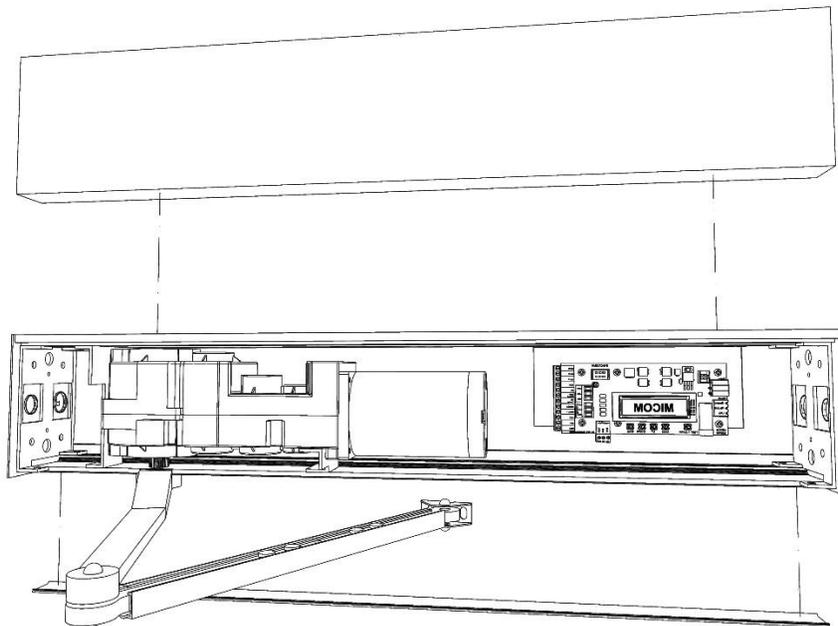


# Smart Swing 3®

## LOW ENERGY SWING DOOR OPERATOR

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# Installation & Instruction Manual



These original installation instructions detailed within are solely for professional installers and not intended to be handed over to the end user.

Ver1 Sep 2018

## WARNING



Failure to observe the information in this manual may result in personal injury or damage to equipment.  
 To reduce the risk of injury to persons - use this operator with single or double pedestrian swinging doors only.  
 Save these instructions for future reference.

### OPERATOR FOR INTERNAL USE ONLY

#### AVOIDANCE OF ELECTRIC SHOCK, INJURY, FIRE OR MALFUNCTIONS

	Please read these instructions carefully before installing the door operator. We are not responsible for any loss or damage if these precautions are not followed. These instructions should be followed to avoid the possibility injury and damage due to wrong installation or adjustment.
	During maintenance and installation, the power to the control unit should be OFF.
	Please use the correct power supply – Power Acceptance 90V~250V DC - 50 / 60 Hz
	Make sure that the operator is grounded or connected to earth! The coating of the operator is made of an electrically conductive metallic material, which will easily induce electrical conduction! Make sure the ground or earth wire is connected!
	The operator housing is not completely sealed, therefore it should be noted that excessive moisture or a corrosive atmosphere could destroy the electronic components contained within.
	Do not remove screws and bolts from the structure of the Control Unit or Motor Gear Box. Do not intend to open, repair or alter any part of the operator unit. Failure to comply results in loss of warranty.
	Installation and maintenance of this product can be performed by MICOM authorized personnel only.
	Before switching ON the power supply, make sure that no objects obstruct the travel of the automatic door/s.
	NATIONAL WIRING REGULATIONS AND STANDARDS MUST BE CONFORMED TO.
	Follow all indicated instructions as improper installation could cause severe damage.
	Correct equipment must be used in order to reach overhead area for installation and service.
	KEEP FINGERS & CLOTHING CLEAR OF ALL MOVING PARTS
	Please keep these instructions.
<b>WARRENTY</b>	<b>24 MONTHS FROM SHIPMENT - WARRANTY VOID IF REPAIR IS ATTEMPTED TO MOTOR GEAR OR CONTROL ASSEMBLY</b>

**Table of Contents**

<b>Section</b>	<b>Subject</b>
1	Intended use
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## 1.0 Product Summary

Smart Swing 3 is a universal non-handed, electro-mechanical swing door operator, which provides powered door opening upon activation. Designed to facilitate barrier free access into and within buildings, through swing doors.

SMART SWING 3 features enable the continuous automation of pedestrian doors, whilst offering Low Energy barrier free access. Designed to achieve the highest degree of safety whilst offering a long service life.

During the opening cycle, the spiral spring is tensioned by the rotation of the output shaft. During the closing cycle, the accumulated spring force is released in the closing direction. The spring force can be adjusted so there is appropriate force to close the door when it is operated manually or in case of a power failure.

Opening - When an open signal is received by the control unit, the door is opened at the factory set or pre-adjusted opening speed. Before the door is fully open, it will begin its back check, slowing automatically to low speed. The motor stops when the selected full open angle has been reached. The open position is held by the motor.

If the door is obstructed while opening, it will either creep at slow speed or stop (hold) which can be selected within the control settings via the visual display.

Closing - When the activation time has elapsed, the operator will close the door automatically, using spring force and motor power. The door will slow to at latch speed before it reaches the full closed position. The door is kept closed by spring power assisted by the motor.

Power Failure - During power failure the operator acts as a door closer with controlled closing speed.

The SMART SWING 3 can be surface or concealed mounted on either side of the door header for left, right, pull or push applications. It is suitable for either single or double door opening, being either hinged or center hung mounted.

This operator is for internal use only.

# Smart Swing 3®

## Installation Manual

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### 2.0 Technical Specification

MODEL	SMART SWING 3®	
Application	Low Energy	
Door Weight (max)	325 lbs (145kg) per leaf	
Operator Dimensions	5 ½" 140 mm (H) x 4 ½" 115mm (D)	
Operator Net Weight	16kg Approx.	
Power supply 00	90V ~ 250V AC, 50/60Hz	
Consumption	100W Max	
Motor	1/8 hp, 24VDC, 3A max	
Rated operation	Continuous opening and closing cycles	
Closing force	Adjustable Pressure by Spring Tension	
Operation during power failure	Low manual resistance when opened by hand. Door closing by spring.	
Motor	Low Revolution Brush DC motor	
Reduction gear	Enclosed Reduction Gear system	
Control system	Microprocessor Digital Control	
Braking (Open Back Check & Close Latch)	Adjustable by Control Unit	
Opening time	Full Closed to Back Check	Adjustable (Open Speed in 20 Steps)
	Back Check to Full Open	Adjustable (Back Check Speed in 5 Steps / Back Check Distance in 15 Steps)
Closing time	Full Open to Latch	Adjustable (Close Speed in 15 Steps)
	Latch to Full Closed	Adjustable (Latch Speed in 5 Steps / Latch Distance in 15 Steps)
Hold Open	Pulsed Energy to Motor. No overheating. Continuous Hold Open	
Obstruction Detection (Without safety sensor)	Opening: If door detects obstruction, power is cut to motor. (Sensitivity adjustable by 'Current Overload' setting) Door will close by spring power at low speed.	
Obstruction Detection (With safety sensor)	Safety sensor connected to Safety 1 input will prevent a door opening or prevent the door to go in the closing cycle when the safety sensor is active. Safety sensor connected to Safety 2 input will stall or crawl (Installer selectable) the door when the safety sensor is active.	
Electro-magnetic lock system	Output available	
Operating environment	Ambient temperature -18 deg ~ +50 deg. (no condensation or icing)	
	Ambient humidity 30% to 85%RH (no hazardous materials must be present in the atmosphere)	

SMART SWING 3®

# Smart Swing 3®

## Installation Manual

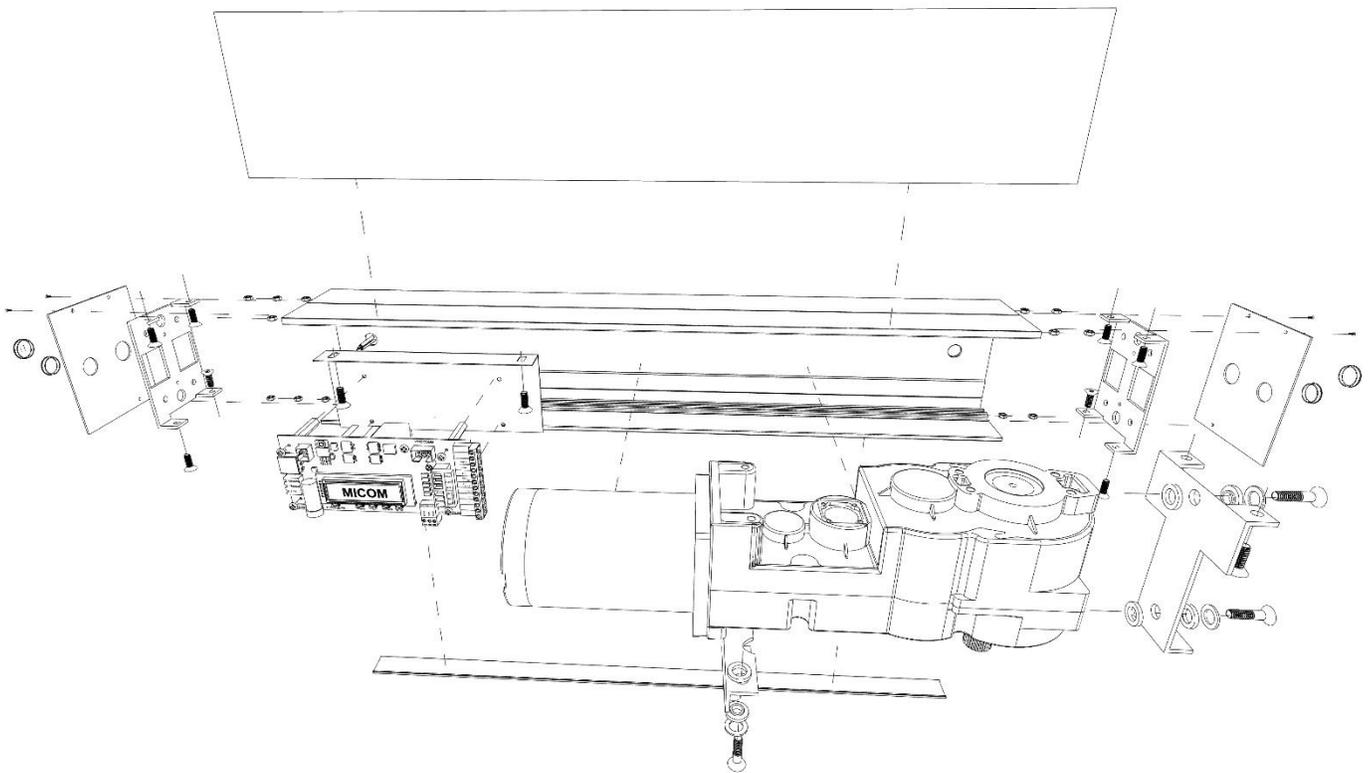
### 3.0 Receiving Inspection

On receiving the package, please verify that the order was shipped complete and correct. Including model number, header width, door handing, arm and color.

- If any of the below items are not correct, do not attempt to install the unit until all conditions are correct.
- Report any incorrect items to the general contractor immediately.

