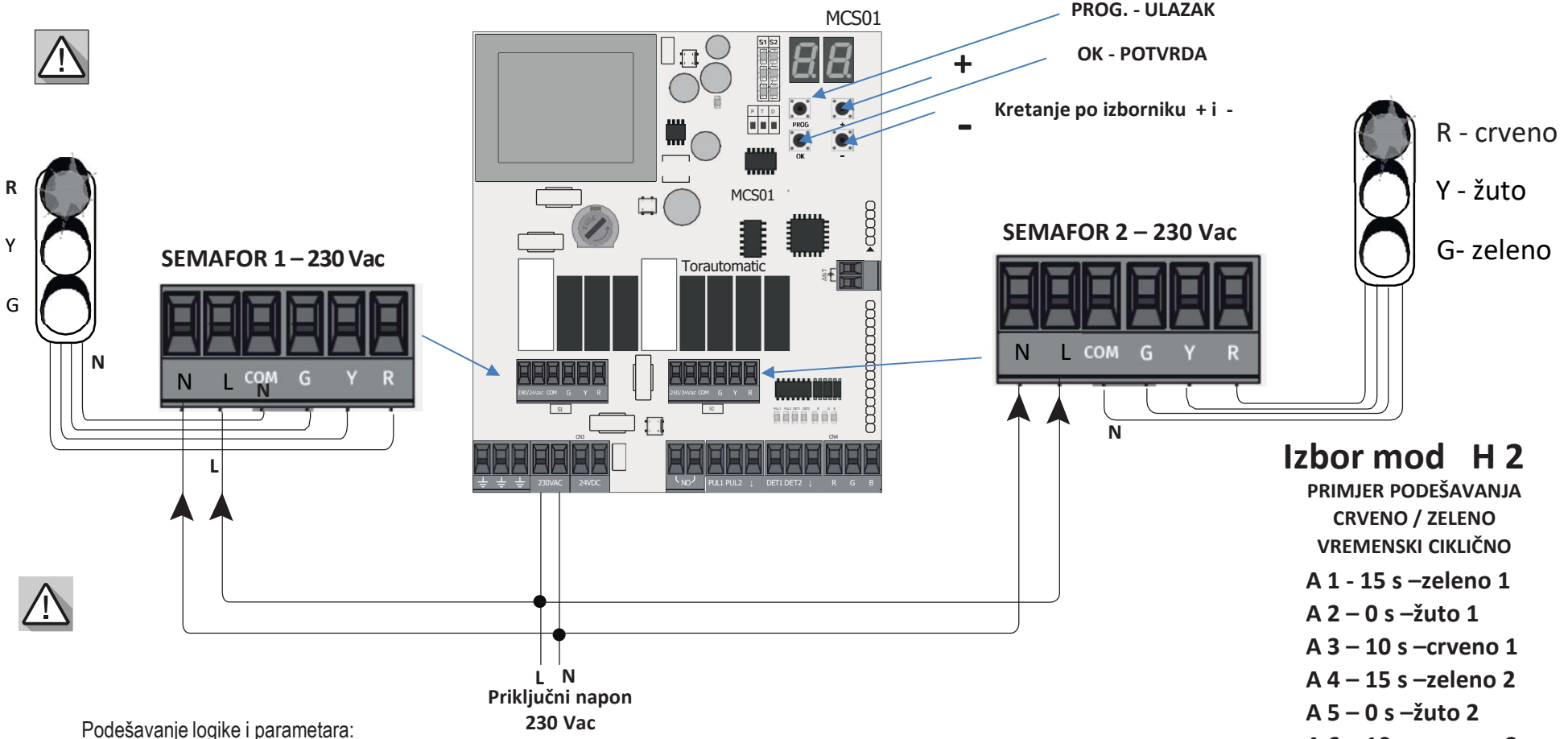
PODEŠAVANJE CRVENI/ZELENI 230 V

SHEMA SPAJANJA – SEMAFOR 230 Vac Podešavanje na „Timer mod" H2– ciklično SEMAFOR CRVENO / ZELENO



Izbor mod H 2

PRIMJER PODEŠAVANJA
CRVENO / ZELENO
VREMENSKI CIKLIČNO

A 1 - 15 s –zeleno 1
A 2 – 0 s –žuto 1
A 3 – 10 s –crveno 1
A 4 – 15 s –zeleno 2
A 5 – 0 s –žuto 2
A 6 – 10 s –crveno 2
A 7 – crveno (1)
A 8 – crveno (2)
C 5 – 4 s –treptanje z1
C 6 – 4 s –treptanje z2

