SISTEMI AUTOMATICI DI APERTURA

ID 120

CONTROL UNIT FOR 1 MOTOR 220V

Important: Read carefully 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 properly done by qualified installers, following rules and regulations of installation country.

⚠ It's mandatory do periodic maintenance each 6 month.

⚠ 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 strongly advised.

⚠ Not respecting of rules may cause serious damage to peoples, animals, things.

⚠ Manufacturer discharges all responsibility for missed respect of rules.

⚠ Don't let 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 life switch is installed upline the installation.

⚠ Verify that cables composing the installation, are suitable for it.

⚠ This product falls within the scope of the Directive 2012/19 / EU concerning the management of waste electrical and electronic equipment (WEEE). The appliance must not be disposed of with domestic waste as it is made of different materials that can be recycled at the appropriate facilities. Inquire through the municipal authority regarding the location of the ecological platforms to receive the product for disposal and its subsequent correct recycling. Furthermore, it should be remembered that, upon purchase of an equivalent appliance, the distributor is obliged to collect the product for disposal free of charge. The product is not potentially dangerous for human health and the environment, not containing harmful substances, but if abandoned in the environment negatively impacts on the ecosystem. Read the instructions carefully before using the appliance for the first time. It is recommended that you do not use the product for any purpose other than that for which it was intended, there being a danger of electric shock if used improperly

The crossed-out bin symbol, on the label on the appliance, indicates the compliance of this product with the regulations regarding waste electrical and electronic equipment. Abandonment in the environment of the equipment or illegal disposal of the equipment is punishable by law.

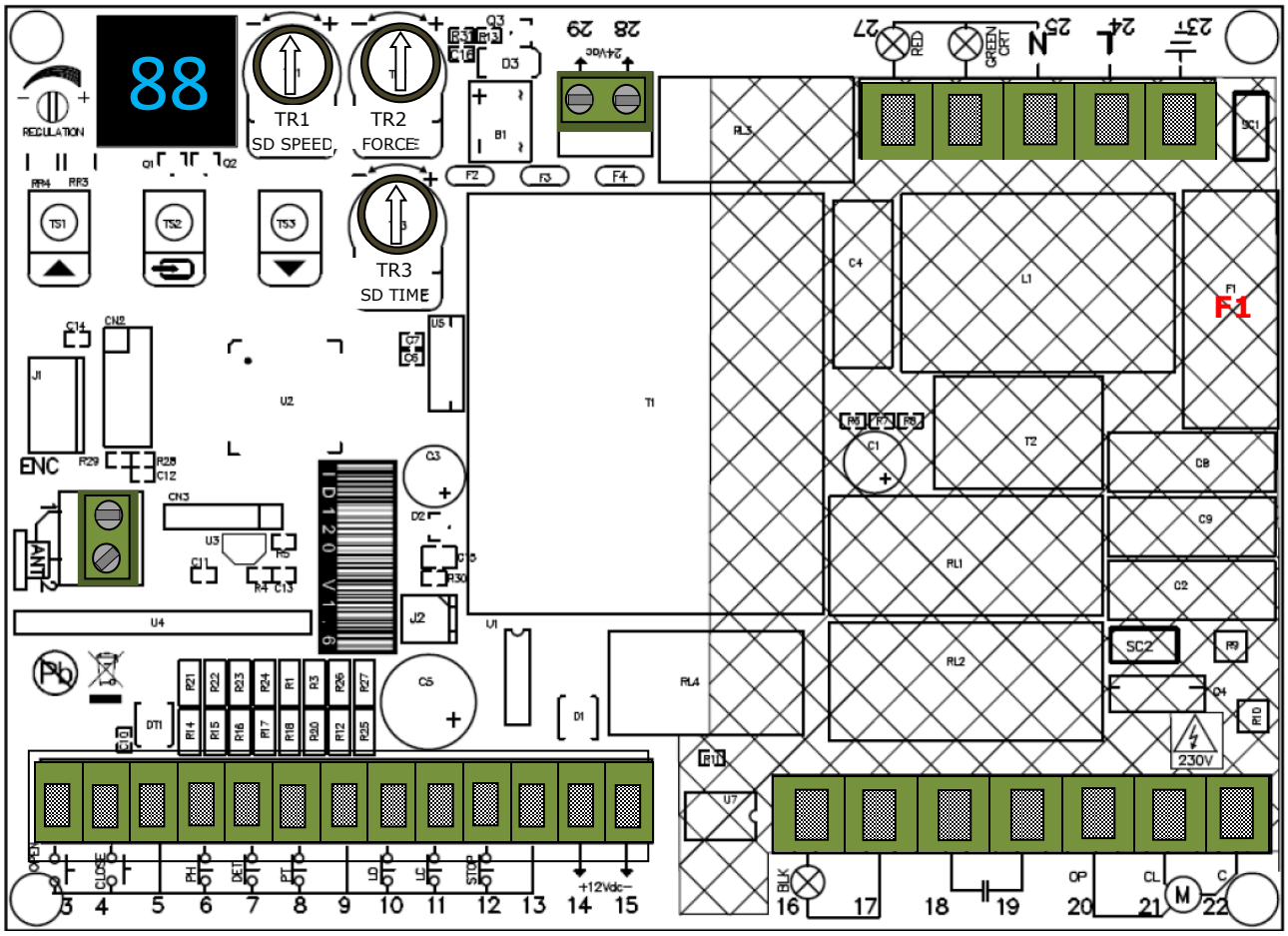
The manufacturer:
Declares: The control unit ID120 is compliant to following directives:
- 2006/95/CE Low voltage directive.
- 2004/108/CE Electromagnetic compatibility.

