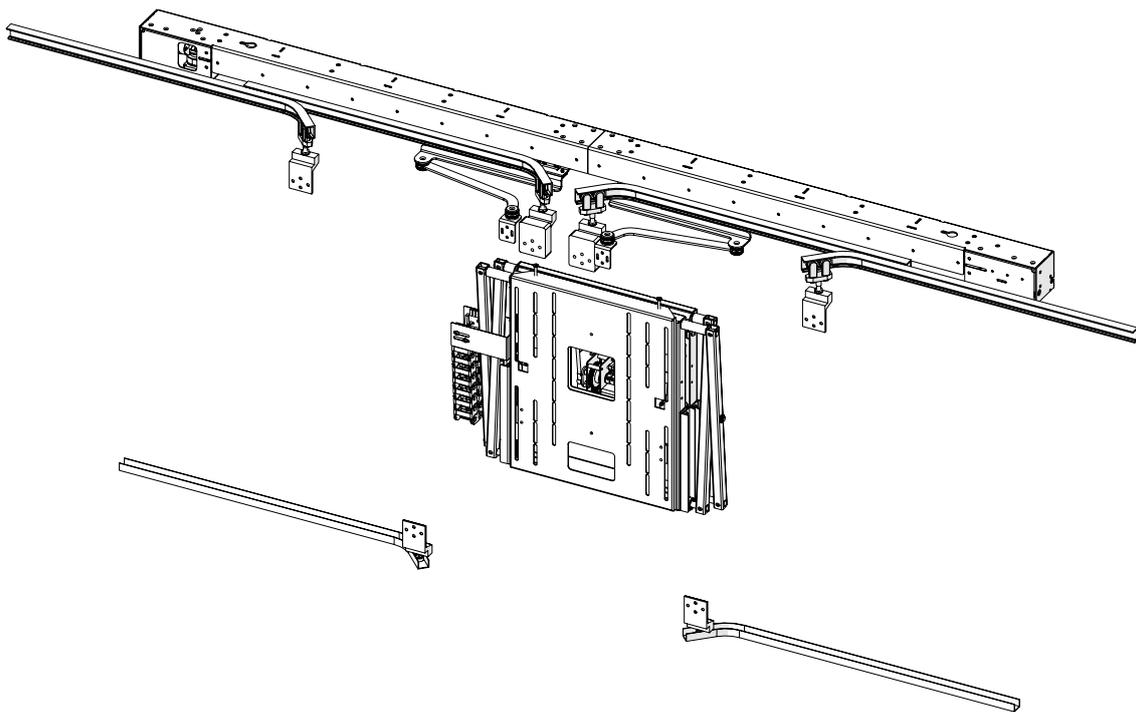




future automation

MDM-RS

MOVING DOOR MECHANISM - RETRACT & SPLIT WITH
SCREEN ADVANCE / SCREEN ADVANCE HEAVY



INSTALLATION INSTRUCTIONS

ISSUE 001

SAFETY DISCLAIMER

IMPORTANT SAFETY INSTRUCTIONS BELOW

WARNING: Failure to provide adequate structural strengthening, prior to installation can result in serious personal injury or damage to the equipment. It is the installer's responsibility to ensure the structure to which the component is affixed can support four times the weight of the component and any additional apparatus mounted to the component.

WARNING: Do not exceed the weight capacity for this product as listed below. This can result in serious personal injury or damage to the equipment. It is the installer's responsibility to ensure that the total combined weight of all attached components does not exceed that of the maximum figure stated.

WARNING: Risk of death or serious injury may occur when children climb on audio and/or video equipment or furniture. A remote control or toys placed on the furnishing may encourage a child to climb on the furnishing and as a result the furnishing may tip over on to the child.

WARNING: Risk of death or serious injury may occur. Relocating audio and/or video equipment to furniture not specifically designed to support audio and/or video equipment may result in death or serious injury due to the furnishing collapsing or over turning onto a child or adult.



WARNING - RISK OF INJURY!



Only for use with equipment weighing **110LBS (50KG) OR LESS.**

Moving Panels may only weigh **154LBS (70KG) OR LESS EACH.**

Use with heavier projectors/equipment may lead to instability causing tip over or failure resulting in death or serious injury.

Bracket Suitable for Residential and Commercial Use.

ADDITIONAL WARNINGS:

1. Keep all documentation/instructions after fitting.
2. Read all technical instructions fully before installation and use. It is the installer's responsibility to ensure that all documentation is passed on to the end user and read fully before operation.
3. Do not use near water or outdoors unless the product has been specifically designed to do so.
4. Protect any cables or cords being used near this bracket from being walked on or pinched to prevent damage and risk of injury.
5. Use this product only for its intended purpose as described in the product instructions and only use attachments/accessories specified by the manufacturer.
6. Do not operate the product if it is damaged in any way, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped. Contact the original installer/manufacturer to arrange repair or return.

WARNING - To reduce the risk of burns, fire, electric shock, or injury to persons:

1. Clean only with a dry cloth and always unplug any electrical items being used in conjunction with this product before cleaning.

Future Sound & Vision trading as Future Automation intend to make this and all documentation as accurate as possible. However, Future Automation makes no claim that the information contained herein covers all details, conditions or variations, nor does it provide for every possible contingency in connection with the installation or use of this product. The information contained in this document is subject to change without prior notice or obligation of any kind. Future Automation makes no representation of warranty, expressed or implied, regarding the information contained herein. Future Automation assumes no responsibility for accuracy, completeness or sufficiency of the information contained in this document.

PRODUCT WARRANTY & RISK ASSESSMENT

WARRANTY INFORMATION

WARNING - The warranty offered for this product shall be annulled if the product is used improperly or in a way that is in breach of our Terms of Service.

Future Automation provides warranty for the mechanism you purchased for the period of **24 months** from the date of purchase, provided that it isn't used for unintended purposes.

Under the warranty, Future Automation aims to either solve the issue remotely (via telephone or email support) or if the mechanism requires a part, arrange a visit to your premises by a Future Automation approved engineer or send replacement items where appropriate.

Warranty repairs will be carried out as quickly as possible, but subject to parts availability. This warranty period is respectively extended for the period of a repair.

A malfunctioning product must be cleaned and placed into suitable packaging to protect against transit damage before organising delivery to a repair workshop.

All the complaints about defects must be submitted to the vendor/installer that sold this product, rather than directly to the manufacturer.

Any part of your system that needs to be replaced during a warranty repair becomes the property of Future Automation.

The warranty does not cover the following:

- Damages resulting from improper product use or maintenance.
- Repairs carried out by unauthorized persons.
- Natural wear and tear during operation.
- Damages caused by the buyer.
- Accidental damages caused by a customer or damages caused as a result of careless attitude or usage, or damages caused by natural disasters (natural phenomena).
- Any electrical, or other environmental work external to your Future Automation mechanism including power cuts, surges etc.
- Additional items not supplied by Future Automation although they may have been supplied together by the retailer
- Any 3rd party software products controlling your mechanism
- Any transfer of ownership. Warranty is provided only to the initial purchaser.
- Compensation for loss of use of the product, and consequential loss of any kind.

A separate Safety and Servicing Information document is provided with these instructions (additional copies can be found at www.futureautomation.co.uk/safety), and this document **MUST** be filled out by the approved Future Automation Dealer who is installing the product. This Warranty Sheet must be held by the end user for the duration of the products life and will be referred to during servicing or warranty queries.

The Safety and Servicing Information document also contains two Service History Forms that must be filled in by the approved Future Automation dealer who is performing the first required yearly service of this product.

One copy of the Service History Form must be held by the customer (along with the Warranty Sheet) and a duplicate copy must be held by the approved Future Automation dealer that performed the service. Missing and/or mismatching documents may delay or invalidate warranty claims.

Additional Service History Forms can be found on the Future Automation website for further yearly services.

RISK ASSESSMENT INFORMATION

It is the installer's responsibility to perform a risk assessment of installed products. Future Automation can provide guidelines to installers/dealer about what should be included in a risk assessment, but due to the individual nuances of each location/site, Future Automation cannot provide a full list of areas to risk assess.

