

ELECTRONIC CONTROL UNIT LRX **GB** 2212

Single-phase electronic control unit for the automation of swinging and sliding gates, with incorporated radio receiver.

- Mod. **LG 2212** : Without radio receiver
- Mod. (**LR 2212**) : 306 MHz
- Mod. (**LRS 2212 / 330**) : 330 MHz
- Mod. (**LRS 2212 / 418**) : 418 MHz
- Mod. **LRS 2212** : 433.92 MHz
- Mod. **LRS 2212 SET** : 433.92 MHz "narrow band"
- Mod. **LRH 2212** : 868.3 MHz "narrow band"

() Product intended for those countries where its use is permitted

TECHNICAL DATA:

- Power supply : 230 V a/c 50-60 Hz 1600 W max.
- Flashing beacon output : 230 V a/c 500 W max.
- Motor outputs : 230 V a/c 500 W max.
- Electric lock output : 12 V d/c 15 W max.
- Photoelectric cells power supply: 24 V a/c 5 W max.
- Indicator light output : 24 V d/c 4 W max.
- Low voltage safety features and commands: 24 V d/c
- Operating temperature : -10 to 55 °C
- Radio receiver : see model
- Op. transmitters : 12-18 Bit or Rolling code
- Max stored TX codes : 120 (CODE or PED. CODE)
- Container size : 240 x 185 x 110 mm.
- Protection degree : IP 65

TERMINAL BOARD CONNECTIONS:

CN1:

- 1 : Earth connection.
- 2 : Earth connection.
- 3 : Earth connection.

CN2:

- 1 : 230 V a/c line input (Phase).
- 2 : 230 V a/c line input (Neutral).
- 3 : 230 V a/c Flashing beacon output (Neutral).
- 4 : 230 V a/c Flashing beacon output (Phase).
- 5 : Motor 1 opening output.
- 6 : Motor 1 shared output.
- 7 : Motor 1 closing output.
- 8 : Motor 2 opening output.
- 9 : Motor 2 shared output.
- 10 : Motor 2 closing output.

CN3:

- 1 : 12 V d/c 15 W (+12 V) Electric lock output.
- 2 : 12 V d/c 15 W (GND) Electric lock output.
- 3 : Photoelectric cell control and power supply (24 V a/c 5 W).
- 4 : Photoelectric cell control and power supply (GND).
- 5 : Indicator light output (+24 V d/c 4 W).
- 6 : Indicator light output (GND).
- 7 : Open / close command button input (NA).
- 8 : Pedestrian / single gate / close command button input (NA).
- 9 : Shared GND input.
- 10: Lock input (NC).
- 11: Safety device 1 input (NC).
- 12: Shared GND input.
- 13: Safety device 2 input (NC).
- 14: Opening stop limit input (NC).
- 15: Shared GND input.
- 16: Closing stop limit input (NC).
- 17: Earth antenna input.
- 18: Antenna hot pole input.

OPERATIONAL DATA:

Automatic operation:

Using both the radio control (CODE LED illuminated) and the low voltage keypad (PUL) to control the gate, the following operation is obtained:

the first press opens the gate until the motor timer reaches zero or until the opening stop limit is reached, the second press closes the gate; if a button is pressed before the motor time has elapsed or before one of the two opening stop limits have been reached, the control unit **inverts** motion during both opening and closing.

Step-by-step operation:

Using both the radio control (CODE LED illuminated) and the low voltage keypad (PUL) to control the gate, the following operation is obtained:

the first press opens the gate until the motor timer reaches zero or until the opening stop limit is reached, the second press closes the gate; if a button is pressed before the motor time has elapsed or before one of the two opening stop limits have been reached, the control unit **stops** motion during both opening and closing. A further command restarts motion in the opposite direction.

Automatic closing:

The control unit can close the shutter automatically without sending additional commands.

The selection process for this operating mode is described in the Pause Time programming mode.

Pedestrian passage:

The control unit can operate motor 1 only using both the radio control (CODE LED on) and the keypad (PED), for the programmed time (T. MOT. PED. LED).

