



Automation Systems AUSTRALIA

ORION

24 Volt Telescopic COMPACT Linear Actuator System



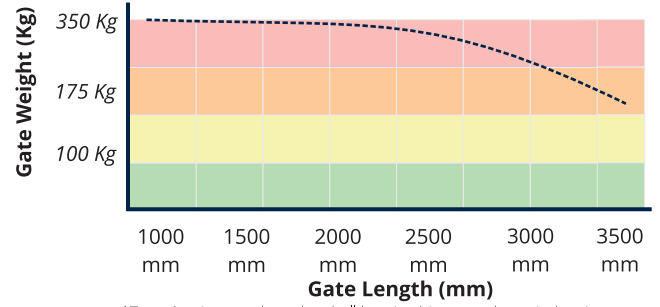
Pull To Open Installation (Gate opens TOWARDS the motor) begins Page 4
Push To Open Installation (Gate opens AWAY from the motor) begins Page 6

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 1-3) then proceed to the relevant installation section and read in its entirety at least once before beginning the installation.

Specifications

Voltage	24V DC
Current	2.5A
Thrust	1200N
Case Material	Die Cast Alloy and Aluminium Extrusion
Piston Material	Stainless Steel with Alloy End Adapter
Duty Cycle	60%
Working Temperature	-20°C to 60°C
IP Rating	IP 54
Min. Length	850mm
Max. Length	1250mm
Stroke	400mm
Minimum Gate Length	800mm
Maximum Gate Length	3500mm

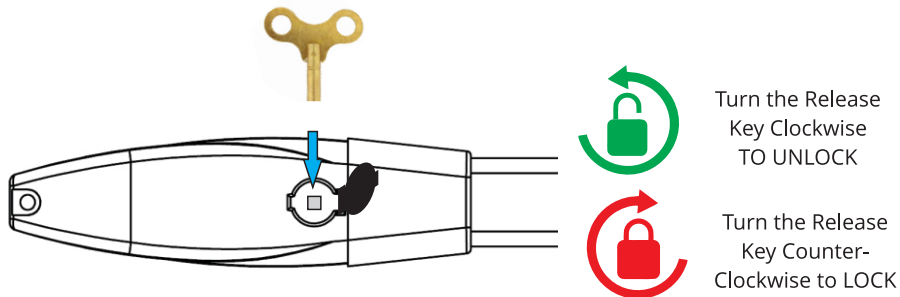


*Tested ratings are based on ball bearing hinges and no wind resistance

Dimensions & Stroke



Manual Release (Clutch)



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 a gate stop has/will be installed
- Ensure that the installation geometry 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

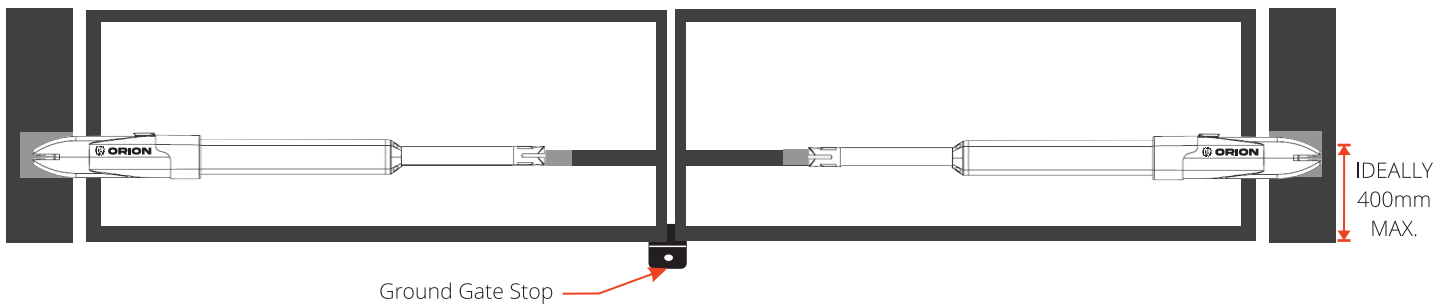
Gate Stop and Actuator Placement

A Gate stop is MANDATORY to be installed as it will serve TWO purposes. Firstly it prevent the gate from over swinging OR being Pulled/Pushed further past the closed point. Secondly it prevents damage to the actuator using a full expanded stroke.

