with 8K2 resistor) r8 = Reclose while opening (sensitive edges with 8K2 resistor) 2r7 = Reopen while closing (pair of sensitive edges with 8K2 resistor) 2r8 = Reclose while opening (pair of sensitive edges with 8K2 resistor)

Safety devices test

Check that the photocells connected to the inputs are operating correctly, after each opening and closing command.

📖 **Run the test by connecting the photocells to the TS terminal [see paragraph on Safety devices].**

F5	OFF (Default) 1 = CX 2 = CY 3 = CX+CY

Hold-to-run

With the function active, the operator stops moving (opening or closing) when the control device is released.

📖 **When the function is active, it excludes all other control devices.**

F6	OFF (Default) ON

Command 2-7

Associate a command to the connected device on 2-7.

F7	0 = Step-by-step (default) 1 = Sequential

Passage-open warning light

It signals the gate status.

The device is connected to output/terminal 5.

F10	0 = Warning light on (default) - The warning light stays on when the gate is moving or open. 1 = Warning light flashing - The warning light flashes every half second when the gate is opening and stays on when the gate is open. The light flashes every second when the gate is closing, and remains off when the gate is closed.

Encoder

Use the encoder input from the motor.

📖 **The parameter is only available for motors that have an encoder.**

F11	ON (Default) OFF

Closing thrust

When the leaves reach the closing limit-switch, the operator thrusts them towards the strike plate for a second.

F13	OFF (Default) 1 = Minimum thrust 2 = Medium thrust 3 = Maximum thrust

Thrust

Before every opening or closing manoeuvre, the leaves thrust inwards to release the electric lock.

📖 **The thrust motion is performed during opening or closing, depending on where the electric lock is active (see function F17).**

F16	OFF (Default) ON

Electric lock

Associate the electric lock release with a command.

F17	OFF (Default) 1 = From closed 2 = From open 3 = From open and closed 4 = Continue

Additional light

Choose the operating mode for the lighting device connected to output E3.

F18	OFF (Default) 1 = Cycle light The lamp stays on during the manoeuvre. 📖 **The light remains off if an automatic closing time is not set.** 2 = Courtesy lamp The light switches on when a manoeuvre starts and remains on once the manoeuvre has finished, for the time set under the function [F25 Courtesy time].

Automatic closure

Set the time before automatic closure, once the opening travel end point has been reached or once the photocells have caused a partial stop [C3].

📖 **The function does not work if any of the safety devices are triggered when an obstacle is detected, after a complete stop, during a power outage or if there is an error.**

F19	OFF (Default) From 1 to 180 seconds

Automatic closing after either partial or pedestrian opening

Set the time before automatic closure after a partial opening command has been performed or after the photocells have caused a partial stop [C3].

📖 **The function does not work if any of the safety devices are triggered when an obstacle is detected, after a complete stop, during a power outage or if there is an error.**

F20	OFF 1 to 180 seconds (Default 10)

Pre-flashing time

Adjust the time for which the beacon is activated before each manoeuvre.

F21	OFF (Default) 1 to 10 seconds

M1 opening delay time

Adjust the delayed opening of the first leaf compared to the second.

F23	OFF 1 to 10 seconds (Default 2)

M2 closing delay time

Adjust the delayed opening of the second leaf compared to the first.

F24	OFF 1 to 25 seconds (Default 2)

Courtesy time

Define how many seconds the additional light (set up as courtesy light) stays on after an opening or closing manoeuvre.

F25	60 to 180 seconds (Default 60)

M1 leaf opening and closing speed
Set the M1 travel speed (percentage of maximum speed).

F28	40% to 100% (Default 70%)

M2 leaf opening and closing speed
Set the M2 travel speed (percentage of maximum speed).

