

CAME.COM

# Control panel for 24 V gearmotors



FA01675-EN

c€ EÆ[

EN

English



ZLX24SA



**INSTALLATION MANUAL** 

# ▲ 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 gualified 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 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 gualified 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.

 $\triangle$  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-0060

ZLX24SA - Multifunction control panel, with 230 VAC power supply, for 24 V swing gates with two leaves, with graphic programming display and signalling, safety device self-diagnostics, adaptive speed and torque technology, BUS CXN, 4 safety inputs and memory space for up to 1000 users.

#### 801QA-0080

ZLX24SR - Multifunction control panel, with 120 VAC power supply, for 24 V swing gates with two leaves, with graphic programming display and signalling, safety device self-diagnostics, adaptive speed and torque technology, BUS CXN, 4 safety inputs and memory space for up to 1000 users.

# Technical data

MODELS	ZLX24SA	ZLX24SR
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	1	1
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	ZLX24SA	ZLX24SR
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

- Line fuse
  Power supply terminal block
  Terminal board for connecting control devices
  Terminal board for connecting the safety devices
  Terminal board for B1-B2 output
  Memory Roll card connector
  Connector for CAME KEY
  Display
  Programming buttons
  RSE card connector
  RIO CONN card connector
  Connector for plug-in radio frequency card (AF)
- B Earthing star point

Terminal board for CRP connection

• Terminal board for connecting the antenna

Terminal board for BUS accessories

Terminal boards for connecting micro limit switches and/ or encoders

Terminal board for connecting the gearmotor with

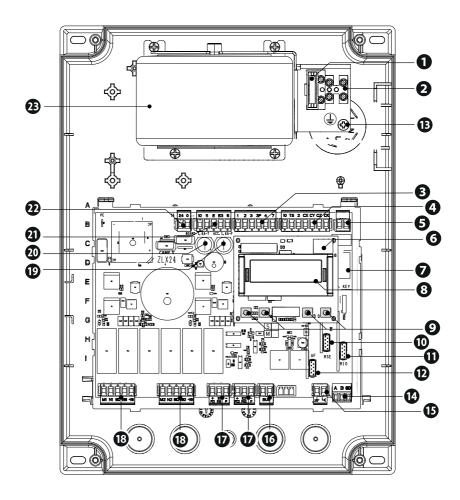
encoder or with slowdown switch and electric lock

Accessories fuse

20 Control board fuse

Terminal board for connecting the signalling devices

Terminal board for power supply to the control board
 Transformer

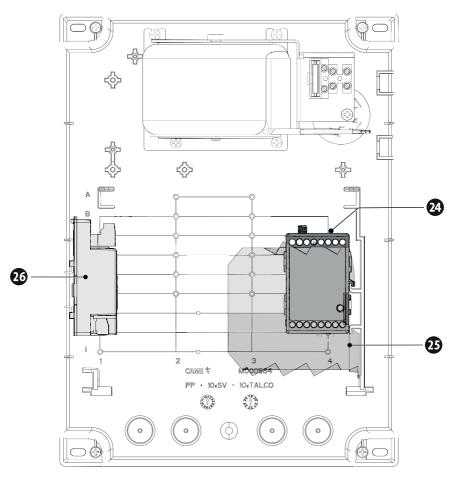


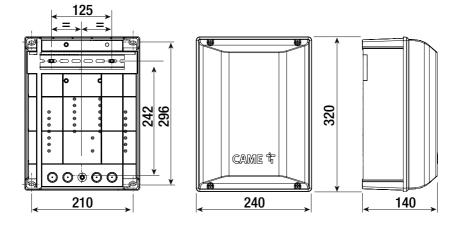
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# **Optional accessories**

23 RGSM001 module (806SA-0010)
 23 SMA module (009SMA)

LLX24S can use two different types of emergency battery, installed on an external panel: - Two 7Ah batteries (846XG-0030) to manage all motors required for the control panel.





### Cable types and minimum thicknesses

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

\* 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).

L 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.

Definition of 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.

III To connect the encoder, use a FRORPU 3 x 0.5 mm<sup>2</sup> cable or a cable supplied by CAME on request (item code 801XA-0020).

### **BUS cable table**

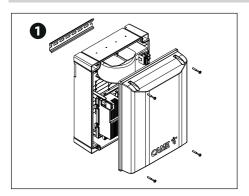
We recommend using a FROR 2x1mm<sup>2</sup> cable, maximum length from the control board: 50 m.

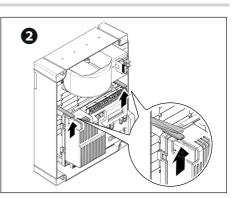
Single branch length (m)	max. 50 m
BUS cable	2 x 1 mm <sup>2</sup>

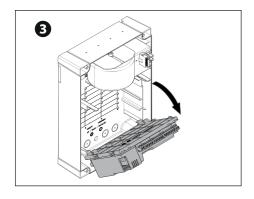
D The total length of all branches can be a maximum of 150 m.

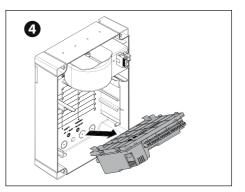
The cable cannot be shielded.

