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DIREZIONE E STABILIMENTO:
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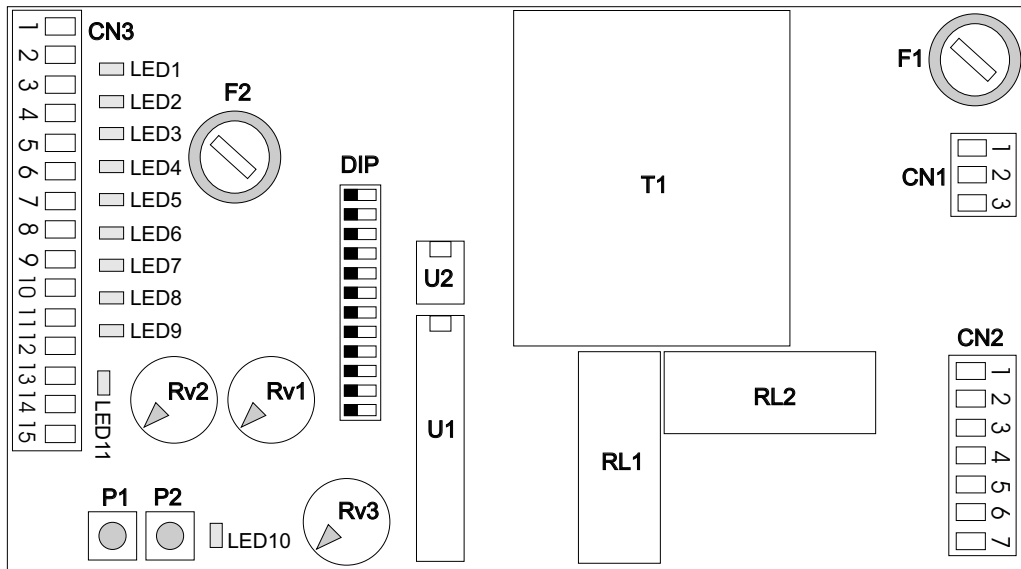


English

ELECTRONIC CONTROL UNIT

GATE 1

(cod. 23001120)



LED1 = Warning light	Rv1 = Motor torque adjustment
LED2 = TX Photocell output	Rv2 = Brake length adjustment (slow down length)
LED3 = 24V Auxiliary output	Rv3 = Pause time adjustment
LED4 = Photocell	P1 = Operating time memory button
LED5 = Limit switch in opening	P2 = Remote control memory button
LED6 = Limit switch in closing	DIP = Dip-switch Function Setting
LED7 = Start	F1 = Output and motor fuse (6.3AT)
LED8 = Auxiliary input	F2 = Accessories fuse (1 A)
LED9 = Encoder	T1 = Transformer
LED10 = Programming	RL1 = Motor Power Supply Relay
LED11 = Stop	RL2 = Motor Operating Direction Relay
CN1 = 110V power supply connector	U1 = Micro-controller
CN2 = Motor and Flashing lamp connector	U2 = EEPROM memory
CN3 = 24V input / output connector	



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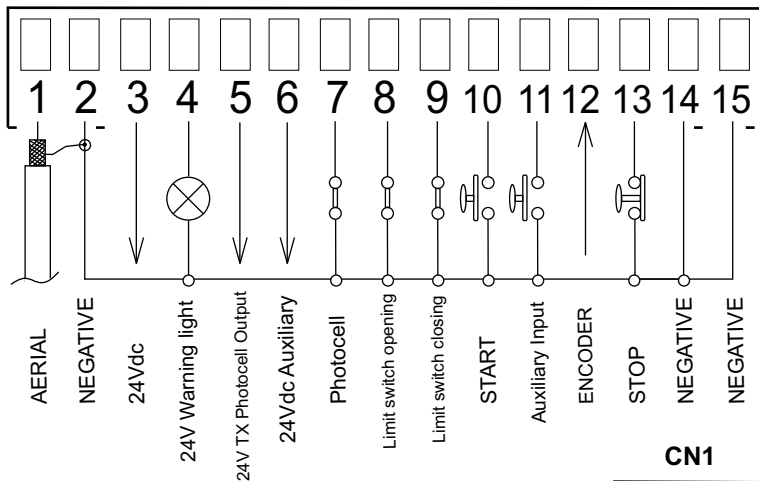


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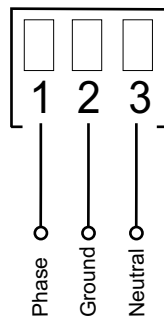


CONNECTIONS

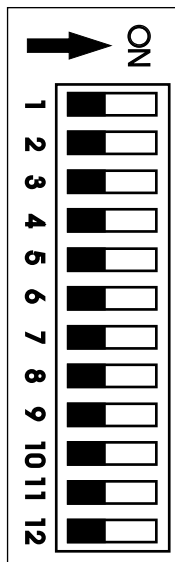
CN3



CN1

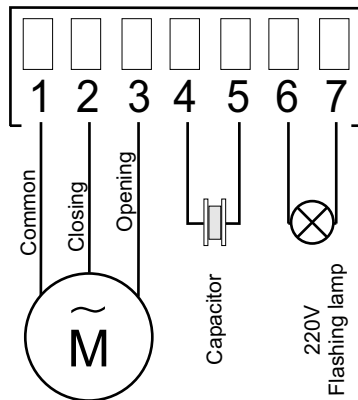


DIP



ON = Function active

CN2





SETTING OPERATING LOGICS



MANUAL LOGIC

A START command opens the gate. A second START while it is opening stops the motor.
A START command while it is closing stops the motor.