NO CLAIMS FOR SHORTAGE WILL BE ACCEPTED UNLESS REPORTED WITHIN 24 HOURS OF RECEIPT OF SHIPMENT. THE FOLLOWING ITMES SHOULD BE SUPPLIED:

### 3.1 Exploded View



### 3.2 Parts List

No.	Description	Part No.
1	Screw end cover	
2	Blank end cover	
3	End cover plate Left	
4	End cover bracket Left	
5	Fixing Bolt	

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6	Fixing plate SMART SWING 3	
7	Control Unit SMART SWING 3	
8	SMART SWING 3 Housing	
9	Motor	
10	Motor gear box mount bracket	
11	Gear Box	
12	Spindle	
13	Fixed Stop	
14	Bush	
15	Retainer	
16	Motor gear box end support bracket	
17	Securing bolt	
18	Fixing bolt	
19	End cover plate Right	
20	End cover bracket Right	

#### 4.0 Pre-Installation Information

##### 4.1 Safety Precautions

- Only MICOM trained technicians are authorized to carry out these operations.
- Ensure all power is OFF to the unit, before performing any work or maintenance.
- Do not climb or put weight on any door or header parts.
- Do not let children play with the operator or the electrical board.
- Keep remote controls away from children.

To avoid bodily injury, material damage and malfunction of the product, the instructions contained in this manual must be strictly observed during installation, adjustment, repair and service.

Training is needed to carry out these tasks safely.

##### 4.2 Compliance Codes and Standards

It is the responsibility of the final installer and/or installation company, to certify that the final completed operator is installed in accordance with local building codes and applicable laws.

Be sure to complete the site acceptance test before taking the door into operation.

##### Caution

- All wiring must conform to standard wiring practice in accordance with national and local wiring codes.
- Door must swing freely through the entire opening and closing cycle before beginning of installation.
- Incorrectly installed or improperly adjusted door operators can cause property damage or personal injury.
- All dimensions are given in inches (millimeters), unless otherwise note.
- Before installation, verify door frame is properly reinforced and is well anchored in the wall.
- Concealed electrical conduit and concealed switch or sensor wires should be pulled to the frame before proceeding.

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#### 4.3 Electrical

The 115±5VAC supply lines are connected into the Green Connector block located to the left hand side of the control unit. Words clearly indicate its correct wiring. The ground wire is also connected into the Green Connector block.

The control board settings have been pre-set prior to shipment. It will be necessary for the door operator to be functional while adjustments and settings are made. Please follow these instruction for a successful installation.

A black push actuator button indicated by 'TEST/LEARN' is mounted to the lower left corner of the Visual display to ease in the adjustment process.

Once the unit is powered up, and before the arm is installed. Push the 'TEST/LEARN' button in order to check the spline drive shaft rotates in the correct direction.

Keep all wires away from moving parts and sharp edges that may cut into the outer casing of the wires.

Installation of any extra wiring for controls or accessories into the header unit shall be secured and away from any moving parts.

If the motor is not plugged into the circuit board, there is no resistance against the spring when manually opening the door. The door or arm will close very quickly if opened.

If an electrical access hole is added or knocked-out of the end plates, code approved electrical transfers must be used. Hole cannot be knocked out and unfilled.

#### 4.4 Required Tools for installation:

- Allen Wrench Set
- Power Drill and Drill Bits
- Level
- Tape Measure
- Wire Stripper
- Screwdrivers: Flat, Philip, 5/16" Hex. Nut
- Additional Fasteners Depending Surface
- Shims
- Hand Saw/ Power Saw

#### 4.5 Suggested Fasteners for Frame

- #14 x 2-3/4" (70mm) long sheet metal screws for wood.

#### 4.6 Suggested Fasteners for Door

- #12, #14, Wood screws, Sheet Metal screws, Self-tapping screws of varying lengths depending on applications.
- Typically, doors are hung on hinges 5" (127mm) max. Width or 3/4" (19mm) offset pivots.

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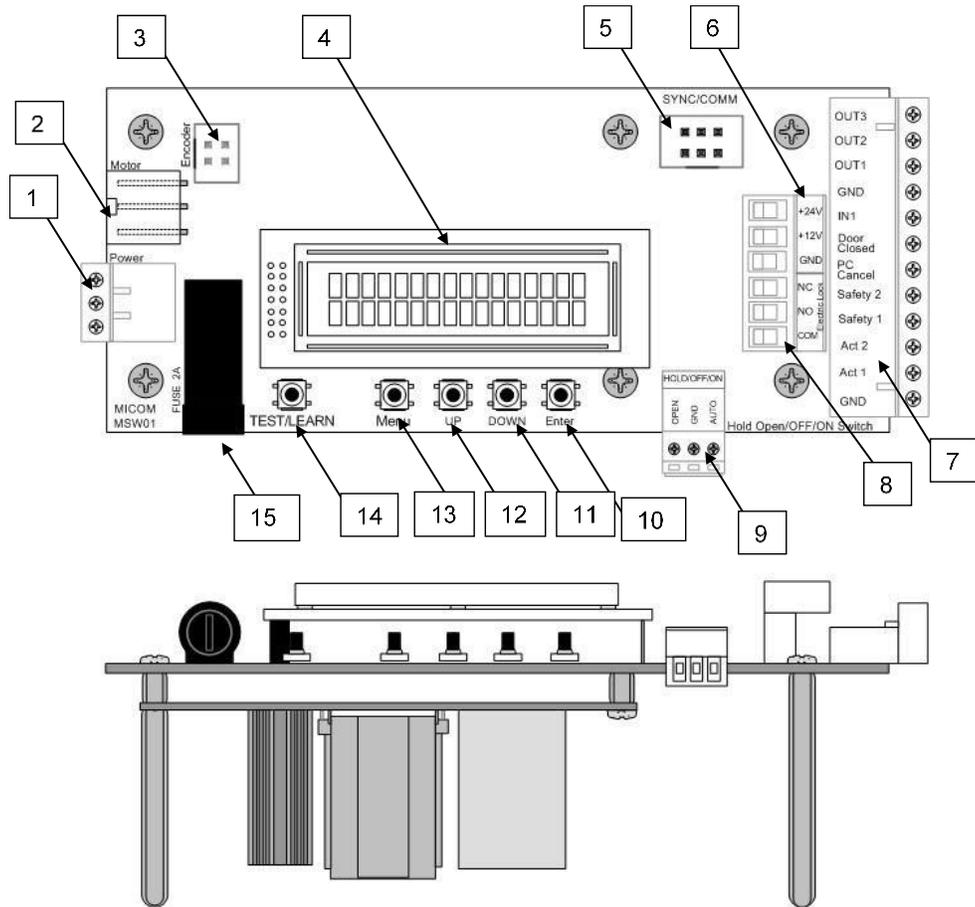
## Installation Manual

The fastener components listed above are merely suggestions. A technician should use their best discretion to determine what components they'll need to complete the job.

### 5.0 Installation

The following information gives a complete guidance to the correct installation on SMART SWING 3 Swing door operator.

#### 5.1 Control Unit SMART SWING 3



No.	Description		
		8	E-Lock Signal Connector
1	Power Input (90-250VAC 50/60hz)	9	3 Position Switch Input connector
2	Motor Connector Plug in	10	Enter Button
3	Motor Encoder Connector Plug in	11	Down Button
4	LED Display Screen	12	Up Button
5	Sync / Comm Connector Plug in (Double Operator)	13	Menu Button

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## Installation Manual

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6	24VDC / 12V DC Power Output Connector	14	Test / Learn Button
7	Activation / Safety Accessories Connector	15	Fuse

### 5.2 SMART SWING 3 Operator Drawings

Note: Installation measurements have a tolerance of +/- 5mm.

#### 5.2.1 Arm Assemblies

#### 5.3 Operator Orientation

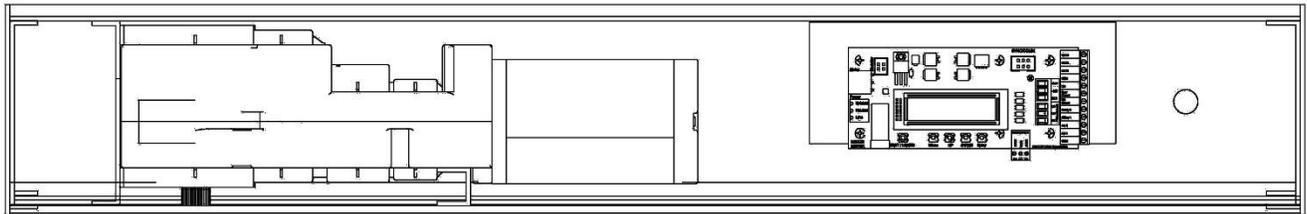
Verify that the operator is the correct orientation. Left Push, Right Push, Left Pull or Right Pull.

**Note:**

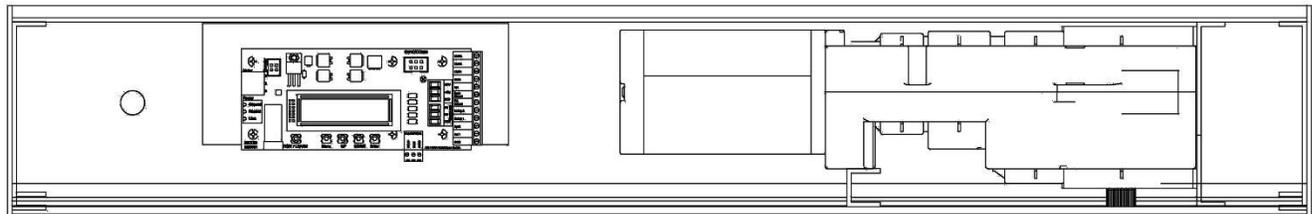
- If the operator label is facing 'Down' to the floor, the handing is Left Hand Push/Pull.
- If the operator label is facing 'Up' to the ceiling, the handing is Right Hand Push/Pull.

#### 5.4 PUSH Arm

##### LEFT Hand PUSH



##### RIGHT Hand PUSH

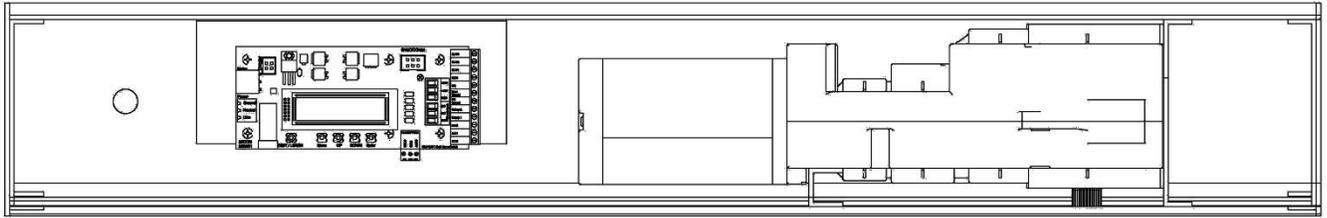


# Smart Swing 3® Installation Manual

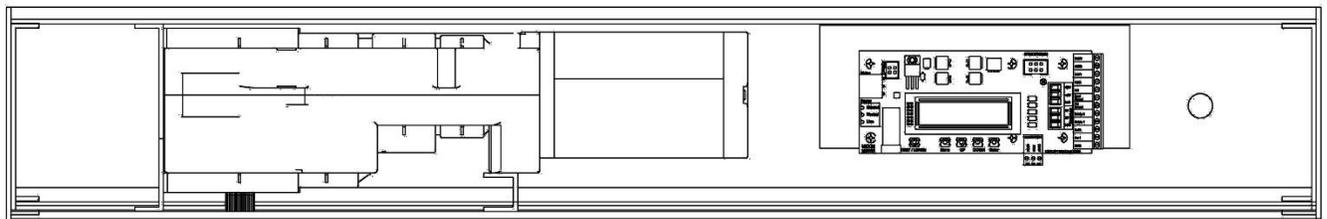
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## 5.5 PULL Arm