Castiglione 10-11-2020

Castiglione 10-11-2016

TECHNICAL DATA	
Power supply	230Vac +/- 10%
Consumption	800mW (stand-by)
Auxiliary supply out	24Vac, 200mA
Motor output	230Vac, 800W
Flashing light output	230Vac, 100W
Courtesy light output (AUX)	230Vac, 100W
Operating temperature range	-10 +60°C

G.R. SISTEMI AUTOMATICI DI APERTURA S.R.L.



1	Antenna's shield	18 – 19	Motor capacitor
2	Antenna	20	Motor output - OPEN
3	Input OPEN / START (NO) – see menu OL	21	Motor output - CLOSE
4	Input CLOSE / PEDESTRIAN (NO) – see menu OL	22	Motor output - COMMON
5	Common	23	Earth connection
6	Photocell input (NC - NO) see advanced menu PC During the pause: Reload the pause time During closing: Reverses the motion of the motors	24 – 25	AC Power connection 230V
7	DETECT quick closing input (NO)	26 – 27	Courtesy light (25-26) / red-green traffic light control (see advanced menu CR)
8	PHOTOSTOP / PROTECTION input (NC / NO see advanced menu Pt)	28 - 29	AC power out 24V– 250mA
9	Common	TR1	Slowdown speed adjustment
10	Limit switch Open input (NO/NC, see advanced menu L5) If both limit switches open they are disabled.	TR2	Motor power adjustment
11	Limit switch Close input (NO/NC, see advanced menu L5) If both limit switches open they are disabled.	TR3	Slowdown time adjustment
12	Stop input (NO/NC, see advanced menu 5P) In every operation it blocks the gate.	TS1- TS3	Buttons UP/DOWN
13	Common	TS2	ENTER button
14 – 15	Output positive / negative 12Vdc – 250mA	DSP	Display
16 – 17	Blinker with two working modes (see advanced menu BL)	F1	230Vac outputs fuse, 5A Fast

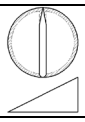
INPUT STATUS
When the board is in standby, the status of the inputs is shown on the display:

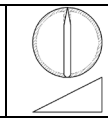
--	NO INPUTS ACTIVE	5T	START INPUT ACTIVE
5P	STOP INPUT ACTIVE	PD	PEDESTRIAN INPUT ACTIVE
PT	PROTECTION INPUT ACTIVE	OP	OPEN INPUT ACTIVE
P5	PHOTOSTOP INPUT ACTIVE	CL	CLOSE INPUT ACTIVE
PC	PHOTOCELLS INPUT ACTIVE	FC	LIMIT SWITCH CLOSE
DT	DETECT INPUT ACTIVE (QUICK CLOSE)	FO	LIMIT SWITCH OPEN

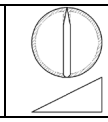
⚠ **ATTENTION:** During pause, the display show the seconds countdown to closing.
If Mass mode is selected (see advanced menu), display show the number of entrance allowed.

