

AUTOMATIC SOLUTIONS

QUICK START INSTRUCTIONS

IMPORTANT - READ THIS FIRST

These instructions are intended as a quick start guide and should be used in conjunction with the manufacturer supplied instructions. These instructions provide you with a basic setup and are based on common installations in Australia. All electrical work in this country is to be performed by licensed electrical contractors. Electricity can kill.

ASA800SOLAR – LOGIC K50



GENERAL

ASA8

Motor Voltage – 12 volt
Power Absorbed – 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 – 2.5 metres
Maximum Leaf Weight – 800 Kg
Torque – 13.5 Nm

K50

Motor Voltage - 12 / 24 DC
Motor Inputs - Two
Battery Charger – Inbuilt 12/24V
Receiver – Inbuilt or External
Limit Switches – Yes / No
Pedestrian Input – Yes (NO)
Start Input - Yes (NO)
Stop Input – Yes (NC)
Photocell Input – Two (NC)
Electric Lock – Yes 12Vdc 1A
Slow Speed Regulator – Yes

PRELIMINARY CHECKS

In order to make the automation work efficiently; the gate to automate must have the following characteristics:

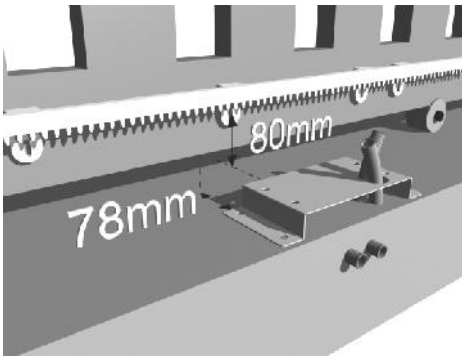
- It must be balanced.
- It must slide fluently.
- You must be able to carry out manual closing and opening of the gate without any effort.
- Make sure that the gate has a solid structure and that there is no friction points in its movement.
- Make sure that the gate has both solid opening stops and solid closing stops.

GENERAL ORDER OF INSTALLATION

To ensure a good installation of the gear motors ASA8, 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 solar 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 - Connect power to the motors control board.
- 10 - Program remote control transmitters.
- 11 - Check motor direction.
- 12 - Program work times.
- 13 - Test your installation.
- 14 - Attach your safety devices and access devices one by one testing for correct operation at each point.

ASA8 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.

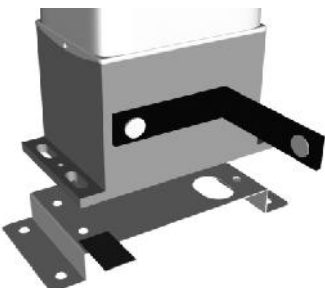
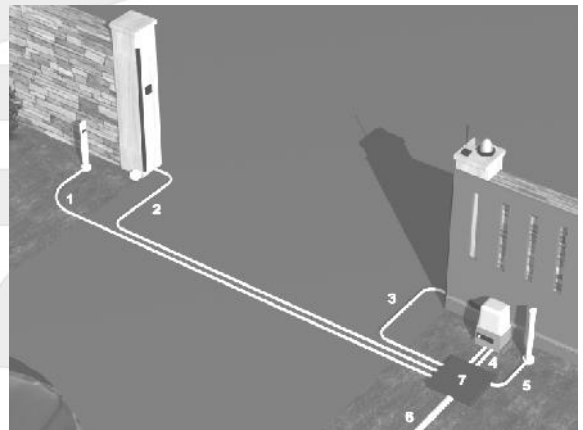
IMPORTANT: In all cases install all conduits before securing your motor base. Once the base is installed it is much more difficult to install conduits.

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.

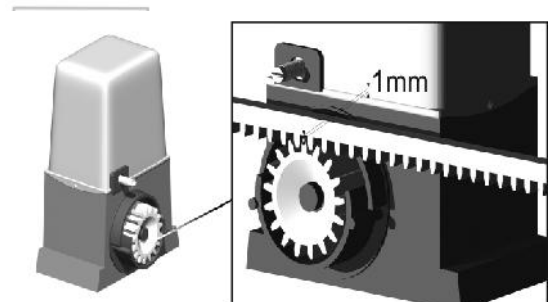
INSTALL RACK

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.