### LEFT Hand PULL



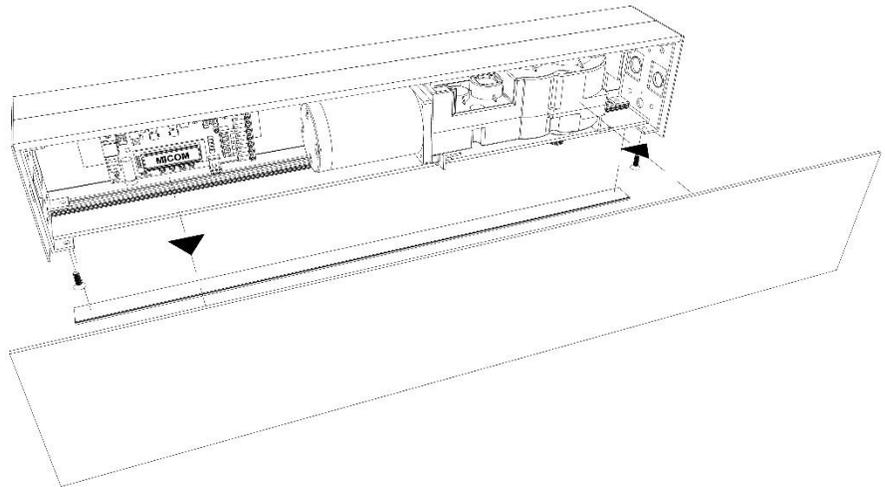
### RIGHT Hand PULL



## 5.5 Operator Installation

**Step 1.** Remove the cover from the assembly by gently pulling the cover outwards with minimal effort.

Carefully set the cover in a location where it will not be damaged.



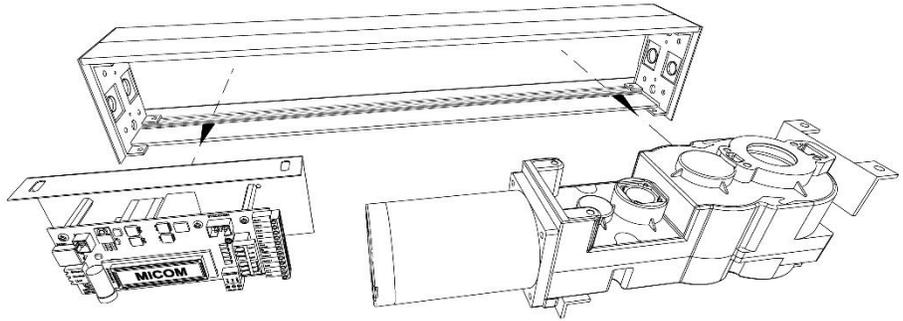
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## Smart Swing 3® Installation Manual

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**Step 2.** Remove the motor/gearbox and control board from the back plate

Make through holes on the back plate for mounting header where appropriate.

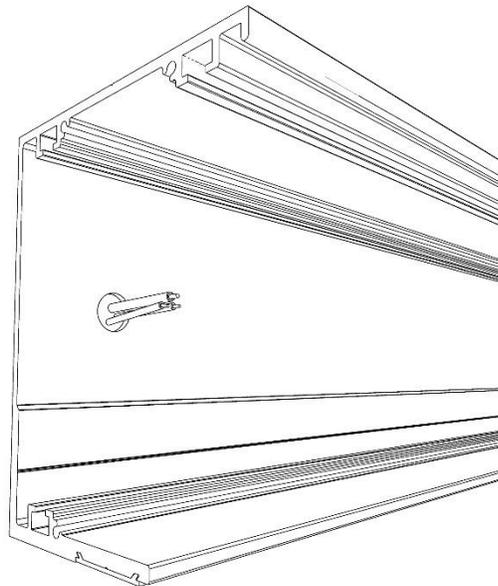


**Step 3.** Power Supply

Make sure all power is turned OFF before handling the supply wires. This should be done by a certified electrician and within the guidelines of the enforced local electrical codes.

Drill holes for the high voltage wires in backing plate.

Pull the power supply into the header at the same time as the header assembly is positioned.

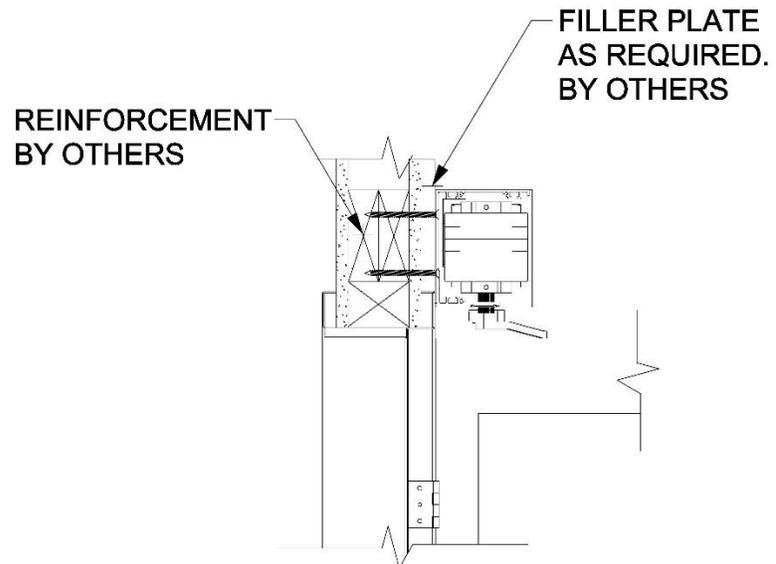


**Step 4. Fixing Operator in Place**

Be sure there is proper support in the wall to secure the header at the vertical jambs and behind the header at intervals between the vertical jambs.

A solid spacer material or filler may be required to compensate for any gap between the back of base rail and wall.

Ensure, before fixing base rail to the doorframe, that access holes for power supply cables are in line, if required



Secure the header box to the top of the door frame with the appropriate fasteners.

**Holes can be made anywhere in header to secure. All holes MUST be drilled into substantial support (studs, blocks, framing, etc.).**

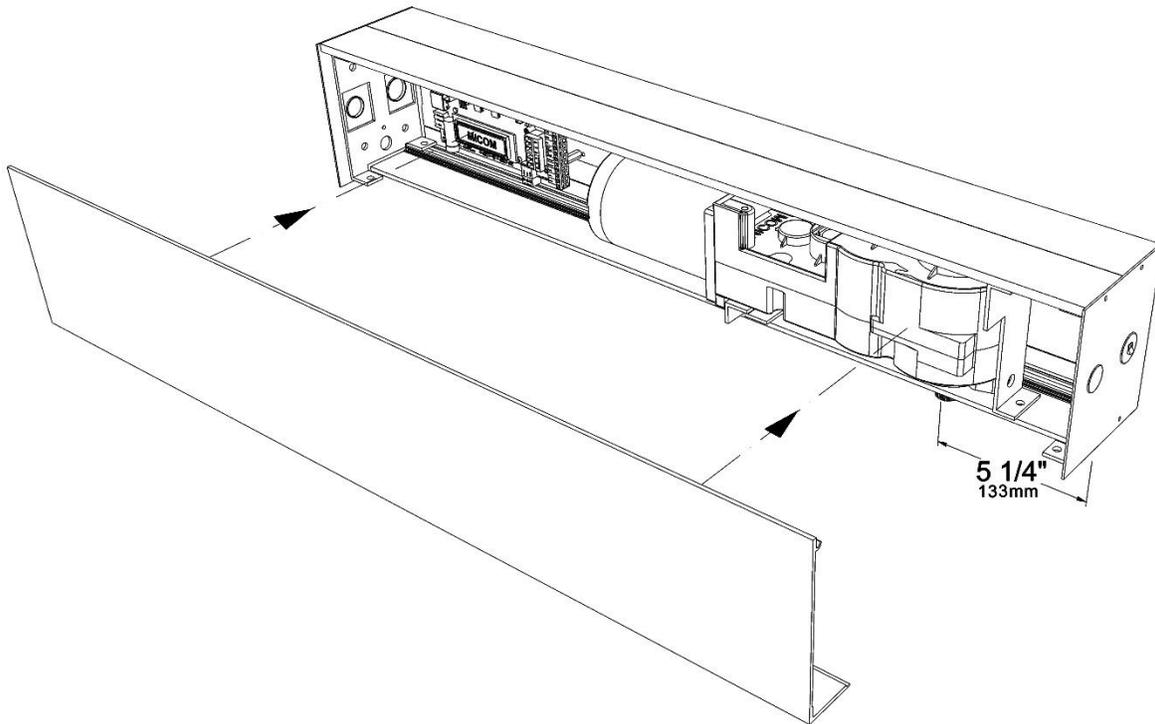
**SPECIFY MIN QTY OF FIXINGS  
TYPE OF FIXINGS & TYPE OF SCREWS – FOR METAL BRICK AND WOOD.  
SPECIFY CORRECT SPACING FOR FIXINGS**

**Step 5.** Once the header back plate is in place, install the motor/gearbox and control board to the header back plate

Slide the nuts (supplied with the operator) to hold the motor/gear box and control board along the 2 parallel tracks on the back plate.

Fasten the bolt to hold the motor/gear box and control board in place.

The motor/gearbox needs to be installed so that the center of the spindle is 5 ¼" (133mm) from the end plate.



## 5.6 Arm installation

The following these simple steps will allow the door to be set up quickly and correctly. Refer to installation drawings below.

### 5.6.1 PUSH / LINK Arm

Notes: Base rail to be mounted flush with the bottom of the doorframe.

A solid spacer material or filler may be required to compensate for any gap between the back of base rail and wall. Ensure, before fixing base rail to the doorframe, that access holes for power supply cables are in line, if required

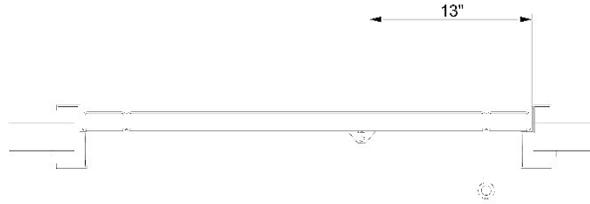
**Step 1.** Without arm fitted, set 3-position switch to Hold Open (II). The drive shaft with turn fully until hitting the in-built fixed doorstop, so charging the spring.