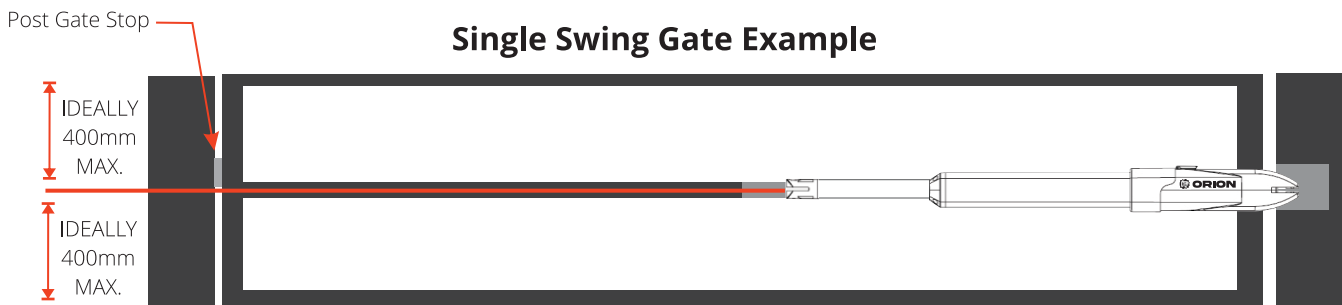
Ideally the gate stop should be within 400mm of the actuators mounting, meaning for double swing gate the actuators should be within 400mm from the ground level as there is typically a ground stop and for single gates within 400mm UP/DOWN from actuators gate rail.