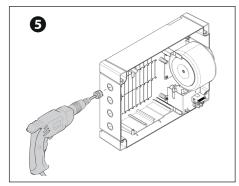
# Preparing the control panel



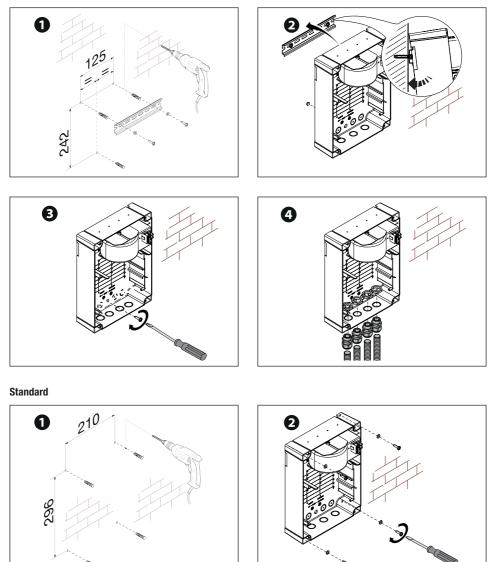








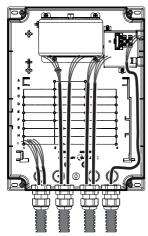
# DIN rail

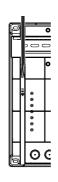


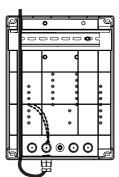
# Preparing the electrical cables

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.



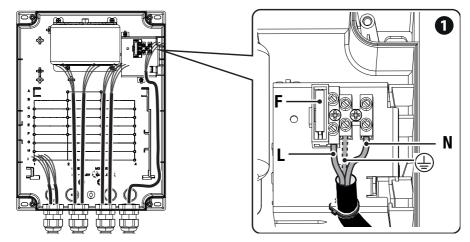




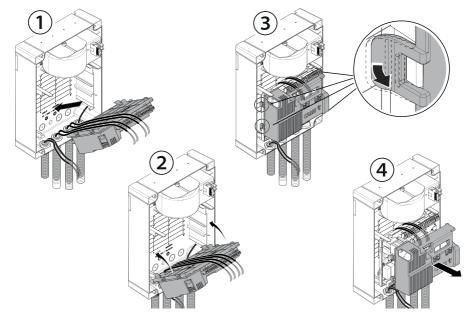
# Oconnecting to the mains (230/120 V AC - 50/60 Hz)

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

The strap used to fix the cables is not supplied.



Given For subsequent connections, reposition the control board and remove the board protection.

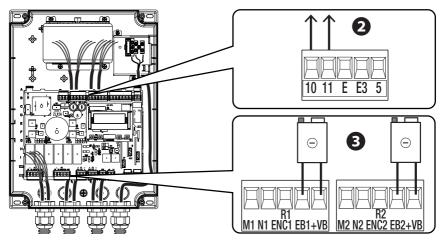


# **2** Power supply output for accessories

The output normally delivers 26 V AC.

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

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



### Maximum capacity of contacts

I 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

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

Device	Output	Power supply (V)	Power (W)
Auxiliary contact	B1 - B2	-	24 (24V AC/DC)
BUS CXN	BUS	15 DC	15

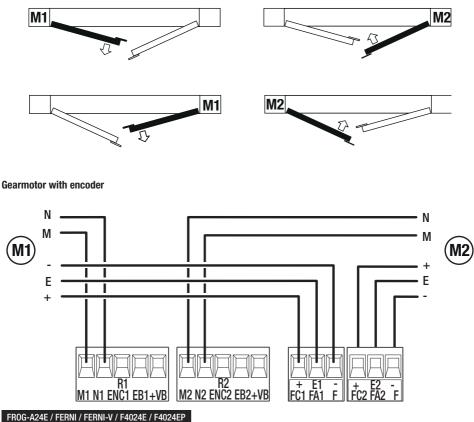
Do not connect anything other than CAME BUS accessories.

