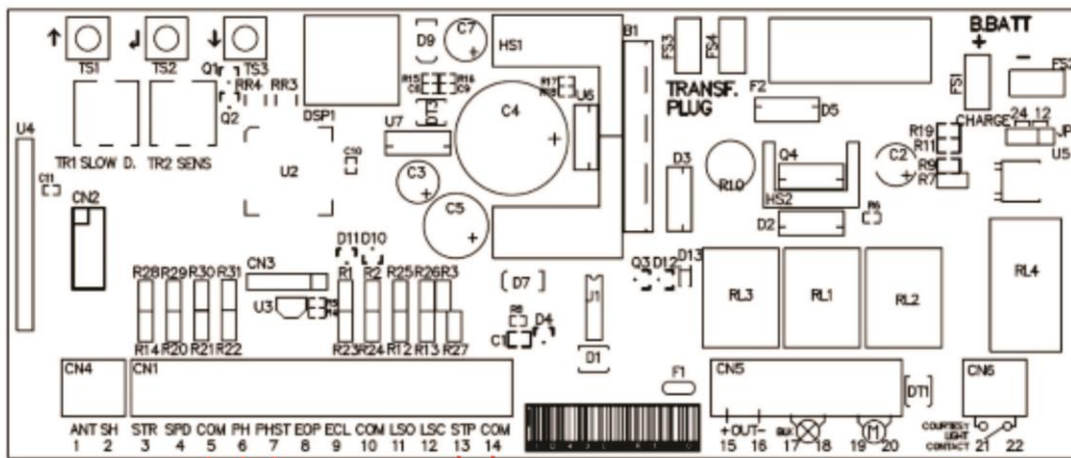


TIPS & TRICKS

ASA6 ID400



- **TIP** – You need solid opening and closing stops. The control board will search for these when programming. Make sure they have no movement or flex.
- **TIP** – You need to fit three small loops of wire to your safety inputs to make anything work. These need to be removed later if you install safety devices to these input terminals. But for now take three pieces of light gauge wire (speaker or telephone wire is good) about 50mm long and strip both ends 7mm and insert them as above from 5 to 6, 5 to 7 and 13 to 14.
 - **TIP** - Ensure JP1 on the control board is set to the correct voltage for your system.
- **TIP** – The transformer has two voltages. Use red and black for 12 volts or red and green for 24 volts. These connect to FS3 and FS4.
 - **TIP** – Look for further highlighted tips throughout the manual.
 - **TIP** – The manual offers both automatic programming and manual programming. Manual programming gives more control and is preferred by professional installers but auto programming works just fine so give it a .
- **TIP** – If using solar power refer to the manual for correct input power connection. Also get hold of a copy of the solar power tips n tricks.

CONVERTING FROM AN OLD K50 OR CTR50

- The terminals from J1 (left side) are now terminals 15 to 22 (right side)
 - The terminals from J2 (middle) are now terminals 3 to 14 (left side)
- Your power input and battery connect to the same terminals as the old K50 or CTR50.
- As your installation used the K50 / CTR50 board your mechanical stops should all be in place so you might find it easiest to program using the “AU” method (automatic). You can make adjustments via the menu from there. Just be certain to start with the gates in the fully open position.

AUTOMATIC SOLUTIONS

Australia Pty Ltd

ASA6 - ID-400



GENERAL

Look for these. They are "Tips N Tricks"

ASA6

Motor Voltage – 12 volt
Absorbed Power – 70 watts
Speed – 10 m/min
Maximum Thrust – 390 N
Protection Level – IP55
Duty Cycle – 80%
Dimensions – 210L x 190W x 330H
Current Absorbed – 2.3A

Maximum Leaf Weight – 600 Kg
Torque – 13.5 Nm Slow Speed Regulator – Yes

ID-400

Motor Voltage - 12V DC
Motor Inputs - One
Battery Charger – Inbuilt
Receiver – Inbuilt
Limit Switches – Yes
Pedestrian Input – Yes (NO)
Start Input - Yes (NO)
Stop Input – Yes (NC)
Photocell Input – Two (NC)

Solar power notes and connections on the last page.

There is a video on the ASA6 online at -

www.automaticsolutions.com.au/assetshttp://www.automaticsolutions.com.au/assets/videos/asa6-id400/asa6-id400.html

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 slide 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 has both solid opening stops and solid closing stops.

GENERAL ORDER OF INSTALLATION

To ensure a good installation of the gear motors ASA6, we suggest the following order of installation:

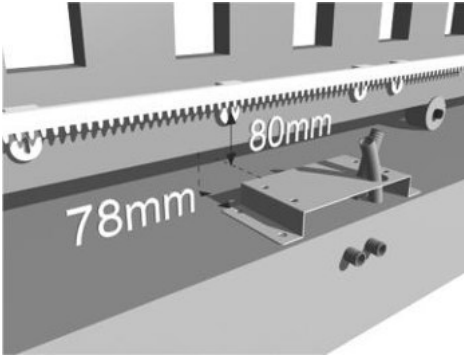
- 1 - Open the box and take out gear motor. Inspect the contents and ensure all components are present.
- 2 - Make sure that the gate is rolling freely and does not bind at any point.
- 3 - Determine the height and position of your motor and mark the mounting base position.
- 4 - Install all conduits for mains power supply and other devices.
- 5 - Install your base ensuring a strong, solid fixing. The motor will generate large amounts of torque at start up.
- 6 - Attach the gear motor to the base.
- 7 - Fix your rack to the gate ensuring that you maintain approximately 1mm gap between the rack and the motor pinion.
- 8 - Attach the limit actuators to the rack at the desired open and close positions.
- 9 - Make wiring connections between control board and gate motor.
- 10 - Connect power to the motors control board.
- 11 - Program remote control transmitters.
- 12 - Check motor direction.
- 13 - Program work times.
- 14 - 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 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.



