

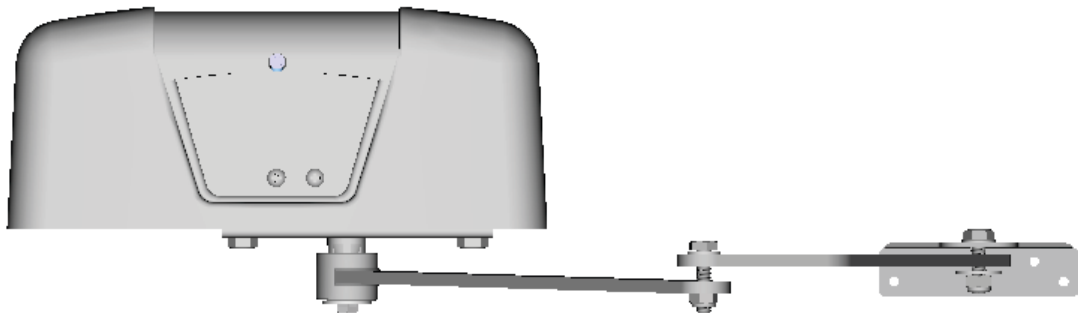


Automation Systems

AUSTRALIA

RAPTOR 24

24 Volt Articulating Arm System
with Limit Switches



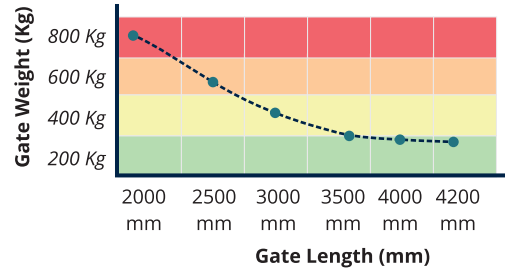
Important!

Please read the manual carefully as it contains important points that need to be followed for a successful installation, we recommend reading all the preliminary information FIRST (page 1-2) then proceed to the relevant installation section and read in its entirety at least once before beginning the installation.

Pull to open installation begins on Page 3
Push to open installation begins on Page 7

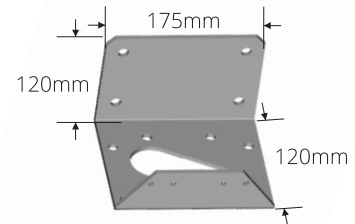
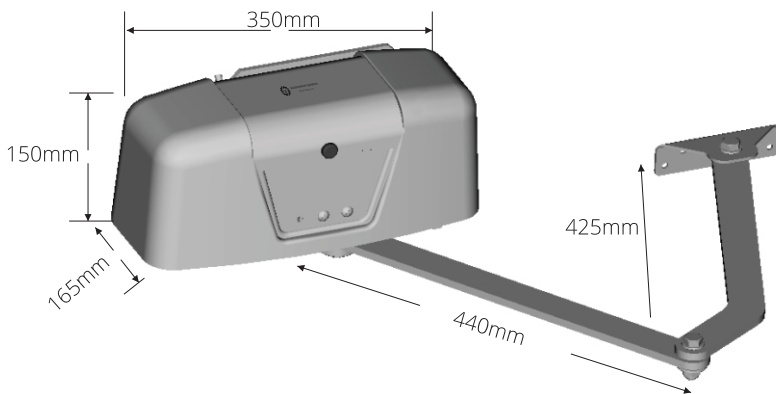
Specifications

Voltage	24V DC
Current	3A
Force	500Nm
Gearing Structure	Reduction Gearbox (All Metal)
Case Material	Die Cast Alloy with Plastic Top Cover
Arm Material	Steel
Limit Type	Limit Switch (Open and Closed)
Duty Cycle	90%
Working Temperature	-20°C to 60°C
IP Rating	IP 55

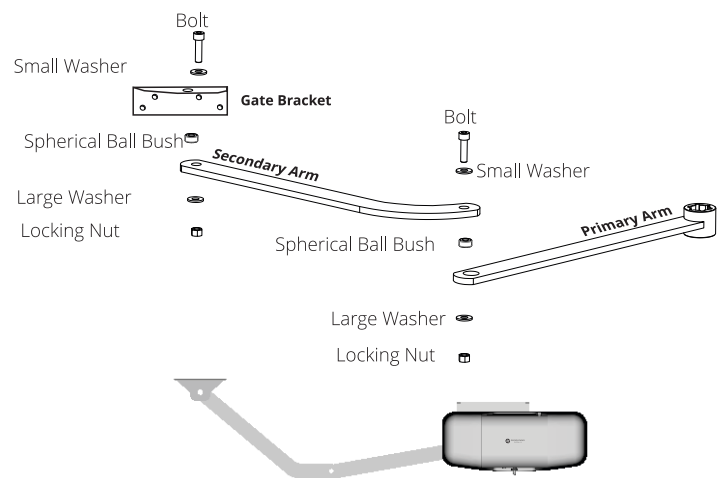
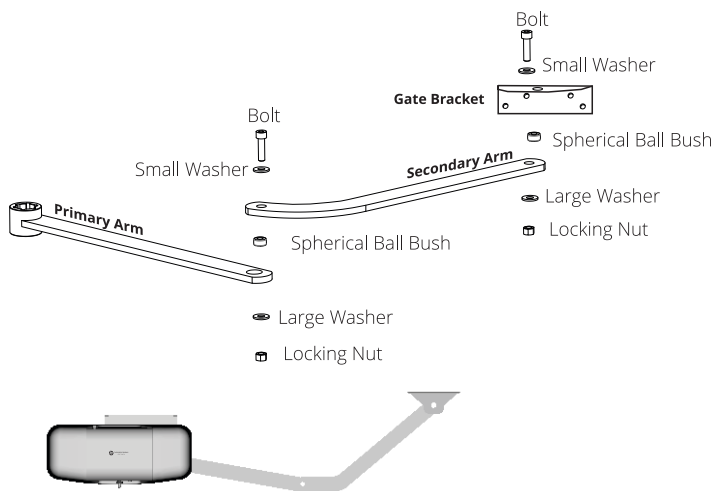


*Tested ratings are based on ball bearing hinges and no wind resistance

Dimensions



Spherical Joint Arm Assembly

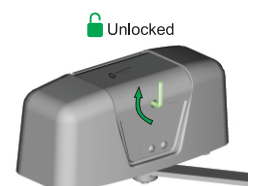
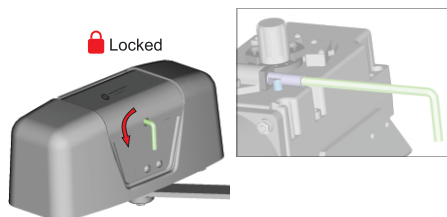


Manual Release/Clutch

1. Remove the plastic plug

2. Insert the Allen key with the bend facing down into the hole til it mates with the adapter Inside

3. Turn the Allen key 90°



Whilst in manual release (clutch disengaged) the gate can be operated manually as needed.