Block input:

The control unit allows the block button connection (NC). Intervention during any functioning phase of the control unit causes the immediate stop of the movement. A further movement control will be valid as long as the block input has been deactivated and, in any case, the control unit will carry out the automatism opening phase.

If not used, link up this input using jumpers.

Safety device 1:

The control unit makes it possible to power and connect photoelectric cells in accordance with EN 12453.

Action is not taken into account during the opening stage but causes inverted motor action during the closing stage.

The control unit must use photoelectric cells connected to dedicated inputs; otherwise the control unit will not be enabled for operation.

Safety device 2:

The control unit makes it possible to power and connect photoelectric cells in accordance with EN 12453.

Action during opening momentarily stops the movement of the gate; after release, the control unit resumes its opening phase. Action during closing causes inverted motion.

The control unit must use photoelectric cells connected to dedicated inputs; otherwise the control unit will not be enabled for operation.

Opening and closing stop limit:

The control unit makes it possible to connect two opening and closing stop limits (NC). Action in the respective operating stages causes the motor to stop immediately for motor outputs 1 and 2.

These inputs must be bridged if they are not used.

Initial pick-up and motor power adjustment:

The electronic control unit is equipped with initial pick-up and motor power adjustment functions which are fully managed by the microprocessor.

The initial pick-up function is used to help the motor in its initial activation stage, powering it at the maximum level for 2 seconds, even if the motor power adjustment function is enabled. The motor power adjustment function is used to ensure correct motion so that the gate is locked in position if any obstacles emerge, without harming individuals or damaging property.

Deceleration:

The motor deceleration function is used to avoid the high-speed closing of swinging gates at the end of the opening and closing phases.

Deceleration can be programmed for the desired points (before the gate is totally open or closed) during motor timer programming.

Indicator light:

The control unit makes it possible to connect a 24 V d/c lamp in order to display the operating status of the automation. Lamp: when off the automation is closed, when lit it is open, when flashing slowly the motor is in its opening phase and when flashing quickly the motor is in its closing phase.

Flashing beacon or courtesy light operation:

The control unit is fitted with an output for a 230 V a/c flashing beacon. Its operation is influenced by the settings selected in Extended menu 2.

Operation with TIMER:

The control unit may be connected to a timer instead of using the open-close command button (PUL).

Example: at 8:00 a.m. the timer closes the contact and the control unit opens the shutter; at 6:00 p.m. the timer opens the contact and the control unit closes the shutter. Between 8:00 a.m. and 6:00 p.m. at the end of the opening phase, the control unit disables the flashing beacon, the automatic closing stage and the radio controls.

PROGRAMMING:

SEL button: selects the type of function to be stored; selection is indicated by the flashing of the LED.

By pressing the button repeatedly, you can select the desired function. The selection remains active for 10 seconds (indicated by the flashing of the LED); after 10 seconds, the control unit returns to its original status.

SET button: programmes the information according to the type of function selected previously using the SEL button. IMPORTANT: The function of the SET button can be replaced with the radio control, if programmed previously (CODE LED on).

MAIN MENU

The control unit is supplied by the manufacturer with the option of selecting some important functions.

----- MAIN MENU -----		
Reference LED	LED Off	LED On
1) 1-2 MOTORS	1-motor automation	2-motor automation
2) AUT / P-P	automatic	step-by-step
3) CODE	no code	code entered
4) PED. CODE	no code	code entered
5) T. MOT.	motor time 30 sec.	time programmed
6) T.MOT.PED.	ped. mot time 10 sec.	time programmed
7) T. PAUSA.	without aut. closing	with aut. closing
8) RIT. ANTE	without gate delay.	programmed time

1) 1 – 2 MOTORS:

To facilitate the installation process, the control unit has two default configurations for automations using 1 or 2 motors.

The control unit in its default configuration offers typical 1-motor automation management (e.g. sliding gate); if you need to enable the alternative pre-set 2-motor automation management (e.g. swing gate), proceed as follows: use the SEL button to navigate to the position where the 1-2 MOTORS LED flashes and press the SET button. From this moment the 1-2 MOTORS LED will remain lit and the procedure will then be complete.

