

AUTOMATIC SOLUTIONS

ID100 Manual – Control for one motor 240 volts

Important: Read this manual before the installation. This manual is integral part of your product, keep it for reference.

Warnings:

-  First of all verify that this product is suitable for the installation.
-  Read carefully technical characteristic before the installation.
-  Installation of this control unit must be done by qualified installers, following rules and regulations of installation country.
-  It is mandatory do periodic maintenance.
-  Maintenance or repairing must be done by qualified Technicians.
-  Turn power off before maintenance or repairing.
-  This device is intended for gate automation, any other applications is not advised.
-  Manufacturer discharges all responsibility for failing to respect the rules.
-  Don't leave this control unit unattended or where children can reach.

Preliminary checking: Before to install this control unit,

-  Verify that all the connected devices respect the technical characteristics mentioned in the table which follows.
-  Verify that a working and suitable RCD switch is installed up line of the installation.
-  Verify that cables composing the installation are suitable for it.

The manufacturer:

Declares:

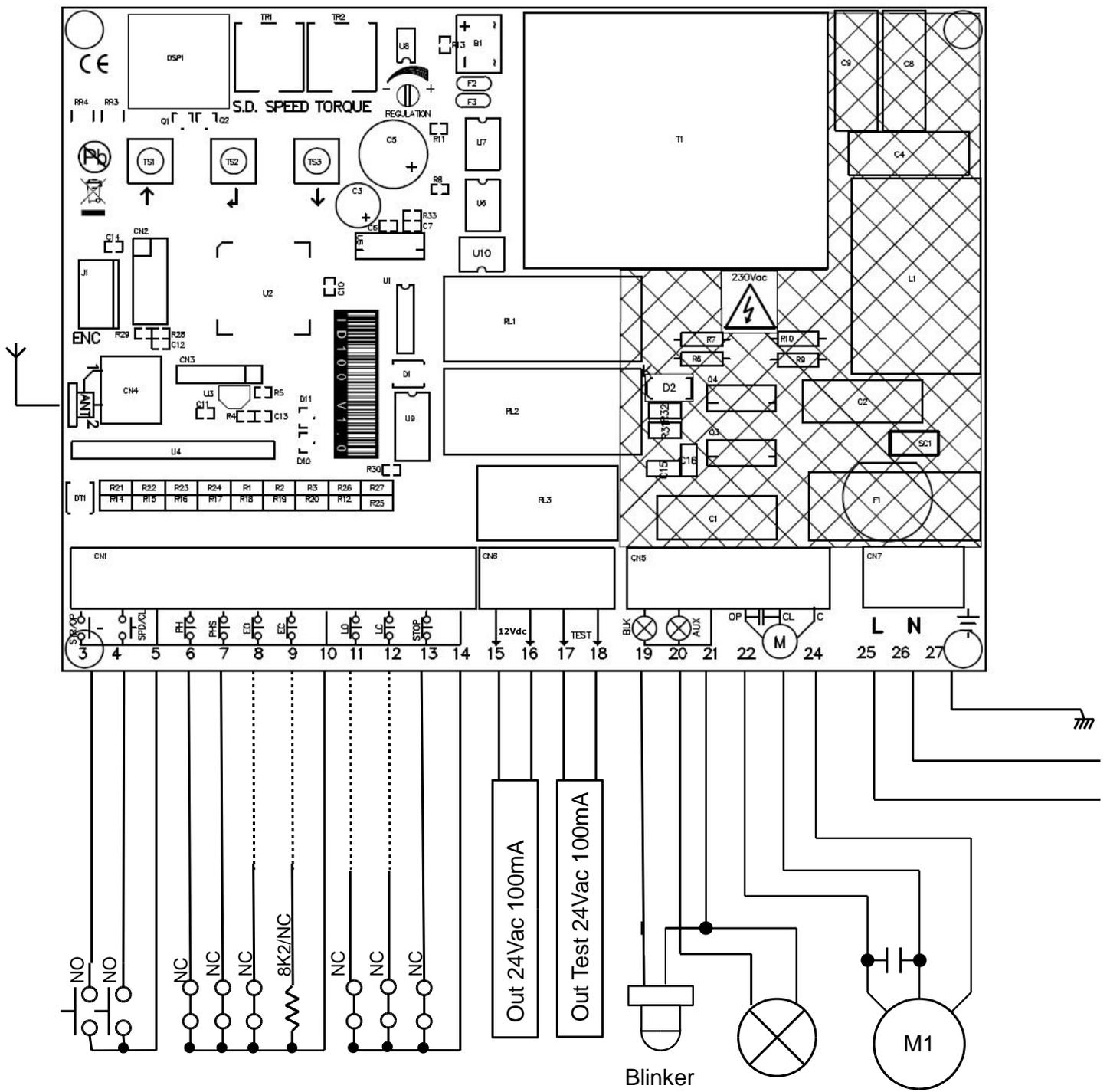
The control unit ID100 is compliant to following

