SEA USA Inc.
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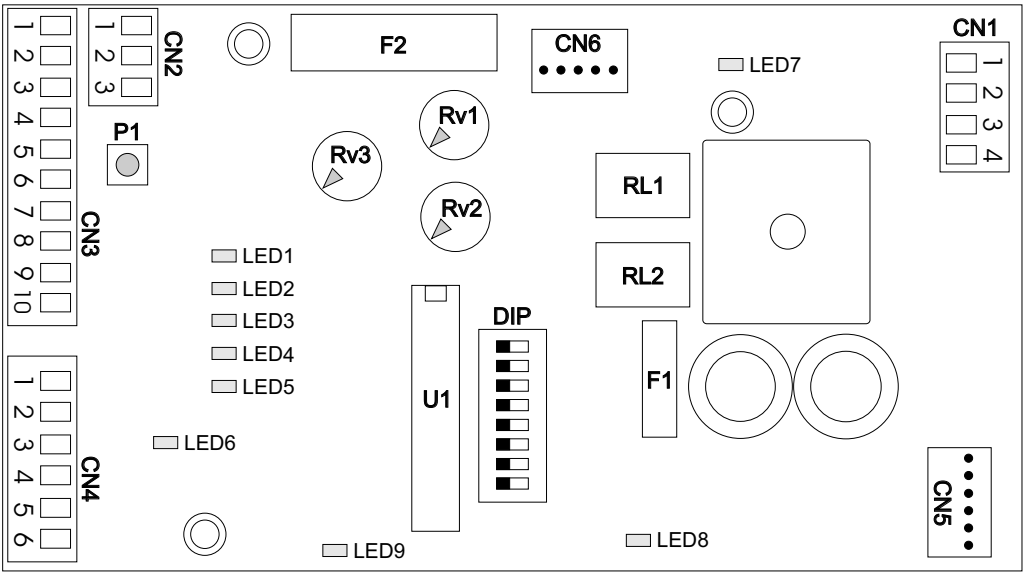
GATE 1 24V DC for VERG 24V

CONTROL UNIT



LED1 = Photocell	CN4 = Flashing lamps connector
LED2 = Closes	CN5 = Batterycharger connector *(see last page)*
LED3 = Start	CN6 = Radio receiver connector
LED4 = Stop	Rv1 = Motor speed regulation
LED5 = Timer / Opens	Rv2 = Slow down speed regulation
LED6 = Safety edge	Rv3 = Anti-crushing sensibility regulation
LED7 = Encoder	P1 = Working time memorizing push button
LED8 = Power supply	DIP = Dip switch for functions setting
LED9 = Programming	F1 = Power supply and motor (10A) fuse
CN1 = Transformer motor connector	F2 = Accessories fuse (2A)
CN2 = Encoder connector	RL1 - RL2 = Relè motor direction
CN3 = Inputs/outputs 24V connector	U1 = Microcontroller

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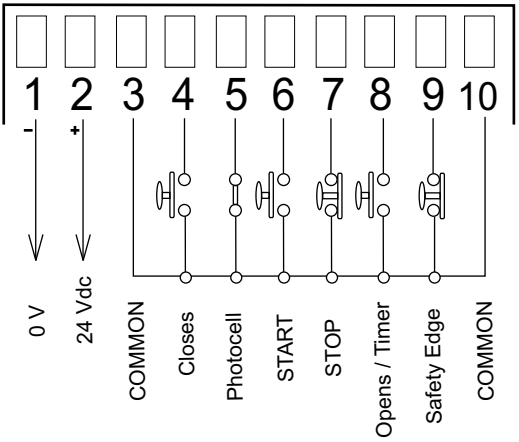
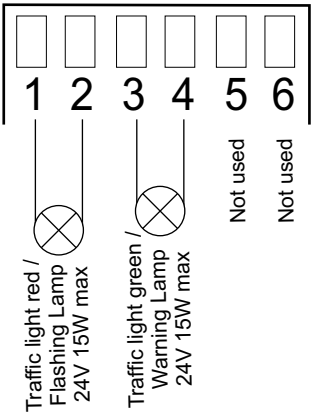
CONNECTIONS

