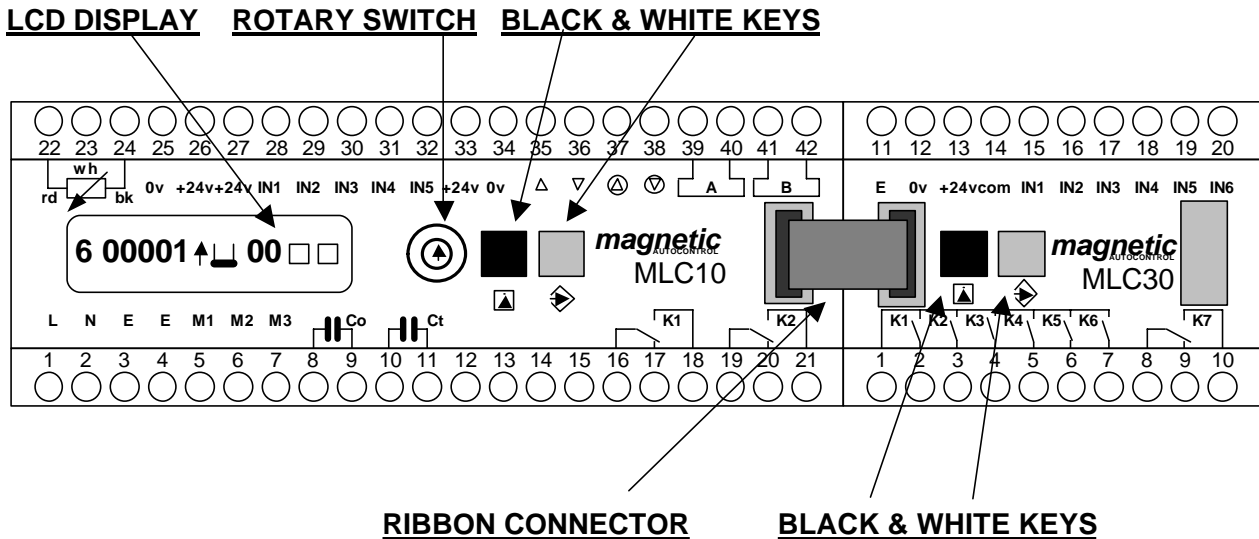


# EMS

ELECTRO MECHANICAL SYSTEMS LIMITED

## MLC10 with MLC30 Extension unit (I/O box)



The MLC30 (I/O box) is an extension unit to the MLC10 and can be used for the following additional functions:

- Capacity counting with switching of full sign
- Additional inputs / outputs for use with car parking systems
- Two way traffic light control
- Customised applications

### CAPACITY COUNTING

First set the **counting mode**.

Turn the rotary switch on the MLC10 to position A

Counter mode    000

Briefly press the black and white key together, the cursor appears

Counter mode    000

Use the black key to scroll through the options, press the white key to confirm each digit.

Counter mode    065

Once all the digits have been confirmed save the setting using the black key.

Save    Y = ↑    N = →

After setting the **counting mode** return the rotary switch to the 0 position

See the following table for description of the **counting mode**. Generally the control in the entry barrier assumes the "master function" and the control in the exit barrier the "slave function". If using bi-directional counting then loop B has to be correctly set as an entry or exit loop.

If using selective counting it is not normal to have automatic opening loops.

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Mode	Description
65 master 66 slave	Simple Bi-directional counting, using loops A & B for direction sensing, Incoming vehicles are subtracted, outgoing vehicles added. All vehicles are counted.
97 master 98 slave	Selective Bi-directional counting, using loops A & B for direction sensing, Incoming vehicles are subtracted, outgoing vehicles added. Vehicles using input 2 (priority) are not counted.
129 master 130 slave	Simple differential counting with separate barriers for entry and exit, Incoming vehicles are subtracted, outgoing vehicles added. All vehicles are counted.
161 master 162 slave	Selective differential counting with separate barriers for entry and exit, Incoming vehicles are subtracted, outgoing vehicles added. Vehicles using input 2 (priority) are not counted.

## Setting the number of parking spaces

Turn the rotary switch on the MLC10 to position 0, press the black key on the MLC10 until the display shows

Parking lot quantity 0250

Briefly pres the black and white key together, the curser appears

Parking lot quantity 0250

Use the black key to scroll through the options, to confirm each digit press the white key.

