

# Eco-Swing 90 Door Operator



Installation Manual

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# Safety

This manual is designed to give you the correct information to assemble and install this swing door operator to the current EN 16005 : 2012 regulations

The ES-90 swing door operator has been designed by engineers with many years experience in the automatic door industry and built on proven, reliable designs, incorporating the latest wireless technology which interfaces the unit to any Wi-Fi browser for easy set-up and adjustment features.

An optional adjuster board can be added to give a certain level of manual adjustment / settings if preferred.

## Safety First



This unit should be installed as per the instructions in this manual and with reference to the current EN 16005 regulations by a qualified engineer.

A badly or incorrectly installed unit can cause damage to both the equipment and possible injury to people.

As with all equipment installed in the workplace which falls under the Machinery At Work Act, this operator should be routinely inspected and serviced according to the EN16005 : 2012 regulations.

We recommend this is carried out at least twice yearly by a EN16005 certified & trained engineer.

(Please note : Other regulations such as Building Regulations Part “P” or Disability Discrimination Act may need to apply as well)

**This unit is designed to be used indoors, in a dry environment only.**

### Environmental Requirements

The Eco-Swing 90 contains electronics and batteries that may have materials that could be hazardous to the environment. Please dispose of them responsibly & safely in accordance with your countries laws

# Eco-Swing 90 Features

Compact 90mm X 135mm Aluminium Profile With “Easy Clip” Cover

Push & Pull Arm Systems.

Pull Arm With Integrated Guide Channel Spacing  
( i.e. No Packing Of Door Channel Required)

Powerful Microprocessor Based Control System With All Options Integrated Within the Programming / Setup. It Uses A Self Diagnostic System To Identify Faults And Make Installations / Maintenance As Simple As Possible

Low Energy Operation

Power Assist Mode

Push and Go Option

Electric Lock Output

Fire Alarm Input (N/O or N/C Selectable)

Morning Entry / Access Control Key Input (N/O)

Safety Mat Input (N/O)

Emergency Stop Input (N/O or N/C Selectable)

Auxiliary Locking Relay ( N/O & N/C)

Master/Slave Connection

Interlocking Between Door Sets

Rebated Door Mode

Fully Monitored Safety Sensor System (EN16005 : 2012)

Easy To Use Wifi Interface Set-Up Program With Status & Error Reporting  
(using any wifi enabled browser)

## Mode Switch Options

Rocker Switch (Standard) - Key Operated Switch - LCD Key Switch

## Options

Battery Back-Up

Manual Display / Adjustment Board

Arm Extension Kit

# Technical Details

Min Door Width	700mm
Max Door Width	1200mm
Max Door Height	2500mm
Max Door Weight	200 kgs
Unit Weight	14Kg
Max opening angle	110 Degrees
Mains Voltage	80v - 250 v ac 50 Hz
Hold Open time	0 – 60 Sec
Opening Speed	3 – 6 Seconds
Closing Speed	3 – 6 Seconds
Auxiliary Power Supply 2	24v dc - 2000 mA
Ambient Temp -	- 20 to +45
Protection Class	IP 20

# Introduction

## Eco-Swing 90



The Eco-Swing 90 is an electro-mechanical operator designed to open and close doors under the control of a microprocessor control system designed to comply with EN 16005 : 2012 regulations.

It has been designed to be easily installed and has clear / simple, setup / adjustment procedures

It is housed in a two part aluminium housing (as above) with an "easy clip" cover.

All the main components are mounted on a module plate which allows for quick and easy removal of all the internal parts for ease of fitting and / or repair.

The operator is a powered open / spring close unit operating under the control of specialised software.

The Eco-Swing 90 has been developed to adapt to all situations and therefore comes with a wide range of optional settings and easy to understand connections.

Using the latest technology and it comes with "Built in" Wifi which means it can be set up and adjusted from any WiFi enabled device with a browser (i.e. Phone, Tablet, Laptop) independent of the operating system of the device. This makes the setup / adjustments incredibly easy.

An option Display / Adjuster board is available if manual settings are preferred (ie dip switches & adjuster)

# Pre-Installation

- Make sure all installation areas are clear and suitably reinforced to take the pressure of a powered door operator
- Check all pivots & hinges are in good working order and not worn.
- Check a suitable and sufficient risk assessment has been undertaken.
- Check you have the correct operator for type of door operation ie Push or Pull unit.
- Check you have all parts to complete the installation before commencing.

## Tools Needed To Install An Eco-Swing 90 Unit

Eco-Swing 90 Fitting Template

Set of Metric Allen Keys ( 4mm / 5mm / 6mm / 8mm)

A drill and drill bits

Set of screwdrivers of various types / sizes

A marking device ( ie pencil)

## Notes Prior To Installation

- The Eco-Swing 90 operator is mounted to the area above the door, be it either framework or other (such as concrete lintel / wooden stud work)
- The area to which the operator is mounted should be checked to ensure it is suitable to take the weight of the operator and any imposed loads.
- Always use the correct type of fixing for the materials being fixed to

### Material Fixing To

### Minimum Recommended Fixings

Aluminium Frame / Doors

5mm

Steel

5mm

Wood

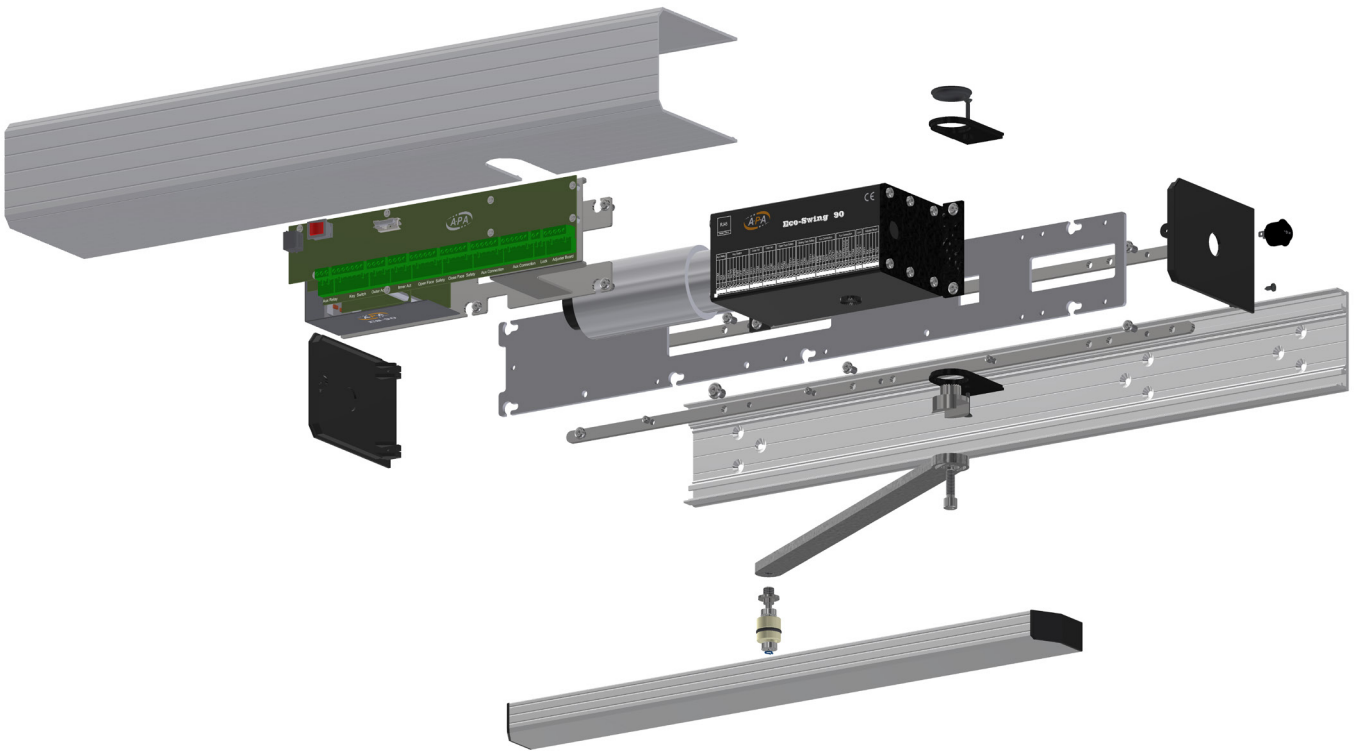
50mm No10 Wood Screws

Brick

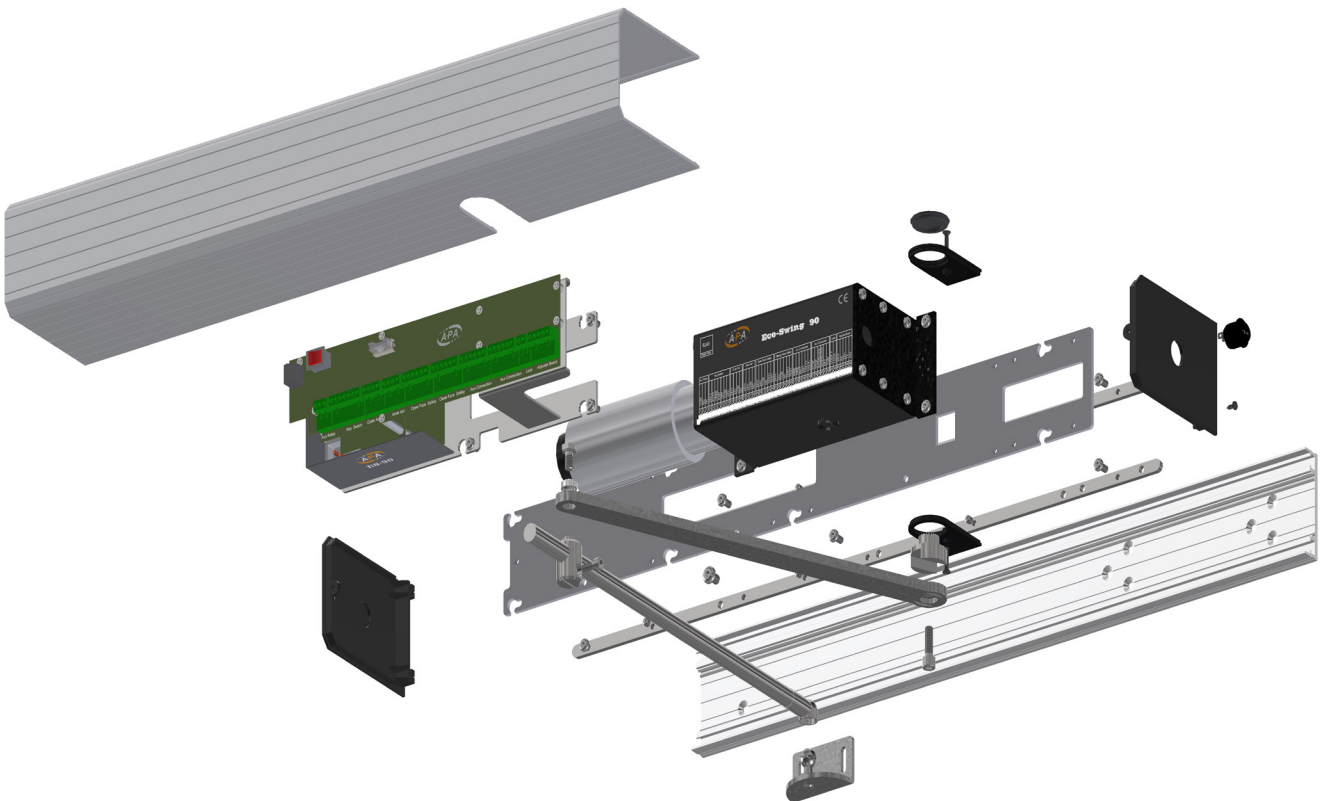
Concrete/Brick Fixers or Raw plugs & Screws

# Exploded View

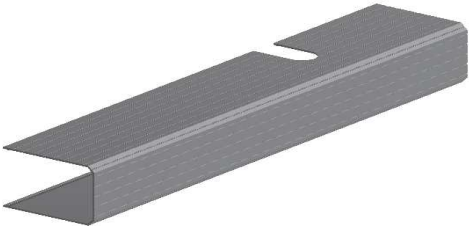
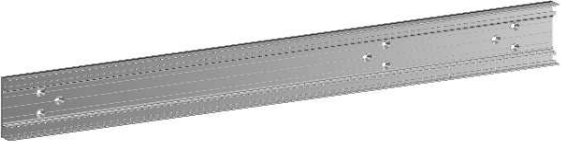
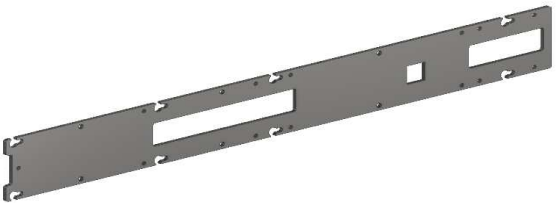


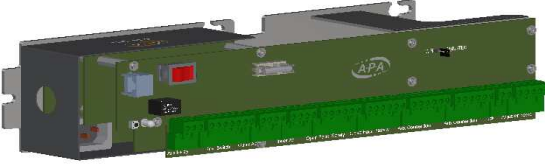

## Eco-Swing 90 Pull Unit



## Eco-Swing 90 Push Unit






# Parts List

Aluminium Cover		
	<p><b>Operator Cover</b> Part No : 3005031</p>	<p>1</p>
Fitting Backplate		
	<p><b>Operator Backplate</b> Part No : 3005034</p>	<p>1</p>
Module Plate		
	<p><b>Module Plate</b> Part No : 3005043</p>	<p>1</p>
Module Fitting Bars		
	<p><b>Module Fitting Bars</b> Part No : 3005042</p>	<p>2</p>
Fittings Kit		
	<p><b>Fitting Kit</b> Part No : 3005026 - PULL Part No : 3005026 - PUSH</p>	<p>1</p>
Control Unit		
	<p><b>Control Unit</b> Part No : 3005014</p>	<p>1</p>
Motor Gear Box		
	<p><b>Motor / Gearbox Unit</b> Part No : 3005010</p>	<p>1</p>

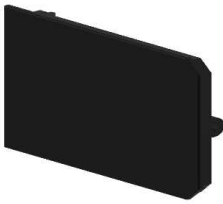
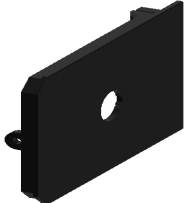

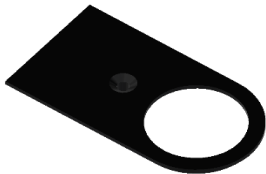



# Parts-Arms

Connection Boss & Arm Fitting Bolt		
	<p><b>Standard Connection Boss for both push &amp; Pull Arms</b> Part No : 3005045</p>	<p>1</p>
Pull Arm		
	<p><b>Pull Arm With Roller Wheel</b> Part No : 3005019</p>	<p>1</p>
Pull Arm Channel		
	<p><b>Aluminium Arm Channel with Intergrated Spacer</b> Part No : 3005036</p>	<p>1</p>
Push Arm Flat Bar with Bearing		
	<p><b>Push Arm - Flar Bar With Bearing</b> Part No : 3005017</p>	<p>1</p>
Push Arm Connector Joint & Bolt		
	<p><b>Push Arm Joint</b> Part No : 3005075</p>	<p>1</p>
Push Arm Rod & Ball Joint		
	<p><b>Push Arm Rod with Ball Joint</b> Metal Frame - Part No : 3005076 Standard - Part No : 3005012</p>	<p>1</p>
Fitting Angle & Ball		
	<p><b>Door Fitting - Angle with Ball Fitting</b> Part No : 3005078</p>	<p>1</p>

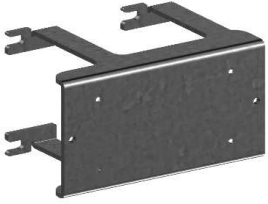


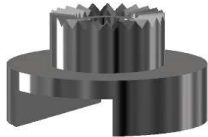
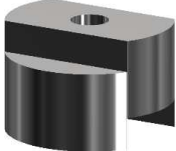


# Parts-Arms Complete

Pull Arm Set		
	<b>Pull Arm &amp; Track</b> Part No : 3005019	1
Push Arm Set - Standard		
	<b>Push Arm - Std - Hinged Door</b> Part No : 3005016	1
Push Arm - Aluminium Door		
	<b>Push Arm - Centre Pivoted Door</b> Part No : 3005027	1

# Parts-Plastic Items

Standard End Plate		
	<p><b>Plain End Plate</b> Part No : 3005038</p>	1
Rocker Switch Plate		
	<p><b>Standard Rocker Switch End Plate</b> Part No : 3005038</p>	1
LCD Switch Plate - Optional		
	<p><b>LCD Switch End Plate</b> Part No : 3005039</p>	1
Spindle Shaft Cover		
	<p><b>Spindle Shaft Cover</b> Part No : 3005040</p>	2
Spindle Cover Grommet		
	<p><b>Spindle Shaft Grommet</b> Part No : 3005018</p>	1
Pull Arm Cap - Left Hand		
	<p><b>Pull Arm Channel Cover - L/H</b> Part No : 3005046</p>	1
Pull Arm Cap - Right Hand		
	<p><b>Pull Arm Channel Cover - R/H</b> Part No : 3005049</p>	1

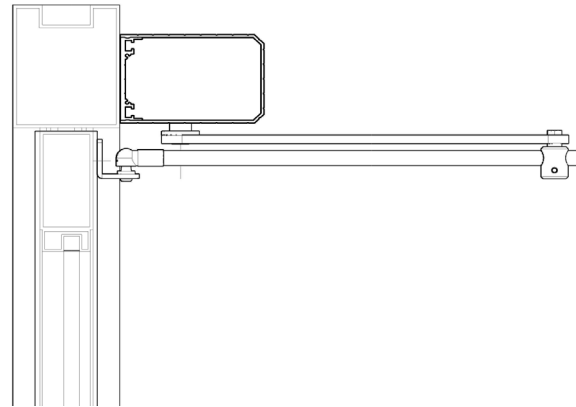
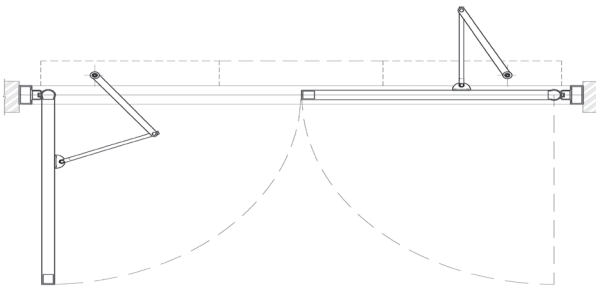
# Parts-Optional Extras