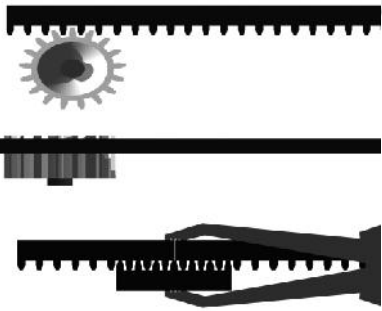


Open the gate fully – position your first length of rack on the pinion and against the gate – get this first length roughly level and attach this length at two end points – adjust the

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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

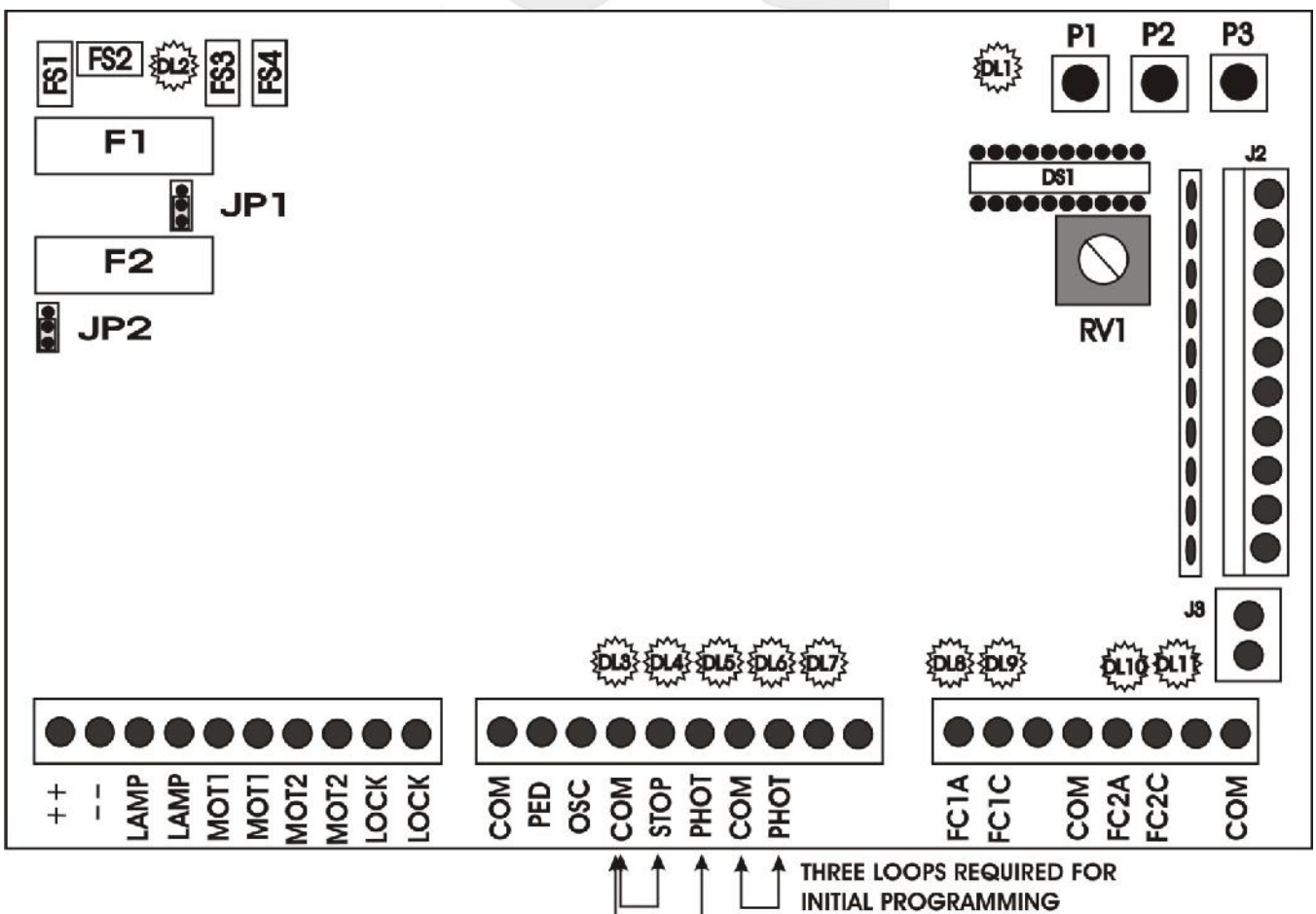
This is a critical point in ensuring long trouble free operation of your automation system, yet it is relatively simple. Each gate must have a positive and well secured opening stop and closing stop. There are a range of stops available over the counter or you can make them yourself but the critical 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.