TRIMMERS
TR1 SD SPEED - Regulates the slowing down speed.
TR2 FORCE – Regulates the obstacle detection sensibility from 0% to 100%. **ATTENTION:** during the first 2 seconds of running the control unit gives 100% of the power to the motor (starting power)

TR3 SD TIME –Regulates the slowing down lasting from 0 to 10 seconds (about)

SLOWER		*FASTER*
TR1 SLOWING DOWN SPEED		

LESS TORQUE		*MORE TORQUE*
TR2 OBSTACLE DETECTION SENSITIVITY		

0 sec.		*10 sec*
TR3 SLOWINGDOWN LASTING		

SPECIAL FEATURES:

SELF PROGRAMMING
This board in most chases doesn't need any working time programming to work. If the working time hadn't been programmed, at each first complete opening (from closing limit switch to opening limit switch.) after a power reset the board will calculate itself a value for the current gate and sets the slowing down starting from next closing. This self-learned setting can be deleted by resetting the board or by programming the working time.

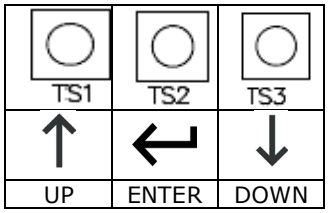
QUICK PROGRAMMING
To quickly program the working times, keep pushed up till you read LT on the display (3 seconds). If the gate/barrier isn't fully closed, it will close till the limit switch, then it will open to the Opening limit switch, and finally it closes once.
Attention: if you aren't sure about gate/barrier direction, set it in fully closed position before to start programming, the board will assume the engaged limit switch as closing side, and will manage motor direction automatically (see "GD" menu in advanced menu)

QUICK LEARNING OF REMOTE CONTROLS
Briefly press the down key (C1 appears on the display), then transmit a start / open command.
To enter a pedestrian command / close, briefly press the down key twice (C2 appears on the display).
To enter a command to switch on the courtesy light, briefly press the down key (on the display) 3 times C3 appears).

Auto Learning transmitters:
It's possible to learn transmitters quickly without using the base menu. To insert a new transmitter, transmit 3 times with the new remote, making at least 1 second pause between each transmission. Then transmit 3 times with a transmitter already in memory and then once with the new. When programming is done, the stop led on the keyboard flash once. **Attention:** This function must be enabled, refer to "advanced menu AR".

MASS ENTERING MODE
In this mode, if you push 5 times Open command (example), the control unit count 5 cars passing through the detect sensor, then it closes the barrier. This mode must be enabled in advanced menu (MM). This mode can be enabled just when automatic closing is disabled.

USE OF UP, MODE AND DOWN BUTTONS FOR PROGRAMMING
Control unit function programming is made within a special configuration menu, to which you can access and where you can shift through DOWN, MENU and UP keys placed under the display. 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 function
• By pressing MODE, you can view the current value of selected item and possibly change it.
There are 2 main menus:
- *BASE PROGRAMMING*: only the useful parameters for a base programming are displayed.
- *ADVANCED PROGRAMMING*: parameters of the advanced menu are displayed.

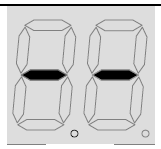


BOARD PROGRAMMING

BASE MENU

Push enter button shortly to enter base menu. OI is displayed, with up/down it's possible to select other functions of this menu. To exit this menu select EX or push up and down together. After 20 seconds without actions, control unit exits itself from this menu.

BASIC MENU SCHEME



1 SEC.

oL	Operating logic	**5T**	Step by step mode: inputs 3 & 4 works as Start and Pedestrian start.
		At	Step by step mode with auto closing: inputs 3 & 4 works as Start and Pedestrian start.
		CD	Condominium mode: inputs 3 & 4 works as Start and Pedestrian start.
		Oc	Open/Close mode: inputs 3 & 4 works as Open and close.
		oa	Open/Close mode with auto closing: inputs 3 & 4 works as Open and close.
		EX	EXIT or push ⇵ together

↓

LC	Radio code learning	**C1**	Learn Start / Open command (according to OI menu).
		C2	Learn Pedestrian / Close command (according to OI menu).
		C3	Learn Courtesy light (see advanced menu L**X**).
		ra	Remove all codes
		EX	EXIT or push ⇵ together

LC LEARN RADIO CODE - Select LC and push enter, with up/down select sub menu.
C1: Learns a remote. Select this menu and transmit to learn a Start/Open command.
C2: Learns a remote. Select this menu and transmit to learn a Pedestrian/Close command.
C3 : Courtesy light activation
RA: Remove all codes, select this menu, than select Y5 (yes) in the next menu to remove all codes.