Battery / Display Board Bracket		
	<p><b>Battery / Display Board Bracket</b> Part No : 3005044</p>	<p>1</p>
Display Board		
	<p><b>Display Board Unit</b> Part No : 3005015</p>	<p>1</p>
Battery Backup Kit		
	<p><b>Battery Strap / Fittings &amp; Batteries</b> Part No : 3005022</p>	<p>1</p>
Extension Connection Boss		
	<p><b>Connection Boss - For use with extension parts</b> Part No : 3005017</p>	<p>1</p>
Arm Extension - 20mm		
	<p><b>Arm Extension - 20mm</b> Part No : 3005061</p>	<p>1</p>
Arm Extension - 50mm		
	<p><b>Arm Extension - 50mm</b> Part No : 3005062</p>	<p>1</p>
Arm Extension - 70mm		
	<p><b>Arm Extension - 70mm</b> Part No : 3005063</p>	<p>1</p>

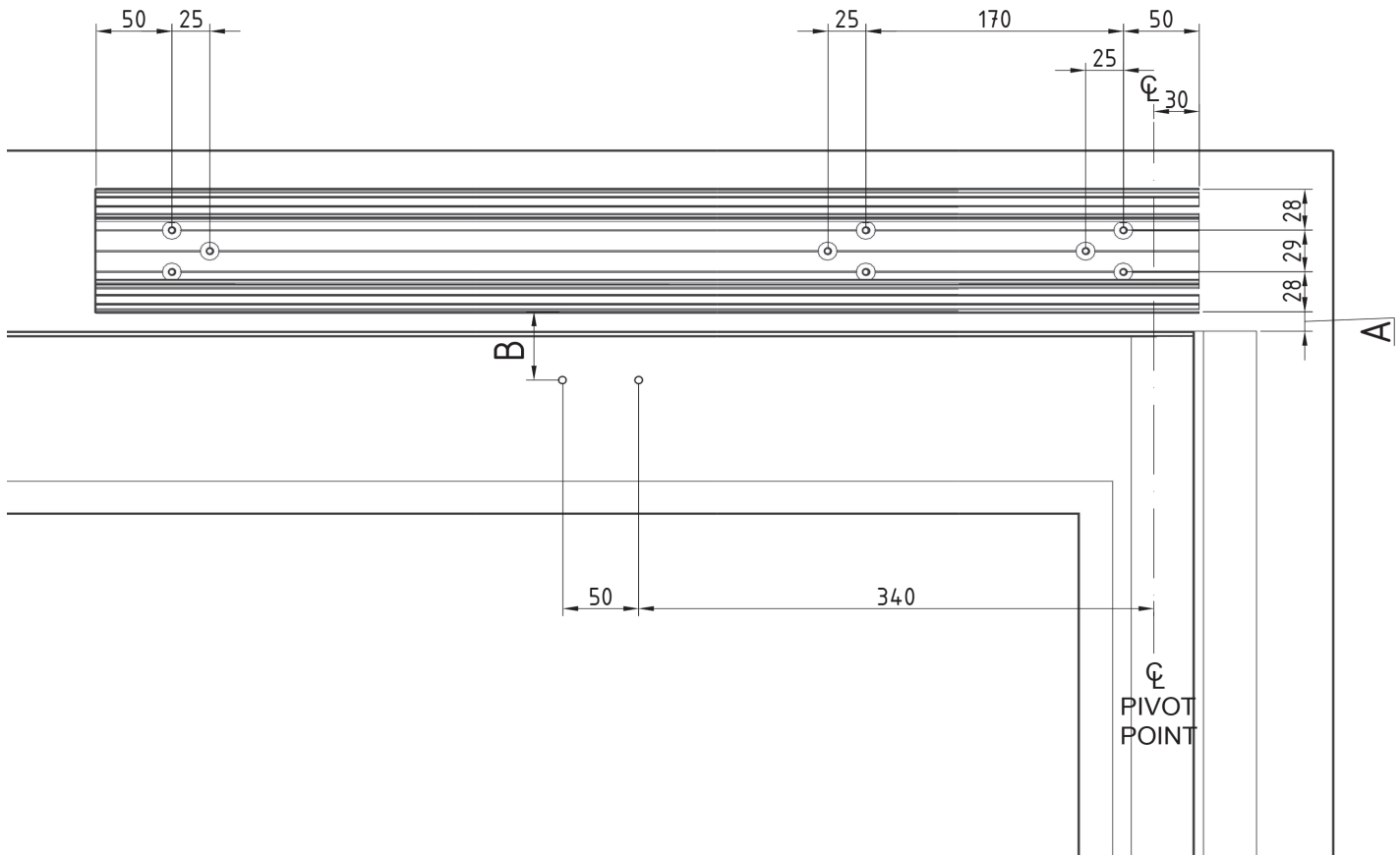
# Installation

## Push Unit Installation Details

C	A	B
0	5	36
20	25	56
50	55	86
70	75	106



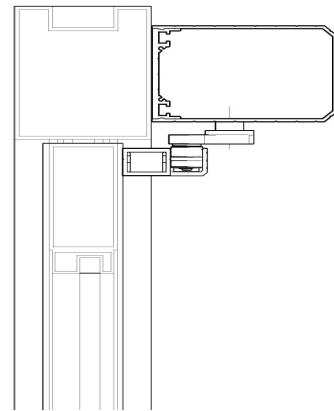
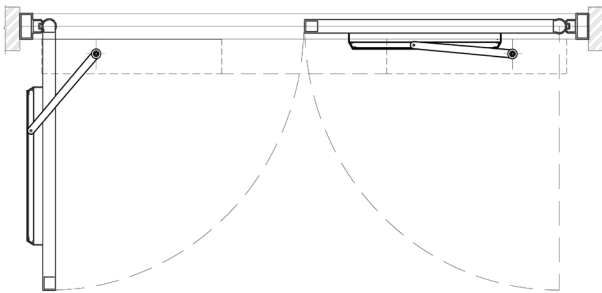
Use the dimensions as set-out below to position the unit backplate in correct position.  
 Note : Rear of backplate is positioned 30mm past the pivot point.



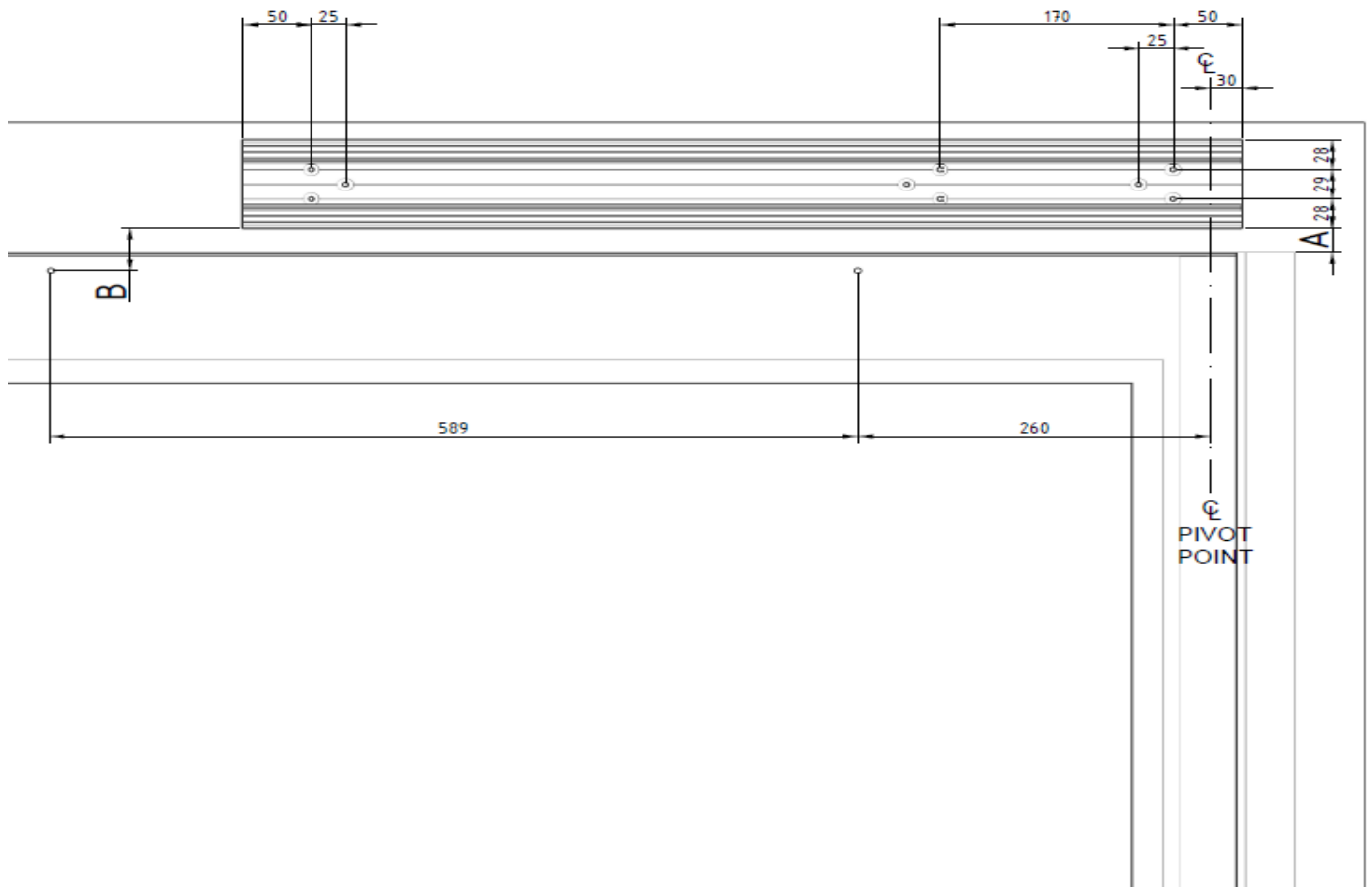
# Installation

## Pull Unit Installation Details

C	A	B
0	38	52
20	58	72
50	88	102
70	108	122

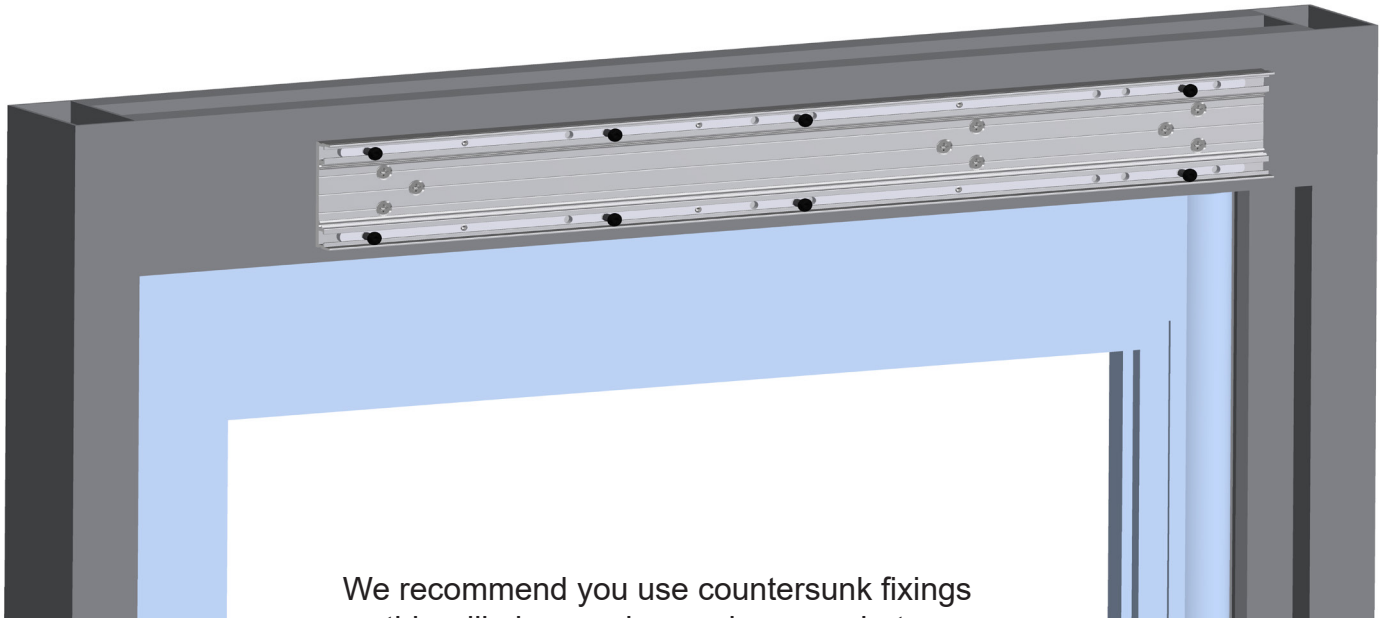


Use the dimensions as set-out below to position the unit backplate in correct position.  
 Note : Rear of backplate is positioned 30mm past the pivot point.

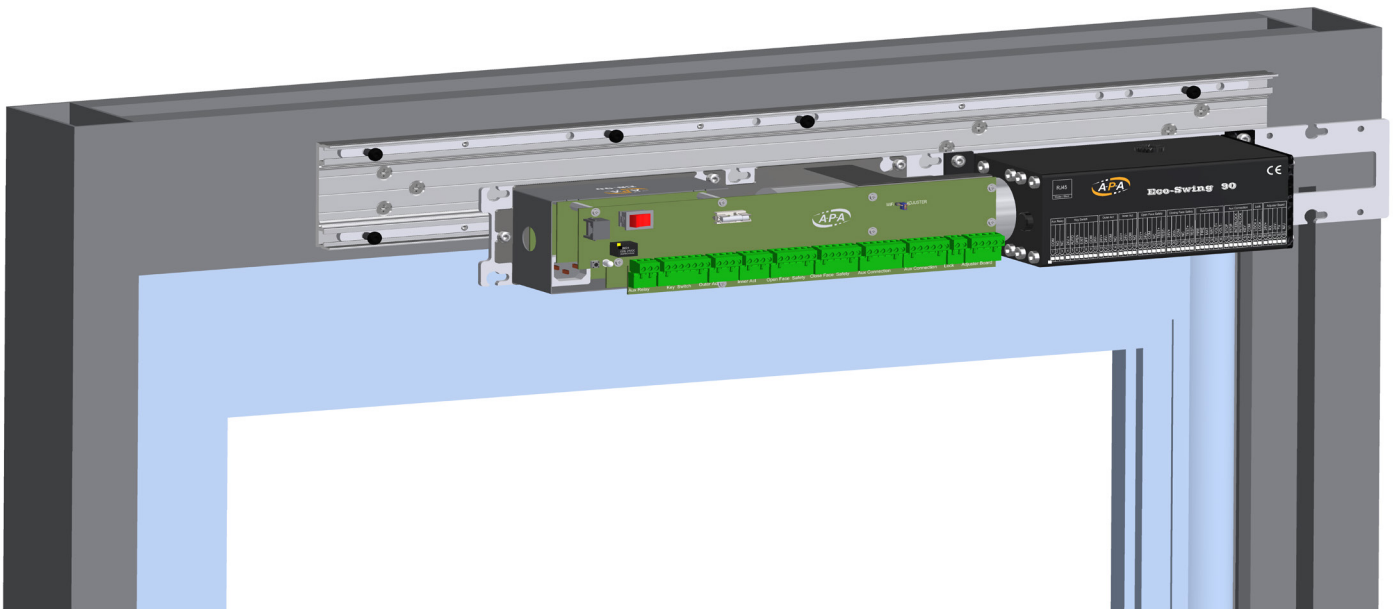


# Installation

After drilling correct fitting holes (9 off), fix the backplate to the transom area using appropriate fixings.



We recommend you use countersunk fixings as this will give maximum clearance between the backplate and module plate for running any wiring.



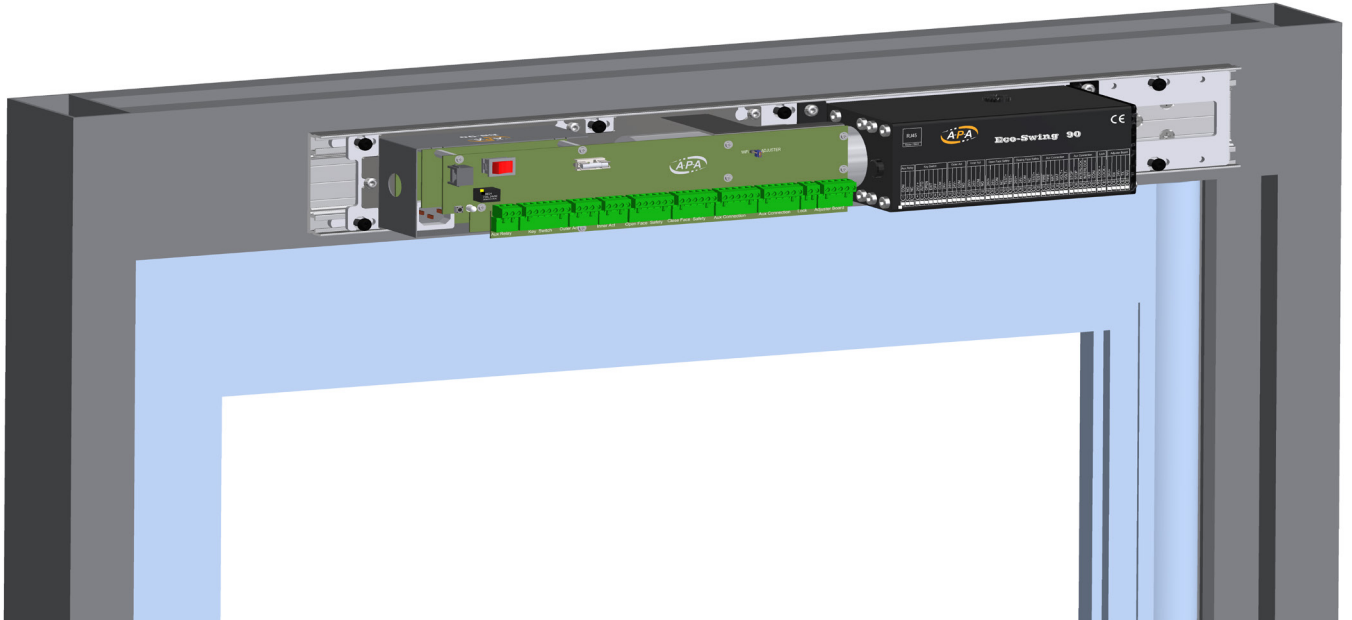
Within the backplate is pre-fitted fixing bars to which all fixings are secured for the fitting of the module plate.