Repeat the procedure to restore the previous configuration. In the 1-motor mode, if necessary, it is possible to position the motor 1 and motor 2 outputs in parallel in order to double the applicable load (one motor up to 1.5 CV).

2) AUTOMATIC / STEP-BY-STEP:

The control unit is supplied with the “Automatic” operation feature enabled by default (AUT/P-P LED off). To enable the “step-by-step” operation feature (AUT/P-P LED on) proceed as follows: use the SEL button to navigate to AUT/P-P LED when flashing and press the SET button: the AUT/P-P LED lights up. Repeat the procedure to restore the previous configuration.

3) CODE: (Radio control code)

The control unit can store up to 150 radio controls with different fixed or rolling codes.

Programming.

To programme the transmission code, proceed as follows: use the SEL button to reach a point where the CODE LED is flashing and send the desired code using the relevant radio control; programming has been completed when the CODE LED remains lit constantly. If you have stored 120 codes and you repeat the programming procedure, all the programming LEDs will start flashing to indicate that no more codes can be stored.

Deleting the codes.

To delete all transmission codes stored in the memory, proceed as follows: press the SEL button; the CODE LED will start flashing. Then press the SET button: the CODE LED will switch off and the procedure will be complete.

4) PED. CODE:(radio control code for Ped. / Left Door)

The programming and deleting procedure is the same as the one illustrated above, with reference to the PEDESTRIAN CODE LED.

5) MOTOR TIME and DECELERATION: (Programming a motor operation time of max. 4 minutes)

The control unit is supplied by the manufacturer with the default motor operation time of 30 seconds without deceleration.

To modify the operating time of motors 1 and 2, perform this procedure while the gate is closed: use the SEL button to reach the stage where the T. MOT LED flashes, then press the SET button briefly; the motor will begin the opening cycle. When the shutter reaches the desired initial position press the SET button. The T. MOT LED will begin flashing more slowly and motor 1 will slow down; when the desired position has been reached press the SET button to conclude the opening cycle. At this point the T. MOT LED will begin flashing normally again and motor 2 will begin its opening phase: repeat the operating time programming procedure for motor 2. Once the opening phase motor times have been programmed, motor 2 begins its closing phase immediately. Repeat the above steps for the closing phase of motor 2 and then motor 1.

To deactivate the deceleration function during programming, once the opening and closing cycles are complete, press the SET button twice in succession instead of just once.

If the control unit is used in the 1-motor configuration (1-2 MOTORS LED OFF), the operating time for motor 2 will not be programmed.

During programming the radio control button on the control unit can be used instead of the SET button, if stored previously.

6) T. MOT. PED.: (Programming pedestrian operation time of max. 4 minutes)

The control unit is supplied by the manufacturer with a default motor 1 operation time (pedestrian) of 10 seconds, without deceleration.

To modify the pedestrian operation time, perform this procedure while the gate is closed: use the SEL button to reach the stage where the T. MOT. PED. LED flashes, then press the SET button briefly; the motor will begin the opening cycle. When the shutter reaches the desired initial position press the SET button. The T. MOT. PED. LED will begin flashing more slowly and motor 1 will slow down; when the desired position has been reached press the SET button to conclude the opening cycle. At this point the T. MOT. PED. LED will begin flashing normally again and motor 1 will start running again in its closing direction; repeat the abovementioned steps for the closing phase.

To deactivate the deceleration function during programming, once the opening and closing cycle is completed, press the SET button twice in succession instead of just once.

During programming the radio control button on the control unit can be used instead of the SET button, if stored previously.

7) T. PAUSA: (Programmed aut. closing time: max. 4 min.)

The control unit is supplied by the manufacturer without an automatic closing procedure. To enable the automatic closing function, proceed as follows: use the SEL button to navigate to T. PAUSA when flashing, then press the SET button, wait for the desired interval of time, then press the SET button again; the automatic closing time will be stored and the T.PAUSA LED will be lit. To restore the initial configuration (without automatic closing) navigate to T.PAUSA when the corresponding LED is flashing then press the SET button twice within 2 seconds. The LED will switch off and the procedure will be complete.

