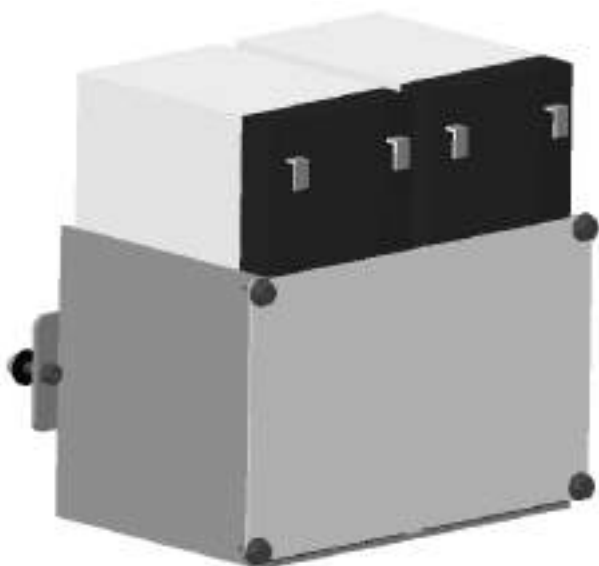


**SEA<sup>®</sup>** USA  
ELECTRONIC  
OPENING  
SYSTEMS  
International registered trademark n. 2.777.971

# **BATTERY BACK-UP SYSTEM**

**(Cod. 23105044)**  
**ONLY FOR PRE GATE**



SEA USA Inc.  
10850 N.W. 21st unit 160 DORAL MIAMI  
Florida (FL) 33172  
Phone: ++1-305.594.1151 Fax: ++1-305.594.7325  
Toll Free: 800.689.4716



**WARNING: Not following these instructions may  
cause severe injury or death to person**

**IMPORTANT SAFETY INSTRUCTIONS**



**WARNING - To reduce risk of severe injury or death:**

**1) READ AND FOLLOW ALL INSTRUCTIONS**

2) Never let children operate or play with door controls. Keep the remote control away from children.

3) Always keep the moving system in sight and away from people and objects until it is completely closed or stopped. **NO ONE SHOULD CROSS THE PATH OF THE MOVING SYSTEM.**

4) Test the system gate operator monthly. The system **MUST** reverse on contact with a rigid object or when an object activates the non-contact sensors. To obtain a reverse on contact with an object on hydraulic linear and in-ground operators SEA recommend to install the patented safety device "SAFETY GATE" for each leaf.

After adjusting the force or the limit of the travel, retest the gate operator. Failure to adjust properly the gate operator properly can increase the risk of severe injury or death.

5) Use the manual release only when gate is not moving

6) **KEEP GATES PROPERLY BALANCED AND MAINTAINED.** An improper balancing or maintenance increases the risk of severe injury or death. Have a qualified service person to make repairs to cables, spring assemblies and other hardware.

7) The entrance with a gate operators system is for vehicles only. Pedestrian **MUST** use separate entrance.

8) Every gate operator installation **MUST** have secondary protection devices against entrapment, such as edge sensors and photo beams more in particular in places where the risk of entrapment is more likely to occur.

**END USER INSTRUCTIONS**



**The installer is responsible for grounding the operator system,  
for providing the main power breaker switch, and for making sure  
that the entire gate systems meets all applicable electrical codes.**




**SAVE THESE INSTRUCTIONS**



## **INSTALLATION INSTRUCTION**

# IMPORTANT SAFETY INSTRUCTIONS

- 1) The gate operator system has to be installed only when:
  - I. Check to be sure this is the proper gate operator system for the construction and the usage UL class of the gate as specified on the label of the product (see also page 6)
  - II. All openings of a horizontal slide gate are guarded or screened from the bottom of the gate to a minimum of 4 feet (1,22 mt) above the ground to prevent a 2-1/4 inch (57.2 mm) diameter sphere from passing through the openings anywhere in the gate, and in that portion of the adjacent fence that the gate covers in the open position
  - III. **ALL EXPOSED PINCH POINTS ARE ELIMINATED OR GUARDED** and
  - IV. **GUARDING IS SUPPLIED FOR EXPOSED ROLLERS**
- 2) **The operator is intended for installation only on gates used for vehicles.**  
Pedestrian must be supplied with a separate access opening. 
- 3) The gate **MUST** be installed in a location so that enough clearance is supplied between the gate and adjacent structures when opening and closing to reduce the risk of entrapment. Swinging gates shall not open into public access areas.
- 4) The gate **MUST** be properly installed and work freely in both directions prior to the installation of the gate operator. Do not over-tighten the operator clutch or pressure relief valve to compensate for a damaged gate. Make any necessary repairs to the gate before installing this equipment
- 5) The gate operator controls **MUST** be placed so that the user has full view of the gate area when the gate is moving and away from the gate path perimeter.
- 6) Controls **MUST** be far enough from the gate so that the user is prevented from coming in contact with the gate while operating the controls. Controls intended to be used to reset an operator after 2 sequential activations of the entrapment protection device or device **MUST** be located in the line-of-sight of the gate. Outdoor or easily accessible controls shall have security feature to prevent unauthorized use.
- 7) All warning signs and placards must be installed where visible in the area of the gate. A minimum of two (2) placards shall be installed.
- 8) For gate operator utilizing a non-contact sensors ( Photo Beam or like) in accordance with section 31.1.1 of the UL 325 standards:
  - I. See instruction on the placement of non-contact sensors for each type of application (see page 15)
  - II. Care shall be exercised to reduce the risk of nuisance tripping, such as when a vehicle, trips the sensor while the gate is still moving, and
  - III. One or more non-contact sensors shall be located where the risk of entrapment or obstruction exist, such as the perimeter reachable by a moving gate or barrier



**SAVE THESE INSTRUCTIONS**



**READ AND FOLLOW ALL INSTRUCTIONS**



**IMPORTANT: SEA recommend to install at least 2 separate non contact sensor as on the post close to the gate as at furthest point of the opened gate where the risk of entrapment exists in order to avoid any risk of damage/injury( see pg. 15 Typical Installation). SEA also recommend to install infrared Photo beam for a higher performance of use.**

- 9) For a gate operator utilizing a contact sensor (Edge sensor or like) in accordance with section 31.1.1 of the UL 325 standards:
- I. One or more contact sensors shall be located where the risk of entrapment or obstruction exists, such as at leading edge, trailing edge, and post mounted both inside and outside of a vehicular horizontal slide gate.
  - II. One or more contact sensor shall be located at the bottom edge of a vehicular vertical lift gate.
  - III. One or more contact sensor shall be located at the pinch point of a vehicular vertical pivot gate.
  - IV. A hardwired contact sensor shall be located and its wiring arranged so that the communication between the sensor and the gate operator is not subject to mechanical damage.
  - V. A wireless contact sensor such as one that transmits radio frequency (RF) signals to the gate operator for entrapment protection functions shall be located where the transmission of the signals are not obstructed or impeded by building structures, natural landscaping or similar obstruction. A wireless contact sensor shall function under the intended end-use conditions.
  - VI. In case of a swing gate one or more contact sensors shall be located on the inside and outside leading edge of the gate. Additionally, if the bottom edge of a swing gate is greater than 6 inches (152mm) above the ground at any point in its arc of travel, one or more contact sensors shall be located on the bottom edge (see pg..for Typical Installation)
  - VII. One or more contact sensors shall be located at the bottom edge of a vertical barrier (arm)

**SEA warns that the gate operator system with an A.C. power electric motor shall have a reversing sensor (encoder) on the drive shaft of the motor as additional safety device. In case of swing linear/in-ground hydraulic operator SEA recommend to install the "SAFETY GATE" as an additional reversing sensor.**

11) The professional installer has to check that the main power supply circuit breakers are separate, intended solely for this equipment and rated for 15 AMPS. Visually check that the circuit breakers are in the "OFF" position and mark the circuit breakers "USED" prior to installation.

12) During service the main power MUST always being disconnected.

13) If this gate operator system includes a battery backup, the battery backup system needs to be disconnected first, prior to disconnecting main power supply during installation, maintenance and servicing procedures.

14) After installation The professional installer has to check that the gate operator system is working properly, that the open and close force are properly adjusted, that the piston does not bottom out in either direction, that breather screws have been removed, that the positive stops used are sufficient for stopping the gate properly, and that all pinch points and potential entrapment areas are reduced.



**SAVE THESE INSTRUCTIONS**



**READ AND FOLLOW ALL INSTRUCTIONS**



## **GROUNDING**

# IMPORTANT SAFETY INSTRUCTIONS



Good grounding and proper surge suppression are an integral part of proper installation for a gate operator system. One or all of the following may require surge suppressors: high voltage power lines, low voltage power lines, telephone lines, data lines, low voltage control lines and loops. How much surge suppression is required depends upon how susceptible the area is to lightning and power surges. Regardless, good grounding is essential. To realize maximum protection, proper grounding and proper surge suppression is absolutely necessary.



If the circuit breaker box is located close to the gate operator system, for example, in a guard house, then the ground from that circuit can be used to ground the gate operator system. Eliminate all 90° bends in ground wires and keep a minimum of three feet between the surge suppressor and the equipment being protected.



If the power source or circuit breaker box is not located close to the gate operator system an Isolated Ground Zone (IGZ) needs to be created. An IGZ can also be created if the circuit breaker box is located close by the gate operator system. An IGZ is an imaginary circle drawn around the gate operator system. The gate operator system not only includes the gate operators and control panel, but all of the accessories and devices associated with it at that controlled entry point. This includes loop detectors, card readers, digital entries, telephone entries, any device that has a ground or requires a ground and all of the surge suppressors. The ground bus is a common ground point called a Single Point Ground (SPG). It is used to bond all the equipment and device grounds in the IGZ together. The SPG is very important because it helps eliminate different ground potentials that can be present on the equipment. In such cases, equipment damage occurs even with surge suppressors.



Do not use or connect the ground wire coming from the circuit breaker box. By using an Isolated Ground Zone, you are separating the gate operator system from the house or building ground. This eliminates ground potentials. It is recommended that the ground bus be located in a separate NEMA type enclosure. All grounds will be tied to this ground bus. Some points to remember:

Keep all ground wires as straight as possible. Do not have any sharp 90° bends. Have a minimum of 3 feet of wire between the surge suppressor and the equipment being protected.

Equipment ground wire should be a minimum of 12 AWG. The main ground wire from the bus bar to the ground rod should be an 8 or 6 AWG copper wire. Ground rod should be a minimum of 10 feet in length, longer depending on local soil conditions.



For more information regarding good grounding practices check: National Electric Code art. 250; IEEE Emerald Book, standard 100; International Association of Electric Inspectors.

**The installer is responsible for grounding the operator system, for providing the main power breaker switch, and for making sure that the entire gate systems meets all applicable electrical codes.**



## **END USER INSTRUCTIONS**

1) Vehicular gate operator systems offer convenience to their users and limit vehicular traffic into your Property.



2) Gate operator systems can and do produce high levels of force. This operator system must never be used as a means to control pedestrian or bicycle traffic. Serious injury or death to pedestrians may result if this operator is used in this manner. Never allow pedestrians or pets to pass through this gate system.

3) It is important that you are aware of the possible hazards associated with your gate operator system. Hazards may include, but are not limited to pinch points, entrapment, absence of reversing devices, absence of pedestrian access, traffic backup, etc.

4) Your installer should instruct you on the proper operation of your gate operator system.

