AUTOMATIC SOLUTIONS
Australia Pty Ltd

ASA600 – J300

IMPORTANT – MANUAL OVERIDE CAP MUST BE ON AT ALL TIMES

GENERAL

ASA600240V

Motor Voltage – 240 volt
Power Absorbed – 180 watts
Speed – 0,018 metres per second
Maximum Thrust – 1600 N
Protection Level – IP43
Duty Cycle – 25%
Dimensions – 970L x 90W x 185H
Stroke – 60 CM
Maximum Leaf – 5 metres
Maximum Leaf Weight – 200 Kg
Opening Time – 21 Seconds

J300

Motor Voltage – 240 AC
Motor Inputs - Two
Battery Charger – N/A
Receiver – Inbuilt or External
Limit Switches – No
Pedestrian Input – Yes (NO)
Start Input - Yes (NO)
Stop Input – Yes (NC)
Photocell Input – Two (NC)
Electric Lock – Yes 12Vac 1A
Slow Speed Regulator – Yes

IMPORTANT— READ THIS FIRST

Parts of these instructions are intended as a quick start guide and should be used in conjunction with the full instructions. The quick start instructions provide the basics to get you up and running and are based on the most commonly used installations in Australia. All electrical work in this country is to be performed by licensed electrical contractors. Electricity can kill!

SAFETY

This booklet will offer you information you may need to install your gear motor and to safeguard your safety.
However, caution is unquestionably indispensable and nothing is better than preventing accidents.

WARNING: any repair or adjustment of working machinery is strictly prohibited unless all the necessary precautions (electrical supply disconnected and motor off) have been taken in order to avoid possible accidents.
WARNING: any repair must be carried out by qualified people.
WARNING: All moving mechanisms must be provided with suitable protections.
WARNING: Keep the automatic controls out of the reach of children.
WARNING: Command pulses must be given from positions where the gate is visible.
WARNING: Use transmitters only if you can see the gate.

Read carefully the instructions enclosed in this manual.
Keep this booklet in a suitable place well known to all interested people.

PRELIMINARY CHECKS

In order to make the automation work efficiently; the gate to automate must have the following characteristics:
- It must be balanced.
- It must oscillate fluently.
- You must be able to carry out manual closing and opening of the gate without any effort.
- Make sure that the gate has a solid structure and that there is no friction points in its movement.
- Make sure that the gate/s have both solid opening stops and solid closing stops.

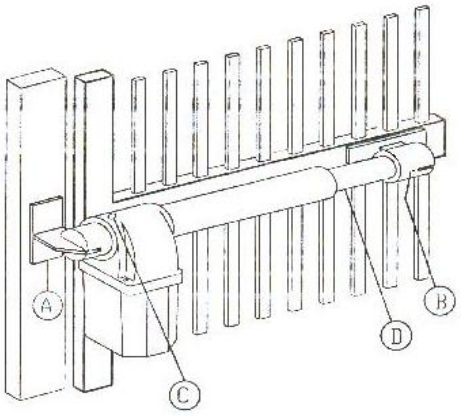
GENERAL ORDER OF INSTALLATION

To ensure a good installation of the gear motors ASA600240V, we suggest the following order of installation:
1 - Open the box and take out gear motor. Inspect the contents and ensure all components are present.
2 - Make sure that the leaf of the gate is perfectly horizontal.
3 - Determine the height position of your motor and mark post bracket position.
4 - Spend some time here considering the correct height and geometry of your post bracket.
5 - Attach the gear motor on to the support post.
6 - With gate/s leaf closed, turn and slide the screw of gear motor's shaft, until it comes to the end of the screw.
7 - Screw shaft back 1 complete turn of 360º.
8 - Place the gate support plate in the hole of the shaft end and position it against the gate leaf.
9 - Fix it to the gate leaf taking in account the inclination.
10 - Put the gear motor into manual operation mode with your override key and test your install for smoothness.
11 – If correct proceed in the same way with the other gate leaf.
12 - Place the mechanical limit stops
13 - Connect the gear motors to the logic controller.
14 – Program and test your installation
15 – Attach your safety devices and access devices one by one testing for correct operation at each point.

MAINTENANCE

Periodically check your installation for loose or worn fastenings, correct alignment and operation of your gate/s and correct operation of your manual override operation. Clean and keep clean all areas of the installation. Remember that the motorisation has been planned in order to help you use the gate. This means that it does not resolve the problems caused by an inadequate installation or by a poor upkeep of the gate.