FOR GATES OPENING OUTWARDS (PUSH TO OPEN) A OPEN POSITION GATE STOP MUST BE INSTALLED

Double Swing Gate Example

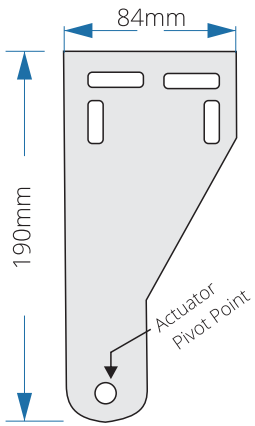


Single Swing Gate Example

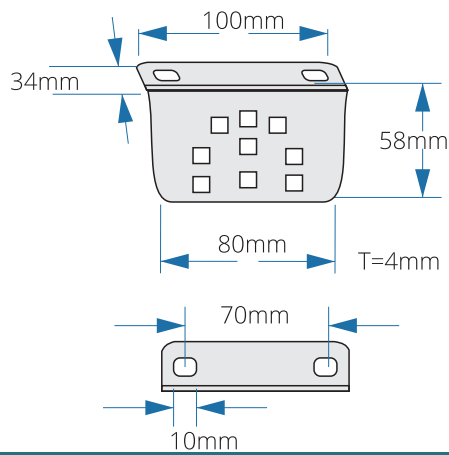


Bracket Measurements

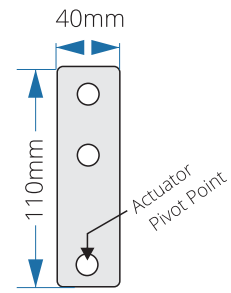
Post Extender Plate



Assembly Bracket

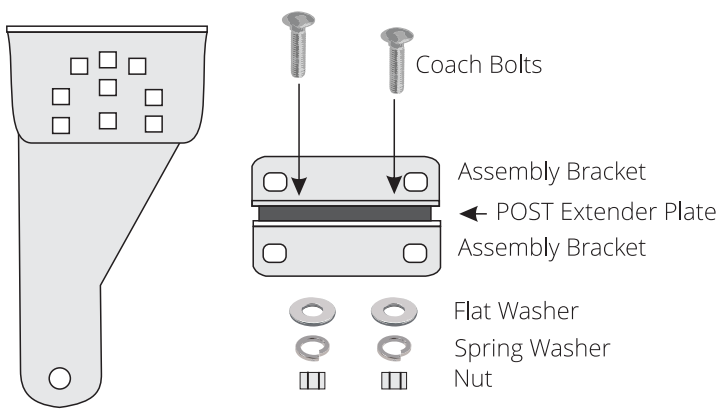


Gate Extender Plate

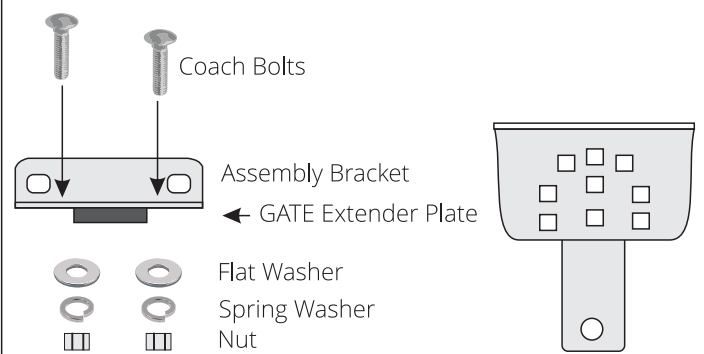


Bracket Assembly

Post Assembly

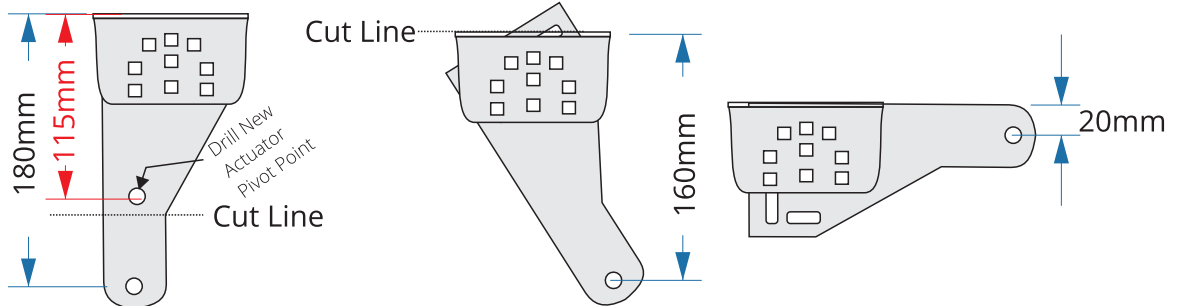


Gate Assembly



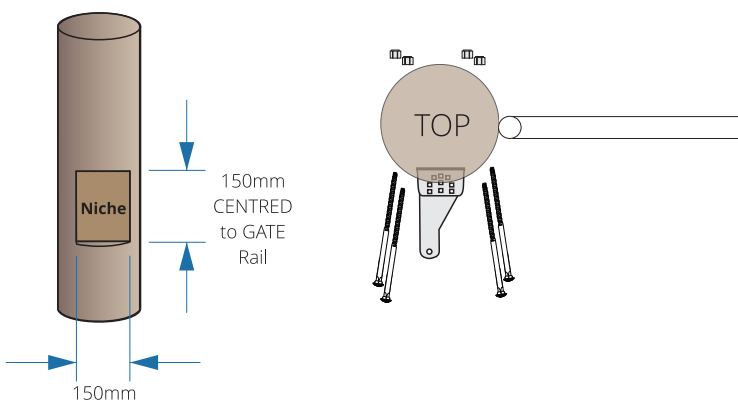
Post Bracket Manipulation

Up to 75mm can be cut away from the post bracket to help achieve the pivot geometry.



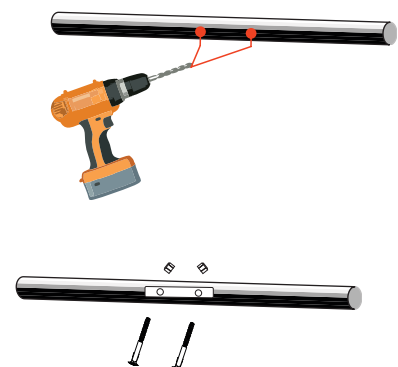
Round Timber Posts

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



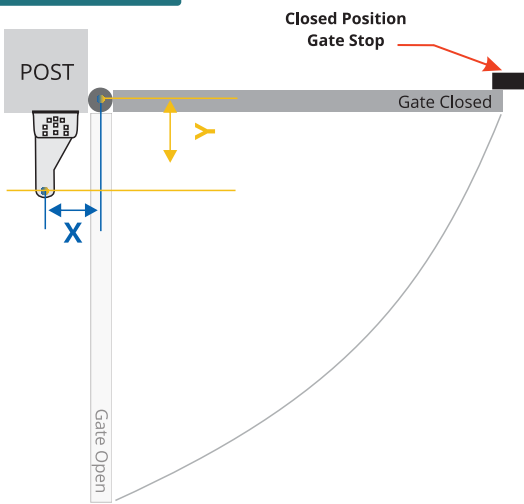
Farm Gates

Drill Holes according to correct placement of gate bracket. Use bolts and nut to install to the gate