5) You and your installer should review the basic functions of the reversing devices on your gate operator system and test them periodically.

6) Reversing devices include one or more of the following: encoder, SAFETY GATE (for hydraulic swing operator system), reversing loops, photo beam (SEA recommend 2 pairs infrared), reversing edges, etc.

7) Your installer needs to instruct you on how to remove the gate operator system from service, shut power off at service panel in case of break down or malfunctioning of the products and how to use the release system to open the gate manually.



8) Do not allow children or pets to play in the area of the gate and gate operator system. Do not allow children to play with any access control device.

9) Operate gate only when fully visible, properly adjusted and free of obstructions.

10) Do not enter the path of the moving gate while in motion.

11) Avoid operating in the proximity of the hinges or moving mechanical parts

12) It is your responsibility and of your professional installer determine, prior to use, whether the equipment and optional devices or combination thereof are suitable and safe for the use intended.



**SAVE THESE INSTRUCTIONS**



**READ AND FOLLOW ALL INSTRUCTIONS**





## **END USER INSTRUCTIONS**



13) Since individual installations may be subject to variations and are usually abundant in devices not always obtained from or through SEA USA and since SEA USA has no control over the end use of the products it distributes, SEA USA makes no representations or warranties as to the suitability of safety of this equipment for a specific application.

14) Always ask your installer for original components of the same brand of your operators. SEA USA do not recognize the operating of accessories of other manufacturers if installed in combination with its gate operator systems.

15) Warranty will be considered void if unit was installed and/or wired improperly, used wrong power source, used wrong hydraulic fluid, or if damage was caused by fire, flood, lightning or any other acts of God as stated in the sales conditions.

16) The gate operator system has to installed and periodically checked for maintenance only by qualified professional installer.

17) The manufacturer(SEA USA Inc.) cannot be held responsible for damages caused by improper, erroneous or unreasonable use.

18) All installation, maintenance and repair work **MUST** be documented and made available to the user

19) This manual is your property. Please keep for future reference.



**WARNING: Failure to meet this requirement could cause severe injury and/or death, for which the manufacturer / distributor can not be held responsible.**



**SAVE THESE INSTRUCTIONS**



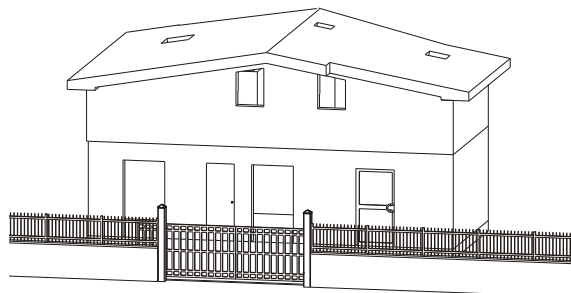
**READ AND FOLLOW ALL INSTRUCTIONS**



# UL325 GATE OPERATOR CLASSIFICATION

## RESIDENTIAL VEHICULAR GATE OPERATOR **CLASS I**

A vehicular gate operator (or system) intended for use in a home of one-to four single family dwelling, or a garage or parking area associated therewith.



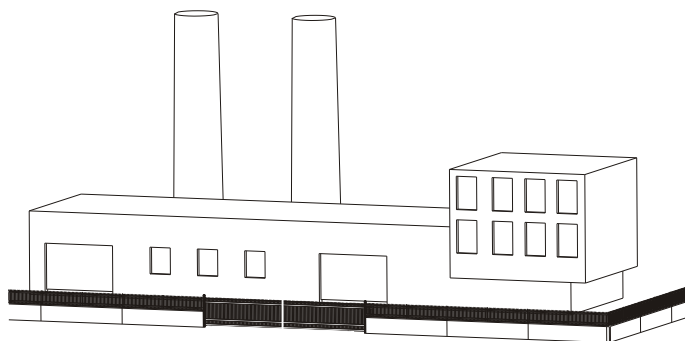
## COMMERCIAL/GENERAL ACCESS VEHICULAR GATE OPERATOR **CLASS II**

A vehicular gate operator (or system) intended for use in a commercial location or building such as a multi-family housing unit (five or more single family units), hotels, garages, retail store, or other building servicing the general public.



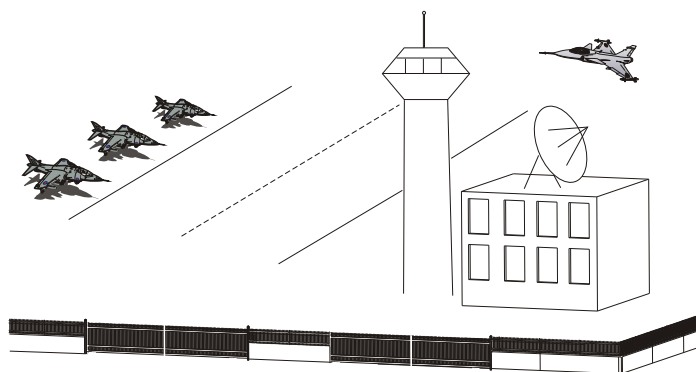
## INDUSTRIAL/LIMITED ACCESS VEHICULAR GATE OPERATOR **CLASS III**

A vehicular gate operator (or system) intended for use in a industrial location or building such as a factory or loading dock area or other locations not intended to service the general public.



## RESTRICTED ACCESS VEHICULAR GATE OPERATOR **CLASS IV**

A vehicular gate operator (or system) intended for use in a guarded industrial location or building such as an airport security area or other restricted access locations not servicing the general public, in which unauthorized access is prevented via supervision by security personnel.



**Install the gate operator only when:**

**The operator is appropriate for the construction of the gate and the Usage Class of the gate.**



**SAVE THESE INSTRUCTIONS**



**READ AND FOLLOW ALL INSTRUCTIONS**





# **MECHANICAL INSTALLATION**

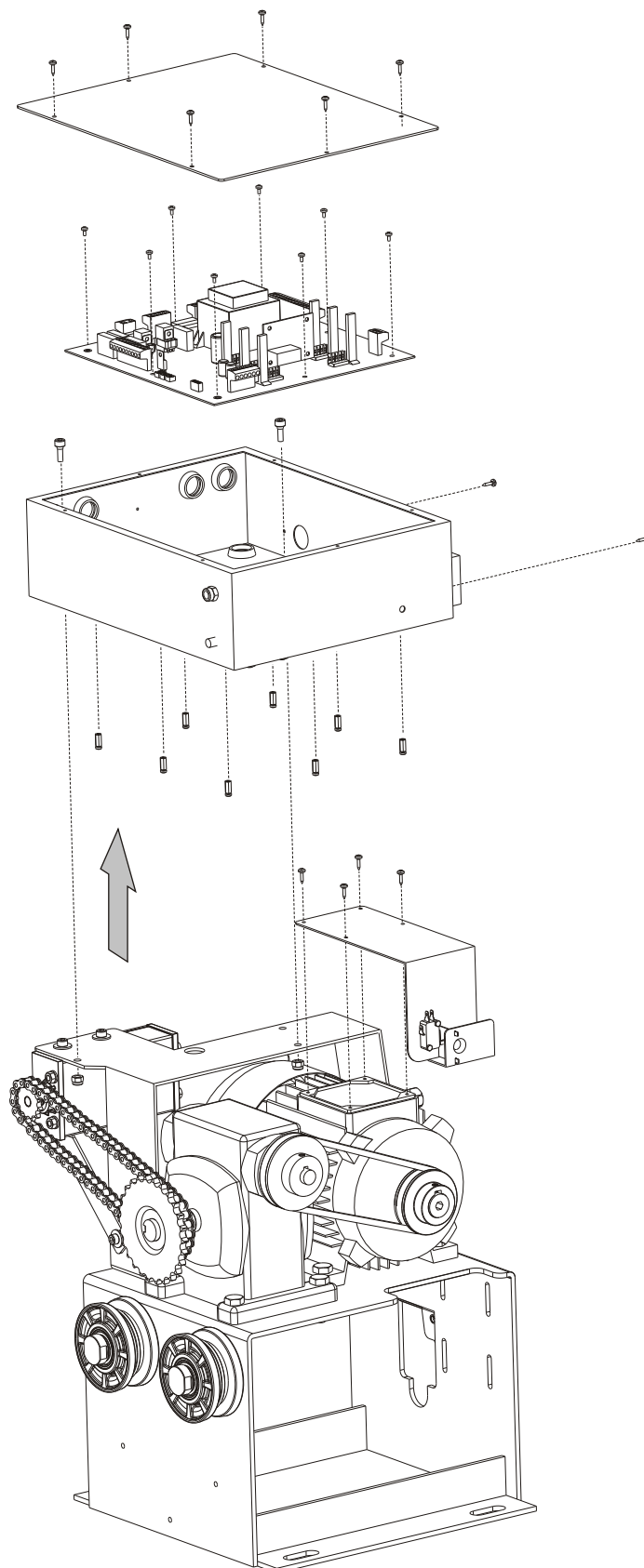
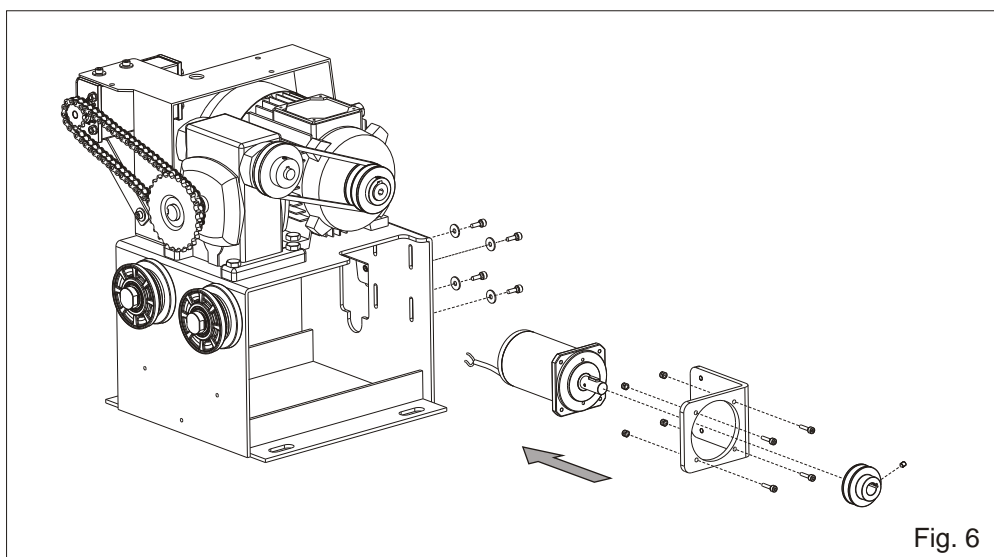
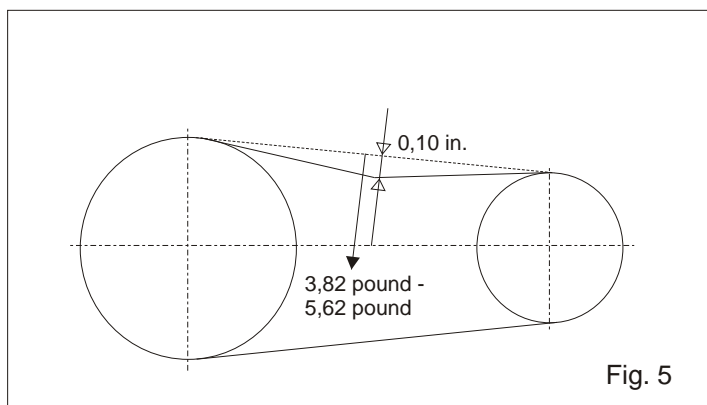
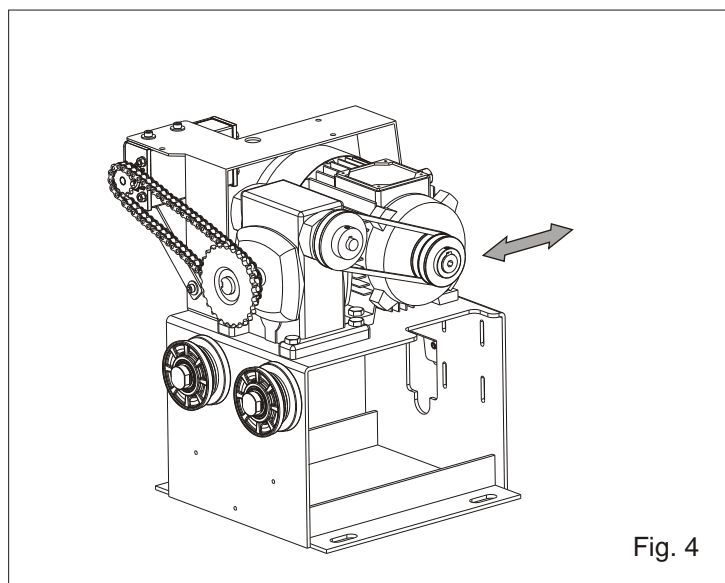
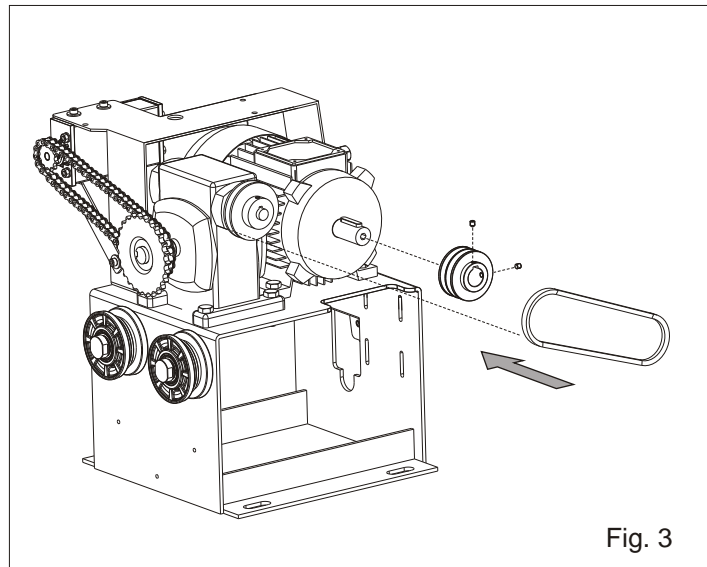
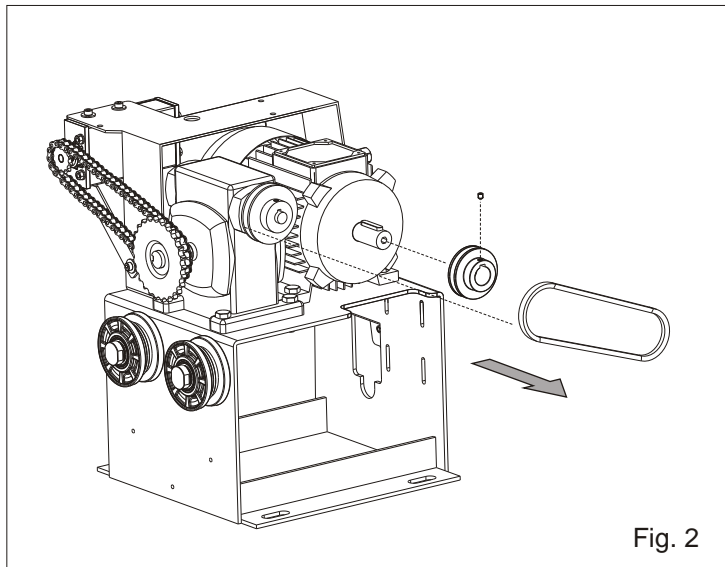