K50 LOGIC CONTROL BOARD INSTALLATION



BOARD INTERFACE

COMPONENTS

FS1-2	Battery charge plug 12-24 Vdc
FS3-4	Power supply input 12-20 Vac
F1	Battery Fuse 10A Fast
F2	Output Fuse 2A Slow
JP1	Battery Charge Selector 12/24Vdc
JP2	Output Selector 12/24Vdc
DL1	Programming LED
DL2	Power Supply LED
DL3 DL4	Open Input LED

TERMINALS – LEFT TO RIGHT

12Vdc/24Vdc	Choose via jumper JP2 Pos 1&2 = 12V
LAMP	Flashing light output
MOT1	Output for motor 1 10A Max
MOT2	Output for motor 2 10A Max
LOCK	Output for electric lock 12Vdc 1A
COM	Common for open inputs PED & OSC
PED	Pedestrian open input (NO)
START	Open/Stop/Close input (NO)
COM	Common for STOP & PHOT inputs

DL5 DL6 DL7	Stop & Photo LED	STOP	Stop input (NC)
DL8 DL9	Motor1 Limit Switch LED	PHOTO	Photocell Input (NC)
DL10 DL11	Motor2 Limit Switch LED	COM	Photocell 2 common
J3	Antenna Connector	PHOTO	Photocell 2 Input (NC)
J2	External receiver connector	FC1A	Limit switch 1 opening input (NC)
RV1	Slowing speed regulator	FC1C	Limit switch 1 closing input (NC)
DS1	Setting Up Dip Switches	COM	Common for limit switch 1
P1	Radio code programming button	FC2A	Limit switch 2 opening input (NC)
P2	Working time programming button	FC2C	Limit switch 2 closing input (NC)
P3	Pause time programming button	COM	Common for limit switch 2

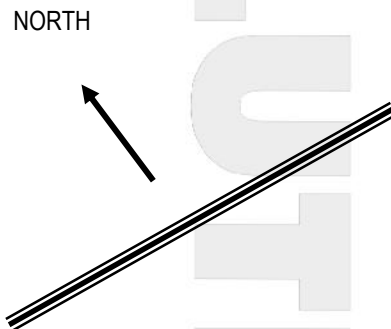
GENERAL SOLAR NOTES

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).

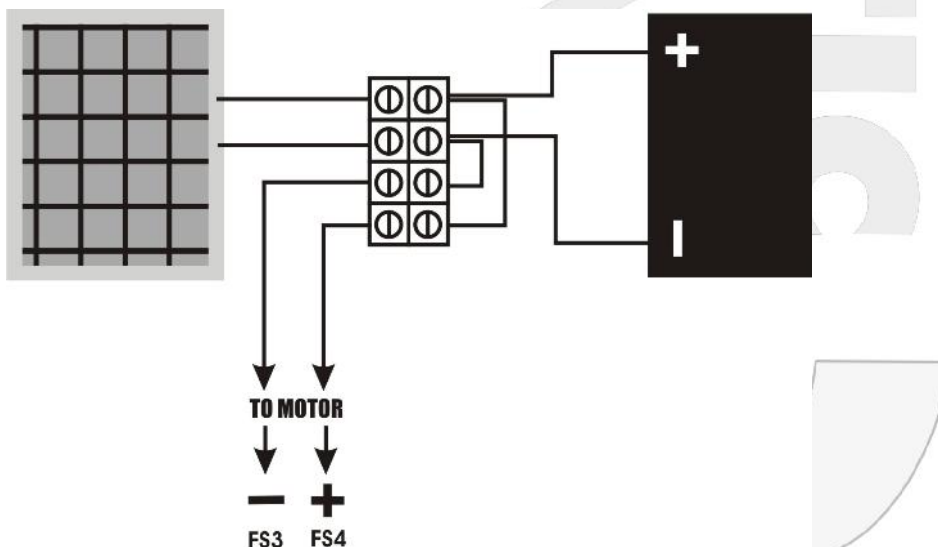


BATTERY SIZE

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.



