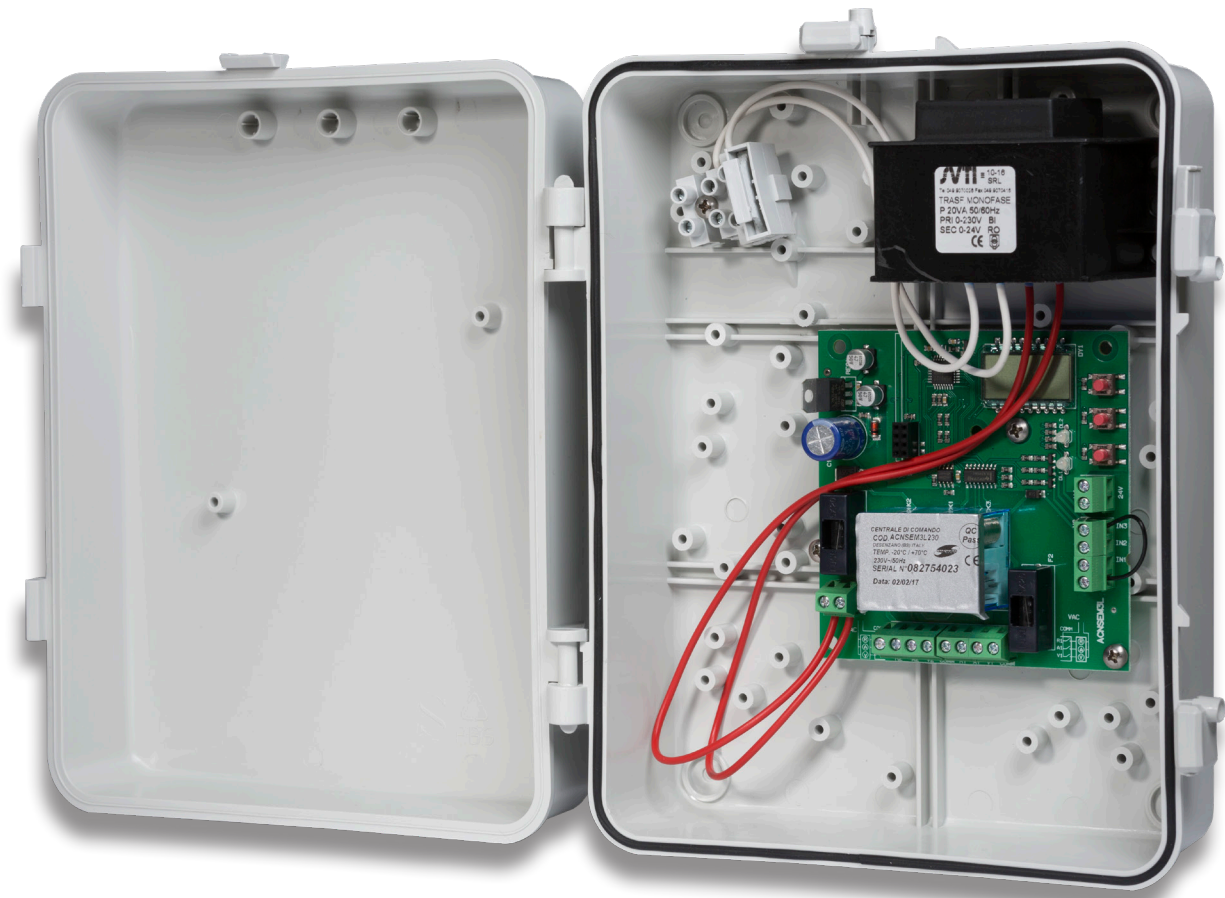


MGACNSEM3L



MGACNSEM3L

MGACNSEM3L230

INSTRUCTIONS

The following manual is intended qualified technical personnel responsible for the installation.

We recommend reading these instructions carefully before proceeding with the installation.

Any improper use of the product or misplaced connection may compromise the correct functioning of the product itself and the safety of the final user.