Fig. 1



## **MECHANICAL INSTALLATION**





## **MECHANICAL INSTALLATION**

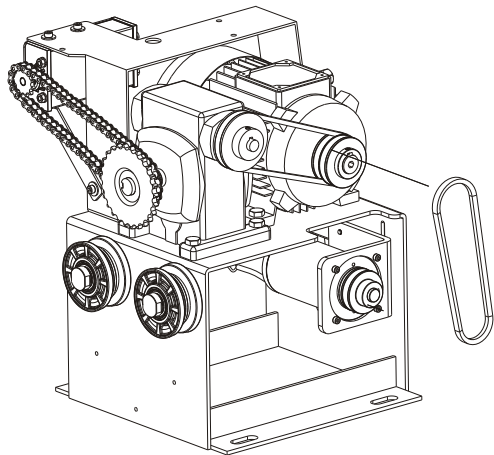


Fig. 7

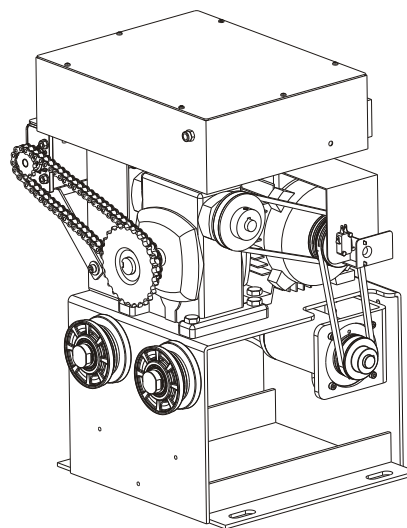


Fig. 8

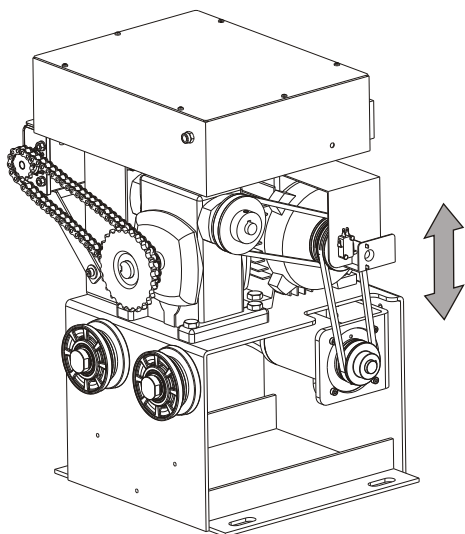


Fig. 9

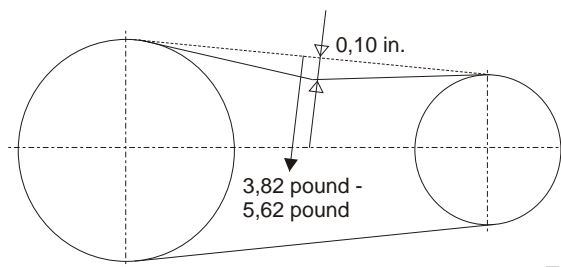


Fig. 10

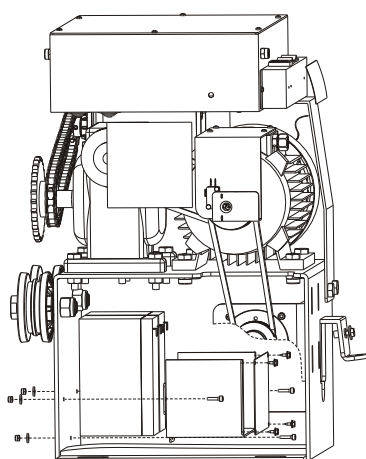


Fig. 11

**The installation of back up battery system must be done by qualified staff trained by the manufacturing firm.**

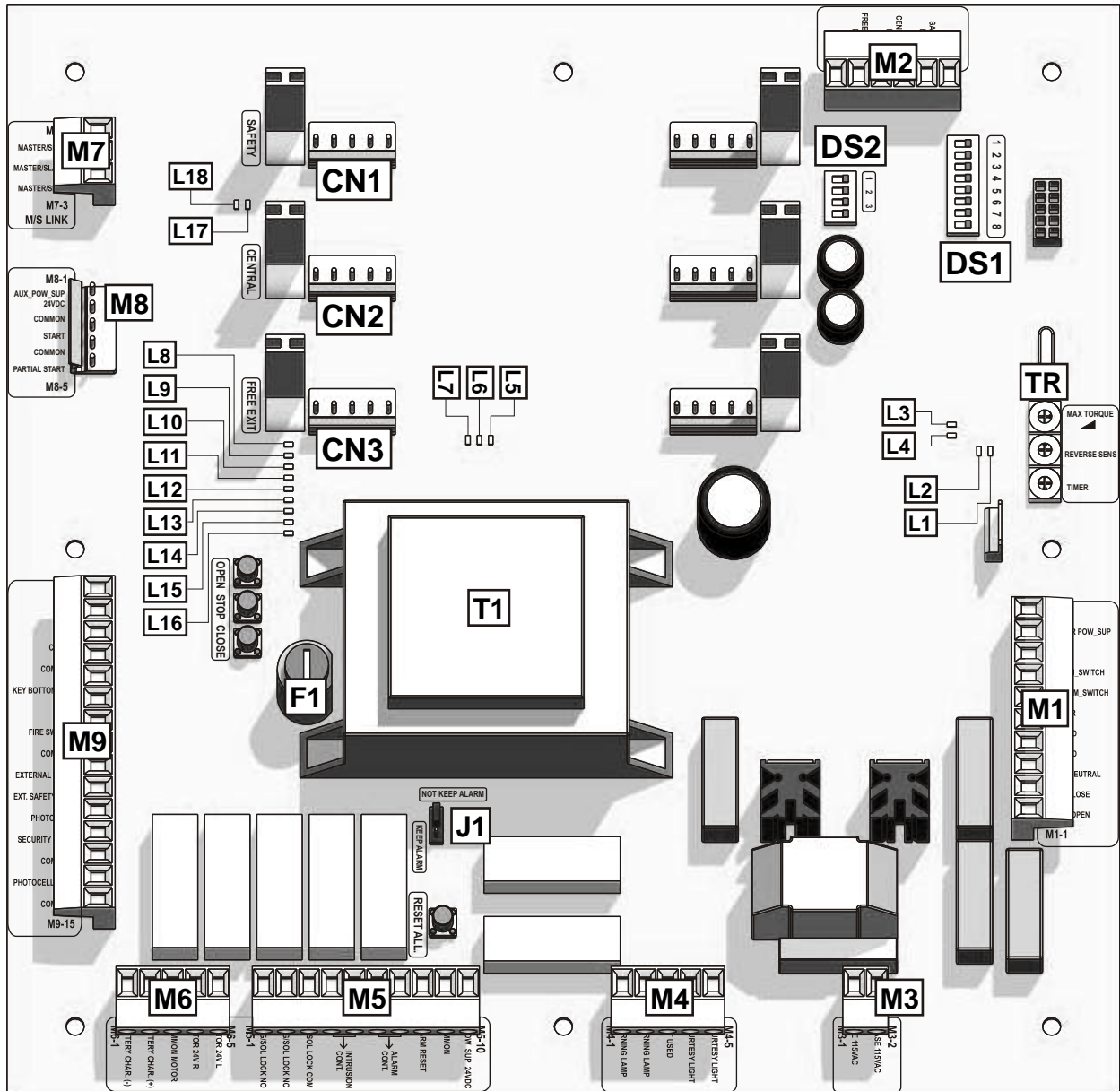


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# PRE GATE CONTROL UNIT

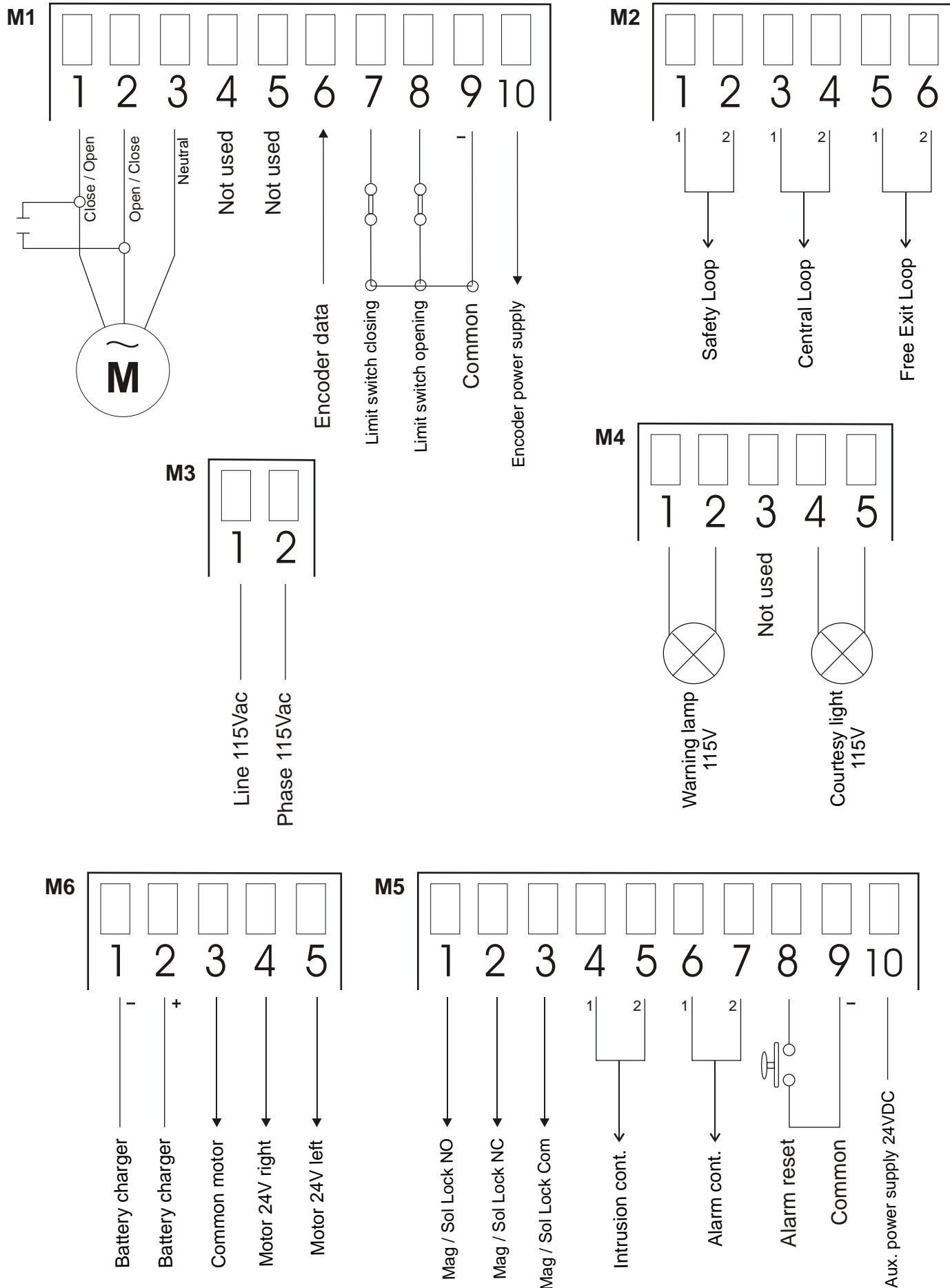


**CN1** = Safety loop connector  
**CN2** = Central loop connector  
**CN3** = Free Exit loop connector  
**M1** = Motor connector  
**M2** = Loop connector  
**M3** = Power line (high voltage) connector  
**M4** = Service lamp connector  
**M5** = Alarm and Lock connector  
**M6** = Backup unit connector  
**M7** = Master/Slave connector  
**M8** = Plug-in radio receiver connector  
**M9** = Input connector  
**DS1** = Dip-switch  
**DS2** = Dip-switch  
**F1** = Master fuse  
**J1** = Keep/not Keep alarm  
**T1** = Transformer  
**TR** = Trimmers

**L1** = Led access limit switch gate closed  
**L2** = Led access limit switch gate open  
**L3** = Led access photocells (n.c.)  
**L4** = Led access border  
**L5** = Led module safe loop  
**L6** = Led module centre loop  
**L7** = Led module exit loop  
**L8** = Led access receiver pedestrian  
**L9** = Led access push button open  
**L10** = Led access push button stop  
**L11** = Led access push button close  
**L12** = Led