directives:

- 2006/95/CE Low voltage directive.
- 2004/108/CE Electromagnetic compatibility.

Castiglione 10-11-2016

TECHNICAL CHARACTERISTICS	
Power Supply	230Vac +/- 10%
Power consumption	800mW (stand-by)
Auxiliary supply out	24Vdc, 100mA
TEST output	24Vac, 100mA
Motor output	230Vac, 750W
Flashing light output	230Vac, 250W
Courtesy light output (AUX)	230Vac, 250W
Operating temperature range	-5 +60°C



R21	R22	R23	R24	R1	R2	R3	R26	R27
R14	R15	R16	R17	R18	R19	R20	R12	R25

Out 24Vac 100mA

Out Test 24Vac 100mA

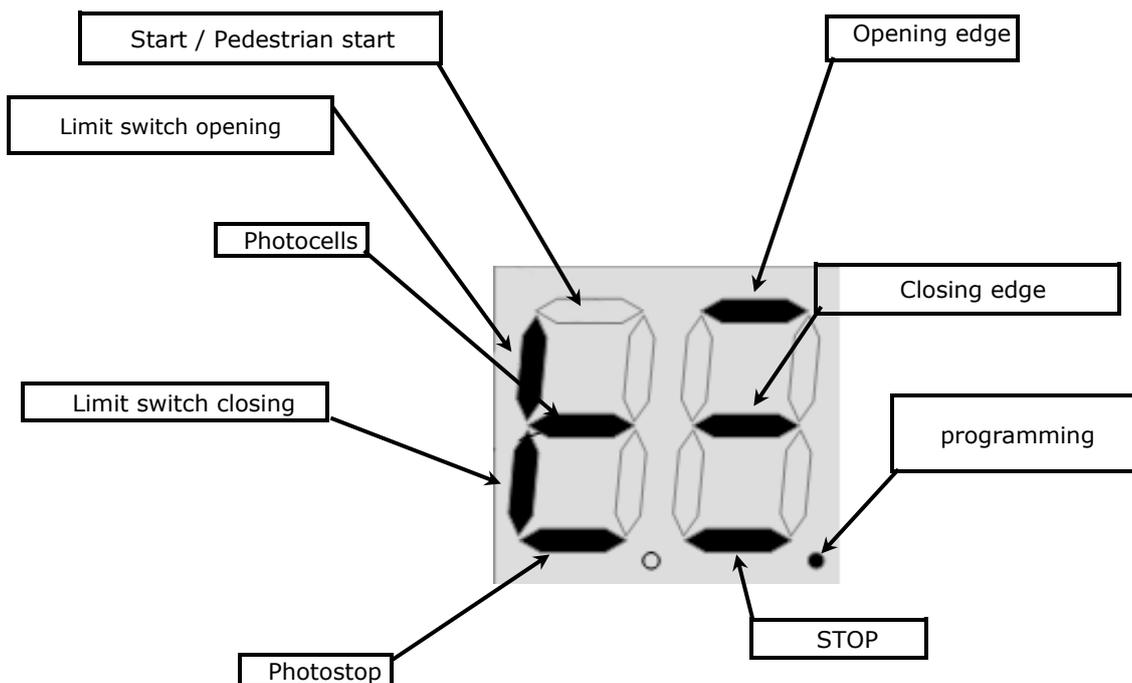
Blinker

M1

1	Antenna's shield
2	Antenna
3	Start/Open input (NO)
4	Pedestrian/Close input (NO)
5	Common
6	Photocell input (NC) During pause: Reloads pause During closing: Reverses motors direction
7	Photostop input (NC) During pause: Reloads pause During closing: Reverses motors direction During opening: stops the motors and waits till contact returns close.
8	Opening Edge input (NC) Enabled by advanced menu. During opening: Reverses motors direction for 1 sec.
9	Closing Edge input (NC/8K2) Enabled by advanced menu. During pause: Reloads pause During closing: Reverses motors direction
10	Common
11-12	Limit switches input (NC) Leaving both inputs not connected disables limit switches.
13	STOP Input (NC) Always stops the gate.
14	Common
15-16	Auxiliary supply output 24Vac
17-18	Open gate light/Photocell test
19-21	Flashing light output 230Vac
20-21	Courtesy light output 230Vac
22-23-24	Output motor, 230Vac 750W
25-26	Power supply input 230Vac
27	Earth input
TR1	Slowing down speed trimmer
TR2	Motors torque trimmer
TS1- TS3	Buttons up/down
TS2	Enter button
DSP	Display
F1	230Vac outputs fuse, 5A Fast

INPUT STATUS