⇵

	LT	Working times learning	**AU**	Automatic learning procedure
			EX	EXIT or push ⇵ together

LT EARN WORKING TIME - Select LT in the base menu and push enter, after select the learning mode with up/down. The gate/barrier closes till the closing limit switch, then it opens to the Opening limit switch, and finally it closes once.
ATTENTION: if you aren't sure about gate/barrier direction, set it in fully closed position before to start programming, the board will assume the engaged limit switch as closing side, and will manage motor direction automatically (see "GD" menu in advanced menu).
To stop Learning procedure, switch Stop input.

⇵

5P	Set pause time	↵	⇵ 0 – 99

5P SET PAUSE TIME - Use up/down to set the pause time between 0 and 99 seconds. Push enter to confirm. To EXIT without modifications, push together up and down.

⇵

DM	Dead man mode	**OP**	Open motor
		CL	Close motor
		EX	EXIT or push ⇵ together

DM DEAD MAN MODE. By selecting this menu it is possible to move the gate in dead man mode:
O1: Gate opens, press and hold ENTER in this menu to move the gate in dead man mode.
C1: Gate closes, press and hold ENTER in this menu to move the gate in dead man mode.

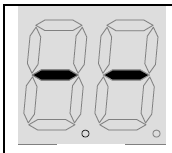
⇵

EX	EXIT	↵

ADVANCED MENU

Keep enter button pushed till on the display is shown TM (almost 4 seconds). With up/down it's possible to select all items in this menu. To exit this menu select EX or push up/down together. After 20 seconds without actions, control unit exits itself from this menu.

ADVANCED MENU SCHEME



4 SEC.

tm	Working times menu	**T1**	Working time	⇵ 0 – 99
		TP	Pedestrian time	
		tc	Courtesy light time (x 10 sec)	
		ex	EXIT or push ⇵ together	

tm Working times menu:
In this menu it's possible to modify working times of control unit:
T1 – Working time
tp – Pedestrian time
tc – Courtesy light time (in ten of seconds)
EX – Exits from advanced menu
Once selected working time to be changed, use up/down to modify it from 0 to 99 seconds. Push enter to confirm.
To exit without modifications select **ex** or push together up and down.

gd	Gate direction	**Rh**	Gate direction right
		Lf	Gate direction left
		ex	EXIT or push ⇵ together

GD GATE DIRECTION - Set if direction of the gate is right (RH) or left (LF). Use up/down to choose, ENTER to confirm.

PC	Photocell input polarity	**No**	Normally open
		nc	Normally close
		ex	EXIT or push ⇵ together

PC PHOTOCELL INPUT POLARITY - Set if photocell input is NO or NC. Use up/down to choose NO (NO), NC (NC) or exit (EX). Push ENTER to confirm.

pt	Photostop/Protection mode	**No**	Normally open
		nc	Normally close
		ex	EXIT or push ⇵ together

PT PHOTOSTOP / PROTECTION INPUT POLARITY - Set if Photostop/Protection input is NO or NC. The PT input works as Photostop (P5) if Sliding gate mode is selected, while it works as Protection (PT) when the barrier mode is selected (see advanced menu BR).
P5 – Photostop Mode (NC): During closing it stops the gate while this input is engaged, on release the gate opens. Photostop input during opening it stops the gate till the command it's released. After a photostop command the next direction is always opening.
PT – Protection mode (NO): While closing, Protection command reverses opening completely. In opening phase Protection command is ignored. The gate can't close while Protection command is engaged.

5p	Stop input polarity	**No**	Normally open
		nc	Normally close
		ex	EXIT or push ⇵ together

5P STOP INPUT POLARITY - Set if Stop input is NO or NC. Use up/down to choose NO (NO), NC (NC) or exit (EX). Push ENTER to confirm.

L5	Limit switches polarity	↵ ⇵	**No**	Normally open
			nc	Normally close
			ex	EXIT or push ⇵ together

L5 LIMIT SWITCHES POLARITY - Set if L5 are NO or NC. Use up/down to choose NO (NO), NC (NC) or EXIT (EX). Push enter to confirm.

⇵

Pr	Motor power in fast speed	↵ ⇵		0 - 10
			ex	EXIT or push ⇵ together

PR MOTOR POWER IN FAST SPEED - Set the motor power (fast speed) between 1 (10%) and 10 (100%).

⇵

pl	Motor power in slowing down	↵ ⇵		0 - 10
			ex	EXIT or push ⇵ together

PI MOTOR POWER IN SLOWING DOWN - Set the motor power (slowing down) between 1 (10%) and 10 (100%).