Ensure all module bolts (black head) are fitted and loose.

# Installation

The fitting system uses a “keyhole type fitting which allows the plate to fit over the head of the bolt and slide sideways to a position in which it can be secured.

Fit module over the bolts protruding from the fixing bars.



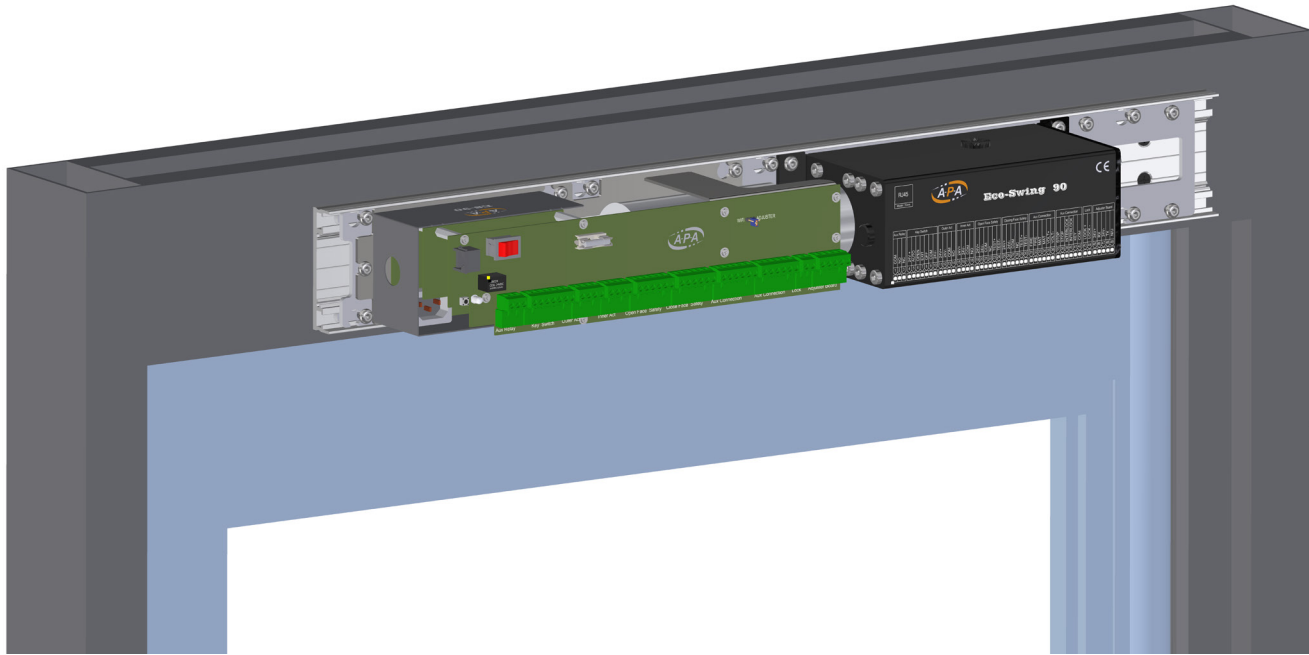
Slide the complete module assembly towards the control unit end & secure module by tightening all (8) M6 bolts.



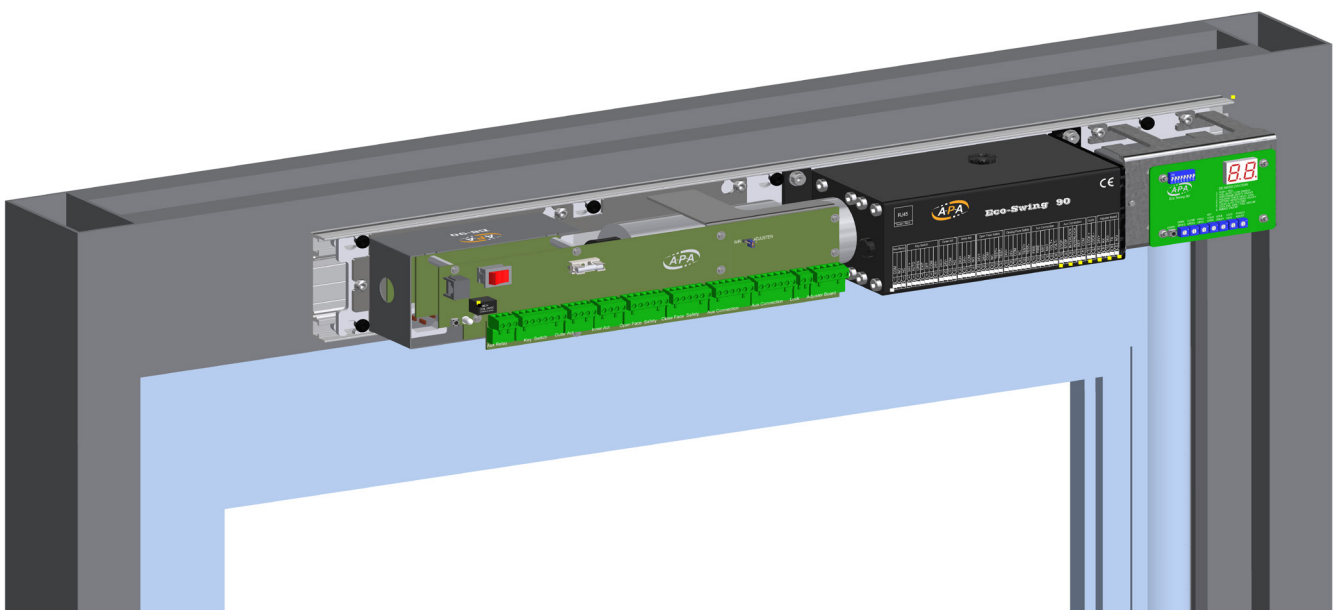
# Installation-Options

Once the module assembly is installed and secured, then add any additional parts such as battery pack or display board & bracket. Add the (4) x M6 bolts supplied by partially screwing into the module plate. Fit the bracket to the module plate R/H side of the bolts and slide to left and secured the bolts.

The connection lead for the display board or the battery pack is routed behind the module plate and is brought out through the opening under the motor.



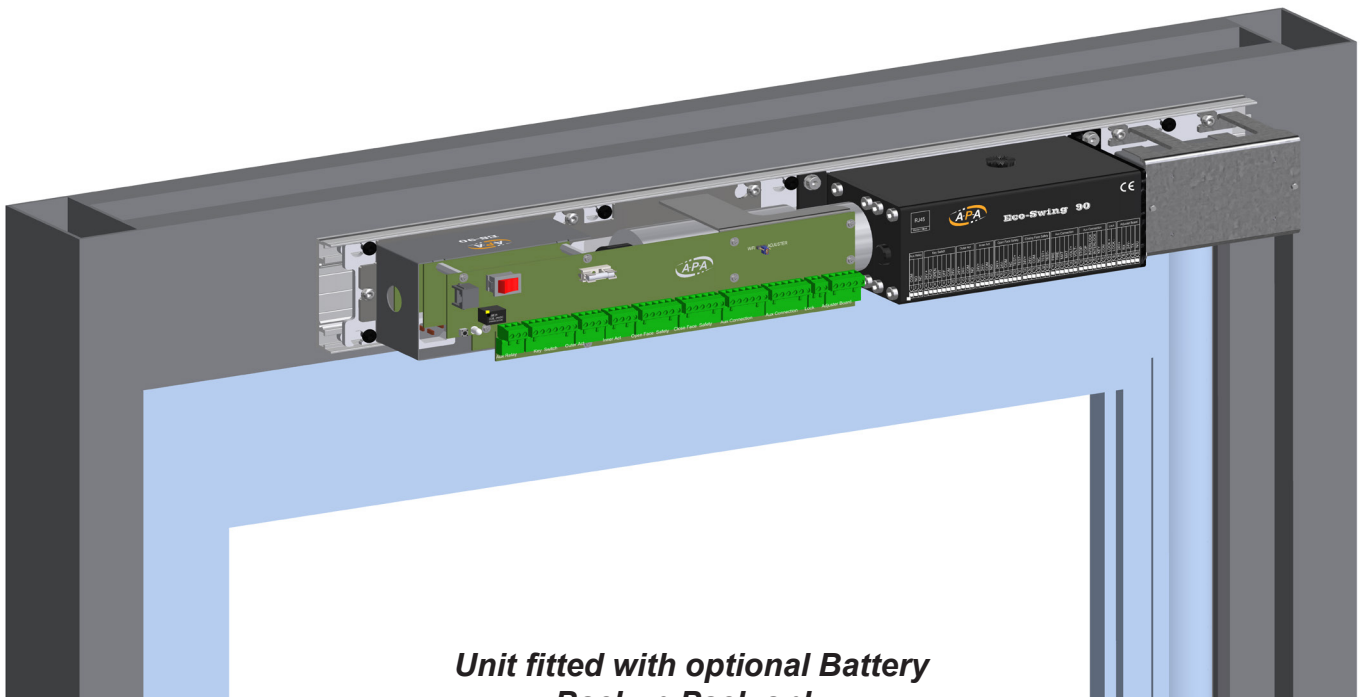
The optional Display / Adjuster Board & Battery back-up are fitted to the same bracket. If fitting both, the battery pack fits to the rear of the bracket with a strap secured by 2 M5 screws. The display board is mounted on the front of the bracket and the (4) x M3 "stand-off's" are fitted to the bracket using the holes provided. The bracket is mounted on the hinge side of the operator and attached to (4) x M6 bolts screwed into the module plate as shown below.



***Unit fitted with both optional Display /  
Adjustment Board & Battery Backup Pack***

# Installation-Options

The battery pack fits to the rear of the bracket with a strap secured by (2) x M5 screws. The batteries are connected by (2) extension leads with are routed down through the bracket and under the module plate. They are brought up under the motor and plugged into the rear side of the PCB.



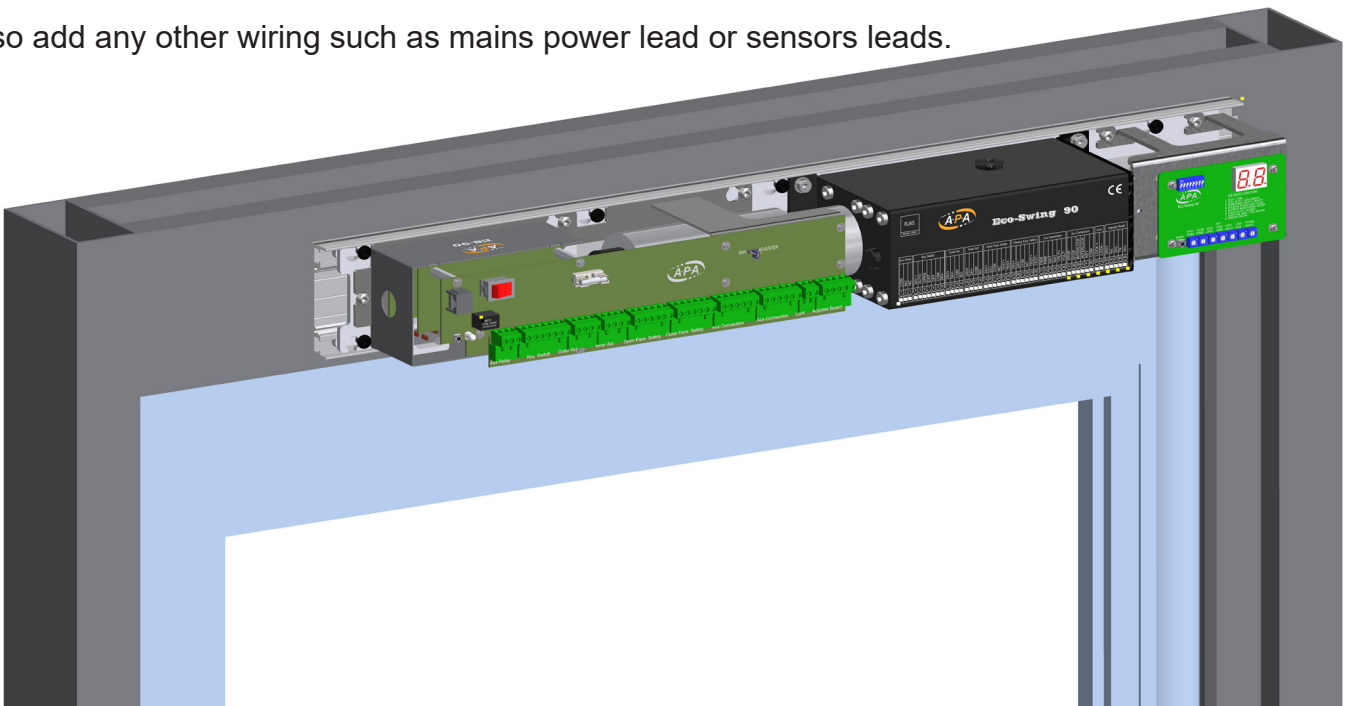
***Unit fitted with optional Battery Backup Pack only***

The Display / Adjuster board fits to the front of the bracket with (4) x M3 fittings.

The unit comes fitted with a connection cable and plug and is routed down through the bracket and under the module plate.

They are brought up under the motor and plugged into R/H of the PCB connection block.

Also add any other wiring such as mains power lead or sensors leads.



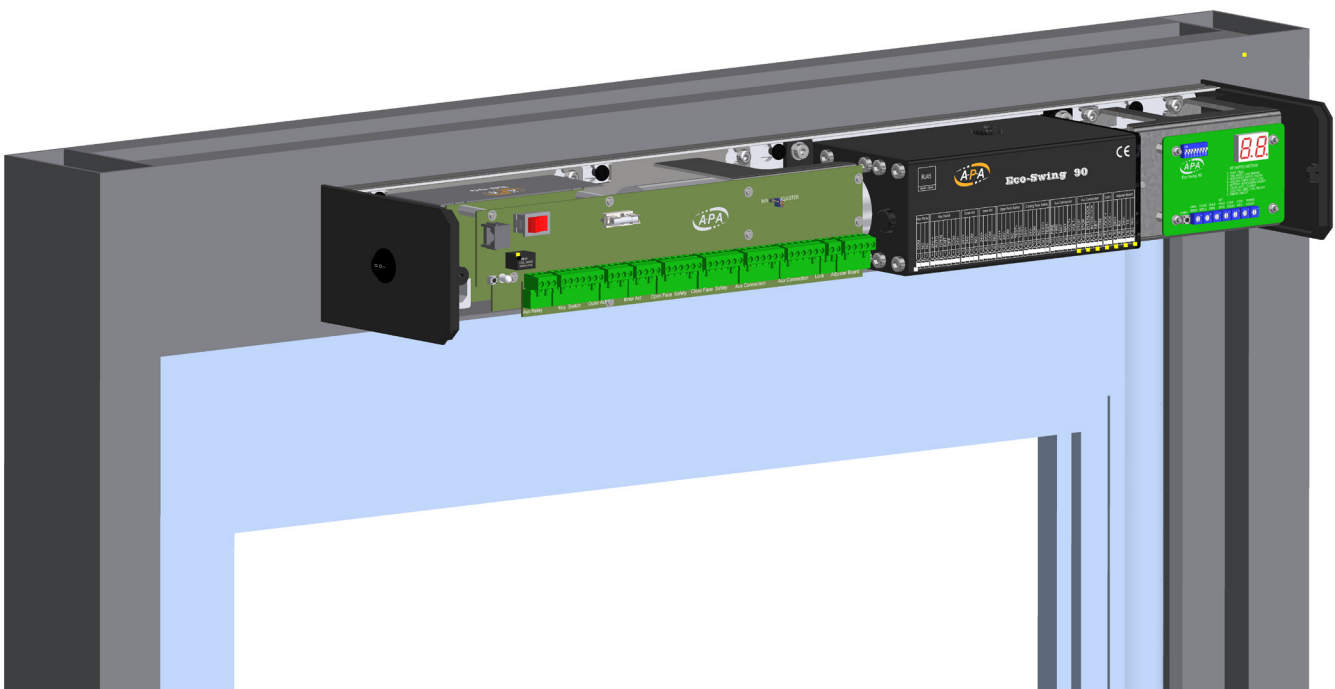
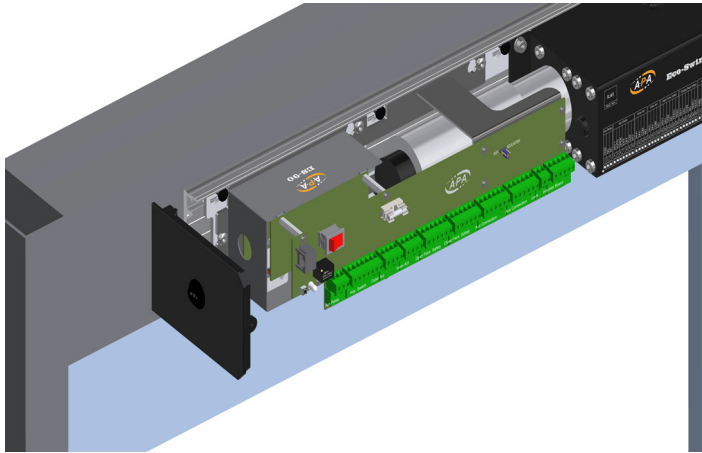
***Unit fitted with optional Display / Adjustment Board only***

# Installation

## Installing the “End Plates”

The next step is to install the operator end plates. These are plastic and once aligned, will knock gently by tapping into place using your hand or a soft mallet. No fixings are required.