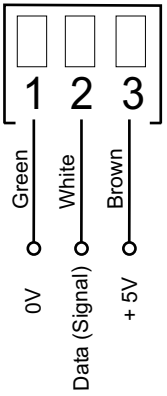
CN3



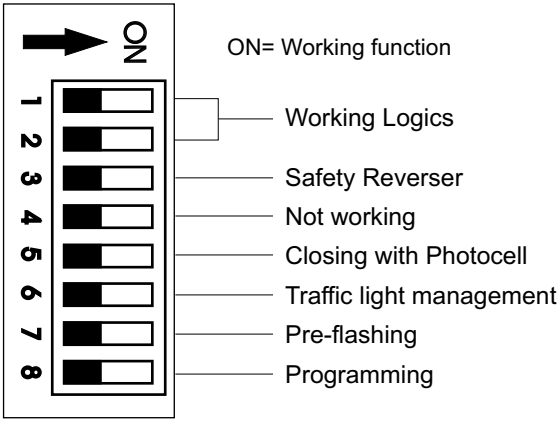
CN4



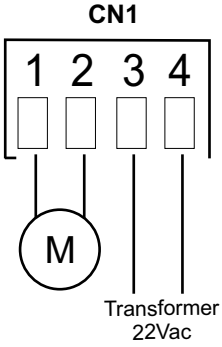
CN2 (ENCODER)



DIP



CN1



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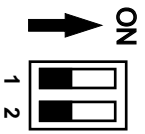
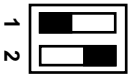
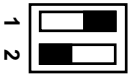
SETTING OF WORKING LOGICS



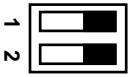
DEAD MAN LOGIC
The automation functions by "Maintained" contacts acting on the entries of open and close. The entry "Open" commands the opening of the barrier. The entry "Close" the closing.



HALF AUTOMATIC LOGIC
The repeated start realizes the following sequence: open-stop-close- open-stop-close-.....

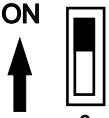


TWO PUSH BUTTON LOGIC
One impulse on the command "Open" opens the barrier.
One impulse on the command "Close" closes the barrier.



AUTOMATIC LOGIC (automatic closing)
The start executes only an opening when the barrier is closed, in opening it has no effect, in pause it closes immediately, in closing it re-opens.

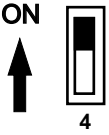
OTHER FUNCTIONS



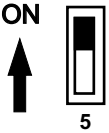
INTERVENTION OF THE SAFETY REVERSER IN CLOSING

OFF: It opens again and if the automatic closing is programmed after the pause time it closes. If the closing has not been completed after two attempts, the barrier remains opened and waits for commands.

ON: It opens again and waits for commands.

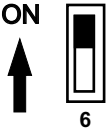


NOT WORKING



CLOSING FUNCTION AFTER THE INTERVENTION OF THE PHOTOCELL

ON: If a pause time is programmed it is reduced to 0 seconds when the photocells are interrupted in opening or in pause.



TRAFFIC LIGHT MANAGEMENT
Traffic light management with red lamp has to be connected to the flashing light exit and the green lamp to the control lamp exit.
The red signal is given when the barrier is closed, in opening and closing.
The green signal is given when the barrier is open.

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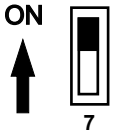
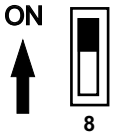


PRE-FLASHING

OFF: The flashing lamp works together with the motor starting.

ON: Pre-flashing which advances every movement of 3 sec. but the reversing, due to the intervention of the safeties.



PROGRAMMING

OFF: Setting for Normal functioning.

ON: It opens the time programming phase.

INPUTS/OUTPUTS DESCRIPTION

PHOTOCELL ***(N.C.)***
In closing when the signal is interrupted it immediately opens.

STOP ***(N.C.)***
It stops the automation whenever it is pushed.
A start order is necessary to reset the movement.

START ***(N.O.)***
Input to command the automation depending on DIP1 and 2

OPEN ***(N.O.)***
Commands the opening of the barrier depending on how Dip 1 and 2 have been set.

CLOSE ***(N.O.)***
Commands the closing of the barrier depending on how Dip 1 and 2 have been set.

TIMER ***(N.O.)*** (to use as clock input)
Input of opening only. Keeping it in function with the Automatic Logic the automation does not close until when it is not obstructed.