TECHNICAL DATA

Power supply: 24Vac/dc
 Max accessories power current: 0,5 A
 Operating temperature: -20°C/60°C

Max lights power current: 2A
 Accessories power supply: 24Vac/dc
 NOTE: the type of output current is determined by the type of input current

INTENDED USE AND LIMITATIONS OF USE

MGACNSEM3L is a control unit designed for traffic lights with 2 or 3 lights.

Made only from first-choice materials, it has been designed to have a low absorption at rest, allowing for net energy savings. Special attention has been given to the professionals in this sector to facilitate the programming of the control unit by means of a multi-language display.

DESCRIPTION OF THE PARTS

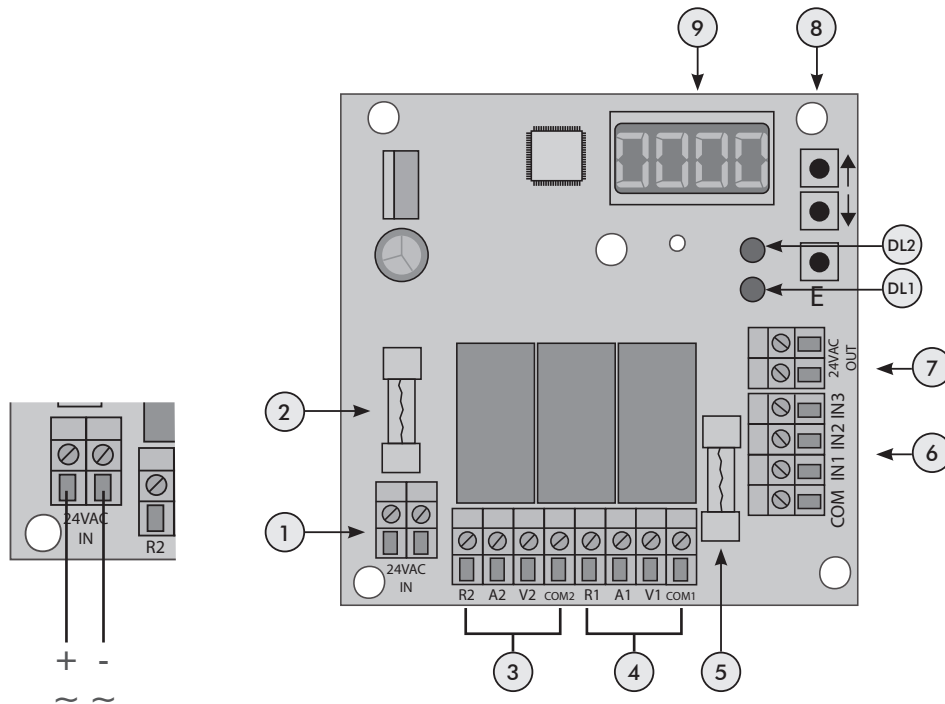


FIG 1

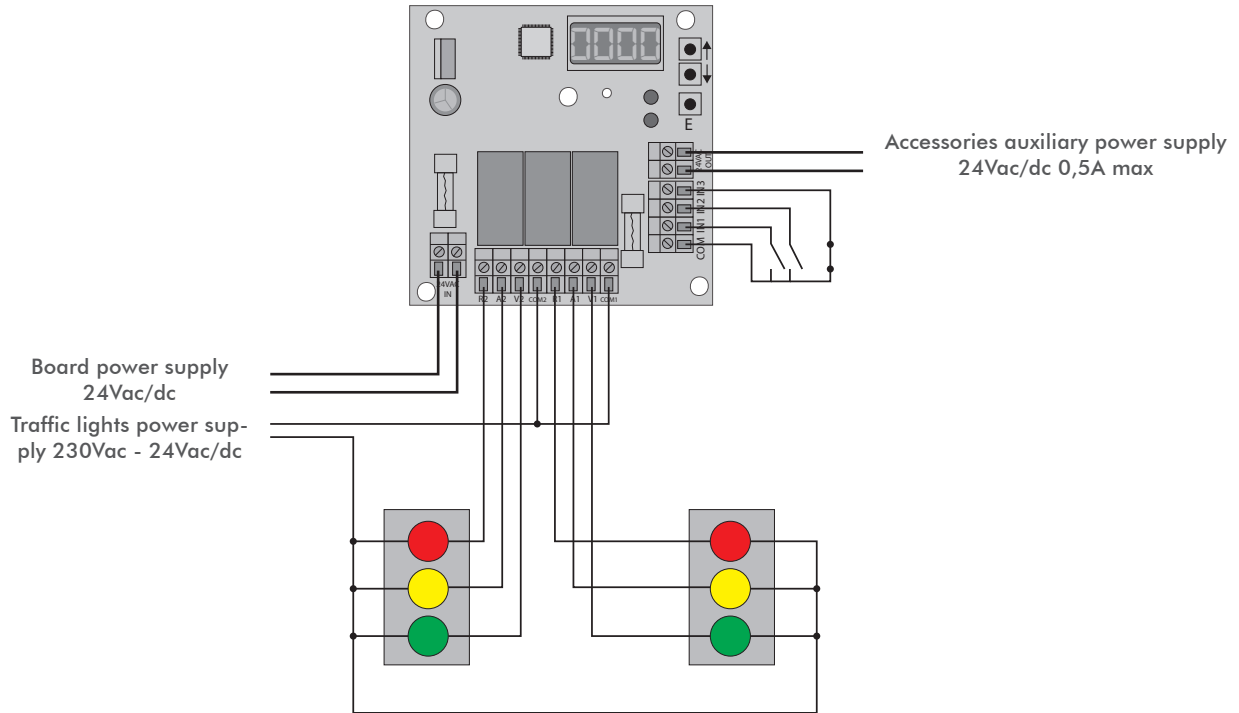
1. Terminal board for power supply 24Vac/dc
 2. Power supply and accessories fuse (T0,5A, 5x20)
 3. Traffic light 2 terminal board
 4. Traffic light 1 terminal board
 5. Traffic lights management fuse (F2A 5x20)
 6. Priorities input terminal board, with control devices (photocells, detection devices, etc.):
 - IN1: programmable input for traffic light 1, N.O. by default
 - IN2: programmable input for traffic light 2, N.O. by default
 - IN3: emergency programmable input, N.C. by default
 7. Auxiliary power supply 24Vac/dc 0,5 A
 8. Menu navigation buttons
 9. 5-language LCD display (IT, EN, FR, DE, ES)
- DL2- Traffic light operation 1
 DL1- Traffic light operation 2