⇵

55	Soft start	↵ ⇵	**Y5**	Enabled
			Nt	Disabled
			ex	EXIT or push ⇵ together

55 SOFT START - Set if soft start is active (Y5) or not (NT). Soft start make a linear power slope to avoid mech shoks at start.

⇵

bl	Blinker mode	↵ ⇵	**Y5**	Enable blinking
			Nt	Disable blinking (for flashing lights equipped with a flashing board)
			ex	EXIT or push ⇵ together

BL BLINKER MODE - Set if blinker output works as blinker, or as semaphore signal. Use up/down to choose blinker mode (Y5), Semaphore mode (NT) or exit (EX). Push ENTER to confirm.

⇵

cr	(Aux) Courtesy light mode	↵ ⇵	**Y5**	Enabled
			Nt	Disabled
			ex	EXIT or push ⇵ together

cr (AUX) COURTESY LIGHT MODE - Set if AUX dry contact works as courtesy light or as blinker. Use up/down to choose courtesy light mode (Y5), Blinker mode (NT) or exit (EX). Push enter to confirm.

⇵

D2	Load defaults	↵ ⇵	**Y5**	Enabled
			Nt	Disabled
			ex	EXIT or push ⇵ together

D2 LOAD FACTORY SETTINGS - To reset the control unit to factory conditions, select this menu and then confirm by selecting YES (Y5).

⇵

rc	Release torque at the end of closing	↵ ⇵	**Y5**	Enabled
			Nt	Disabled
			ex	EXIT or push ⇵ together

RC RELEASE AT END OF CLOSING - By activating this function (Y5) the motor will perform a brief inversion at the end of closing, in order to release the mechanical tension.

⇵

Ar	Remote learning of transmitters	↵ ↓↑	**Y5** **Nt** **ex**	Enabled Disabled EXIT or push ↓↑ together

AR REMOTE LEARNING OF TRANSMITTERS- Enables (y5) or disables (nt) remote control learning (see chapter Remote control self-learning).

↓↑

rm	Receiver mode	↵ ↓↑	**1b** **4b** **ex**	Independent insertion Automatic insertion EXIT or push ↓↑ together

RM RADIO MODE
-1B: Each button of a new transmitter enter separately. User can choose the associated channel (C1 Start/open, C2 Pedestrian/close, C3 courtesy light command).
- 4B: Once you enter a button of transmitter in memory, All other buttons works. Each button take a channel between (open, close, pedestrian and stop)

↓↑

cn	Counter	↵ ↓↑	**00** **00** **00** **ex**	1 pair of digits 2 pair of digits 3 pair of digits EXIT or push ↓↑ together

CN COUNTER Show the counter in 3 groups of 2 numbers. Eaxmple: 123.456 is displayed as : 1.2 - 34. - 56

↓↑

MM	Mass mode	↵ ↓↑	**Y5** **Nt** **ex**	Enabled Disabled EXIT or push ↓↑ together

MM MASS MODE - In this menu you can enable the mass enter mode. This mode can be enabled just when pause time is 00, this means when automatic closing is disabled. In this mode, if you push 5 times Open command (example), the control unit count 5 cars passing through the detect sensor, then it closes the barrier.

↓↑

br	Barrier logic	↵ ↓↑	**Y5** **Nt** **ex**	Enabled Disabled EXIT or push ↓↑ together

BR BARRIER LOGIC - Enables (y5) or disables (nt) the barrier operating logic. When the barrier logic is disabled, the control unit uses the standard program to control a sliding gate.

↓↑

EX	↵

DEFAULT SETTINGS

DISPLAY	*DESCRIPTION*			*DEFAULT*	DATA
ol	Operating logic			**5T**	
Lc	Radio code learning				
Lt	Working times learning				
5p	Pause time			10	
Dm	Dead man mode				
tm	Working times menù	T1	Working Time	1.8 (180sec.)	
		Tp	Pedestrian opening time	08	
		tc	Courtesy light time	12	
Gd	Gate direction			rh	
Pc	Photocell input polarity			No	
Pt	Photostop / Protection mode			Pt	
5p	Stop input polarity			No	
L5	Limit switches polarity			no	
Pr	Motor power in fast speed			10	
Pl	Motor power in slowing down			10	
55	Soft Start			Y5	
Bl	Blinker mode			Y5	
Cr	(Aux) Courtesy light mode			Y5	
D2	Load defaults				
Rc	Release torque at the end of closing			Nt	
Ar	Remote learning of transmitters			Nt	
Rm	Receiver mode			1b	
Cn	Counter				
Mm	Mass mode			nt	
br	Barrier logic			nt	

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