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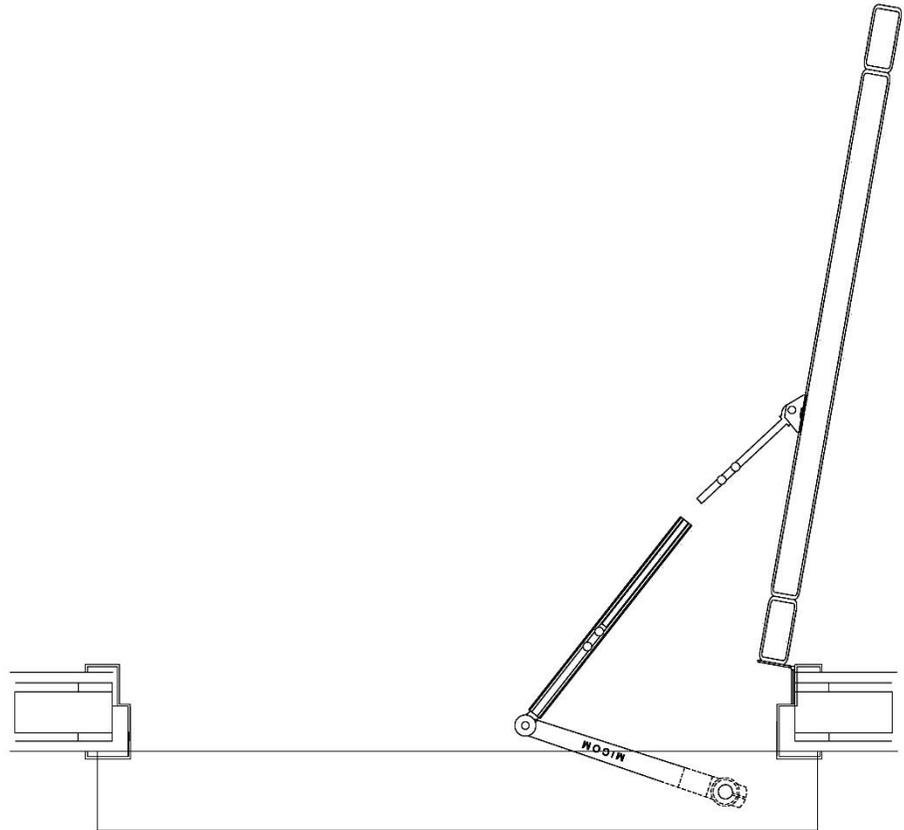
**Step 2.** With door in the closed position, install door shoe and rod to the door according to the installation drawing. 13" to the first Hole,



**Step 3.** Manually open the door to the full open position (Approx. 100deg open position).

Line up Rod with Push Arm, sliding Rod into Push Arm and tighten bolts.

Fit PUSH arm to the drive shaft at the full open position and tighten.



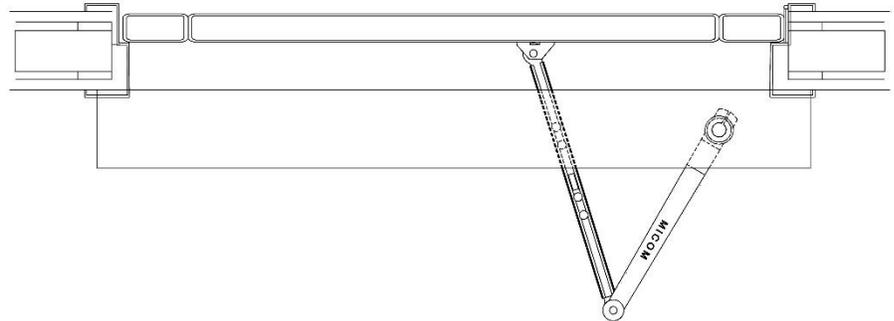
# Smart Swing 3®

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**Step 4.** Set 3-position switch to manual (0) and allow door to close under spring pressure.

Test and adjust arm at full closed position as necessary so door closes fully with frame.



**Step 5.** Press Test/Learn button to begin the learning cycle. See Learning Door Cycle.

### 5.6.2 PULL / SLIDE Arm

Notes: Operator to be mounted so that base of drive shaft is clear above the door top. See Installation Drawings.

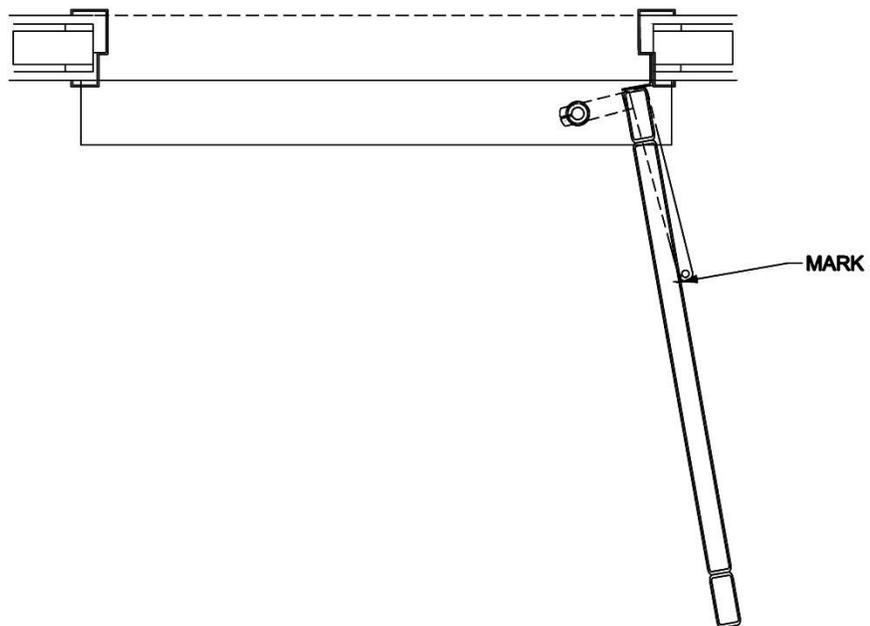
A solid spacer material or filler may be required to compensate for any gap between the back of base rail and wall. Ensure, before fixing base rail to the doorframe, that access holes for power supply cables are in line, if required

**Step 1.** Without PULL arm fitted, set 3-position switch to Hold Open (II). The drive shaft with turn fully until hitting the in-built fixed doorstop, so charging the spring.

**Step 2.** Manually open the door to full open (Approx. 100deg open position).

Fit PULL arm to the drive shaft at the full open position so the roller touches the door.

Mark the open position where roller touches the door.



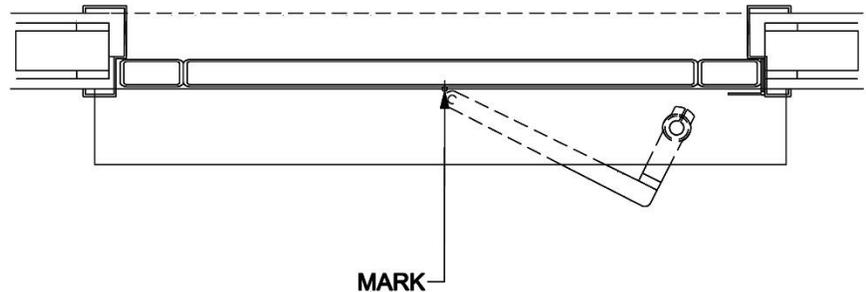
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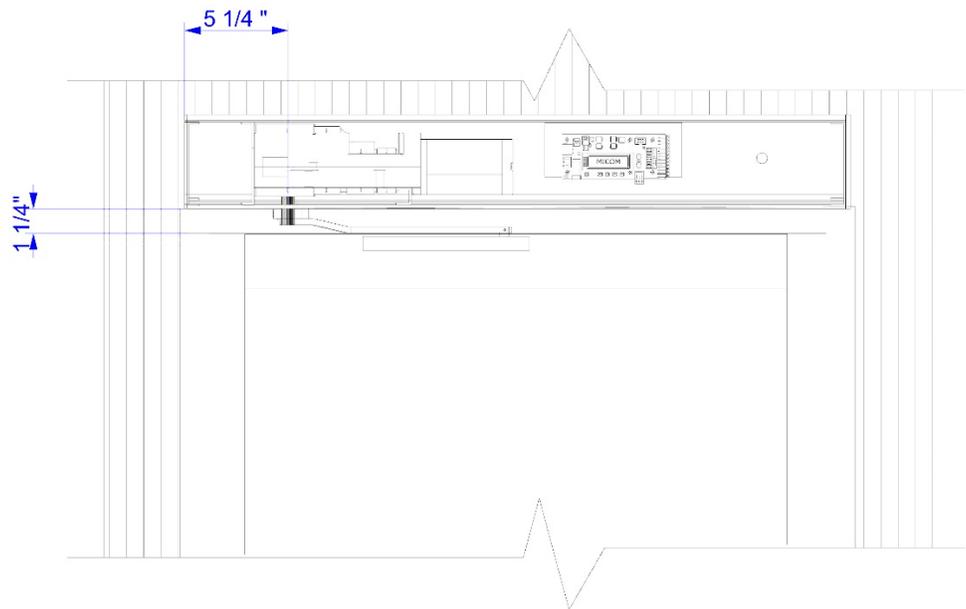
**Step 3.** Set 3-position switch to manual (0) and allow the door to close under spring power.

Mark the closed position where the roller touches the door.



**Step 4.** Position slide track horizontally within 1<sup>st</sup> and 2<sup>nd</sup> mark, then fix it to the door.

Slide the roller along the channel, followed by fitting end caps.



**Step 5.** Turn 3-position switch to automatic (I). Press Test/Learn button to begin the learning cycle. See Learning Door Cycle.

### 6.0 Learning Door Cycle

"TEST/LEARN" button is currently used for two functions.

- TEST - If the 'TEST/LEARN' button is pressed for less than 3 seconds and released, an activation will be generated.
- LEARN - If the button is pressed for at least 4 seconds and released, a door re-learn is selected. Re-learn is confirmed by pushing the "ENTER" button.

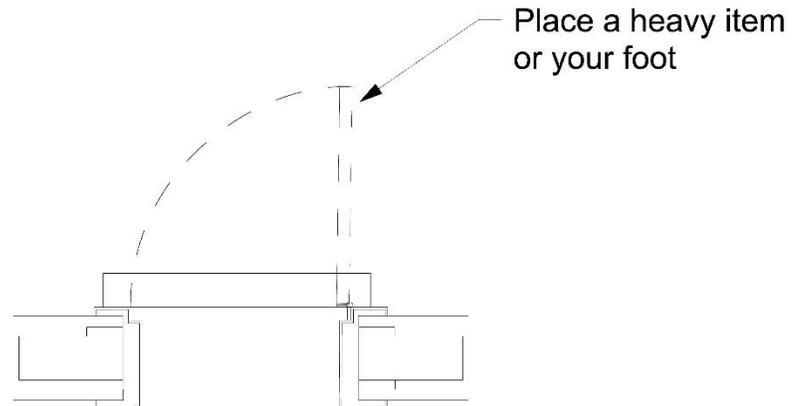
Re-learn can be cancelled by pushing the "TEST" or "MENU" or "UP" or "DOWN" button.

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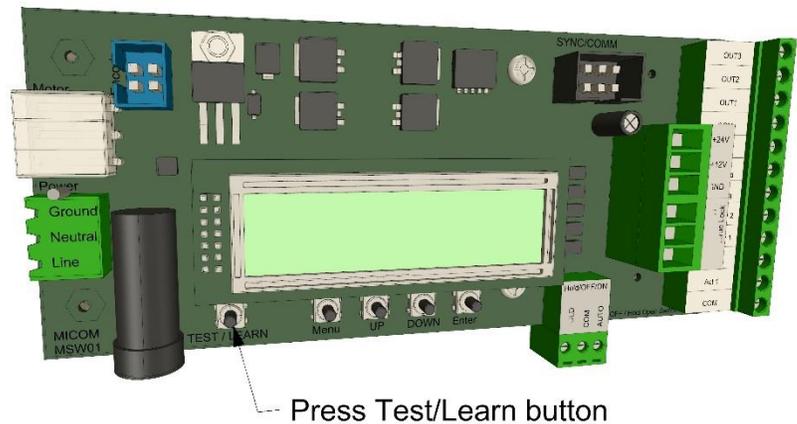
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**Step1.** Place a heavy item or your foot at the desired full open position at approx. 90deg open position.



**Step 2.** Press Test/Learn button for 3 seconds and release to begin the learning cycle.



**Step3.** Incorporating a unique electronic stop, the door will learn the full open position during a one-time open/close cycle.