ELECTRICAL WIRING

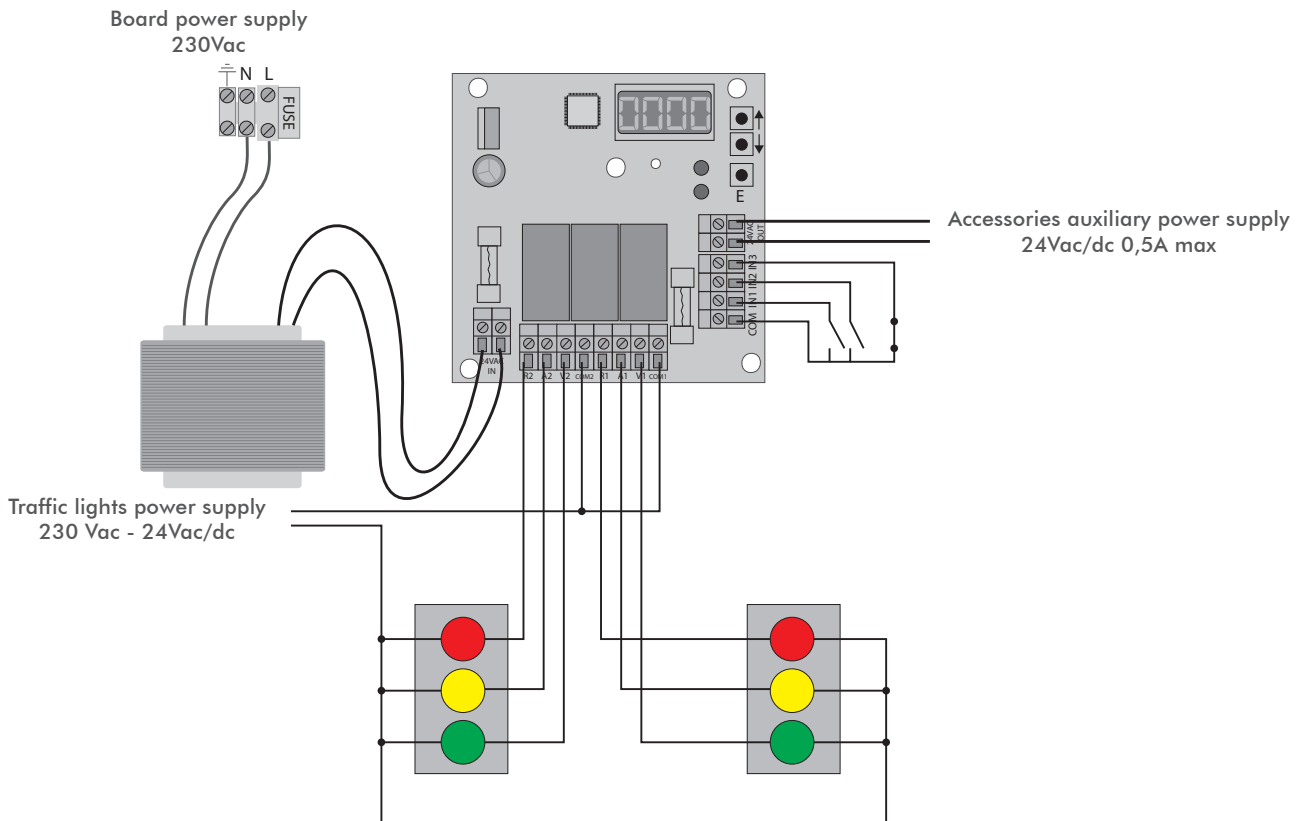


Attention!
Electrical wirings are to be made in absence of a power supply, and with the battery charger disconnected, if present.

24V VERSION KIT



230V VERSION KIT



NAVIGATING THE MENU

Keep the following in mind while navigating in the menu:

- if button "E" is pressed for 1s, it functions as "ENTER" while, when pressed for 3s it functions as "ESC"
- the control unit does not regard any control signals when the user is navigating the menu.