Pull To Open Installation (Gate opens TOWARDS the motor)

Step 1



Adhere to the X and Y Geometry range

The post bracket can be adjusted to reach the best Y measurement or cut to a shorter length if required.

All measurements are made from the centre of the pivot hole to the centre of the hinge.

X = 90mm Min. (90°)/110mm Min. (100°) - Up to 130mm Max

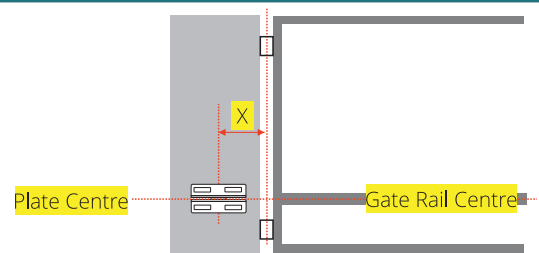
Y = 140mm - 200mm

ENSURE THE GATE STOP FOR THE CLOSED POSITION IS INSTALLED

Step 2

- Assemble the POST bracket.
- Draw a centre line from the gate rail to the post.
- Install the actuator POST bracket to the post or wall according to the appropriate geometry WHILST Centred to the gate rail.

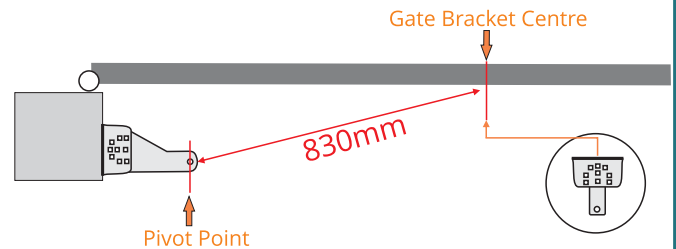
Adjust the bracket or cut the excess of the bracket now if necessary.



Step 3

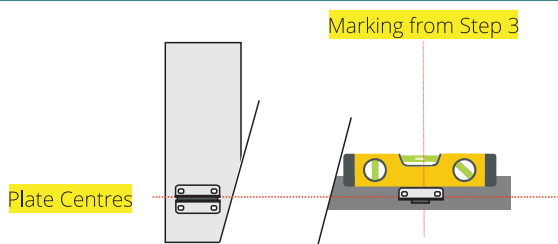
COMPLETELY Open the gate to the installation OPEN position (90°-100°) based on the requirement and geometry installation.

MEASURE from the **post bracket pivot point** to the gate face diagonally and mark the position at **830mm** this is the centre point of the gate bracket.



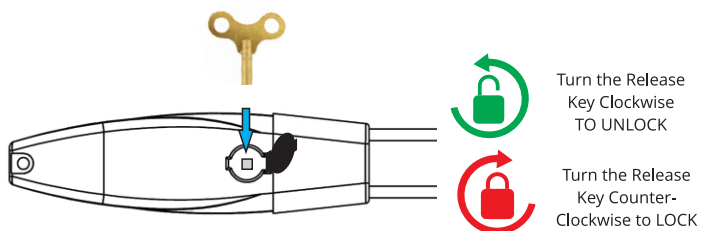
Step 4

Assemble then install the gate bracket to the post using the appropriate fasteners. Ensure the CENTRE of the brackets are level to one another.



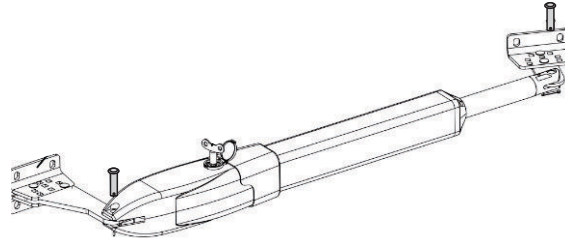
Step 5

Set the actuator to manual release (unlock) to prepare for the following steps.