INSTALL YOUR INPUT LOOPS

(NB: This section below should be prewired in the factory)

The only wiring needed before testing your installation is to install a few loops into the “NC” or normally closed inputs. Cut three short lengths (50mm) of single core cable and strip the two ends. Connect one end to the “photo” terminals and one end to the “com” terminal. Do the same with the “stop” terminal and the “com”. These will need to be removed later if you add safety beams (photocells) or a stop button to your installation but for now will close the inputs and make the board operational.

FIT AN ANTENNA WIRE

If you intend using a full antenna, install this now into the antenna terminals taking care not to allow the shield to make any contact with the core of your coaxial. Otherwise cut a small length (150mm) of light cable and strip one end. Place the stripped end into the right hand antenna terminal and secure.

SET YOUR DIP SWITCHES AND JUMPERS

Set your dip switches as per the settings below.

Dip Switch Initial Settings										
ON			3				7			10
OFF	1	2		4	5	6		8	9	

Ensure that jumper “JP1” the clip is installed to cover the 12 Volt pins and the same thing on jumper “JP2”.

DISCONNECT TRANSFORMER

Disconnect the transformer red and black wire from the logic control board at FS3 and FS4. The transformer can remain in place and is doing no harm.

CONNECT BATTERY

Connect your solar panel to your battery carefully observing polarity to ensure positive to positive and negative to negative. As you need to also have cables from the battery to the control board it may be easier to use a row of strip connectors to make these connections.

CONNECT POWER

You can now connect your battery to your logic control board paying careful attention to correct polarity. Use female battery terminal spade connectors to connect the negative to “FS3 and the positive to FS4”.

CHARGING YOUR BATTERY

If your battery has not been charged before installation you will need to let the system sit for a few good sunny days to bring battery up to full charge before programming, testing and using the system. Alternatively you can give the battery a good charge beforehand so long as you use a sealed lead acid battery charger. (NB: Most car battery chargers will not do).

PROGRAM YOUR TRANSMITTERS (REMOTES)

To proceed to the next step you need to have programmed a remote control transmitter into the control board. To program a transmitter press “P1” once on the control board and wait for the led “DL1” to light. Press the button (channel) on your remote control transmitter that you wish to use for two seconds and release. Your transmitter should now be programmed. Repeat for other transmitters. You can also program a second button (channel) on any transmitter to open in pedestrian mode. To program a transmitter to pedestrian opening press “P1” twice and release (NB: Each press of P1 should be spaced by 1 second minimum), when “DL1” is lit press the button (channel) you wish to use for pedestrian access. Up to 50 codes may be stored in any combination of full open or pedestrian open. To erase all codes press and hold “P1” until the red LED “DL1” goes out (about 10 seconds)

IMPORTANT - (If you are not using transmitters you will need to connect a normally open momentary pushbutton into “COM” and “START” terminals to proceed)

CHECK FOR CORRECT MOTOR DIRECTION

With your gear motor in manual, position the gate about half way open and lock into automatic mode. Using the transmitter you programmed press the button and release. Because this is the first activation after a power interruption your gate should open. Press your transmitter again to stop the gate. To correct any gate which did not open simply turn off the power, disconnect the battery lead and reverse the motor terminals. You also need to swap your limit switch inputs “FC2A” and “FC2C”. Apply power and test again.

PROGRAM THE CONTROL BOARD

OPTION 1 - Automatic setting of the work times.

Use your manual override key and put the gate to the fully open position. Set the trimmer RV1 to about half way. Press push button "P2" once for a few seconds until "DL1" lights and release. After a few seconds the logic control will make some tests, and then it will self learn the working time by closing the gate. The board will automatically exit this mode when complete and led "DL1" will go out. Use your transmitter (or pushbutton) to test your installation.

OPTION 2 - Manual setting of the work times.