For full risk assessment and safety information please view our Safety and Servicing guide available at www.futureautomation.net/safety

GUIDE

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PACKAGE CONTENTS

1 - MDM-RS MECHANISM & SA/SAH OPTION

- 1.1 - MDM-RS MECHANISM
- 1.2 - PANEL GUIDE RAILS LEFT
- 1.3 - PANEL GUIDE RAILS RIGHT
- 1.4 - PANEL TOP HANGER BRACKET
- 1.5 - PANEL BOTTOM GUIDE BRACKET
- 1.6 - PANEL BRACKET PACKING BLOCK
- 1.7 - SCREEN ADVANCE UNIT
- 1.8 - SCREEN ADVANCE UNIT HEAVY

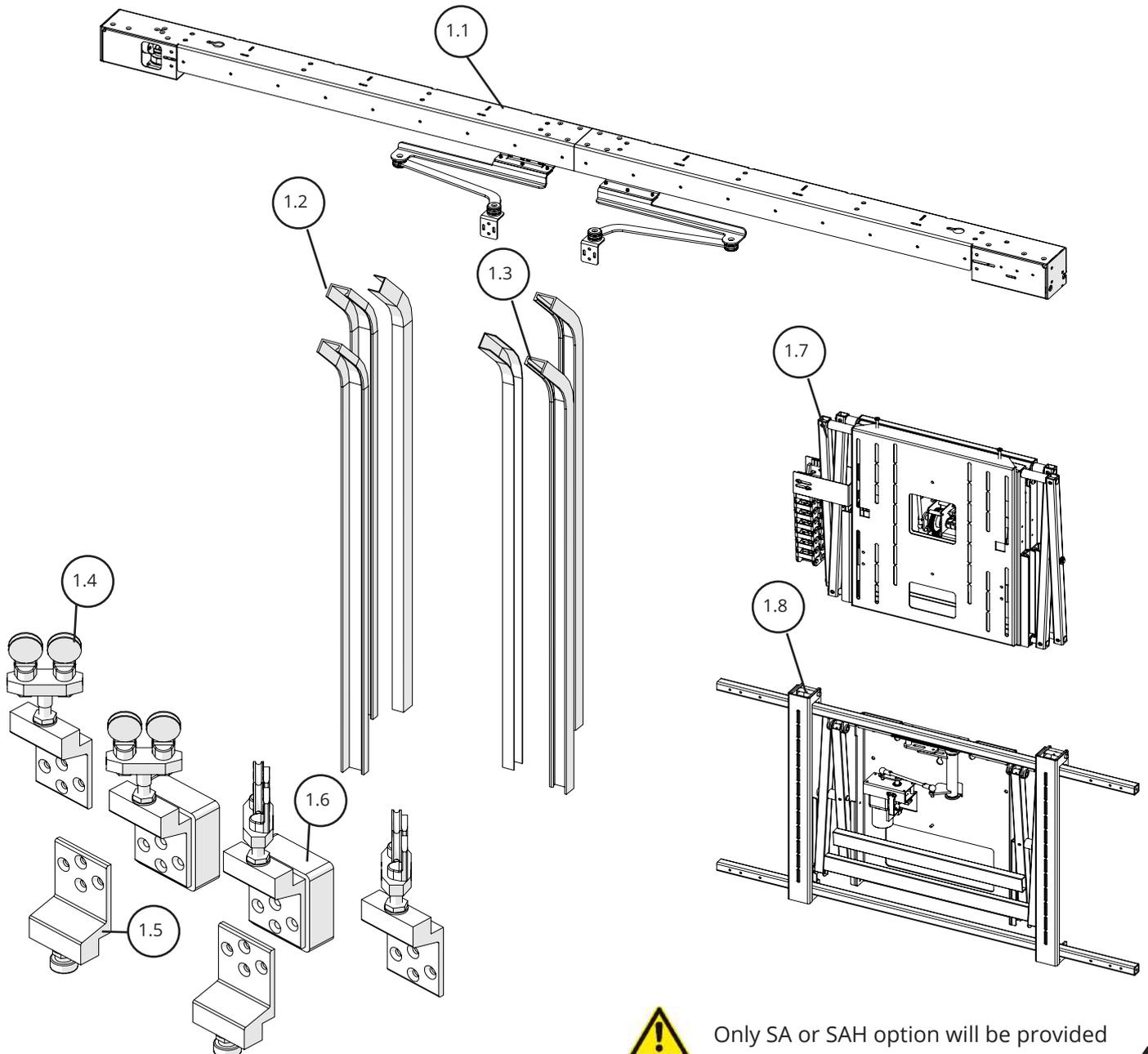
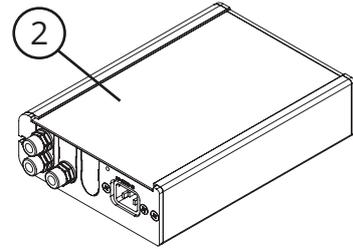
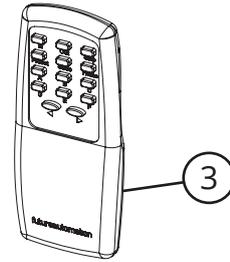
2 - CONTROL BOX

3 - IR REMOTE CONTROL

ITEMS NOT SHOWN ON PAGE

MDM ACCESSORY PACK:

- 2X AAA BATTERIES
- MULTI-PACK NUTS, BOLTS & WASHERS
- MAINS POWER, IR AND CONTACT CLOSURE LEADS



Only SA or SAH option will be provided

MECHANISM QUICK-START GUIDE

Some Future Automation mechanisms may ship with the control box disconnected to prevent damage during transit. In order to operate the mechanism, the control box will need to be reconnected, then have mains power applied along with the desired control method.

RECONNECTING THE CONTROL BOX

To reconnect the mechanism control box, follow the below steps:

1. Make sure the power is disconnected from the control box.
2. Remove the retaining screw and washer from the end of the control box to allow removal of the control box lid. (Image 1 Below).
3. Slide off the control box lid to reveal the control board inside.
4. Locate the green connector on the end of the loom leading from the lift mechanism. This plug will have a small tag attached stating the correct connecting socket on the control board (e.g. "AC1", "DC2"...). (Image 2 Below).
5. Plug the green connector into the corresponding socket on the control board. This plug is handed and will only connect correctly one way. Do NOT force the connector into the socket, this can cause serious damage to the control board and mechanism.
6. Route the wiring loom out of the end of the control box by inserting the black plastic inserts into the slots provided. (Image 3 Below).
7. Slide the control box cover back over the control board and replace the fixing screw and washer.



Image 1.

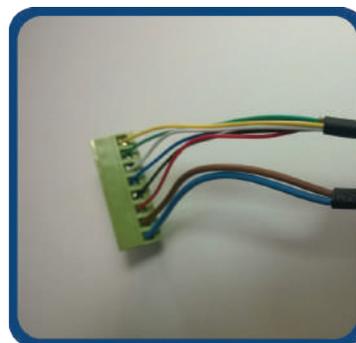


Image 2.



Image 3.



Image 4.

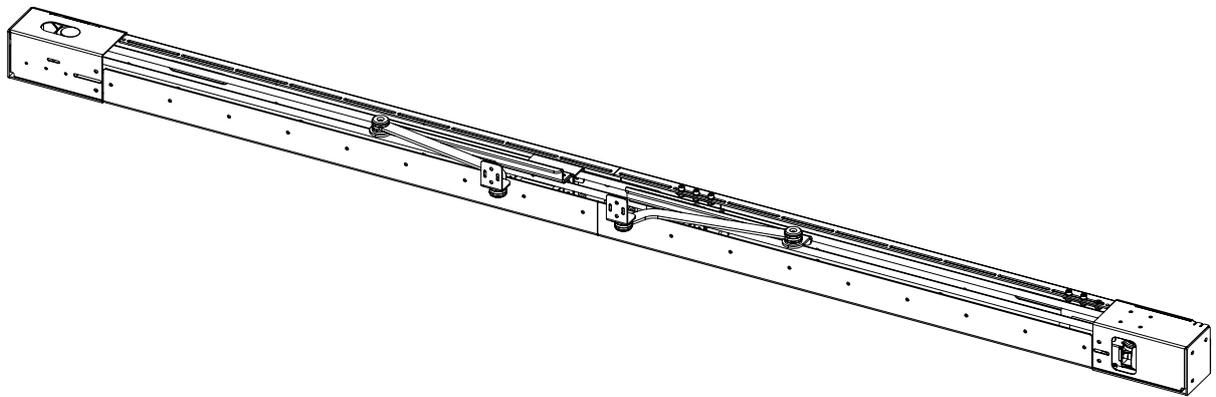
IMPORTANT

For the mechanism to operate, the green three way safety connector with the loop of wire attached, must also be plugged into the end of the control box. (Image 4 above). If this connector is not plugged in, a bright red LED will be visible inside control board and the Input Confirmation Input LED will be permanently illuminated.

MECHANISM PRETESTING

Before installing your mechanism, it is important that you perform the following checks.

- The product is in good condition
- There is no damage to any parts of the mechanism
- All wiring is secure



1

Use the Quick Start Guide and connect mechanism to control board and familiarise yourself with mechanism operation.

2

Set up Mechanism on the floor or a table as shown above and run out and in to confirm the mechanism is in good working order.

Mechanism is configured to Technical Sheet specified travel.

RAIL INSTALLATION(LOWER)



Always measure physical Guide Rail before cutting channels - the radii of rails can fluctuate.