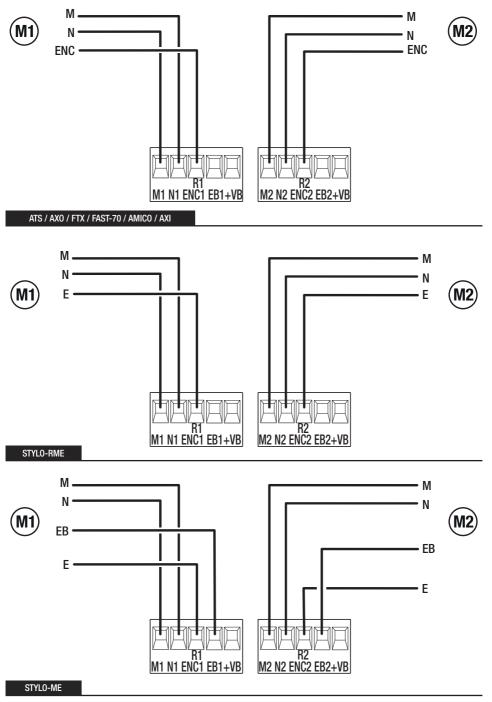
# Gearmotors

M1 =Gearmotor delayed while opening

M2 =Gearmotor delayed while closing

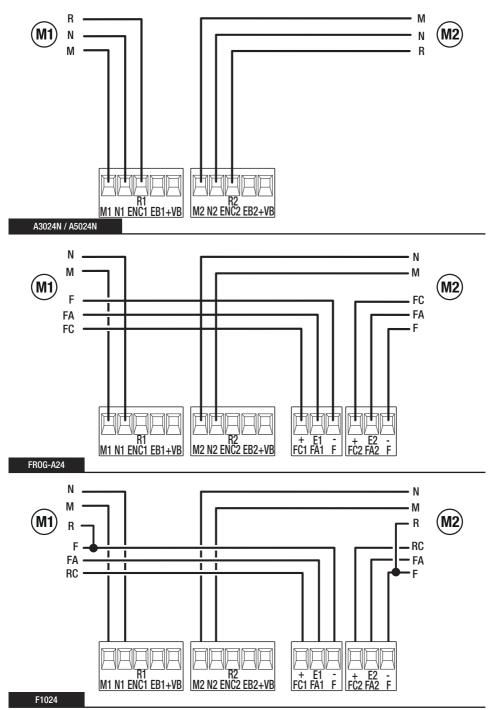
Where there is only one gearmotor in the system, make the electrical connections on the gearmotor (M2).



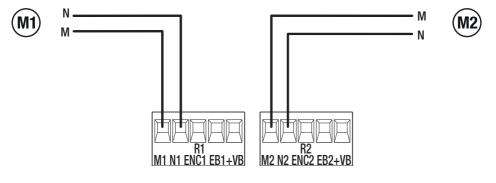


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#### Gearmotors with slowdown switches



Gearmotors without encoder



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

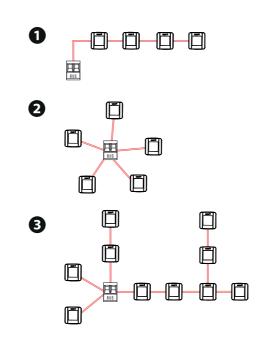
Connection to the BUS can be in a chain, star or mixed formation.

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.

The CXN BUS can support control devices, photocells, safety devices, beacons and gateways at the same time.

# Cabling

- 1 Chain connection
- 2 Star connection
- 3 Mixed connection



# Cable type

 $\triangle$  We recommend using a FROR 2x1mm<sup>2</sup> cable, maximum length from the control board: 50 m.

Single branch length (m)	max. 50 m
BUS cable	2 x 1 mm <sup>2</sup>

🛄 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

# • 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.

# **2** Control device (N0 contact)

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

# 3 Control device (NO contact)

PARTIAL OPENING or PEDESTRIAN OPENING function

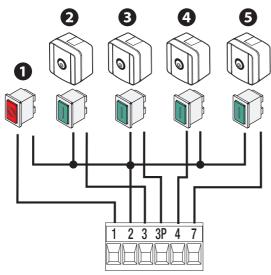
# Control device (NO contact)

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

# **S** Control device (NO contact)

OPEN-CLOSE function OPEN-STOP-CLOSE-STOP function See control function 2-7.

# 6 Antenna with RG58 cable





# Signalling devices

# • Flashing beacon

It flashes when the operator opens and closes.

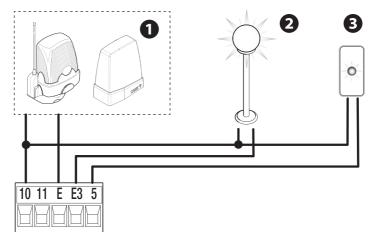
# **2** Additional light

It increases the light in the manoeuvring area.

# **Operator status warning light**

It notifies the user of the operator status.

See function [Passage-open warning light].



# Safety devices

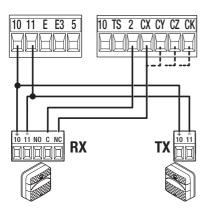
During programming, configure the type of action that must be performed by the device connected to the input. Connect the safety devices to the CX and/or CY and/or CZ and/or CK inputs.

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

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

### **DELTA** photocells

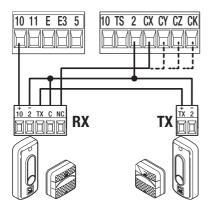
Standard connection



# 10 11 E E3 5 10 TS 2 CX CY CZ CK 10 TS 2 CX CY CZ CK

**DIR / DELTA-S photocells** 

Standard connection



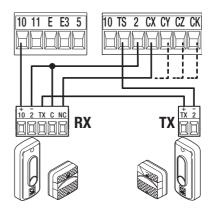
# DIR / DELTA-S photocells

**DELTA photocells** 

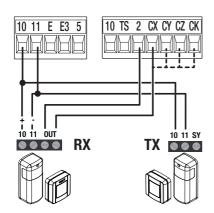
Connection with safety test

See [Safety devices test] function.

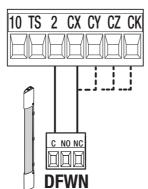
Connection with safety test See [Safety devices test] function.



Standard connection



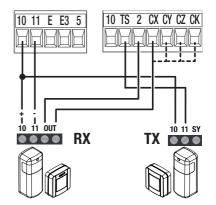
# DFWN sensitive edge



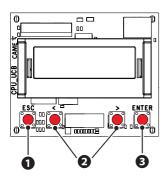
# DXR - DLX photocells

Connection with safety test

See [Safety devices test] function.