ASA6 SLIDING GATE MOTOR INSTALLATION



INSTALL MOTOR BASE PLATE

The position of the motor base plate will vary with each installation but in general the base plate needs to be 78mm from the side face of your gate. The height of the plate will be determined by your site conditions and gate structure.

The motor will generate a large amount of force on starting and for this reason it is important that the motor base is anchored securely to the ground. A few methods of securing are detailed below.

- On new installs with no track you can weld supports and attach your base to the track before concreting the track in.
- If the track exists but a foundation is required for the motor base, then weld a couple of scrap steel lengths to the base before fixing in concrete. This will ensure that the base does not move in the concrete.
- If you have an existing strong foundation use strong purpose made fasteners to secure the base to the foundation.

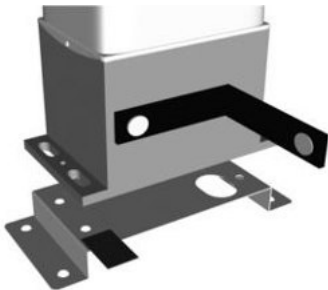
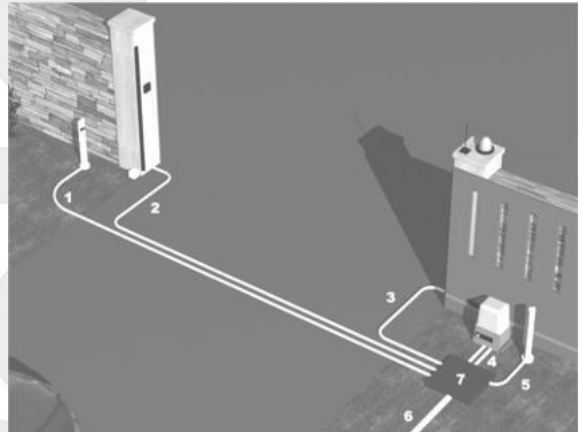
IMPORTANT: In all cases install all conduits before securing your motor base. Once the base is installed it is much more difficult to install conduits.

BOLT DOWN MOTOR

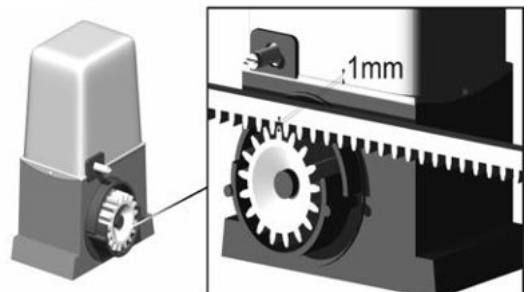
Once your motor base is installed and due time has been given for foundations to dry or settle you can attach your motor to the motor base with the bolts provided.

INSTALL RACK

If you have carefully planned your motor base position then it should be possible to sit a length of rack onto the motor pinion and the rack fixing tabs should be in good position against the back face of the gate. Yes? Good. Put the motor in manual mode using your manual override key – insert the key in the keyway and turn – pull the manual override lever out to 90 degrees. You are now in manual mode and the pinion will rotate freely.



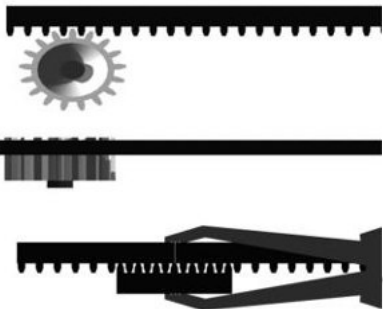
Open the gate fully – position your first length of rack on the pinion and against the gate – get this first length roughly level and attach this length at two end points – adjust the height of this length so that there is approximately a 1mm gap between the rack and the pinion – move the gate backwards and forwards along



this length and check for no tight spots or binding – now install the next length in the same way (if the rack has location lugs this helps to position one end and you only need to position the other end and fix, if not you can use another length upside down and a clamp to hold the new length at the correct height and position) - when all lengths are attached and you are happy that you have no tight spots you can set the remaining fasteners on the rack.

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.



ATTACH LIMIT ACTUATORS

Now attach your limit actuators to the rack in the desired opening and closing position. The actuators should be positioned to hit the limit spring and activate the switch before hitting the opening and closing stops. If after programming the gate drives hard to either stop adjust the actuators and re program so that the gate does not hit the stops.