As shown in figure, the home screen shows a series of characters of which the first three represent the cycling time. The fourth character appears only during the area clearance time and it is represented by a blinking "S".

In the event of two or more inputs being activated, the cycling time is obscured, leaving its place to the number of the respective input that has been selected until the input state has been restored.

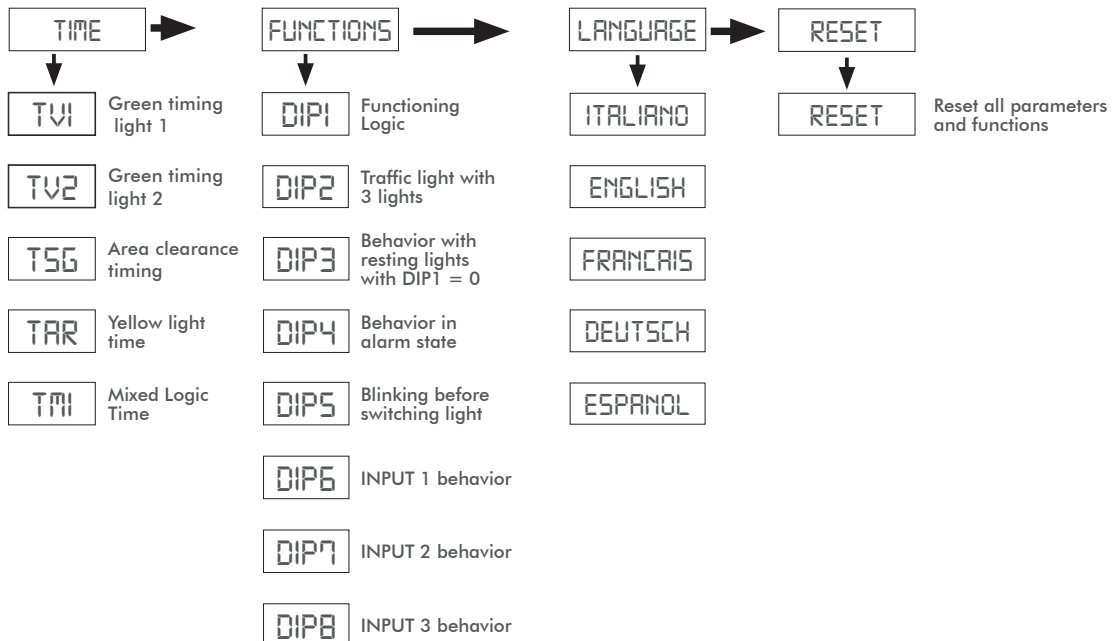
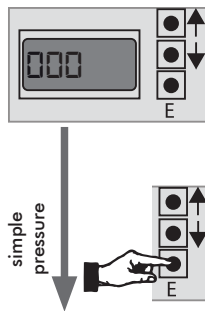
LANGUAGE SETUP