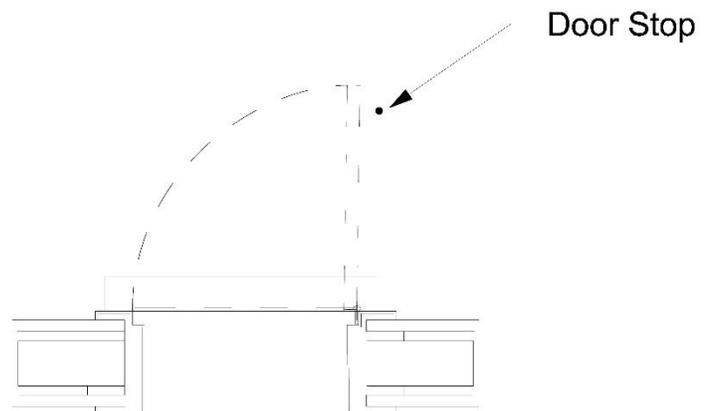
The door will open until it touches the object at the desired full open position.

Back-check and latching position are automatically calculated and do not need setting (unless adjustment is required).

On the next activation, the door will open, slow at back check, then stop at the learnt open position.

The door will not hit the in-built fixed doorstop.

**Note: The inbuilt fixed doorstop should only act as a limiting device should the door be pushed past its pre-set final open position.**



### 7.0 Control Programming

- Programming is quick and simple via the VISUAL LED DISPLAY.
- FUNCTION is clearly shown on the display in words.
- VALUE or APPLICATIONS can easily be adjusted using the buttons on the control face.

#### **Note:**

- Changed menu values will automatically be saved during the next opening cycle.

**Menu values/settings must comply with ANSI/BHMA A156.19 for a low energy door and ANSI/BHMA A156.10 for a fully automatic door**

### 7.1 Function / Value & Applications

#### 7.1.1 Opening speed (05-20)

- This setting is door opening speed from full close position to the backcheck position.
- Use the "UP" and "DOWN" buttons to select the desired door opening speed.
- Activate the door to check the speed is correctly adjusted.

#### 7.1.2 Backcheck speed (01-05)

- This setting is speed when the door reaches the backcheck position to the full door opening.
- Use the "UP" and "DOWN" buttons to select the desired door backcheck speed.
- Activate the door to check the speed is correctly adjusted.

#### 7.1.3 Safety speed (Hold/Crawl)

- This setting is door speed when safety 2 is active during the opening cycle.
- Use the "UP" and "DOWN" buttons to select either hold or crawl speed.

#### 7.1.4 Closing speed (01-15)

- This setting is door closing speed from full opened to the latch area.
- Use the "UP" and "DOWN" buttons to select the desired door closing speed.
- Activate the door to check the speed is correctly adjusted.

#### 7.1.5 Latch speed (01-05)

- This setting is door closing speed in the latch area until fully closed.
- Use the "UP" and "DOWN" buttons to select the desired door latch speed
- Activate the door to check the speed is correctly adjusted.

#### 7.1.6 Current limit (01-20)

In case the door encounters an obstruction during the opening cycle, once the maximum current limit is reached for at least 2 seconds, the door opening is then cancelled.

- Use the "UP" and "DOWN" buttons to select the desired current limit strength.
- Activate the door to open. During the opening cycle, physically apply pressure to stall the door for at least 2 seconds.
- Check the force needed to reach the limit at which the door opening is cancelled.
- Increase or decrease this setting to achieve the correct strength needed.

#### 7.1.7 Activation time (01-60sec)

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- This setting is the duration of the door open cycle in seconds.
- Timer starts when the door reaches the backcheck area.
- Use the "UP" and "DOWN" buttons to select the desired opening time.

#### 7.1.8 Hold on manual open (No, 1-5)

- This setting is the length of time the door must be physically held opened, when the door is manually pushed open by a pedestrian.
- The door must be opened at least 60% of the door swing, for this feature to activate.
- Use the "UP" and "DOWN" buttons to disable or enable this feature and set the timer value.

#### 7.1.9 Electronic Door stop (YES/NO)

- This setting is to enable or disable the electronic door stop.
- This feature, when selected, will prevent the door moving during heavy wind conditions when the door reaches the full opened position.

#### 7.1.10 Electric lock (NO/YES)

- This setting is to enable or disable the electronic lock delay/output
- Use the "UP" and "DOWN" buttons to enable or disable the electronic lock delay/output

#### 7.1.11 Electric lock delay (0.2-2.0)

- This setting is the time in seconds for the delay between activating the electric lock and the start of the opening cycle.
- Use the "UP" and "DOWN" buttons to set the proper electric lock/opening delay.

#### 7.1.12 Latch position (10-30)

- This setting will adjust the door latch position during the closing cycle
- Use the "UP" and "DOWN" buttons to set the point for the latch position.
- Activate the door. During the closing cycle, check the position where the latch begins.
- Check this setting is correctly adjusted.

#### 7.1.13 Backcheck position (70-98)

- This setting is to adjust the door backcheck position of the opening cycle.
- Use the "UP" and "DOWN" buttons to set the point for the backcheck position.
- Activate the door. During the opening cycle, check the position where the backcheck begins.
- Check this setting is correctly adjusted.

#### 7.1.14 Push & Go (NO/YES)

- This setting is to disable/enable the Push & Go feature, also known as Manual Activation, when the door is manually pushed by hand.
- Use the "UP" and "DOWN" buttons to disable or enable this feature

#### 7.1.15 Push & Go active time (1-30)

- This setting is to adjust the duration of the door open cycle in seconds. From when the door is manually opened, to when the Push & Go feature is enabled.
- Use the "UP" and "DOWN" buttons to select the desired opening time.

#### 7.1.16 Power Close (NO/YES)

- This setting can disable/enable the power close assist feature.

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- Used for correct door latching, when the pressures on the door prevents it from fully closing.
- Use the “UP” and “DOWN” buttons to disable or enable this feature

**Warning: Please note when using power close safety sensor must be used**

#### 7.1.17 Reverse on obstruction (NO/YES)

- This setting will disable/enable the door re-activation feature.
- If enabled, a re-activation is generated if the door encounters an obstruction for at least 2 seconds, during the closing cycle (Between backcheck and the latch area)

#### 7.1.18 This door overlaps? (NO/YES)

- This setting will disable/enable the door overlap feature.
- Used for a dual door operator, when there is a door overlap.
- When enabled, the controls will communicate with one another, to create an overlap during the closing cycle.
- Use the “UP” and “DOWN” buttons to disable or enable this feature

#### 7.1.19 Factory reset (NO/YES)

- This setting will restore the control unit to its original factory settings.
- To reset the control to the original setting, push the “UP” button, then push the “ENTER” button to confirm.
- After pushing the “YES” button, the factory reset can be cancelled, by pushing the “MENU” or the “DOWN” buttons.

#### 7.1.20 Display Light ON time (01-30)

- This feature sets the length of time, in minutes, the display light will remain on, after the last button push of the control unit.
- This setting is an energy saving feature.

#### 7.1.21 Software version MSW01 VX.XX

- This menu will display the software version in the control unit, where X is a numeric value.

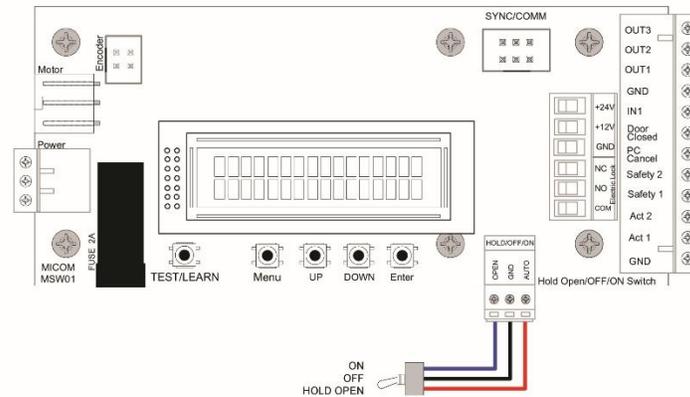
### 8.0 Wiring Connections

#### 8.1 Selector Switch

3 position switch offers easy selection for 3 modes of operation.

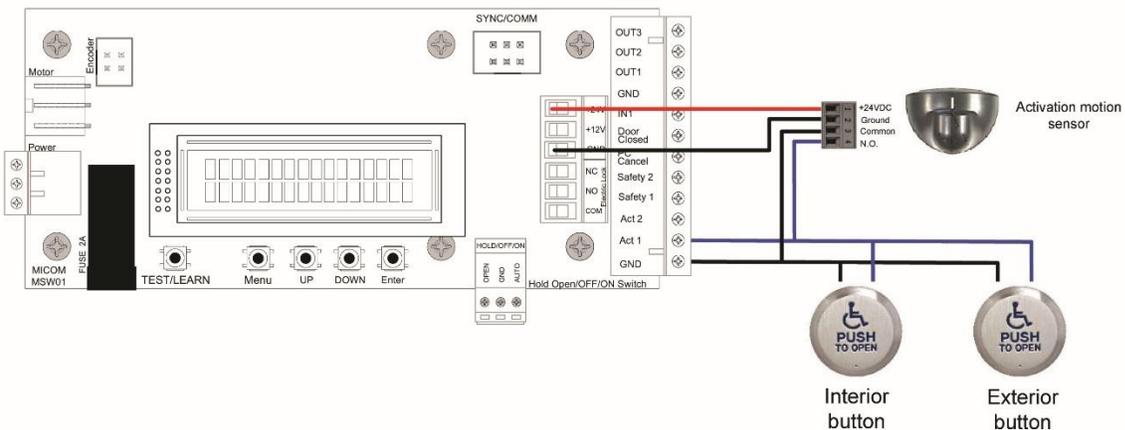
1. **Hold Open** – The operator will hold the door, in the fully open position for an unlimited amount of time. The motor will not overheat or fail causing the door to close.
2. **Manual** – The door is free to open by hand and will fully close with spring power. This function does not switch off the power, however motion sensors / push plates are still active but are ignored.
3. **Automatic** – Motion sensors / push plates are active and will activate the operator to open the door automatically should they be triggered.

# Smart Swing 3® Installation Manual



## 8.2 'Act1' – Activation 1

Connected to activation switch such as motion sensor or push plate. When activated this signal always opens the door.



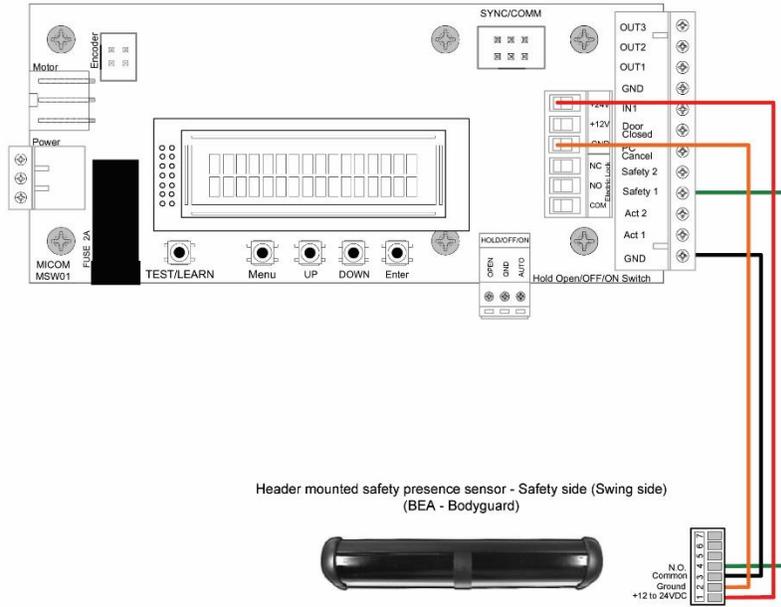
## 8.3 'Act2' – Activation 2

Connected to activation switch such as motion sensor or push plate. Only active after Act1 is triggered. Or when the door is closing and before reaching the latch position.