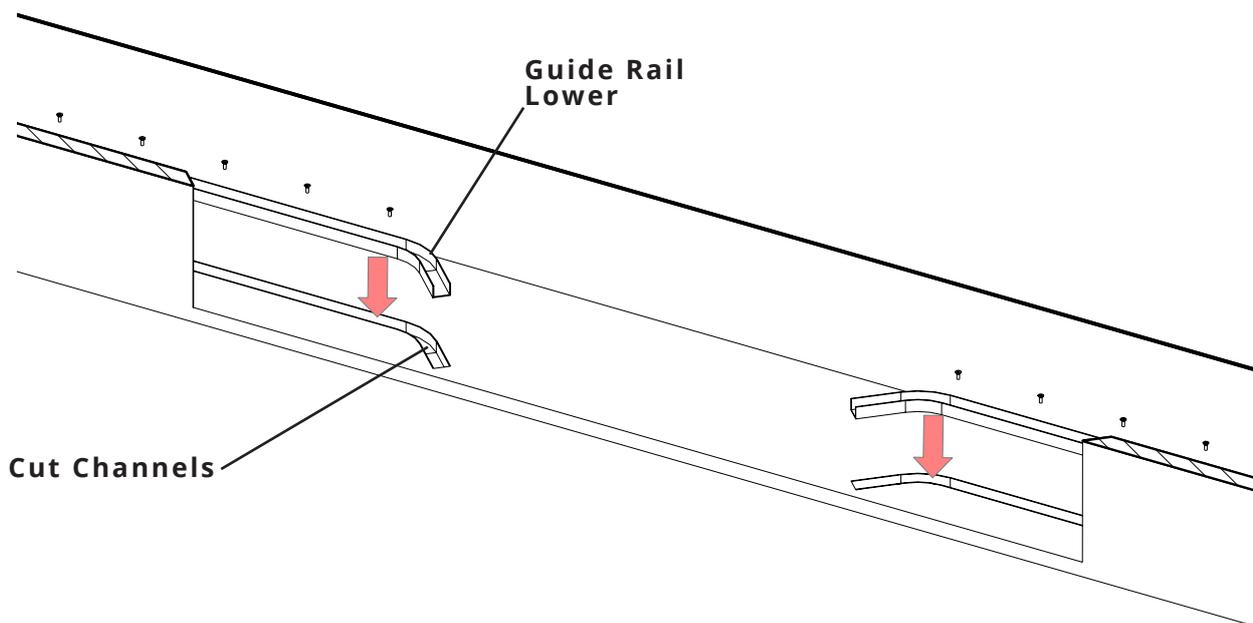
1

Mark out positions for rails on lower face of the cabinet as per the Technical Sheet for your mechanism.
Cut channels in floor of cabinet for Lower Guide Rails.

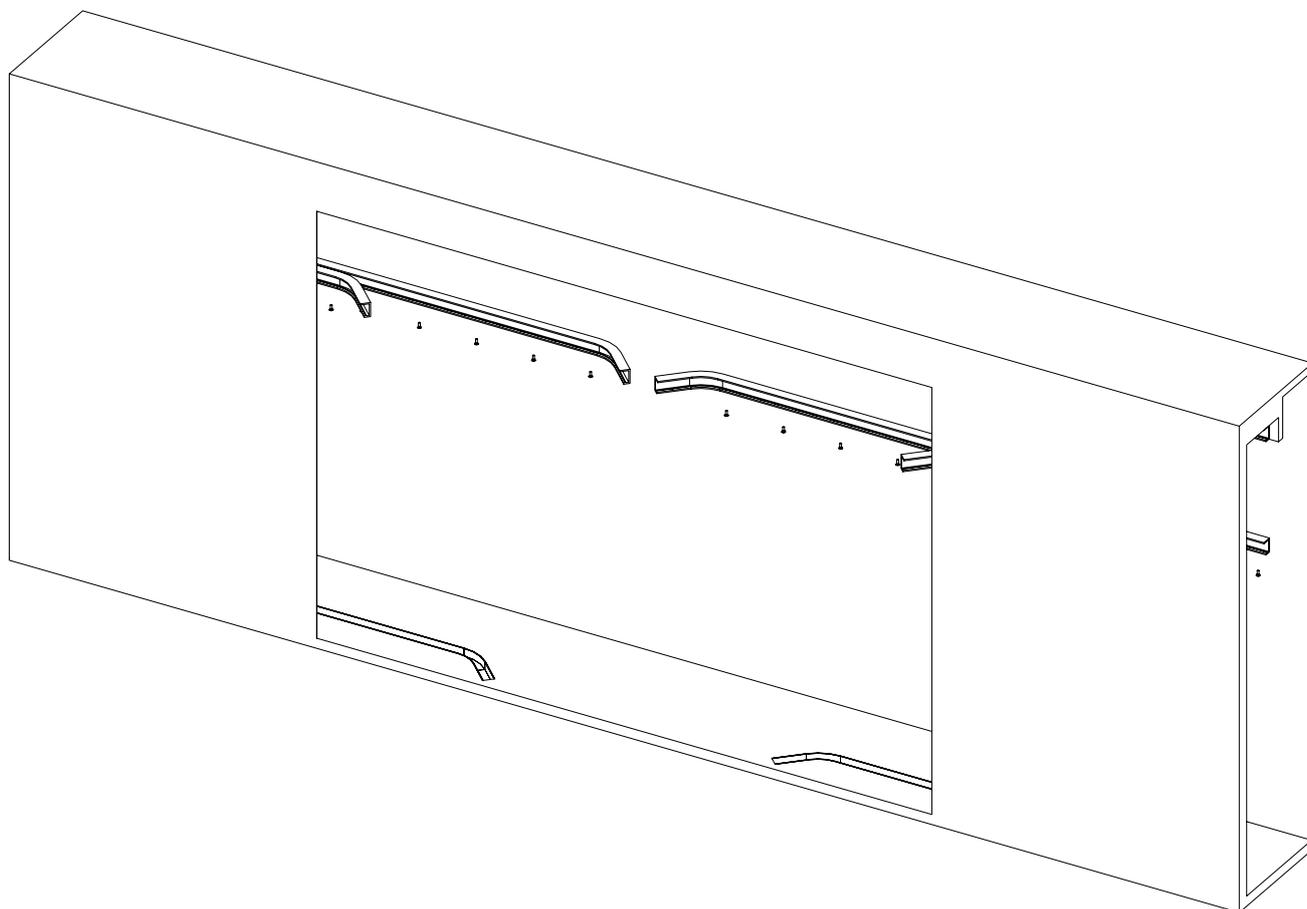


2

Install Guide Rails into channels and fix with appropriate fixings.



RAIL INSTALLATION(UPPER)



1

Mark out positions for rails on upper face of the cabinet as per the Technical Sheet for your mechanism.

2

Use appropriate fixings (NOT INCLUDED) to secure the rails to the inside of the cabinet.

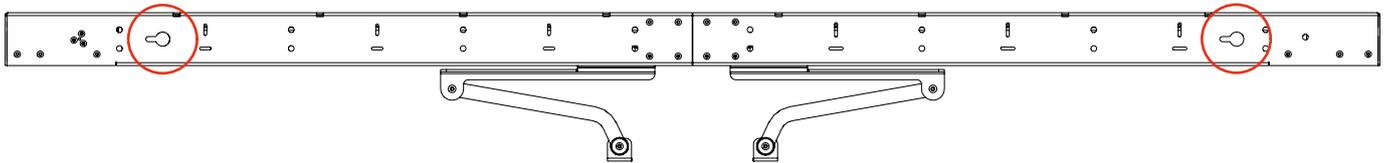
MDM-RS INSTALLATION

1

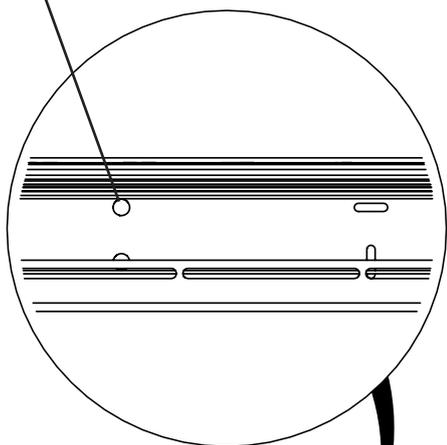
The MDM must be mounted through the holes on the top of the mechanism.

2

To make installation simpler there are keyhole slots on the top of the mechanism (highlighted below). These can be used to hook the mechanism in place and take the weight of it, before final fixing.