When the control unit is waiting for an opening or closing cycle, or when it's in pause, status of inputs is displayed as following diagram



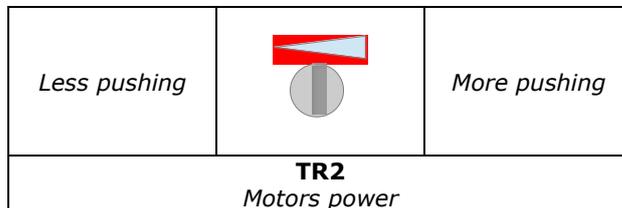
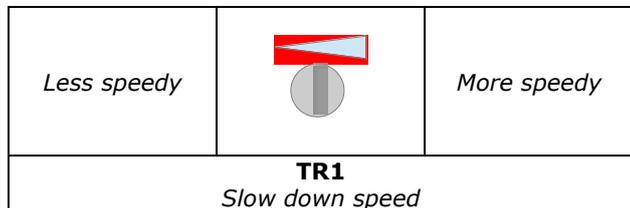
QUICK INSTALLATION

To program working times, set the gate to fully closed then press UP (TS1) until you read **AU** on the display. The gate starts opening. If limit switches are installed the control unit learns itself the gate direction and the procedure is over after the gate has fully open and closed. If limit switches aren't installed, you will need to push ENTER (TS2) once the motor is fully open. Then wait until the gate completely closes.

TRIMMER REGULATIONS

TR1 The slow down speed trimmer regulates the slow down speed.

TR2 The motors torque trimmer tunes the power on the motor. Attention: during first 2 seconds after start, each motor pushes at 100% of its power (Boost power).



OBSTACLE DETECTION TUNING AT NORMAL SPEED

 **Attention:** Obstacle detection requires a properly installed gate, no resistance points, no defects in the drive, and the motor must not be overwhelmed (gate too heavy for the motor).

Enable obstacle detection using the "OD" basic menu and enable parameter F

In order to enable obstacle detection, the encoder input must be disabled (see advanced menu).

Set torque trimmer TR2 to max rotating it clockwise and let the gate run giving a START command, once the gate has been running at least 2 seconds (boost) slowly reduce torque until the gate reverses. Now rotate back clockwise TR2 1/8 and test the power of the gate.

 **Attention:**

For first 2 seconds after starting (boost) and in the first two second of the slow motion phase, the gate ignores obstacle detection (boost).