RESET na tvorničke postavke C 9
Kratko pokaže 00 da je uspješno

Podešavanje logike i parametara:

Kratkim pritiskom na ***PRG*** ulazimo u glavni izbornik. Sa + ili – biramo grupu **nA** – **nC** – **nL** – **nH**

Na izabranu grupu kratko pritisnuti OK. Kroz grupu nA birate sa + ili – za podešavanje: **A1**-**A2**-**A3**-**A4**.....korekciju potvrdite sa Ok. Kada ste završili sva **nA** podešavanja vratite se na **A0** i kratko pritisnite Ok, vrati vas na glavni izbornik. Sa + ili – dođete na grupu **nC** kratko pritisnite OK da uđete u grupu **nC**, sa + ili – putujete po izborniku za podešavanje **C1**-**C2**-**C3**-**C4**-**C5**-**C6**.....Kada ste izvršili korekciju potvrdite sa Ok, za izlaz iz grupe vratite se na **C0** i kratko pritisnite Ok, vrati vas u glavni izbornik. Isti postupak i za grupu **nL**. Za korisničke postavke koristite tabelu.

Ukoliko želite resetirati na tvorničke postavke u grupi **nC** izaberite **C9**, kratko pritisnite OK kratko pokaže 00, ponoviti postupak podešavanja.

Napomena: za **A3** i **A6** CRVENO podesite na vrijeme koje je potrebno da vozilo napusti prostor između dva semafora.

Nakon svega potvrda i početak rada u glavnom izborniku grupa **nH** izabrati **H2** mod za rad sa cikličnim podešenim vremenom. Za potrebe naknadnog podešavanja postupak je isti PROG (pokaže **H2**), izabrati **H0** i kratko OK i vrati vas u glavni izbornik.

Kada se ne koristi žuti semafor, sa **C5** i **C6** podešava se treptanje zelenog prije nego prebaci na crveno

03. KONFIGURACIJA

FUNKCIJE

Modul MCS01 radi sa semaforima u dvije ili tri boje. Omogućuje vam odabir polariteta ulaza A0 ili AC , ako želite da se napajaju neovisno o opskrbi ploče s 230 Vac ili 24 Vac / dc kako bi se omogućila upotreba visokonaponskih ili niskonaponskih svjetiljki.

Za usklađivanje semafora pristupite podizbornicima A7 i A8 postavite početnu boju svakog semafora.

FUNKCIJA A7 **i** A8
Koristi + tipku za definiranje startne boje na semaforu 1 i semafor 2.

Ova je postavka obavezna za načine rada Timer i Detector, osim ako je svrha da radi kao jednostavan rotirajući semafor.

Za podešavanje načina rada, idite u podizbornik C3 i C4.
Napomena · PUL i DET ulazi nisu tvornički podešeni.

FUNKCIJA C3 **i** C4
Koristi**+ i -** za određivanje parametra:
00 · Nije postavljen.
NO · Normalno otvoren.
NC · Normalno zatvoren.

Ova konfiguracija je obavezna za načine rada, osim ako je cilj raditi kao jednostavan rotirajući semafor.

Ako želite način rada detekcije, s programiranim samo DET ulazima ili dvostruku detekciju s vremenom između 2 ulaza, morate konfigurirati potrebno vrijeme detekcije za DET ulaze.
Kroz početni izbornik nC **i podizbornike** C1 **(povezan sa DET1) i** C2 **(povezan sa DET2) i postavite vrijeme od najmanje 1 sekundu.**

Da biste mogli odabrati način rada, svi parametri za taj način moraju biti programirani. Nije potrebno programirati sve opcije općenito.
Ako programiranje nije uspješno provedeno, nećete moći odabrati nijedan od programa.

U C9 od nC izbornik opcije, moguće je resetirati upravljačku elektroniku i postaviti sve vrijednosti na 0 (osim programiranih daljinskih upravljača).

Sve postavke mogu se promijeniti u bilo kojem trenutku. Jednom pohranjena u sustavu, čak i ako dođe do nestanka struje, ne gubi podešene postavke te nastavlja funkcionirati na temelju njih, čim se elektronika uključi.