During programming the radio control button on the control unit can be used instead of the SET button, if stored previously.

8) T. RIT. ANTE: (Programming gate delay of max. 15 sec.)

The control unit is supplied by the manufacturer without gate delay during opening and closing. If the 2-motor automation configuration is used, it may be necessary to enter a gate delay time; programming must be performed when the gate is closed, in the following manner: use the SEL button to reach the point where the RIT. ANTE LED flashes and press the SET button briefly; wait for the desired interval of time, then press the SET button briefly again; the fixed gate opening delay time of 2 seconds will be stored. The programmed gate closing delay time will be stored and the RIT. ANTE LED will remain lit in a fixed manner. To restore the initial configuration (without gate delay) navigate to the RIT. ANTE LED when flashing then press the SET button twice within 2 seconds; the LED switches off and the operation is complete.

EXTENDED MENU 1

The control unit is supplied by the manufacturer with the option of directly selecting only the functions listed in the main menu.

To enable the functions of Extended menu 1, proceed as follows: press and hold the SET button for 5 seconds; the T. PAUSA and RIT. ANTE LEDs start flashing alternately; the user has a period of 30 seconds in which to select the functions of Extended menu 1 using the SEL and SET buttons; after 30 seconds the control unit returns to the main menu.

----- EXTENDED MENU 1 -----		
Reference LED	LED Off	LED On
A) 1-2 MOTORS	INB. CMD AP = OFF	INB. CMD AP. = ON
B) AUT / P-P	electronic brake = ON	electronic brake= OFF
C) CODE	pressure maint. = OFF	pressure maint. = ON
D) PED. CODE	ramming effect = OFF	ramming effect = ON
E) T. MOT.	closure strike = OFF	closure strike = ON
F) T.MOT.PED.	SOFT START = OFF	SOFT START = ON
G) T. PAUSA	alternate ON/OFF flashing	
H) RIT. ANTE	alternate ON/OFF flashing	

A) 1 – 2 MOTORS

(command inhibition during opening and pause time, if entered):

The command inhibition function during opening and pause time, if entered, is used when the automation includes the loop detector. During opening or pause time the control unit does not pick up the commands given by the loop detector at every passage.

The control unit is supplied by default with the command inhibition function during opening and pause time not enabled. To enable the function proceed as follows: make sure that Extended menu 1 is enabled (T. PAUSA and RIT. ANTE LEDs flash alternately), use the SEL button to navigate to 1-2 MOTORS LED when flashing and press the SET button: the 1-2 MOTORS LED switches on and programming is complete. Repeat the procedure to restore the previous configuration.

B) AUT / P-P (electronic brake):

The control unit is supplied by the manufacturer with the electronic brake function disabled. To enable the function proceed as follows: make sure that Extended menu 1 is enabled (T. PAUSA and RIT. ANTE LEDs flash alternately), use the SEL button to navigate to the AUT/P-P LED when flashing and press the SET button: the AUT/P-P LED will remain lit in a fixed manner and programming will be complete.

The control unit reduces the forward motion of the gate due to inertia in the presence of a stop or inversion command. Repeat the procedure to restore the previous configuration.

C) CODE (maintaining hydraulic motor pressure):

The control unit is supplied by the manufacturer with the hydraulic motor pressure maintenance feature disabled. To enable the function proceed as follows: make sure that Extended menu 1 is enabled (T. PAUSA and RIT. ANTE LEDs flash alternately), use the SEL button to navigate to the CODE LED when flashing and press the SET button: the CODE LED switches on and programming is complete. This means the control unit will send a closing command to the motor for 2 seconds, every 2 hours. Repeat the procedure to restore the previous configuration.