F29	40% to 100% (Default 70%)

M1 leaf opening and closing slowdown speed
Set the M1 slowdown speed during opening and closing (as a percentage of the maximum speed).
📖 **The parameter is only used with [Opening slowdown point of M1] or [Closing slowdown point of M1] functions active.**
📖 **For Stylo ME and Stylo RME motors it might be necessary to reduce the minimum voltage applicable to the motor to achieve the desired slowdown percentage. See function [F45 - Reduction of speed].**

F30	10% to 50% (Default 40%)

M2 leaf opening and closing slowdown speed
Set the M2 slowdown speed during opening and closing (as a percentage of the maximum speed).
📖 **The parameter is only used with [Opening slowdown point of M2] or [Closing slowdown point of M2] functions active.**
📖 **For Stylo ME and Stylo RME motors it might be necessary to reduce the minimum voltage applicable to the motor to achieve the desired slowdown percentage. See function [F45 - Reduction of speed].**

F31	10% to 50% (Default 40%)

Travel AST control
Adjust the obstruction detection sensitivity during the gate travel in percentage terms.

F34	10% to 100% (Default 100%) 📖 **10% = minimum thrust and high obstruction sensitivity** 📖 **100 % =maximum thrust and low obstruction sensitivity**

Slowdown AST control
Adjust the obstruction detection sensitivity during slowdown in percentage terms.
📖 **The parameter is only used if the opening or closing slowdown point is active.**

F35	10% to 100% (Default 100%) 📖 **10% = minimum thrust and high obstruction sensitivity** 📖 **100 % =maximum thrust and low obstruction sensitivity**

Adjusting the partial opening
For single-leaf gates, it determines the partial opening percentage of the leaf with respect to the total travel.
For two-leaf gates, it determines the partial opening percentage of the M2 leaf with respect to the total travel.
📖 **100% = Pedestrian opening**

F36	10% to 100% (Default 100%)

Opening slowdown point for M1
Set the percentage of the total travel to be used for M1 opening slowdown.

F37	OFF (Default) 1% to 50%

M1 closing slowdown point
Set the percentage of the total travel to be used for M1 closing slowdown.

F38	OFF (Default) 1% to 50%

M1 opening approach point
Set the percentage of the total travel to be used for M1 opening approach.

F39	0.5% to 25.0% (Default 8.0%)

M1 closing approach point
Set the percentage of the total travel to be used for M1 closing approach.

F40	0.5% to 25.0% (Default 8.0%)

Opening slowdown point for M2
Set the percentage of the total travel to be used for M2 opening slowdown.

F41	OFF (Default) 1% to 50%

M2 closing slowdown point
Set the percentage of the total travel to be used for M2 closing slowdown.

F42	OFF (Default) 1% to 50%

Opening approach point for M2
Set the percentage of the total travel to be used for M2 opening approach.

F43	0.5% to 25.0% (Default 8.0%)

Closing approach point for M2
Set the percentage of the total travel to be used for M2 closing approach.

F44	0.5% to 25.0% (Default 8.0%)

Reduce speed
Reduce the minimum voltage applicable to the motor.
📖 **The parameter is only available for the Stylo ME and Stylo RME motors.**

F45	OFF (Default) 1% to 50%

Number of motors

Set the number of motors that control the gate.

📖 **Value 1 indicates that the M2 motor is being used**

F46	2 (Default) 1

Save data

Save user data, timings and configurations to the memory device (memory roll).

📖 **The function is displayed only when a memory roll card is inserted into the control board.**

F50	OFF ON (Run operation)

Read data

Upload user data, timings and configurations to the memory device (memory roll).

📖 **The function is displayed only when a memory roll card is inserted into the control board.**

F51	OFF ON (Run operation)

CRP address

Assign a unique identification code (CRP address) to the 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)

Configure maintenance

Set the number of manoeuvres the operator can perform before a maintenance warning signal is generated.

📖 **The warning is displayed as an [SEr] message and signalled by 3 + 3 flashes every hour on the device connected to the 10-5 output.**

F58	OFF (Default) 1X100 to 500X100

RSE speed

Set the communication speed of the remote connection system.

F63	2 = 4800 bps 3 = 9600 bps 4 = 14400 bps 5 = 19200 bps 6 = 38400 bps (default) 7 = 57600 bps 8 = 115200 bps

RIO ED T1

Associate one of the available functions with a wireless safety device.

📖 **The function only appears if the RIO CONN interface board is present.**

F65	OFF (Default) P0 = It stops the gate and excludes automatic closing. Use a control device to resume movement. P7 = Reopen while closing. P8 = Reclose while opening.

RIO ED T2

Associate one of the available functions with a wireless safety device.

