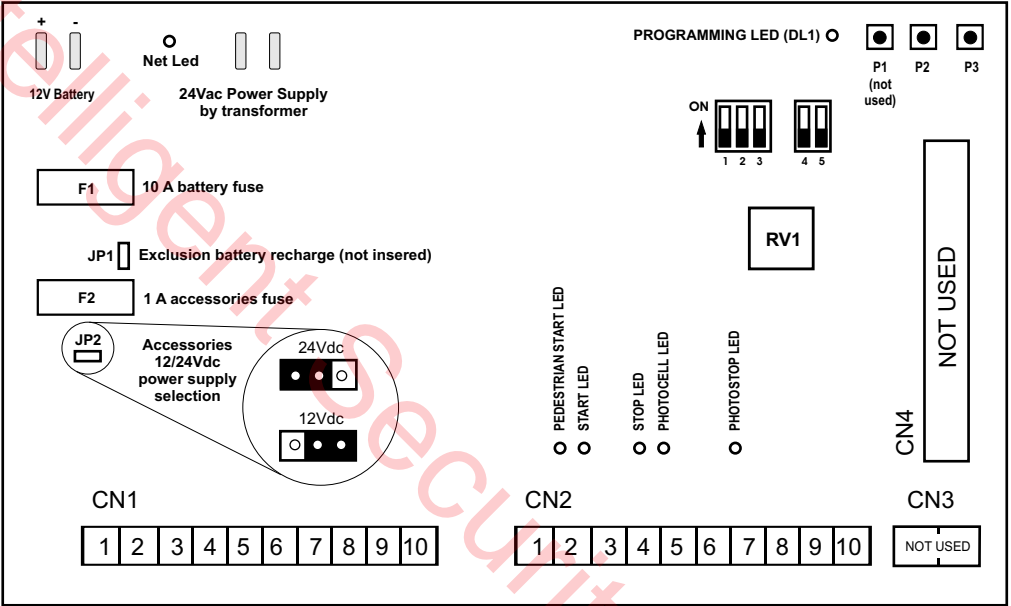




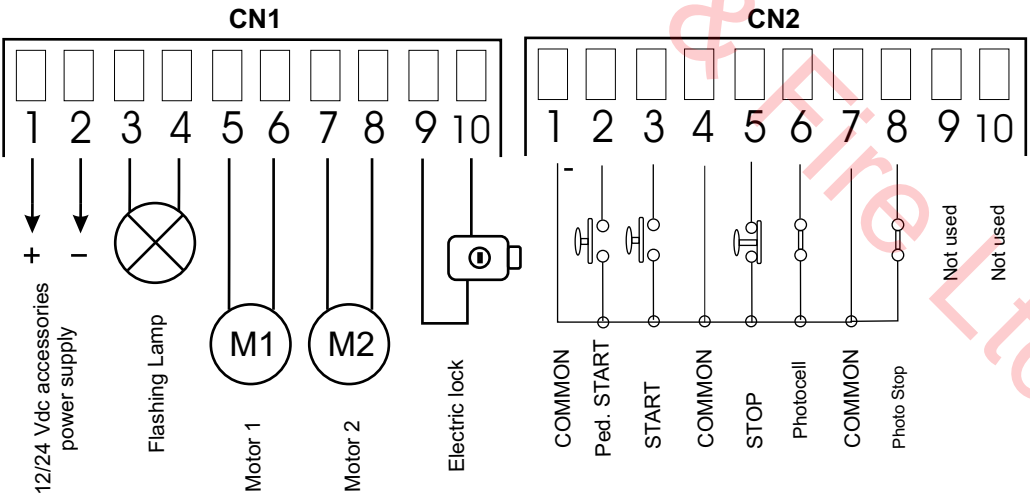
English

# GATE 2 24V TR CONTROL UNIT

(cod. 23001137 - 23001138)



## CONNECTIONS





## 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 PEDESTRIAN 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.