03. KONFIGURACIJA

A1 PODEŠAVANJA VREMENA TRAJANJA ZELENOG SEMAFORA 1

Ovaj izbornik omogućuje konfiguriranje vremena kada će zelena boja semafora 1 biti UKLJUČENA tijekom njegovog rada. Za vrijeme rada ovog suprotni ima crveno upaljeno.

Za korištenje Timer moda morate konfigurirati ovu opciju (H2) , osim ako je L5 aktivan.

programibilna vrijednosti
0s → 99s

A2 PODEŠAVANJE VREMENA TRAJANJA ŽUTOG NA SEMAFOR 1

Ovaj izbornik omogućuje konfiguriranje vremena kada će crvena boja semafora 1 biti UKLJUČENA tijekom njegovog rada.

Žuto (3 boje semafora) nije obavezno. Za aktiviranje koristite jednu od programabilnih vrijednosti (najmanje 1 sekunda).

programibilna vrijednosti
0s → 99s

A3 PODEŠAVANJE VREMENA TRAJANJA CRVENOG SEMAFOR 1

Ovaj izbornik omogućuje konfiguriranje vremena kada će crvena boja semafora 1 biti UKLJUČENA tijekom njegovog rada. Faza prolaska vozila– oba crvena upaljena.

Za korištenje Timer moda morate konfigurirati ovu opciju, osim ako je L5 aktivan.

programibilna vrijednosti
0s → 99s

A4 PODEŠAVANJA VREMENA TRAJANJA ZELENOG SEMAFORA 2

Ovaj izbornik omogućuje konfiguriranje vremena kada će zelena boja semafora 2 biti UKLJUČENA tijekom njegovog rada. Za vrijeme ovog zelenog suprotni ima crveno.

Za korištenje Timer moda morate konfigurirati ovu opciju, osim ako je L5 aktivan.

programibilna vrijednosti
0s → 99s

A5 PODEŠAVANJE VREMENA TRAJANJA ŽUTOG NA SEMAFOR 2

Žuto (3 boje semafora) nije obavezno. Za aktiviranje koristite jednu od programabilnih vrijednosti (najmanje 1 sekunda).

Žuto (3 boje semafora) nije obavezno. Za aktiviranje koristite jednu od programabilnih vrijednosti (najmanje 1 sekunda).

programibilna vrijednosti
0s → 99s

A6 RED COLOR TIME SETTING OF THE TRAFFIC LIGHT 2

This menu allows to configure the time that the red color of traffic light 2 will be on, during its operation.

	programibilna vrijednosti
To use the Timer mode, you need to configure this option, except if the L5 is active.	**0s → 99s**

A7 SET THE INITIAL COLOR OF THE TRAFFIC LIGHT 1

This menu allows to configure the initial color (green or red) that you want for traffic light 1.

	programibilna vrijednosti
To use the Timer or Detector mode, you need to configure this menu.	**green → red**

A8 SET THE INITIAL COLOR OF THE TRAFFIC LIGHT 2

This menu allows to configure the starting color you want for traffic light 2, you can choose between green or red.

	programibilna vrijednosti
To use the Timer or Detector mode, you need to configure this menu.	**green → red**

A9 TIME SETTING IF THERE IS NO ACTIVITY

This menu allows you to configure the time that traffic lights are OFF if there is no activity until a new detection is made or a button is pressed.

	programibilna vrijednosti
It does not work in Parking mode.	**15 → 30 → 45→ 60min**

C0 DET 1 TIME SETTING

This menu allows to configure the time that DET1 has to be blocked to validate a detection. The double detection setting (DET and PUL) will determine the time you have to activate the PUL1 input after passing DET1.

	programibilna vrijednosti
Configure the DET1 time setting only if you want to use the DET or dual detection inputs with time.	**0s → 99s**

C2 DET 2 TIME SETTING

This menu allows to configure the time that DET2 has to be blocked to validate a detection. The double detection setting (DET and PUL) will determine the time you have to activate the PUL2 input after passing DET2.

	programibilna vrijednosti
Configure the DET2 time setting only if you want to use the DET or dual detection inputs with time.	**0s → 99s**

C3 SET PUL1 AND PUL2

This menu allows to configure **PUL1** and **PUL2** as normally open (nO) or normally closed (nC).

	programibilna vrijednosti
If you don't want to use PUL ignore this option or set 00 to delete any previously defined definition.	**00 → nO → nC**

C4 SET DET1 AND DET2

This menu allows to configure **DET1** and **DET2** as normally open (nO) or normally closed (nC).