Use your manual override key and put the gate to the fully closed position. Set the trimmer RV1 to about half way. Press push button "P2" once and hold until "DL1" goes out (approx 10 seconds). After a few seconds the gate/s start opening at a reduced speed. During this phase use trimmer "RV1" to obtain the desired slow down speed. When the gate reaches fully open press "P2" and release. Wait a few seconds for "DL1" to light. Next press "P2" and release as follows to register the following steps.

Press 1 – Motor 2 Start

Press 2 – Motor 2 Slow down start (about 500mm to 1000mm from the stop)

Press 3 – Motor 2 Stop (Wait 5 seconds after hitting travel stop)

The board will automatically exit this mode when complete and led "DL1" will go out. Use your transmitter (or pushbutton) to test your installation.

SOLAR POWER SAVE MODE

Turn Dip Switch 10 off to conserve power – the LED lights will go out.

END OF SIMPLE SETUP

If all went well you have finished simple setup.

AUTOMATIC SOLUTIONS AUSTRALIA PTY LTD
PO BOX 1034 CANNING VALE WESTERN AUSTRALIA 6970
TECHNICAL HELP – service@automaticsolutions.com.au

SELF INSTALL - NEED TECHNICAL ASSISTANCE?

OPTION 1: DIRECT WITH THE SERVICE DESK – QUICKEST AND MOST EFFECTIVE METHOD

Submit your enquiry direct with the service desk at – service@automaticsolutions.com.au

The service desk has the most experienced staff in Australia to help with your problem but they need your help.

- Describe your problem in detail and as clearly as possible. Don't forget to include a telephone number.
- Be certain to detail which model or models of you are working with.
- Send photos of the installation – they love photos. The people at the service desk are good but they are even better when they can see the installation. Send photos of the overall scene so they can see the entire installation. Also send photos of the wiring to the control board and any other part of the installation you think is relevant.
- Send video if appropriate. Smartphone's these days take remarkably good video in small file sizes which can be emailed in a moment. If your problem needs a video to show the issue please feel free to send it.

**NOTE: THIS IS BY FAR THE FASTEST AND MOST SUCCESSFUL WAY TO SOLVE YOUR PROBLEM
PHOTOS AND VIDEOS ARE THE NEXT BEST THING TO BEING THERE**

OPTION 2: LODGE YOUR ENQUIRY LOCALLY - SLOWER BUT CAN STILL BE EFFECTIVE

Make contact with the store of purchase. Branch staffs are typically not technicians and dependent on their length of service will have varying degrees of technical knowledge. If they cannot help however they will certainly either source help locally from their technicians or make contact with the service technicians on your behalf.

OPTION 3: SERVICE CALL WITH AUTOMATIC SOLUTIONS TECHNICIAN – SLOWEST METHOD

If you fall within the local branch service area it may be possible to book a local technician to look at your installation. Wait times will vary dependent on local workloads. The cost is a service fee which includes the first half hour and the hourly rate thereafter. If any Automatic Solutions provided parts are found to be defective and within warranty these will be provided free of charge.

(NOTE: If you suspect that any parts are defective and within warranty you may wish to consider option 4)

A note on this option: If you decide on this option you will be asked to sign an "authorisation to proceed" which will provide legal authority and payment security. This form has three options available of which only the first two are available to you. The third option is for warranty repairs only for full install customers. Self install customers requiring warranty only service need to refer to option four below.

IMPORTANT: IN SHORT THIS OPTION WILL INCUR CHARGES

OPTION 4: RETURN THE PRODUCT IF BELIEVED TO BE FAULTY

As a self install customer who has purchased product if you believe the product to be faulty rather than an installation or site problem you have the option of returning the product for evaluation and to exercise your right to a replacement, repair or refund as applicable. All returned product is forwarded immediately to the service technicians for evaluation and response. There are two main methods available to return product –

- Direct to the service centre – this is the quickest method as it cuts out the branch delay
- Via the branch of purchase – slower because of the delay at the branch

When choosing this option you need to complete a product return form. This form gives you all the information on procedure involved and where to send to. These are available at the branch of purchase, can be emailed to you (contact your branch), or available here - <http://automaticsolutions.com.au/page/warranty.php>