### “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 start of the first leaf (M2) and it is deactivated 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 deactivated 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:

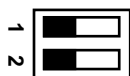
**Stop:** if the stop order is activated, it prevents the start of every cycle and makes the start order irrelevant. A stop order given during the movement immediately stops the gate, stopping the working cycle. This condition keeps on until it is present. After a stop order, the following start order 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.

**Pedestrian Start:** the pedestrian 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 pedestrian start order is irrelevant during the starting cycle until the end of the closing phase (gate closed). During the pedestrian start cycle, the start order is always working and it determines the start of an opening cycle of both the leaves.

### OPERATING LOGICS SETTING



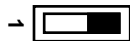
#### STEP-BY-STEP LOGIC

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

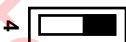
Place dip switch 1 in ON. The condition of the other dip switches is irrelevant.



#### 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

**Rv1**



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.

**P2**



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

**P3**



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



## 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:  
**SEAs.r.l. ZONA Ind.le, 64020 S.ATTO Teramo Italia**

## INTENDED USE

The 23001138 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.



## CORRECT DISPOSAL OF THIS PRODUCT (WASTE ELECTRICAL & ELECTRONIC EQUIPMENT) - EUROPE ONLY

(Applicable in the European Union and other European countries with separate collection systems)  
This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.  
Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

## STORAGE

STORAGE TEMPERATURES			
$T_{min}$	$T_{Max}$	Humidity <sub>min</sub>	Humidity <sub>Max</sub>
- 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 23001138 electronic unit must only be carried out by experienced and authorized personnel.

## LIMIT OF GUARANTEE

The 23001138 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.**

*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.*



## TERMS OF SALE

**EFFICACY OF THE FOLLOWING TERMS OF SALE:**The following general terms of sale shall be applied to all orders sent to SEA srl. All sales made by SEA to all customers are made under the prescription of this terms of sales which are integral part of the sale contract and cancel and substitute all opposed clauses or specific negotiations present in the order or in other documents received from the buyer.

**GENERAL NOTICE** The gate automation systems must be assembled exclusively with SEA components, unless specific agreements apply. Non-compliance with the applicable safety standards (European Standards EN 12453 EN12445 and others) and with good installation practice releases SEA from any responsibilities. SEA shall not be held responsible for any failure to execute a correct and safe installation under the above mentioned standards.

**1) PROPOSED ORDER** The proposed order shall be accepted only prior SEA approval of it. By signing the proposed order, the Buyer shall be bound to enter a purchase agreement, according to the specifications stated in the proposed order and always under those Terms of sale. On the other hand, failure to notify the Buyer of said approval must not be construed as automatic acceptance on the part of SEA.

**2) PERIOD OF THE OFFER** The offer proposed by SEA or by its branch sales department shall be valid for 30 solar days, unless otherwise notified.

**3) PRICING** The prices in the proposed order are quoted from the Price List which is valid on the date the order was issued. The discounts granted by the branch sales department of SEA shall apply only prior to acceptance on the part of SEA. The prices are for merchandise delivered ex-works from the SEA establishment in Teramo, not including VAT and special packaging. SEA reserves the right to change at any time this price list, providing timely notice to the sales network.

**4) PAYMENTS** The accepted forms of payment are each time notified or approved by SEA. The interest rate on delay in payment shall be 1.5% every month but anyway shall not be higher than the max. interest rate legally permitted.

**5) DELIVERY** Delivery shall take place, approximately and not peremptorily, within 30 working days from the date of receipt of the order, unless otherwise notified. Transport of the goods sold shall be at Buyer's cost and risk. SEA shall not bear the costs of delivery giving the goods to the carrier, as chosen either by SEA or by the Buyer. Any loss and/or damage of the goods during transport, are at Buyer's cost.

**6) COMPLAINTS** Any complaints and/or claims shall be sent to SEA within 8 solar days from receipt of the goods, proved by adequate supporting documents as to their truthfulness.