ASA400 GEAR MOTOR INSTALLATION

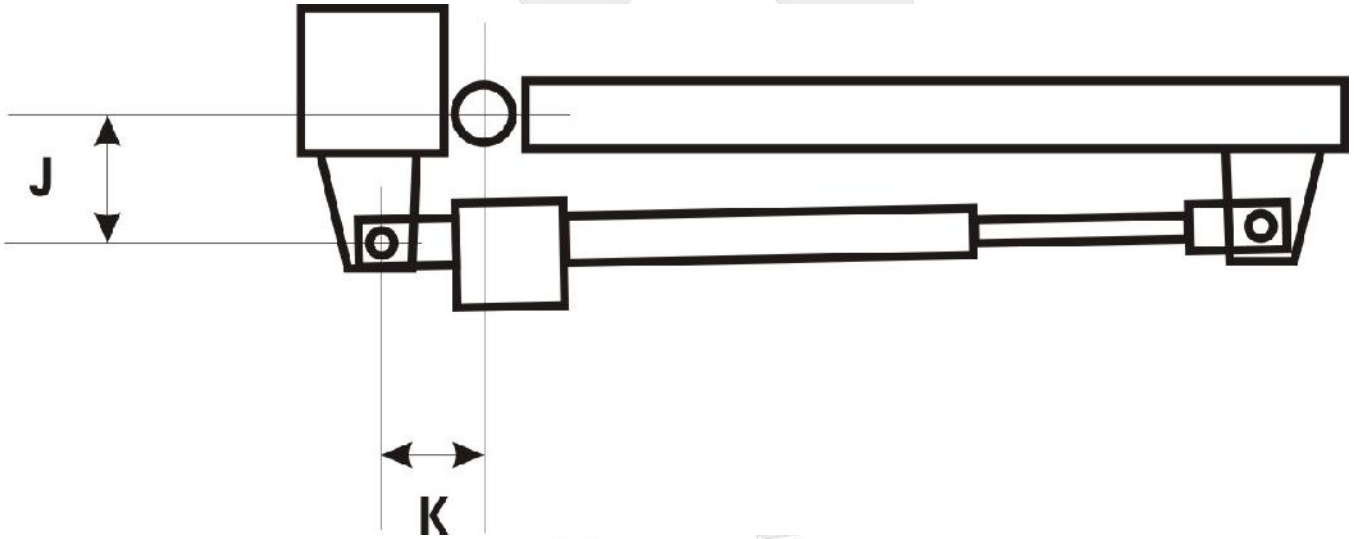


INSTALL POST BRACKET

The position of the post bracket “A” is critical to the success of your installation and attention needs to be paid to both its correct height and also its position on the post in respect to the relationship between your gate hinge pivot point and the motor pivot point on the bracket.

Once you have determined the general desired height of your motor, position the bracket and take note of dimensions “J” and “K”. In a standard installation the basic aim is to get dimensions “J” and “K” to be as close as possible to equal.

The other consideration before fixing the post bracket is that the pivot point of the post bracket “A” should be 12mm higher than the pivot point of the gate bracket “H” giving the gear motor an incline of approximately one degree.



INSTALL GATE BRACKET

With your post bracket securely fastened, attach your gear motor to the post bracket with the bolts provided. Take care to support the weight of the gear motor at this point and throughout this stage. Wind out shaft “D” all the way till the end. Now turn shaft “D” back one complete turn of 360 degrees. Attach your gate bracket to the shaft end “H” and position on the gate taking careful note of your 12mm fall from the post bracket. Fix your gate bracket at this position. Using your manual override key put the gear motor into manual mode and gently move your gate and gear motor through the entire 90 degree arc to test the smoothness of your installation. If your gate and gear motor moves smoothly through the entire travel range then you are ready to proceed to the next point. If you are having difficulty or hitting sticking points at any point in the travel you may need to adjust your post bracket pivot point to facilitate a smoother run.

INSTALL GATE STOPS

This is a critical point in ensuring long trouble free operation of your automation system, yet it is relatively simple. Each gate must have a positive and well secured opening stop and closing stop. There are a range of stops available over the counter or you can make them yourself but the critical point is that the stops must be well secured as the gear motors will exert quite a deal of force on them during programming. In summary when your gate/s open they must hit a positive stop point that stop the gate/s from opening any further and the same at the closed point.

AUTOMATIC SOLUTIONS

J300 logic controller for one or two 240 volt swing gate motors.

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 properly 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.

 Don't leave this control unit unattended or where children can reach.

Preliminary checking: Before installation of 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 the installation.

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

The manufacturer:

Declares:

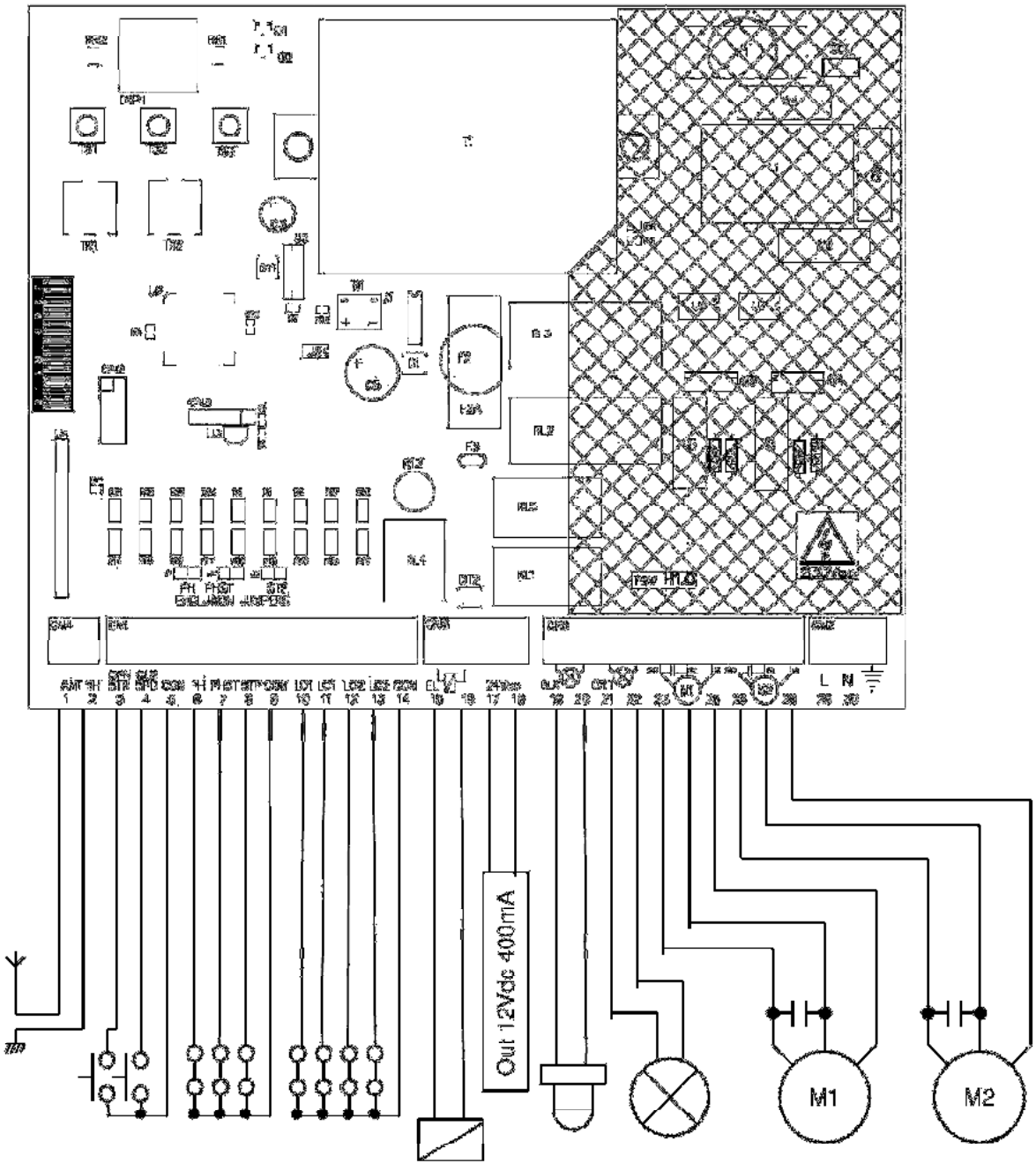
The control unit J300 is compliant to following

directives:

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

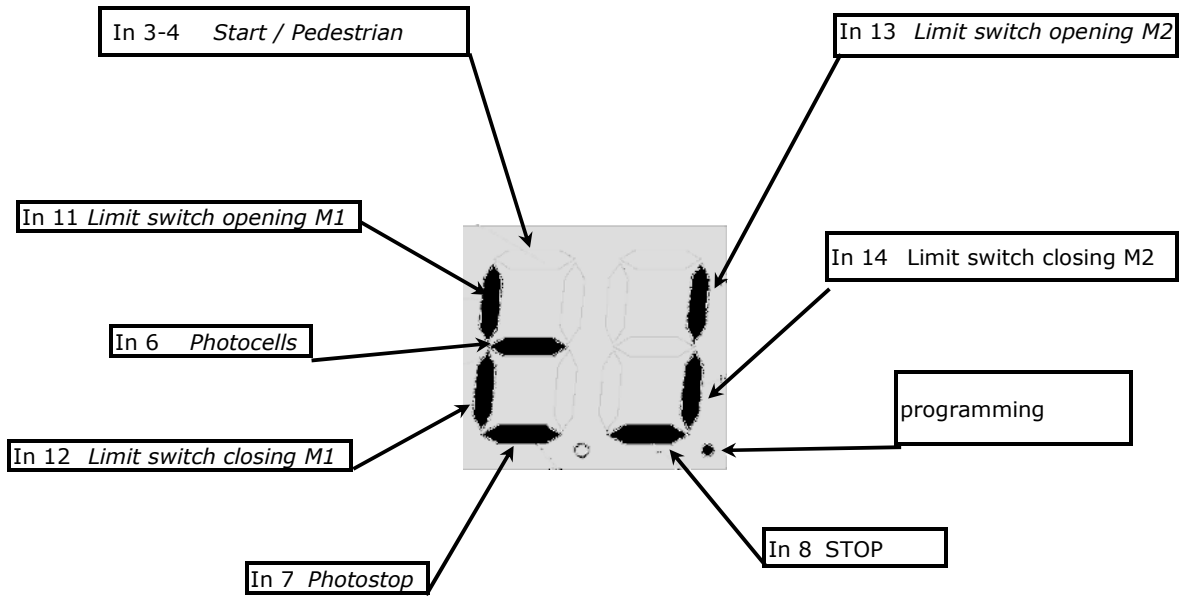
Castiglione 10-11-2016

Technical characteristics	
Power Supply	230Vac +/- 10%
Power consumption	800mW (stand-by)
Auxiliary supply out	24Vac, 400mA
Electric-Lock output	12Vac, 1A
Motors outputs	230Vac, 750W
Flashing light output	230Vac, 100W
Courtesy light output	230Vac, 100W
Operating temperature range	-5 +60°C