Step 6

Slide the actuator on to the post and gate brackets, the gate position does not matter. The manual release feature (unlocked) can now be used to allow extension of the actuator if required. Fix in place using the supplied drop in pivot pins then secure with the split pin from the underside.



Step 6

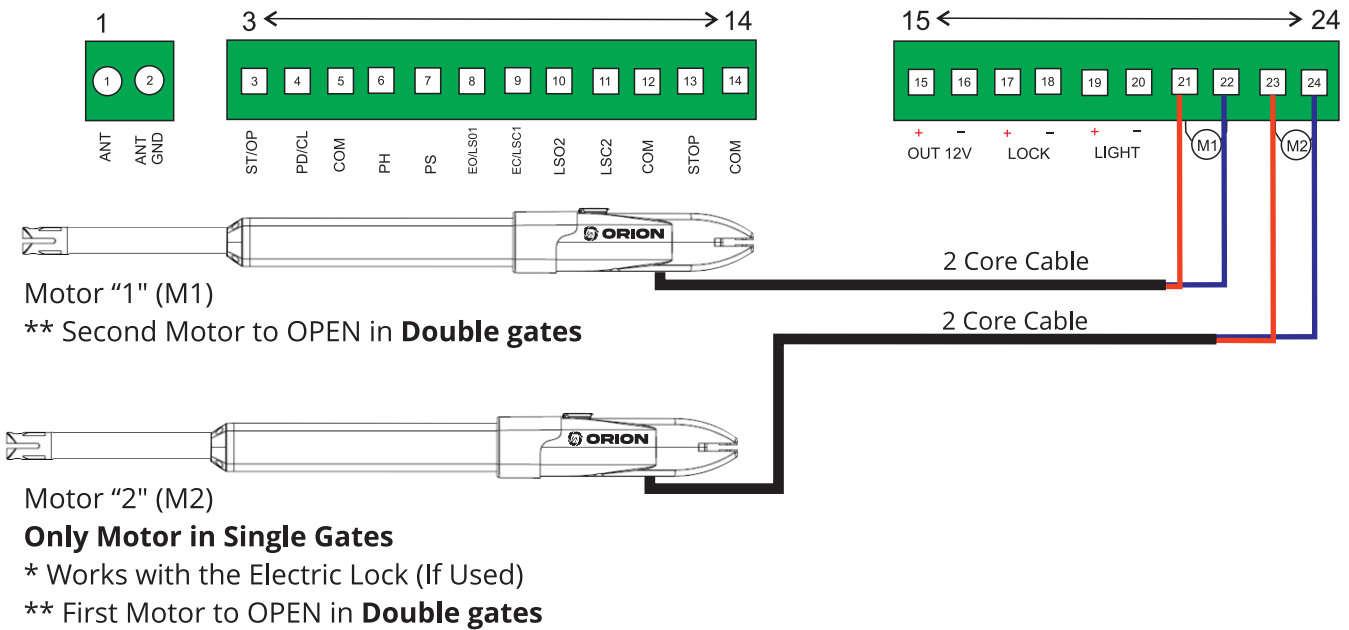
Whilst still in manual release SLOWLY push and pull the gate and ensure the gate, actuator and brackets do not touch one another. The actuator should be able to move through the motion easily and should not bind.

Once complete re-engage (lock) the actuator in the OPEN position.

DOUBLE GATES: REPEAT ALL STEPS FOR THE SECOND ACTUATOR

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.

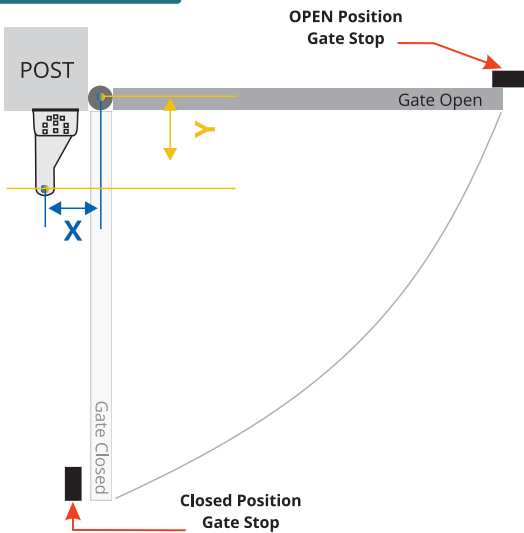


Step 13

Proceed to motor test section (Page 8)

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

Step 1



Adhere to the X and Y Geometry range

The post bracket can be adjusted to reach the best Y measurement or cut to a shorter length if required.