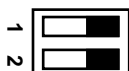
SAFETY LOGIC

A START command opens the gate. A second START while it is opening reverses the motor. A START command while it is closing reverses the motor.



AUTOMATIC LOGIC 1

A START command opens the gate. A second START while it is opening is not accepted. A START while it is closing reverses the direction.
P. N.: for automatic closing, set DIP SWITCH 6 to the ON position.



AUTOMATIC LOGIC 2

A START command opens the gate. A second START while it is opening is not accepted. A START during the pause time closes the gate immediately. A START while it is closing reverses the direction.
P.N.: for automatic closing, set DIP SWITCH 6 to the ON position.

AUXILIARY INPUT CONFIGURATION



SAFETY EDGE (N.C. contact)

When the safety edge contact becomes Opened, the gate reverses direction and stops after approximately 1 second. A START command is required to start the motion again.



TIMER (N.O. contact)

If a TIMER is connected to this input, it is possible to open the gate and hold it open for as long as the contact remains closed. Using a 24 hour or a 7 day timer, openings time can be scheduled exactly as required. When the TIMER contact is open the motor operates following the operating logics previously set.



AUXILIARY PHOTOCCELL (N.C. contact)

The intervention of this Photocell contact stops the operator until the obstacle is removed. If it's verified while the gate is opening, movement resumes in the same direction; if it's verified while closing, the direction is reversed.



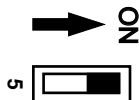
PEDESTRIAN OPENING (N.O. contact)

On this command, the gate opens partially, for about 10 seconds.

Make JUMPERS on all N.C. contacts that are not being used

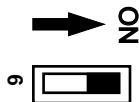


OTHER FUNCTIONS



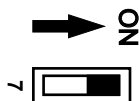
PRE-FLASHING

When this function is activated, the flashing lamp and warning light begin flashing about 3 seconds before the motor starts opening, whether in opening or closing.



AUTOMATIC CLOSING

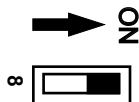
When activated, the motor automatically closes the gate after the PAUSE time set by trimmer Rv3. This function can be activated independently from the operating logic set. (DIP SWITCH 1 & 2).



PHOTOCELL AUTOTEST

When this function is activated, a test on the photocells is carried out prior to any movement of the gate. In order to use this function, the transmitting photocells must be connected to terminals 5 (24V) and 2 (Negative) on the CN3 connector.

In the event of a malfunctioning, the flashing lamp and warning light will both flash slowly.

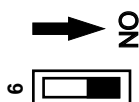


ENCODER MANAGEMENT

The signals sent from the ENCODER, located on the motor or on the gate, can be managed activating this function. If activated, any obstacle in the gate route will be detected and the gate movement reversed.

In the event of a malfunctioning, the flashing lamp and warning light will both flash slowly.

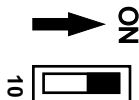
P.N.: if no ENCODER is installed, the DIP Switch should be set to the OFF position.



“SOFT” START

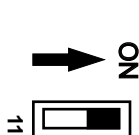
When activated, the motor will start at a lower torque level, to avoid stresses and strains on the mechanical components of the gate. The starting torque is a percentage of the normal operating torque.

P.N.: When the gate is very heavy or does not run smoothly, it is advised NOT TO activate this function.



BRAKING (slow-down) AT LIMIT SWITCH

When activated, the motor speed is reduced before reaching the limit switch or the end of the operating time. The purpose of this function is to bring the leaf gently towards the stop position to avoid a noisy collision. The closing speed is fixed, but the slow-down time is adjustable, using the Rv2 trimmer.

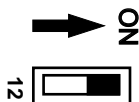


LEAF LOCKING

When activated, after slowing down, and when the leaf has reached the mechanical stop, for about 1 second the motor is supplied at the maximum power. This increases the oil pressure in the motor, making the hydraulic lock more effective.

IMPORTANT NOTE:

this function SHOULD NOT be activated when used on sliding gates, as it can cause the gate over-running of the limit switches and the motor jamming



CLOSING DIRECTION

This function allows to define the gate closing direction without reversing the Motor wiring connections and the Limit Switch contacts.



TRIMMER REGULATION



OPERATING TORQUE ADJUSTMENT

This Trimmer allows to adjust the motor torque. This adjustment is needed for operators without mechanical or hydraulic anti-crush safety devices. Regulation should be carried out to avoid any risks of crushing either people or objects and, in any case, compliant with current legislation on the subject.