1	Antenna
2	Antenna's shield
3	Start input (NO) It completely opens the gate
4	Pedestrian start in. (NO) It opens just motor 2
5	Common
6	Photocell input (NC) During pause: Reloads pause During closing: Reverses motors direction
7	Photostop input (NC) During pause During closing: Reverses motors direction During opening: stops the motors and waits till contact returns close.
8	Stop input (NC) It always stops motors and blocks control unit activity.
9	Common
10-11	Motor 1 limit switches (NC) Letting both inputs not connected, it disables limit switches for this channel
12-13	Motor 2 limit switches (NC) Letting both inputs not connected, it disables limit switches for this channel
14	Common
15-16	Electric lock output 12Vac 1A
17-18	Auxiliary supply output 24Vac 400mA
19-20	Flashing light output 230Vac 100W
21-22	Courtesy light output 230Vac 100W
23-25	Output motor 1, 240Vac 750W
26-28	Output motor 2, 240Vac 750W
29-30	Power supply input 230V
J1	Photocell exclusion jumper
J2	Photostop exclusion jumper
J3	Stop exclusion jumper
TR1	Slowing down speed trimmer
TR2	Motors torque trimmer
TS1-TS3	Buttons up/down
TS2	Enter button
DSP	Display
CN7	Power supply input 230Vac
F1	230Vac outputs fuse, 5A Fast
F2	Electric-lock/logic fuse, 2A 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.



TRIMMER REGULATIONS

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

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

Less speed		*More speed*
TR1 *Slow down speed*		

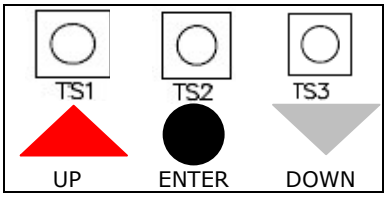
Less pushing		*More pushing*
TR2 *Motors power*		

QUICK INSTALLATION

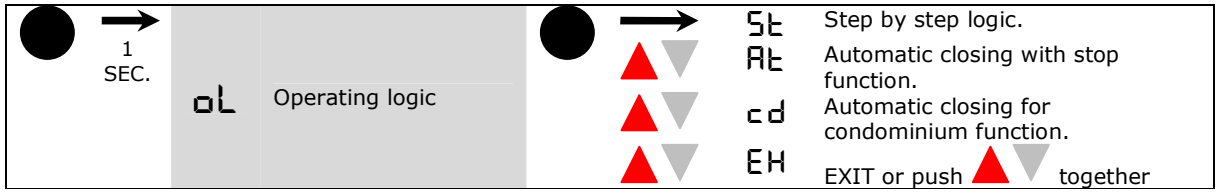
To program simply the working times, open both wings using the manual opening procedure, then keep pushed **UP** till you read Au on the display. Both wings start closing.
If limit switches are installed, wait until motors are fully closed, otherwise Push **ENTER** when the first wing is fully closed, push **ENTER** once when second wing is fully closed also.