	programibilna vrijednosti
If you don't want to use DET ignore this option or set 00 to delete any previously defined definition.	**00 → nO → nC**

C5 FLASHING TIME SETTING OF THE TRAFFIC LIGHT 1 GREEN COLOR

This menu allows to configure the time that the flashing green color (replacing the yellow color) of traffic light 1 will be on during its operation.

	programibilna vrijednosti
To use in Timer mode, you need to set the desired time. For other modes, you only need to set it to 1. Ignore this menu if you use yellow color or don't want the green light to flash.	**0s → 99s**

C6 FLASHING TIME SETTING OF THE TRAFFIC LIGHT 2 GREEN COLOR

This menu allows to configure the time that the flashing green color of traffic light 2 will be on during its operation.

	programibilna vrijednosti
To use in Timer mode, you need to set the desired time. For other modes, you only need to set it to 1. Ignore this menu if you use yellow color or don't want the green light to flash.	**0s → 99s**

03. CONFIGURATION

C7 DEFINE MAXIMUM VEHICLE CAPACITY

This menu allows to configure the maximum vehicle capacity inside the park.

Mandatory for the Parking operating mode.

PROGRAMMABLE VALUES
0s → 99

C8 MANUALLY CHANGE OF THE CURRENT AMOUNT OF VEHICLES

This menu allows to manually change the number of vehicles within a park, in real time, in case of errors caused by false detections or other external factors.

PROGRAMMABLE VALUES
0 → 99

C9 RESET TO FACTORY VALUES

This menu allows to reset to factory values, eliminating all previously programmed settings.

The display flashes once 00, indicating that the reset was successful.

C1 USE PUSH BUTTONS

This menu allows you to configure the detection of new vehicles.
Example: If there is a detection in PUL1 while timing a triggered input in PUL2, the cycle of PUL2 will continue and, once it is finished, the cycle of PUL1 starts.

PROGRAMMABLE VALUES
00 → On

C2 USE SIMPLE DETECTION MODE WITH PUL AND DET

This menu allows to configure the PUL1 and PUL2 inputs as detectors (as well as the DET1 and DET2 inputs).

For use in Detector mode only.

PROGRAMMABLE VALUES
00 → On

C3 PROGRAMMING A REMOTE CONTROL

This menu allows you to program a remote control (programming a RF remote control):

1. • Access this menu.
2. • Press the OK button. It will appear FF on the display.
3. • Press one of the buttons on the remote control to save.
4. • Will appear U3 on the display. Repeat the process to store more remote controls.

03. CONFIGURATION

C4 DELETE REMOTE CONTROL

This menu allows you to delete all programmed remote controls.
After accessing, press OK, FF it flashes, indicating that all remote controls have been removed.

C5 USE RGB INPUTS

This menu allows to define the use of RGB inputs, to determine the color of each traffic light.

PROGRAMMABLE VALUES
00 → On

C6 TIME TO PERFORM DETECTION AFTER USING REMOTE CONTROL

This menu allows to program the time to activate a detector, after using the remote control.

If there is no detection during the defined time, nothing happens to the state of the gate.

PROGRAMMABLE VALUES
0 → 99

OPERATING MODES

After programming the control board, to activate one of the operating modes, select one of the following options:

H1 PARKING MODE

The "parking" feature will allow the user to define a number of vehicles that can enter in a certain direction, with the traffic light turning red when that number is reached. The system will count vehicles using detection methods. For this, one of these methods must be chosen and programmed, as well as its proper installation.

Traffic light 1 (S1) will be the indicator that the car park is full, as well as signaling whether circulation is allowed towards the entrance. To do this, it must be left outside. Traffic light 2 (S2) will only serve as an indication that it is possible or not to travel in the exit direction. To do this, it must be left inside the park. In this operating mode, both traffic lights are green by default to signal that it is possible to drive in both directions.
It is possible to send a signal to open and close a gate.

In this operating mode, the LED lights up red under the letter "P".

H2 TIMER MODE

The "timer" feature will allow the user to define the time that each light must remain active to regulate, through time, the circulation in a bidirectional way. The system will count the programmed time, in a sequenced way, to make the regulation and, through the use of one of the detection methods, it will be possible to know which sequence to perform to give access in that direction. If no detection method is programmed, the system will function as a continuous rotating traffic light.