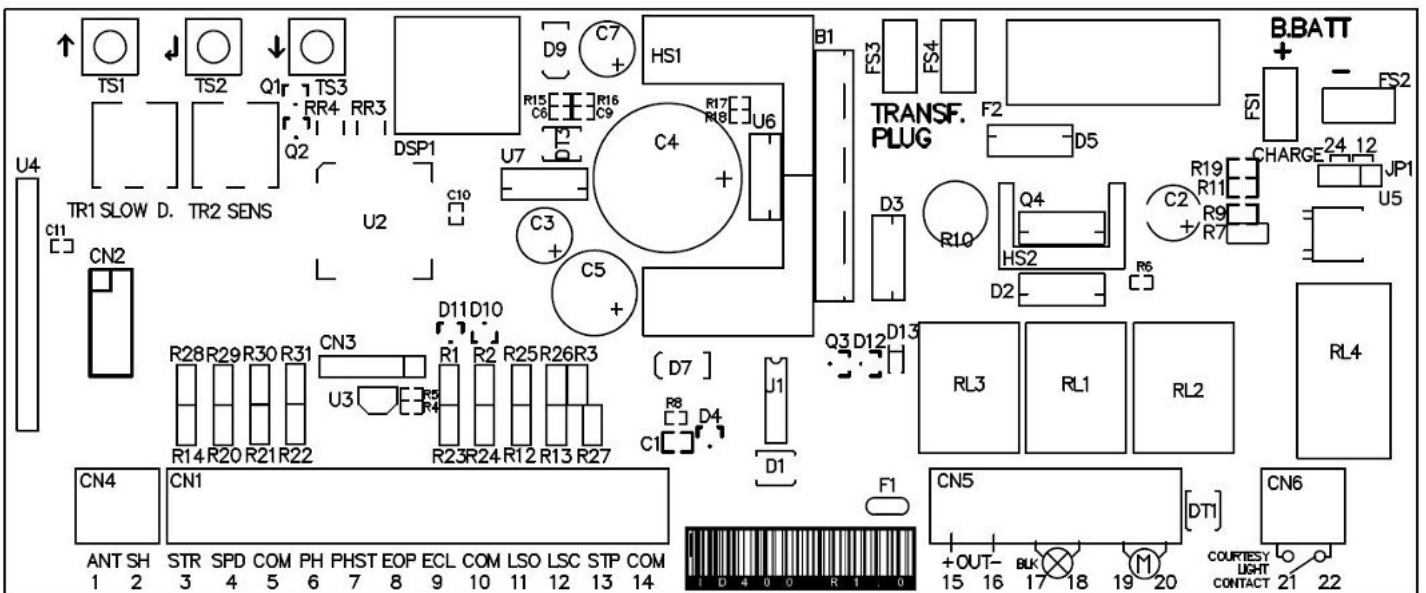


**Control unit low voltage
For sliding Gate**

ID-400

GB Instructions Manual

Rev. 1



GB

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

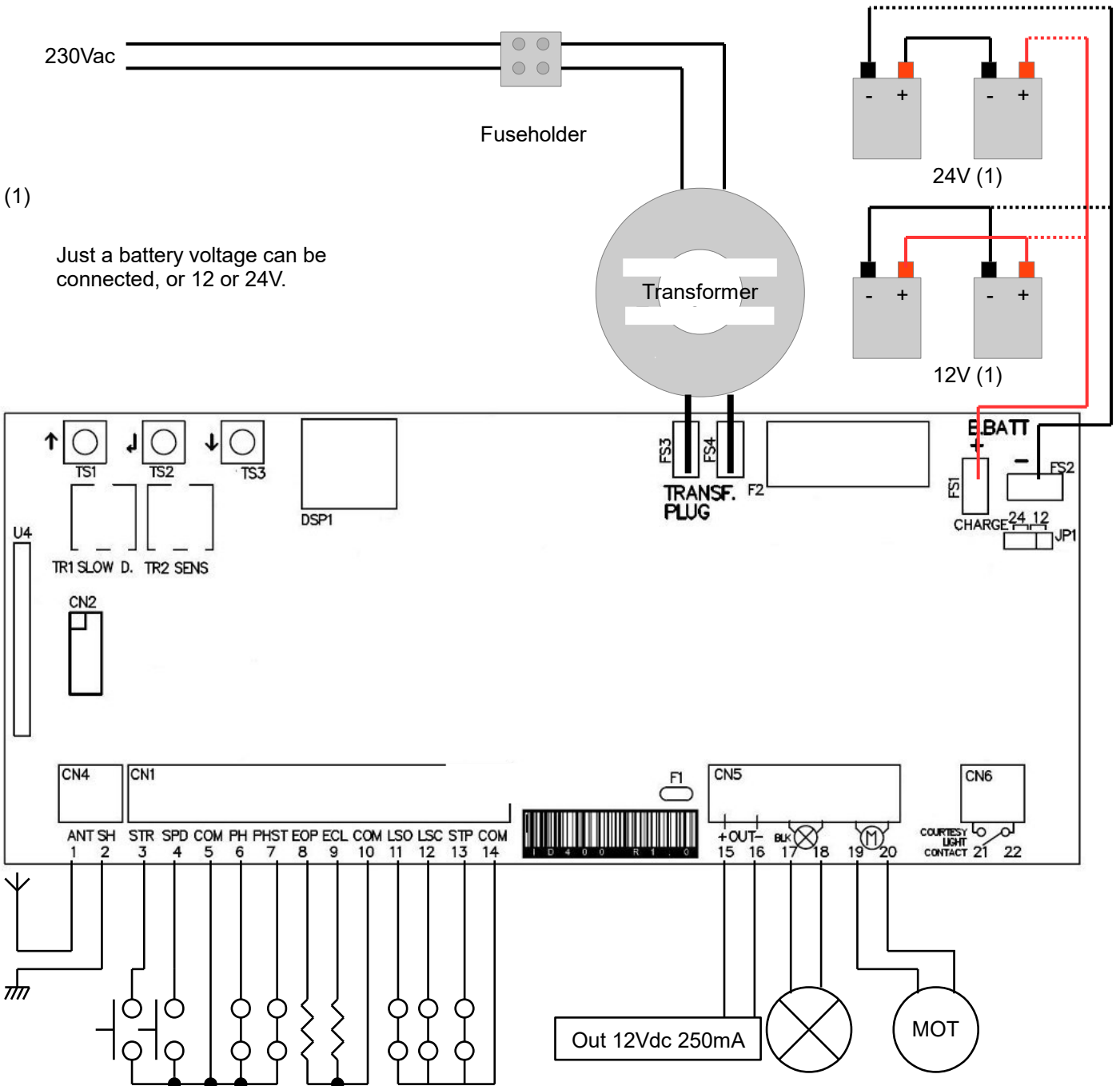
Preliminary checking: Before to install this control unit, verify that all the connected devices respect the technical characteristics mentioned in the table which follows. Verify that a working and suitable life switch is installed upline the installation. Verify that cables composing the installation, are suitable for it.