Each end plate has (2) lugs which align with the backplate channel profile.



With a standard operator, one of the end plates will contain the “3” position rocker ” switch for setting the modes.

On a single & double door with separate operators, this can be placed either end.

On a double door set with extended cover fitted, this will need to be fitted on the hinge side.

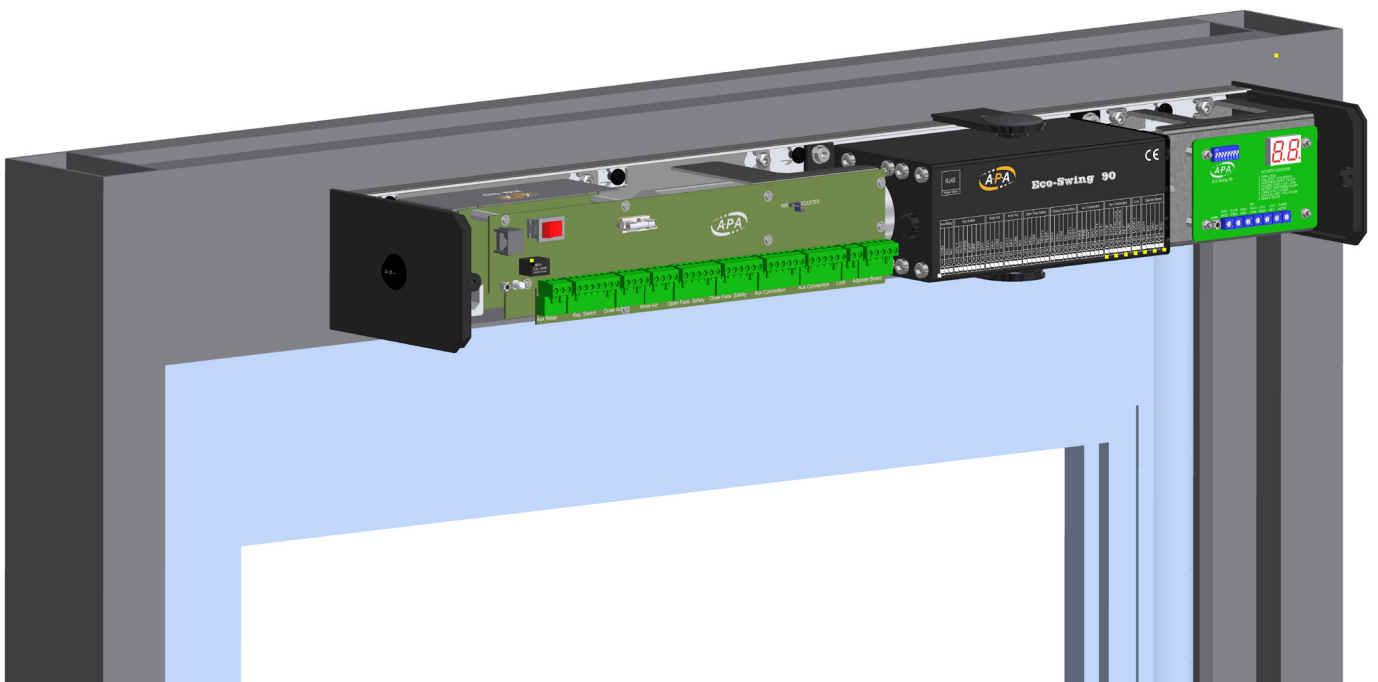
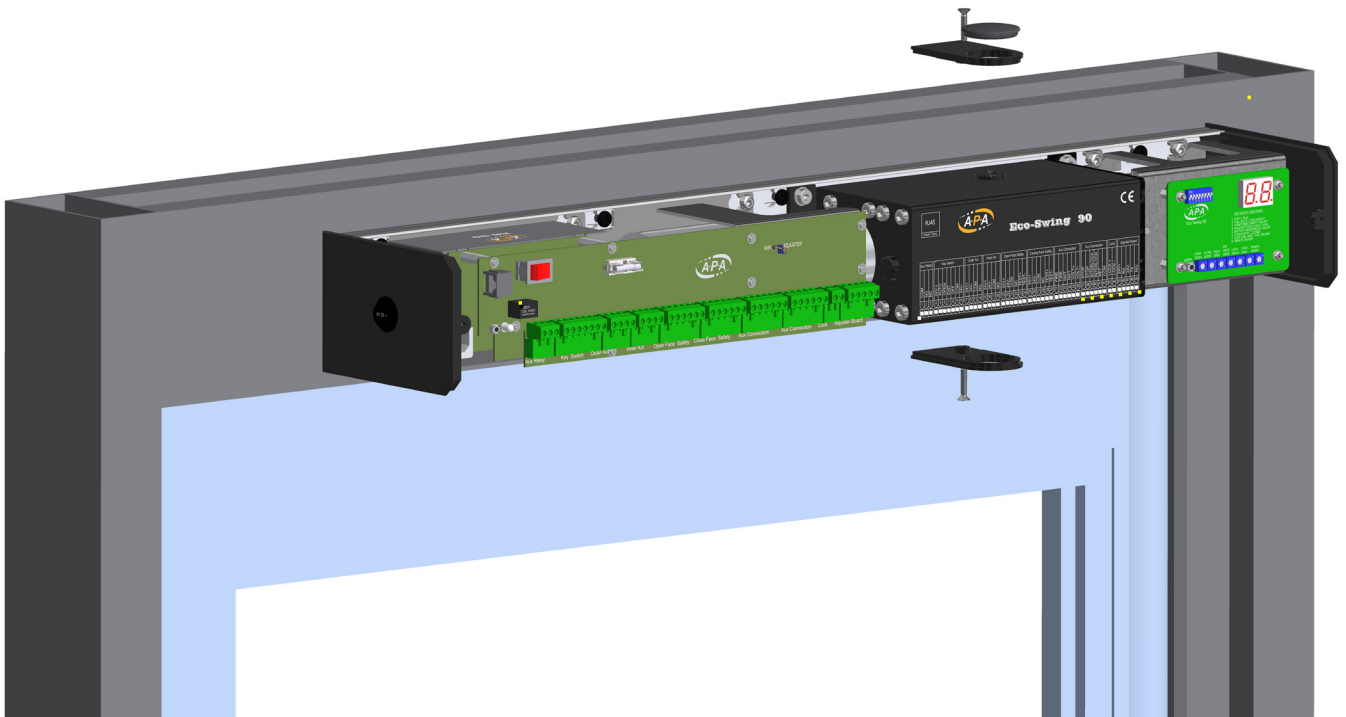
This is connected to the “mode switch connection terminal” on the control unit with the supplied cable

# Installation

## Installing the “Drive Spindle Covers”

The operator is fitted with (2) spindle covers. The top cover comes with a rubber grommet fitted. They are fitted to the gearbox by a small M4 machine screw.

**Note: It is important the lower spindle cover is fitted before the arm is fitted. It will not fit once the arm is in place**

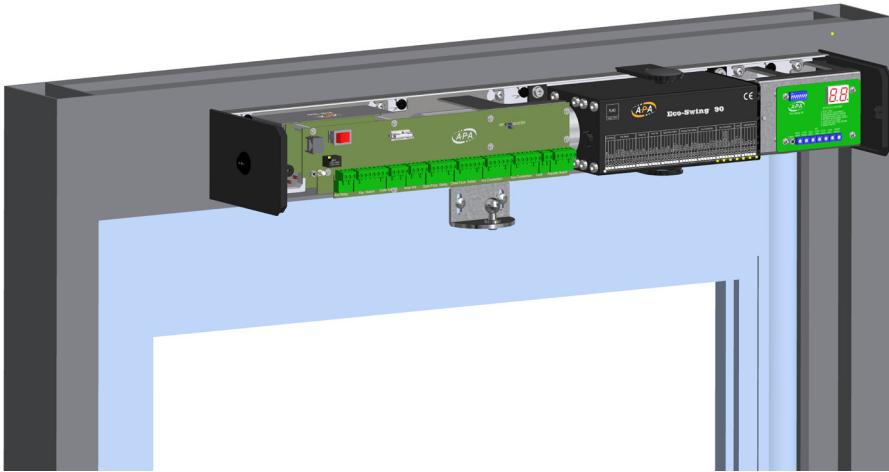


# Installation

## Installing The Drive Arms - Push Type

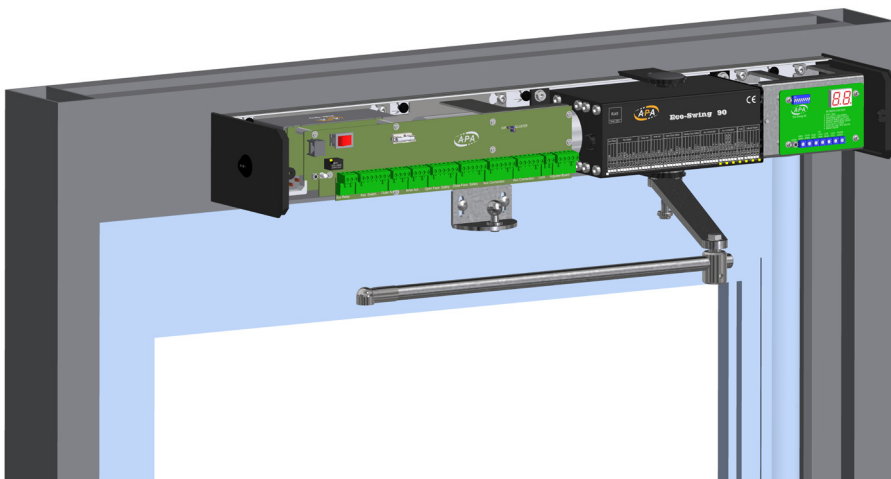
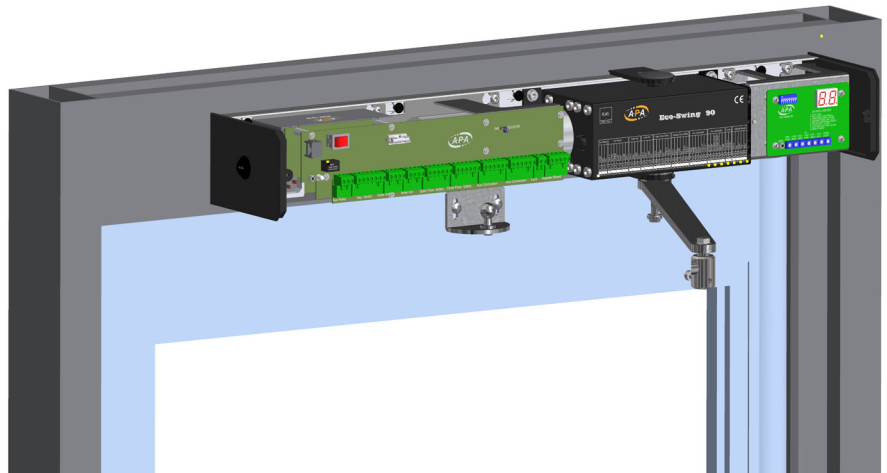
The arm can be fitted next but the unit needs to be powered up to allow for setting the “pre-tension” refer to “door setup & calibration” as this is different for either the display / adjuster board or by using the wifi setup.

Where the arm is shown actually fitting to the gearbox, this is in the “pre-tensioned” position



The drive arm door fitting is now fitted to the door using (2) fitting bolts. Holes should have been previously marked out and drilled.

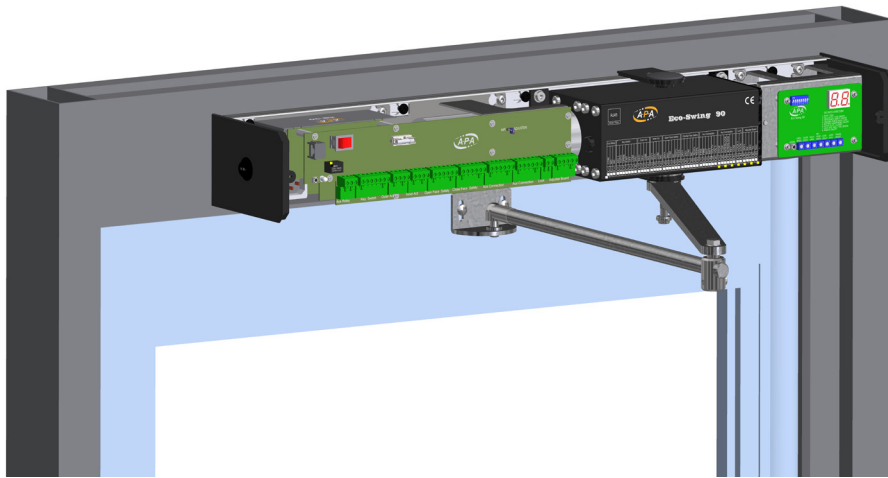
Fit the connection boss to the flat drive arm and loosely fit into place. Don't tighten the drive arm at this point as it needs to swivel



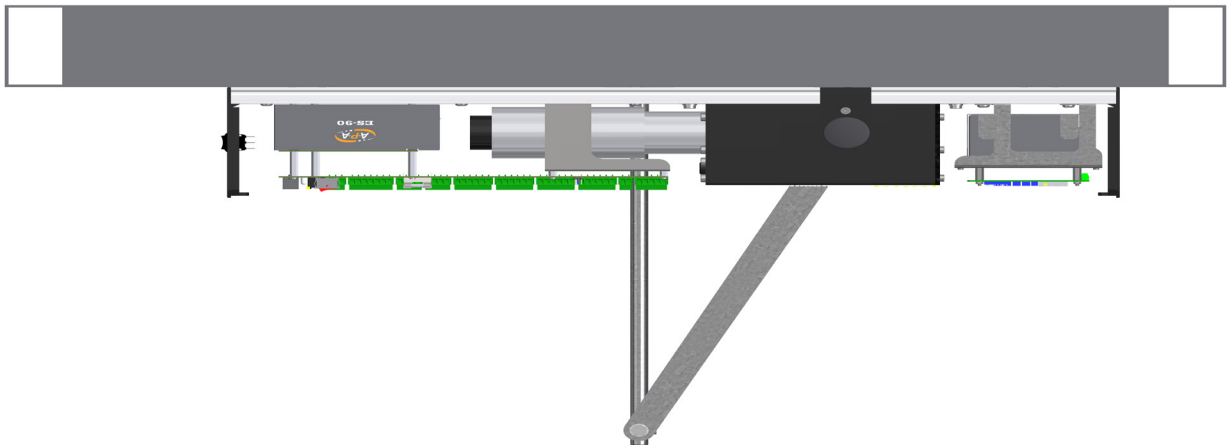
Take the drive arm rod and slide into the arm swivel joint and clip the socket over the ball on the door fitting, securing fully with the spring clip

# Installation

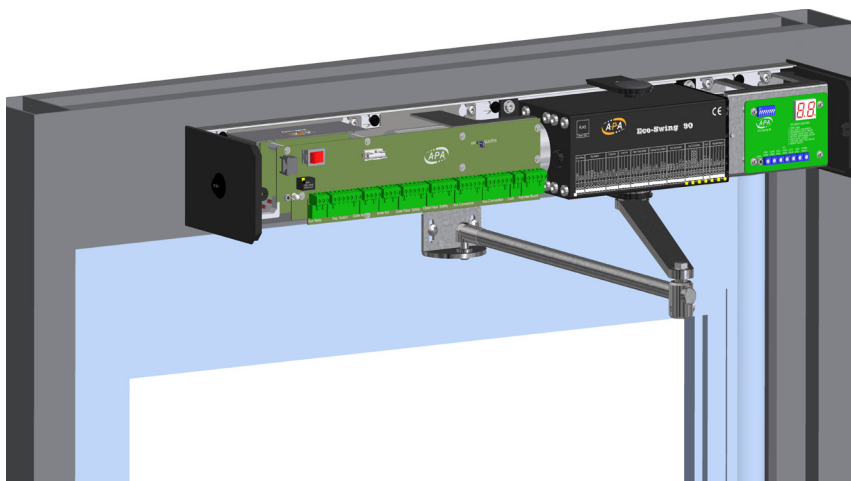
## Installing The Drive Arms - Push Type



The drive arm should now be aligned by loosening the arm connection joint bolt (M6) and allowing the rod to slide through until the arm rod is set at 90deg angle from door face.