# Programming button functions



# **1** 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 Stop the operator

# 2 < > buttons

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

# **B** ENTER button

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

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

When executing a manoeuvre, press and hold the ENTER button to display the Opening, Partial Opening, Closing and Stop commands. You can select the desired command using the <> buttons.

### Display symbols key

È	The encoder is deactivated.
Â	The [Impact test] function is on.
$\rightarrow$	The operator detected an obstruction when the gate was closing.
÷	The operator detected an obstruction when the gate was opening.
→ <b> </b> 2	The operator detected two obstructions when the gate was closing. The number on the display varies according to the number of obstructions detected. When the maximum number of detected obstructions has been reached, the operator stops and an error message shows on the display.
<b>2 </b> ←	The operator detected two obstructions when the gate was opening The number on the display varies according to the number of obstructions detected. When the maximum number of detected obstructions has been reached, the operator stops and an error message shows on the display.
Ø	There is at least one programmed timer.
X	A programmed timer is running. With the timer programmed for opening or partial opening, any given radio command will always allow opening. The wired commands continue to operate normally.

# Getting started

Donce 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 follow the instructions on the display.

Start programming following the wizard.

III fthis is not the first time the board is being switched on, go to the menu Configuration > Wizard. Follow the indications shown on the display.

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

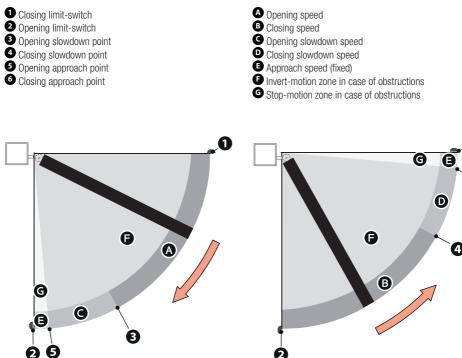
After powering up the system, the first manoeuvre is always to open the gate Wait for the manoeuvre to be completed.

Perform the first manoeuvre where you can see the gate in motion and with the photocells active, including where remotely controlled.

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.

L If CALIBRATION REQUIRED appears on the display, you must calibrate the travel. The panel will not accept motion commands, except for the motor test.

#### Diagrams showing leaf speed, slowdown and approach points

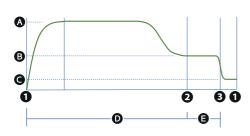


#### Graph showing speed curves during movement, slowdown and approach.

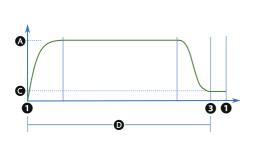
Boving between the various speeds always involves a gentle acceleration/slowdown slope.

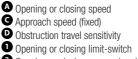
#### Using slowdown space (slowdown space > 0)

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



- Opening or closing speed
- <sup>B</sup> Opening or closing slowdown speed
- G Approach speed (fixed)
- Obstruction travel sensitivity
- Slowdown obstruction sensitivity
- Opening or closing limit-switch
- **2** Opening or closing slowdown point
- 3 Opening or closing approach point





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 message Calibration Complete shows on the display, followed by the symbol, to signal that 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

### Menu layout

We some options only show on the display if certain conditions are met. For more information, please see the information for the individual functions.

Level 1	Level 2	Level 3	Level 4
Configuration	Motor settings	Number of motors	
		Motor type	
		Encoder	
		Reduce speed	
		Limit-switch function	
		Input type FC/FA	
		Motor test	
		Travel calibration	
		Motor power	
		Configure M1	Motor type
			Encoder
			Limit-switch function
			Input type FC/FA
		Configure M2	Motor type
			Encoder
			Limit-switch function
			Input type FC/FA
	Gate travel settings	Opening speed	
		Closing speed	
		Travel AST control	
		Adjusting the partial opening	
		Op. approach point	
		Cl. approach point	
		Opening slowdown point	
		Closing slowdown point	
		Opening slowdown speed	
		Closing slowdown speed	
		Slowdown AST control	
		Impact test	

	Configure M1	Opening speed
		Closing speed
		Op. approach point
		Cl. approach point
		Opening slowdown point
		Closing slowdown point
		Opening slowdown speed
		Closing slowdown speed
	Configure M2	Opening speed
		Closing speed
		Op. approach point
		CI. approach point
		Opening slowdown point
		Closing slowdown point
		Opening slowdown speed
		Closing slowdown speed
Wired safety devices	Total stop	
	CX input	—
	CY input	—
	CZ input	_
	CK input	
	Safety devices test	
RIO safety devices	RIO ED T1	
	RIO ED T2	
	RIO PH T1	
	RIO PH T2	

BUS safety devices	BUS Photocell 1	
	Photocell BUS 2	
	Photocell BUS 3	
	Photocell BUS 4	
	Photocell BUS 5	
	Photocell BUS 6	
	Photocell BUS 7	
	Photocell BUS 8	
Command inputs	Command 2-7	
Functions	Electric lock	
	Closing thrust	
	Thrust	
	Removing obstacles	
	B1-B2 output	
	Hold-to-run	
Times	Automatic close	
	Automatic partial close	
	M1 open delay	
	M2 close delay	
Manage lights	Passage-open warning light	
	Additional light	
	Courtesy time	
	Pre-flashing time	
	BUS flashing beacon	Mode
		Opening colour
		Closing colour
		Pre-flashing colour
		Signal error
	BUS device lights	Signal maintenance
RSE communication	CRP address	
	RSE speed	