Technical characteristics

Power Supply	12-20Vac/100-200VA +/-10%
Max. Current out (14-15)	250mA
Embedded Battery charger	12/24V 100mA
Max motor current	8A (200VA transformer)
Max flashing light current	1A
Operating temperature range	-5 +60°C
Backup battery	(2x) 12V 4.5Ah / (1x) 12V 7Ah

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Wiring Main functions



(1)
Just a battery voltage can be connected, or 12 or 24V.

- 1 Antenna
- 2 Antenna's shield
- 3 Start input (NO)
It completely opens the gate
- 4 Pedestrian start in. (NO)
It opens just 1 meter
- 5 Common
- 6 Photocell input (NC)
During pause: Reloads pause
During closing: Reverses motors direction

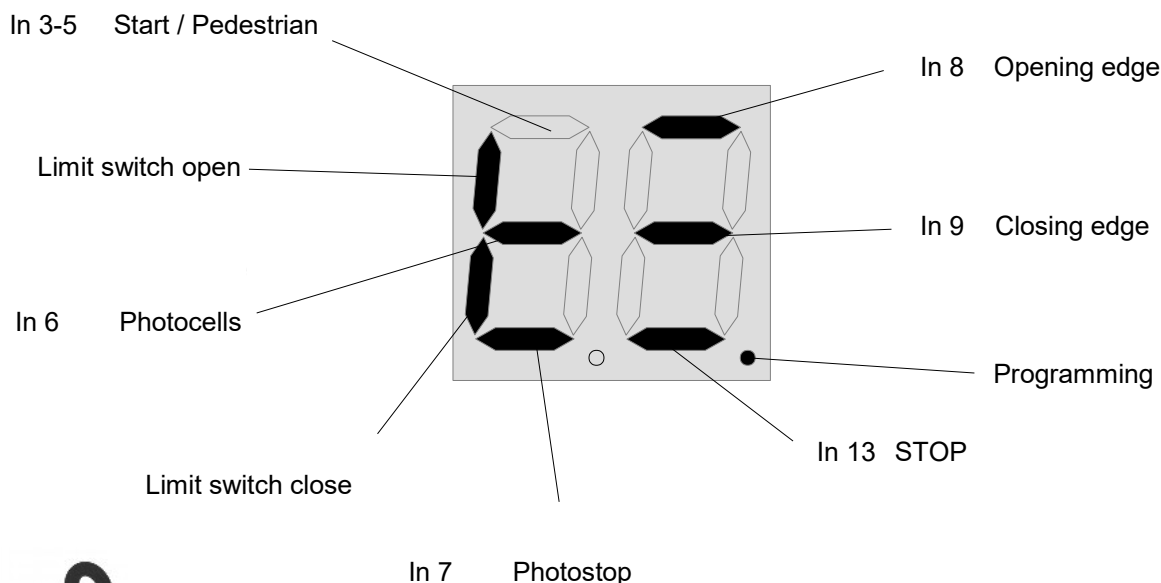
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7	<p>Photostop input (NC) <i>During pause: Reloads pause</i> <i>During closing: Reverses motors direction</i> <i>During opening: stops the motors and waits till contact returns close.</i></p>
8	<p>Analog opening edge input (8K2 ohm) <i>Waiting an opening command: inhibits opening</i> <i>During opening: reverses motor direction for 1 second.</i> <i>If not used left unconnected.</i></p>
9	<p>Analog closing edge input (8K2 ohm) <i>It works as opening edge, but for closing.</i></p>
10	<p>Common</p>
11-12	<p>Limit switches input (NC). <i>They can be inverted together with gate direction (see advanced menu).</i> <i>Left open in case limit switches aren't used.</i></p>
13	<p>Stop input (NC) <i>It always stops motors and blocks control unit activity.</i></p>
14	<p>Common</p>
15-16	<p>Power supply output 12Vdc 250mA</p>
17-18	<p>Flashing light output 12/24V 1A. <i>It flashes fast opening and slow closing. If mains fails, it flashes very slow (4 sec.)</i></p>
19-20	<p>Output motor 8A</p>
21-22	<p>Courtesy light dry contact.</p>
TR1	<p>Slowing down speed trimmer</p>
TR2	<p>Obstacle detection sensibility trimmer</p>
TS1- TS3	<p>Buttons up/down</p>
TS2	<p>Enter button</p>
DSP	<p>Display</p>
FS3- FS4	<p>Transformer input 12-20Vac / 100-200VA</p>
F2	<p>Battery fuse 10A Fast</p>
FS1- FS2	<p>Backup battery input 12/24Vdc</p>
JP1	<p>Backup battery voltage selector 12/24V</p>

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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.