D) PED. CODE (ramming effect):

The control unit is supplied by the manufacturer with the ramming effect function disabled. If you wish to enable the ramming effect function at its maximum power, proceed as follows: make sure that Extended menu 1 is enabled (T. PAUSA and RIT. ANTE LEDs flash alternately), use the SEL button to navigate to the PED. CODE LED when flashing and press the SET button: the PED. CODE LED is illuminated in a constant manner and programming is complete. To enable the ramming effect function at the set power using the Trimmer VR1, repeat the above procedure, pressing the SEL button twice (the PED. CODE LED flashes rapidly) instead of once. Repeat the procedure to restore the initial configuration.

In this mode the lock can be unlocked and the opening operation phase can be performed correctly. Before starting the opening phase the control unit will send a closing command for 2 seconds, at a power level which corresponds to the selected value.

E) T. MOT. (closure strike):

The control unit is supplied by the manufacturer with the closure strike function disabled. If you wish to enable the closure strike function at its maximum power, proceed as follows: make sure that Extended menu 1 is enabled (T. PAUSA and RIT. ANTE LEDs flash alternately), use the SEL button to navigate to the T. MOT. LED when flashing and press the SET button: the T. MOT. LED remains lit in a constant manner and programming is complete. To enable the closure strike function at the set power using the Trimmer VR1, repeat the above procedure, pressing the SEL button twice (the T. MOT LED flashes rapidly) instead of once. Repeat the procedure to restore the initial configuration.

If deceleration during closing is programmed, the control unit will add 1 second at a power level corresponding to the set

value (after the decelerated closing procedure has been completed) in order to overcome the lock, if present.

F) T. MOT. PED. (SOFT START):

The control unit is supplied by the manufacturer with the soft start function disabled. To enable the function proceed as follows: make sure that Extended menu 1 is enabled (T. PAUSA and RIT. ANTE LEDs flash alternately), use the SEL button to navigate to the T. MOT. PED. LED when flashing and press the SET button: the T. MOT. PED. LED remains lit constantly and programming is complete. This means the control unit, every time the motor starts, will control the start-up speed of the motor, gradually increasing its power from minimum to maximum in the first 2 seconds of operation. Repeat the procedure to restore the previous configuration.

EXTENDED MENU 2

The control unit is supplied by the manufacturer with the option of directly selecting only the functions listed in the main menu. To enable the functions of Extended menu 2, proceed as follows: access Extended menu 1 (as described in the corresponding paragraph), then press the SET button again and hold for 5 seconds. After this time period has elapsed, the T. PAUSA and RIT. ANTE LEDs will begin to flash. The user has a period of 30 seconds in which to select the functions of Extended menu 2 using the SEL and SET buttons; after a further 30 seconds the control unit returns to the main menu.

----- EXTENDED MENU 2 -----		
Reference LED	LED Off	LED On
A) 1-2 MOTORS	remote PGM = OFF	remote PGM = ON
B) AUT / P-P	photocells test = OFF	photocells test = ON
C) CODE	flashing/courtesy light = OFF	flashing/courtesy light = ON
D) PED. CODE	pause flashing = OFF	pause flashing = ON
E) T. MOT. PED.	El. Lock CMD = OFF	El. Lock CMD = ON
F) T.MOT.PED.	PUL=PUL - PED=PED	PUL=AP - PED=CH
G) T. PAUSA	simultaneous ON/OFF flashing	
H) RIT. ANTE	simultaneous ON/OFF flashing	

A) 1 – 2 MOTORS

(remote programming of radio control):

The control unit allows the transmission code to be programmed by remote, without using the SEL key. To programme the radio control remotely, proceed as follows: send the radio control code continuously for more than 10 seconds and the control unit will enter the programming mode as described above for the CODE LED in the main menu.

The control unit is supplied by the manufacturer with remote programming of the transmission code not enabled; to enable the function proceed as follows: make sure that Extended menu 2 is enabled (T. PAUSA and RIT. ANTE LEDs flash simultaneously), use the SEL button to navigate to 1-2 MOTORS LED when flashing and press the SET button: the 1-2 MOTORS LED switches on and programming is complete. Repeat the procedure to restore the previous configuration.