	External memory	Save data	1 1
		Read data	-
	Parameter reset		
	Guided procedure (Wizard)		
Manage users	New user		
	Remove user	-	
	Remove all	-	
	Radio decoding	-	
	Self-Learning Rolling	-	
	Change mode	-	
Information	FW version		
	BUS device status	-	
	Manoeuvre counter	-	
	Configure maintenance	-	
	Maintenance reset	-	
	Errors list	-	
Timer management	Show clock		
	Set the clock	-	
	Automatic DST	-	
	Time format	-	
	Create new timer	Open	Start time End time Days of the week
		Partial opening	Start time End time Days of the week
		B1-B2 output	Start time End time Days of the week
	Remove timer		
Language			
Password	Enable password		
İ	Remove password		
	Change password		

#### Functions menu

#### Number of motors

Set the number of motors that control the gate.

Configuration>	Number of motors	M1+M2 (Default)
Motor settings		M2

#### Motor type

Set the type of gearmotor installed on M1 and M2.

🛄 If the value set for M1 is different to the value set for M2, only the value for M2 is shown here.

Configuration> Motor settings	Motor type	Generic STYLO-ME STYLO-RME FTX FAST-70 AXI AMICO FERNI FERNI-V AXO A3024N/A5024N FROG-A24 FROG-A24E F1024 F1024 F1024 F4024E F4024E F4024EP
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#### Encoder

Use the encoder input from the motor.

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

If the value set for M1 is different to the value set for M2, only the value for M2 is shown here.

Configuration>	Encoder	Activated (Default)
Motor settings		Off

#### Reduce speed

Reduce the minimum voltage applicable to the motor.

Department of the style of the

Configuration>	Reduce speed	Deactivated (Default)
Motor settings		1% to 50%

#### Limit-switch function

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

Definition only appears for motors configured for this purpose.

📖 If the value set for M1 is different to the value set for M2, only the value for M2 is shown here.

After modifying the function of the slowdown/end-of-travel inputs, recalibrate [Function Travel calibration].

L 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.

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

Configuration> Limit-switch function Motor settings	Off Stop in FA, stop in FC Slowdown in FA/FC (Default) Stop in FA, slowdown in FC
--	--

# Input type FC/FA

Set the inputs type FC/FA.

I The function appears only with generic motors [Function Motor Type set to Generic].

Configuration>	Input type FC/FA	N.O. (Default)
Motor settings		N.C.
		N.C. for FA input, N.O. for FC input

#### 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.

Configuration>	Motor test	The > button opens gate leaf M2
Motor settings		The < button opens gate leaf M1

# Travel calibration

Start the travel self-learning.

Configuration>	Travel calibration
Motor settings	

# Motor power

Setting power range of motors connected on M1 and M2.

III The parameter is used only with generic motors [Function Motor Type set to Generic].

Configuration> Motor settings	Motor power	Minimum power [up to 120W] Medium power (Default) [up to 200W] Maximum power [more than 200W]

#### Configure motor M1

Modify certain parameters previously described for motor M1 only (where different from M2).

The function appears only with M1+M2 selected in [Function Number of Motors].

Configuration> Motor settings> Configure motor M1	Motor type Encoder Limit-switch function Input type FC/FA Motor power	See the specific parameters for each function.
	viously described for motor M2 on nly with M1+M2 selected in [Fu	,
Configuration> Motor settings> Configure motor M2	Motor type Encoder Limit-switch function Input type FC/FA Motor power	See the specific parameters for each function.
Opening speed		

Set the opening speed for both motors (percentage of maximum speed).

📖 If the value set for M1 is different to the value set for M2, only the value for M2 is shown here.

Configuration> Gate travel settings	Opening speed	40% to 100% (Default 70%)
-		

#### **Closing speed**

Set the closing speed for both motors (percentage of maximum speed).

If the value set for M1 is different to the value set for M2, only the value for M2 is shown here.

Configuration> Gate travel settings Closing speed

40% to 100% (Default 70%)

### Travel AST control

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

Configuration> Gate travel settings	Travel AST control	Deactivated (Default) Maximum thrust and low obstruction sensitivity. Minimum Average Maximum* (*) Minimum thrust and high obstruction sensitivity. Customised Customised closing Customised opening The personalised values to be used are expressed as a percentage: - from 10% (minimum thrust and high obstruction sensitivity) - to 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

Configuration> Gate travel settings	Part. open point	10% to 100% (Default 100%)

#### Opening approach space

Set the percentage of the total travel to be used for the M1 and M2 opening approach.

If the value set for M1 is different to the value set for M2, only the value for M2 is shown here.

Configuration	Op. approach point	0.5% to 25.0% (Default 8.0%)
Gate travel settings		

#### Closing approach space

Configuration>

Gate travel settings

Set the percentage of the total travel to be used for the M1 and M2 closing approach.

Cl. approach point

0.5% to 25.0% (Default 8.0%)

#### Opening slowdown point

Set the percentage of the total travel to be used for the M1 and M2 opening slowdown.

If the value set for M1 is different to the value set for M2, only the value for M2 is shown here.