## 8.4 Safety 1

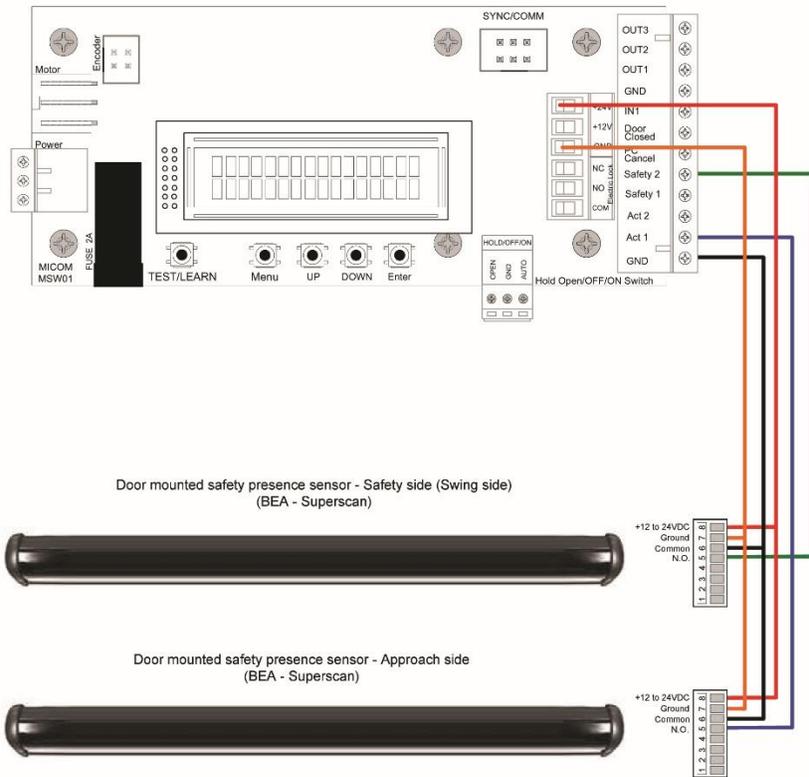
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## 8.4 Safety2

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Door mounted safety presence sensor - Safety side (Swing side)  
(BEA - Superscan)



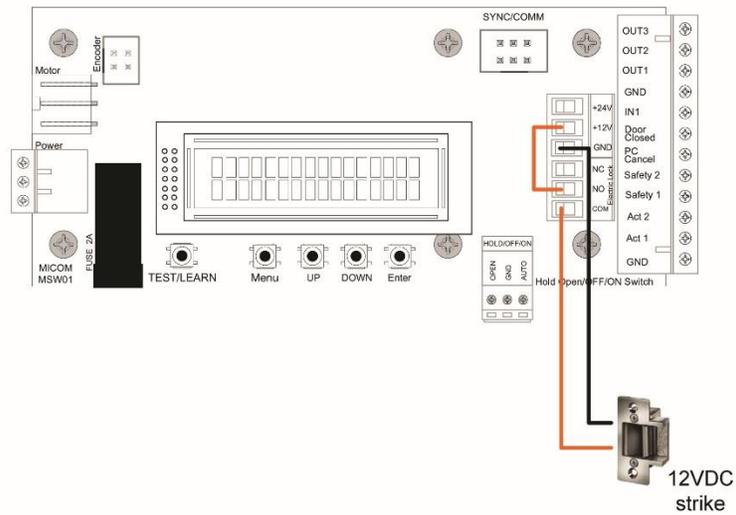
Door mounted safety presence sensor - Approach side  
(BEA - Superscan)



## 8.5 Electric Strike

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## Installation Manual



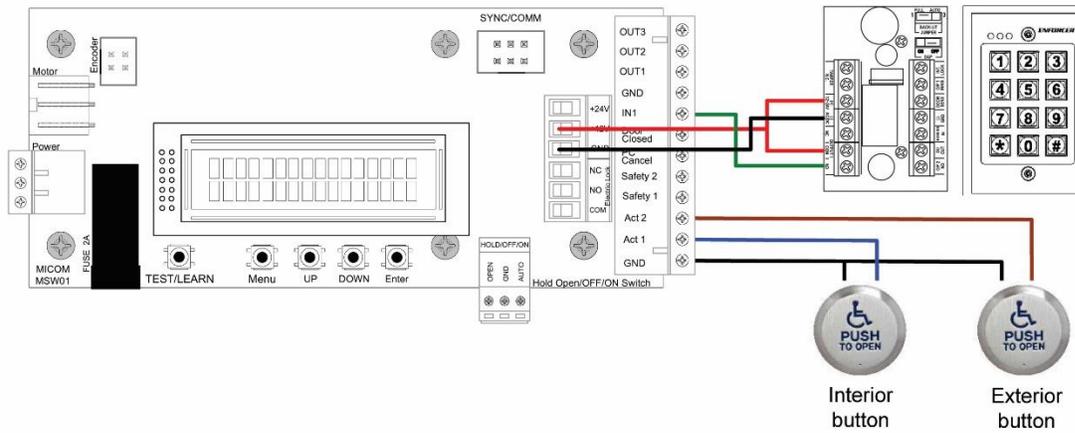
### 8.6 Door Closed

### 8.7 Security Access Control

### 8.8 Safety Sensor Monitoring – Not available yet

- If a fault is detected in the safety circuit, all activations will be ignored by the control unit.

# Smart Swing 3® Installation Manual



## 8.8. Electromagnetic Lock

## 9.0 Basic Setting Table

Line Voltage	Model	Software version
90 - 250VAC 50/60Hz	CU SMART SWING 3	MSW01 VX.XX

FUNCTION DESCRIPTION	SETTING	VALUE	DEFAULT
OPENING SPEED Door opening speed from full closed to back check position	(5 to 20)	5 = slowest 20 = fastest	10
BACK CHECK SPEED Door speed at final section of opening	(1 to 5)	1 = slowest 5 = fastest	5
SAFETY SPEED Slow speed (crawl) or stop (hold) when safety1 is active	(2 steps)	HOLD / CRAWL	HOLD
CLOSING SPEED Door closing speed from full open to latch position	(1 to 15)	1 = slowest 15 = fastest	5
LATCH SPEED Door speed at final section of closing	(1 to 5)	1 = slowest 5 = fastest	2
CURRENT LIMIT Obstruction detection	(1 to 20)	1= more sensitive 20 = less sensitive	10
ACTIVATION TIME Time begins at activation signal ON.	(1-60 steps : 1 to 60sec)	1 = minimum 60 = maximum	5

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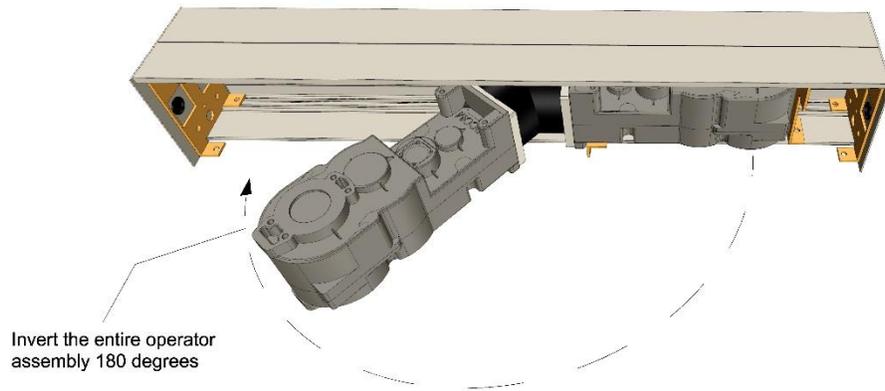
### Installation Manual

HOLD ON MANUAL OPEN Door held open when pushed by hand. Not active with push & go.	(2 options)	a = No b = 5 steps (1-5 sec)	3
ELECTRONIC DOOR STOP Setting stop position by encoder	(2 options)	Y = Yes N = No	Yes
E-LOCK Strike or Electromagnetic Lock	(2 options)	Y = Yes N = No	No
E-LOCK DELAY Time before E-Lock will release	(18 steps : 0.2 sec to 2.0 sec)	0.2 sec = minimum 2.0 sec = maximum	1.0
LATCH POSITION Position at which final section of closing begins	(15 steps : 2% to 30%)	2% = minimum 30% = maximum	10
BACK CHECK POSITION Position at which final section of opening begins	(15 steps : 70% - 98%)	70% = maximum 98% = minimum	90
PUSH & GO	(2 options)	Y = Yes N = No	No
PUSH & GO TIME Time door is pushed open before activation	(30 steps)	1sec = minimum 30sec = maximum	3
POWER CLOSE Power assisted closing with spring	(2 options)	Y=Yes N = No	No
REVERSE ON OBSTRUCTION	(2 options)	Y=Yes N = No	No
OVERLAP	(2 options)	Y=Yes N = No	No
FACTORY RESET	(2 options)	Y=Yes N = No	No
LIGHT ON TIME Time backlight remains on	(30 steps)	1sec = minimum 30sec = maximum	1

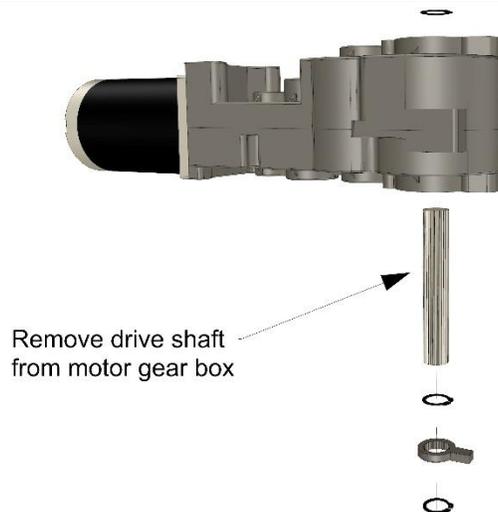
# Smart Swing 3® Installation Manual

## Changing handing of Operator

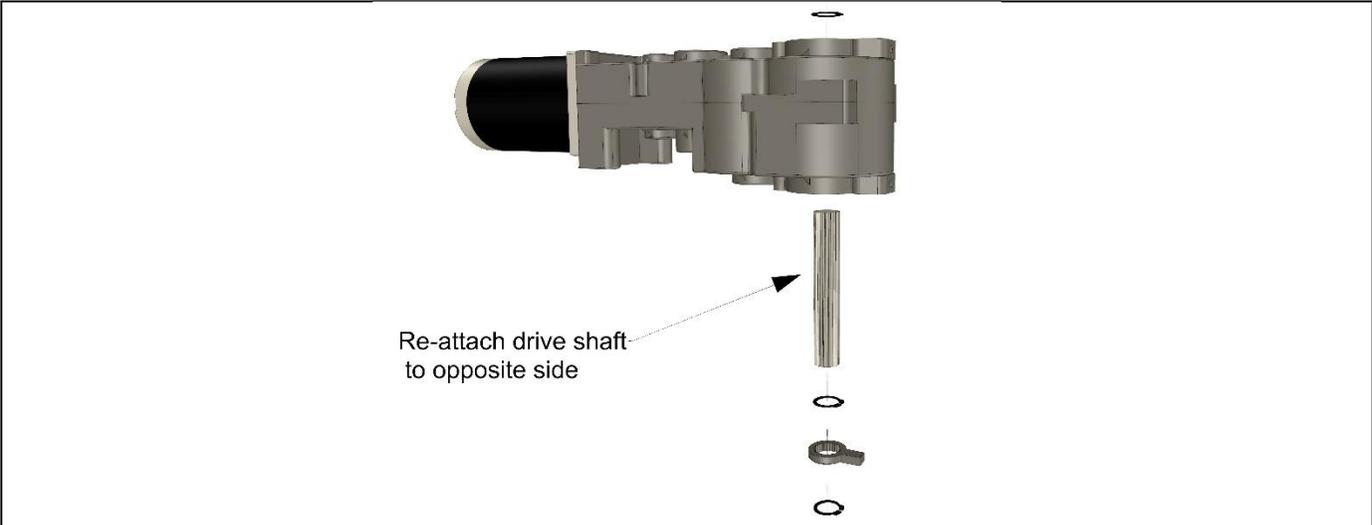
**Step1.** Invert the entire operator assembly 180 degrees