Whilst in locked state (clutch engaged) the gate can only be operated electronically.

Installers Brief Checklist

- Ensure the gate(s) structure is rigid and does not flex
- Ensure you will be using an adequate fastening system to suit the structure and environment
- Ensure the gate(s) move freely and uniformly
- Ensure that the installation measurements can be adhered to
- Ensure that if any underground work is occurring you have followed the local regulations and checked with utilities providers
- Ensure the correct operator is to be installed based on size, weight, geometry and wind resistance
- Never supply mains power to a gate motor directly
- Never install if it will present a hazard or danger

Placement

The Raptor articulated gate operator requires a minimum of 40mm gate to ground clearance allowing the arm to slip onto the output shaft whilst the operator is still not bolted to the mounting plate. The ideal minimum to allow the arm to slide on/off whilst motor is mounted to the mounting plate is 90mm.



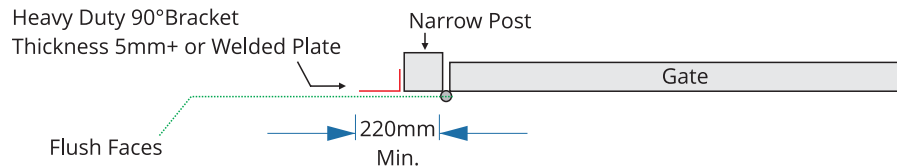
Ideal Minimum 90mm from ground to mounting Rail



ABSOLUTE Minimum 40mm from ground to Gate Centre Rail

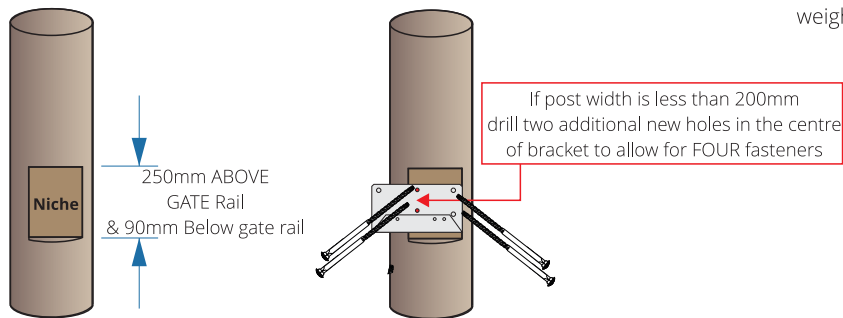
Extending Narrow Posts (Pull To Open)

When a gate post is too narrow for automation an extension plate/bracket to widen the mounting area will be required.



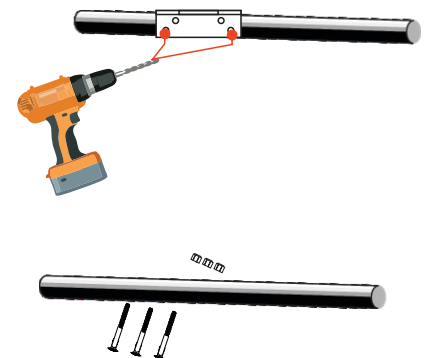
Round Timber Posts

Cut a Niche to allow for a flat installation surface. Use Coach Bolt or Coach Screws for Fixing

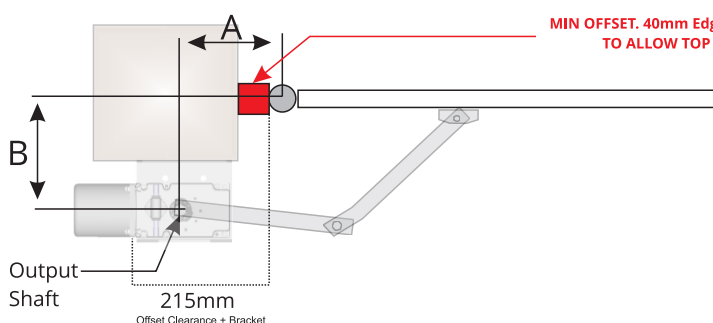


Farm Gates

Drill Holes according to correct placement of the gate bracket, farm gates will only require two fixing bolts due to their light weight.



Opening Angle Assistance Chart



A & B Measurements are Centre to Centre

		B						
		90mm	110mm	150mm	200mm	250mm	300mm	350mm
A Including 40mm Offset	130mm	120°	120°	110°	105°	105°	100°	95°
	150mm	120°	120°	120°	115°	110°	105°	100°
	170mm	125°	120°	115°	115°	110°	105°	100°

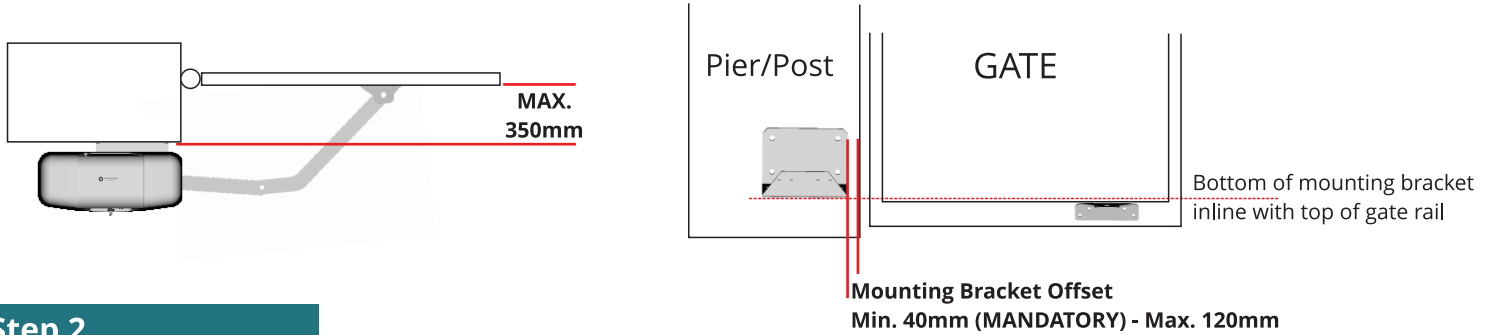
Pull To Open Installation (Gate opens TOWARDS the motor)

Step 1

Install the raptors mounting bracket in accordance with the Minimum/Maximum mounting set away from the corner of pier/post to the leading edge of the bracket.