access card  
**L13** = Led access fire  
**L14** = Led access exit loop  
**L15** = Led access safe loop  
**L16** = Led access receiver start  
**L17** = Led exit TX serial  
**L18** = Led access RX serial



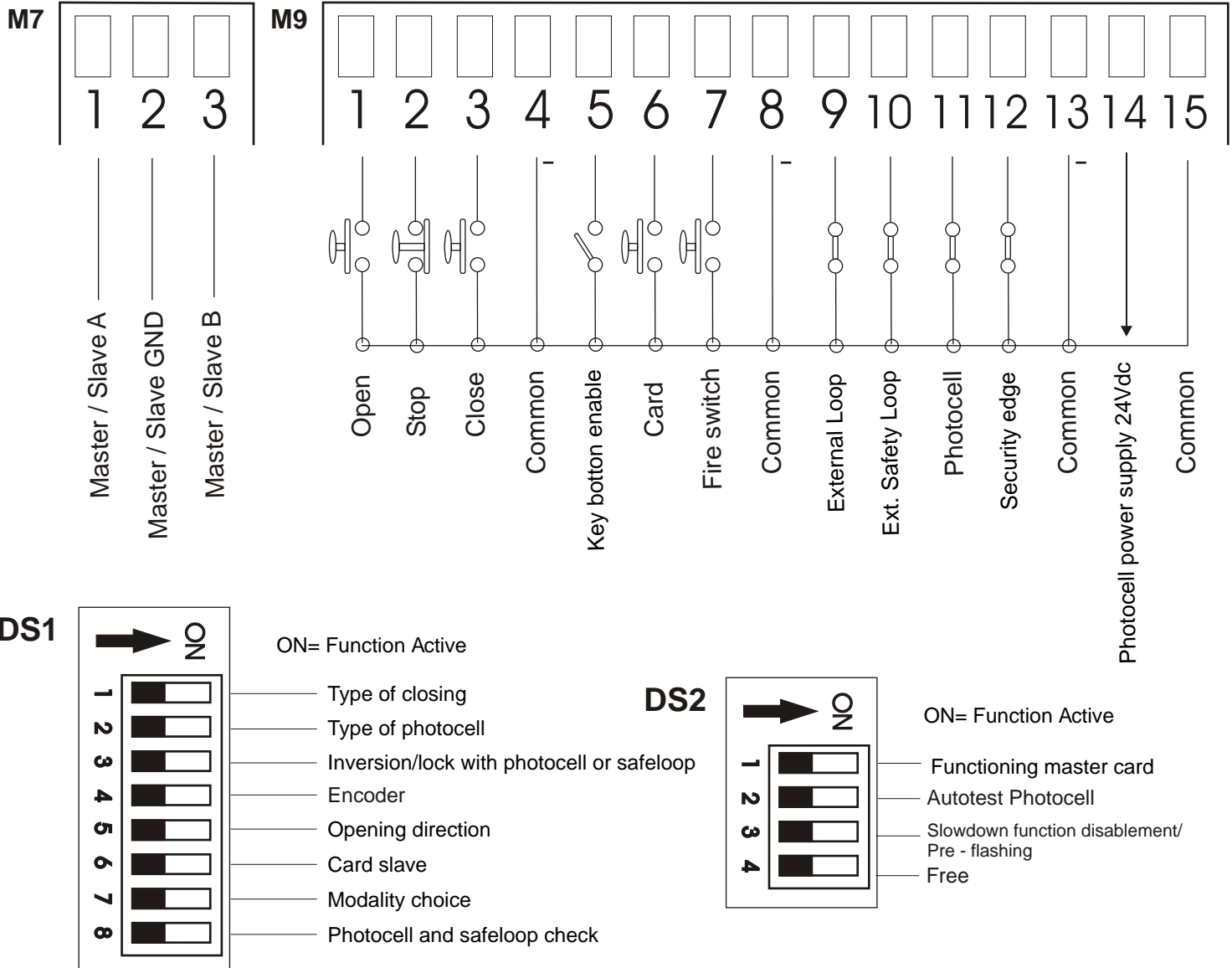
## CONNECTIONS







## CONNECTIONS



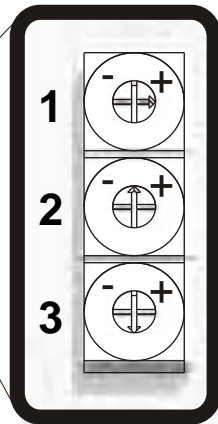
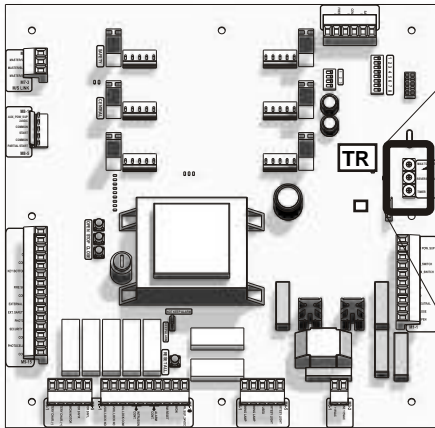
Notice:

If you place DIP3 on DS2 to ON position you can choose if disable or not the acceleration function, the slowdown and pre - flashing functions, adjusting dip 1,2,3 respectively on DS1. Once you have chosen how to set such parameters, replace DIP3 to OFF position on Ds2 and therefore DIP 1,2,3 on DS1 will restart with the above-described functions.

**WARNING:** Once you have executed the choices related to the slowdown and acceleration functions, remind to replace DIP3 on DS2 to OFF position and set again the desired functions of DIP 1,2,3 on Ds1.



## TRIMMER REGULATION



### **1. Trimmer MAX TORQUE**

This trimmer is used to adjust the motor torque. This adjustment is essential for operators without mechanical or hydraulic anti-crush devices and must be carried out so that there is no risk of people or objects being crushed. It must always be executed in accordance with current legislation on the subject.

### **2. Trimmer REVERSE SENSE**

Sensibility adjustment of the gate collision detection (only with encoder present)

### **3. Trimmer TIMER**

This trimmer allows the PAUSE time to be adjusted between 0 and 60 seconds. Set DIP SWITCH 1 to the ON position to enable automatic closing.

