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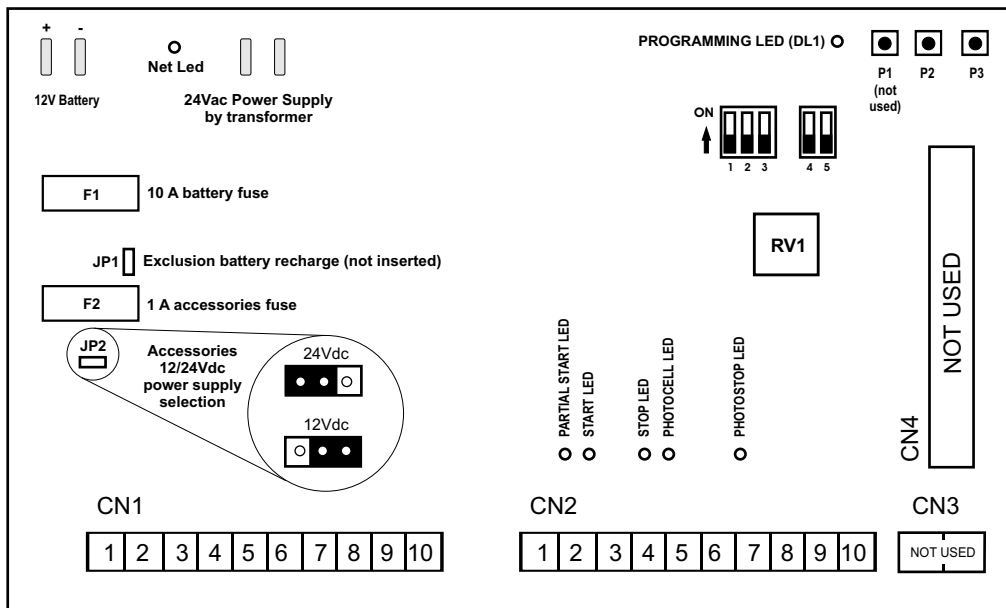
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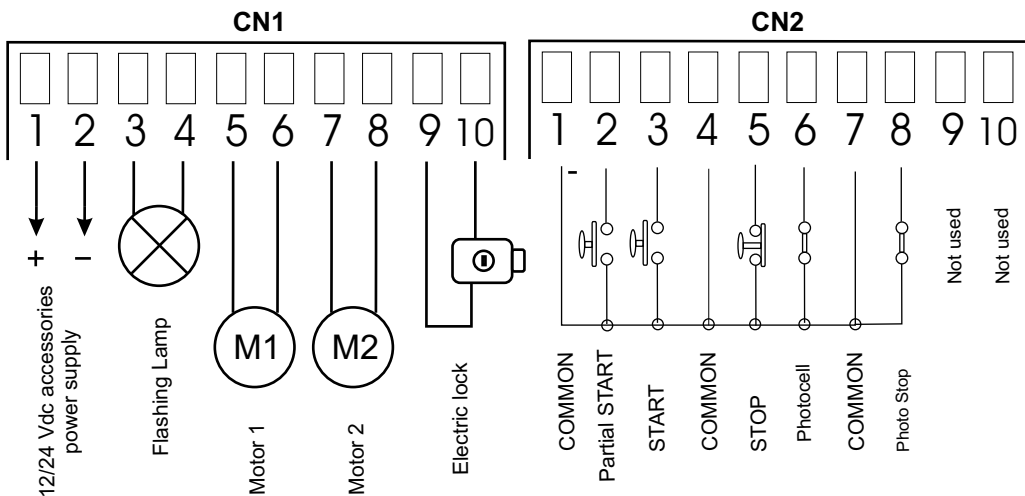
English

## GATE 2 24V TR CONTROL UNIT

(cod. 23001137 - 23001138 - 23001139)



### CONNECTIONS





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Importation Agreement Approved in 1991

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## OPERATING LOGICS

### Introduction

Inside the electronic control unit there is a microprocessor which manages the operating logic of the gate. During the functioning there are 4 main phases to distinguish:

- Phase preceding the movement
- Phase in which the gate is moving fast
- Phase in which the gate is moving slowly
- Phase in which the gate is in pause (opened)

The control unit can manage three different operating logics:

- Step-by-Step. It is obtained by setting dip switch 1 =OFF 2=OFF
- Automatic. It is obtained by setting dip switch 1 =OFF 2=ON
- Condominium. It is obtained by setting dip switch 1 =ON 2=Irrelevant

Condominium operating logic has priority. If more logics are selected at the same time, the logic with the priority will be used.