B) AUT / P-P (Photocells Test):

The control unit is supplied by the manufacturer with the Photocells Test programming deactivated; if wanting to enable such function (in compliance with Standard EN 12453) it is firstly necessary to move the jumper located on the board from position 1-2 to position 2-3. If wanting to enable the test only on DS1, proceed as follows: ensure to have enabled Extended Menu 2 (highlighted by the simultaneous flashing of PAUSE T. LED and DOORS DEL. LED), with the SEL key positioned on the flashing of AUT/S-S LED press the SET key, the AUT/S-S LED will simultaneously switch on permanently and the programming is completed. In this way, the DS1 test will be carried out before automation starts any movement. If wanting to enable the test for both photocells (DS1 and DS2), repeat the operation described above, pressing the SEL key twice (obtaining the quick flashing of AUT/S-S LED) instead of once. In this way, the test on both photocells will be carried out before automation starts any movement.

Repeat the operation if wanting to restore the previous configuration. If not used, inputs DS1 and DS2 must be linked up using jumpers and the Photocells Test deactivated.

Important: ensure the appropriate jumper is positioned correctly, in accordance or not, with the programming of the Photocells Test.

C) CODE (advance flashing / courtesy light):

The control unit is supplied by the manufacturer with the advance flashing and courtesy light functions disabled. To enable the advance flashing function proceed as follows: make sure that Extended menu 2 is enabled (T. PAUSA and RIT. ANTE LEDs flash simultaneously), use the SEL button to navigate to CODE LED when flashing and press the SET button: the CODE LED switches on and programming is complete. To enable the courtesy light function, repeat the procedure above, pressing the SEL button twice (the CODE LED flashes rapidly) instead of once. Repeat the procedure to restore the initial configuration.

Advance flashing operation: The 230 V a/c flashing beacon output will always be enabled 3 seconds before the automation begins moving in any direction.

Courtesy light operation: The 230 V a/c flashing beacon output will be enabled for 3 minutes every time an opening command is given.

D) PED. CODE (flashing beacon operation):

The control unit is supplied by the manufacturer with the flashing beacon function during pause time disabled. To enable the function proceed as follows: make sure that Extended menu 2 is enabled (T. PAUSA and RIT. ANTE LEDs flash simultaneously), use the SEL button to navigate to the PED. CODE LED when flashing and press the SET button: the PED. CODE LED is illuminated in a constant manner and programming is complete. Repeat the procedure to restore the previous configuration.

E) T. MOT (electric lock PED. CMD activation):

The control unit is supplied by the manufacturer with the electric lock pedestrian command function disabled. To enable the function proceed as follows: make sure that Extended menu 2 is enabled (T. PAUSA and RIT. ANTE LEDs flash simultaneously), use the SEL button to navigate to the T. MOT. LED when flashing and press the SET button: the T. MOT. LED remains lit in a constant manner and programming is complete. The electric lock pedestrian command function is used when, for example, a sliding gate has been fitted with a door for pedestrian passage next to it. This means the gate can be opened using the PUL commands and the pedestrian door can be opened by enabling the electric lock function using the PED commands. Repeat the procedure to restore the previous configuration.

F) T. MOT. PED. (PUL and PED commands operation):

The control unit is supplied by the manufacturer with an enabled PUL command input for the connection of a cyclical main command button (NA) and PED input for the connection of a cyclical pedestrian command button (NA). If you wish to select a different operating mode for the PUL and PED inputs, proceed as follows: make sure that Extended menu 2 is enabled (T. PAUSA and RIT. ANTE LEDs flash simultaneously), use the SEL button to navigate to the T. MOT. PED. LED when flashing and press the SET button: the T. MOT. PED. LED remains lit constantly and programming is complete.

This means the PUL input will allow connection of a button (NA) only for the opening movement and the PED input will be used for the connection of a button (NA) only for the closing movement. Repeat the procedure to restore the previous configuration.

EXTENDED MENU 3

The control unit is supplied by the manufacturer with the direct selection possibility of only the main menu functions.