The Maximum distance from the back of pier/post to the back face of the gate is 350mm.

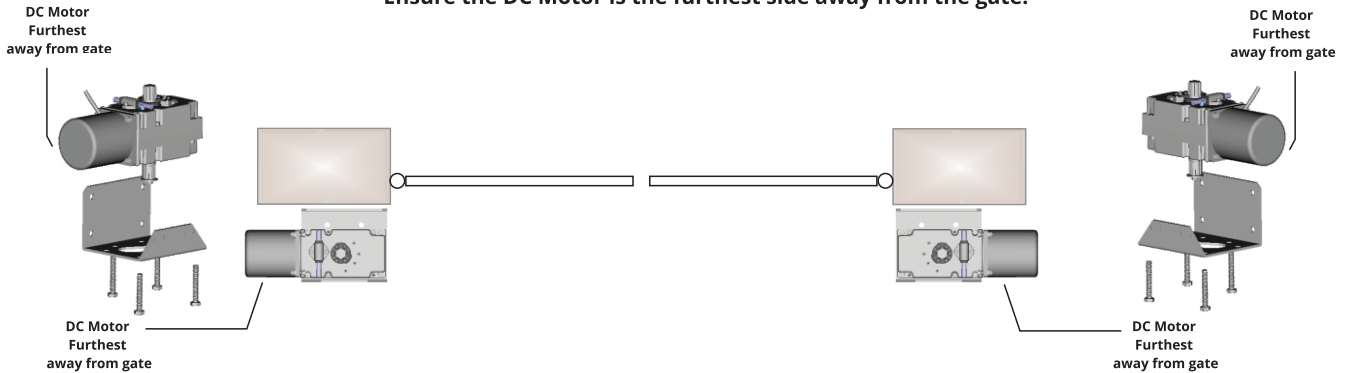
The mounting bracket offset minimum of 40mm allows for clear area for the top cover installation and a limitation of a 90° opening if the gate is DIRECTLY mounted to pier. The mounting bracket offset maximum of 120mm allows for a swing angle of up to 120° opening.



Step 2

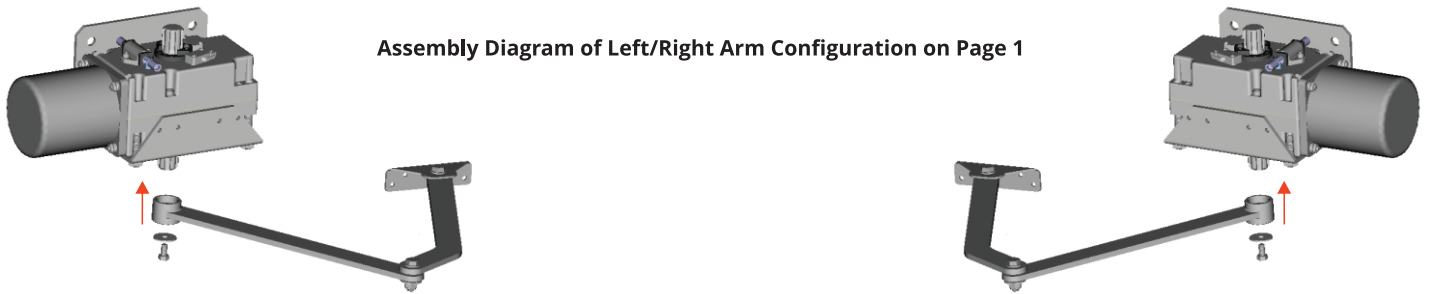
Install the Raptor motor-gearbox assembly to the mounting plate with the four bolts from the underside of the mounting plate, ensure to use hand tools and not impact tools.

Ensure the DC Motor is the furthest side away from the gate.



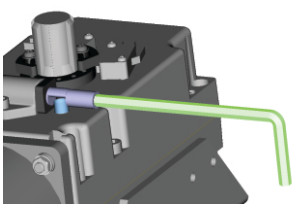
Step 3

Install the linking arm to the operators output shaft and secure in place using the bolt and washer, this will ensure the arm does not slide off the output shaft.



Step 4

Manually release the operator by inserting the Allen key into the manual release position and turning 180°, this will now allow the primary arm to move freely.



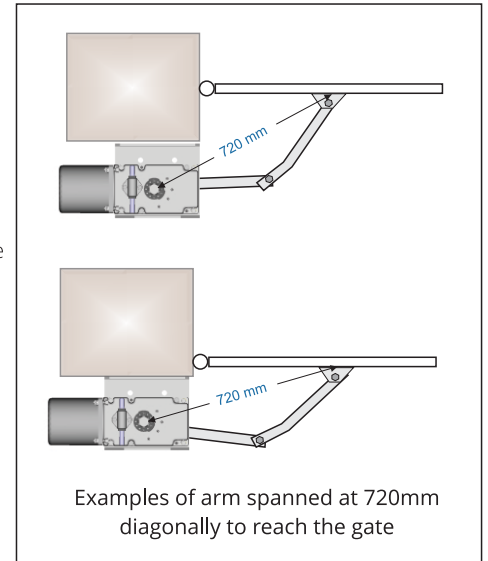
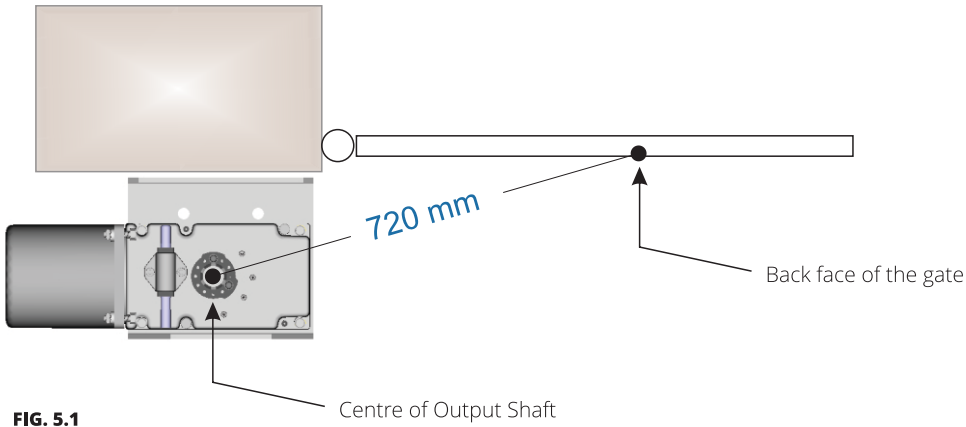
Whilst in manual release (clutch disengaged) the gate can be operated manually as needed.