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Quick installation

To program quickly the working times, open the gate, then push TS1 (up) until you read **RU** on the display. The control unit will do several tests and it will learn working times and limit switches installed as well as the gate direction. When the procedure is complete the blinker goes off.

Do not try to do this during setup. You must program through basic programming.

Auto Learning transmitters:

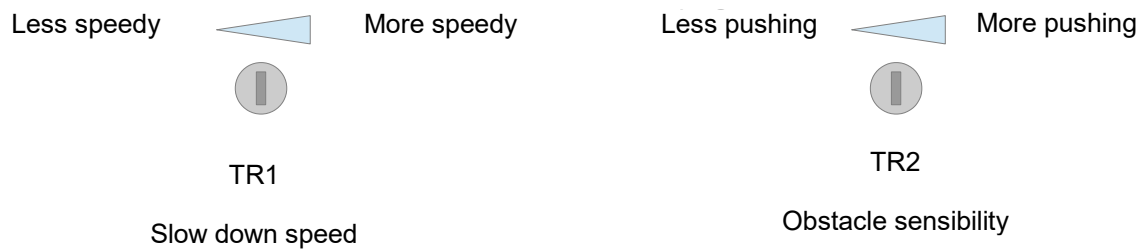
It's possible to learn transmitters quickly without using the base menu. To insert a new transmitter transmit 3 times with the new remote, making at least 1 second pause between each transmission. Then transmit 3 times with a transmitter already in memory and then once with the new. When programming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

Trimmer regulations

The slow down speed trimmer regulates the slow down speed. Do not set speed to low (less than 6 cm/sec on the wing edge) to avoid that gate get problems in too cold conditions.

The obstacle sensibility trimmer fine tunes the obstacle detection level learned by the control unit during working times programming. This fine regulation must be do after working times learning.

Normally the trimmer goes in the center, in this position should be possible to respect rules in most of installations. If it's need to resolve problems related to norms or to environmental situations (ex. strong wind) is it possible to regulate this trimmer increasing or decreasing sensibility.



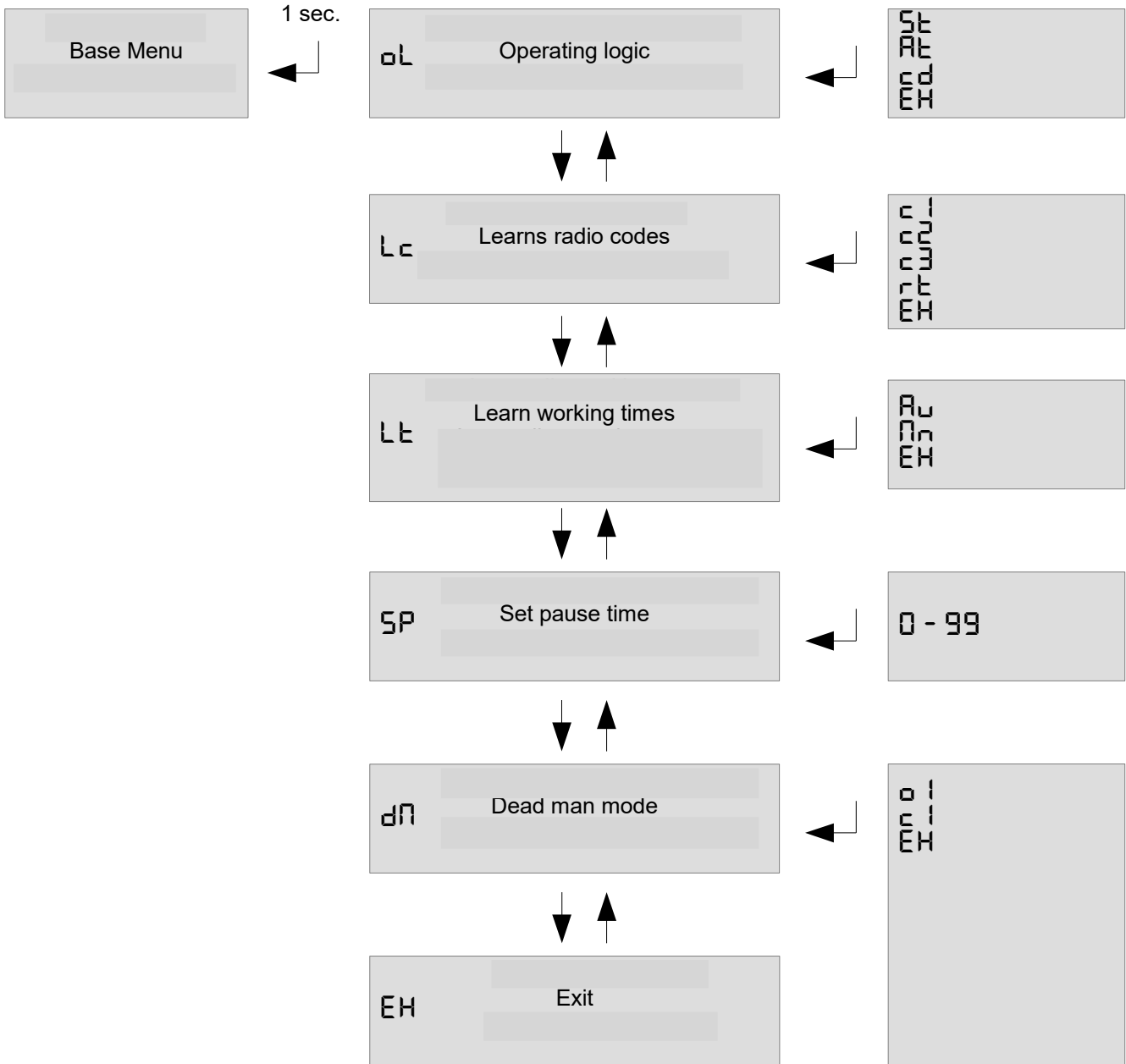
Board Programming

Base Menu

Push TS2 (*enter*) for at least 1 second to enter base menu. **oL** is on the display. With TS1 and TS2 (*up/down*) it is possible to select other functions of this menu. To exit this menu select **EH** or push up and down together. After 2 minutes without actions, the control unit exits itself from this menu.

