

inDEM-automation-MC200-Universal-Control-Board



inDEM automation MC200 Universal Control Board Instructions

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inDEM automation MC200 Universal Control Board



Specifications:

- Universal control board for 220V sliding gate automation
- 24V power supply output
- Courtesy light 220V and flashing light 220V outputs
- Motor output max 500W
- **Dimensions:** 105mm x 87mm x 40mm

Product Usage Instructions

Connections:

- **1 – 3:** Start button (N.O.) for stepping function
- **11 – 12:** Flashing light output 230 Vac max 100 W
- **2 – 3:** Stop button (N.C.)
- **4 – 6:** Photocells input CL (N.C.) for closing protection
- **5 – 6:** Safety edge input (N.C. or 8K2)
- **6-7:** 24 Vdc power supply
- **12-14:** Courtesy light output (90 sec.)
- **13 – 14 – 15:** Motor output (13 opening, 14 com, 15 closing) max 500W

DIP-SWITCH Setting:

- **SW1 OFF:** Commercial model disabled
- **SW1 ON:** Commercial mode enabled, Soft start enabled, Fast closing mode enabled

Programming:

- **AUTOMATIC PROGRAMMING:**

1. Press the SET button for 10s until the motor starts (Led DL2 flashes)
2. The motor moves towards the closing limit switch, then does a complete cycle, slowing down automatically before reaching the limit switches

- **MANUAL PROGRAMMING:**

1. Press and release the SET button to enter program mode. DL2 Led starts flashing.
2. Press START, the motor starts closing, reaches the limit switch, and starts opening automatically.
3. Gate slows down at the opening limit switch, press START to continue slowly to the limit switch.
4. The gate starts closing automatically, slows down, and stops at the closing limit switch.

FAQ

- **Q: How can I reset the factory settings?**

- **A:** To perform a factory reset, turn off the power supply, press and hold the SET button, then turn on the power supply while keeping the SET button pressed. The control board will reset after regular movement.

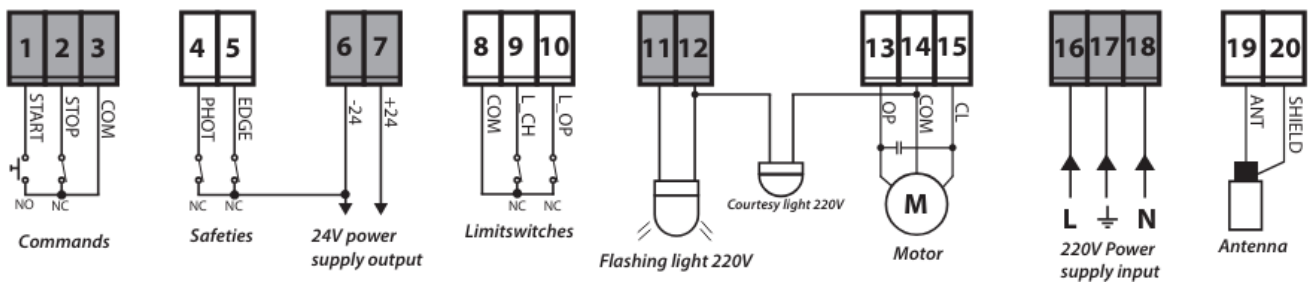
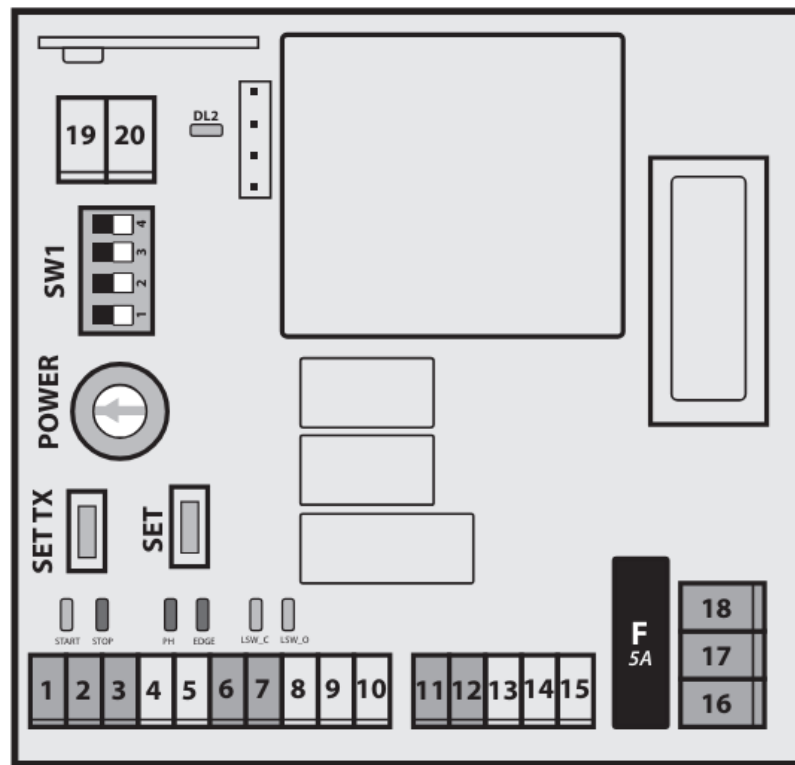
- **Q: How can I enable the resistive safety edge?**