Whilst in locked state (clutch engaged) the gate can only be operated electronically.

Step 5

Span the arm and attach to the gate at 720mm away from output shaft to back face of the gate, this measurement is made diagonally as per Fig 5.1. This is the centre position of the gate bracket. Install the gate bracket to this position by moving the arm assembly.

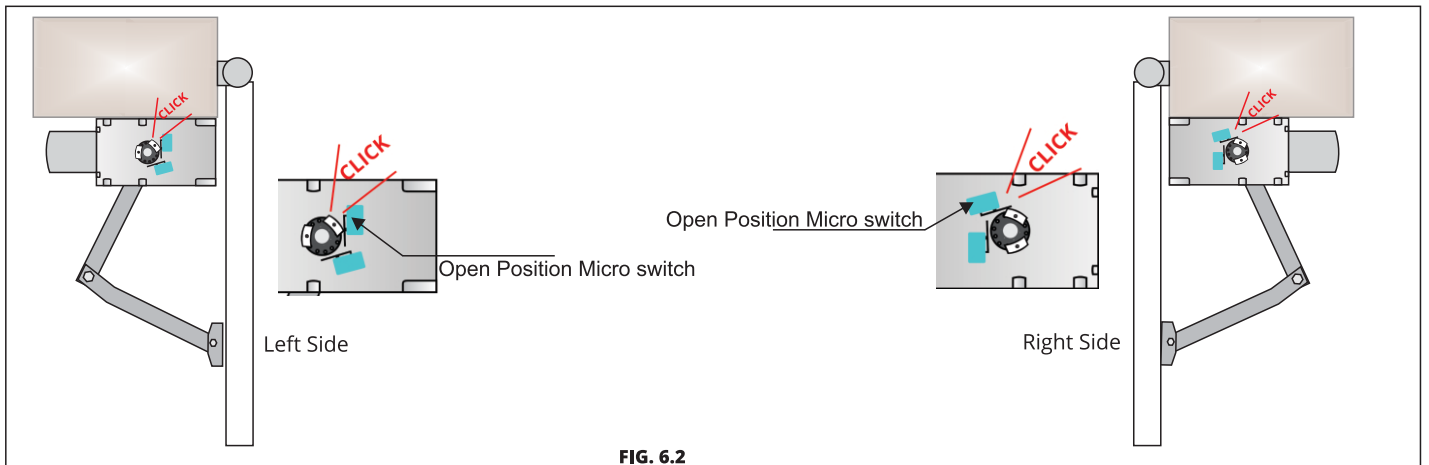
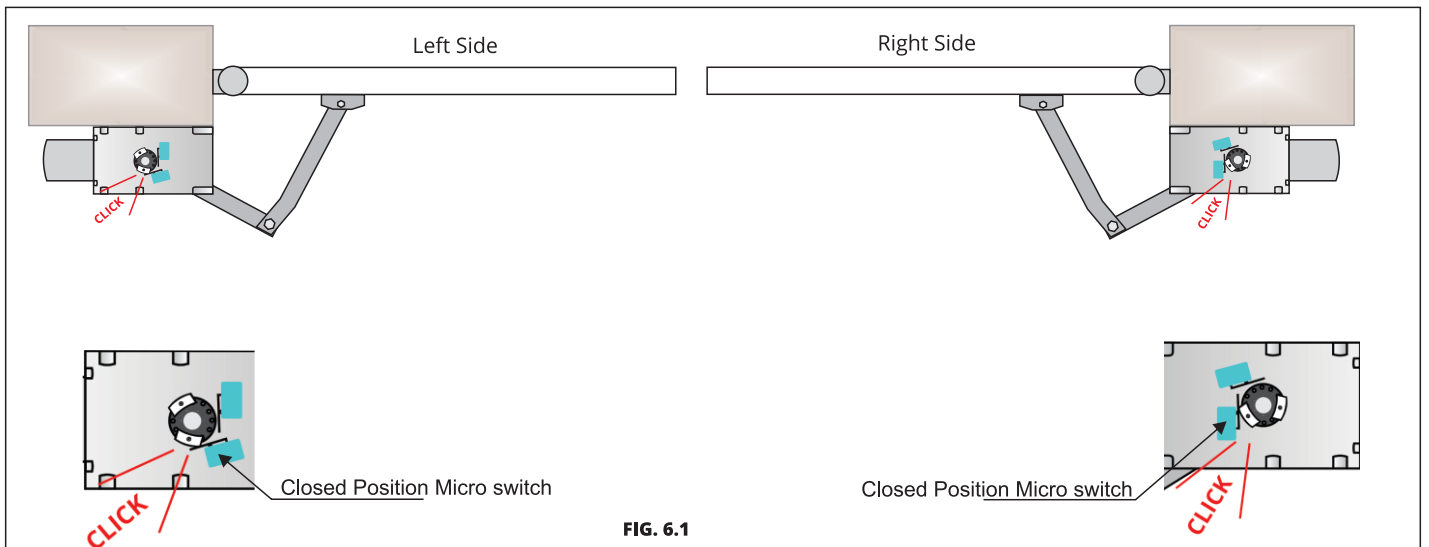


Step 6

Set the closed (Fig 6.1) and open (Fig 6.2) position limit switches by adjusting the strikers position on the perforated disc. It is important to note the trigger should ALWAYS approach the micro switch from the open area and not the area between the switches. Ideally the screw should be in the centre of the striker allowing for fine tuning later on (after LT calibration).

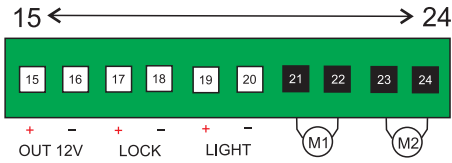
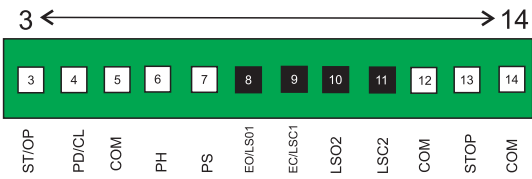
ONLY USE A SCREWDRIVER TO MAKE THIS ADJUSTMENT

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Step 7

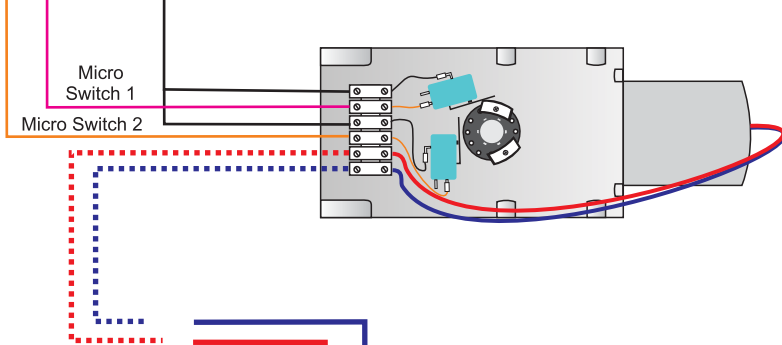
Follow the illustration bellow for the connection to the Premier 24 Swing Gate Controller paying attention to the **Motor 2 connection being the master gate** and Motor 1 Connection being the Second Motor for Double Gates.