SAFETY EDGE ***(N.C.)***
If it is set up during the opening/closing phase, it stops the movement and reverses for about 0,5 sec.
A start order is necessary to reset the movement.

IMPORTANT NOTICE: All the N.C. contacts which are not used must be linked with common.

FLASHING LAMP:
During the opening phase, it flashes once a second; during the closing phase, it flashes twice a second.
When the automation is opened and in automatic logic, the flashing lamp stays on for all the pause time.
If DIP 7 is set on ON there will be a pre-flashing of 3 seconds before the barrier starts to move.
If DIP 6 is set on ON, it manages the red signal of the traffic light.

WARNING LAMP:
Follows the same logic of the flashing light and remains switched on should the barrier stop and not be in closing position.
When DIP 6 is set on ON, it manages the green signal of the traffic lamp.

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SETTINGS

MOTOR SPEED REGULATION
Trimmer completely turned anti-clockwise = low speed
Trimmer completely turned clockwise = high speed
NOTICE: Pay a lot of attention when adjusting the maximum functioning speed, as it must be adapted to the mechanical structure of the barrier and must respect the technical rules in force.
Note: For the opening time follow the table in the mechanical manual.

SLOW DOWN SPEED REGULATION
Trimmer completely turned anti-clockwise = low speed
Trimmer completely turned clockwise = high speed
NOTICE: Pay a lot of attention when adjusting the maximum slow down speed, as it must be adapted to the mechanical structure of the barrier and must respect the technical rules in force.

INTERVENTION THRESHOLD OF THE ANTI-CRUSHING DETECTOR REGULATION
Trimmer completely turned anti-clockwise = high sensibility (low push in case of obstacle).
Trimmer completely turned clockwise = low sensibility (high push in case of obstacle).
After two consecutive interventions of the anti-crushing detector, even if in automatic logic, the automation stays opened waiting for orders.
Regulate the sensibility in observance with the current laws.

NOTICE: The setting of Trimmers and Dip Switches are read when the automation has stopped.

It puts in action the autoprogramming process (with DIP 8 = ON)
It puts in action the opening/closing of the automation (with DIP 8 = OFF)

PROCESS OF CARD SELF-PROGRAMMING

After having verified the correct movement of the barrier and the electrical connexions on the entries/exits, execute the following procedure:

1. Release the barrier and bring it manually next to the stop in closure
2. Restore the mechanical lock and move the barrier by hand until the mechanical plug in of the lock
3. Give input to the Gate 1 24V card
4. Bring Dip Switch 8 on ON position
5. Make sure that during the learning process the stop, photocell, safety edge, etc. commands are not set up.
6. Push button S1 (Make sure the barrier closes, on the contrary switch off the automation, reverse the motor cables (black and red) on CN1 and repeat the process from point 1)
7. Once reduced the speed, the barrier will close until reaching the mechanical stop in closing
8. At this point and once reduced the speed, it will automatically open.
9. Once the opening phase has ended, the counting of the pause time will start.
   Wait for the desired time (every flash of the warning lamp is equivalent to about 1 sec.) and push P1 button again
10. Wait for the complete closing of the barrier
11. When the barrier will stop and will be completely closed, bring Dip Switch 8 on OFF position
12. The automation is ready to work

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SAFETY PRECAUTIONS
All electrical installation work should conform to current regulations.
A 16A - 0,030A differential switch must be incorporated into the source of the gate main electrical supply and the entire system must be properly earth bonded.
Remember to separate mains (230/115 V) carrying cables from low voltage control cables.

SPARE PARTS
To obtain spare parts contact:
SEA USA Inc. - 10850 N.W. 21th Street - MIAMI, FL 33172

INTENDED USE
The electronic control unit GATE1 24V for VERG has been planned to be used exclusively as a control device for sliding gates, swing gates, garage-doors, folding doors, barriers

SAFETY AND ENVIRONMENTAL COMPATIBILITY
We recommend not to spoil the environment with product and circuit packing material.

STORAGE

STORAGE TEMPERATURES			
T_{min}	T_{max}	$Humidity_{min}$	$Humidity_{max}$
-40° F	+185 °F	5% no condensation	90% no condensation

When being transported this product must be properly packaged and handled with care.

MAINTENANCE AND OUT OF SERVICE
The decommission and maintenance of this unit must only be carried out by specialised and authorised personnel.