**Notice:** The setting of the operating logic (dip switch) and the programming of working time and pause must be executed only when the working cycle has been completed or is going to start (gate closed).

The operating cycle of opening and closing is started by a START or PARTIAL START order.

**Notice:** The first Start order given after having supplied power to the electronic control unit always establishes the start of an opening cycle no matter which logic has been selected.

### “STEP-BY-STEP” LOGIC

After having supplied power to the electronic control unit, the first Start order starts an opening cycle. During the slow-down phase, the end of the working time or the intervention of the AMMETRICAL STOP for both motors, determines the stopping of the gate.

The working cycle is completed (flashing lamp off) waiting for a new start order for the closing.

A start order stops the gate when it has not finished its run. A following start order determines the inversion of movement.

### “AUTOMATIC” LOGIC

After having supplied voltage to the electronic control unit, the first Start order starts an opening cycle. During the slow-down phase, the working time end or the intervention of the AMMETRICAL STOP for both motors, it establishes the stopping of the gate and the beginning of the pause time (flashing lamp off). When the pause time has passed, the gate closes automatically.

The working cycle is completed at the end of the closing phase.

A start order stops the gate when the gate has not finished its run.

A following start order determines the inversion of movement.

A start order given during the pause interrupts the working cycle and the gate does not close automatically.

A following start order starts a closing cycle.

### “CONDOMINIUM” LOGIC

After having supplied power to the electronic control unit, the first Start order starts an opening cycle. During the slow-down phase, the working time end or the intervention of the AMMETRICAL STOP for both motors, it determines the stopping of the gate and the beginning of the pause time (flashing lamp off). When the pause time has passed, the gate closes automatically. The working cycle is completed at the end of the closing phase. A start order given during the opening is irrelevant.

A start order given during the closing phase stops the gate and reverses its movement after about 1,5 seconds.

A start order given during the pause time recharges it, lengthening the period which precedes the automatic closing.

**Notice:** If the gate opening is controlled by a clock it is necessary to enable the condominium operating logic.



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## "ONELEAF" LOGIC

It is used on single-leaf gates. When enabled, it determines the operating of the M2 motor only.

The operating logics previously described do not change. By selecting the "single leaf" logic it is necessary to set dip switch 3 = ON.

**Notice:** At the beginning of every opening cycle, with the gate closed, there are distinguished 2 functioning ways of the electric lock:

- 1) if dip switch is on 4 = OFF, the lock is activated for some tenths of a second (0.8 sec) before the star of the first leaf (M2) and it is disactivated for some tenths of a seconds (0,4sec) after the start of the leaf itself.
- 2) if dip switch is on 4 = ON, the lock is activated after a short closing phase of the leaves (about 1 sec) and it is disactivated only after the start of the leaf M2 in opening. The "stroke ram" procedure is usually used to facilitate the release of the electric lock in case of bad environment conditions.

No matter which operating logic is in use, the intervention of the safety devices produces the following effects:

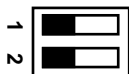
**Stop:** if the stop order is activated, it prevents the start of every cycle and makes the start order irrelevant. A stop order given during the movement immediately stops the gate, stopping the working cycle. This condition keeps on until it is present. After a stop order, the following start order always starts an opening cycle. A stop order given during the pause time interrupts the working cycle. The following start order begins a closing cycle.

**Photocell:** It is relevant only during the closing phase or during the pause time. If an obstacle darkens the photocell during the closing phase, it causes the stopping and the reversing of the gate after about 1,5 seconds. The intervention of the photocell during the pause time recharges it, lengthening the period which precedes the automatic closing.

**Photostop:** If an obstacle darkens the photocell during the movement, no matter which the direction of movement is, or during the phase which precedes the start of the working cycle, it causes the temporary stopping of the gate until it stays in this condition. The flashing lamp warns the irregular condition with a fix light. As soon as the obstacle is removed and the photoelectric cell is free, an opening cycle will always begin. This condition is not valid only when, once completed the opening cycle, a start order starts the closing phase in step-by-step logic. The photostop intervention during the pause time recharges it, lengthening the period which precedes the automatic closing.