Press and release TS2. Any more than one second and you enter advanced programming.

Base menu map



Menu di base**Operating logic $\square L$:**

Select $\square L$ and push enter, with *up/down* select wanted logic between following end push once *enter*. Check tab operating logics for further informations.

$\square E$: Step by step logic.

$\square A$: Automatic closing with stop funcion.

$\square d$: Automatic closing for condominium function.

To exit this menu select $\square H$ or push *up/down* together.

 $L C$ Learning / removing transmitters code:

Select learning code function $L C$ and push enter, than select one of following functions with *up/down*.

$C 1$: learn a start code

$C 2$: learn a pedestrian code

$C 3$: learn a courtesy light code

$r E$: Delete all transmitters in memory.

See tab operating logics for further informations.

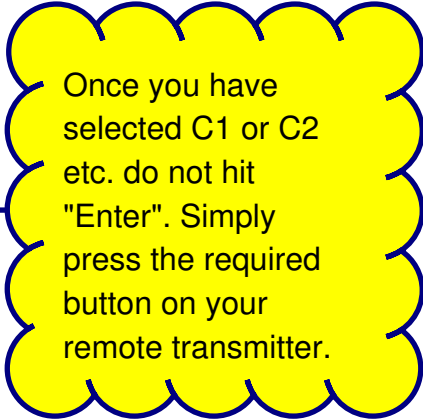
Once selected the channel transmitt the code, on the display is show " $\square H$ " for a while if operation is done.

To replace the channel of a code, just select desired channel and transmitt once the same code.

To delete just one code, select $r E$ and transmitt the code to be removed, on the display is show " $\square H$ " for a while if operation is done.

To delete all codes, select $r E$ and push *enter*, then confirm with $\square \square$.

To exit this menu select $\square H$ or push *up/down* together.



Once you have selected C1 or C2 etc. do not hit "Enter". Simply press the required button on your remote transmitter.

 $L E$ 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 "dead man" function to put the gate in the right position.

Is it possible to program working time automatically, please refer to "**Quick installation**".

Select $L E$ in the base menu and push *enter*, after select the learning mode with *up/down*.

$A \square$: Automatic learning procedure.

$\square \square$: Manual learning procedure.

To exit this menu select $\square H$ or push *up/down* together.

RL Automatic procedure for working time learning:

Attention: in this procedure all safety inputs are disabled.

The wings close themselves, in the meanwhile all the working times and values for obstacle detection sensor are learned. If limit switches are connected (coherent with motor direction) the board learn the direction of the gate. If analogue edges are connected, they are automatically enabled.

RL 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.

Gate starts opening, in this phase it's possible to set the slowing down speed with the trimmer 2. If limit switches aren't installed, push enter button or transmit with remote once gate is open. The control unit makes some test of motor consumption to set the threshold for the obstacle detection sensor.

Once the test is finish, you can see **RL** on the display.

In the phase which follows, *enter* button or a memorized code control following sequence: start closing gate, start slowing down, stop the motor. If limit switches are installed, the gate stops itself when completely closed.

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 "RL operating logic" to enable this function.

RL 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:

RL Open motor

RL Close motor

RL Exit

Keep pushed *enter* to start the selected motor in dead man mode.