LIMIT OF GUARANTEE
The GATE1 24V for VERG is guaranteed for a period of 24 months. The guarantee period starts from the date stamp printed on the unit. The GATE1 24V for VERG guarantee will be void if the unit has been incorrectly installed, not used for the purpose intended, tampered with or modified in any way.
The validity of this guarantee only extends to the original purchaser of the unit.

NOTE: THE MANUFACTURER CAN NOT BE DEEMED RESPONSIBLE FOR ANY DAMAGE OR INJURY CAUSED BY IMPROPER USE OF THIS PRODUCT.

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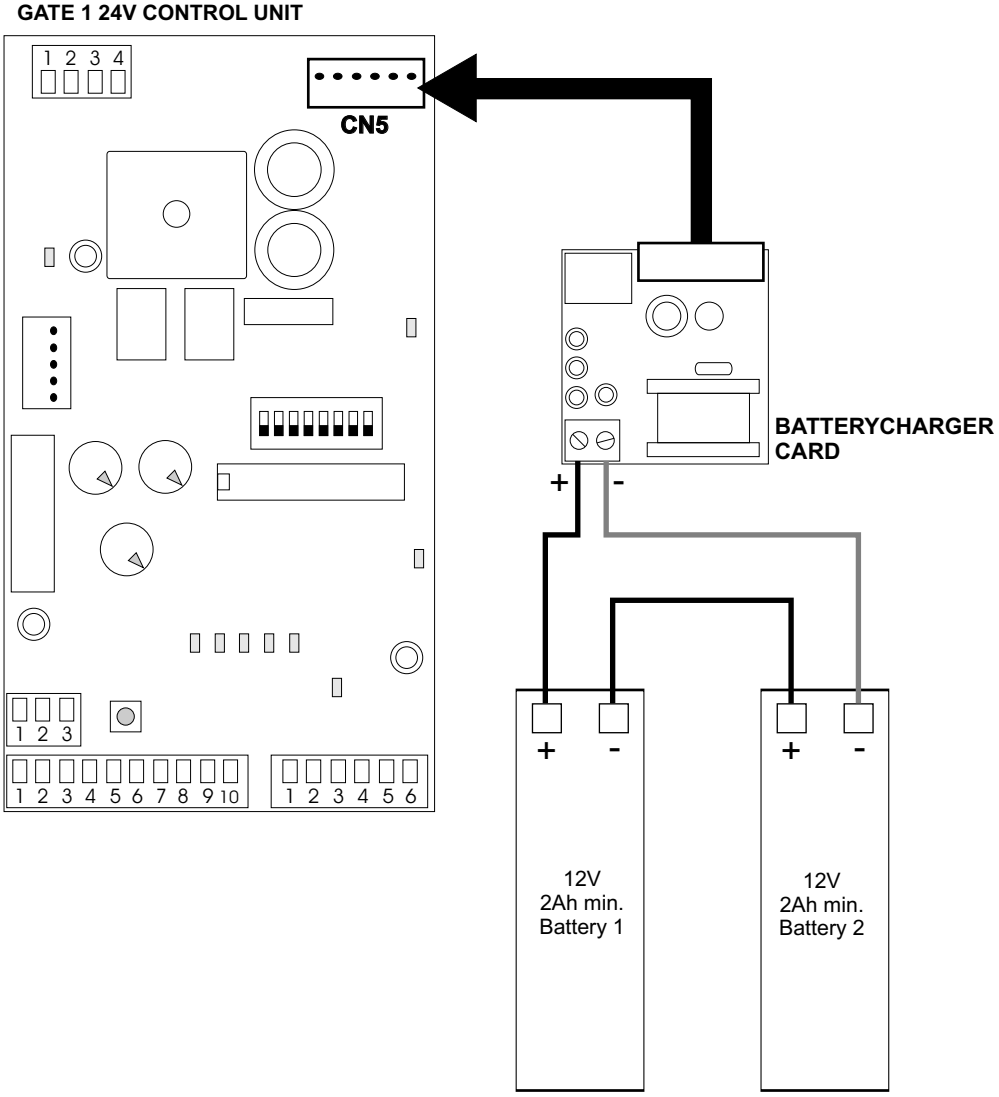
CONNECTION OF BATTERIES AND BATTERYCHARGER CARD (OPTIONAL)



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