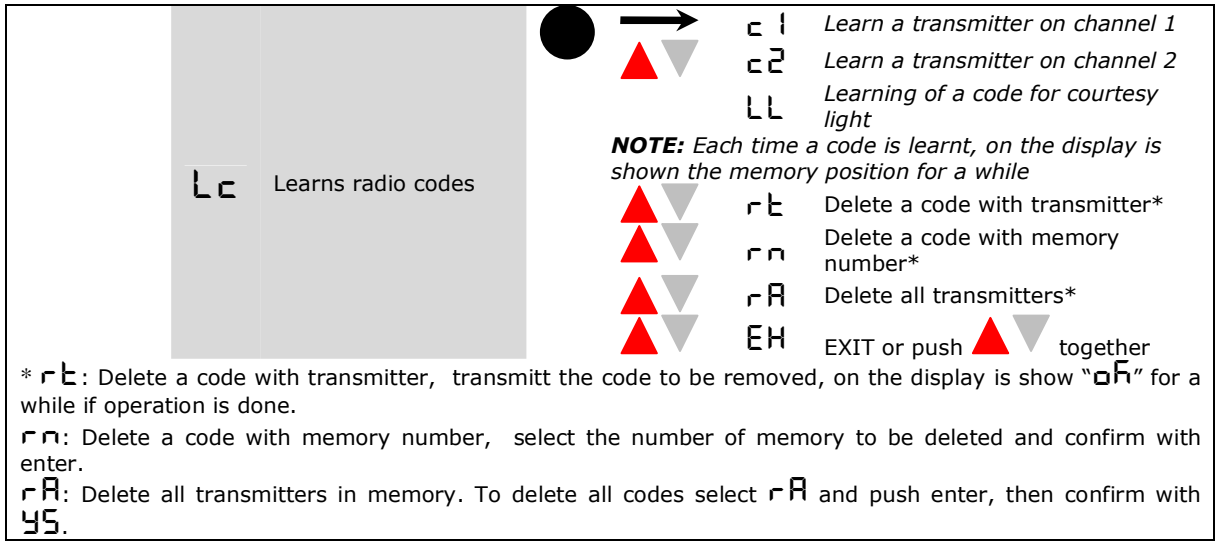
BOARD PROGRAMMING
BASE MENU

Push **ENTER** for at least 1 sec. to enter base menu.
oL is on the display, with **UP** and **DOWN** it is possible to select other functions of this menu.
To exit this menu select exit (EH) or push **UP** and **DOWN** together.
After 2 minutes without actions, the control unit exits itself from this menu.



BASE MENU MAP

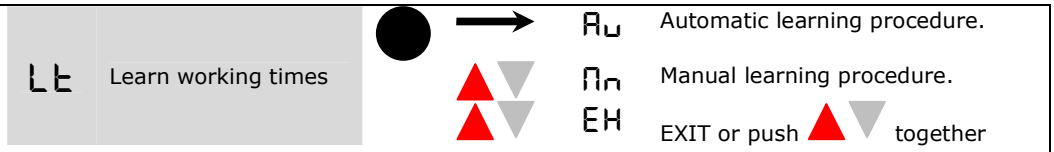




* rt: Delete a code with transmitter, transmitt the code to be removed, on the display is show "oK" for a while if operation is done.

rn: Delete a code with memory number, select the number of 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 YS.



LE learn working time:

Attention: before to start leaning procedure, the gate must be open to do automatic procedure, otherwise must be closed to do the manual procedure. Use manual mode to put the gate in the right position.
Is it possible to program working time automatically, please refer to "*Quick installation*".
Select LE in the base menu and push enter, after select the learning mode with up/down.

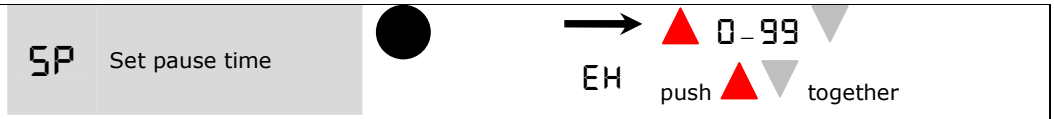
Au: Automatic learning procedure.
Mn: Manual learning procedure.
To exit this menu select EH or push up/down together.

Au ***Automatic procedure for working time learning:***

to do this procedure prepare at least a transmitter into memory. In this procedure all safety inputs are disabled.
The wings close themselves, in the meanwhile all the working times are learned. If the installation is single wing connect just motor 2 and enable this function in advanced menu.
If digital limit switches are installed (LO1,2 – LC1, 2) the control unit learns automatically working times.
If limit switches aren't installed, user need to push enter or give a start command (by radio too) once first motor (M1) reach end when second motor reach end.

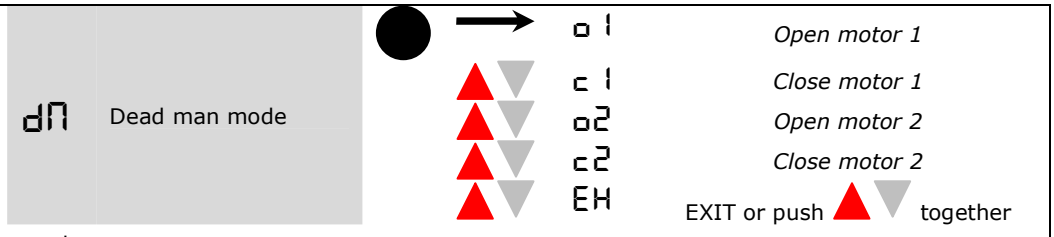
Mn ***Manual procedure for working time learning:***

Attention: to do this procedure prepare at least a transmitter into memory. In this procedure all safety inputs are disabled.
Both wings start opening, in this phase it's possible to set the slowing down speed with the trimmer 1. Once both wings are open, push enter or transmit with remote shortly.
M 1 is written on the display.
In the phase which follows, enter button or a memorized code control following sequence: start motor 1, start motor 2, slow down motor 1, slow down motor 2, stop motor 1, stop motor 2.
If just motor 2 is connected (single wing mode), program times just for this motor.
If digital limit switch are installed motors stop automatically at the end of travel.

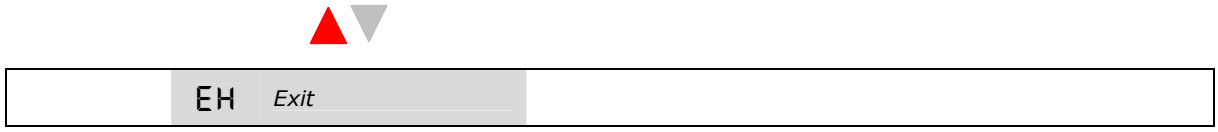


SP Set pause time:

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.
Attention, setting a pause time doesn't enables automatic closing, please refer to chapter "oL operating logic" to enable this function.