OPEN POSITION SWITCH
 Open Switch Terminal 10 (Motor 2)
 Open Switch Terminal 8 (Motor 1)

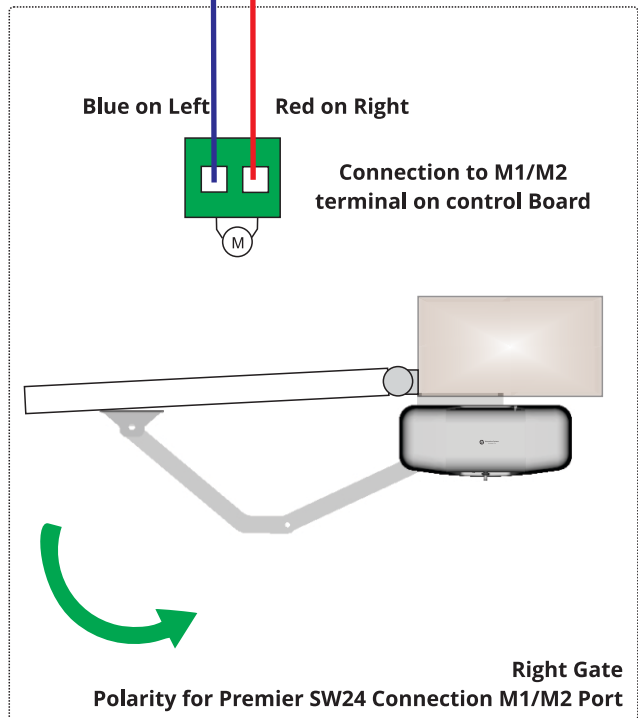
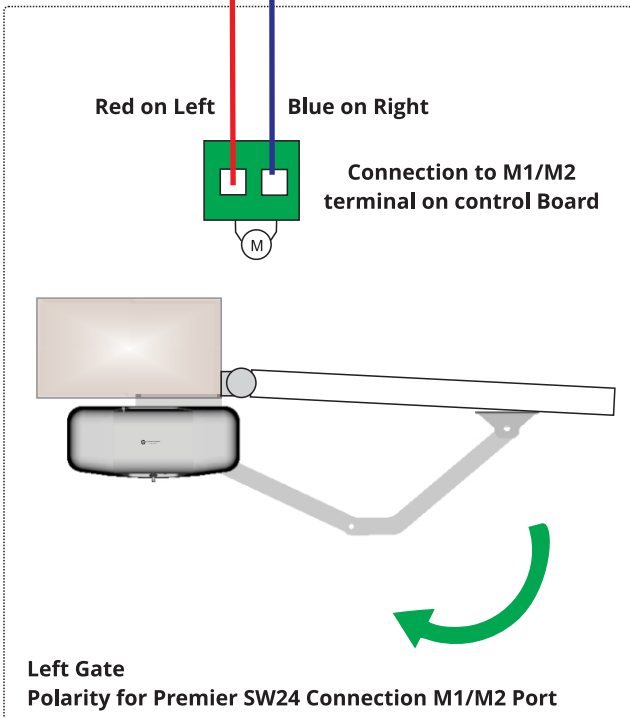
CLOSED POSITION SWITCH
 Close Switch Terminal 11 (Motor 2)
 Close Switch Terminal 9 (Motor 1)

BOTH Micro Switch Commons Terminal 12



Motor "1" (M1)
SLAVE Motor

Motor "2" (M2)
Only Motor in Single Gates
 * Works with the Electric Lock (If Used)
 ** First Motor to OPEN in Double gates



Step 8

Follow the Premier SW24 Instructions for setting the control board to accept limit switches in direct connection to the control board (NC) along with series limit to be defined as (NT). Furthermore if required set the system to single gate if only one motor unit is in use (YS). These settings are all located in the advanced menu of the control board.

LS

Direct to control board Limit Switches (NOT in series to motor)



NC

Sets the controller to accept NORMALLY CLOSED limit switches directly to the control board limit switch terminals
Opening E_o AND Closing edge E_c inputs must be set to ds

SL

Limit Switches in SERIES to Motor

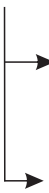


NT

Feature is disabled, Used for over current motors OR motors requiring the Limit Switches wired DIRECTLY to the controller

SG

Single Gate Mode (Default Double Gate)



YS

Single Gate Mode

NT

Double Gate Mode

Step 9

Run the motor test mode for each gate through the Premier SW24 Control board to ensure each gate opens to its limit switch and also its closed position limit switch, make any necessary changes now to the limit strikers if required.

Page 19 of Premier SW24 manual

Step 10

With the gate(s) in the full open position activate the Learn time calibration to enable the controller to learn the distances of each gates operation.

Page 20 of Premier SW24 manual for Double Swing Gates

Page 21 of Premier SW24 manual for Single Swing Gates

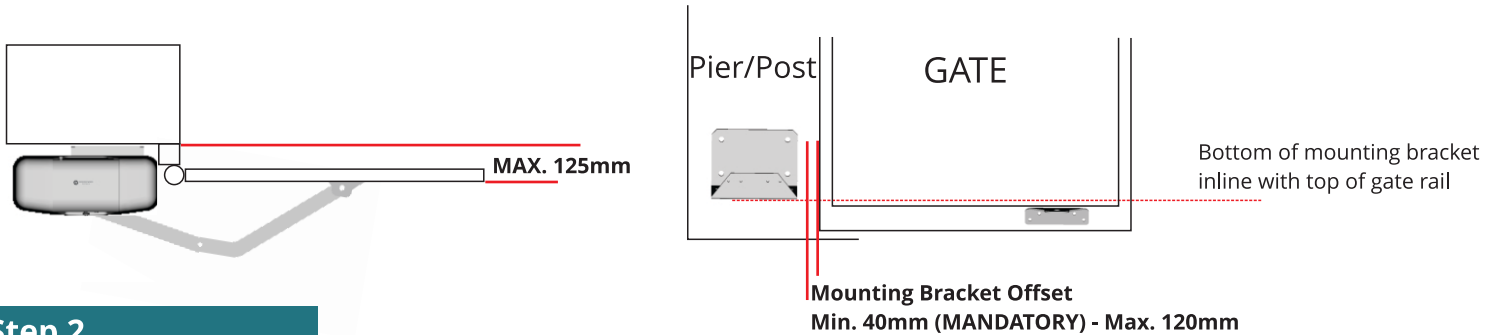
Push To Open Installation (Gate opens AWAY from the motor)

Step 1

Install the raptors mounting bracket in accordance with the Minimum/Maximum mounting set away from the gate to the leading edge of the bracket.