Configuration>	Opening slowdown point	Deactivated (Default)
Gate travel settings		1% to 50%

#### **Closing slowdown point**

Set the percentage of the total travel to be used for the M1 and M2 closing slowdown. If the value set for M1 is different to the value set for M2, only the value for M2 is shown here.

Configuration>	Closing slowdown point	Closing slowdown point
Gate travel settings		

#### Opening slowdown speed

Set the M1 and M2 slowdown speed during opening (as a percentage of the maximum speed).

If the value set for M1 is different to the value set for M2, only the value for M2 is shown here.

I The parameter is only used with the [Opening slowdown point] function active.

Given by the style of the motors it might be necessary to reduce the minimum voltage applicable to the motor to achieve the desired slowdown percentage. See function [Reduction of speed].

Configuration>	Opening slowdown speed	10% to 50% (Default 40%)
Gate travel settings		

#### Closing slowdown speed

Set the M1 and M2 slowdown speed during closing (as a percentage of the maximum speed).

If the value set for M1 is different to the value set for M2, only the value for M2 is shown here.

I The parameter is only used with the [Closing slowdown point] function active.

Given 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 [Reduction of speed].

Configuration> Gate travel settings Closing slowdown speed

10% to 50% (Default 40%)

## 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.

Configuration> Gate travel settings	Slowdown AST control	Deactivated (Default)
		Minimum
		Average
		Maximum*
		(*) Minimum thrust and high obstruction sensitivity.
		Customised
		Customised closing
		Customised opening
		The personalised values to be used are expressed as a percentage:
		<ul> <li>from 10% (minimum thrust and high obstruction sensitivity)</li> </ul>
		- to 100% (maximum thrust and low obstruction sensitivity)

## Impact test

Activate/deactivate test mode for impact tests. With the function on, the operator does not signal errors connected to obstacle detection after more than one consecutive impact.

Light Test mode is deactivated automatically after 1, hour.

 $\square$  With the function on, the display shows the  $\triangle$  icon.

Configuration> Gate travel settings Impact test

Activate test mode Deactivate test mode

## Configure travel M1

Modify certain parameters previously described for motor M1 only (where different from M2).

III The function appears only with M1+M2 selected in [Function Number of Motors].

Configuration>	Opening speed	See the specific parameters for each function.
Gate travel settings>	Closing speed	··· ·· ·· ·· ·· ·· ·· ··· ·· ··· ·
Configure travel M1	Opening approach space	
	Closing approach space	
	Opening slowdown point	
	Closing slowdown point	
	Opening slowdown speed	
	Closing slowdown speed	

## Configure travel M2

Modify certain parameters previously described for motor M2 only (where different from M1).

The function appears only with M1+M2 selected in [Function Number of Motors].

Configuration> Gate travel settings>	Opening speed Closing speed	See the specific parameters for each function.
Configure travel M2	Opening approach space Closing approach space Opening slowdown point Closing slowdown point Opening slowdown speed Closing slowdown speed	

## Total stop

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

Configuration>	Total stop	Deactivated (Default)
Wired safety devices		On

## CX input, CY input, CZ input, CK input

Associate a function with the input CX or CY or CZ or CK

Configuration> Wired safety devices	CX input CY input CZ input CK input	Deactivated (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) r7 (two sensitive edges) = Reopen while closing (pair of sensitive edges with 8K2 resistor) r8 (two sensitive edges) = Reopen while closing (pair of sensitive edges) = Reopen while closing (pair of
		,

## Safety devices test

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

Configuration>	Safety devices test	Deactivated (Default)
Wired safety devices	שמובוץ עביוניטי וניצו	CX
		_ CX CY
		CZ_
		CX _ CZ _
		_ CY _CZ _
		CX CY CZ _
		CK
		CX CK
		_ CY _ CK
		CX CY _ CK
		CZ CK
		CX _ CZ CK
		_ CY CZ CK
		CX CY CZ CK

## RIO ED T1 and RIO ED T2

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

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

Configuration>	RIO ED T1	Deactivated (Default)
RIO safety devices	RIO ED T2	PO = 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 and RIO PH T2

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

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

Configuration> RIO safety devices	RIO PH T1 RIO PH T2	Deactivated (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.
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## Photocell BUS <n>

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

Configuration >	BUS Photocell 1	Deactivated (Default)
BUS safety devices	Photocell BUS 2	C1 = Reopen while closing (photocells)
	Photocell BUS 3	C2 = Reclose while opening (photocells)
	Photocell BUS 4	C3 = Partial stop Only with [Automatic close] activated.
	Photocell BUS 5	C4 = Obstacle standby (photocells)
	Photocell BUS 6	C13 = Reopen while closing, with immediate stop once
	Photocell BUS 7	the obstruction has been removed, even if the gate is not
	Photocell BUS 8	in motion
		C23 = Open command
		C24 = Close command

## Command 2-7

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

Configuration>	Command 2-7	Step-by-step (Default)
Command inputs		Sequential

#### Electric lock

Associate the electric lock release with a command.

Configuration>	Electric lock	Deactivated (Default)
Functions		From closed
		From open
		From open and closed
		Continue

## **Closing thrust**

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

Configuration> Functions	Closing thrust	Deactivated (Default) Minimum Medium Maximum
-----------------------------	----------------	---

## Thrust

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

Define thrust motion is performed during opening or closing, depending on where the electric lock is active [see function Electric lock].