BRAKE (slow-down) LENGTH ADJUSTMENT

This Trimmer allows to adjust the length of the slow-down



PAUSE LENGTH ADJUSTMENT

This Trimmer allows the adjustment of the PAUSE time between 0 and 120 seconds.
Set DIP SWITCH 6 to the ON position to enable automatic closing.

P.N.: TIMES AND VALUES ARE INCREASED BY ROTATING THE TRIMMERS CLOCKWISE

SELF-LEARNING OF OPERATING TIME FOR SLIDING GATES (WITH LIMIT SWITCH)

1 STAGE 1

Make all the electrical connections and jumpers on any unused N.C. contact.

If an operator equipped with mechanical or hydraulic anti-crush safety device is being used, set the torque (trimmer Rv1) to the maximum value and adjust the motor torque using the by-pass valves or clutch adjustment screws located on the operator.

If an operator without a mechanical or hydraulic anti-crush safety system is being used, set the torque to the maximum value **ONLY** for the self-learning process.

Immediately afterwards, set a torque value that will ensure anti-crush safety, in accordance with current legislation.

ATTENTION !

THIS PROCEDURE IS POTENTIALLY DANGEROUS AND MUST BE CARRIED OUT ONLY BY SPECIALIZED PERSONNEL USING ALL SAFETY PRECAUTIONS.

2 STAGE 2

Take off the power supply, release the motor and set the gate in the half-open position.

Lock back the motor.

Press and Hold button P1, Led 10 will come on.

Continue to hold P1 until the motor starts to close the gate. Release P1.

If the motor start to open the gate, take off the power supply again. Move DIP Switch 12 and repeat completely the procedure (stage 2).

3 STAGE 3

The gate closes until it reaches the closing limit switch. The motor stops and then immediately begins an opening cycle. On reaching the opening limit switch, the motor stops and begins to close the gate once more until it reaches the closing limit switch.

At this point the gate remains closed, the operating times are memorized and the operator is ready to work.

Double check that the operating times have been memorized correctly giving a Start or pressing button P1. If necessary, repeat the programming procedure from stage 2.

4 STAGE 4

If used with an operator without a mechanical or hydraulic anti-crush safety device, adjust trimmer Rv1 to values that will ensure anti-crush safety, in accordance with current legislation.

Adjust the slow-down length (if enabled), using trimmer Rv2.



SELF-LEARNING OF OPERATING TIME FOR SWING GATES (WITHOUT LIMIT SWITCH)

1 STAGE 1

Make all the electrical connections and jumpers on any unused N.C. contacts.

If an operator equipped with mechanical or hydraulic anti-crush safety device is being used, set the motor torque (trimmer Rv1) to the maximum value and then adjust the motor torque using the appropriate by-pass valves or clutch adjustment screws located on the motor.

If an operator without a mechanical or hydraulic anti-crush safety system is being used, set the motor torque to the maximum value ONLY for the self-learning process.

Immediately afterwards, set a torque value that will ensure anti-crush safety, in accordance with current legislation.

ATTENTION!

THIS PROCEDURE IS POTENTIALLY DANGEROUS AND MUST BE CARRIED OUT ONLY BY SPECIALIZED PERSONNEL USING ALL SAFETY PRECAUTIONS.

2 STAGE 2

Take off the power supply, release the motor and set the gate in the half-open position.

Lock back the motor.

Press and Hold button P1, Led 10 will come on.

Continue to hold P1 until the motor starts to close the gate. Release P1.

If the motor start to open the gate, take off the power supply again. Move DIP Switch 12 and repeat completely the procedure (stage 2).

3 STAGE 3

The gate closes; when it reaches the mechanical stop, press button P1. The gate will start an opening cycle.

When it reaches the mechanical stop, press Start or P1 again. The motor stops and begins to close the gate once more. When it reaches the mechanical stop, press P1 once more.

At this point the gate remains closed, the operating times are memorized and the operator is ready to work.

Check that the operating times have been memorized correctly by giving a Start command or by pressing button P1. If necessary, repeat the programming procedure from stage 2.

4 STAGE 4

If used with an operator without a mechanical or hydraulic anti-crush safety device, adjust trimmer Rv1 to values that will ensure anti-crush safety, in accordance with current legislation.

Adjust the slow-down length (if enabled), using trimmer Rv2. If after adjusting the motor torque the operating time is insufficient (ex. the leaf fails to open or close completely), repeat STAGE 2 with the motor torque value set for the normal use of the operator.

Adjust the slow down length (if enabled), using trimmer Rv2.

PROGRAMMING A TRANSMITTER

Press button P2 until LED 10 turns ON.

Give a START with the transmitter, using the button chosen for the start command.

The LED will flash to confirm that the Transmitter code has been memorized and will remain ON waiting for further transmitters. If no further code is memorized within 10 seconds, the LED automatically goes off and exits the programming procedure.

ATTENTION: If an existing code is already in the memory, it will be deleted.



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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:

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

INTENDED USE

The electronic control unit 23001120 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 °C	+85 °C	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 23001120 electronic control units are guaranteed for a period of 24 months. The guarantee period starts from the date stamp printed on the unit. The 23001120 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.

SEA reserves the right to do changes or variations that may be necessary to its products with no obligation to notice.