The Connection Boss will swivel, allowing the arm to be correctly aligned. Turn it until the correct angle is achieved and then tighten the drive arm bolt (M8)

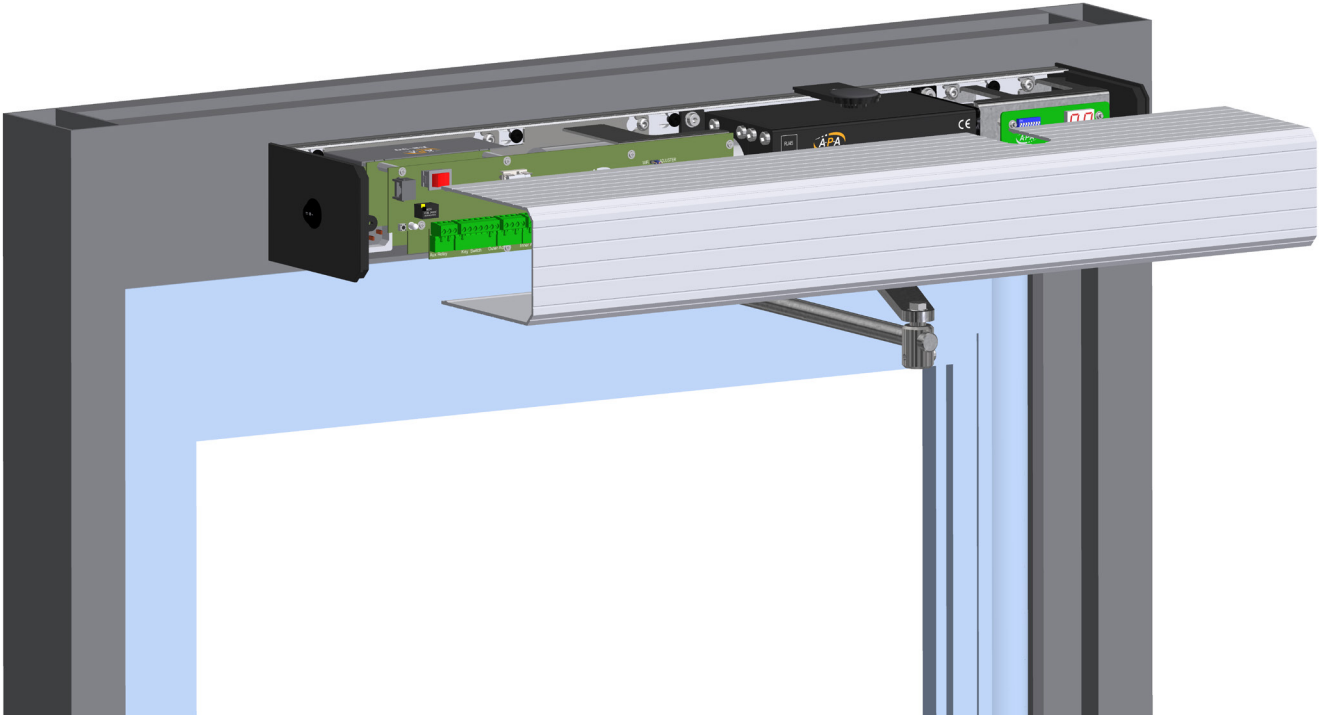


Finally secure the drive rod by tightening the M6 "pinch bolt"

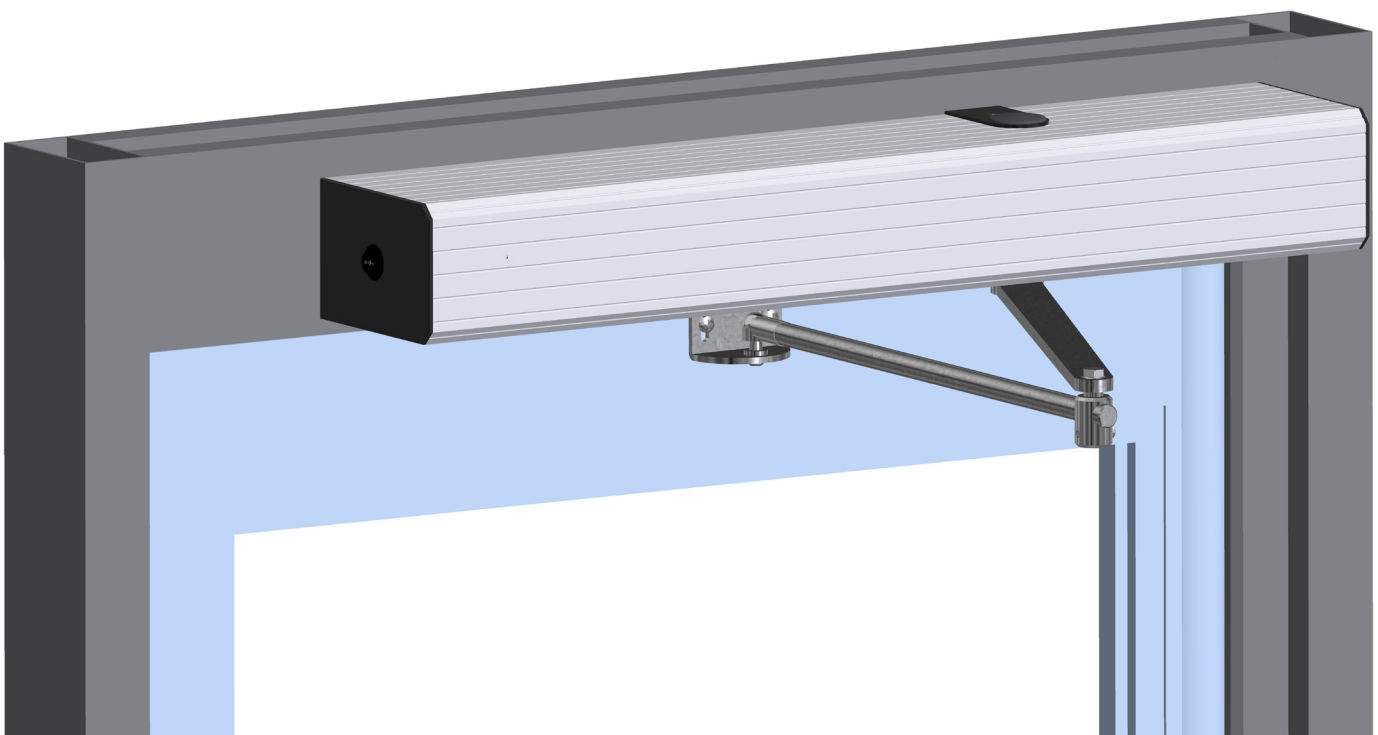
# Installation

## Installing The Cover - Push Unit

Position the cover with the cut out for the arm to the correct side and align with end plates



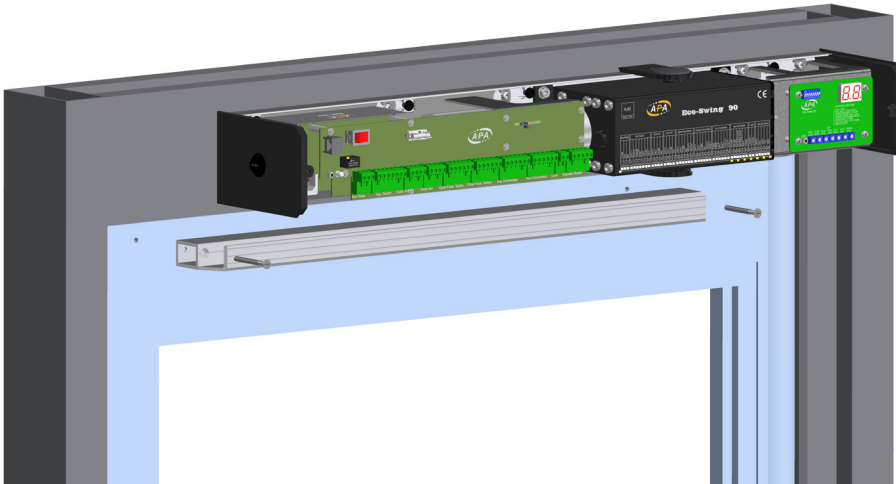
Gently push the cover on until the cover “snaps” into place.  
Take care to guide it correctly around the spindle covers



# Installation

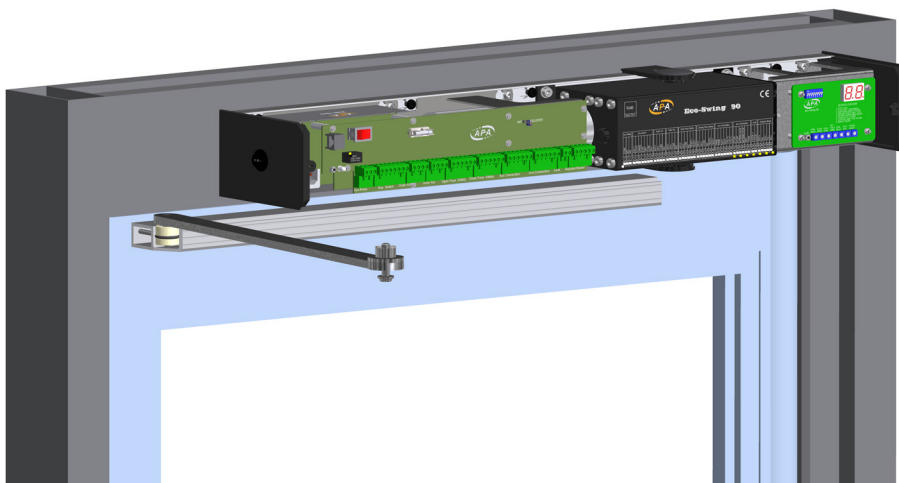
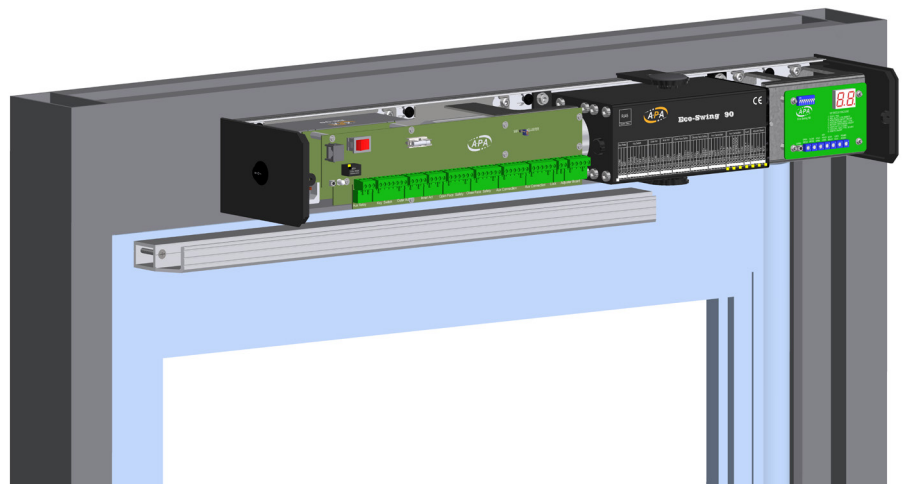
## Installing The Drive Arms - Pull Type

The “Drive Arm” slide channel is fitted to the door using (2) counter sunk M5 fitting bolts & nuts.



Remove the plastic end covers and fit through the pre-drilled holes to fit the channel to the top door rail. Holes should have been previously marked out and drilled (details Page 15)

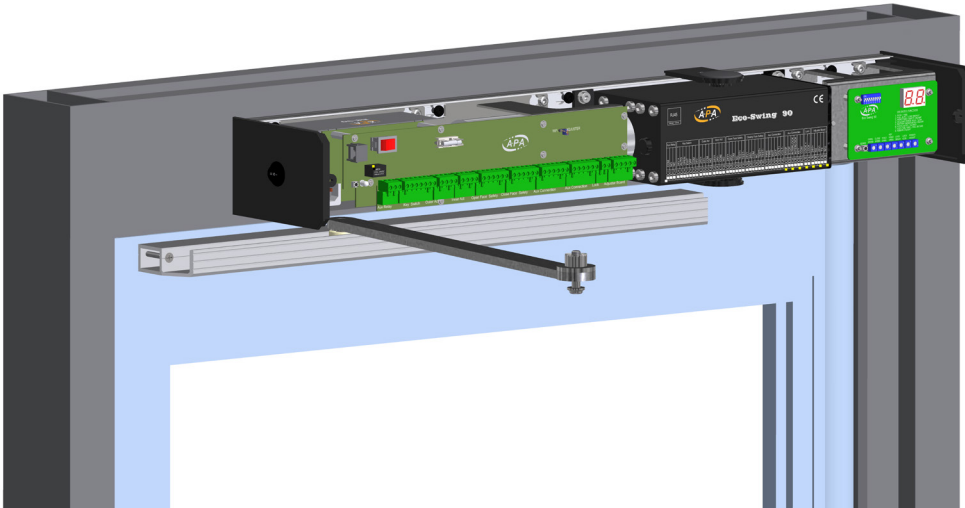
Tighten both bolts ensuring the channel is level with the top edge of the door



Take the flat arm with roller downwards (connection boss fitted) and insert the roller into the guide channel

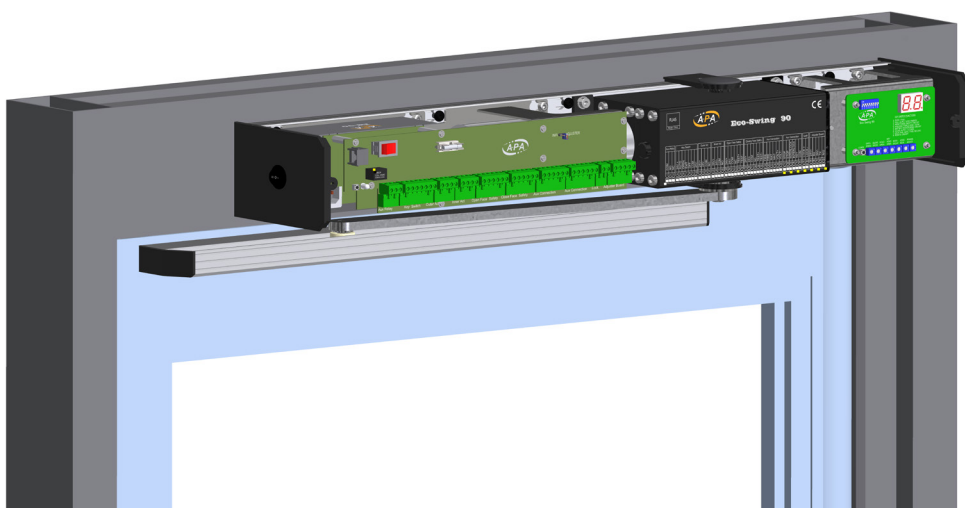
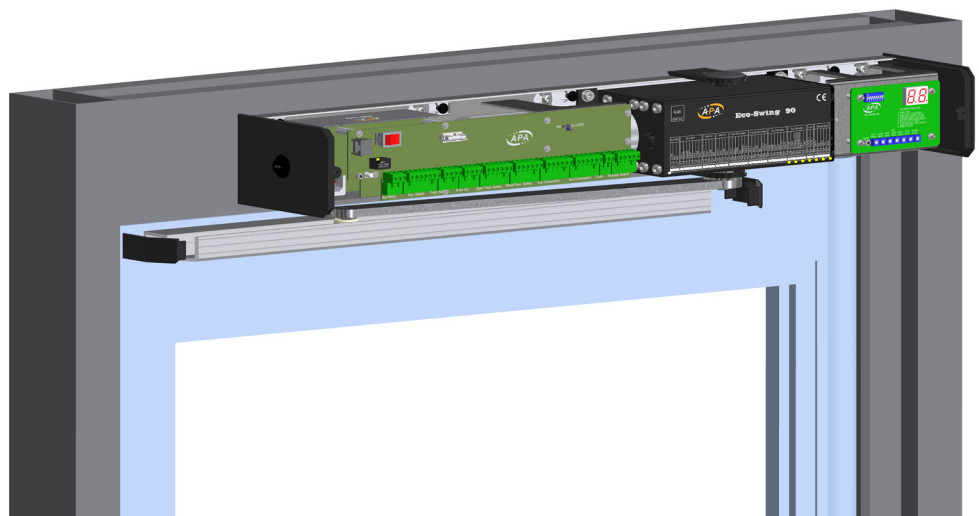
# Installation

## Installing The Drive Arms - Pull Type



Slide the arm towards the gearbox and align over the gearbox shaft.

Attach the "Drive Arm" to the gearbox using the M8 bolt provided and tighten fully.