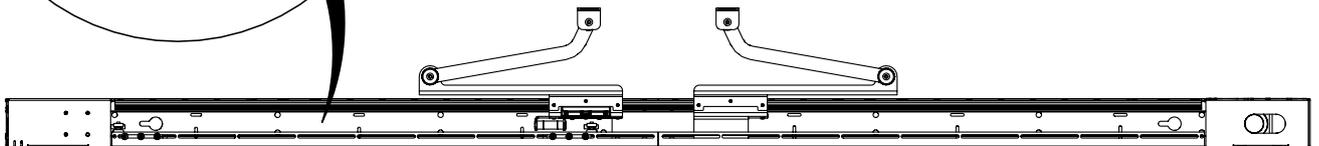


10mm [3/8"]
Hole



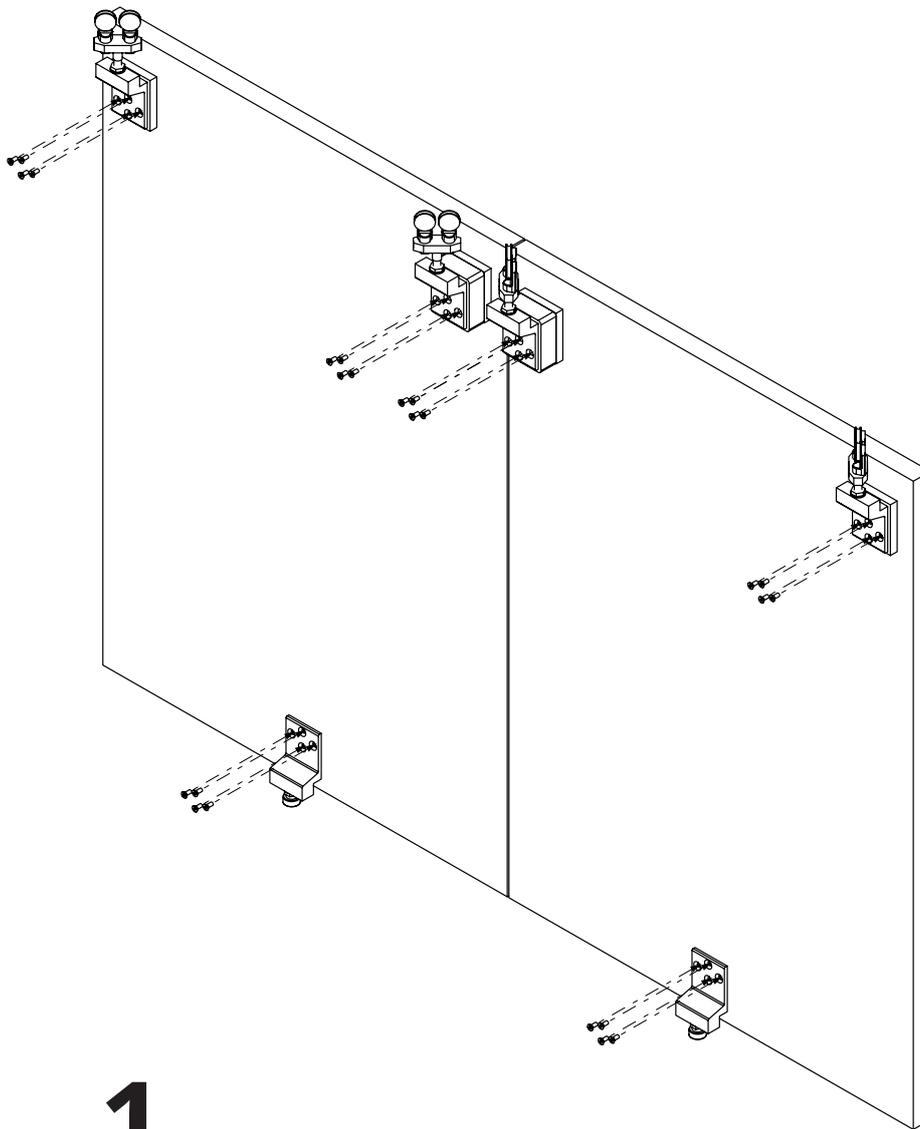
3

Using appropriate fixings (not supplied), fix through from the underside of the mechanism as shown below.



Fixing heads **must** have a maximum height of 10mm [3/8"] or less.

PANEL BRACKET FITTING



1

Referring to your Technical Sheet ensure that you have additional packing specified where the Hanger Brackets are mounted.

2

Ensure the provided packing blocks are used on the Top Inner Brackets, as these account for the offset in the top rails.

3

Mount the Bottom Guide Brackets centrally on your moving panels.

ATTACHING PANELS TO MECHANISM

1 Hook Panels onto guide rails and align Bottom Guide Bracket in Lower Guide Rail.

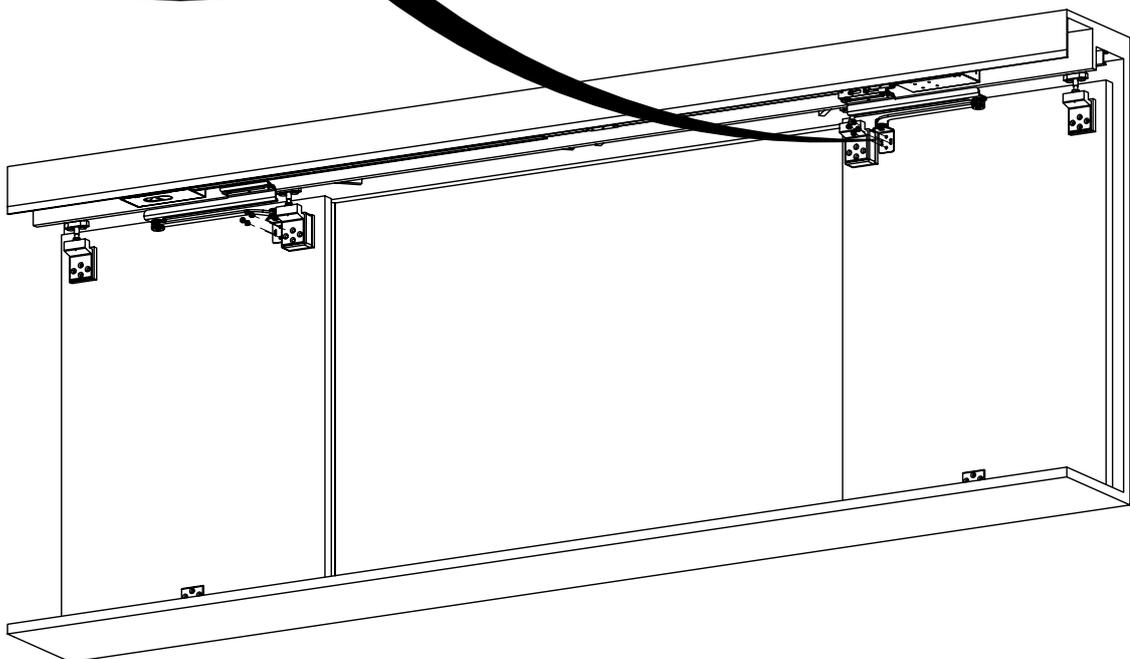
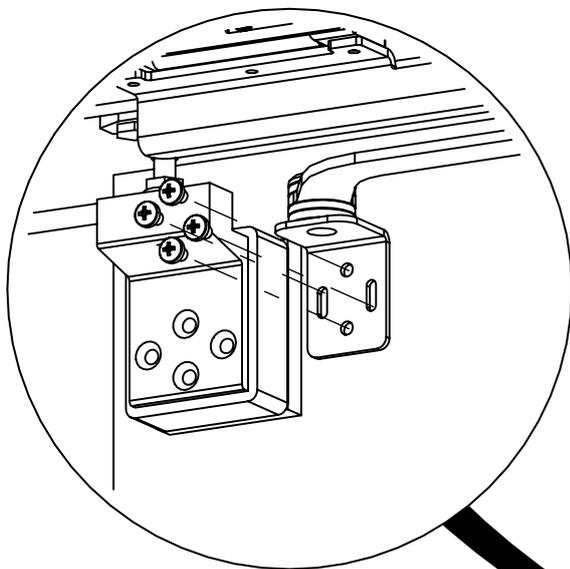
2 Using the IR Remote provided with the mechanism, send the mechanism to the OUT Position.

3 Move Panels to Open Position by sliding them manually on the rails.

4 Use appropriate fixings to secure the mounting panels to link arm plates (shown left).



Ensure link arm plates are mounted in the same place on each door or doors will not run symmetrically