- **A:** Turn off the power supply, press and hold the SET+SET TX buttons while restoring power supply to enable the resistive safety edge.

- **Q: What does the flashing LED DL2 indicate?**

- **A:** If LED DL2 is flashing quickly, it means that one or more NC contacts are open. Check safeties and limit switches wiring in this case.

OVERVIEW AND DIMENSIONS



The MC 200 board is an electronic control unit for the control of sliding gates with or without friction from the construction particularly robust and reliable. Prepared for the use of a clock (timer) to be connected to the START input (with condominium mandatory) for scheduled openings and closings. Immunes come on induced disturbances and are protected against atmospheric discharges and electrostatic. The control unit has passed all tests relating to electromagnetic emissions and immunity to disturbances foreseen by current European legislation. In particular, it responds to directives EMC 89/336/EEC, 92/31/EEC, BT 73/23/EEC and 93/68/EEC.

WARNING: the installation of this equipment must be carried out exclusively by specialized technicians who comply with the safety regulations in force, as well as the instructions in this manual. It is in any case the task of the installer to verify the type of system and possibly insert upstream of the equipment those safety devices (switches, differential and magnetothermal) necessary to meet current regulations. The manufacturer disclaims all liability for damage to persons or property resulting from improper installation, improper use and unreasonable, tampering and non-compliance with current legislation by the installer or user.

Protect the equipment with a 6A circuit breaker or with a 16A single-phase switch complete with fuses. It is necessary to respect phase and neutral polarities in the line 230vac supply (terminal 18 = phase, terminal 16 = neutral, terminal 17 ground). For power circuits (lamp and motor outputs) the minimum cross-section shall be 1,5 mm². For power, auxiliary and control (inputs) it is necessary to always use connecting cables separated to avoid interference or failure caused by induced voltages (do not use a single multipole cable).

In the case of lines longer than 50 m it is advisable to disconnect the control circuits with relays at the control panel command.

The inputs n.c. (photocell, coast, and stop) if they were not used, must be connected to the common (terminal 3 or 6) by means of bridges.

CONNECTIONS

1 – 3 START	Start button (N.O.) stepping function, press again to stop the motors (if auto-closing is set, invert them while closing).	11 – 12 FLASH	Flashing light output 230 Vac max 100 W.
2 – 3 STOP	The stop button (N.C.) stops the movement . If pressed during the waiting time it cancels the automatic closing.	12- 14 L.C.	Courtesy light output (90 sec.). 230 Vac Max 100W
4 – 6 PH_C	Photocells input CL (N.C.) only closing protection (stop and invert). If Dip 4 is ON, it works also in the opening.	13 – 14 – 15 M1	Motor output (13 openings, 14 com, 15 closings) max 500W.
5 – 6 EDGE_O	Safety edge input (N.C. or 8K2) stops the movement and invert for 5cm.	16 – 18 ALIMENT . 230 Vac	Power supply input
6 – 7 ALIMENT. 24 Vdc	24Vdc output photocells power supply (250 mA max). – 24V (terminal 6) + 24V (terminal 7)	17	Ground input
8 – 9 LSW_C	Closing limit switch input (N.C.)	19 – 20 ANTENNA	Antenna input (19 ants, 20 shields).
8 – 10 LSW_O	Opening limit switch input (N.C.)		

DIP-SWITCH setting (to be done while the control board is turned off)

		OFF	ON
S W 1	1	Commercial model disabled.	Commercial mode enabled. (Ignore the start command while the gate is moving).
	2	Peak power start.	Soft start enabled (smooth start).
	3	Fast closing mode disabled.	Fast closing mode enabled. When the gate is open, it will close right after 1,5s from the disengagement of the photocells.
	4	PH_C input works only in closing.	PH_C Input works both in opening and closing.

DL2 Led: when in working time program mode it flashes slowly, otherwise if it's flashing quickly it means that one or more NC contacts are open, in this case please check safeties and limit switches wiring.