📖 **The function only appears if the RIO CONN interface board is present.**

F66	OFF (Default) P0 = It stops the gate and excludes automatic closing. Use a control device to resume movement. P7 = Reopen while closing. P8 = Reclose while opening.

RIO PH T1

Associate one of the available functions with a wireless safety device.

📖 **The function only appears if the RIO CONN interface board is present.**

F67	OFF (Default) P1 = Reopen while closing. P2 = Reclose while opening. P3 = Partial stop. Only with [Automatic close] activated. P4 = Obstacle standby. P13 = Reopening during closure with immediate stop once the obstacle has been removed, even with the gate not in motion.

RIO PH T2

Associate one of the available functions with a wireless safety device.

📖 **The function only appears if the RIO CONN interface board is present.**

F68	OFF (Default) P1 = Reopen while closing. P2 = Reclose while opening. P3 = Partial stop. Only with [Automatic close] activated. P4 = Obstacle standby. P13 = Reopening during closure with immediate stop once the obstacle has been removed, even with the gate not in motion.

Limit-switch function

Set the operation of the inputs for slowdown/end-of-travel switches.

📖 **The function only appears for motors configured for this purpose.**

📖 **After modifying the function of the slowdown/end-of-travel inputs, recalibrate [Function A3]**

📖 **If the inputs are used for slowdown, once calibration is complete, the board automatically sets the slowdown points. These parameters can, however, be modified. They allow for slowdown even if the slowdown switch is not seen.**

📖 **The type of input (N.O. or N.C.) can be modified only with the generic motor [Function F73]. In all other cases, use the type envisaged by the specific motor.**

F72	OFF = Deactivated 1 = Opening limit-switch and closing limit-switch 2 = Slowdown (Default) 3 = Opening limit-switch, closing slowdown

Input type FC/FA

Set the type of inputs FC/FA

📖 **The function appears only with generic motors [Function A1 set at 0].**

F73	0 = N.O. (Default) 1 = N.C. 2 = N.C. for FA input, N.O. for FC input

Removing obstacles

If an obstacle is detected via the AST control on the board or by a safety edge input, the [Remove obstruction] function inverts the gate leaf far enough to free the obstruction, then it stops.

F83	OFF = Inversion caused by obstacle (Default) ON = Remove obstruction

New user

Register up to a maximum of 250 users and assign a function to each one.

📖 **The operation can be carried out by using a transmitter or a BUS selector device (e.g. a keypad or transponder reader). The board that manages the transmitters (AF) must be inserted into the connector.**

U1	1 = Step-by-step 2 = Sequential 3 = Open 4 = Pedestrian/partial opening Choose the function to be assigned to the user. Press ENTER to confirm. The free position in the memory is shown intermittently for a maximum of 10 seconds. During this phase, send the code from the control device. Repeat the procedure to add other users.

Remove user

Remove one of the registered users.

U2	No. 1 > 250 Use the arrows to choose the number associated with the user you want to remove. Alternatively, the control device associated with the user you want to remove can be activated. Press ENTER to confirm. 📖 **"CLr" will appear to confirm deletion.**

Remove all

Remove all registered users.

U3	OFF (Cancel operation) ON (Run operation)

Radio decoding

Choose the type of radio coding for the transmitters enabled to control the operator.

📖 **If you choose the type of radio coding for the transmitters [Rolling code] or [TW key block], any transmitters 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 (Default) ON

Motor type

Set the type of gearmotor installed on M1 and M2.

A1	0 = Generic 1 = STYLO-ME 2 = STYLO-RME 3 = FTX 4 = FAST-70 5 = AXI 6 = AMICO 7 = FERNI 8 = FERNI-V	9 = AXO 10 = A3024N/A5024N 11 = FROG-A24 12 = FROG-A24E (Default) 13 = ATS 14 = F1024 15 = F4024E 16 = F4024EP

Motor test

Check the gate leaves open in the right direction.

With the function active, the > key opens the gate leaf connected to M2, and the < key opens the gate leaf connected to M1. The movement continues while the key is pressed or until the end-of-travel limit switch is reached. When the key is released, the movement stops.

📖 **If the leaf does not move in the correct direction, invert the motor phases.**

📖 **The leaves will move at reduced speed.**

A2	----

Travel calibration

Start the travel self-learning.