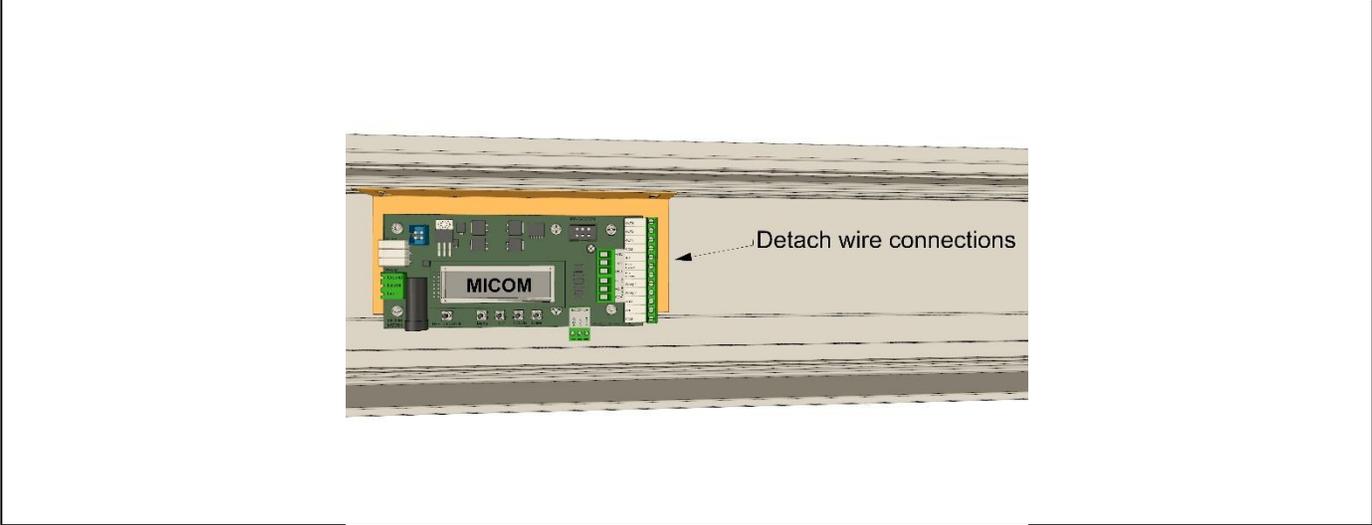
**Step2.** Remove drive shaft (spindle) from motor gear box assembly (See changing position of drive shaft)



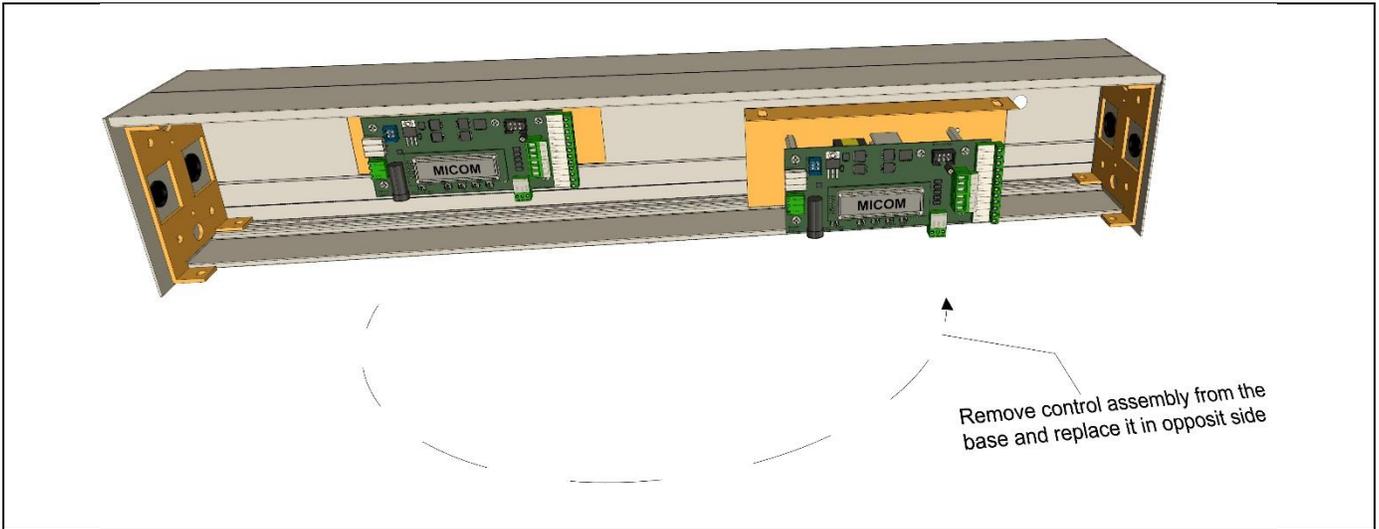
**Step3.** Re-attach drive shaft (spindle) to opposite side of motor gearbox assembly



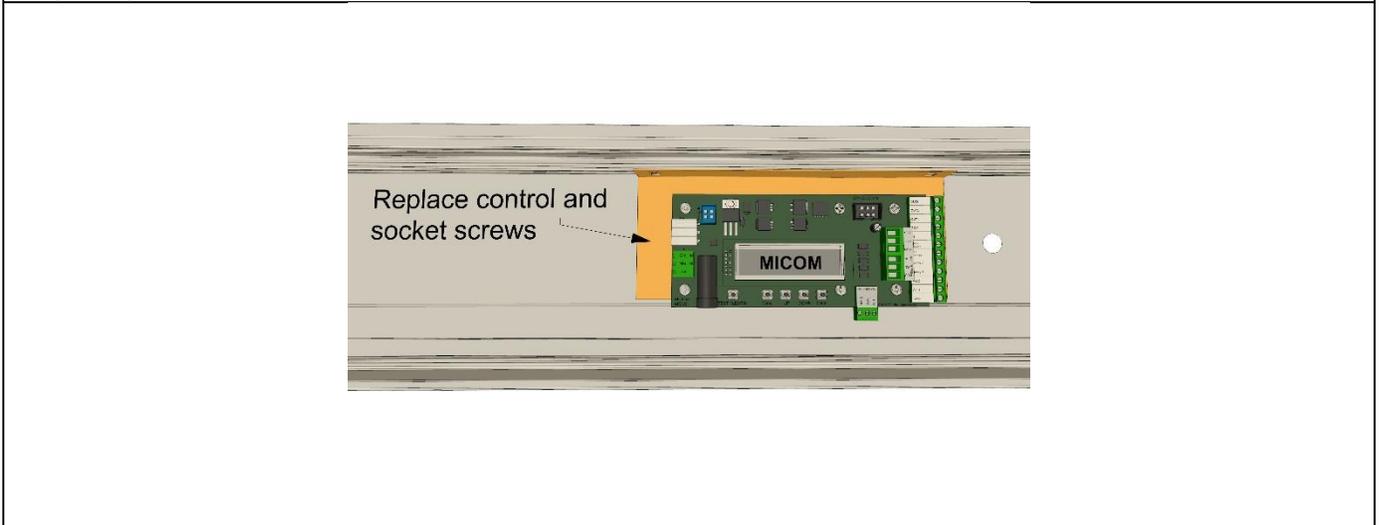
**Step4.** Detach wire connections from operator to control board



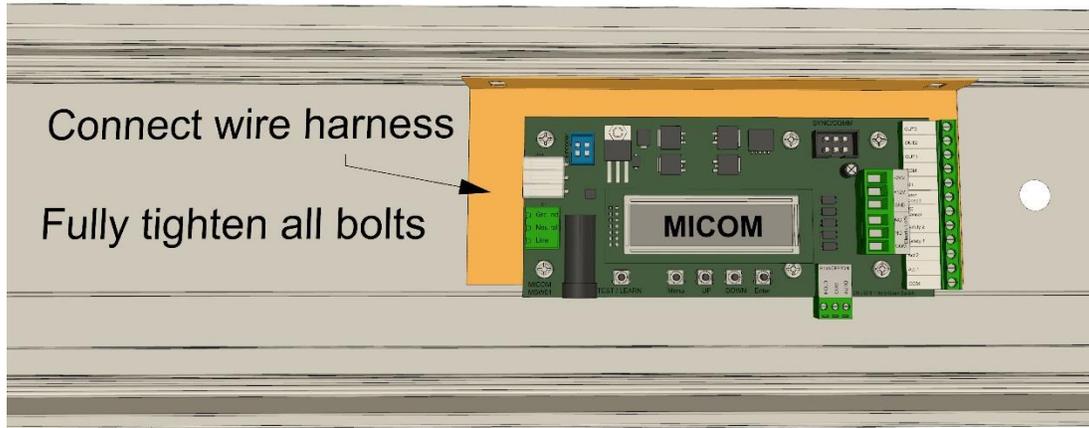
**Step5.** Remove control assembly from the base and rotate 180 degrees



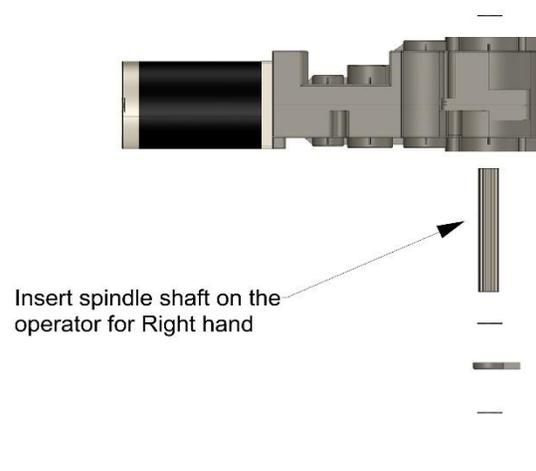
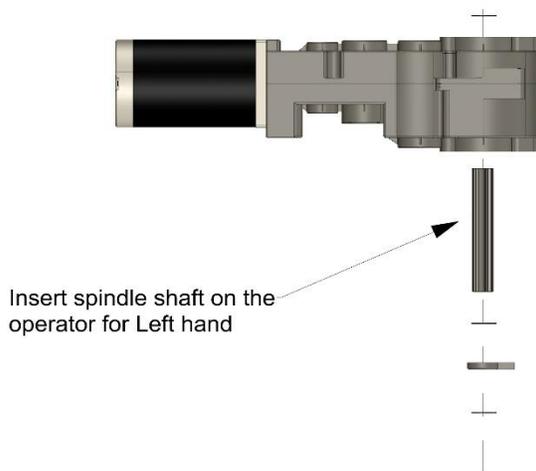
**Step6.** Replace control and socket screws