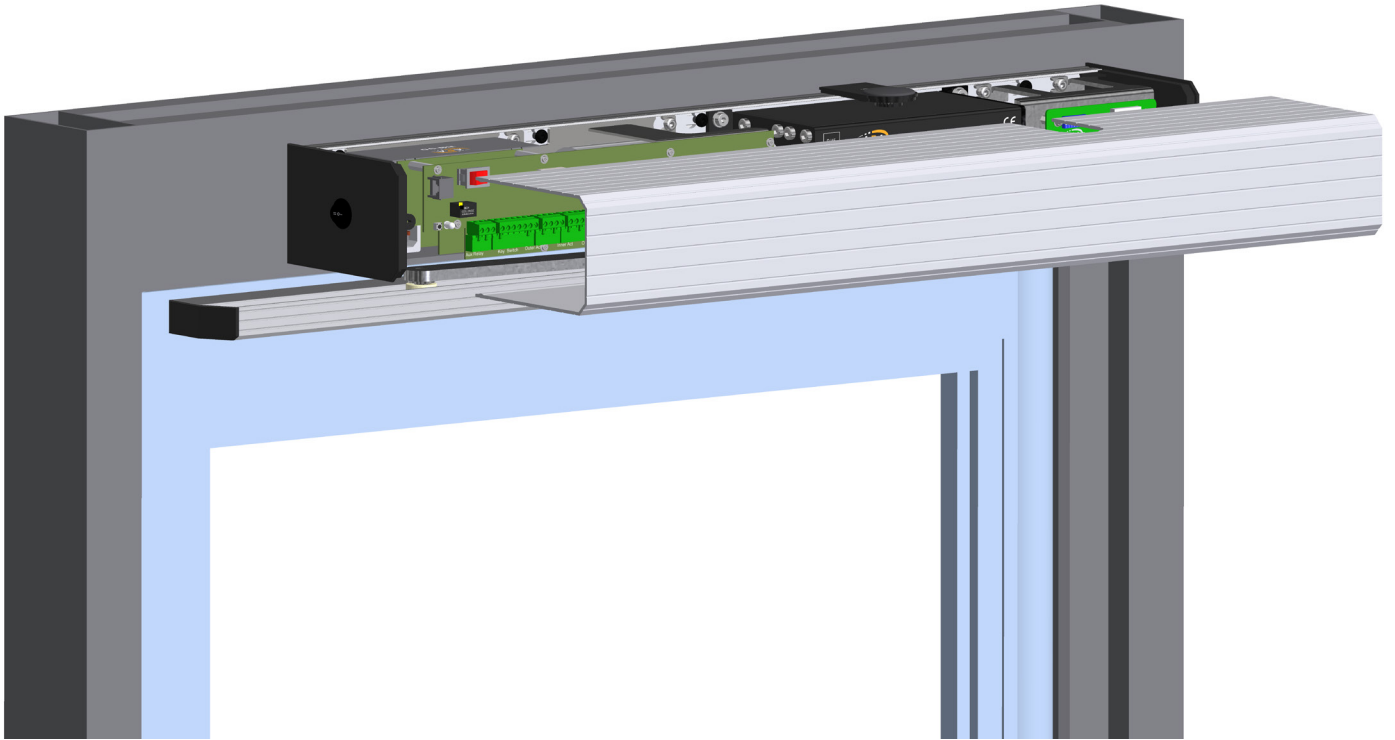


Attach the Plastic end caps, noting they are handed, gently push into place

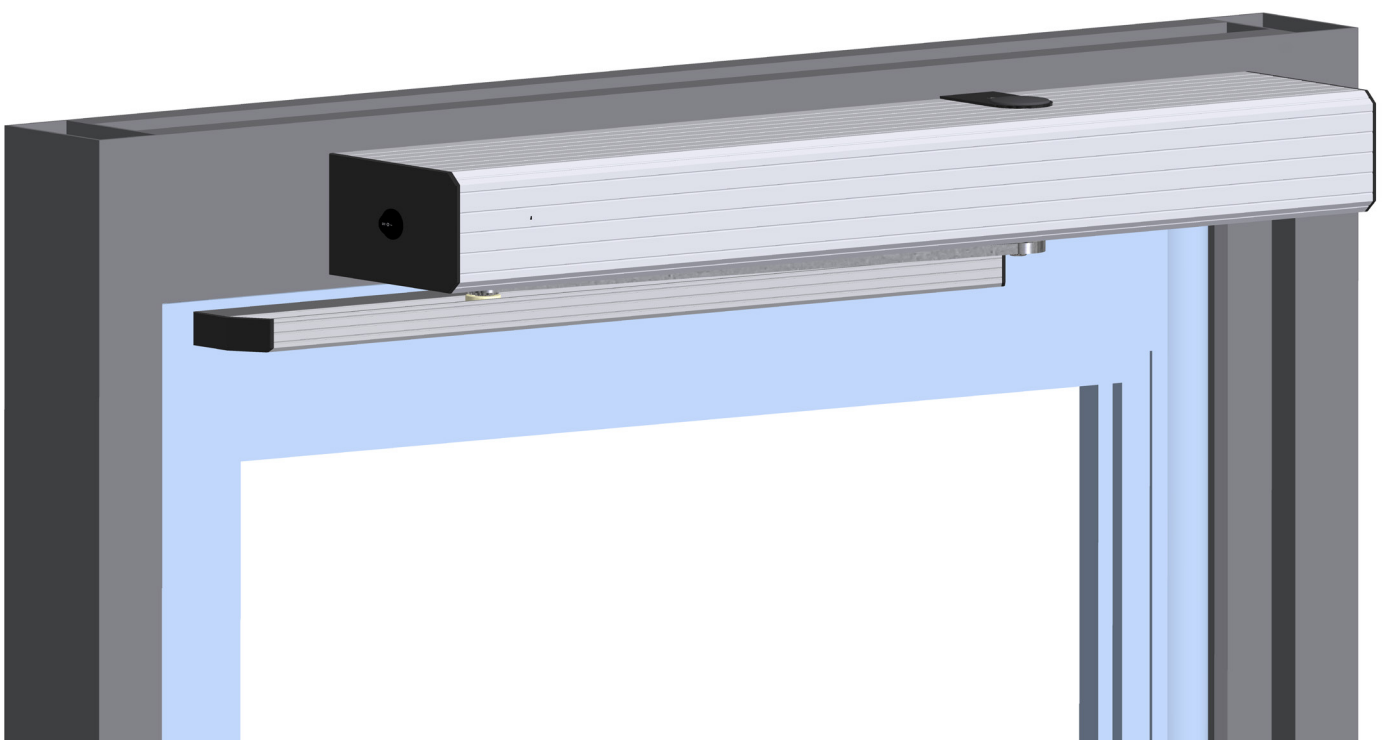
# Installation

## Installing The Cover - Pull Unit

Position the cover with the cut out for the arm to the correct side and align with end plates

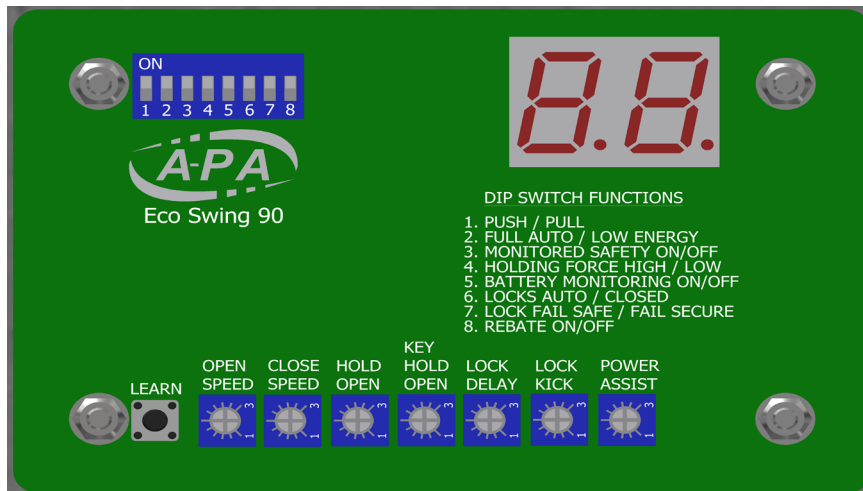


Gently push the cover on until the cover “snaps” into place.  
Take care to guide it correctly around the spindle covers



# Setup & Calibration

## Display Board Setup



If you have chosen to fit the optional display / adjustment board then this is the setup instructions. (If no display / adjustment board is used then refer to WiFi setup page).

Ensure the link on the control unit is set to adjuster setting  
Set Dip switches for correct arm type ( ie Push or Pull)  
Set other options on Dip switches as needed.

Apply power to unit

Observe Control Unit LED, if green press and hold the “Learn Button” on the control unit until LED flashes “orange”

Display will show “FA”

This means memory is cleared and awaiting calibration.

(If a pair of units are connected as master / slave, the slave LED must also be flashing “orange”)

On the display board, press learn button for 4 seconds

Observe the gearbox drive spindle, it will move 10 degrees in correct direction to the “pre-tension” position for arm type selected.

Fit the drive arm to gearbox shaft & tighten bolt with door in closed position.

Press learn button again

Observe, door will close, display will show “FH”

Door will then open on its “learn Cycle” - display shows “cO”

Door will close - display shows “cC”

When door is closed, display will show “AL” followed by “FH”

Display will then change to current status

Control Unit LED will change to flashing “green”

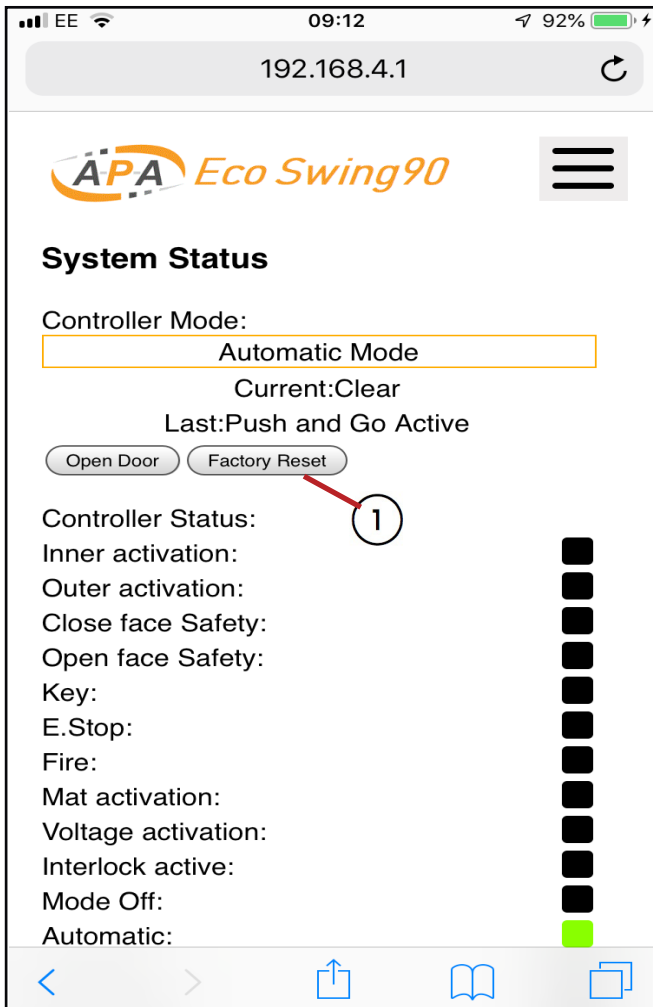
Learn cycle is complete and door will operate normally.

# Setup & Calibration

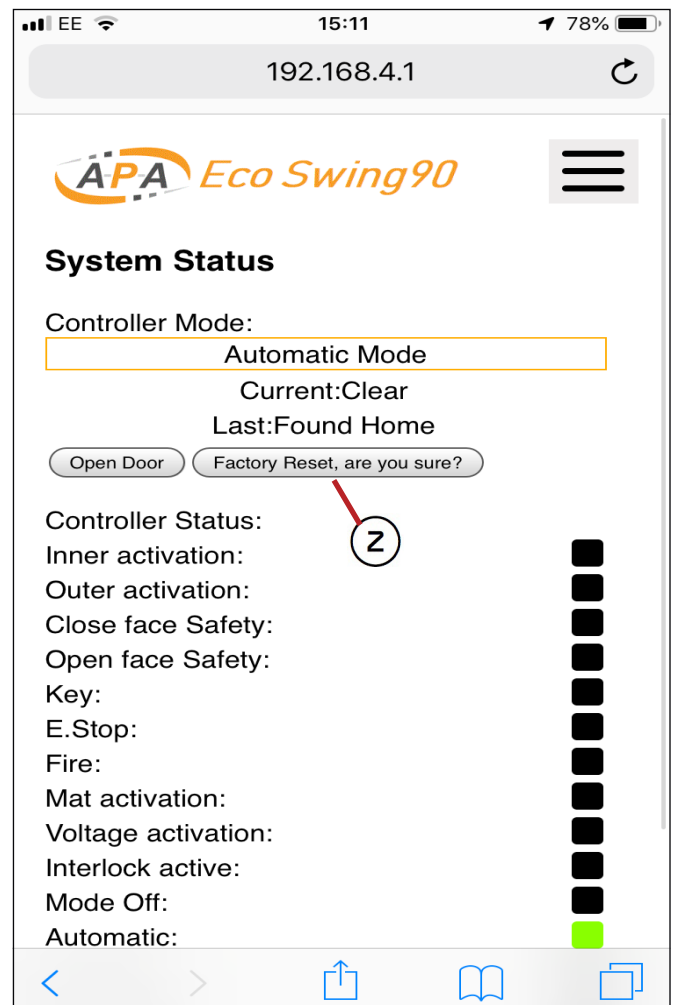
## WiFi Setup

The preferred method of adjusting the settings & set-up of the operators is via the built in WiFi system. This is set by making sure the Control Unit Jumper link is set to WiFi position on the master (Jumper is not linked on the slave unit if fitted. Fit link to one pin only)

After logging into the set up system (details for that are explained later in the manual) you will be presented with the System Status page.



The setup / calibration is initiated by selecting "Factory Reset" ①

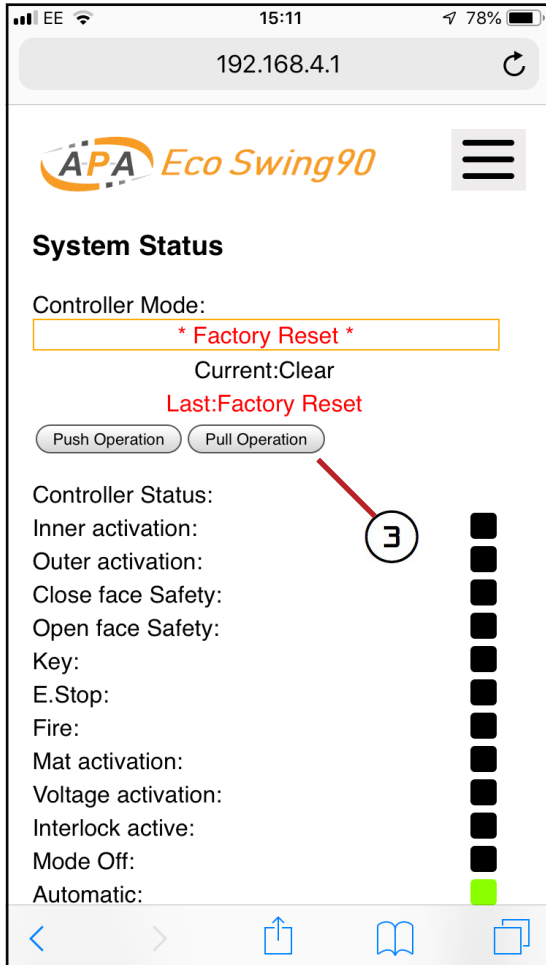


It will ask if you are sure you want to reset the door controller. Press "Yes" ②

There could be a small delay and nothing appears to happen, but just be patience

# Setup & Calibration

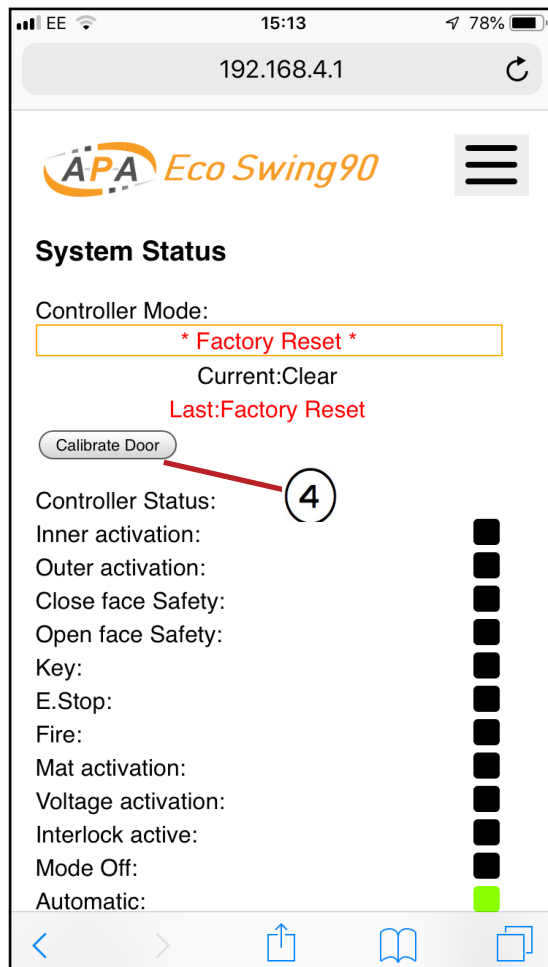
## Wifi Setup



It will then ask you to select “Push” or “Pull” type arm. ③

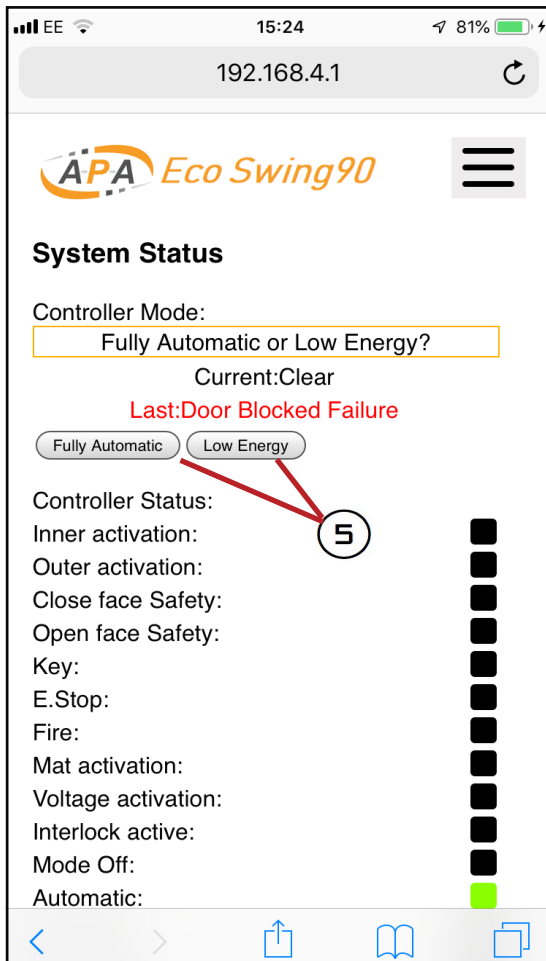
As soon as you select the arm type the gearbox drive spindle will move to the “pre-tension” position. (The open Door & Factory Reset button change to a single calibrate button)

Fit the drive arm and tighten with bolt with the door in the closed position.