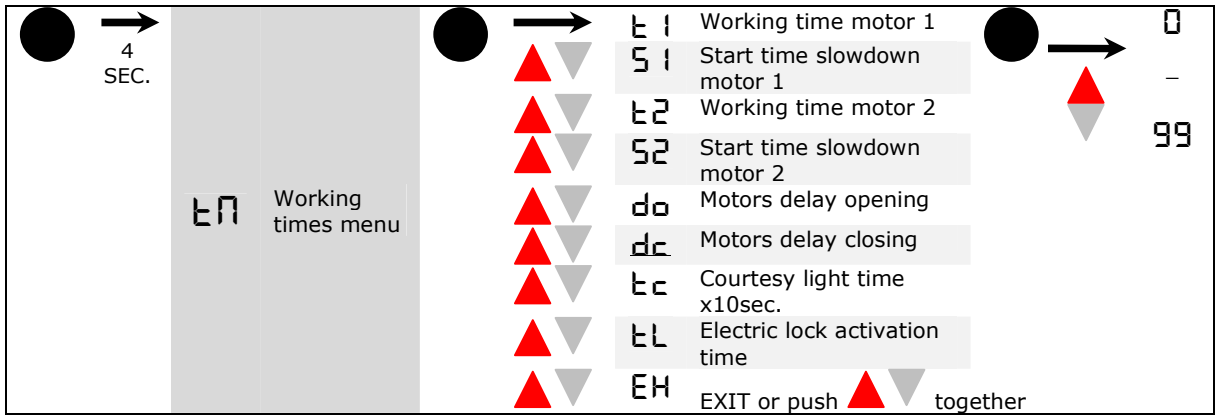
dM Dead man mode:
Selecting this menu it's possible to control each motor in dead man mode. Push up and down to select one of following item:
o 1 Open motor 1
c 1 Close motor 1
o2 Open motor 2
c2 Close motor 2
EH Exit
Keep pushed enter to start the selected motor in dead man mode.

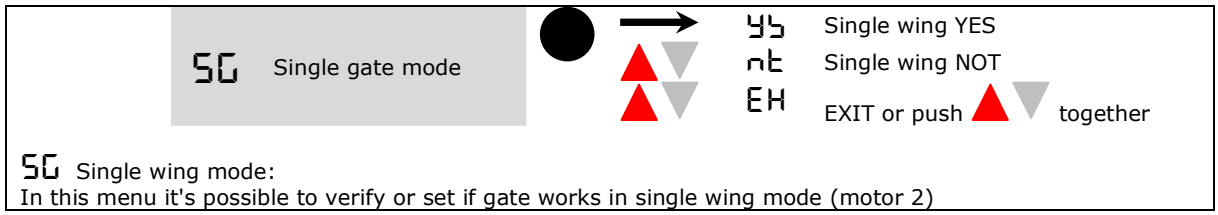


BOARD PROGRAMMING ADVANCED MENU

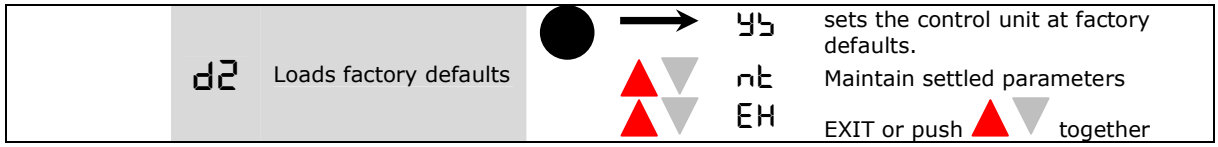
Push enter button till on the display is shown tM. With up/down it's possible to select all items in this menu. To exit this menu select EH or push up/down together. After 2 minutes without actions, control unit exits itself from this menu.

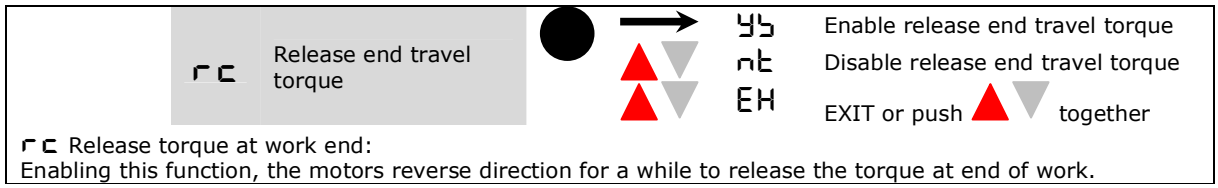
ADVANCED MENU MAP



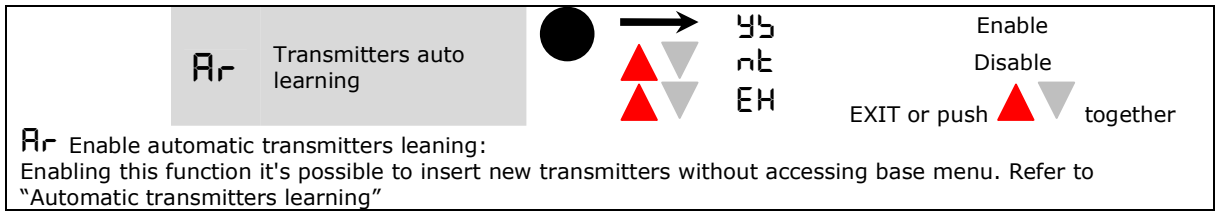


SG Single wing mode:
In this menu it's possible to verify or set if gate works in single wing mode (motor 2)