DIMENSIONS: 105 X 87 X 40

- **Working time:** 120s
- **Automatic closing:** waiting time 120s max
- **Integrated receiver storage:** 48 max remotes (start + ped)
- **Trimmer POWER:** Adjust torque
- **Led DL7:** Encoder
- **SET Button:** working time program mode
- **SET TX Button:** Remotes and Automatic Closing programming
- **Factory RESET** :(cancel programmed working time) turn the power supply off, then press SET and turn on the power supply while always keep pressing the SET button (21s of regular movement then slow down until the limit switch).
- **Enable 8K2 resistive safety edge:** turn the power supply off, then press and keep pressing SET+SET TX while restoring the power supply on.

AUTOMATIC PROGRAMMING

Press the SET button for 10s until the motor starts (Led DL2 flashes) : first, the motor moves towards the closing limit switch, then does a complete cycle, slowing down automatically 5s before reaching the limit switches.

MANUAL PROGRAMMING

1. Press and release SET button to enter in program mode. DL2 Led starts flashing.
2. Press START, motors starts closing, reaches the limit switch and starts automatically to open.
3. When the gate gets to the point where should start to slow down, press START, then it goes slowly to the opening limit switch.
4. The gate starts automatically in closing direction, then slows down and stops to the closing limit switch.
5. The programming is now complete and the control board is set up for operating.

MANUAL PROGRAMMING with remote

1. Press and release the SET-TX button (DL2 flashes once + pause) press the button on the remote to program, the Led turns off.
2. With the gate closed, press and release SET button to enter in program mode. DL2 Led starts flashing.
3. Press once the button on the remote programmed. Motor looking for closing direction, stops on the limit switch and starts automatically to open.
4. When it gets to the point where the slow-down should start press again the button on the remote, it will move slowly to the opening limit switch.
5. Starts automatically in closing direction, slow-down and stop on the closing limit switch.
6. When the cycle is finished the control board is set up and ready for operation.

AUTOMATIC CLOSING TIME PROGRAMMING

1. With the gate closed, press and release SET button to enter in program mode. DL2 Led starts flashing.
2. Press once SET-TX button. The board starts counting ACT and the flashing light turns on.
3. Press once again SET-TX. The board saves automatically the time between the two pushes of SET-TX button.

WARNING

- **a)** gate in open position with AUTOMATIC CLOSING and COMMERCIAL MODE ENABLED, press start: the board counts backward from zero. Pedestrian works like this too.
- **b)** gate in open position with AUTOMATIC CLOSING ENABLED, the flashing light stays on with a steady fixed light.

DISABLE AUTOMATIC CLOSING

1. With the gate close, press and release SET button to enter in program mode. DL2 Led starts flashing.
2. Press and keep pressing SET-TX button for at least 5s (Led turns on with a steady light)

CANCEL ALL RADIO CODES STORED

1. Press and keep pressing SET-TX for 10s, DL2 Led turns on, then flashes to notify that all codes has been canceled (both START and PED).

PROGRAMMING STARTS WITH RADIO CODES

1. Press once SET-TX button, DL2 Led starts flashing (1 flash + pause)
2. Press the button on the remote that has to be programmed, the board receive the command and exits programming mode.

Max storage: 48 remotes (START + PED).

PROGRAMMING PEDESTRIAN RADIO CODES

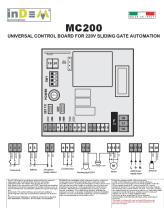
1. Press two times SET-TX button, Led DL2 starts flashing (2 times + pause).
2. Press the button on the remote that has to be programmed, the board receives the command and exits programming mode.

MC200 PROBLEM SOLVING

PROBLEM	SOLUTION
DL2 Led flashes quickly when power on the board	NC Contact open (safeties wiring error) Check inputs status (safeties leds lit)
With slow-down movement on, the gate doesn't get to the limit switch.	1) Increase the Power trimmer 2) If the problem persists, remove the slowdown
Wrong working time	1) Repeat working time programming paying attention to motor torque adjustment 2) If the problem comes up again, try with manual programming mode
Sometimes stops when opening	Increase power trimmer
The motor doesn't work	Check voltage to power supply input
Board doesn't open	Check inputs status (LEDs on)
The board doesn't close	Check inputs status (LEDs on)
Board turned off	Check fuses

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Documents / Resources

	<p>inDEM automation MC200 Universal Control Board [pdf] Instructions MC200, MC200 Universal Control Board, Universal Control Board, Control Board, Board</p>
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References

- [Indem Automation](#)
- [User Manual](#)

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