This control unit is available in 5 different languages:
ITALIAN - ENGLISH - FRENCH - SPANISH - DUTSCH

The default language on the control unit is English; to select another language, access the menu by pressing the "E" button, then click on the down arrow five times until the language menu is displayed, then press "E" once again to select it. Now you can choose your preferred language by using the up/down arrows and select it by pressing "E".



DESCRIPTION OF TIMING PARAMETERS



DESC DESCRIPTION OF TIMING PARAMETERS

TV1	(Green timing light 1) = timing of green for traffic light 1 expressed in seconds, therefore also timing of red for traffic light 2	Default: 10sec Min: 1sec Max: 240sec
TV2	(Green timing light2) = timing of green for traffic light 2 expressed in seconds, therefore also timing of red for traffic light 1.	Default: 10sec Min: 1sec Max: 240sec
TSG	(Area clearance timing) = period preceding the color switch in which both traffic lights are red, which allows cars to clear the area.	Default: 10sec Min: 0sec Max: 240sec
TAR	(Yellow light time) = if the system is regulated to a 3-light setup, DIP2 = 1 sets the yellow time. Otherwise with DIP2=0 and DIP5=1, TAR will be used to setup the blinking timing.	Default: 0sec Min: 0sec Max: 15sec
TMI	(Mixed Logic Time): with DIP1 = 2, set the timing for the light change in the case there are no bookings. After the value 240. the scale varies from 1 to 60 seconds.	Default: 120sec Min: 30sec Max: 840sec

DESCRIPTION OF FUNCTIONS

DIP1	(Functioning Logic): 0. On booking with control devices 1. Timed 2. Mixed Logic For additional details on the functioning logics see the following page	Default: 0
DIP2	(Traffic light with 3 lights): This function determines whether the specified traffic light has two or three lights. 0 = 2-light traffic light 1 = 3-light traffic light	Default: 0
DIP3	(Behavior with resting lights with DIP1 = 0): 0. All lights turned off 1. Light 1 green, light 2 red 2. Light 1 red, light 2 green 3. Both lights 1 and 2 red	Default: 3
DIP4	(Behavior in alarm state) = Alarm state is activated only once input3 is solicited. 0. Both lights blink red 1. Light 1 green, light 2 red 2. Light 1 red, light 2 green 3. Both lights red ATTENTION: the relative clearing or orange light times will be executed before switching to alarm state	Default: 0
DIP5	(Blinking before switching light) 0. No blinking during TAR; if DIP2 = 0, thus the traffic lights with two lights are selected, the lights' colors won't change 1. Blinking active before switching lights, if DIP2 = 0, the TAR icon in the Time menu then sets the blinking time	Default: 0
DIP6	(INPUT 1 behavior) = 0. N.O. Input 1. N.C. Input	Default: 0
DIP7	(INPUT 2 behavior) = 0. N.O. Input 1. N.C. Input	Default: 0
DIP8	(INPUT 3 emergency behavior) = 0. N.C. Input 1. N.O. Input	Default: 0

DESCRIPTION OF FUNCTIONING METHODS

DIP1 = 0 Operational logic with control device (for instance photocells or buttons)

The green light cycle of each traffic light is determined by detection devices.

The red and green times of the traffic lights are set on the display using the parameters TV1 (green time traffic light 1), TV2 (green time traffic light 2), tsg (area clearance time).