SWITCH ADJUSTMENT

1

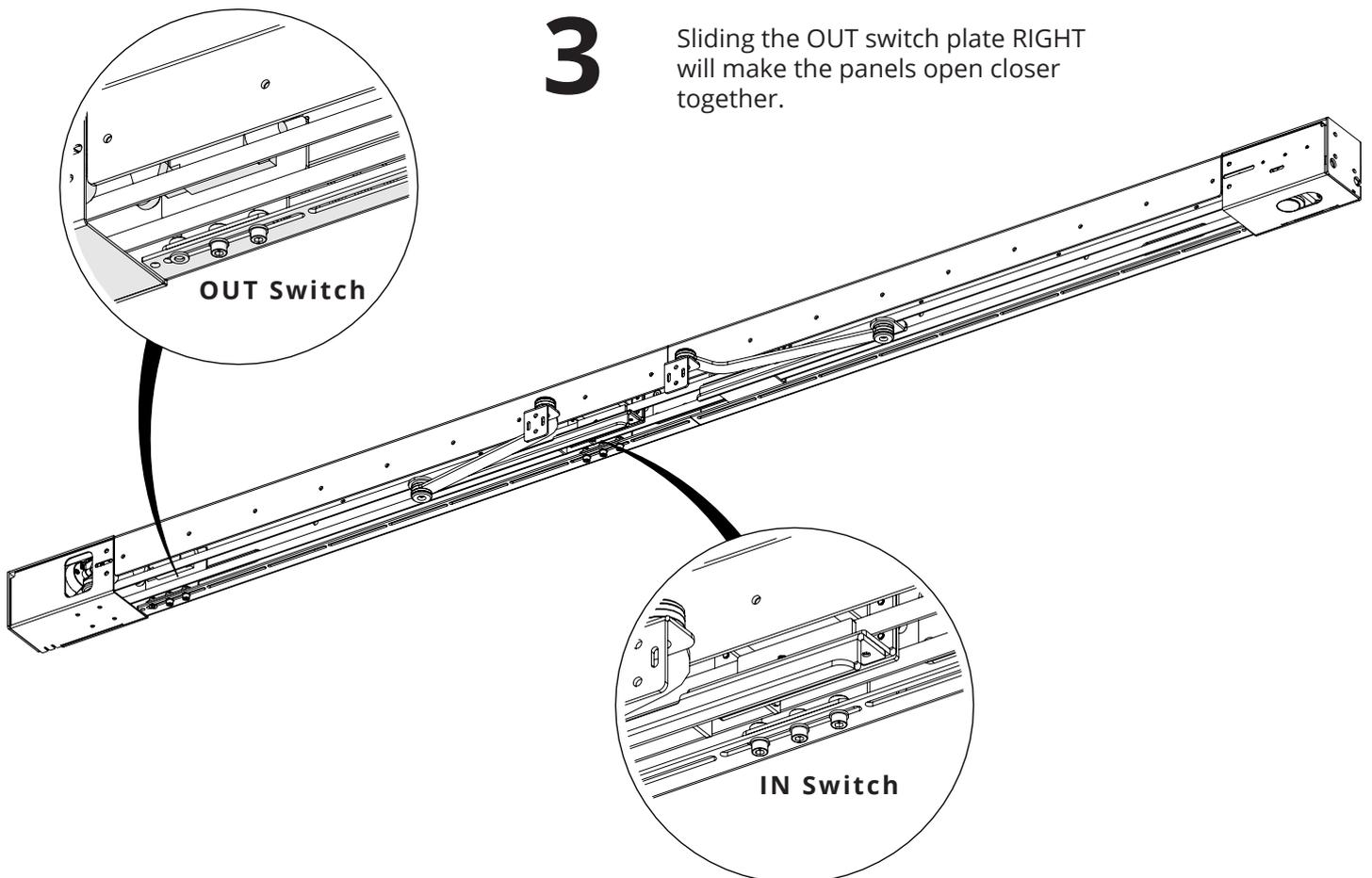
Loosen the bolts shown in the detail views. **Do not fully remove them.**

2

Sliding the OUT switch plate LEFT will make the panels open further apart.

3

Sliding the OUT switch plate RIGHT will make the panels open closer together.



4

Sliding the IN switch plate LEFT will make the panels further apart when Closed.

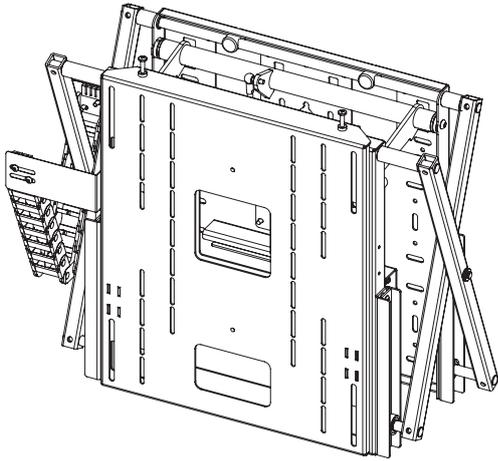
5

Sliding the IN switch plate Right will make the panels closer together when Closed.

6

Tighten the bolts when desired positions are established.

SCREEN ADVANCE POSITIONING (SA)



1

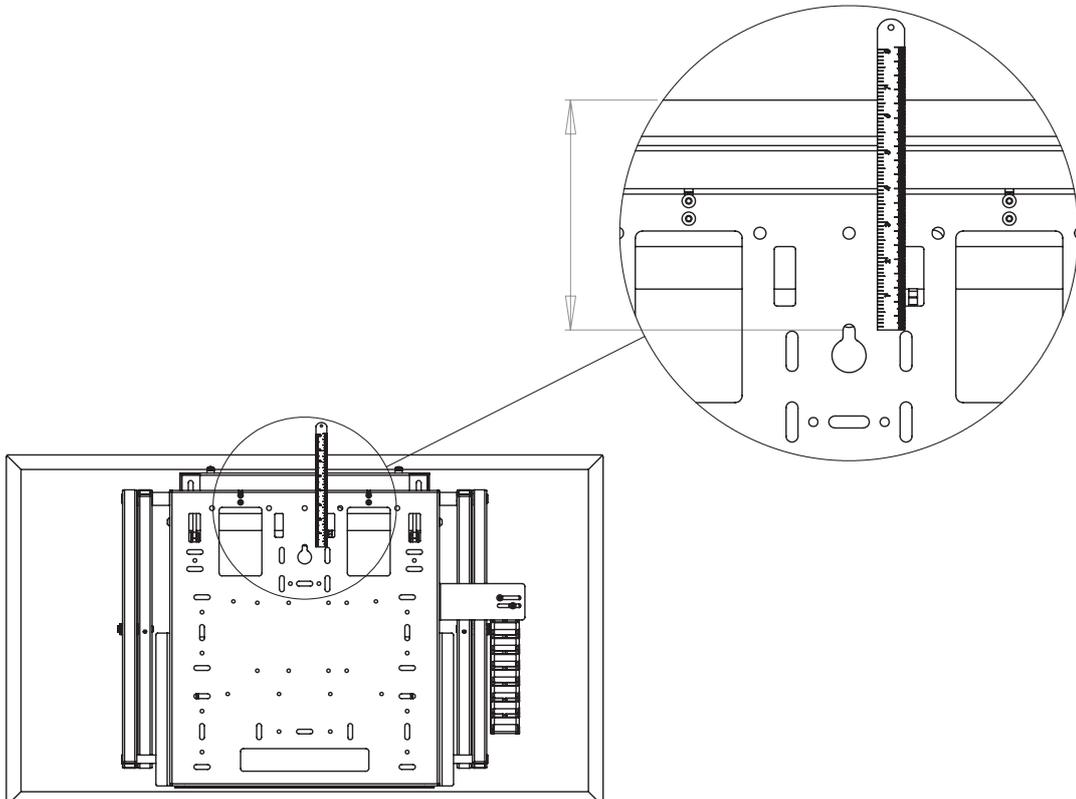
Offer display to Screen Advance mechanism.

2

Measure from the top of the display to the key-hole mount slot.

3

The measurement taken can be used to correctly position mechanism inside the enclosure.



SCREEN ADVANCE MOUNTING (SA)

1

Remove the Screen Mount Plate by loosening the two Locking Bolts and lifting up and away.

2

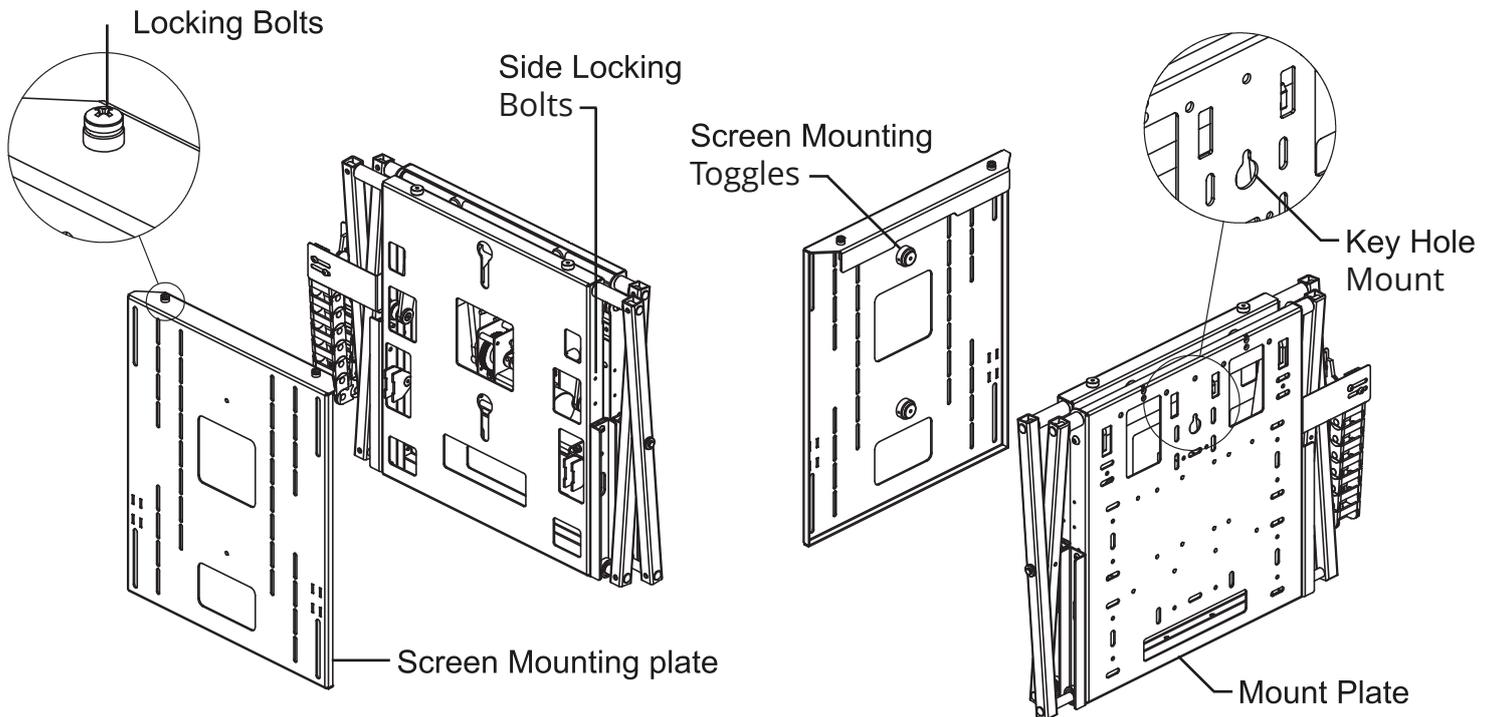
Take Screen Advance Positioning measurement and mark position inside the enclosure.