Parking lot quantity 0125

Once all the digits have been confirmed the curser disappears and the setting is made. To leave the adjusting mode press the white key. Press the black key to move to the next parameter.

## Setting the number of empty spaces

Turn the rotary switch on the MLC10 to position 0, press the black key on the MLC10 until the display shows

Counter 1                      0025

This value can be adjusted by pressing the black key (+) or white key (-) the value must be between 0 and the previously programmed number of spaces

To leave the adjusting mode press the white key. Press the black key to move to the next parameter.

## Reading the input / output status of the MLC30

Turn the rotary switch on the MLC10 to position 0, press the black key on the MLC10 until the display shows

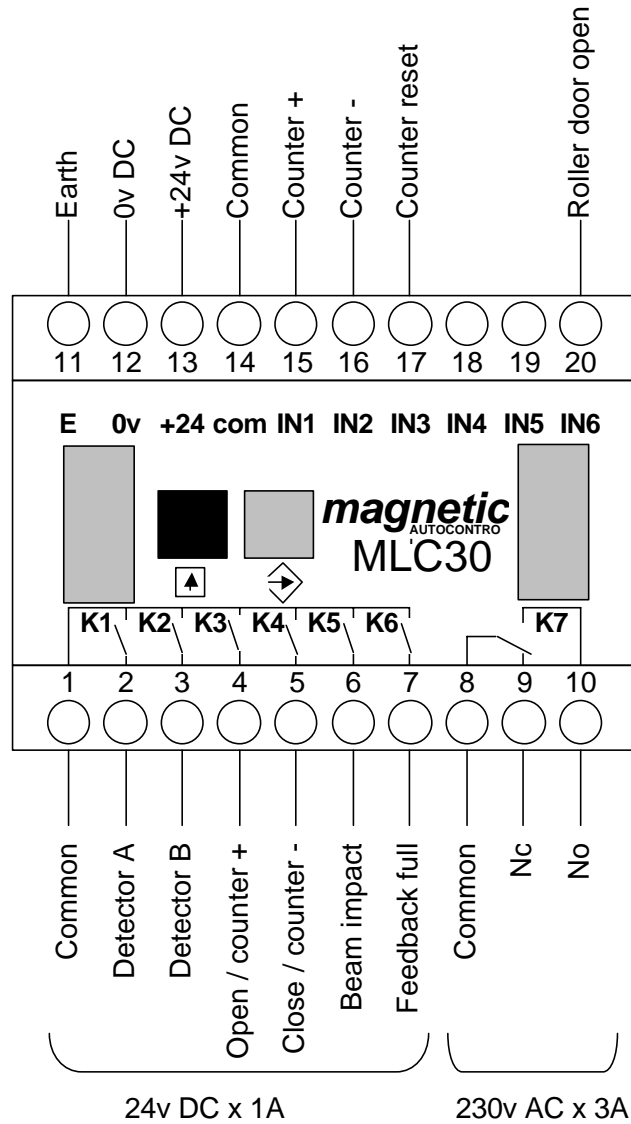
B    100010    0101000  
                   └───┘    └───┘  
                   Inputs    outputs

This shows that: IN1, IN5, K2 & K4 are active

Leave the adjusting mode press the white key. Press the black key to move to the next parameter.

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## MLC30 connections



### Master Control

This is normally in the entry barrier. All vehicles passing through when the barrier is open are counted. The counter displays the number of free spaces thus vehicles entering are subtracted and vehicles leaving are added.

It is also possible to alter the count using inputs IN1 & IN2 as when using a slave control. It is not possible to have more free spaces than the number of parking spaces although the unit can count negative spaces (for instance when using the priority open) in this case the number is shown with a minus sign and flashes.

Once the counter reaches zero outputs K6 & K7 switch over to signal external equipment for example a full sign and the barrier can only be opened by IN2 (priority), IN4 (external loop) or exit loop B on the MLC10.

IN3 (MLC30) can be used with a timer to reset the number of spaces to the maximum at times when the car park is empty.

### Slave Control

This is normally in the exit barrier and gives signals to the master control through outputs K3 & K4

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## Connection diagram

MLC10 with MLC30 (I/O box)

Master control with simple bi-direction counting (mode 65)