The Maximum depth from the back of gate to the pier mounting face is 125mm, this includes the gate thickness, hinge clearance and also a gate mounting post.

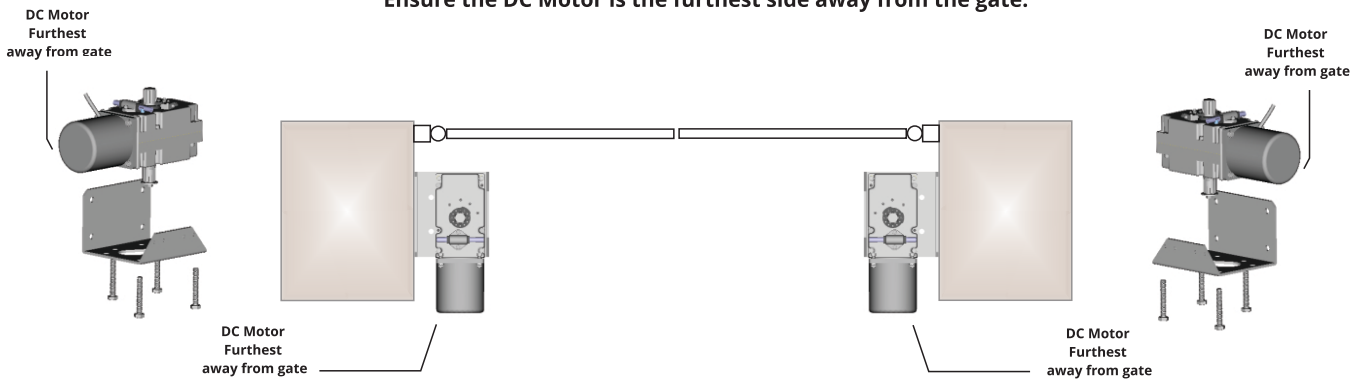
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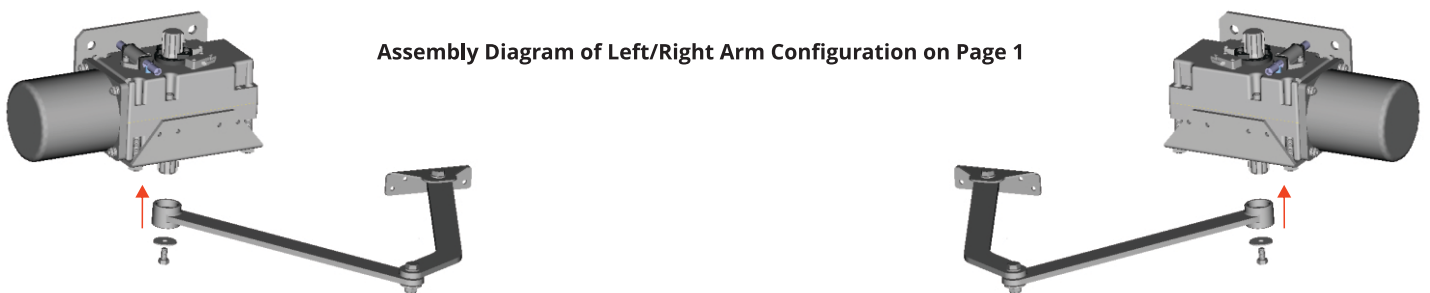
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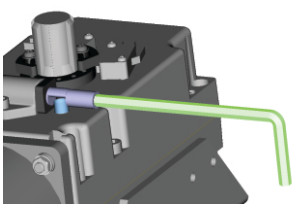
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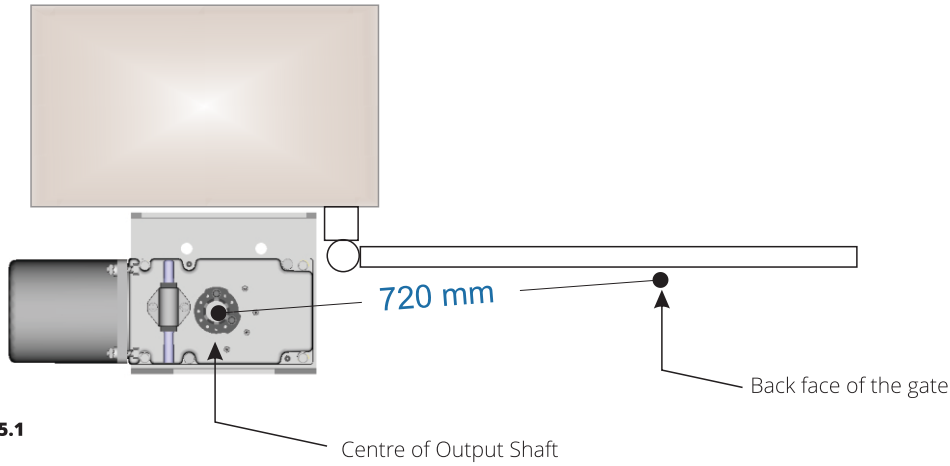


FIG. 5.1

Step 6

Set the open (Fig 6.1) and closed (Fig 6.2) position limit switches by adjusting the strikers position on the perforated disc. It is important to note the trigger should ALWAYS approach the micro switch from the open area and not the area between the switches.

Ideally the screw should be in the centre of the striker allowing for fine tuning later on (after LT calibration).