3

Fix a screw into the wall with the head protruding at marked position, so that the SA can be freely supported inside the enclosure.

4

Attach Screen Mounting Plate to the back of the display using included M6 fixings



5

Mount the SA mechanism onto the protruding screw and check positioning is as desired.

6

With the mechanism in the IN position, fix through the front plate with the square clearance holes provided. (FIXINGS NOT INCLUDED)

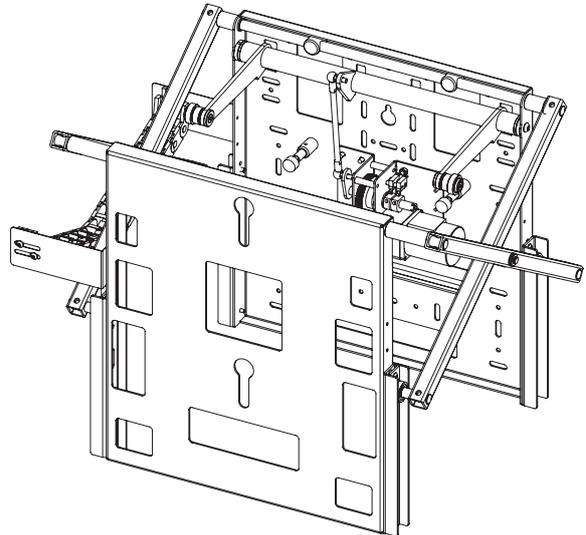
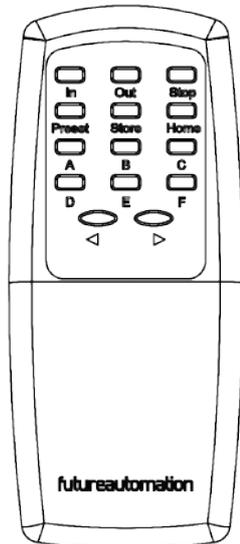
7

Feed necessary cables through the provided cable run.

8

Hook screen onto the SA using the Screen Mounting Toggles and securing the Locking Bolts into place.

SETTING THE MECHANISM OUT POSITIONS (SA)



1

To alter the OUT position of the screen advance, press the OUT button followed by the STOP button when the screen is at the desired position.

2

Press STORE, followed by OUT to set this position as the new OUT position. The position can be fine tuned by pressing STORE then STORE then >, this will move the screen forward 1-2mm and set this position as the new OUT position.

3

To reset the OUT position back to its default (maximum extension before hitting the service position) press Store then STOP then OUT.

4

To enter service mode, push OUT to send the SA to its OUT position. Once in its OUT position, press B to pulse out to the Service Mode and then manually pull out the mechanism. Once adjustments are made push the mechanism back and press A to pulse the push arm back into the OUT position.

SCREEN ADVANCE MOUNTING (SAH)

1

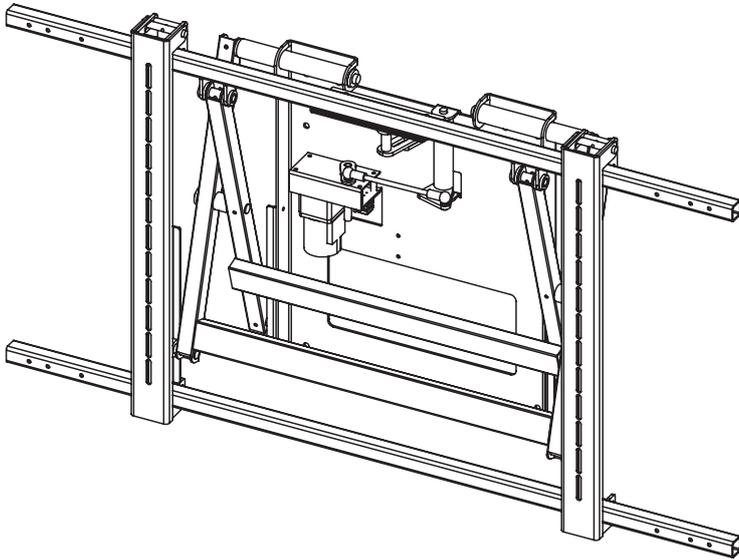
Offer display to Screen Advance Heavy (SAH) mechanism.

2

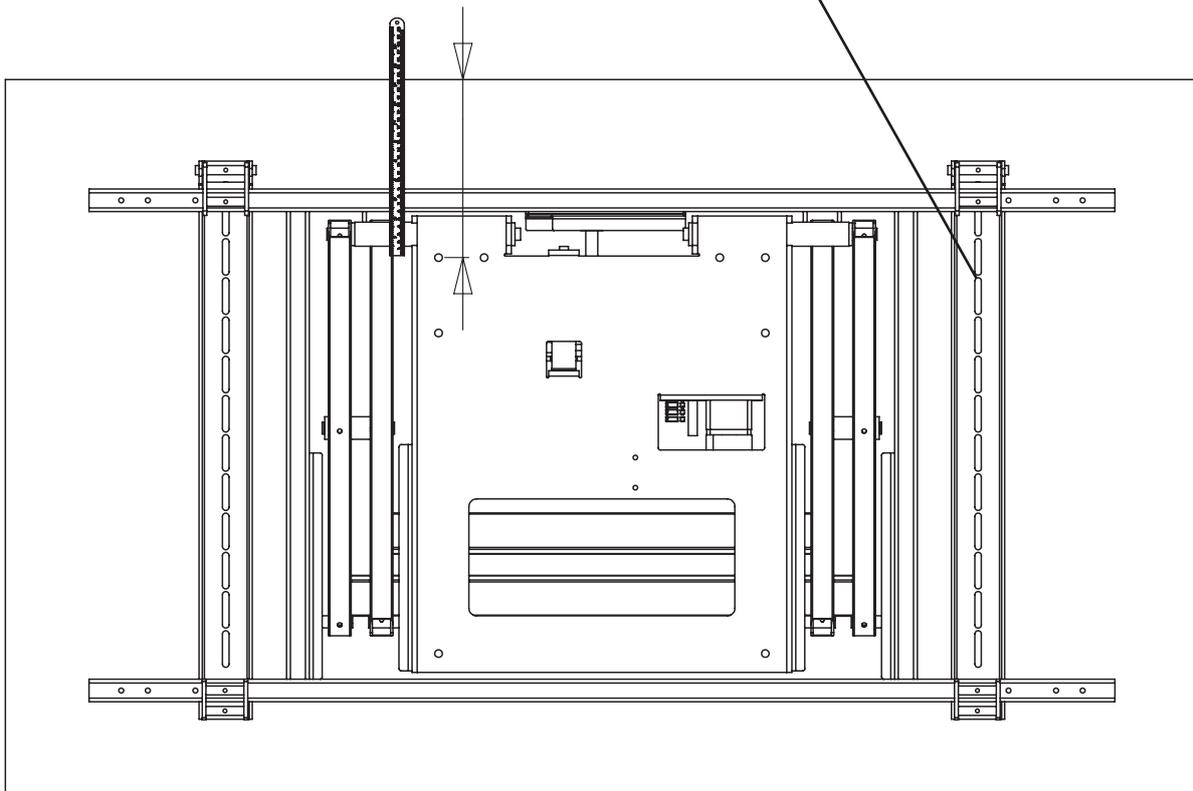
Measure from the top of the display to the two largest mounting holes on the SAH Bracket Wall Plate.