To use this logic, open the function menu, and set DIP1 = 0

Set the TV1 and TV2 times based on the maximum time required for the green lights in each traffic light.

Set the desired time tsg, during this time the traffic lights both show red lights to be sure that the maneuvering area between the traffic lights is cleared before the green light comes on the opposite side.

If the traffic light has three lights (there is a yellow light) regulate the time TAR for the yellow light and set DIP2 = 0 to avoid sudden braking.

If the traffic light has two lights, (due to the absence of the yellow light), and you need a signal before one of the lights turns red, it is possible to insert the flash of the green light (DIP5 = 1 e DIP2 = 0) regulating the time (TAR).

Define DIP3 to configure the lights behavior in resting state. Moreover, it's possible to use a single control device wired to the input of the resting red traffic light by setting DIP3 = 1 or 2.

DIP1 = 1 Operational logic with timer

The timing of the red and green of the traffic lights are set from the display using the parameters TV1 (green time traffic light 1), TV2 (green time traffic light 2), TSG (area clearance time). This logic doesn't require the use of photoelectric cells or other detection devices as the system is controlled only by the times set for the two traffic lights. Operation is cyclical.

To use this logic, open the function menu, and set DIP1 = 1.

Set the TV1 and TV2 times based on the maximum time required for the green lights in each traffic light.

Set the desired time TSG, during this time the traffic lights both show red lights to be sure that the maneuvering area between the traffic lights is cleared before the green light comes on the opposite side.

If the traffic light has three lights (there is a yellow light) regulate the time TAR for the yellow light and set DIP2 = 1 to avoid sudden braking. If the traffic light has two lights, (due to the absence of the yellow light), and you need a signal before one of the lights turns red, it is possible to insert the flash of the green light (DIP5 = 1 e DIP2 = 0) regulating the time (TAR).

DIP1 = 2 Operational Mixed Logic

The switch to green (from green 1 to green 2 or viceversa) happens during the resting state after every pre-set time count (TM1). Cycling time will reset to zero whenever there will be transit through IN1 during green1, unless IN2 is already toggled; in this case it will be booked and cycles will happen as determined by TV1 and TV2. The same process applies for IN2 during green2.

DESCRIPTION OF THE CANCEL MENU

RESET

RESET: The reset option in the CANCEL resets all parameters and functions with default settings. Once you have entered into the CANCEL menu, go to RESET by pressing ENTER. The display will begin to flash as it awaits confirmation. Press ENTER again to reset to default parameters. If not, exit. If you press ENTER, the message PRG will appear on the screen to indicate that resetting is in progress.

IMPORTANT WARNINGS AND FIRST START-UP

IMPORTANT WARNINGS ABOUT INSTALLATION:

Automation systems must be installed by qualified technical staff in compliance with legal requirements and meeting the requirements of the law

- Verify the conditions of any cables already present in the system.
- Analyze automation risks and take the necessary safety and signal precautions accordingly.
- Install controls (for example key selectors) to keep users out of danger zones.
- Once installation has been completed, test safety, signaling and automation unlocking devices a few times (see FINAL TESTING).
- Make sure that users have understood correct automatic, manual and emergency operation of automation.

FIRST START-UP:

- Draft a system technical file containing: Installation drawing, Wiring diagram of connected cables, analyses of risks present and adopted solutions, analyses of residual risks still present, declaration of conformity of all products drafted by the manufacturer and a declaration of conformity relative to installation completed by the installer.
- Affix the CE label or plate containing hazard information and identifying data (serial number, etc.) to the machine.
- Deliver instructions for use, safety warnings, CE declaration of conformity and a copy of the technical file to the end user.

ALSO MAKE SURE TO INFORM THE END USER:

- Regarding the possible presence of unprotected residual risks and foreseeable improper use of the importance of disconnecting power supply when performing cleaning in the automation area or when performing small maintenance operations (i.e. repainting)
- On the need to frequently verify that there is no visible damage to automation or, if any is detected, to immediately alert the installer
- With regards to the danger of letting children play in the immediate vicinity of automation
- Prepare a system maintenance schedule (at least every 6 months for safety devices), keeping notes regarding operations performed in a log.