P.N.: TURNING THE TRIMMERS CLOCKWISE INCREASES THE TIMES/VALUES

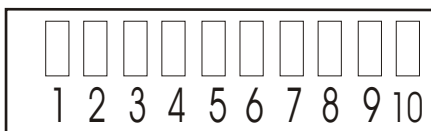


## SELFLEARNING PROCEDURE

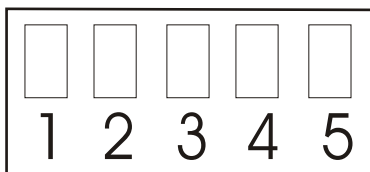
- Bridge the photocell (if DS 1-2 is to OFF position), the safety edge and STOP if they are not connected.
- If the encoder is used put DIP4 of DS1 on ON
- Release the operator and close the gate manually (limit switch of closing occupied)
- Reactivate the mechanical block
- Put Dip 7 on "ON" and press the pushbutton OPEN or START
- Wait for the complete opening of the gate and reposition DIP 7 on OFF.

## MOTOR CONNECTIONS

**M1**



**M6**



### **Left hand:**

Limit switch1 (M1): 7 yellow  
Limit switch2 (M1): 8 green  
Motor (M1): 1 purple  
Motor (M1): 2 White  
Motor (M1) neutral: black  
Motor 24 (M6):

- 1 (-) battery
- 2 (+) battery
- 3 (+) battery
- 4 not connected
- 5 left motor

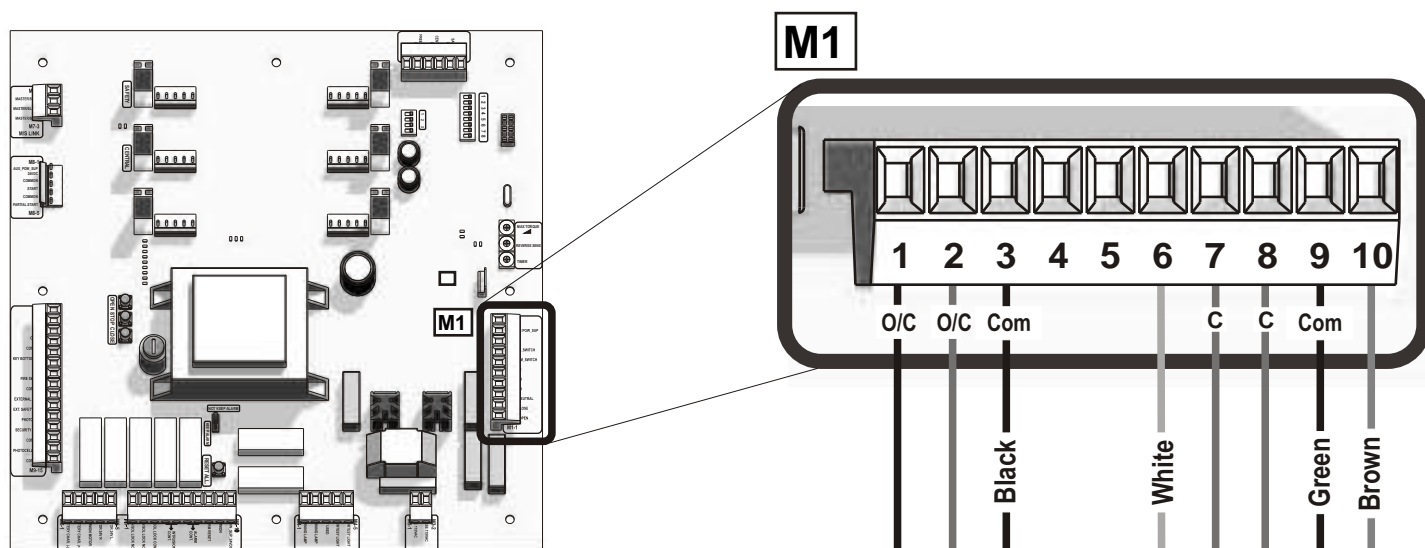
### **right hand :**

limit switch1 (M1): 8 yellow  
limit switch2 (M1): 7 green  
Motor (M1): 2 purple  
Motor (M1): 1 White  
Motor (M1) neutral: black  
Motor 24 (M6):

- 1 (-) battery
- 2 (+) battery
- 3 (+) battery
- 4 right motor
- 5 not connected



# **MOTOR 115V, LIMIT SWITCH, ENCODER**



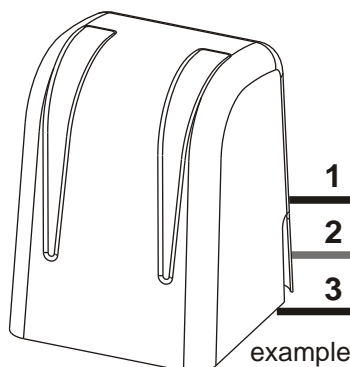
## **Motor 115Vac**

Output for motor connection

O = OPEN

C = CLOSED

Com = COMMON  
(motor black cable)



## **Limit Switches**

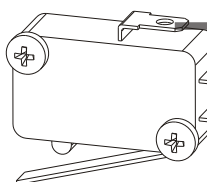
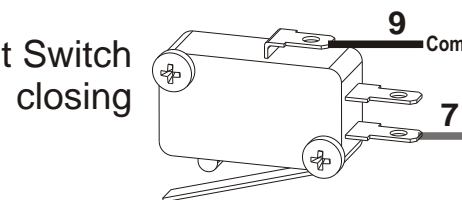
They can be of different types:

- inductive limit switch
- mechanical limit switch with lever
- limit switch with spring
- limit switch for motor-reducer with chain.

All these limit switches must be manufactured by SEA for a complete compatibility of the connectors

Com = Common

## **Limit Switch closing**



## **Encoder (reversing sensor)**

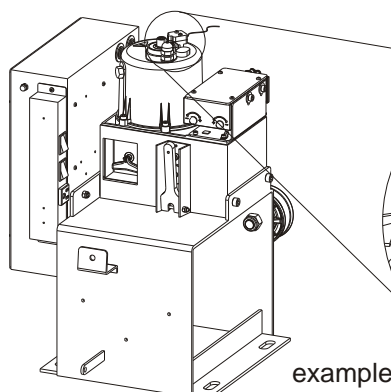
The encoder is a system which detects any obstacle during the running of the gate.

To use this system it is necessary to purchase a SEA motor provided with encoder.

If the encoder function is activated (DIP 4 to OFF position), in case it will detect an error or an obstacle, you will get the movement reverse for about 2 seconds.

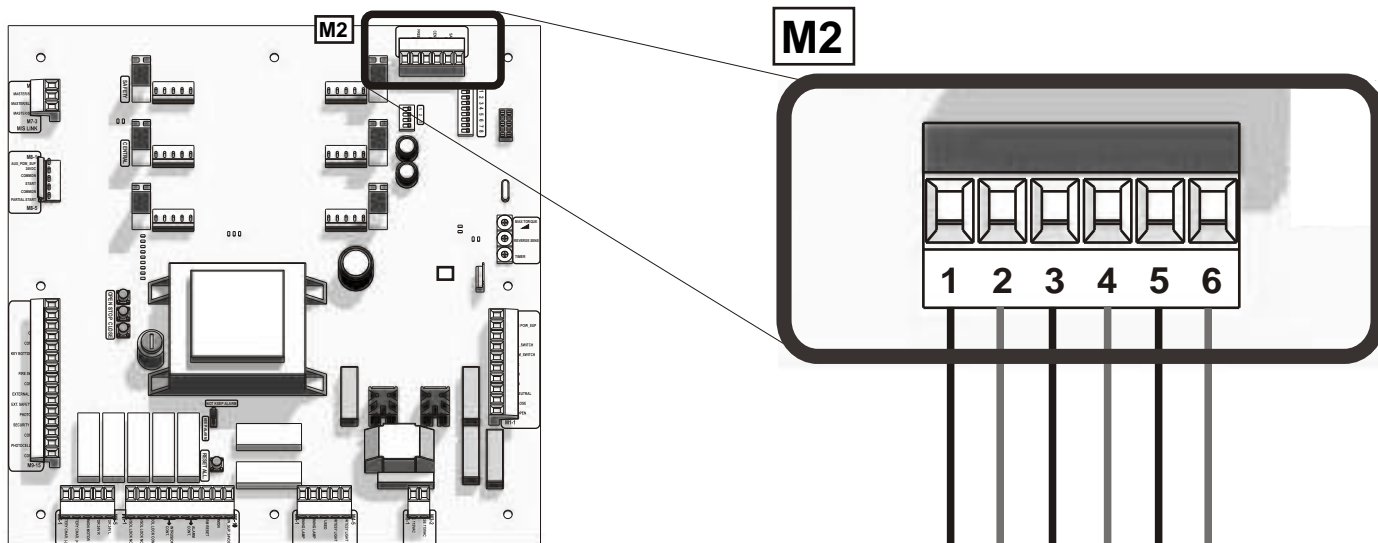
! Never disconnect the operating of this primary entrapment protection.

**WARNING: SEA will never be responsible in case of damages if the reversing sensor has been disconnected.**





## **SAFETY LOOP, CENTRAL LOOP, EXIT LOOP**



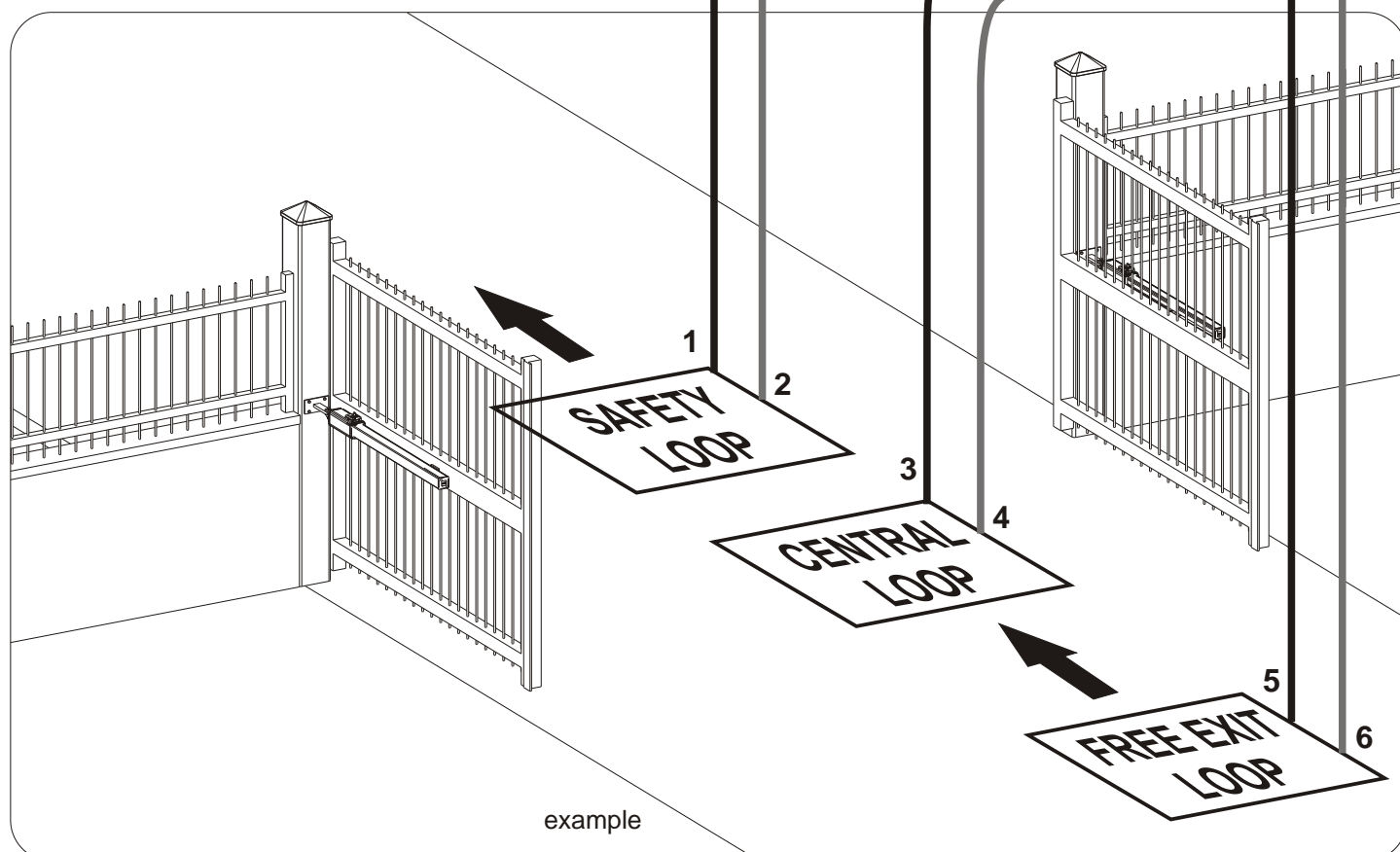
On the control unit there can be sited three loop detector modules for the detection of a vehicle:

**Module safety:** behaves like a **SAFETYLOOP**

**Module centre:** behaves like a photocell (**function not enabled**)

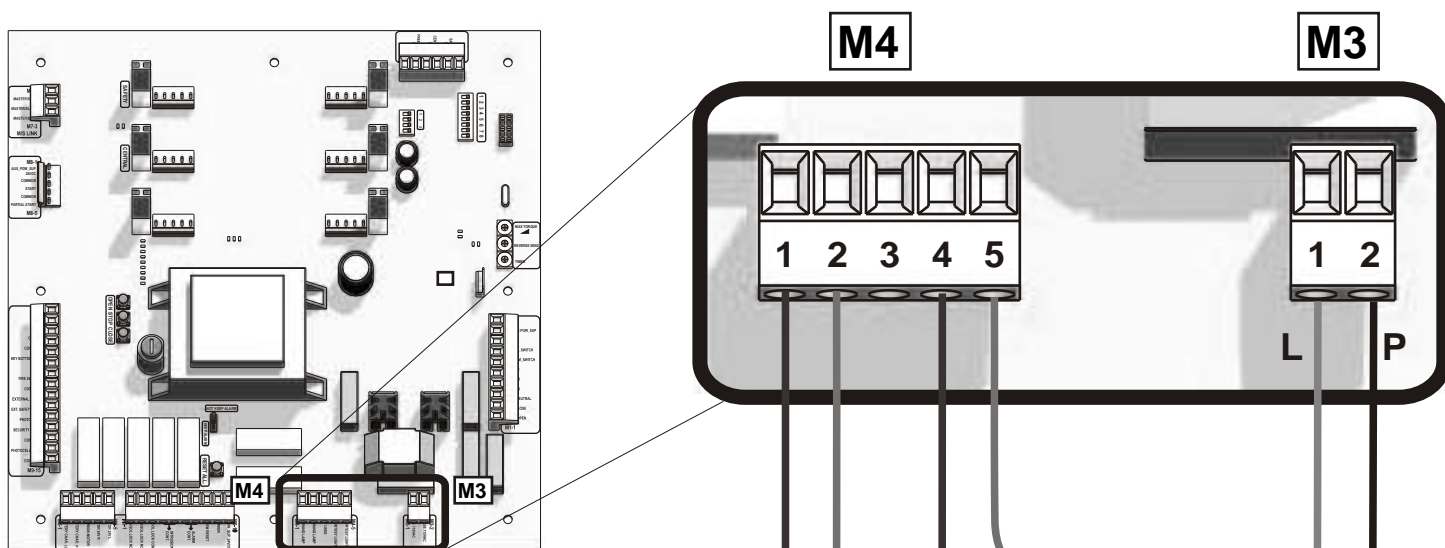
**Module exit:** if the DIP DS1-1 is placed to OFF and a loop is connected to the entry **EXLOOP**, when an obstacle occupies the loop, it causes the reclosing of the gate. .

If DS1-1 is on OFF and if key button Enable is not activated the EXLOOP input (M6 inputs 5 and 6) causes the re-closure of the gate, when the car occupies the loop.





# POWER SUPPLY, WARNING LAMP, COURTESY LIGHT



## Flashing Lamp (115V)

The flashing lamp is an important accessory which warns the gate operating.

Exit by relay RL2 (com M4/2, no M4/1) activates some seconds before the gate begins to move, and switches off some seconds after the gate has stopped.

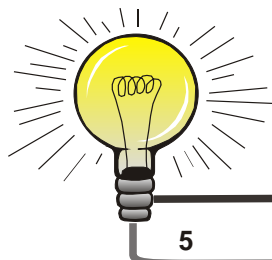
The exit rests closed during the functioning, this means that the intermittence of the flashing light is not controlled.



**Note:** this connection can be executed through the 24V auxiliary exit instead through the 110V exit

## Courtesy Light (115V max 100W)

Exit by relay RL1 (com M4/5, no M4/4) the relay switches on for the whole opening cycle of the gate and stays on also after the gate's closing for a time period which has to be defined.

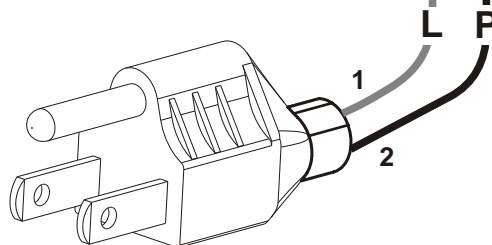


## Power input

Input for the connection of the electric power.

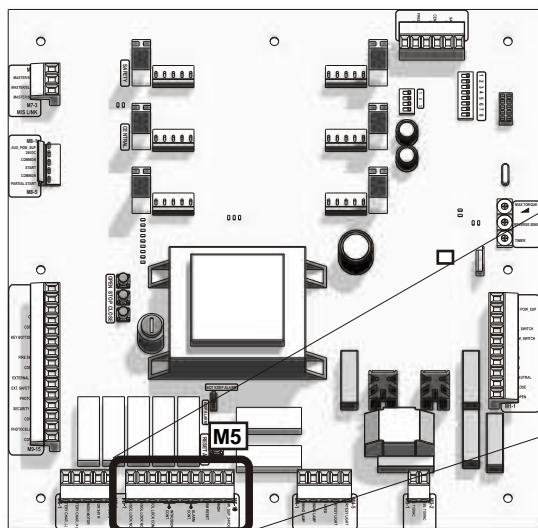
P = PHASE  
L = LINE

**NOTICE:** for the connection to the electric power see the law in force.

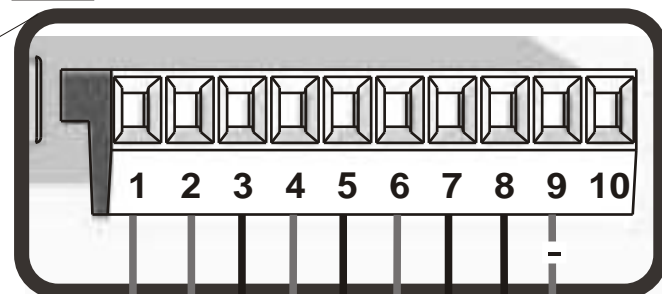




# **MAGNETIC LOCK, SOLENOID LOCK, INTRUSION CONTACT, BUZZER**



**M5**

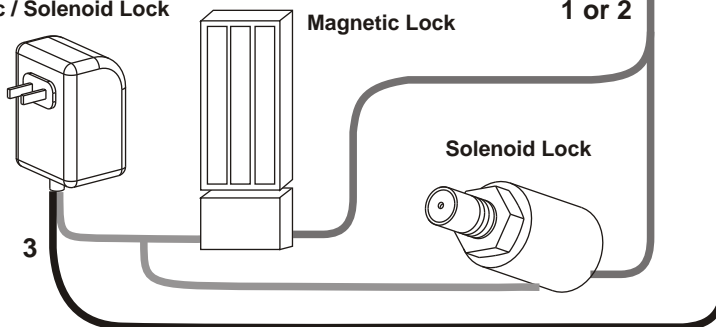


N.O.

N.C.

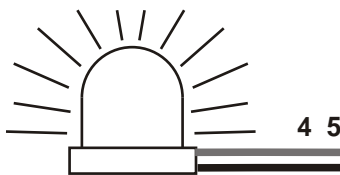
## **Power for Magnetic / Solenoid Lock**

**Magnetic Lock and Solenoid Lock wiring:** Exit with relay RL5 (com M5/3, no M5/2, nc M5/1); is enabled for 0,5" for the activation of the electric lock.



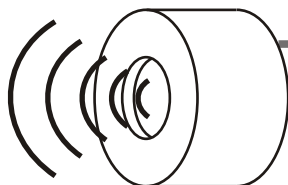
*The Power Supply is not provided.*

**Intrusion contact:** exit with relay RL4 (com M5/5, no M5/4) when the limit switch of the closed gate de-activates without any opening command, the relay closes for a time period which has to be defined.



## **Buzzer (24Vdc) Audible Alarm**

Use a buzzer 24Vdc of 100 dB. The buzzer will be switched on after two consecutive activations of the anticrush sensor.



6

7

To reset the alarm it is necessary to push the button STOP. Anyway after 5 minuts the buzzer will stop to sound and the automation stands still waiting for commands.

**! IMPORTANT:** UL325 standards requires an audible alarm to go OFF after 2 consecutive events detected by the primary entrapment protection of the gate operator (for ex. reversing sensor).