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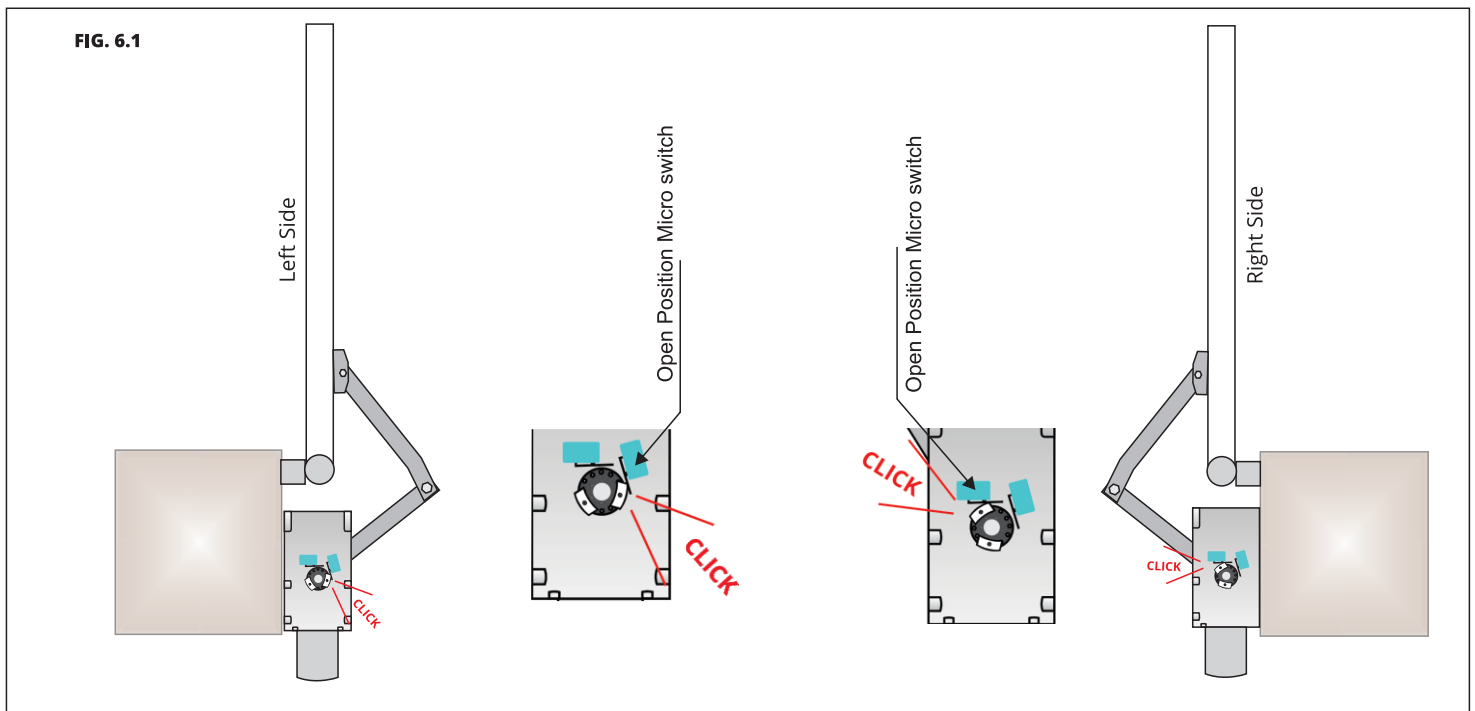


FIG. 6.1

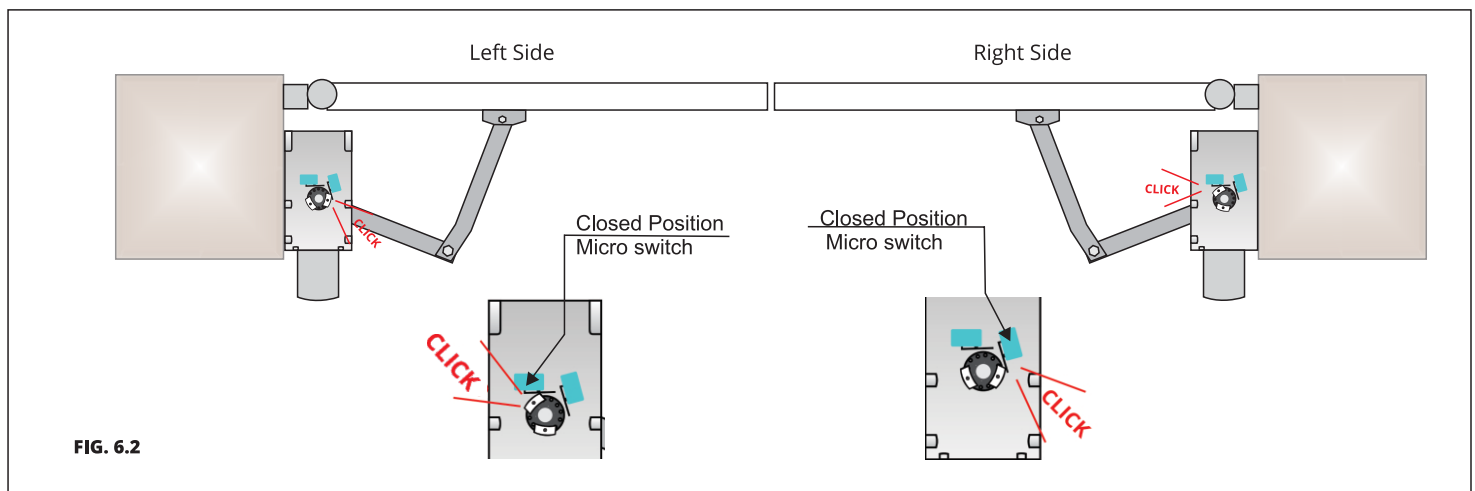
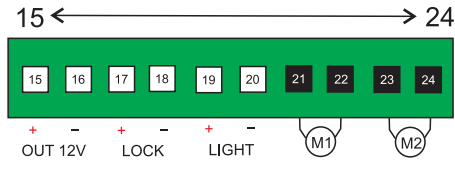
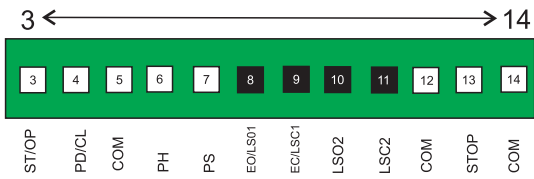


FIG. 6.2

Step 7

Follow the illustration bellow for the connection to the Premier 24 Swing Gate Controller paying attention to the **Motor 2 connection being the master gate** and Motor 1 Connection being the Second Motor for Double Gates.