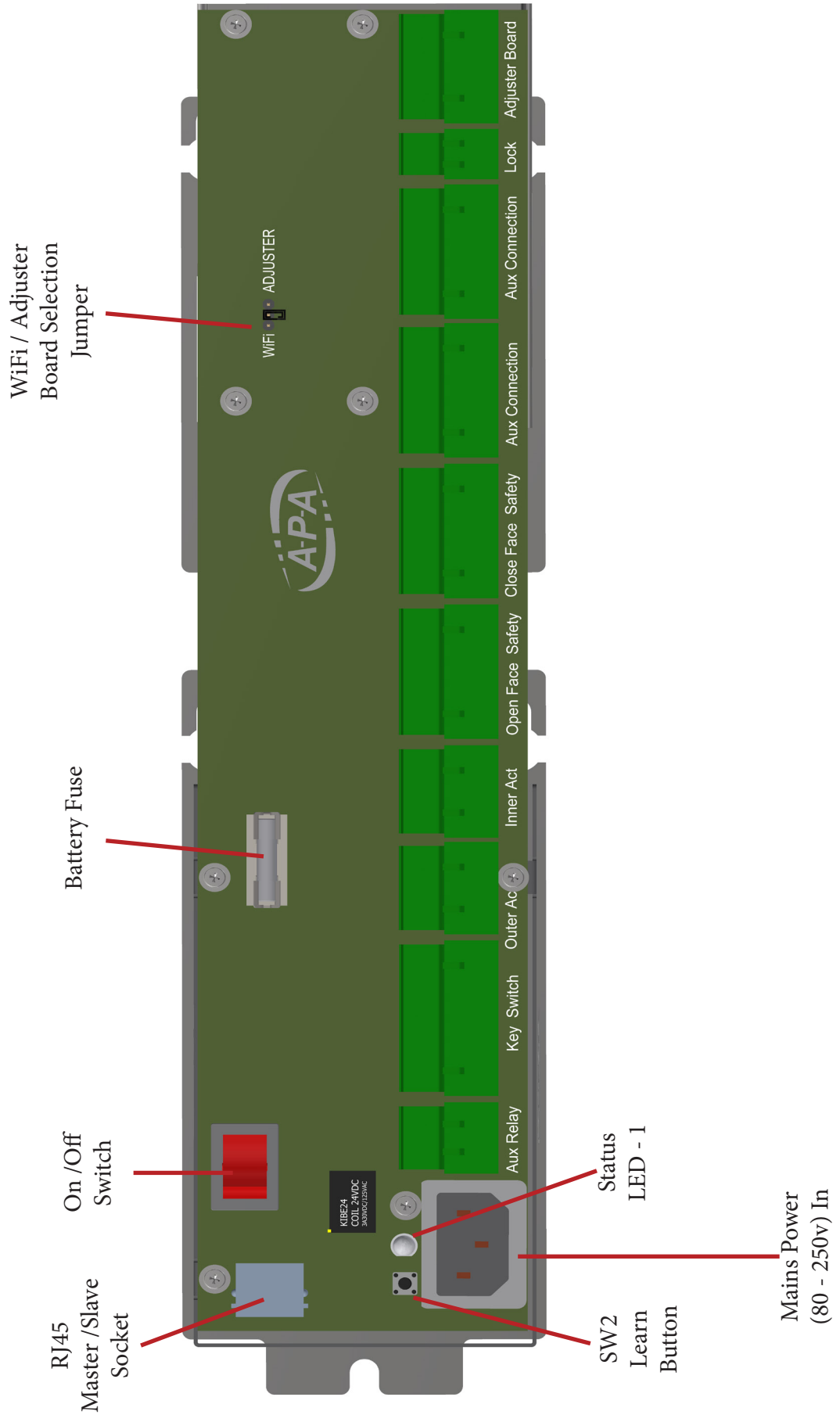


Once arm is secure, press the “Calibrate” ④ button, the door initially closes to the stop, then opens and closes.

At which point the screen changes to ask if the door is “Fully Automatic” or “Low Energy” use, once you select door usage the door is set and ready to use. ⑤

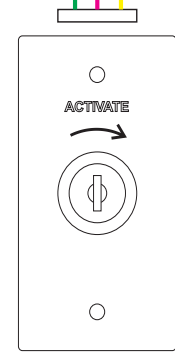
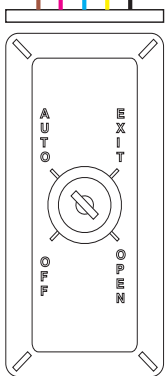
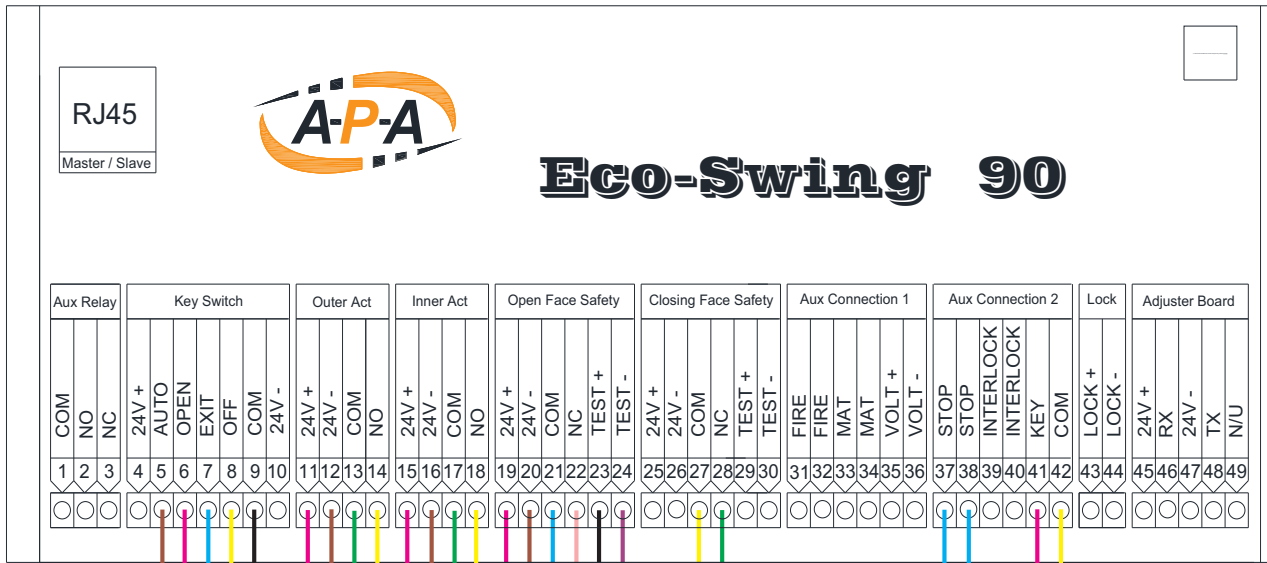