**Alarm control:** A circuit of self blocking of the relay also foreseen which is selected by bridge J1. When the bridge J1 is inserted the relay RL3 rests activated until it is not reset with the external contact n.o. **ALLARM** (M5/8, M5/9) or with the push button on board of the control unit **RESET ALL**



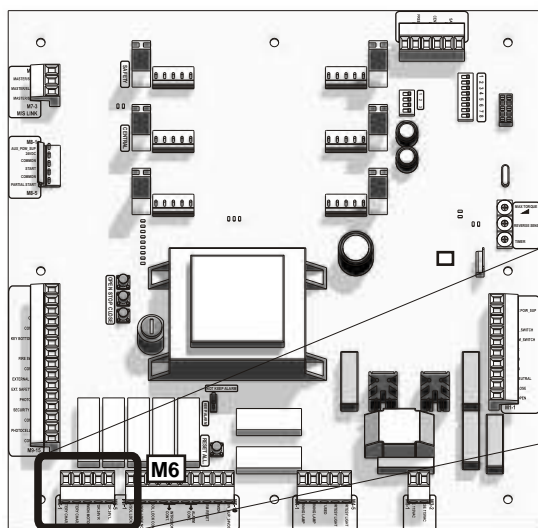
8

9

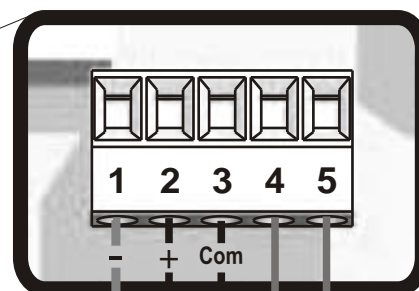




## **BATTERIES, 24Vdc MOTORS**

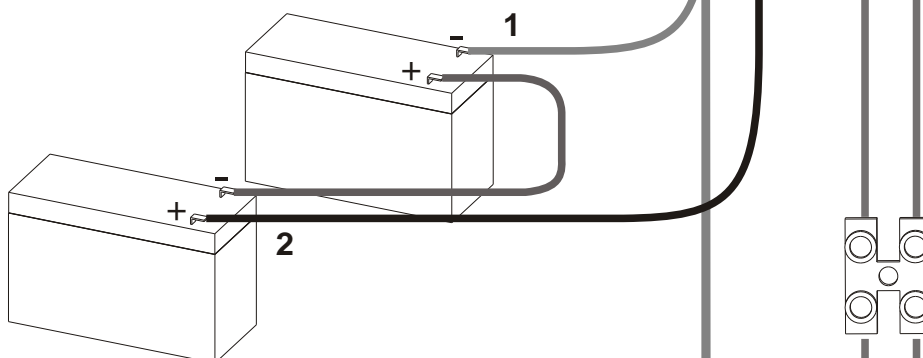


**M6**



### **24Vdc Battery charger**

The backup battery allows to execute an opening cycle in case of power cut, so that it's possible to exit through the gate and keep the gate open until the current will be reconnected.



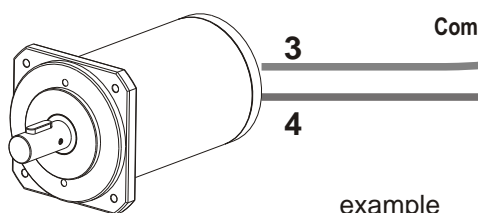
### **Motor 24Vdc RIGHT**

Control of the gate opening in case of power failure. This control closes two contacts of two relays which control an external module for the administration of the movement of a motor with 24 Vdc continuous current.

The contacts are the following:

24Vdc Motor on the right hand side M6/4 closed on M6/3

Com = COMMON



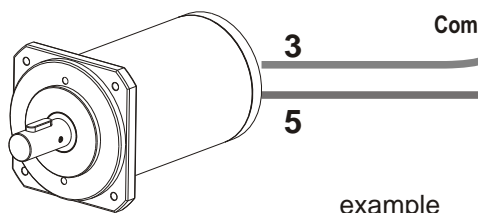
### **Motor 24Vdc LEFT**

Control of the gate opening in case of power failure. This control closes two contacts of two relays which control an external module for the administration of the movement of a motor with 24 Vdc continuous current.

The contacts are the following:

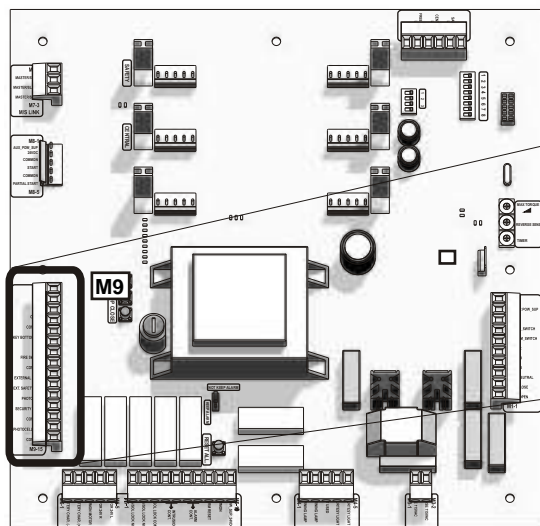
24Vdc Motor on the left hand side M6/5 closed on M6/3

Com = COMMON

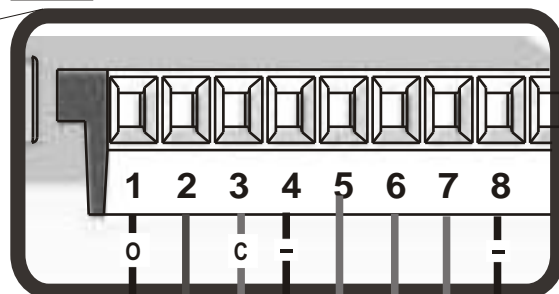




# **OPENING/CLOSING, KEY BUTTON ENABLE, CARD READER, FIRE SWITCH**



**M9**

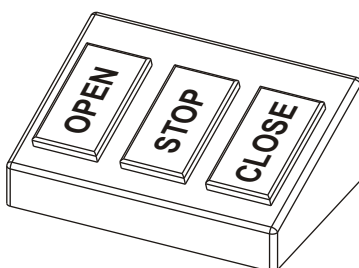


## **Opening/Closing switch**

**OPEN:** contact n.o. controls the opening command of the gate which remains opened until a new closing command is given or until an adjusted time period (3 to 60 sec.) through Timer has passed.

**STOP:** Contact n.c. stops immediately the movement of the gate, furthermore it resets some alarm conditions.

**CLOSE:** Contact n.o. controls the closing of the gate.



1

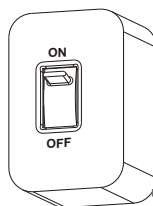
2

3

o = open  
c = close

**Key button enable:** The first three accesses are foreseen for a pushbutton board sited in a porter's lodge, and it is foreseen that it can be switched off during certain hours during day. Therefore the following three accesses are enabled through **key button ENABLE** (M9/5) with the following configuration:

**Key button ENABLE** closed at **GND** => **OPEN, STOP, CLOSE** enabled and **EXLOOP** switched off  
**Key button ENABLE** open => **OPEN, STOP, CLOSE** switched off and **EXLOOP** enabled

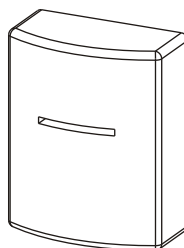


4

5

## **Card:**

Contact n.o. controls the opening of the gate; the re-closing can be executed by a command from the external loop car presence or after an adjusted time period (3 to 60 sec., by trimmer "**TIMER**").



4

6

## **Fire Switch:**

Contact n.o. controls the opening of the gate, which rests opened until the consents has been taken away. When released the gate automatically closes again if the DIP DS1-1 is on ON, otherwise to restore the movement is necessary to activate first the Stop and then the START.

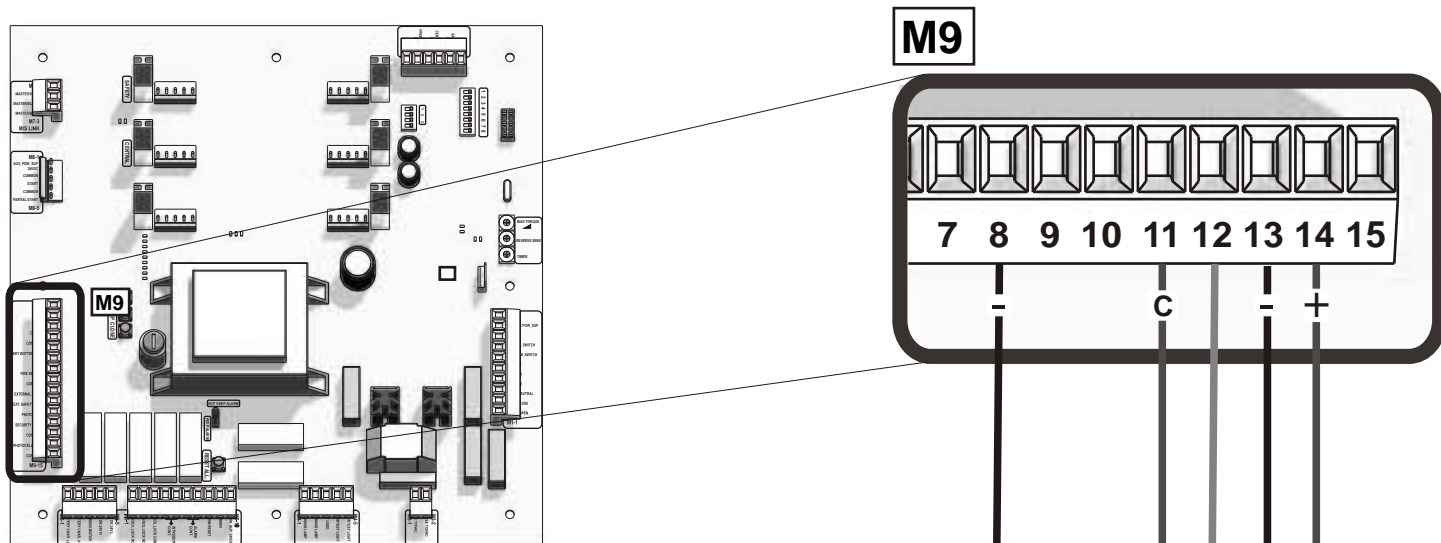


7

8



## PHOTOCELLS, SAFETY EDGE



### Safety edge input:

It is a n.c. contact, which stops immediately the movement of the gate. A further safety can be obtained making a connection with the safety edge mentioned on the side. If it is start up, the safety edge reverses the movement of the gate for two seconds and it stops.

**Notice:** if the safety input is not used, make a Jumper between 12 and 14.

### PHOTOCELL: Photocells connection

This contact can function in n.o. or n.c. mode, depending on how the dip switch DS1-2 has been adjusted:

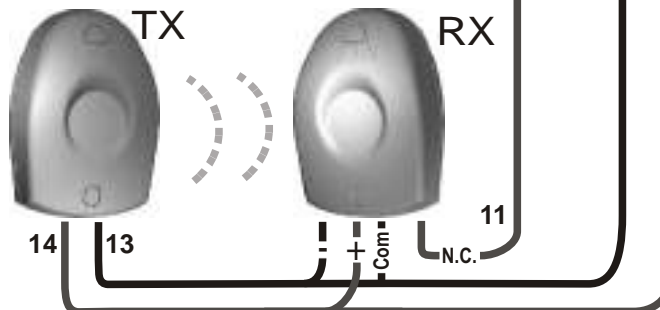
DS1-2 = ON => function n.o.

DS1-2 = OFF => function n.c.

When activated the movement of the gate stops immediately, if it is occupied for more than two seconds, the gate will reverse the movement..