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X = 90mm Min. (90°)/110mm Min. (100°) -
Up to 130mm Max

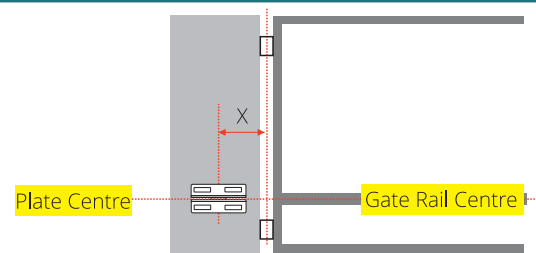
Y = 140mm - 200mm

ENSURE THE GATE STOP FOR THE CLOSED AND OPEN POSITION IS INSTALLED

Step 2

- Assemble the POST bracket.
- Draw a centre line from the gate rail to the post.
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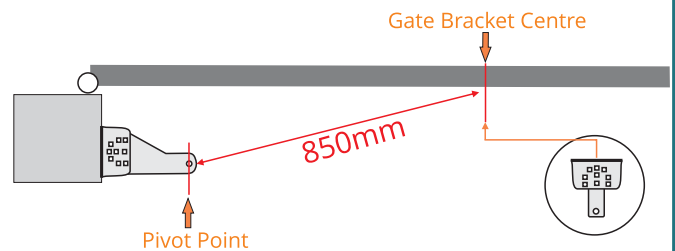
Adjust the bracket or cut the excess of the bracket now if necessary.



Step 3

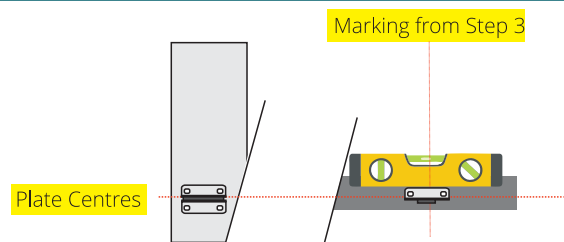
COMPLETELY Close the gate to the Closed position gate stop.

MEASURE from the **post bracket pivot point** to the gate face diagonally and mark the position at **850mm** this is the centre point of the gate bracket.