	Configuration> Functions	Thrust	Deactivated (Default) On
--	-----------------------------	--------	-----------------------------

#### **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 t		a safety edge input, the [Remove obstruction] function inverts		
Configuration> Functions	Removing obstacles	Deactivated (Default) On		
B1-B2 output Configure the contact.				
Configuration> Functions	B1-B2 output	Bistable Monostable: on from 1 to 180 seconds (Default 1)		
Hold-to-run With the function active, the operator stops moving (opening or closing) when the control device is released.				
Configuration> Functions	Hold-to-run	Deactivated (Default) On		
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.				
Configuration> Times	Automatic close	Deactivated (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.				
Configuration> Times	Automatic partial close	Off 1 to 180 seconds (Default 10)		

## M1 opening delay time

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

Configuration>	M1 open delay	Off
Times		1 to 10 seconds (Default 2)

# M2 closing delay time

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

Configuration>	M2 close delay	Off
Times		1 to 25 seconds (Default 2)

### Passage-open warning light

Signal gate status. The device is connected to output/terminal 5.

Configuration> Manage lights	Passage-open warning light	Warning light on (Default) - The warning light stays on when the gate is moving or open. 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.

## Additional light

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

Configuration> Manage lights	Additional light	Disabled (Default) Cycle lamp - The lamp stays on during the manoeuvre. The light remains off if an automatic closing time is not set.
		Courtesy light - The light switches on when a manoeuvre starts and remains on once the manoeuvre has finished, for the time set under the function [Courtesy time].

## Courtesy time

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

Configuration>	Courtesy time	60 to 180 seconds (Default 60 seconds)
Manage lights		

#### Pre-flashing time

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

Configuration>	Pre-flashing time	Deactivated (Default)
Manage lights		1 to 10 seconds

## <Mode> BUS flashing beacon

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

Departure of the second 
Configuration> Mode Manage lights> BUS flashing beacon	<ul> <li>Flashing beacon (Default). The light flashes during opening and closing.</li> <li>Cycle flashing beacon. The light flashes during opening and closing and remains on in the countdown before automatic closure.</li> <li>The colour of the flash depends on the functions [Opening colour], [Closing colour] and [Pre-flashing colour].</li> </ul>
--	---

## <Opening colour> BUS flashing beacon

Set the BUS flashing beacon colour during gate opening.

Description 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.

Configuration> Manage lights> BUS flashing beacon	Opening colour	White (Default) Yellow Orange Red Purple Blue Light blue Green
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## <Closing colour> BUS flashing beacon

Set the BUS flashing beacon colour during gate closing.

Definition only appears if there is a BUS flashing beacon connected.

Configuration> Manage lights> BUS flashing beacon	Closing colour	White (Default) Yellow Orange Red Purple Blue Light blue Green
---	----------------	---

## <Pre-flashing colour> BUS flashing beacon

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

## Description only appears if there is a BUS flashing beacon connected.

Configuration> Manage lights> BUS flashing beacon	Pre-flashing colour	White (Default) Yellow Orange Red Purple Blue Light blue Green
		Green

## <Signal error> BUS flashing beacon

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

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

Description only appears if there is a BUS flashing beacon connected.

Configuration> Manage lights> BUS flashing beacon	Signal error	Deactivated (Default) White Yellow Orange Red Purple Blue Light blue 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.

A Maintenance must be configured [Function Configure Maintenance].

In the function only appears if there is a BUS flashing beacon or a BUS selector connected.

Configuration> Manage lights> BUS device lights	Signal maintenance	Deactivated (Default) White Yellow Orange Red Purple Blue Light blue Green
---	--------------------	--

#### **CRP** address

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

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

Configuration>	CRP address	1 to 254 (Default 1)
RSE communication		

## **RSE** speed

Set the communication speed of the remote connection system.

Configuration> RSE communication	RSE speed	4800 bps 9600 bps 14400 bps 19200 bps 38400 bps (Default) 57600 bps 115200 bps
		1.10200.500

## Save data

Save user data, timings and configurations to the memory device (memory roll).  $\hfill \square$  The function is displayed only when a memory roll card is inserted into the control board.

# Read data

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

Configuration> External memory	Read data		
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## Parameter reset

Restore the factory configurations except for: [users], [timers], [no. motors], [motor type], [CRP address], [limit-switch inputs function], [RSE speed], [password], [language], [time format] and the settings related to the travel calibration.

Configuration	Parameter reset	Confirm? NO
		Confirm? YES

## Guided procedure (Wizard)

You can use the system configuration wizard.

Configuration

Guided procedure (Wizard)

#### New user

Register up to a maximum of 1000 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.

Manage users	New user	Choose the function to be assigned to the user.
		Step-by-step Sequential Open Partial opening
		B1-B2 output Press ENTER to confirm.
		You will be asked to enter your user code. Send the code from the control device. Repeat the procedure to add other users.

#### Remove user

Remove one of the registered users.

	Use the arrows to choose the number associated with the user you want to remove.
--	--

## Remove all

Remove all registered users.

Manage users	Remove all	Confirm? NO
		Confirm? YES

#### 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.

Manage users	Radio decoding	All decoding (Default) Rolling code TW Key block
		Confirm? NO Confirm? YES

## 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.

Manage users	Self-Learning Rolling	Deactivated (Default)
		On

#### Change mode

Change the function assigned to a specific user.