Board Programming

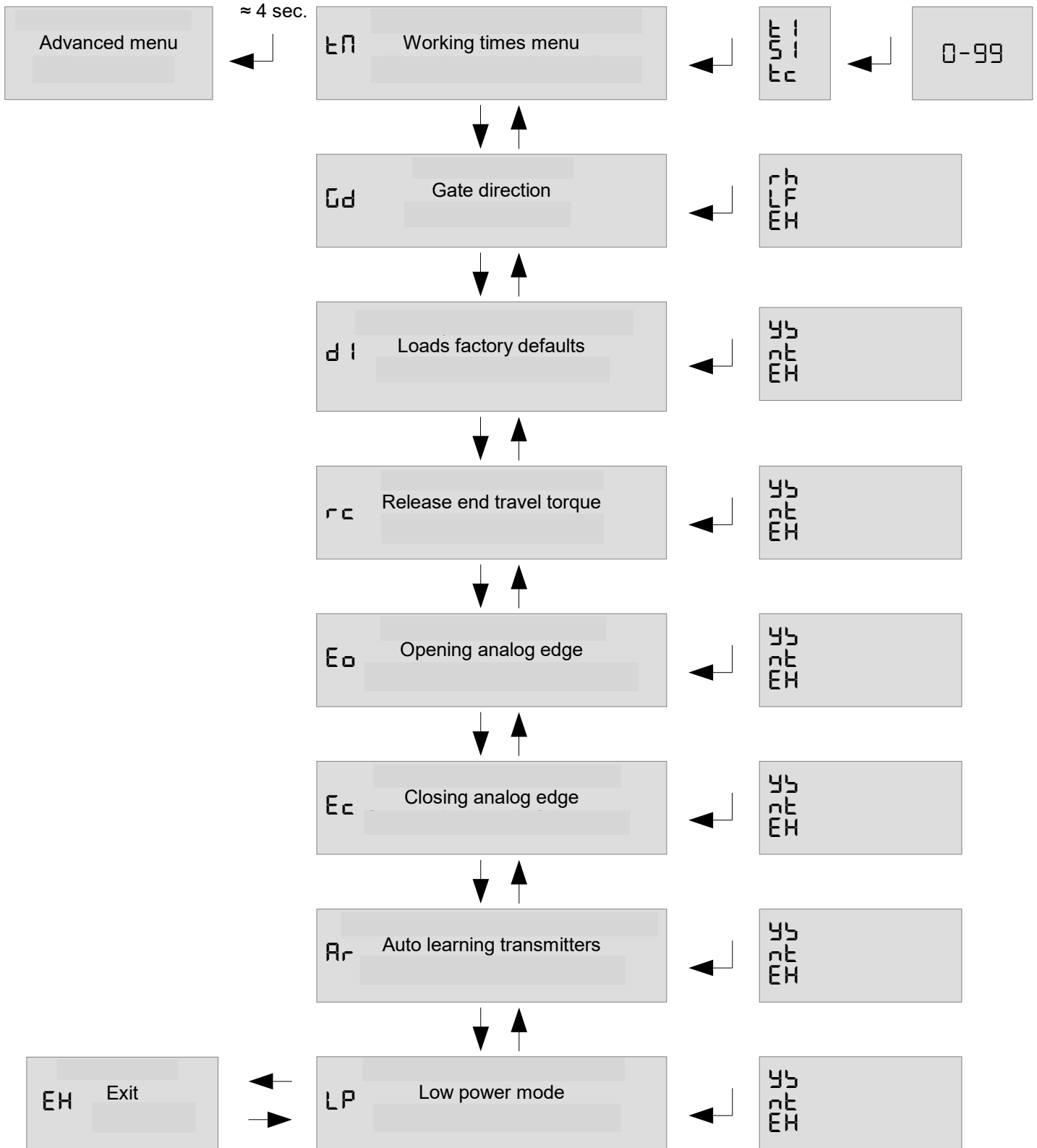
Advanced Menu

Push enter button till on the display is shown **EΠ**. 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



Advanced menu

EH Working times menu:

In this menu it's possible to modify working times of control unit:

- E I – Working time motor 1
- S I – Start time slowdown motor 1
- E C – Courtesy light time (x10 sec)
- EH – 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 **EH** or push together *up* and *down*.

LD Gate direction:

In this menu it's possible to invert motor direction and limit switches according if gate is right or left. Use *up/down* to choose right (RH), left (LF) or exit (EH). Push *enter* to confirm.

DI Load defaults:

Choosing this menu and confirming with yes (YS), sets the control unit at factory defaults.

RC Release torque at work end:

Enabling this function, the motors reverse direction for a while to release the torque at end of work. This function is enabled just if limit switches aren't installed. Use *up/down* to choose yes (YS), not (NL) or exit (EH). Push *enter* to confirm.

EO Enable opening analogue edge:

Enabling this function it's enabled the edge active in opening period.

EO Enable closing analogue edge:

Enabling this function it's enabled the edge active in closing period.

AL 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).

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Operating logic tables

Step by step

Fase	Comando						
	Start	Pedestrian	Photocell	Photostop	Edge opening	Edge closing	Stop
Closed	Opens	Opens	Ignored	Stops	Stops	Ignored	Stop
Opening	Stops	Stops	Ignored	Stops and waits release	Reverses	Ignored	
Open	Closes	Closes	Ignored	Stops	Ignored	Stops	
Closing	Stops	Stops	Reverses	Reverses	Ignored	Reverses	

GB

Automatic closing

Fase	Comando						
	Start	Pedestrian	Photocell	Photostop	Edge opening	Edge closing	Stop
Closed	Opens	Opens	Ignored	Stops	Stops	Ignored	Stop
Opening	Stops	Stops	Ignored	Stops and waits release	Reverses	Ignored	
Open	Closes	Closes	Stops	Stops	Ignored	Stops	
During pause	Exits pause	Exits	Reloads time	Reloads time	Ignored	Reloads time	
Closing	Stops	Stops	Reverses	Reverses	Ignored	Reverses	



Condominium mode

Fase	Comando						
	Start	Pedestrian	Photocell	Photostop	Edge opening	Edge closing	Stop
Closed	Opens	Opens	Ignored	Stops	Stops	Ignored	Stop
Opening	Ignored	Ignored	Ignored	Stops and waits release	Reverses	Ignored	
Open	Ignored	Ignored	Stops	Stops	Ignored	Stops	
During pause	Reloads time	Reloads time	Reloads time	Reloads time	Ignored	Reloads time	
Closing	Ignored	Ignored	Reverses	Reverses	Ignored	Reverses	



Default settings

Here it follows list of default settings, the same set after a **d f** command of advanced menu.