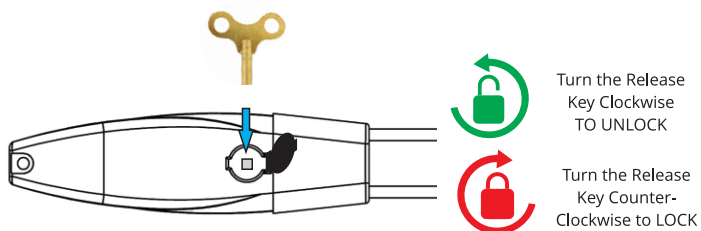
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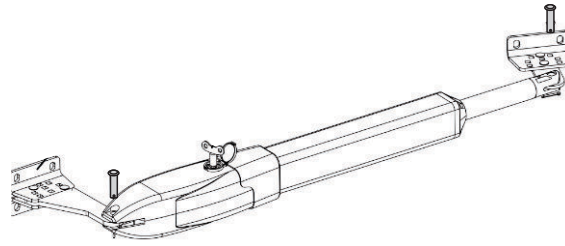
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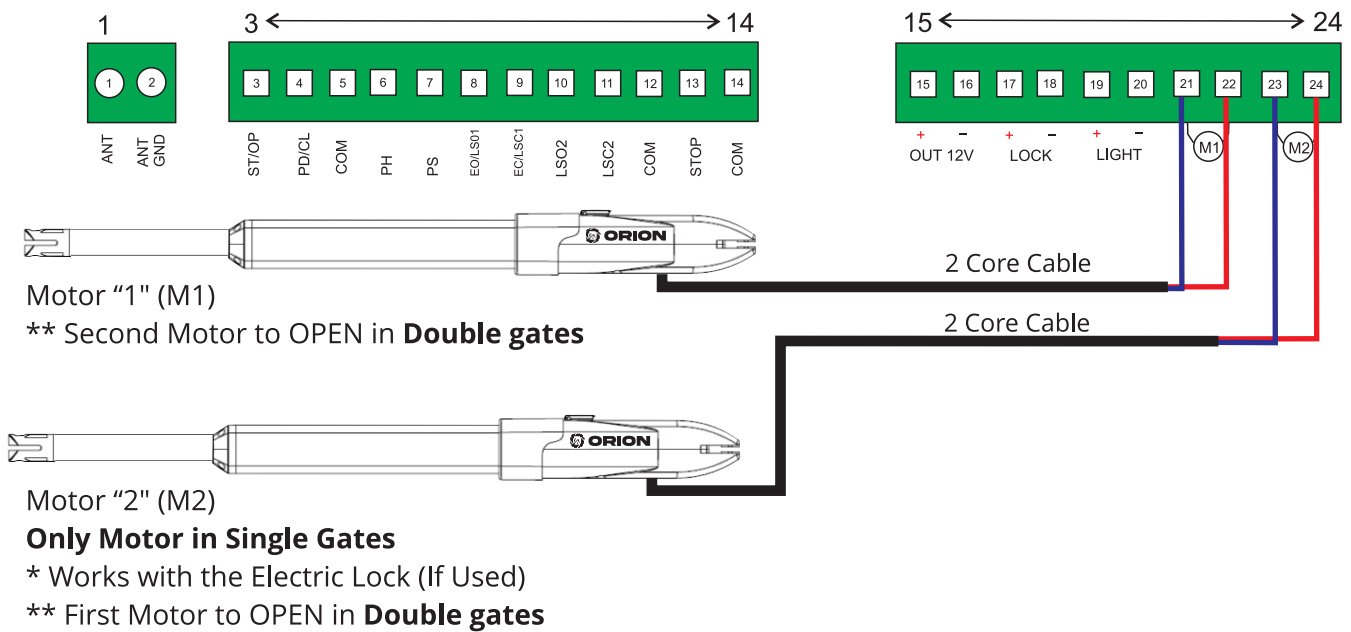
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DOUBLE GATES: REPEAT ALL STEPS FOR THE SECOND ACTUATOR

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Step 13

Proceed to motor test section (Page 8)

Motor Test Mode

The purpose of motor testing is to identify the correct operating procedure before the time travel calibration. The information that can be gained from the motor test is if the motors are wired:

- Correct polarity meaning they operate in the correct direction according to the control board.
- The limit switches have been correctly set for the OPEN and CLOSED position. This test can be repeated an unlimited amount til all is set correctly.
- The correct operating sequence FOR DOUBLE GATES

O2 will open Gate 2 (M2) - The MASTER gate with the AUTOMATIC LOCK if used, First gate to open/ONLY GATE IF SINGLE GATE