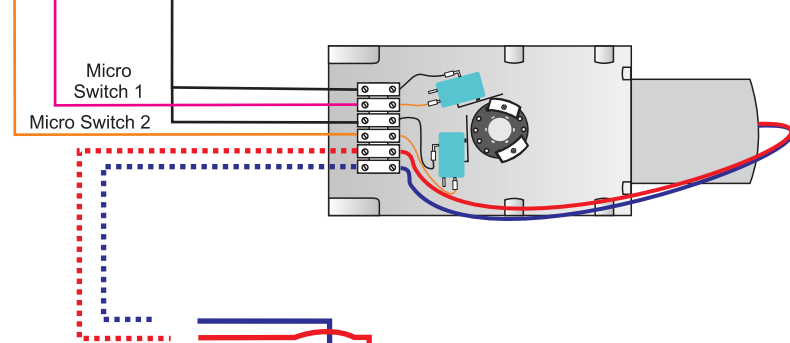
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CLOSED POSITION SWITCH

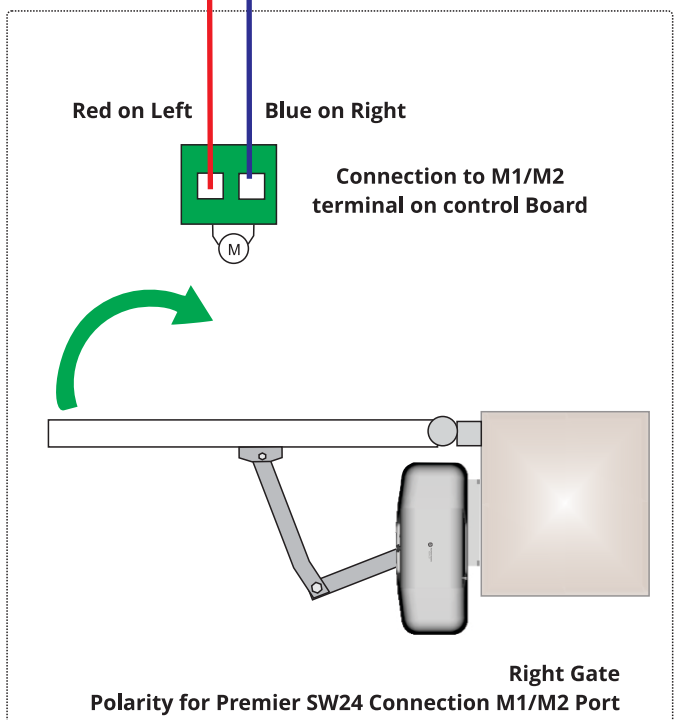
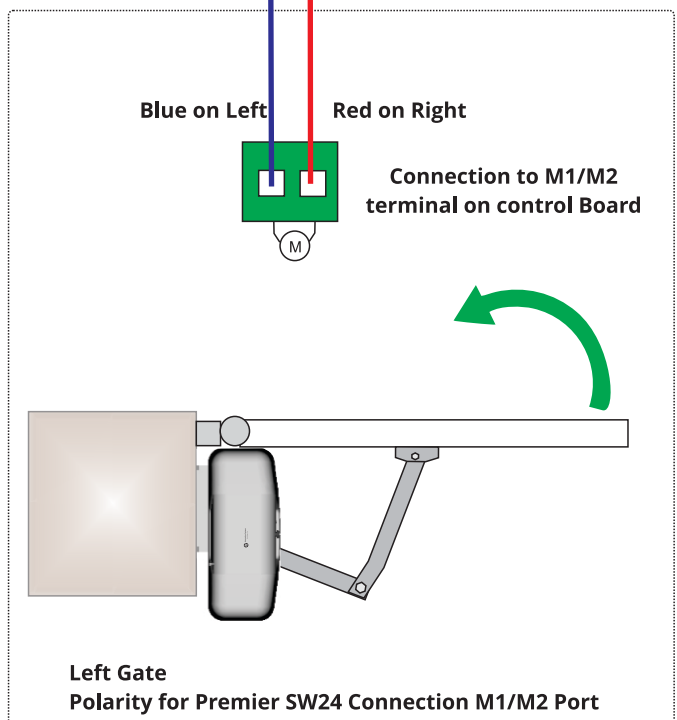
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BOTH Micro Switch Commons Terminal 12



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SLAVE Motor

Motor "2" (M2)
Only Motor in Single Gates
* Works with the Electric Lock (If Used)
** First Motor to OPEN in **Double gates**



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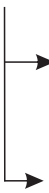


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Page 21 of Premier SW24 manual for Single Swing Gates

Warranty Terms and Conditions

The product is warranted for a period of 36 months (3 years) from the date of purchase, unless expressly specified as extended warranty (extension to the warranty period). The product is to be installed for its intended purpose and for normal use as outlined within the installation manual, the product warranty is exclusively for defects in manufacturing and manufacturing workmanship. It does not cover out of guidelines use, natural or other disasters, abnormal weather conditions, damage incurred in shipping or handling, damage caused by disaster such as fire, flood, wind, earthquake, lightning, excessive voltage, mechanical shock, water damage, damage caused by unauthorized attachment, alterations, modifications, or foreign objects, damage caused by peripherals (unless such peripherals were supplied by Automation Systems Australia), defects caused by failure to provide a suitable installation environment for the products, damage caused by usage of the products for purpose other than those for which it was designed, damage from improper maintenance, damage arising out of any other abuse, mishandling, and improper application of the products.

At its discretion Automation Systems Australia will require the item determined by the support staff to be returned to base in its original unmodified condition for a warranty inspection if within the warranty period. A return authorization "RA" number will be provided to be enclosed with the product in question. The warranty will not cover freight fees to base, customs fees or any labour costs at the installation site but will cover repair or replacement of the product as seen fit. Automation Systems Australia will cover the freight of the returned item to the original address if deemed as a warranty repair or replacement item. Any warranty repairs or replacements continue to carry through the remaining warranty period and do not extend or restart the period.

Under no circumstances shall Automation Systems Australia be liable for any special, incidental, or consequential damages based upon breach of warranty, breach of contract, negligence, strict liability, or any other legal theory. Such damages include, loss of profits, loss of the product or any associated equipment, cost of capital, cost of substitute or replacement equipment, facilities or services, down time, purchaser's time, the claims of third parties, including customers, and injury to property.

This warranty contains the entire warranty and shall be in lieu of any and all other warranties, whether expressed or implied (including all implied warranties of merchantability or fitness for a particular purpose). And of all other obligations or purporting to act on its behalf to modify or to change this warranty, nor to assume for it any other warranty or liability concerning this product.

Automation Systems Australia will at its option repair or replace out-of-warranty products at a determined cost which are returned to its base according to the following conditions. Anyone returning goods to Automation Systems Australia must first obtain an authorization number. Automation Systems Australia will not accept any shipment whatsoever for which prior authorization has not been obtained. Products which Automation Systems Australia determines to be repairable will be repaired and returned. A set fee which Automation Systems Australia has been predetermined and which may be revised from time to time will be charged for each unit repaired. Products which Automation Systems Australia determines not repairable will be replaced by the nearest equivalent product available at that time. The current market price for the replacement product will be charged for each replacement unit.