BOARD PROGRAMMING

 **BEFORE PROGRAMMING FULLY CLOSE THE GATE**

USE OF DOWN, UP AND ENTER BUTTONS FOR PROGRAMMING

Control unit function programming is made within a special configuration menu, which you can access and where you can shift through DOWN, ENTER and UP keys.

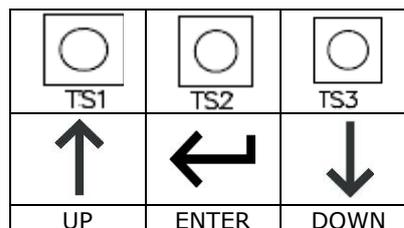
The configuration menu consists in a list of configurable items; the display shows the selected item.

- By pressing DOWN, you will pass to the next item
- By pressing UP, you will return to the previous item
- By pressing together UP and DOWN buttons you exit from the item
- By pressing ENTER, you can view the current value of selected item and possibly change it.

There are 2 main menus:

- **BASE PROGRAMMING** (BASE MENU): only the useful parameters for a base programming are displayed.

- **ADVANCED PROGRAMMING** (ADVANCED MENU): parameters of the advanced menu are displayed.



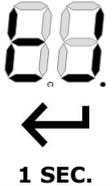
BASE MENU

Press ENTER for at least 1 second to enter base menu.

od is on the display, with up/down it's possible to select other functions of this menu.

To exit this menu select **EX** or press UP and DOWN together. After 2 minutes without actions, the control unit exits itself from this menu.

BASE MENU MAP

	od	Obstacle detection		D5	Disabled
				F	Enabled in normal speed
				F5	Enabled both in fast speed and slowing down.
				EX	EXIT or push  together

F Before starting the procedure, you must enable the obstacle detection using the Basic "OD" menu.

 **Attention:** obstacle detection requires well installed gate, no resistance points or defects in the rails/racks/guides; the engine must not be used at the maximum power (gate too heavy for the actuator).

↓

ol	Operating logic		5T	Step by step logic.
			Af	Automatic closing with stop function.
			CD	Automatic closing for condominium function.
			Oc	Open/Close logic, inputs start and pedestrian work as open and close
			oa	Open/Close logic with automatic closing and stop function, inputs start and pedestrian work as open and close
			EX	EXIT or push  together

↓↑

LC	Learns radio codes		C1	Learn a transmitter on channel 1
			C2	Learn a transmitter on channel 2
			LL	Learning of a code for courtesy light
			NOTE: Each time a code is learnt, on the display is shown the memory position for a while	
			rt	Delete a code with transmitter*
			rn	Delete a code with memory number*
			ra	Delete all transmitters*
			EX	EXIT or push  together

RT: Delete a code with transmitter, transmit the code to be removed, on the display is show "**OK**" if the operation is successful.

Rn: Delete a code with memory number, select the number in the memory to be deleted and confirm with enter.

RA: Delete all transmitters in memory. To delete all codes select **RA** and push enter, then confirm with **Y5**.

↓↑

LT	Learn working times	← ↓↑	AU	Automatic learning procedure.
			MN	Manual learning procedure.
			EX	EXIT or push ↓↑ together

LT learns working time:  **Attention:** in this procedure all safety inputs are disabled. The gate learns all the working times. If limit switches are connected (coherent with motor direction) the board learns the direction of the gate. If the limit switches aren't connected verify gate direction with dead man "DM" menu and change it with gate direction "GD" advanced menu.

If NC/analogue edges are connected, they are automatically detected and enabled. Is it possible to program working time automatically, please refer to "Quick installation". Select **LT** in the base menu and push enter, after select the learning mode with UP/DOWN.

AU: Automatic learning procedure.

MN: Manual learning procedure.

To exit this menu select **EX** or push UP/DOWN together.

- **AU** Automatic procedure for working time learning: In this procedure all safety inputs are disabled.

- **MN** Manual procedure for working time learning: In this procedure all safety inputs are disabled.