Item		Default	
OL	Operating logic	St	Step by step
SP	Pause time	10	10 seconds
t f	Working time	30	30 seconds
S f	Slowing down time	20	20 seconds
tc	Electric lock activation time	12	120 seconds
Ed	Gate direction	rh	Right
rc	Release end travel torque	nt	Not
Eo	Opening analog edge	nt	Not
Ec	Closing analog edge	nt	Not
At	Auto learning transmitters	Y5	Yes
LP	Low power mode	nt	Not

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		<p>Mains power fails, system is running with backup battery. <i>Verify mains switch and life switch. Verify fuse on transformer (fuse holder).</i></p>	
E2		<p>Obstacle detected in the previous cycle. <i>Verify that gate is free and there's no obstacles in the range. Verify gate wings aren't blocked.</i></p>	
E3		<p>Photocells or photostop obstructed for longer than 2 minutes. The gate can't start moving and the blinker could be fixed on. <i>Verify that photocells and photostop aren't obstructed, and if there's no bugs inside them. Verify wiring to this devices.</i></p>	
E4		<p>One of the analog edge is engaged for longer than 2 minutes. <i>Verify edges aren't engaged, verify wiring to this devices. If no edge installed, disable them in the advanced menu.</i></p>	
E5		<p>Stop is engaged for longer than 2 minutes. <i>Verify wiring to emergency device. If there isn't an emergency device installed, shunt this input with the common.</i></p>	
E6		<p>Problem on motor. <i>Verify connections to the motor, verify motor can work in dead man mode.</i></p>	

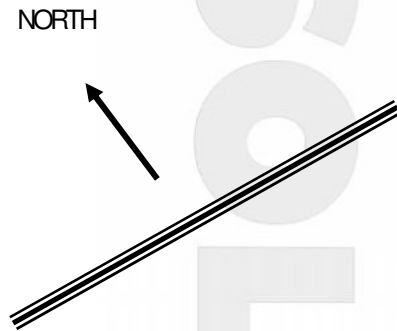
GENERAL SOLAR NOTES

SOLAR PANEL SIZE

Generally speaking simple automatic gate installations will work perfectly in Australia using a 10 watt solar panel. The solar panel size determines the amount of energy you can collect each day. In a simple gate installation we need to collect enough energy to power our control board and run the gate and a 10 watt panel will do this. If however the installation is to include keypads, safety beams or other power hungry devices it may be necessary to increase the solar panel size. Another example where you may wish to consider upsizing your solar panel is where you may have a partially shaded area and you need to collect your energy each day in a shorter period of time. If you do decide to increase the size of your solar panel it may be necessary to install a simple regulator to protect your battery. Check with Automatic Solutions regarding this.

SOLAR PANEL DIRECTION

Your solar panel ideally should be mounted at an angle of 35 degrees and facing north (NB: In Australia).

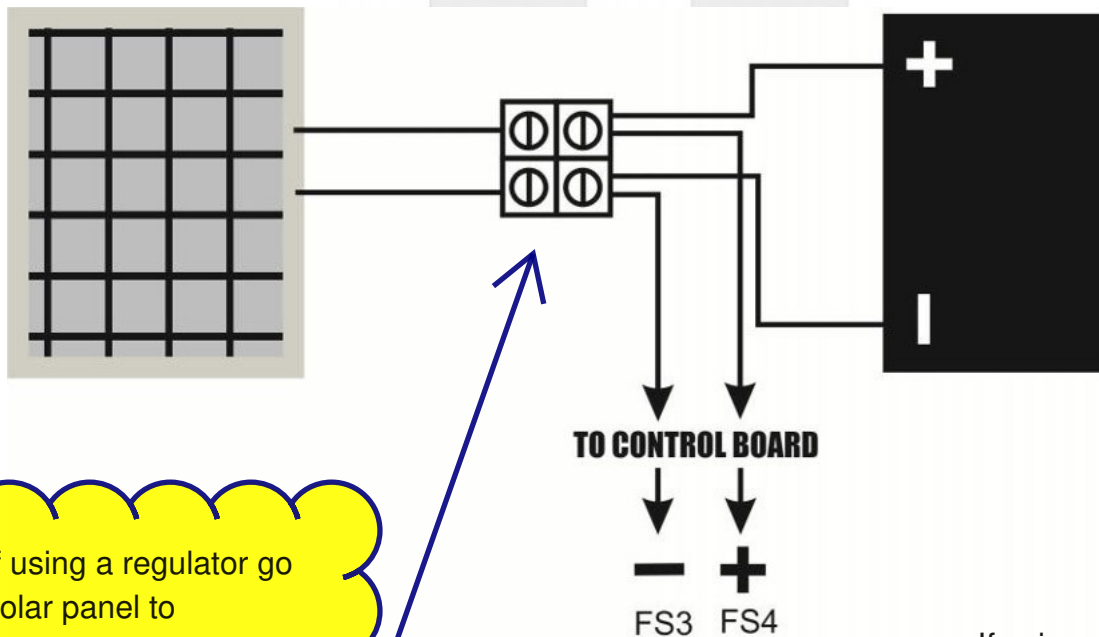


BATTERY SIZE

The battery stores the energy that you collect each day and your system draws on this battery to operate. All batteries have a limit to their storage capacity and can therefore only store enough energy to last our system a certain period of time. What happens if we have for example three days with little or no sunlight, very dark and overcast days? Our battery capacity reduces. The size of the battery will determine the number of days we can have as backup or how many days our system can survive without charging. In general terms bigger is better.

CABLES

Cables must be low voltage cables (5mm is good). Length of cables must be kept to a minimum. Ideally the solar panel will be no more than 10 metres from the battery and the battery will be no more than 5 metres from the motor. Connections must be clean and good quality.



If using a regulator go solar panel to regulator, regulator to battery and then battery to control board. Do not take the

If using a regulator go solar panel to regulator, regulator to battery and then battery to control board. Do not take the board to the regulator.

Solar Panel Connection ID400