**Step7.** Connect wire harness



**Step8.** Insert spline shaft on the operator (depended on push or pull application and spindle rotation)

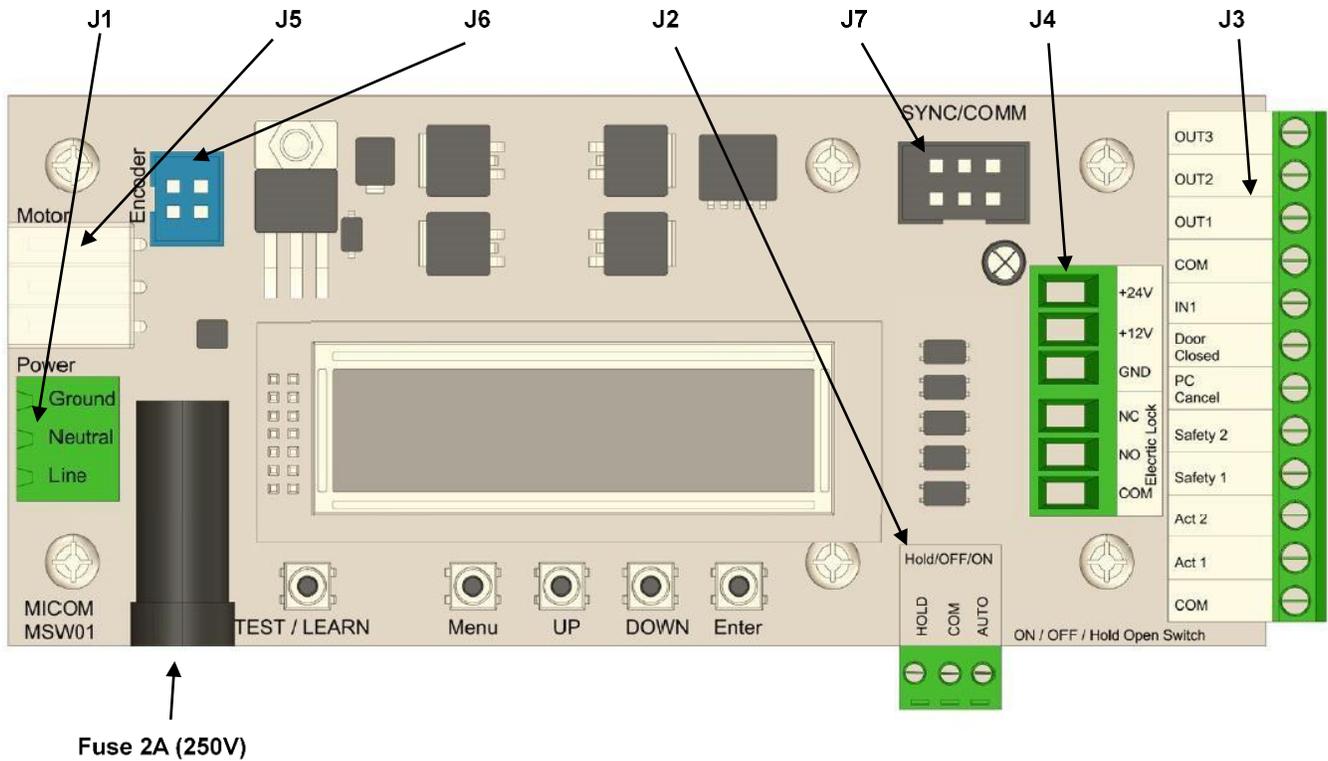


Trouble Shooting

SMART SWING 3®

# Smart Swing 3® Installation Manual

## Connector Description



### J1 - Connector Description: Power input 120-240VAC (100W max.)

PIN	Definition
J1.1	AC Ground
J1.2	AC Neutral
J1.3	AC Line (Fused)

### J2 - Connector Description: Hold open/OFF/Auto switch input

PIN	Definition
J2.1	Auto signal - This signal (to GND) will allow activation
J2.2	GND – Ground reference for signal and power
J2.3	Hold Open – This signal (to GND) will active the operator to hold the door open.

### J3 - Connector Description:

PIN	Signal	Definition
J3.1	GND	Ground reference for signal and power
J3.2	ACTIVATION 1	(Input) This signal (to COM) will activate the operator. If 'AUTO' signal (J2.3) is to COM and no current fault is present.

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### Installation Manual

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J3.3	ACTIVATION 2	(Input) This signal (to COM) will activate the operator. (If 'AUTO' signal (J2.3) is to COM with no current fault present and door is not fully closed.
J3.4	SAFETY 1	(Input) When the door is fully closed, this signal (to COM) will prevent an activation. When the door is fully opened, this signal (to COM) will prevent the door from entering the closing cycle.
J3.5	SAFETY2	(Input) When the door is fully closed, this signal (to COM) will prevent and activation. When safety signal clears, pending activation will activate the operator. During the opening cycle, the door will go to safety (Hold) speed. (When the signal is to COM) When the door is fully opened, this signal (to COM) will prevent the door from entering the closing cycle.
J3.6	PC CANCEL	(Input) This signal (to COM) will prevent or cancel power close
J3.7	DOOR CLOSED	(Output) This signal is tied to COM when door is fully closed. Door must be set up (Learning Completed)
J3.8	IN1	(input) Not used
J3.9	GND	Ground reference for signals and power
J3.10	OUT1	(Output) Not used
J3.11	OUT2	(Output) Not used
J3.12	OUT3	(Output) Not used

#### J4 - Connector Description: Sensor power and electric lock outputs

PIN	Definition
J4.1	(Output) +24VDC (500Ma max)
J4.2	(Output) +12VDC (500Ma max)
J4.3	(GND) Ground reference for signals and power
J4.4	(Output) Electric lock relay N.C. (Normally Closed)
J4.5	(Output) Electric lock relay N.O. (Normally Open)
J4.6	(COM) Electric lock relay common

#### J5 - Connector Description: Motor output (Isolated from power input)

PIN	Definition
J5.1	Motor Positive
J5.2	Motor Negative
J5.3	AC Ground

#### J6 - Connector Description: Motor encoder

PIN	Definition
J6.1	(Output) +5V DC
J6.2	(Input) Encoder Signal B
J6.3	(Input) Encoder Signal A
J6.4	COM (Ground)

#### J7 - Connector Description: ISP/SYNC/Communication

PIN	Definition
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J7.1	(Output) PDO
J7.2	(Output) +5V DC
J7.3	(Output) SCK
J7.4	(Input) PDI
J7.5	(Input / (Output) RST
J7.6	COM (Ground)

#### Additional Information

##### Consideration of Surroundings

##### Floor Space Requirements for Wheel Chair Maneuvering

- The owner may request the activation device location; however, the press switch must be in view of the door and not directly on the door or frame. Please refer to ANSI 117.1 Safety Code for further guidelines on switch requirements.
- Activation switches shall be at minimum height of 36" and maximum height of 48" from finished floors.
- Individual who uses wheelchair needs a minimum of 48" clearance to the door swing for doors in series.

##### External and Internal Factors

##### Door Condition

- Door must move easily open and close (latch) without excessive force; weather stripping and threshold must not interfere with door movement.

##### Reveal

- For out swing (Push) doors, the reveal must be within the range of 0" to 14". For in swing (Pull) doors, 0" to 4" for special reveals is allowed – for all others consult factory.

##### Wind

- When installing on a door in a strong wind condition area, special adjustments should be made to the arm and doorstop position, to increase the spring tension.

##### Power/Control Wires

- Check that the electrical feed, all conduits, and electrical junction boxes (for push plates or other activation devices, if required) are correctly located in accordance with final approved shop drawings and within the guidelines of the enforced local electrical codes.

##### Electronic equipment reception interference

SMART SWING 3®

## Smart Swing 3®

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### Installation Manual

The equipment complies with the European EMC directive (US market FCC Part 15) provided installed according to installation and service manual.

The equipment may generate and use radio frequency energy and if not installed and used properly, it may cause interference to radio, television reception or other radio frequency type systems.

if other equipment does not fully comply with immunity requirements interference may occur. However, there s no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

Re-orient the receiving antenna

Relocate the receiver with respect to the equipment

Move the receiver away from the equipment

Plug the receiver into a different outlet so that equipment and receiver are on different branch circuits

Check that protective earth (PE) is connected

If necessary, the user should consult the dealer or an experienced electronic technician for additional suggestions.

MICOM products are equipped with electronics an may also be equipped with batteries containing materials which are hazardous to the environment. Remove this material from the operator before its is scrapped and make sure that it is disposed of property as was done with the packaging.

This manual contains the necessary details and interactions for the installation, maintenance and service of the swing door operator SMART SWING 3.

Codes & Standards

Draft Info.....

#### **OCCUPIER SAFETY CHECK LIST**

The person / organisation responsible for the operation and maintenance of the doors, should consider each individual installation and adopt a safety test procedure that is suitable for that installation.

Additional tests to those given in the manual may be applicable if required. Occupier safety tests given in this manual are based on BS7036 part 3 and designed to suit the majority of swing and balanced door installations. Occupier safety Checklist for powered swing and balanced doors

The occupier is responsible for undertaking the following test procedure, which should be carried out at least weekly, unless a different frequency of test is identified.

For safety reasons it should not be assumed that the equipments is working safely. There should be no notice boards, literature racks, merchandising displays or other distractions in the vicinity of the door which may congest or inhibit traffic flow.

If a fault is found which affects the safe operation of the door, the doors operating equipment should be switched off and the door made safe. Use of the door should not be reinstated until an authorised technician has undertaken repairs.  
Automatic Activation Devices

Sensor Activation

SMART SWING 3®

1. Test sensor activation as follows:

- a) For a door opening away from the user, test sensors by walking towards the door opening. The door should start to open when a person is approximately 1400mm from the door. The door should swing smoothly to the open position and stop without impact.
- b) For a door opening towards the user, the door should start to open when a person is approximately 1400mm plus the width of the door leaf from the door.

2. Step out of the detection zone. After a time delay (normally 1s to 5s) the door should close smoothly.

3. Repeat 1 and 2 on the other side of the opening of the door has two-way operation.  
Control mat activation

4. Test control mat by stepping onto it. The door should swing smoothly to the open position and stop without impact.

5. Step off the mat. After a time delay (normally 1s to 5s) the door should close smoothly.

6. Repeat 4 and 5 on the other side of the opening if the door has two-way operation.

NOTE: IF there is more than one mat on each side of the door, each mat should be tested.

7. Inspect the mat moulding and threshold. The mat should be complete and secured and should not give rise to tripping hazards.

Safety devices

8. Various devices are available to protect the threshold area of swing by preventing a door from opening or closing whilst the area is occupied. These include presence sensing devices and safety mats. Test these devices as follows:

a) Presence sensing safety devices. If presence sensing devices are fitted proceed as follows:

1) With the door in the closed position, place the test object (see 8.4.2 of Part 1) in the swept area of the doors, activate the door and verify that either the door starts to open but stops before striking the test object (see note 1 below), or that the door does not open at all (see note 2 below).

2) Activate the door to the open position. Place the test object as in 1) above and check that either the door starts to close but stops before striking the object (see note 1 below), or remains in the fully open position (see note 2 below) cont....