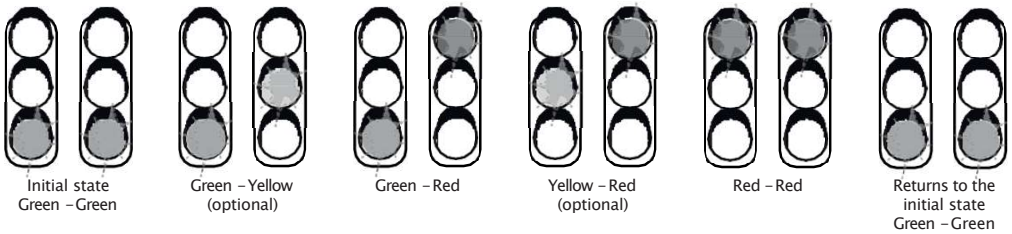
03. CONFIGURATION

OPERATING MODES

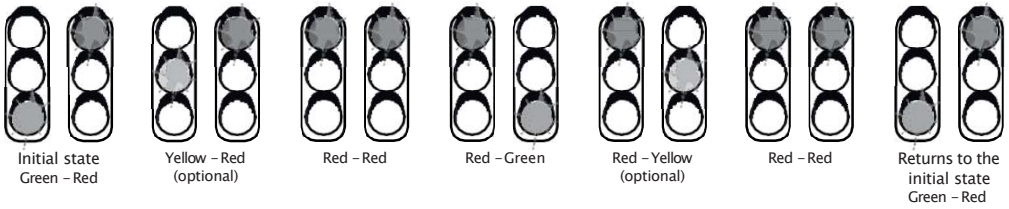
In this operating mode, it is possible to choose the colors that each traffic light should have in a resting situation. It is also possible to send an impulse to indicate an opening signal at the gate, as well as to control the colors of the traffic light through an external board with RGB outputs that will allow you to know the state of the gate at every moment..

OPERATION WITH BOTH TRAFFIC LIGHTS STARTING IN RED

OPERATION WITH BOTH TRAFFIC LIGHTS STARTING IN GREEN



METHOD OF OPERATION FOR TRAFFIC LIGHTS WITH ALTERNATING COLORS



In this operating mode, the LED will light red under the letter "T".
The configuration of the traffic lights to be off after a while without any interaction is present in this operating mode, except if it is operating with a simple rotating traffic light.

03. CONFIGURATION

OPERATING MODES

A3 DETECTOR MODE

The "detector" feature will allow changing the status of traffic lights through detection. The system will count vehicles passing at the beginning of a road, using previously programmed detection methods, so that traffic lights will only return to the initial state when the detectors at the end of the road recognize the same number of vehicles that passed on the start.

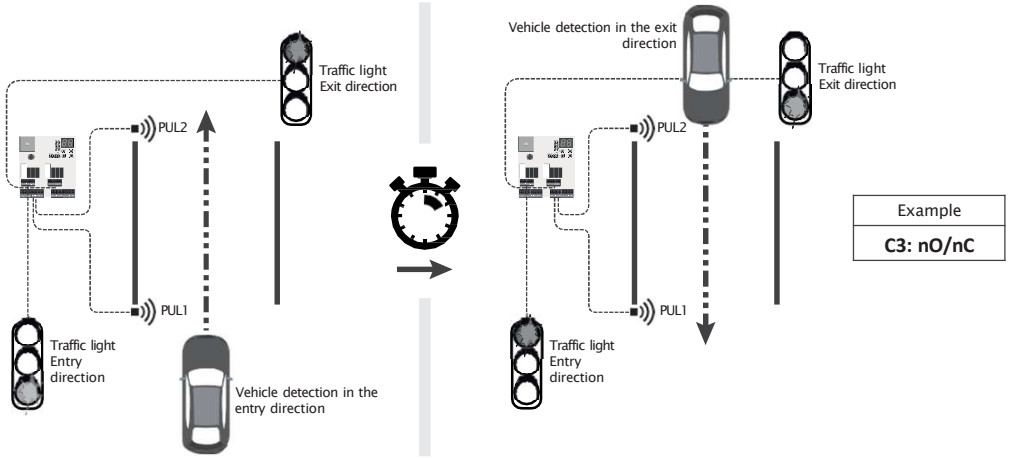
In this operating mode, it is possible to choose the colors that each traffic light should have in a resting situation. It is also possible to send an impulse to indicate an opening signal at the gate, after the first detection and subsequently an impulse to close the gate, when the exit of the last vehicle from the road is detected.