If wanting to enable the programming of the slowing power carried out by the control unit, proceed as follows: access Extended Menu 2 (as described in the relative paragraph), and again press the SET key continuously for 5 seconds, after this time a flashing, firstly alternating then simultaneously, of the PAUSE T. LED and DOORS DEL. LED, will be obtained; in this way, there are 30 seconds to select the desired slowing using the SEL and SET keys, then, after a further 30 seconds, the control unit returns to the main menu.

----- EXTENDED MENU 3 -----	
Level	LEDS Switched on
1	1-2 MOTORS
2	1-2 MOTORS - AUT / S-S
3	1-2 MOTORS - AUT / S-S - CODE
4	1-2 MOTORS - AUT / S-S - CODE - PED. CODE
5	1-2 MOTORS - AUT / S-S - CODE - PED. CODE - MOT. T.
6	1-2 MOTORS - AUT / S-S - CODE - PED. CODE - MOT. T. - PED. MOT. T.

Slowing Programming

The control unit allows to program the power at which the slowing phase will be carried out.

It is possible to choose from 6 different power level as follows: at every combination of switched on LEDES corresponds a level according to the above table; basically, starting from the lowest LED (LED 1-2 MOTORS) moving upwards, every LED corresponds to a higher power level. Using the SEL key it is possible to scroll the different power levels; for every selected power level, the highest respective LED flashes (for example, if level 4 is selected, LEDES 1-2 MOTORS, AUT/S-S- and CODE are switched on permanently, whereas the PED CODE LED flashes); press SET to confirm.

Level 3 is selected in default configuration.

RESET:

To restore the default configuration, press the SEL and SET buttons simultaneously; all RED LEDs will light up and then switch off.

DIAGNOSTICS:

Photoelectric cells test:

The control unit is set up for the connection of safety devices compliant with 5.1.1.6 section of EN 12453. The operation test for connected photoelectric cells is performed at each manoeuvring cycle. If there is no connection and/or no operation, the control unit will not enable motion and will indicate test failure visually through the simultaneous flashing of all LEDs. Once the correct functioning of the photoelectric cells has been restored, the control unit is ready for normal operation. This guarantees monitoring against failures in compliance with Category 2 of EN 954-1.

Command input test:

The control unit is fitted with an LED for every low voltage command input so that the status may be checked immediately.

Operating principle: LED on = input closed, LED off = input open.

supervision is provided or instruction given on how to operate it.

- *Do not let children play with the device; keep radio controls out of their reach.*
- *CAUTION: Keep this instruction manual in a safe place and adhere to the important safety instructions contained within it. Non-adherence to these instructions may lead to property damage and serious accidents.*
- *Examine the system frequently to check for any signs of damage. Do not use the device if it needs to be repaired.*

Warning

All procedures which require the casing to be opened (such as wire connection, programming, etc.) must be carried out during installation, by skilled staff only. For any other procedure which requires the casing to be opened again (re-programming, repairs or site modifications), please contact the technical assistance service.

FOR THE USER - IMPORTANT

- The device should not be used by children or by individuals with reduced physical or psychological abilities unless

FOR THE INSTALLER - IMPORTANT

Before gate automation, it is necessary to check the product is in good condition and that it complies with EN 12604 and the Machines Directive.

The control unit does not have any type of isolating device for the 230 Vac line. It will therefore be the responsibility of the installer to arrange an isolating device inside the plant. It is necessary to install a single-phase switch with over-voltage category III. It must be positioned where it can be protected from accidental closing, according to that prescribed in point 5.2.9 of EN 12453. The wiring of external electrical components must comply with EN 60204-1 as amended in section 5.2.7 of EN 12453. The power supply cables can have a maximum diameter of 14 mm; the fixing of the power supply and connection cables must be guaranteed through the assembly of available cable glands "optional".

For the power supply cables, use flexible cables under insulating sheath in harmonised polychloroprene (H05RN-F) with minimum section of the conductors equal to 1mm²

The rear casing is designed for wall installation (it is designed to have holes so that it may be installed using rawl plugs, or so that it can be fixed in place using screws). Plan and apply all the details necessary for the IP degree to remain unaltered after installation.