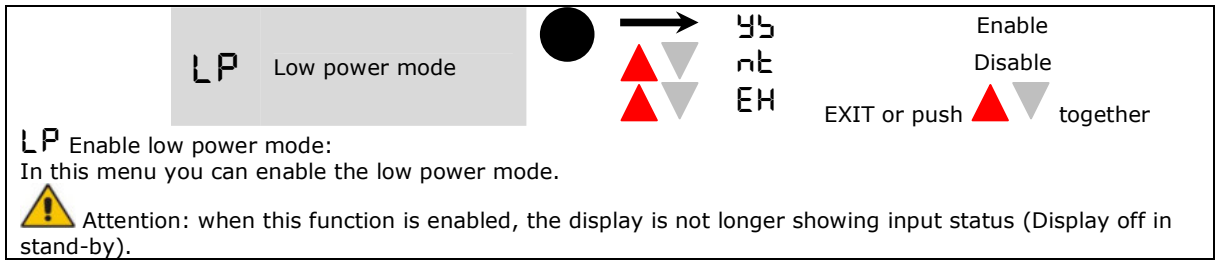




rc Release torque at work end:
Enabling this function, the motors reverse direction for a while to release the torque at end of work.

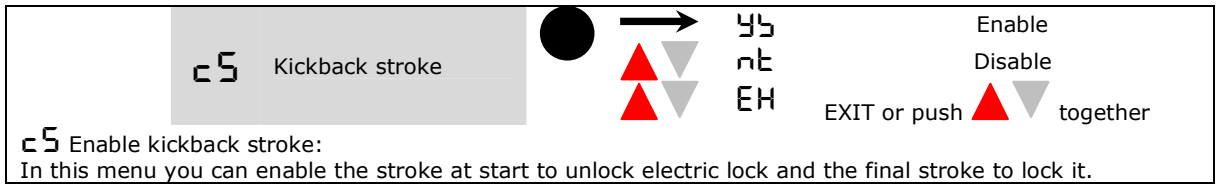


Ar Enable automatic transmitters leaning:
Enabling this function it's possible to insert new transmitters without accessing base menu. Refer to "Automatic transmitters learning"

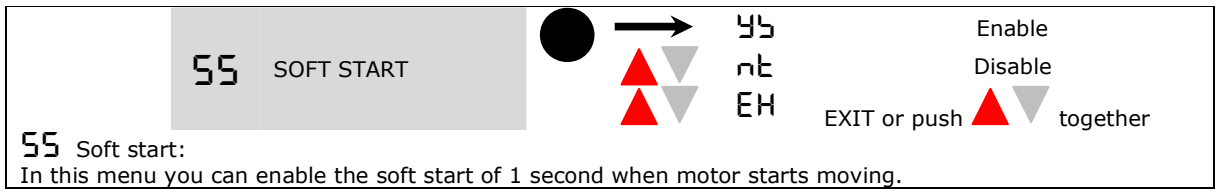


LP Enable low power mode:
In this menu you can enable the low power mode.

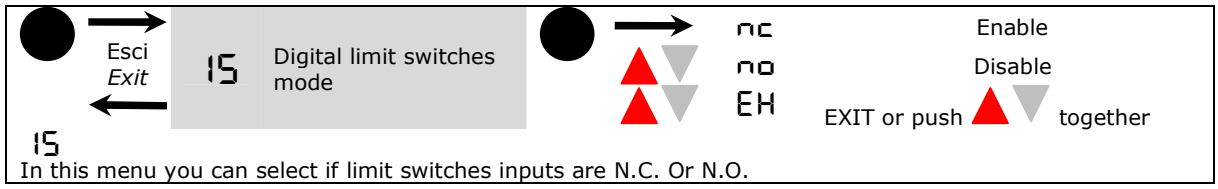
Attention: when this function is enabled, the display is not longer showing input status (Display off in stand-by).



cS Enable kickback stroke:
In this menu you can enable the stroke at start to unlock electric lock and the final stroke to lock it.



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



IS
In this menu you can select if limit switches inputs are N.C. Or N.O.