**7) SUPPLY** The concerning order will be accepted by SEA without any engagement and subordinately to the possibility to get it's supplies of raw material which is necessary for the production; Eventual completely or partially unsuccessful executions cannot be reason for complains or reservations for damage. SEA supply is strictly limited to the goods of its manufacturing, not including assembly, installation and testing. SEA, therefore, disclaims any responsibility for damage deriving, also to third parties, from non-compliance of safety standards and good practice during installation and use of the purchased products.

### **8) WARRANTY.**

**SILVER:** The mechanical components of the operators belonging to this line are guaranteed for 24 months from the date of manufacturing written on the operator.

**GOLD:** The mechanical components of the operators belonging to this line are guaranteed for 36 months from the date of manufacturing written on the operator.

**PLATINUM:** The mechanical components of the operators belonging to this line are guaranteed for 36 months from the date of manufacturing written on the operator. The base warranty (36 months) will be extended for further 24 months (up to a total of 60 months) when it is acquired the certificate of warranty which will be filled in and sent to SEA s.r.l. within 30 days from the purchase date. The electronic devices and the systems of command are guaranteed for 24 months from the date of manufacturing. In case of defective product, SEA undertakes to replace free of charge or to repair the goods provided that they are returned to SEA repair centre.

The definition of warranty status is by unquestionable assessment of SEA. The replaced parts shall remain propriety of SEA. Binding upon the parties, the material held in warranty by the Buyer, must be sent back to SEA repair centre with fees prepaid, and shall be dispatched by SEA with carriage forward. The warranty shall not cover any required labour activities. The recognized defects, whatever their nature, shall not produce any responsibility and/or damage claim on the part of the Buyer against SEA. The guarantee is in no case recognized if changes are made to the goods, or in the case of improper use, or in the case of tampering or improper installation, or if the product label of the manufacturer with the registered SEA trademark n° 804888 has been removed. Furthermore, the warranty shall not apply if SEA products are partly or completely coupled with non-original mechanical and/or electronic components, and in particular, without a specific relevant authorization, and if the Buyer is not making regular payments. The warranty shall not cover damage caused by transport, expendable material, faults due to non-conformity with performance specifications of the products shown in the price list. No indemnification is granted during repairing and/or replacing of the goods in warranty. SEA disclaims any responsibility for damage to objects and persons deriving from non-compliance with safety standards, installation instructions or use of sold goods. The repairs of products in warranty and out of warranty is accepted only if the procedure of SEA are fully respected by the customer.

**9) RESERVED DOMAIN** A clause of reserved domain applies to the sold goods; SEA shall decide autonomously whether to make use of it or not, whereby the Buyer acquires the property of the goods only after full payment of the invoice.

**10) COMPETENT COURT OF LAW** In case of disputes arising from the application of the agreement, the competent court of law is the tribunal of Teramo. The official language for the interpretation of the catalogue, the manuals, the terms of sale and any other is the italian language.

SEA reserves the faculty to make technical changes to improve its own products, which are and are not included in this price list at any moment and without notice.

SEA declines any responsibility due to possible mistakes contained inside the present price list caused by printing and/or copying. The present price list cancels and substitutes the previous ones. The Buyer, according to the law No. 196/2003 (privacy code) consents to put his personal data, deriving from the present contract, in SEA archives and electronic files, and he also gives his consent to their treatment for commercial and administrative purposes. **Industrial ownership rights:** with the purchase, the buyer accepts in full the present Terms of Sale and recognizes that SEA has the exclusive legal ownership of the registered SEA International trademark n° 804888 which is attached on each products label, and/or on manuals, packaging and/or in any other documentation, and he will commit himself to use it in its marketing and/or installation activity in a way which does not reduce the value of these rights; he won't also remove, replace or modify the trademark or any other particularity from the products. Any kind of replication or use of SEA brand is forbidden as well as of any change of sings-brands on the products, unless preventive and expressed authorization by SEA.