In this operating mode, the LED will light red under the letter "T".
The configuration of the traffic lights to be off after a while without any interaction is present in this operating mode.

DETECTION METHODS

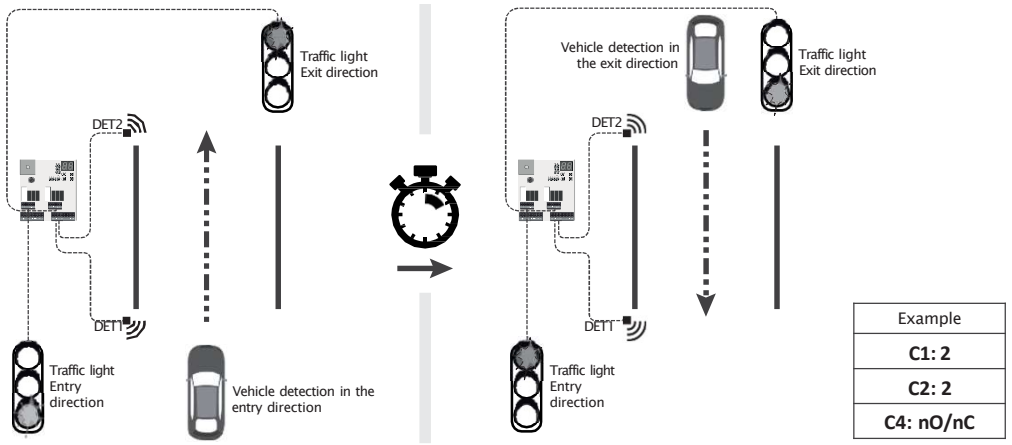
You can find working examples of the detection methods on pages 12A and 12B.

Detection only with PUL inputs: The vehicle will be detected at the exact moment that the entry status changes.
To use only the PUL inputs, it is necessary to program the "C3" to define whether it will be a normally open or normally closed input.



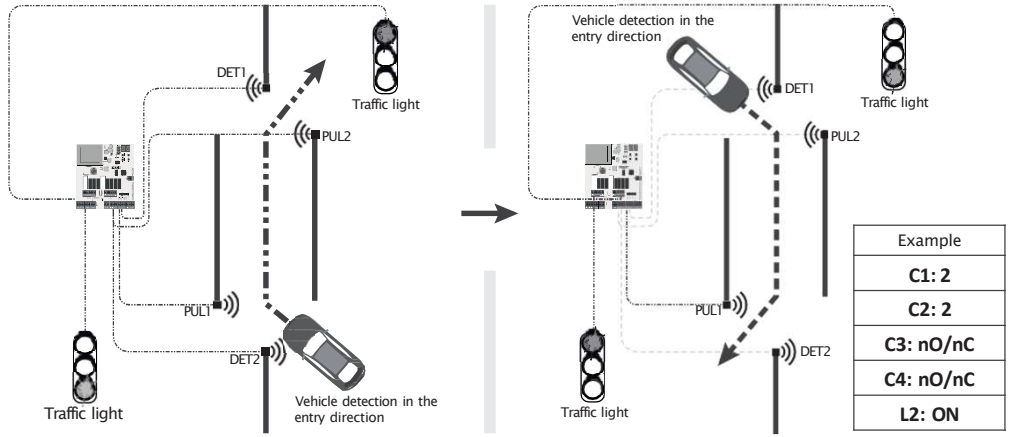
DETECTION METHODS

Detection only with DET inputs: The vehicle will be detected only when the entry status is changed for the seconds configured in "C1" and "C2". This time allows to prevent false detections, such as the passage of pedestrians on the road.
To use only DET inputs, it is necessary to program "C4" to define whether it will be a normally open or normally closed input as well as "C1" and "C2" to configure the time the input state is changed.