A3	OFF (Cancel operation) ON (Run operation)

Parameter reset

Restore the factory configurations except for: [users], [timers], [number of motors], [motor type], [CRP address], [limit-switch inputs function], [RSE speed], [password] and the settings related to the travel calibration.

A4	OFF (Cancel operation) ON (Run operation)

Manoeuvre counter

View the number of total or partial operator manoeuvres (after maintenance).

📖 **The number of manoeuvres is the number shown multiplied by 100.**

A5	Tot = total manoeuvres Manoeuvres performed since the operator was installed. Par = partial manoeuvres Manoeuvres carried out after the last maintenance. 📖 **Under the [Par] parameter, press the ENTER key to reset the number of partial manoeuvres. [Clr] will appear on the screen to confirm deletion.**

Motor power

Setting power range of motors connected on M1 and M2.

📖 **The parameter is used only with generic motors [Function A1 set at 0].**

A8	1 = Minimum power [up to 120W] 2 = Medium power (Default) [up to 200W] 3 = Maximum power [more than 200W]

FW version

Display the firmware version and the GUI installed.

H1	Use the < > arrows to show the versions of the display board and the control board one after the other.

Enable password

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

H3	OFF (Default) ON Use the arrows and the Enter button to dial the desired code.

Forgotten password

If you lose the password, you will need to reset the board to its factory settings. See [Factory reset].

Factory reset

To restore the electronic board data to factory settings:
Disconnect the control board from the power supply and wait for it to switch off.

Press and hold the < and > buttons, then reconnect the control board to the power supply.

Continue to press and hold the < > buttons until [ON/OFF] is displayed.

Select [ON].

Press ENTER to confirm.

📖 **When you reset the control board, all saved users, set times and calibration operations are deleted.**

BUS device status

Show the status of all devices that can be connected to the BUS and managed by the firmware in use.

Key	<x> device status
b = BUS photocells	ll = Conflicting address
d = BUS selector	o = Working
L = BUS flashing beacon	c = Working with alarm signal
<n> is the device number.	F = Device fault
<x> is the device status.	- = No communication or not present

H4	b<n>.<x> 📖 **<n> from 1 to 8** d<n>.<x> 📖 **<n> from 1 to 7** L<n>.<x> 📖 **<n> from 1 to 2**

Photocell BUS <n>

Associate a function with the photocell BUS <n> input.

📖 **<n> is between 1 and 8 and corresponds to the address set on the photocell dip-switch**

b1-b8	OFF (Default) C1 = Reopen while closing (photocells) C2 = Reclose while opening (photocells) C3 = Partial stop Only with [Automatic close] activated. C4 = Obstacle standby (photocells) C13 = Reopen while closing, with immediate stop once the obstruction has been removed, even if the gate is not in motion C23 = Open command C24 = Close command

<Mode> BUS flashing beacon

Choose the operating mode for the lights connected to the BUS connector.

📖 **The function only appears if there is a BUS flashing beacon connected.**

b40 >	**L1**	0 =Flashing beacon (Default) The light flashes during opening and closing. 1 = Cycle flashing beacon The light flashes during opening and closing and remains on during the countdown before automatic closure. 📖 **The colour of the flash depends on the functions [L2], [L3] and [L4].**

<Opening colour> BUS flashing beacon

Set the BUS flashing beacon colour during gate opening.

📖 **The function only appears if there is a BUS flashing beacon connected.**

📖 **During the count preceding automatic closure, the colour of the flashing beacon is the same as during opening.**

b40 >	**L2**	1 = White (Default) 2 = Yellow 3 = Orange 4 = Red 5 = Purple 6 = Blue 7 = Light blue 8 = Green

<Closing colour> BUS flashing beacon

Set the BUS flashing beacon colour during gate closing.

📖 **The function only appears if there is a BUS flashing beacon connected.**

b40 >	**L3**	1 = White (Default) 2 = Yellow 3 = Orange 4 = Red 5 = Purple 6 = Blue 7 = Light blue 8 = Green

<Pre-flashing colour> BUS flashing beacon

On the BUS flashing beacon, set the flash colour for before opening and closing manoeuvres (pre-flash).

📖 **The function only appears if there is a BUS flashing beacon connected.**

b40 >	**L4**	1 = White (Default) 2 = Yellow 3 = Orange 4 = Red 5 = Purple 6 = Blue 7 = Light blue 8 = Green

<Signal error> BUS flashing beacon

Set the colour of the BUS flashing beacon in the event of an error signal.