Manage users	Change mode	Use the arrows to choose the number associated with the user to be changed.  Alternatively, you can select a user by sending a command from the associated device.  Press ENTER to confirm.
		Choose the command to associate with the user. Step-by-step Sequential Open Partial opening B1-B2 output Press ENTER to confirm. Confirm? NO Confirm? YES

## FW version

Display the firmware version and the GUI installed.

Information

FW version

Use the < > arrows to show: FW MC.x.x.xx (motor board firmware version) FW UI.x.x.xx (display board firmware version) GUI x.x (graphics)

## BUS device status

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

#### Key

<n> is the device number.

Information	BUS device status	BUS photocells <n></n>
		Image: n < 1 to 8
		📖 The status shown may be:
		ОК
		Not communicating
		Safety device active
		BUS selector <n></n>
		$\square$ <n> from 1 to 7</n>
		Description: The status shown may be:
		ОК
		Not communicating
		BUS flashing beacon <n></n>
		$\square$ <n> from 1 to 2</n>
		🕮 The status shown may be:
		ОК
		Not communicating

#### Manoeuvre counter

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

Departure: In the number of manoeuvres is the number shown multiplied by 100.

Information	Manoeuvre counter	Total manoeuvres Manoeuvres performed since the operator was installed.
		Partial manoeuvres Manoeuvres carried out after the last maintenance.

#### Configure maintenance

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

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

Information	Configure maintenance	Deactivated (Default) 1X100 to 500X100	
Maintenance reset Reset the number of partial ma	noeuvres.		

Information

Maintenance reset

Confirm? NO Confirm? YES

# Errors list

View the last 8 errors detected. The error list can be deleted.

	The error list call be deleted.	
Information	Errors list	Use the arrows to scroll through the list. To cancel the error list, select [Delete errors] Press ENTER to confirm. Confirm? NO Confirm? YES
Show clock Enable the clock on the display.		
Timer management	Show clock	
Set the clock Set the date and time.		
Timer management	Set the clock	
Automatic DST Enable automatic daylight savin Walid in Central Europe o		
Timer management	Automatic DST	Deactivated (Default) On Summer changeover: +1 hour on the last Sunday in March (change to daylight saving time). Winter changeover: -1 hour on the last Sunday in October (change to standard time).
Time format Choose the clock display format	t.	
Timer management	Time format	24-hour 12-hour

## Create new timer

Time one or more types of activation chosen from those available.

Timer management	Create new timer	Use the arrows to choose the desired command. Open Partial opening B1-B2 output Press ENTER to confirm.
		Start time Use the arrows to set the function activation start time. Press ENTER to confirm.
		End time Use the arrows to set the function activation end time. Press ENTER to confirm.
		Days of the week Use the arrows to set the function activation days. Select days All week Press ENTER to confirm.

# Remove timer

Removes one of the saved timings.

Timer management	Remove timer	Use the arrows to choose the timing to be removed. 0 = [Opening] P = [Partial opening] B = [Output B1-B2]
		Press ENTER to confirm.

## Language

Set the display language.

Language	Italiano (IT)
	English (EN) (Default)
	Français (FR)
	Deutsch (DE)
	Español (ES)
	Português (PT)
	Русский (RU)
	Polski (PL)
	Românesc (RO)
	Magyar (HU)
	Hrvatski (HR)
	Үкраїнський (UA)
	Nederlands (NL)

## Enable password

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

## D This option only shows if a password has NOT been enabled.

Enter the password again using the arrows and the Enter	button to confirm.
---	--------------------

## Remove password

Remove the password that protects access to the main menu.

Discription only shows if a password has been enabled.

Password	Remove password	Confirm? NO
		Confirm? YES

## Change password

Change the password protecting access to the main menu.

Light This option only shows if a password has been enabled.

Password	Change password	Use the arrows and the Enter button to dial the desired code.
		Enter the password again using the arrows and the Enter button to confirm.

## 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.

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

Continue to press and hold the <> buttons until [Factory reset] is displayed.

Select [Confirm YES].

Press ENTER to confirm.

 $\triangle$  When you reset the control board, all saved users, set times, manoeuvre configurations and calibration operations are deleted.

Men 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.

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

2 Press the "Enter" button to access programming.

<sup>3</sup> Use the arrows to choose the desired function.

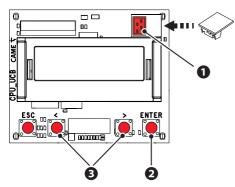
## Configuration > External memory > Save data

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

Configuration > External memory > Read data

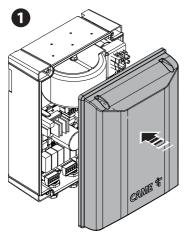
Upload user data, timings and configurations to the memory device (memory roll).

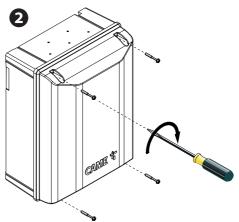
## Drce the data have been saved and loaded, the MEMORY ROLL can be removed.



ERROR MESSA	GES
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

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





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AFFIX THE PRODUCT LABEL FROM THE BOX HERE

# CAME T

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