Example
C1: 2
C2: 2
C4: nO/nC

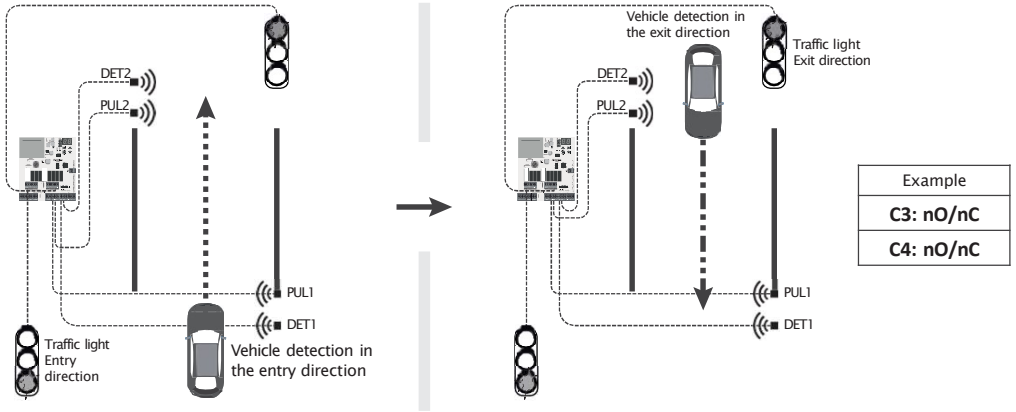
Detection with PUL and DET inputs (detector operating mode only): The detections on the track/road will be carried out by the DET and PUL inputs, in which the DET detects the entrance of the vehicle and the PUL detects the exit of the vehicle. This detection mode will allow you to have two different inputs and two outputs that at a given moment share a bidirectional road.
To use this detection mode, the programming of the option "C3" and "C4" is necessary to define whether it will be a normally open or normally closed input, the programming of the option "C1" and "C2" to configure the time that the status of input is changed as well as putting "L2" to "ON".



Example
C1: 2
C2: 2
C3: nO/nC
C4: nO/nC
L2: ON

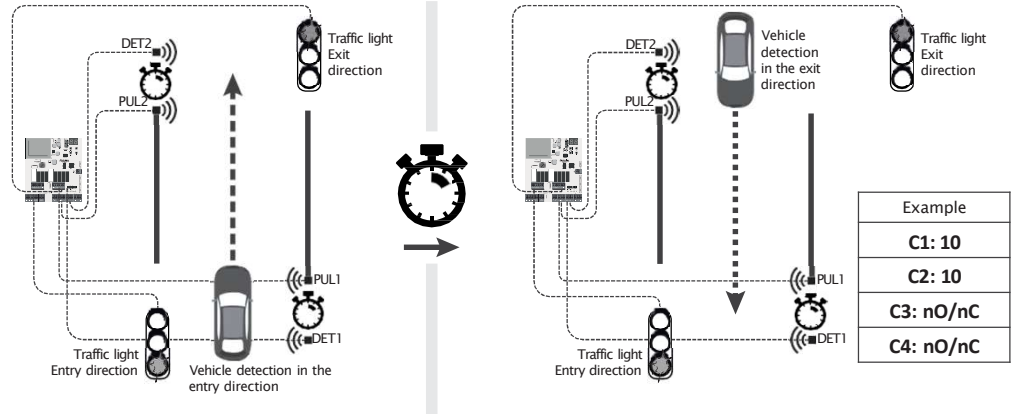
DETECTION METHODS

Detection with PUL and DET inputs without time (example page 12A): The vehicle will be detected only if DET1 and PUL1 or DET2 and PUL2 change the state at the same time. The DET detector will make the initial detection and once the detection through the PUL input is done simultaneously, it will validate an input. The outputs will be validated in reverse, first a PUL detection followed by a DET detection at the same time. This detection mode provides that the inputs are at a certain distance to function as a double detection method where both detectors have to change the state at the same time. If it is intended to use the DET and PUL inputs simultaneously without time, it is necessary to program the option "C3" and "C4" to define the state of the inputs.



Example
C3: nO/nC
C4: nO/nC

Detection with PUL and DET inputs with time: The vehicle will initially be detected in DET1 or DET2 and from that moment the vehicle has "X" seconds to pass in PUL1 or PUL2 to validate the entry of a vehicle on the road. To validate the vehicle's exit from the road, it will have to pass the detectors PUL1 or PUL2 and, from that moment, you have "X" seconds to pass DET1 or DET2 to validate the exit. This detection mode foresees that the inputs are at a certain distance to function as a double detection mode. If you want to use the DET and PUL inputs simultaneously with time, it is necessary to program the option "C3" and "C4" to define the status of the inputs, as well as the programming of the option "C1" and "C2" for setting the time the vehicle will have to pass the second detector, in order to validate the detection.