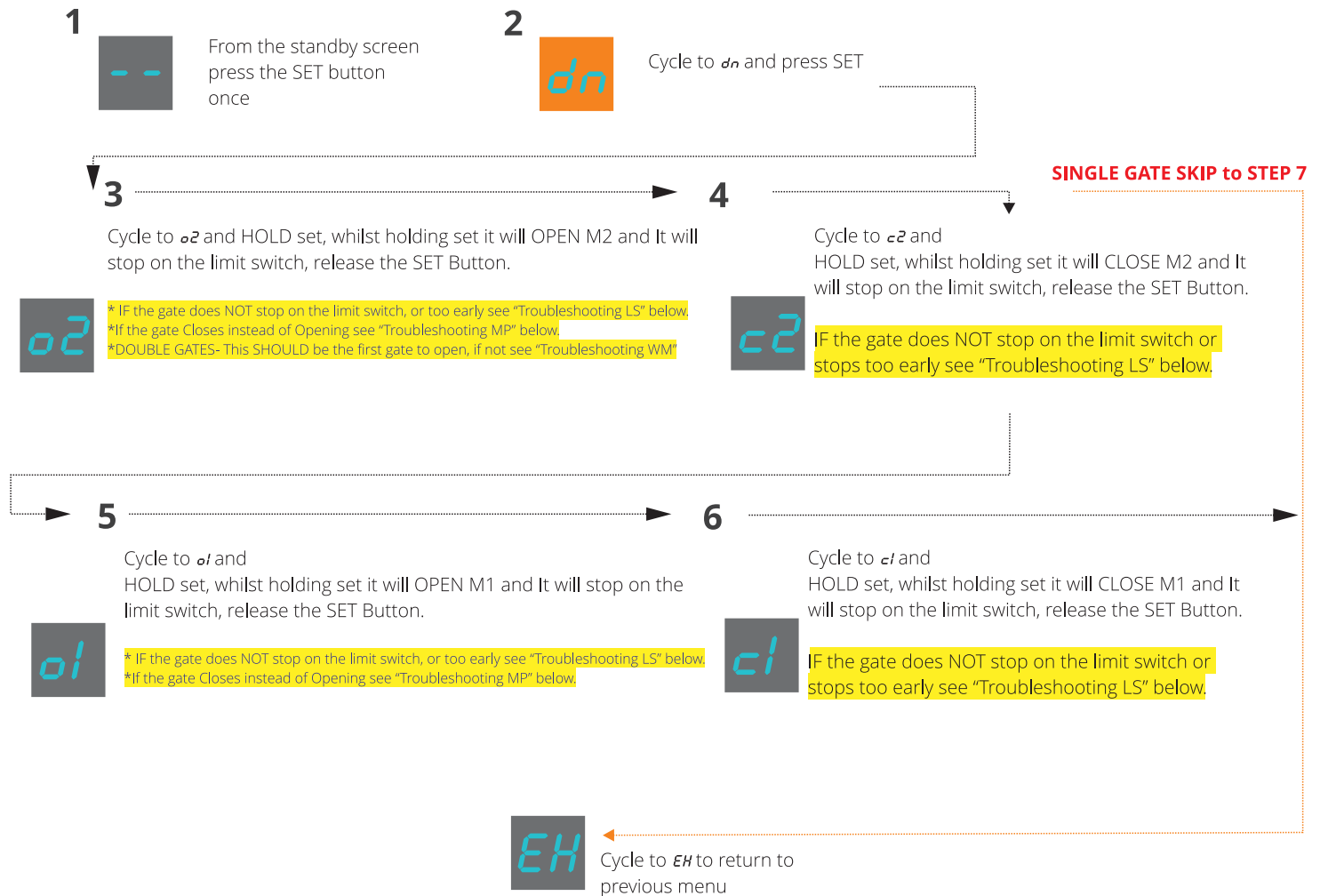
C2 will close Gate 2 (M2) - Second gate to close IF double gates/ONLY GATE

O1 will open Gate 1 (M1) - Second gate (SLAVE) to open IF double gates

C1 will close Gate 1 (M1) - First gate to close IF double gates

O1/C1 is not used for single gate systems

NOTE: Safety Inputs are disabled during this stage



Troubleshooting MP

If the gate(s) close whilst using the open feature this is easily resolved and must be rectified prior to moving forward.

- Confirm which of the gate motor(s) is operating in the wrong direction
- Power down the controller
- Reverse the wires in the IDENTIFIED motor output terminal (this is the wires going to the gate motor)

Troubleshooting LS

If the gate(s) travel past the desired stop point OR stops too early the limit switch is misconfigured and will need to be adjusted.

- Confirm which of the limit switches is not set correctly (open limit/close limit)
- Adjust the relevant limit slider

Troubleshooting WM

In the case of double gates IF the gate that should open second is opening on O1 this must be rectified prior to moving forward.

- Power down the controller
- SWAP the wires in M1 terminal to M2 and the wires in M2 to the M1 terminal

TECH TIP!

It is important to note that FOR THE BEST RESULTS the closed position limit switch should operate whilst the gate motor is pushing against the gate stop OR just after it has pushed against the gate stop. Best results are obtained by temporarily removing the gate stop and setting the limit switch point 10-20mm AFTER the gate stop allowing for a loaded gearbox (and reduced free play) when closed.

Warranty Terms and Conditions

The product is warranted for a period of twelve months (one year) 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.