3

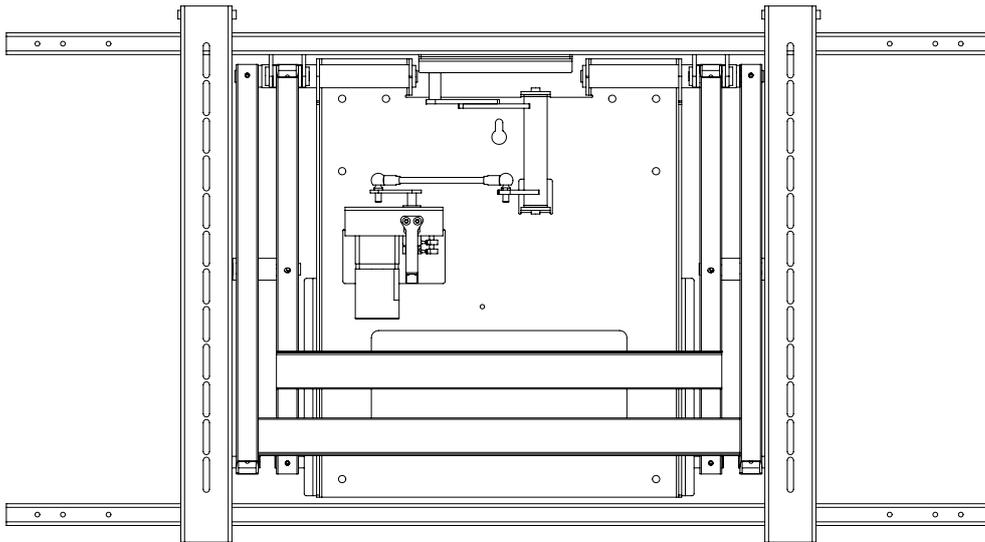
The measurement taken can be used to correctly position mechanism inside the enclosure.



Make sure uprights
line up with mount
holes on the screen

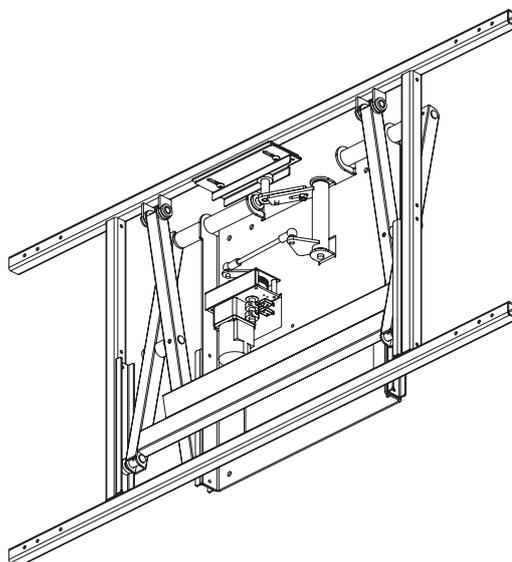
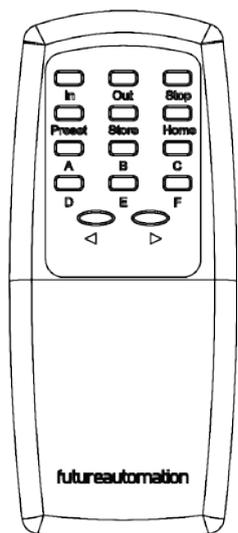


SCREEN ADVANCE MOUNTING (SAH)



- 1** Remove the two Uprights from the SAH and attach them to the display using the supplied fixings.
- 2** Using the previous measurement for reference, secure the SAH mechanism into the enclosure using the appropriate fixings (NOT INCLUDED)
- 3** Confirm that the mechanism is level and in the correct position.
- 4** Hook display onto the installed SAH and secure in place with supplied fixings.

SETTING THE MECHANISM IN / OUT POSITIONS (SAH)

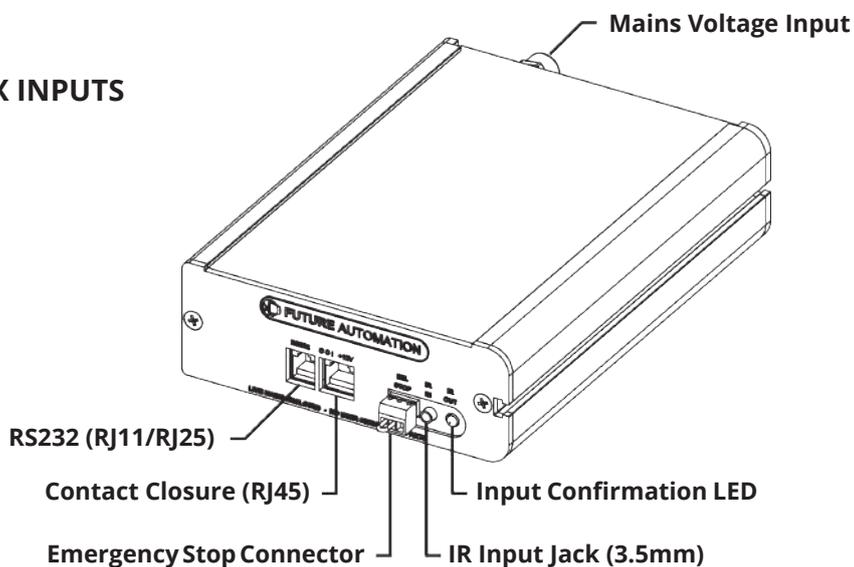


- 1** To alter the OUT position of the screen advance heavy, press the OUT button followed by the STOP button when the screen is at the desired position.
- 2** Press STORE, followed by OUT to set this position as the new OUT position. The position can be fine tuned by pressing STORE then STORE then >, this will move the screen forward 1-2mm and set this position as the new OUT position.
- 3** To reset the OUT position back to its default (maximum extension before hitting the service position) press Store then STOP then OUT.
- 4** To enter service mode, push OUT to send the SAH to its OUT position. Once in its OUT position, press B to pulse out to the Service Mode and then manually pull out the mechanism. Once adjustments are made push the mechanism back and press A to pulse the push arm back into the OUT position.

GENERAL CONTROL

This mechanism has multiple standard control methods, each of which requires a different input method to the control box. For ease, the input sockets on the control board are labelled below. **(Control box size and style may vary to image shown)**

CONTROL BOX INPUTS



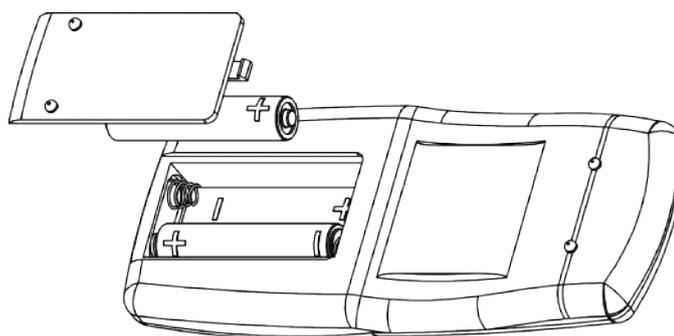
MECHANISM EMERGENCY STOP CONNECTOR

This mechanism features an Emergency Stop Connector, which **MUST** be plugged into the control box in the connector labelled above for the mechanism to operate. If this connector is not plugged in, the Input Confirmation LED will be permanently lit. As per the red plastic tag attached to the Emergency Stop Connector (and shown below), the small loop of wire in this connector is designed to be replaced by a third party safety mechanism.



REPLACING MECHANISM BATTERIES

The standard Future Automation Infrared (IR) remote control required x2 AAA batteries to operate. These are provided with the mechanism in the Accessories Pack. These batteries can be replaced as the per the image below.



INFRARED (IR)

This mechanism can be controlled via the supplied 14 button Infrared (IR) Remote Control, paired with the supplied Infrared (IR) lead and sensor.

The mechanism's functions can be controlled by plugging the Infrared (IR) lead and sensor into the 3.5mm IR Input Jack shown on the General Mechanism Control page.

Confirmation of Infrared (IR) input will be shown by a single flash of the large green LED located on the end of the control box.

As Infrared (IR) control works over line of site, the Infrared (IR) sensor must be directly viewable from what ever location the remote control is being used from.

Infrared (IR) Remote Control Button Layout

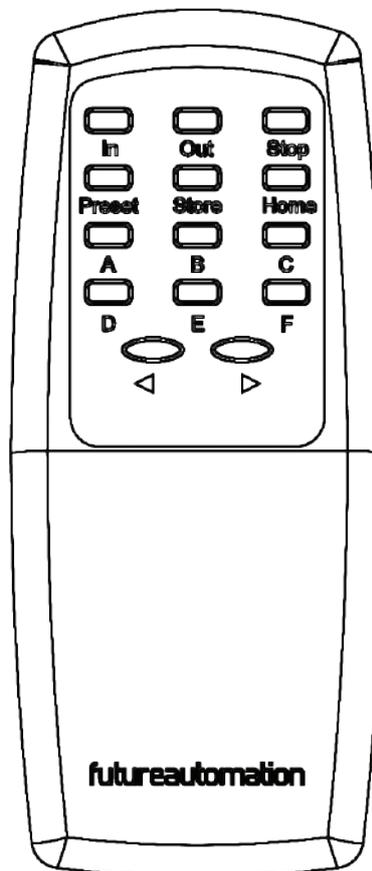
IN - Brings the mechanism into the enclosure, hiding the display.