**Partial Start:** the partial start order acts in the same way as the other start order, but determines the opening and closing only of the leaf (M2) with the electric lock. The partial start order is irrelevant during the starting cycle until the end of the closing phase (gate closed). During the partial start cycle, the start order is always working and it determines the start of an opening cycle of both the leaves.

## OPERATING LOGICS SETTING



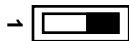
### STEP-BY-STEP LOGIC

Place dip switch 1 and 2 in OFF  
The condition of the other dip switches is irrelevant.



### AUTOMATIC LOGIC

Place dip switch 2 in ON and dip switch 1 in OFF  
The condition of the other dip switches is irrelevant.



### CONDOMINIUM LOGIC

Place dip switch 1 in ON. The condition of the other dip switches is irrelevant.



### SINGLE LEAF LOGIC

Place dip switch 3 in ON. The condition of the other dip switches is irrelevant.



## OTHER FUNCTIONS



### ***STROKE OF THE RAM - EXTRA STROKE IN CLOSING***

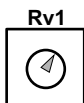
Place dip switch 4 in ON. The condition of the other dip switches is irrelevant.



### ***ANNULMENT DELAY II LEAF (phase-displacement null)***

Place dip switch 5 in ON. The condition of the other dip switches is irrelevant.

## WORKING TIME SETTING



Make sure that the gate is completely closed, otherwise place it manually.

Push **P2** for ca. 3 seconds (lighting of led DL1 with fix light) until the gate starts to open with reduced speed.



During this phase regulate with trimmer **RV1** the speed in order to obtain the desired slow down.

At complete opening push **P2** again and wait for led DL1 and the flash light to turn on again with fix light.

Press in sequence the push button **P2** (for 6 times) to programme the following operations:

1. start motor M1
2. start motor M2 (delay in closing)
3. beginning of slow down motor M1
4. beginning of slow down motor M2
5. stop motor M1 (end of the run)
6. stop motor M2 (end of the run and end of the programming)

## TIME OF PAUSE SETTING



Push **P3** until the lighting of led DL1

Let pass the desired time of pause and push **P3** again

**Important:** Before starting the gate please check :

- a) the connexions to the electronic control unit
- b) the commutation of the electric contacts
- c) the state of the protection fuse
- d) the lighting of the leds



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## SAFETY PRECAUTIONS

The electrical installation work and choice of operating logic must conform to current regulations.  
A 16A 0.030A differential switch must be fitted in any case. Keep the power cables (motors, power supplies) separate from the control cables (buttons, photocells, radio, etc). It is recommended that two separate sheaths be used to avoid interference.

## SPARE PARTS

To obtain spare parts contact:

**SEA USA Inc.**

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## INTENDED USE

The 23001137-38-39 electronic control unit has been designed to be used solely as a control unit for the automation of sliding gates, swing gates, garage-doors, folding doors, barriers.

## SAFETY AND ENVIRONMENTAL COMPATIBILITY

Please do not spoil the environment with product and/or circuit packaging material.

STORAGE TEMPERATURES			
<b>T<sub>min</sub></b>	<b>T<sub>Max</sub></b>	<b>Humidity<sub>min</sub></b>	<b>Humidity<sub>Max</sub></b>
- 40°C	+ 85°C	5% <i>no condensation</i>	90% <i>no condensation</i>

The product must be stored using the appropriate equipment.

## DECOMMISSIONING AND MAINTENANCE

The decommissioning and/or maintenance of the 23001137-38-39 electronic unit must only be carried out by experienced and authorized personnel.

## LIMIT OF GUARANTEE

The 23001137-38-39 electronic control units are guaranteed for a period of 24 months from the date stamped on the unit. The guarantee will cease to apply if the unit is incorrectly installed, not used for the purpose intended, tampered with or modified in any way. The validity of this guarantee applies only to the original purchaser.

**NOTE: THE MANUFACTURER CANNOT BE HELD RESPONSIBLE FOR ANY DAMAGE OR INJURY CAUSED BY THE INCORRECT USE OF THIS PRODUCT.**

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*SEA reserves the right to make any changes or amendments to its products and/or this manual that it sees fit, without the need to give prior notice.*

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