BEFORE TO START SET THE GATE COMPLETELY CLOSED.

The gate starts opening, in this phase it's possible to set the slowing down speed with the SD speed trimmer. Once the gate is fully open, push ENTER.

If limit switches are installed, the gate stops itself once open.

M1 is written on the display

In the phase which follows use the ENTER button to control the following sequence: starting motor, starting slow down, stop motor.

If limit switches are installed the motor stops automatically at the end of closing.

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5P	Set pause time	←	↓↑ 0 - 99
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5P Set pause time:

Use up/down to set the pause time between 0 and 99 seconds. Press ENTER to confirm. To exit without modifications push together UP and DOWN.

Attention, setting a pause time doesn't enable automatic closing, please refer to section "**OL** operating logic" to enable this function

↓↑

DM	Dead man mode	← ↓↑	O1	Open motor
			C1	Close motor
			EX	EXIT or push ↓↑ together

DM Dead man mode:

Selecting this menu it's possible to control each motor in dead man mode. Press and hold ENTER to start the selected motor in dead man mode

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EX	Exit	←
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BOARD PROGRAMMING ADVANCED MENU

Press the ENTER button until the display shows **TM**. Use UP and DOWN to select all items in this menu. To exit this menu select **EX** or push UP/DOWN together. After 2 minutes without actions, the control unit exits itself from this menu.

ADVANCED MENU MAP

	tm	Working times		T1	Working time	0 - 99 
				51	Start time slowdown	
				pt	Pedestrian time	
				tc	Courtesy light time (x 10 sec)	
				ex	EXIT or push  together	

TM Working times menu: In this menu it is possible to modify working times of control unit: Once selected working time to be changed, use the UP and DOWN to modify it from 1 to 99 seconds. Press ENTER to confirm.

gd	Gate direction		Rh	Gate direction RIGHT
			lf	Gate direction LEFT
			ex	EXIT or push  together

GD Gate direction: In this menu it is possible to invert motor direction and limit switches according if gate is right or left. Use UP and DOWN to choose right (**rh**), left (**lf**) or exit (**EX**). Press ENTER to confirm.

En	Encoder enabling		Y5	YES
			Nt	NOT
			ex	EXIT or push  together

En Enables encoder:

Enables or disables the encoder input on **J1** connector. Don't enable this function if none encoder connected.

D1	Load factory defaults		Y5	YES - SET FACTORY DEFAULTS
			Nt	NOT
			ex	EXIT or push  together

RC	Release end travel torque		Y5	YES
			Nt	NOT
			ex	EXIT or push  together

RC Release torque at work end:

Enabling this function, the motors reverse direction for a while to release the torque at end of work.

55	Soft start		Y5	YES
			Nt	NOT
			ex	EXIT or push  together

55 Soft start: In this menu you can enable the soft start of 1 second when motor starts moving



eo	Opening analogue edge	 	Y5	YES - edge is enabled
			Nt	NOT - edge is disabled
			ex	EXIT or push together

Eo Enables opening edge: This function enables or disables the opening edge.

Y5: Edge enabled (NC).

NT: Edge disabled (left input unconnected)



ec	Closing analogue edge	 	D5	Edge disabled
			nc	Edge with NC contact.
			an	Analog edge 8K2
			ex	EXIT or push together



tp	Enable photocells test	 	Y5	YES - test is enabled
			Nt	NOT - test is disabled
			ex	EXIT or push together

TP Enable photocells test: Enabling this function the photocell transmitters must be supplied by "TEST" output on connection 17-18. The control unit tests the contact at each cycle.



T5	Enable photostop test	 	Y5	YES - test is enabled
			Nt	NOT - test is disabled
			ex	EXIT or push together

T5 Enable photostop test: Enabling this function the photostop transmitter's must be supplied by "TEST" output on connection 17-18. The control unit tests the contact at each cycle.