If present, the keypad for manual control must be mounted in such a way that the user is not placed in a dangerous situation.

The motor reducer used to move the gate must comply with section 5.2.7. of EN 12453.

The D.S. power supply output must be dedicated to the powering of photoelectric cells. It must not be used for other purposes.

The control unit tests the operation of photoelectric cells at every manoeuvring cycle to guarantee protection against failures of Category 2 anti-crushing devices, in compliance with section 5.1.1.6 of EN 12453. Therefore, if the safety devices are not connected and/or operated, the control unit is not enabled for operation.

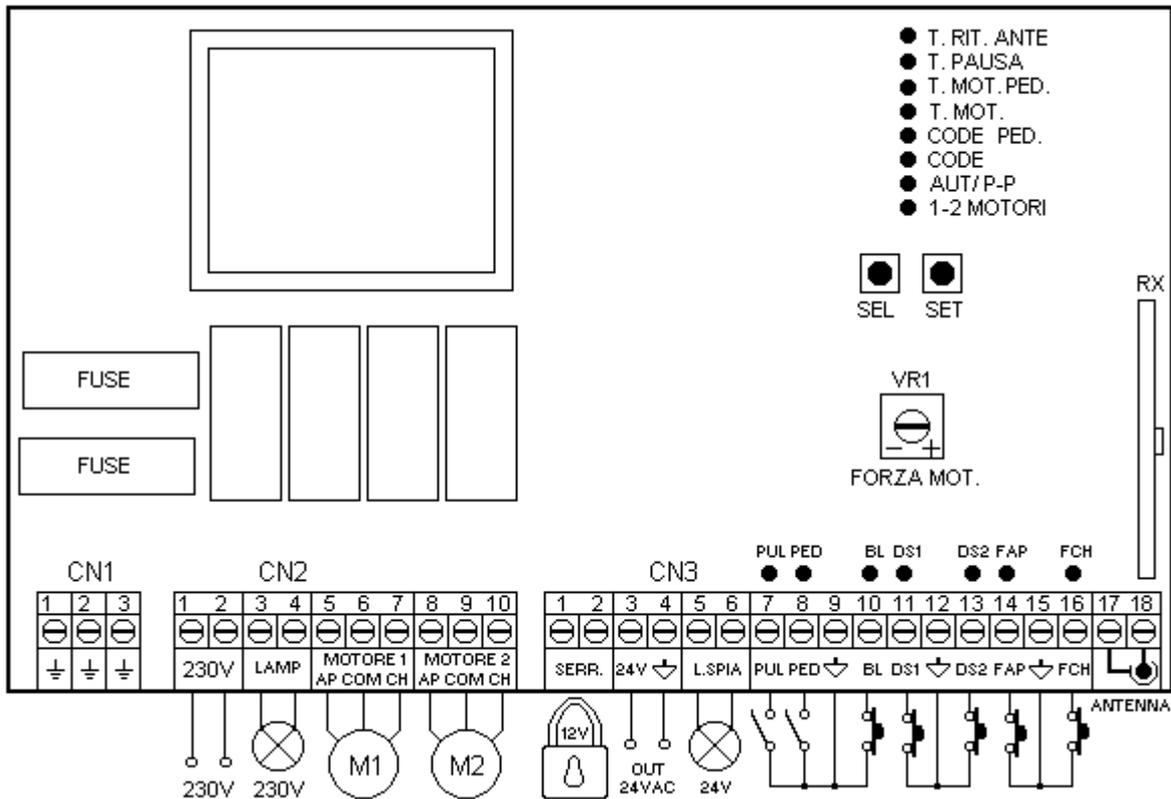
For the radio receiver to operate correctly when two or more control units are used, we recommend that you install the devices at least 3 metres away from each other.

SEAV s.r.l. hereby declares that the below products:

**Electronic Control Unit:
LG 2212 - LRS 2212 - LRS 2212 SET - LRH 2212**

conform to the specifications in the Directives
R&TTE 99/5/EC, EMC 2004/108/EC, LVD 2006/95/EC.





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