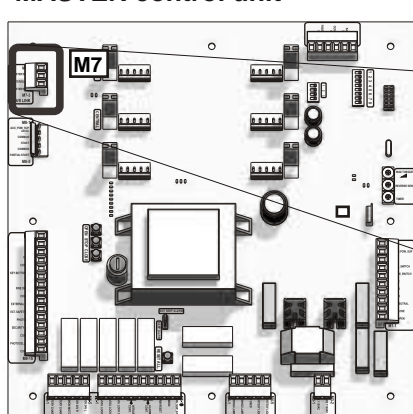
+ = 24Vdc    - = 0Vdc    C = Contact

Com = Common

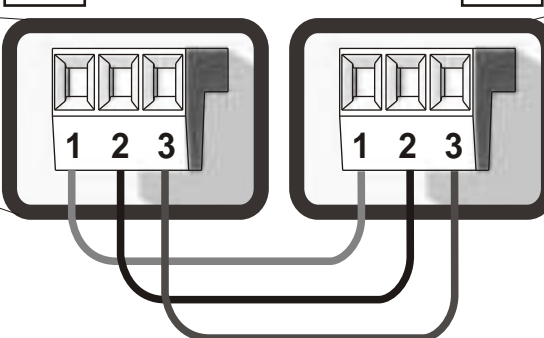


## MASTER / SLAVE CONNECTIONS

MASTER control unit

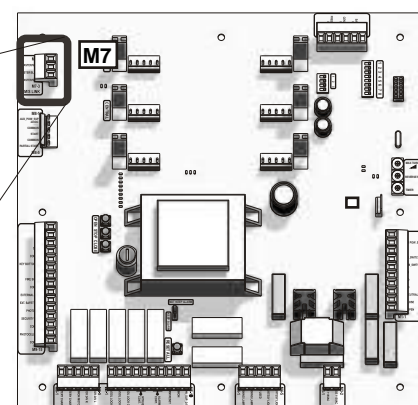


M7



M7

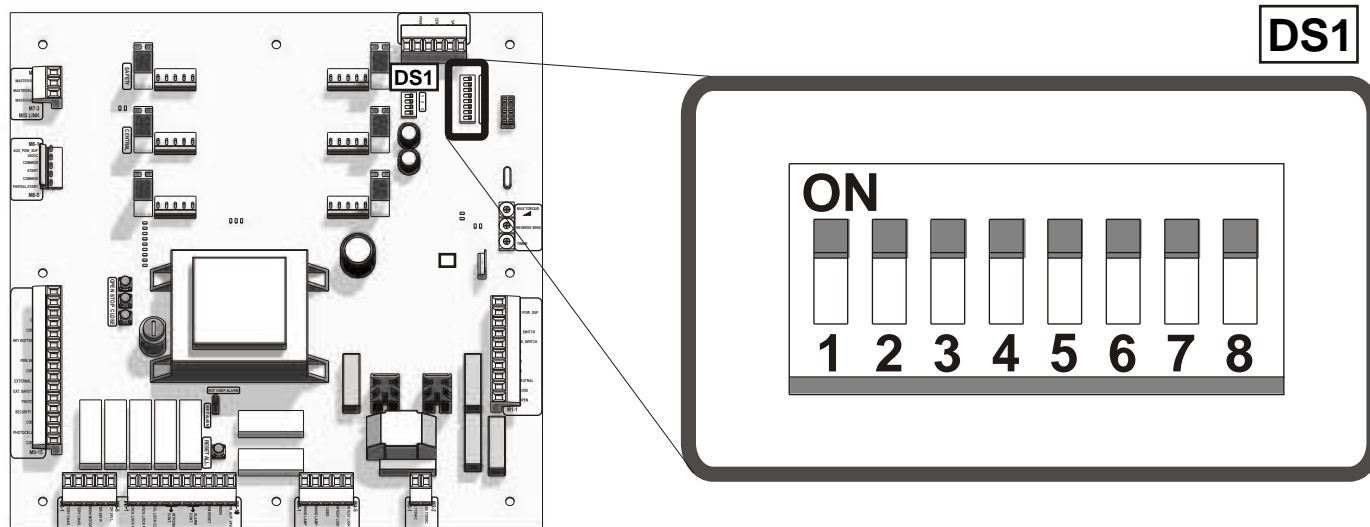
SLAVE control unit



It is selected by a dip switch in the following way: DS1-6 = ON => presence SLAVE card    DS1-6 = OFF => absence SLAVE card  
If the use of the SLAVE card is foreseen, gate with two leaves, it is connected to the Master card through serial connection RS485 and receives from this last one all information, also those of security.



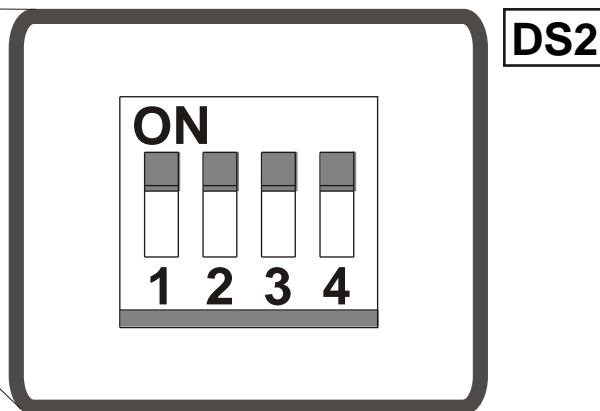
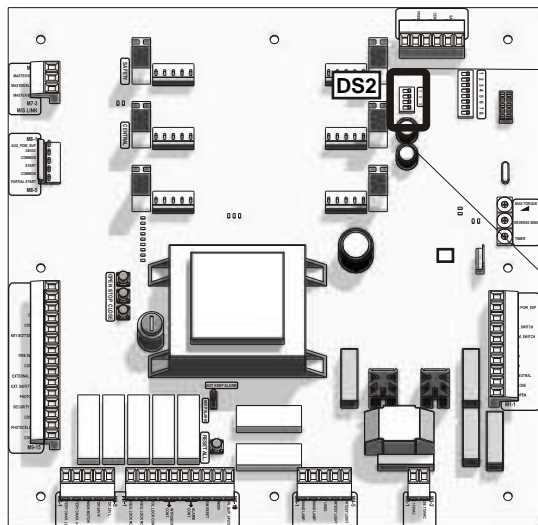
## **DIP SWITCHES**



<i><b>DIP number</b></i>	<i><b>ON/OFF</b></i>	<i><b>DESCRIPTION</b></i>
<b>1</b>	ON	Closing for automatic cycle established by trimmer TIMER (3-60 sec.)
	OFF	Closing for automatic cycle with detection attraverso l'EXLOOP
<b>2</b>	ON	Photocell n.o.
	OFF	Photocell n.c.
<b>3</b>	ON	When a car transits on the safeloop or the photocell intervened, in closing, stops for 3 sec. then opens until the alarm stops
	OFF	When a car transits on the safeloop or the photocell intervened, stands still as long as passage rests occupied.
<b>4</b>	ON	Encoder Presence
	OFF	Encoder Absence
<b>5</b>	ON	Opening on the right hand side of the leaf commanded by Master card, on the left hand side for the one commanded by the Slave card
	OFF	Opening on the left hand side of the leaf commanded by Master card, on the right hand side for the one commanded by the Slave card
<b>6</b>	ON	Slave card presence
	OFF	Slave card not present
<b>7</b>	ON	Learning modality: execute one complete opening to memorize the moving time if there is no encoder or the position if there is an encoder. Afterwards put the DIP on OFF.
	OFF	Learning executed
<b>8</b>	ON	Check of the photocell in opening
	OFF	In opening no check of safeloop of passage



## **DIP SWITCHES**



<i><b>DIP number</b></i>	<i><b>ON/OFF</b></i>	<i><b>DESCRIPTION</b></i>
<b>1</b>	ON	The master card functions normally
	OFF	The master card functions as Slave
<b>2</b>	ON	Autotest Photocell Enable
	OFF	Autotest Photocell Disable

Place DIP3 on DS 2 to ON position in order to set the below - described functions on DS1, once you have chosen the desired settings, replace DIP3 on DS 2 to OFF position and set the standard options of DIP 1,2,3 on DS 1.

<i><b>DS 2</b></i>	<i><b>ON/OFF</b></i>	<i><b>DS 1</b></i>	<i><b>ON/OFF</b></i>	
<b>3</b>	ON	<b>1</b>	ON	Acceleration function disablement
		<b>1</b>	OFF	Acceleration function enabled
		<b>2</b>	ON	Slowdown function disablement / Function disabled
		<b>2</b>	OFF	Slowdown function enabled / Function disabled
		<b>3</b>	ON	Pre - flashing disablement
		<b>3</b>	OFF	Pre - flashing for 5 seconds enabled
<b>3</b>	OFF	DS 1 back to standard settings for DIP 1,2,3		

<b>4</b>	ON	Free
	OFF	Free





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## **BATTERY BACK-UP SYSTEM**

# **SALES CONDITIONS and WARRANTY**

**GENERAL WARNING:** Installation must be realized using parts and accessories approved by SEA. SEA is not responsible for incorrect installations and/or non-compliance with safety standards according to the law in-force. SEA is in no way liable for any damages and/or malfunctioning due to using parts and accessories non-compliant with the UL325 safety standards.

**ORDERS:** Orders are processed upon approval by SEA. Buyers must confirm orders by sending a written Purchase Orders to SEA. Purchase Orders are intended as confirmation of orders and binding for the buyer, which accepts SEA sales condition.

**QUOTATION:** Quotation and special offers with a non-specified duration expires automatically after 30 days.

**PRICES:** Prices are based on the Price List in force. Discounts and quotation from Sales Rep. and other selling branches must be approved by SEA. Prices are F.O.B SEA Warehouse in Miami and do not include shipments costs. SEA reserves the right to modify the price list at any time and provide notice to its sales network.

**PAYMENT:** Method of payments and terms are notified by SEA and displayed on the commercial invoice.

**DELIVERY:** The delivery time on the invoice is not binding and represents an estimated delivery. Shipments costs will be charged to the buyer and SEA is not responsible for delays and/or damages occurred to the products during shipment.

**COMPLAINS:** Complaints and/or claims must be notified to SEA within 7 business days after receiving the products. Claims and complains must be supported by original documents. Customer must contact the factory for instructions and authorization. Merchandise returned for credit must be current, uninstalled and unused and returned in its original packaging. Freight must be pre-paid on all authorized returns.

**REPAIRS:** Repairs and parts are subject to the availability in stock. Shipment of products for repairs must be pre-paid by the customer. Products shipped without authorization, sender's details and description of the problems will be refused. Customers must contact SEA for instructions.

**WARRANTY:** for the original buyer only:

Hydraulic and oil-bath motors: 36 months warranty from the date of invoice on manufacturing, assembling and workmanship defects.

Electro-mechanic motors and electronic control systems: 24 months warranty from the date of invoice on manufacturing, assembling and workmanship defects.

Lepus and Full Tank Standard model: 60 months warranty from the date of invoice on manufacturing, assembling and workmanship defects.

No warranty will be recognized for damages due to incorrect installation and/or improper use for which the product was intended. SEA warranty obligations shall be limited to repair or replace the defective product/parts at SEA option, upon examination of the products by SEA technical Staff. All replaced parts must remain property of SEA. The warranty status of the product remains an unquestionable assessment of SEA. Buyer must ship pre-paid defective products. Products under warranty will be returned pre-paid by SEA. Recognized defects, whatever their nature, will not produce any responsibility and/or damage claims to SEA USA Inc and SEA s.r.l. Warranty shall not cover any required labor activities. Warranty will in no case be recognized if alterations and any other changes will be found on products. Warranty will not cover damages caused by carriers, expendable materials and faults due to improper use with the products specifications. No indemnities are recognized during repairing and/or replacing of the products under warranty. SEA USA Inc. and SEA s.r.l. decline any responsibility for damages to person and objects deriving from non-compliance with safety standards, installation instructions or use of the products sold. It is intended that warranty will be recognized only on products bought through the SEA authorized network. Products must be installed by professionals. No warranty will be recognized if products are installed directly by the final user. Warranty does not apply in case of unexpected events such as fire, flood, electrical power surge, lightning, vandalism and others.

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