Attention: If both test functions **TP** and **T5** are disabled, TEST output on connections 17-18 works as open gate signal light 24V (as by default).



ar	Transmitters auto-learning	 	Y5	YES - enabled
			Nt	NOT - disabled
			ex	EXIT or push together

Ar Enable automatic transmitters leaning: Enabling this function it's possible to insert new transmitters without accessing base menu. Refer to "Automatic transmitters learning".



EX	Exit	
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QUICK TABLE BASE MENU

DISPLAY	DESCRIPTION	DATA	DESCRIPTION	DEFAULT	DATA
od	Obstacle detection	D 5	Disabled	D 5	
		F	Enabled in normal speed		
		F 5	Enabled both in fast speed and slowing down.		
		EX	EXIT		
ol	Operating logic	5T	Step by step logic.	5T	
		At	Automatic closing with stop function.		
		CD	Automatic closing for condominium function.		
		Oc	Open/Close logic, inputs start and pedestrian work as open and close		
		oa	Open/Close logic with automatic closing and stop function, inputs start and pedestrian work as open and close		
		EX	EXIT		
LC	Learns radio codes	C1	Learn a transmitter on channel 1		
		C2	Learn a transmitter on channel 2		
		ll	Learning of a code for courtesy light		
		rt	Delete a code with transmitter*		
		rn	Delete a code with memory number*		
		ra	Delete all transmitters*		
		EX	EXIT		
LT	Learn working times	AU	Automatic learning procedure.		
		MN	Manual learning procedure.		
		EX	EXIT		
5P	Set pause time		↓↑ 0 - 99	10 sec.	
DM	Dead man mode	01	Open motor		
		C1	Close motor		
		EX	EXIT		
EX	Exit				

QUICK TABLE ADVANCED MENU

DISPLAY	DESCRIPTION	DATA	DESCRIPTION	DEFAULT	DATA
tm	Working times	T1	Working time motor 0 – 99	30 sec.	
		51	Start time slowdown motor	20 sec.	
		pt	Pedestrian time	08 sec.	
		tc	Courtesy light time (x 10 sec)	12 120 sec.	
		EX	EXIT		
gd	Gate direction	Rh	Gate direction RIGHT	Rh	
		lf	Gate direction LEFT		
		ex	EXIT		
En	Encoder enabling	Y5	YES	Nt	
		Nt	NOT		
		EX	EXIT		
D1	Load factory defaults	Y5	YES - SET FACTORY DEFAULTS		
		Nt	NOT		
		EX	EXIT		
RC	Release end travel torque	Y5	YES	Nt	
		Nt	NOT		
		EX	EXIT		
55	Soft start	Y5	YES	Nt	
		Nt	NOT		
		EX	EXIT		
eo	Opening analogue edge	Y5	YES - edge is enabled	Nt	
		Nt	NOT - edge is disabled		
		EX	EXIT		
ec	Closing analogue edge	D5	Edge disabled	D5	
		nc	Edge with NC contact.		
		an	Analog edge 8K2		
		EX	EXIT		
tp	Enable photocells test	Y5	YES - test is enabled	Nt	
		Nt	NOT - test is disabled		
		EX	EXIT		
T5	Enable photostop test	Y5	YES - test is enabled	Nt	
		Nt	NOT - test is disabled		
		EX	EXIT		
ar	Transmitters auto-learning	Y5	YES - enabled	Y5	
		Nt	NOT - disabled		
		EX	EXIT		
EX	Exit				

Error code	Problem and eventual solution
E1	Power control system failure. Send board in assistance.
E2	Obstacle detected in the previous cycle. Verify that gate is free and there's no obstacles in the range.
E3	Photocells or photostop obstructed for longer than 2 minutes. The gate can't start moving and the blinker could be fixed on. Verify that photocells and photostop aren't obstructed, and if there's no bugs inside them. Verify wiring to this devices.
E4	Safety edges are engaged for longer than 2 minutes. Verify wiring to emergency device. If there isn't an emergency device installed, disable it by advanced menu.
E5	Stop is engaged for longer than 2 minutes. Verify wiring to emergency device. If there isn't an emergency device installed, shunt this input with the common.