📖 **The warning light is activated after sending a command for movement.**

📖 **The function only appears if there is a BUS flashing beacon connected.**

b40 >	**L5**	0 =Deactivated (Default) 1 = White 2 = Yellow 3 = Orange 4 = Red 5 = Purple 6 = Blue 7 = Light blue 8 = Green

Signal maintenance

Set the colour of the flash on enabled BUS devices (flashing beacons and selectors) when maintenance is necessary. With the function activated, these devices will signal that maintenance needs to be carried out at the start of each manoeuvre.

📖 **Maintenance must be configured [Function F58].**

📖 **The function only appears if there is a BUS flashing beacon or a BUS selector connected.**

b43	0 =Deactivated (Default) 1 = White 2 = Yellow 3 = Orange 4 = Red 5 = Purple 6 = Blue 7 = Light blue 8 = Green

⚠ **When using a CAME KEY device, always update the board firmware to the latest version.**

Import/export data

Save user data and system configuration data on a MEMORY ROLL card.

The stored data can be reused for another control board of the same type to carry across the same configuration.

⚠ **Before inserting and removing the MEMORY ROLL card, DISCONNECT THE MAINS POWER SUPPLY TO THE LINE.**

❶ Insert the MEMORY ROLL card into the corresponding connector on the control board.

❷ Press the “Enter” button to access programming.

❸ Use the arrows to choose the desired function.

📖 **The functions are displayed only when a MEMORY ROLL card is inserted.**

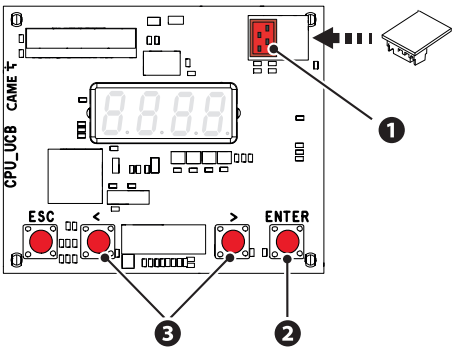
F50 -Save data

Save user data, timings and configurations to the memory device (memory roll).

F51 -Read data

Upload user data, timings and configurations to the memory device (memory roll).

📖 **Once the data have been saved and loaded, the MEMORY ROLL can be removed.**

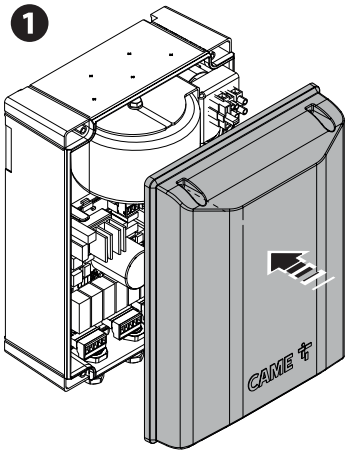


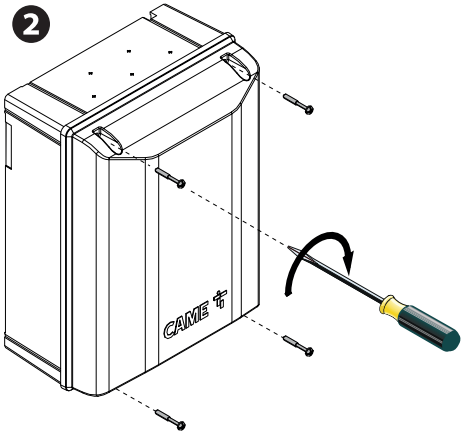
ERROR MESSAGES

E1	Motor M1 calibration error
E2	Motor M2 calibration error
E3	Encoder signal not detected error
E4	Service test failure error
E7	Operating time error
E9	Consecutive obstacles detected during closing
E10	Consecutive obstacles detected during opening
E11	Maximum number of obstacles
E12	Motor supply voltage missing or insufficient
E13	Limit switch input error or both limit switches open
E15	Incompatible transmitter error
E17	Wireless system communication error
E18	Wireless system not configured error
E24	BUS device communication error
E25	Address settings error on BUS devices

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

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