Example
C1: 10
C2: 10
C3: nO/nC
C4: nO/nC

OPERATION EXAMPLES

PARK - Double detection with PUL and DET inputs without time

For this example we will configure a traffic light with 3 colors, using the detection method with switches and detectors without time.
The inputs used will be PUL1, DET1 and PUL2, DET2 with the PUL normally open and the DET normally closed.
The maximum capacity of the park will be 30 vehicles.

Parameter	Value
A2	1
A5	1
C3	nO
C4	nC
C7	30

DETECTOR - Detection only with DET inputs

For this example we are going to configure a traffic light with 2 colors, with the green light flashing. The initial colors will be green at both traffic lights and the entrances used will have two photocells (DET1 and DET2) normally closed with a detection time of 2 seconds. We will also define that if there are no detections within 45 minutes, the traffic lights will be off.

Parameter	Value
A7	Green
A8	Green
A9	45
C1	2
C2	2
C4	nC
C5	1
C6	1

TIMER - Detection only with PUL inputs

For this example we are going to configure a traffic light with 3 colors, with red as the starting color in both traffic lights. Traffic light 1 will be on for 20 seconds with the green light, 4 seconds with the yellow light and 10 seconds with the red light. Traffic light 2 will be 15 seconds with green light, 3 seconds with yellow light and 10 seconds with red light. The inputs used will have two magnetic loops (PUL1 and PUL2) normally open.

Parameter	Value
A1	20
A2	4
A3	10
A4	15
A5	3
A6	10
A7	Red
A8	Red
C3	nO

TIMER - Detection only with DET + remote control inputs

For this example we are going to configure a traffic light with 3 colors, with red as the starting color in both traffic lights. An RF remote control will be used which, after being pressed, has 10 seconds to detect the vehicle. A DET photocell will be used at the entrance and another at the exit, with a required detection time of 2 seconds. The traffic light colors are controlled by an external board via the RGB inputs.

Parameter	Value
A2	1
A5	1
A7	Red
A8	Red
C1	2
C2	2
C4	nO
L3	RF remote control
L5	nO
L6	10

03. CONFIGURATION

OPERATION EXAMPLES

DETECTOR - Double detection with PUL & DET inputs with time

For this example we are going to configure a 2-color traffic light, with red as the starting color for both traffic lights. A double detection mode with 4 photocells will be used, with a maximum detection time between the photocells of traffic light 1 (DET1 and PUL1) of 8 seconds and traffic light 2 (DET2 and PUL2) of 8 seconds. All inputs will be as normally closed.

Parameter	Value
A7	Red
A8	Red
C1	8
C2	8
C3	nC
C4	nC

DETECTOR - 2 Independent Inputs and 2 Outputs

For this mode of operation, we will configure a 3-color traffic light, with green as the starting color for both traffic lights. A detection method will be used where the PUL and DET inputs will be used as independent detectors. In this case, the four photocells will be as normally open and will have to be blocked for at least 3 seconds to validate a detection.

Parameter	Value
A2	1
A5	1
A7	Green
A8	Green
C1	3
C2	3
C3	nO
C4	nO
L2	On

CONTROL VIA EXTERNAL BOARDS

The MCS01 allows the connection to external boards in order to control the color of the traffic lights through the "R", "G" and "B" inputs, as well as the opening and closing of a barrier/gate through an output relay.
To use this control it is necessary to configure:

- **L3** – for programming a remote control;
- **L5** – to use the outputs "R", "G" and "B" of the Motorline boards, allowing no desynchronization between the traffic light colors and the state of the gate (the two boards will be working in sync)
- **L6** – to program the time between pressing the remote until a detection exists.

If you are using this control with the Timer Mode connected to a Motorline board, it is not necessary to program the color times of the traffic lights. After the detection of a vehicle, a signal will be sent to the external board for the opening of the barrier/gate and the traffic lights will change color to give access to the side where the detection occurred. The time that the gate must remain open must be programmed on the external board. If you are not using a Motorline board, it will be necessary to program the times that each color should remain on, so that the gate performs an opening and closing cycle. Unlike a board with "R", "G" and "B" outputs, it is not possible to guarantee the synchronization between the traffic light colors and the state of the gate at any given time. If you are using this control in the capacity and detector mode, after detecting a vehicle, a signal will be sent to the external board to open the barrier/gate and the traffic lights will change color to give access to the side where the detection occurred. The gate will remain open as long as bi-directional exit detection is not carried out. If more than one vehicle is detected in one direction, the barrier/gate will only close when the last vehicle is detected.