QUICK TABLE BASE MENU

DISPLAY	DESCRIPTION	DATA	DESCRIPTION	DATA	Descr
oL	*Operating logic*	StEP	*Step by step*		
		AtO	*Automatic closing with stop funcion.*		
		cd	Automatic *closing uninterruptible CONDOMINIUM*		
		EnD	*EXIT*		
Lc	*Learning / removing transmitters code*	c1	*Learn a transmitter on channel 1*		
		c2	*Learn a transmitter on channel 2*		
		rtE	*Erase codes*	YES	*Erase all codes*
		EnD	Uscita		
LT	*Learn working time*	Au	*Automatic learning procedure*		
		Mn	*Mutomatic learning procedure*		
		EnD	*EXIT*		
SP	*Set pause time*	0-99			
dM	*Dead man mode*	o1	*Open motor 1*		
		c1	*Close motor 1*		
		o2	*Open motor 2*		
		c2	*Close motor 2*		
		EnD	*EXIT*		
EnD	*EXIT*				

QUICK TABLE ADVANCED MENU

DISPLAY	DESCRIPTION	DATA	DESCRIPTION	
tN	Working times menu	t1	Working time motor1	0-99
		S1	Start time slowdown motor1	
		t2	Working time motor2	
		S2	Start time slowdown motor2	
		do	Motors delay opening	
		dc	Motors delay closing	
		tc	Courtesy light time x 10sec.	
		tL	Electric lock activation time	
		Eh	EXIT	
SG	Single wing mode	YS	Yes	
		nt	No	
		Eh	Exit	
d2	Default settings	YS	Yes	
		nt	No	
		Eh	EXIT	
rc	Release torque at work end	YS	Yes	
		nt	No	
		Eh	EXIT	
Ar	Enable automatic transmitters leaning	YS	Yes	
		nt	No	
		Eh	EXIT	
LP	Enable low power mode	YS	Yes	
		nt	No	
		Eh	EXIT	
cS	Enable kickback stroke	YS	Yes	
		nt	No	
		Eh	EXIT	
SS	Soft start	YS	Yes	
		nt	No	
		Eh	EXIT	
IS	Digital limit switches	nc	N.C	
		no	N.O	
		Eh	EXIT	
Eh	*EXIT*			

OPERATING LOGIC TABLES					
St *step by step*					
PHASE	***COMMAND***				
	Start	*Pedestrian*	*Photocell*	Photostop	Stop
CLOSED	*Opens*	*Opens*	*Ignored*	*Stops*	Stop
OPENING	*Stops*	*Stops*	*Ignored*	*Stops and waits release*	
OPEN	*Closes*	*Closes*	*Ignored*	*Stops*	
CLOSING	*Stops*	*Stops*	*Reverses*	*Stops, wait release, reverses*	
STOP	*Ignored*	*Ignored*	*Ignored*	*Ignored*	-

At *Automatic closing*					
PHASE	***COMMAND***				
	Start	*Pedestrian*	*Photocell*	Photostop	Stop
CLOSED	*Opens*	*Opens*	*Ignored*	*Stops*	Stop
OPENING	*Stops*	*Stops*	*Ignored*	*Stops and waits release*	
OPEN	*Closes*	*Closes*	*Ignored*	*Stops*	
DURING PAUSE	*Exits pause*	*Exits pause*	*Reloads time*	*Reloads time*	
CLOSING	*Stops*	*Stops*	*Reverses*	*Stops, wait release, reverses*	
STOP	*Ignored*	*Ignored*	*Ignored*	*Ignored*	-

cd *condominium mode*					
PHASE	***COMMAND***				
	Start	*Pedestrian*	*Photocell*	Photostop	Stop
CLOSED	*Opens*	*Opens*	*Ignored*	*Stops*	Stop
OPENING	*Ignored*	*Ignored*	*Ignored*	*Stops and waits release*	
OPEN	*Ignored*	*Ignored*	*Ignored*	*Stops*	
DURING PAUSE	*Reloads time*	*Reloads time*	*Reloads time*	*Reloads time*	
CLOSING	*Ignored*	*Ignored*	*Reverses*	*Stops, wait release, reverses*	
STOP	*Ignored*	*Ignored*	*Ignored*	*Ignored*	-

Default settings

Here it follows list of default settings, the same set after a d2 command of advanced menu

Item		Default	
oL	Operating logic	St	Step by step
SP	Pause time	10	10 seconds
t1-t2	Working time motor 1 and 2	30	30 seconds
S1-S2	Slowing down time motor 1	20	20 seconds
do	Wings delay opening	02	2 seconds
dc	Wings delay closing	05	5 seconds
tc	Courtesy light time	12	120 seconds
tL	Electric-lock time	02	2 seconds
SG	Single gate mode	nt	Not
rc	Release end travel torque	nt	Not
Ar	Auto learning transmitters	YS	Yes
LP	Low power mode	nt	Not
cS	Kickback stroke	nt	Not
SS	Soft-start	nt	Not
IS	Digital limit switches mode	nc	Normal Close

Diagnostic and troubleshooting

The control unit has a self diagnostic software able to find problems. Once a problem occurs, a code is shown on the display in alternance with command status.
Here it follows a troubleshooting table.

Error code	***Problem and eventual solution***
E1	*Power control system failure.* *Send board in assistance.*
E2	*Obstacle detected in the previous cycle (by analog edges).* *Verify that gate is free and there's no obstacles in the range.*
E3	*Photocells or photostop obstructed for longer than 2 minutes.* *Verify that photocells and photostop aren't obstructed, and if there's no bugs inside them.* *Verify wiring to this devices.*
E4	*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.*