OUT - Brings the mechanism out of the enclosure, revealing the display.

STORE, OUT - Stores the current location of the screen as the new OUT position.

STORE, STOP, OUT - Reset the OUT position to be just short of the service position.

STORE, STORE, HOME - Clear ALL programmed positions.



STOP - Immediately stops the mechanism regardless of position.

A - Pulses the mechanism IN to return to User Mode

B - Pulses the mechanism OUT into service mode to access rear of screen.

STORE, STORE, > - Advance screen forwards 1-2mm and store this position as the new OUT position.

IMPORTANT

Only buttons indicated above are functional with the product. Any other button press will STOP the mechanism.

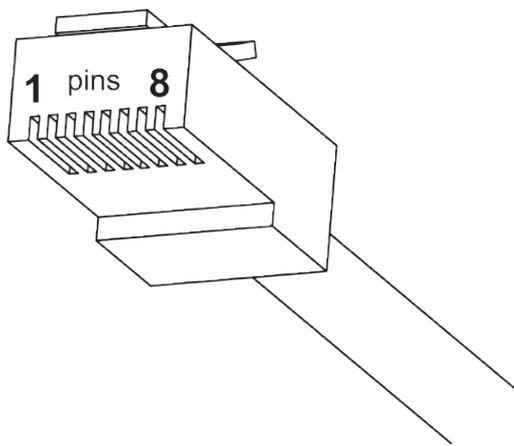
CONTACT CLOSURE

This Mechanism can be controlled via Contact Closure, utilising an 8 Pin RJ45 Connector attached to a length of CAT5 (Type 568A or 568B) cable.

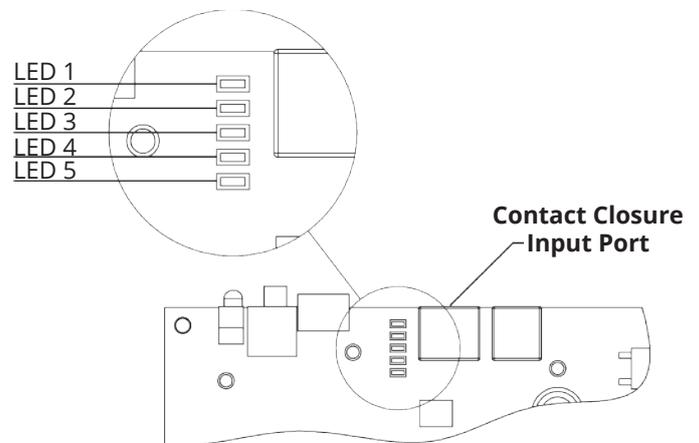
The mechanism's functions can be controlled by plugging this into the RJ45 port on the mechanism control board, then shorting pins 1-8 on this connector as shown in the Contact Closure Input Table below.

Confirmation of Contact Closure input will be shown by a single flash of the large green LED located on the end of the control box, as well as illumination of the corresponding Contact Closure LED on the printed circuit board as shown below.

RJ45 PIN LAYOUT



CONTACT CLOSURE LED LAYOUT



CONTACT CLOSURE INPUT TABLE

PIN	DESCRIPTION	ACTION
1	12V SUPPLY	12V SUPPLY - CURRENT LIMITED
2	12V LATCH	WHEN 12V ATTACHED, DEVICE WILL GO OUT TO PRESET POSITION. WHEN 12V REMOVED, DEVICE WILL GO IN.
3	GROUND	GROUND
4		
5	DEVICE LATCH	SHORT TO GROUND (PIN 3), DEVICE WILL GO OUT TO PRESET POSITION, REMOVE SHORT DEVICE WILL GO IN.
6	DEVICE STOP	MOMENTARY SHORT TO GROUND (PIN 3), STOPS DEVICE IN CURRENT POSITION.
7	DEVICE OUT	MOMENTARY SHORT TO GROUND (PIN 3), MAKES DEVICE GO OUT.
8	DEVICE IN	MOMENTARY SHORT TO GROUND (PIN 3), MAKES DEVICE GO IN.

WIRE/CABLE TYPE		LED INDICATOR
568A	568B	
W G	W O	
G	O	
W O	W G	
B	B	
W B	W B	LED 4
O	G	LED 3
W BR	W BR	LED 2
BR	BR	LED 1

RS232 CONTROL

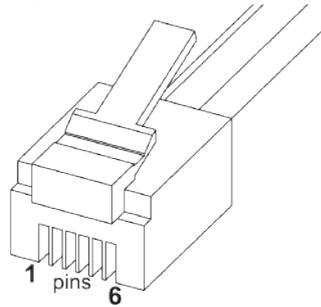
This Mechanism can be controlled via RS232, utilising a 6 Pin RJ11/RJ25 connector OR 9 Pin Serial connector attached to a length of 6 core cable.

The mechanism's functions can be controlled by plugging this into the RJ11/RJ25 port on the mechanism control box, then inputting the RS232 commands shown in the RS232 Input Table below.

Confirmation of Contact Closure input will be shown by a single flash of the large green LED located on the end of the control box.

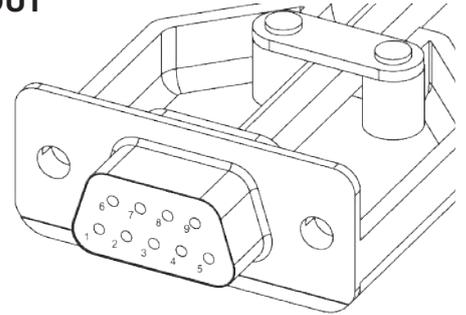
RJ11/RJ25 PIN LAYOUT

- PIN 1: RX**
- PIN 6: TX**
- PIN 3 & 4: GROUND**



SERIAL PIN LAYOUT

- PIN 2: RX**
- PIN 3: TX**
- PIN 5: GROUND**



RS232 PROGRAMMING DETAILS

- Baud Rate: 9600
- Stop Bit: 1
- Parity: None
- Databits: 8

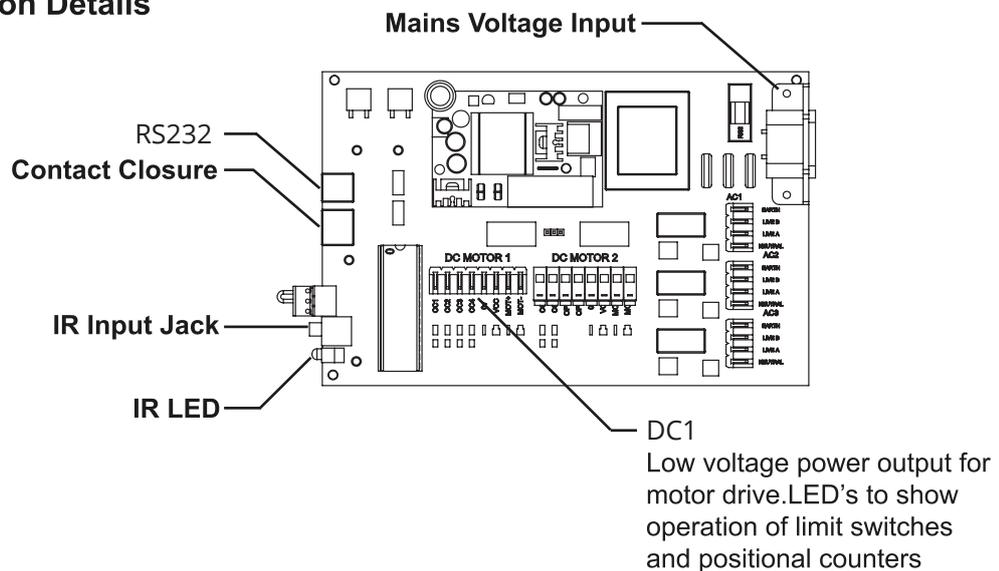
RJ11/RJ25	Func.	9 PIN Serial	Colour
PIN 1	TX-RX	PIN 2	Blue
PIN 3	GROUND	PIN 5	Green
PIN 4	GROUND	PIN 5	Red
PIN 6	RX-TX	PIN 3	White

RS232 INPUT TABLE

IMPORTANT - Ensure all protocols are entered exactly as written below, including Carriage Return (ENTER / ASCII 13)

Protocol	Action
fa_in Carriage Return (Enter / ASCII 13)	Device IN
fa_out Carriage Return (Enter / ASCII 13)	Device OUT
fa_stop Carriage Return (Enter / ASCII 13)	Device STOP (At any position)

Operation Details





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