# Wiring



# Wiring

## Wiring Diagram - Optex Sensors

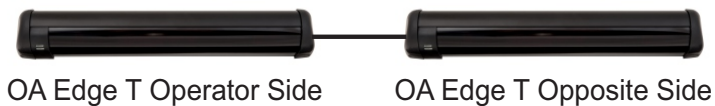


OM-105C / 106C  
Outer



OM-105C / 106C  
Inner

— = White wire

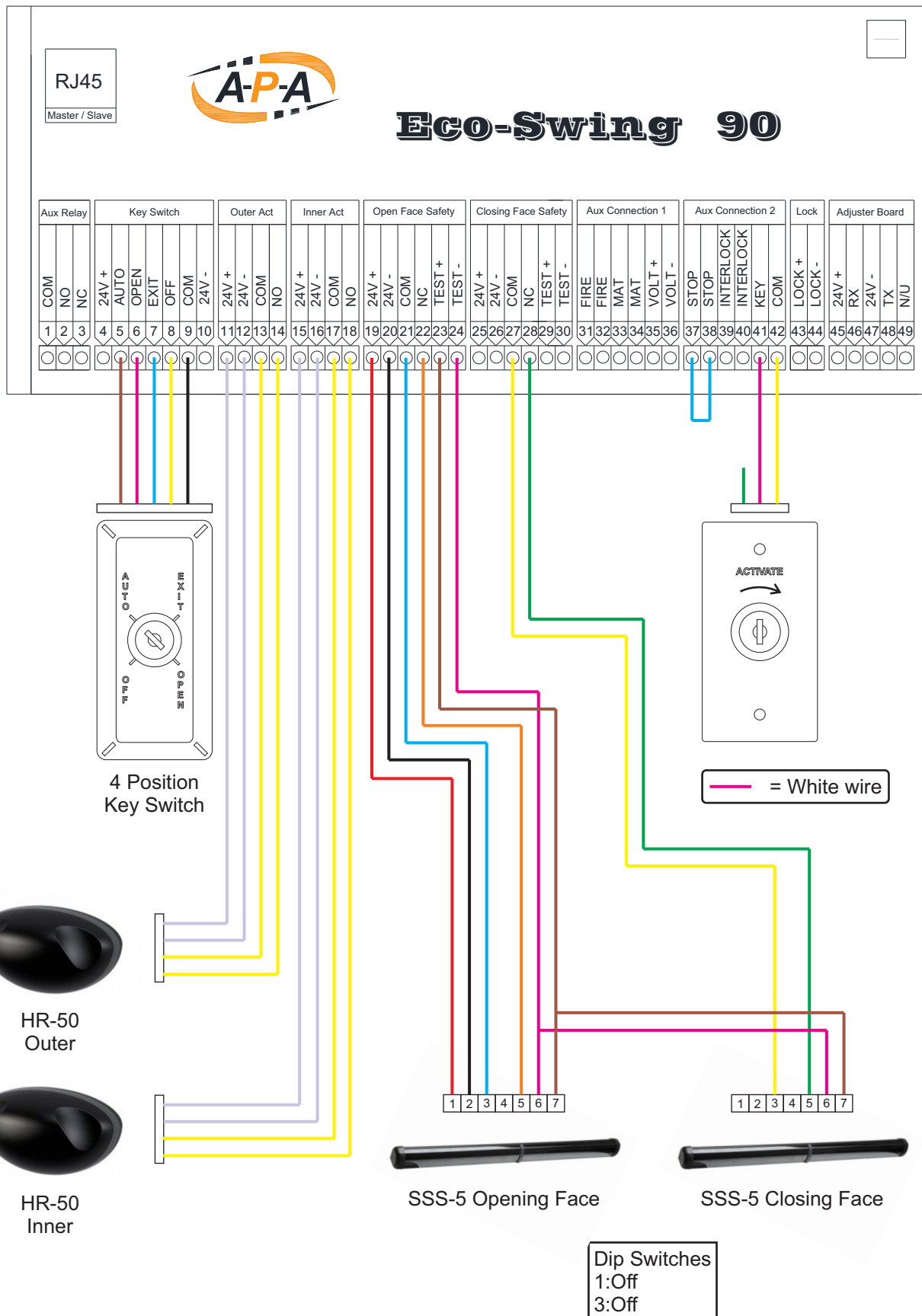


Dip Switch A7: ON

Dip Switch B4:  
OFF: Stop Side  
ON: Reactivation Side

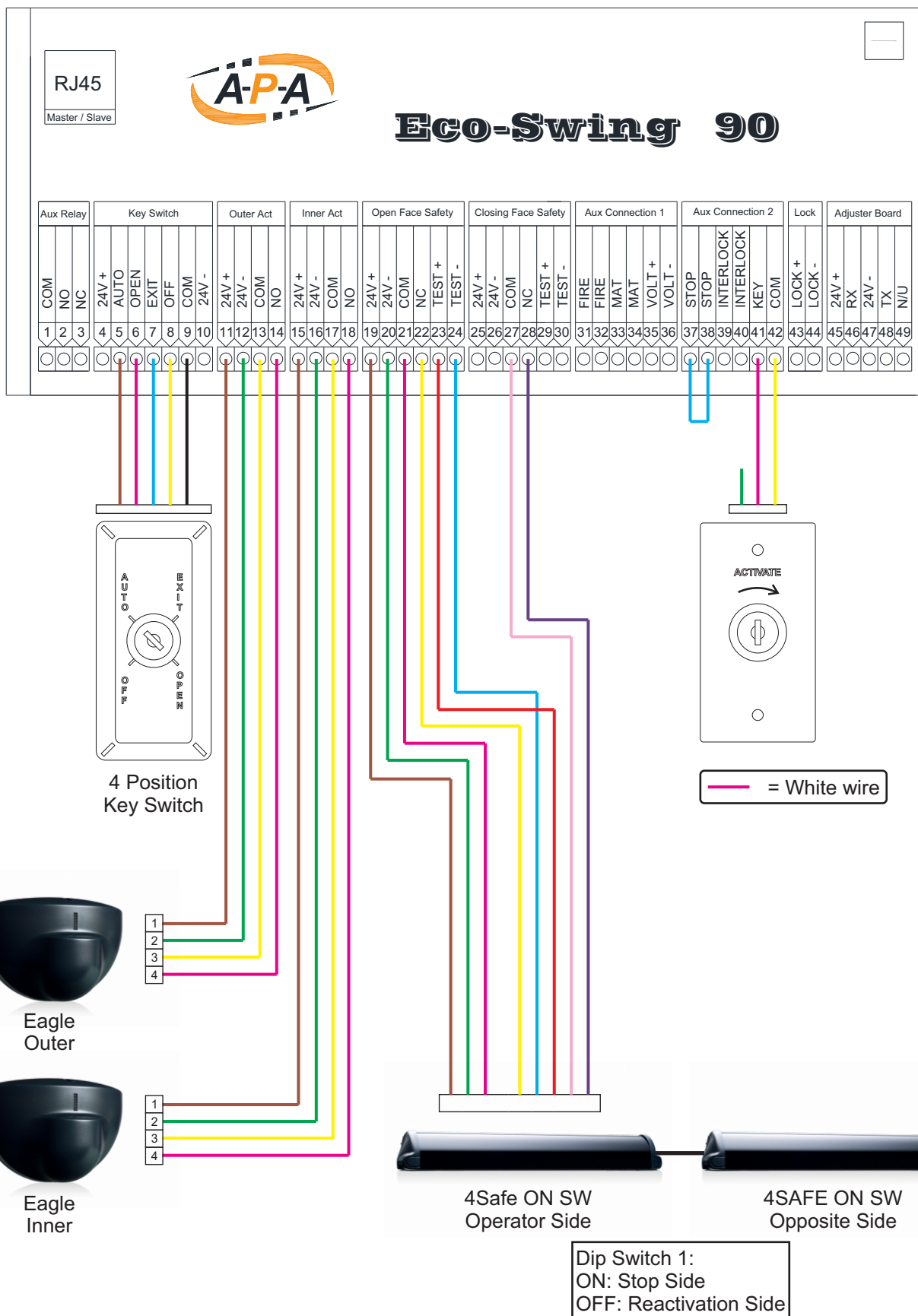
# Wiring

## Wiring Diagram - Hotron Sensors



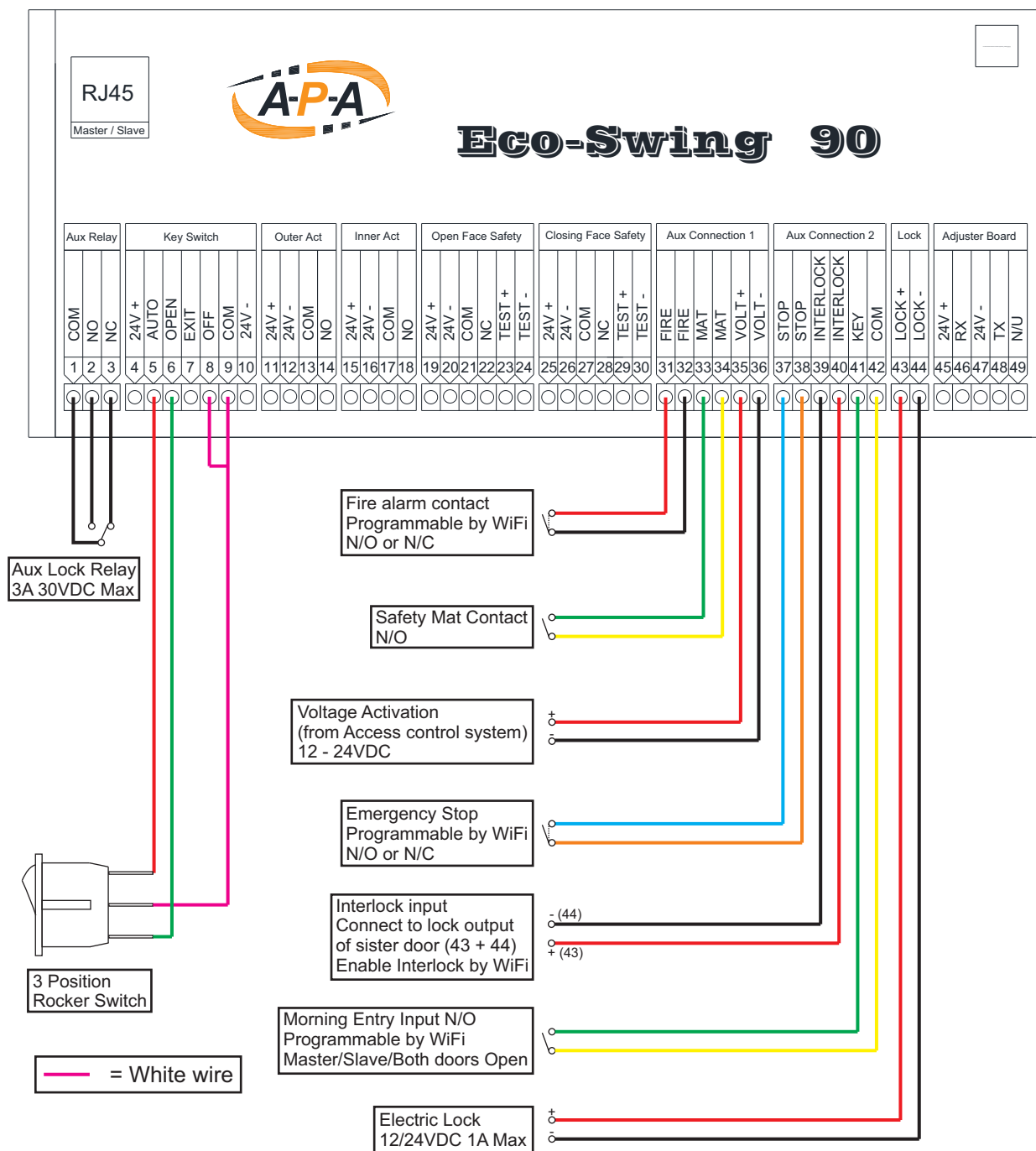
# Wiring

## Wiring Diagram - BEA Sensors



# Wiring

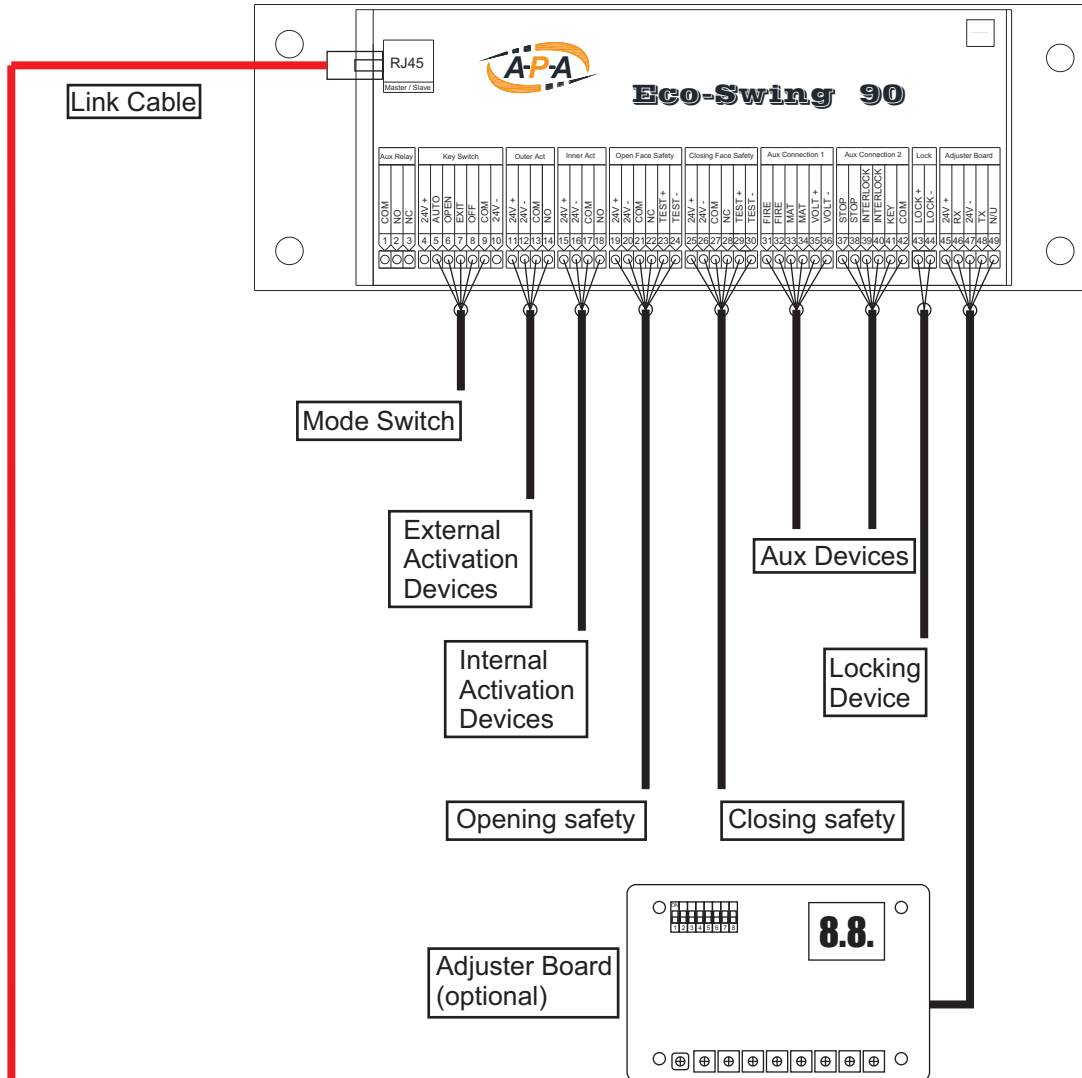
## Wiring Diagram - Aux Items



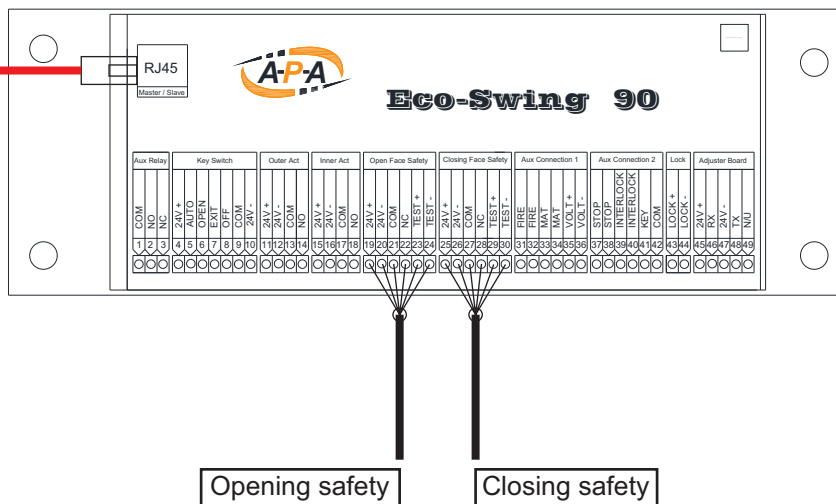
# Wiring

## Wiring Diagram - Master / Slave Connection

### Master Unit



### Slave Unit



# Wi-Fi - Connection



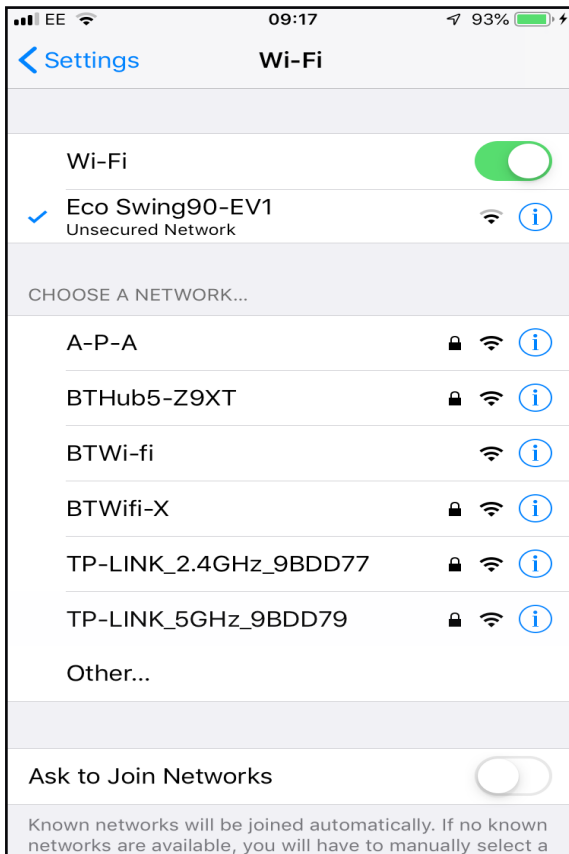
The ES90 Swing Door Operator uses a unique Wi-Fi interface to carry out all adjustments and setting etc as standard.

An optional adjustment / display board is available if the user prefers manual adjustments and switches settings etc.

The ES90 WiFi interface has been designed to be very simple to use on any Wi-Fi enabled device. (i.e. Smart Phone (Android or OS) / Tablet / Laptops / Desktop PC )

The following will show how easy it is to access the setting, the status of various inputs and any error messages for fault finding.

The complete interface is integrated into the ES90 control system and is easily accessed.



We begin by going to the device you are using and selecting the Wi-Fi setting page ( All screen-shots are taken on an iPhone but will be almost identical on other devices)

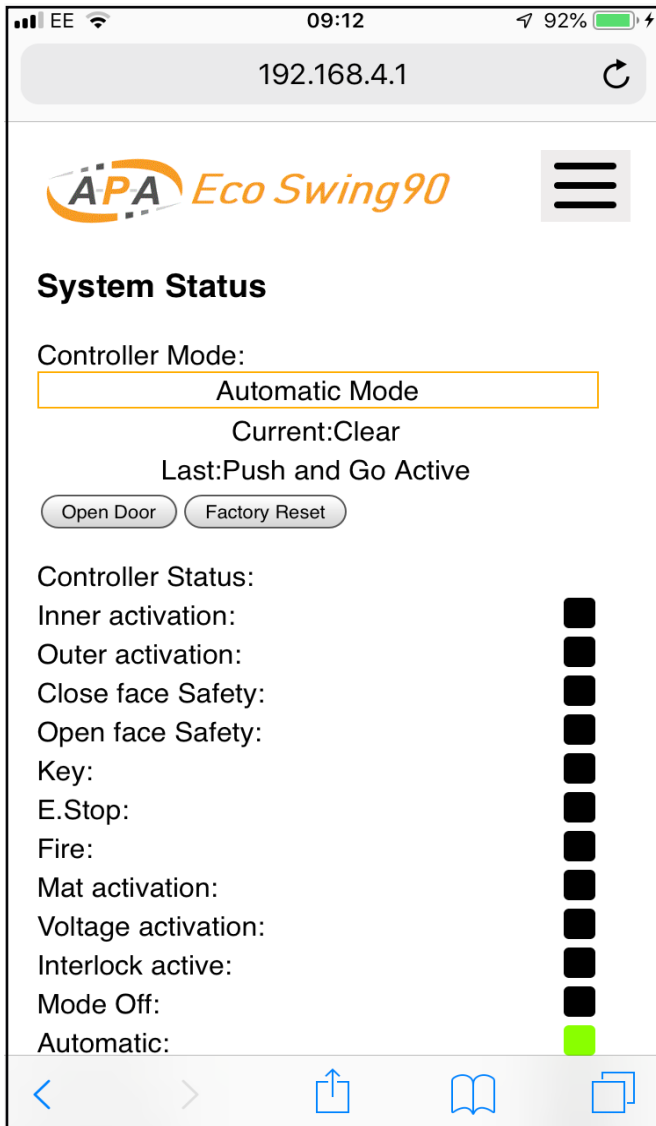
We search for Wi-Fi and the ES90 operator Wi-Fi will be displayed ie. ( First Use ECO Swing 90 -1)

We select this Wi-Fi hotspot and log on to it. Next we close the setting page and open your internet browser.

Type into the browser the following - 192.168.4.1

You will then be taken to the ES90 login page

# Wi-Fi - Login Page



Once logged into the system, the control will show the System Status page.

This page displays the status of various inputs such as the sensors, key switches and operating modes.

It also displays the current and last actions (i.e. if door is opening from a sensor, it will show that sensor as active)

It has an activation button and the factory reset / commissioning setup as activated from this page.

Lastly it will also display error & status messages the system generates by replacing the current mode with the error in red .

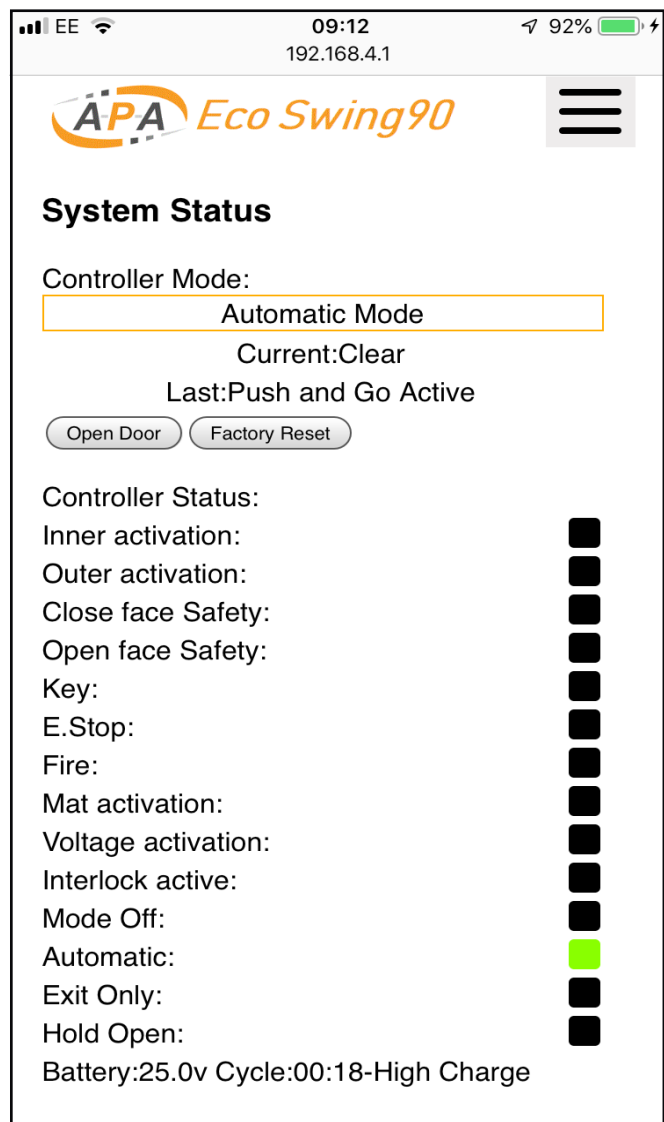
The system as been designed to very self explanatory and simple to use.

When the unit is new, the default password is : 1234

Obviously if the unit has been commissioned previously the password may have been changed and that password will be needed to access the system.

We recommend that installers maintain a set password through their installations as this means the units you install can always be accessed.

This can be set in the admin area.



# Wi-Fi - Status Page

The complete system uses only 4 pages to allow access to all functions

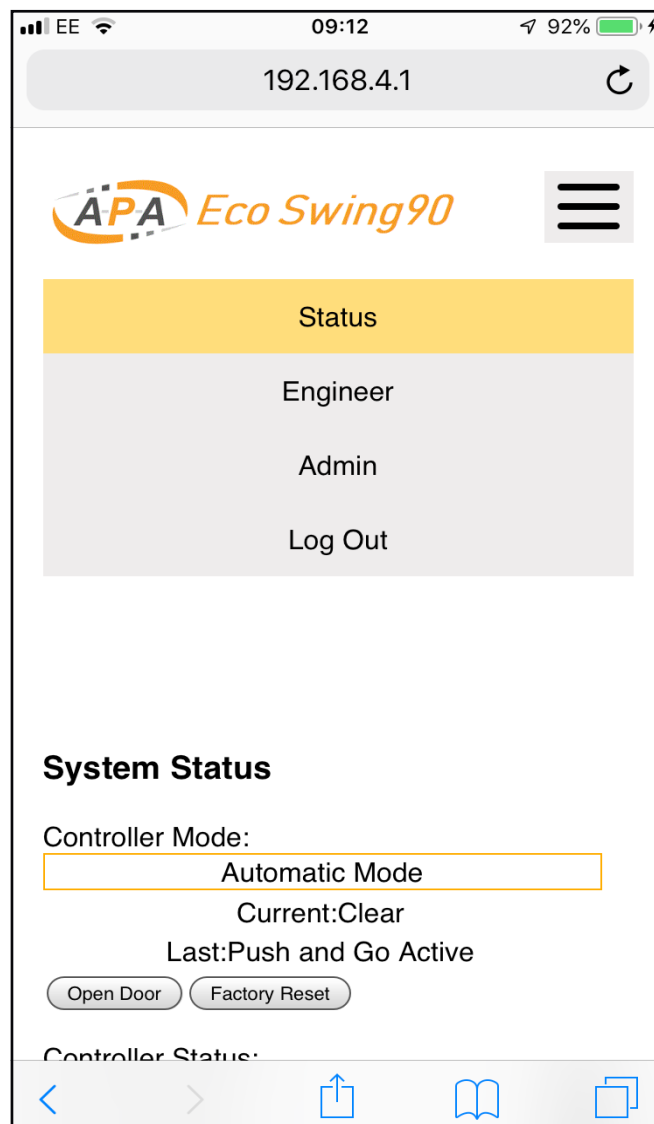
**Log In Page** : Initial log in and page after Log out

**Status Page** : Showing real time status of inputs, actions & errors

**Engineers Page** : Setting of all door functions such as door speeds, additional functions such as rebated doors, battery monitoring / locking / fire alarm inputs etc

**Admin Page** : Setting Operators name (displayed as wifi hotspot) & change password

These pages are accessed by selecting the  at the top R/H corner



Then just scroll down the list and select page you want to access.

# Wi-Fi - Engineers Page

09:13 92%

192.168.4.1

APA Eco Swing 90

### Engineer Settings

Key Open Door Normal Open Door

Opening Speed (1 - 10): 7

Closing Speed (1 - 5): 3

Hold Open Time(1 - 20): 1

Key Switch Time(1 - 20): 3

Lock Delay(0 - 5): 0.0

Lock Kick (1 - 10): 5

Holding Force (1 - 10): 5

Power Assist (0 - 5): 0

Push and Go: Enabled

Monitored Safety: Not Monitored

Battery Monitoring: Off

Battery Mode: Hold Open

Lock on Close: Yes

Lock in Automatic: No

You are able to make several selections before saving the changes i.e. you don't have to press save after each change.

The page also offers a door open activation button and a button to test the key switch input (such as after adjusting the key switch timer).

The Engineers settings page is where you make all changes & adjustment to the ES90 control system.

The systems comprises simple adjustment parameters such as door speed between 1 & 10 with 1 being the lowest speed and 10 being the highest. You simply type the required value and then press the save button to store the change.

Other options include Yes/No & Off/On selected in drop down menus.

09:13 92%

192.168.4.1

### Engineer Settings

Key Open Door Normal Open Door

Opening Speed (1 - 10): 7

Closing Speed (1 - 5): 3

Hold Open Time(1 - 20): 1

Key Switch Time(1 - 20): 3

Lock Delay(0 - 5): 0.0

Lock Kick (1 - 10): 5

Holding Force (1 - 10): 5

Power Assist (0 - 5): 0

Push and Go: Enabled

Monitored Safety: Not Monitored

Battery Monitoring: Off

Battery Mode: Hold Open

Lock on Close: Yes

Lock in Automatic: No

Lock in Exit Only: No

Fail Safe/Secure: Fail Secure

Interlock On/Off: Off

Rebate On/Off: Off

Morning Entry: Open Master

Emergency Lock: Off

Fire Alarm: Normally Open

Emergency Stop: Normally Closed

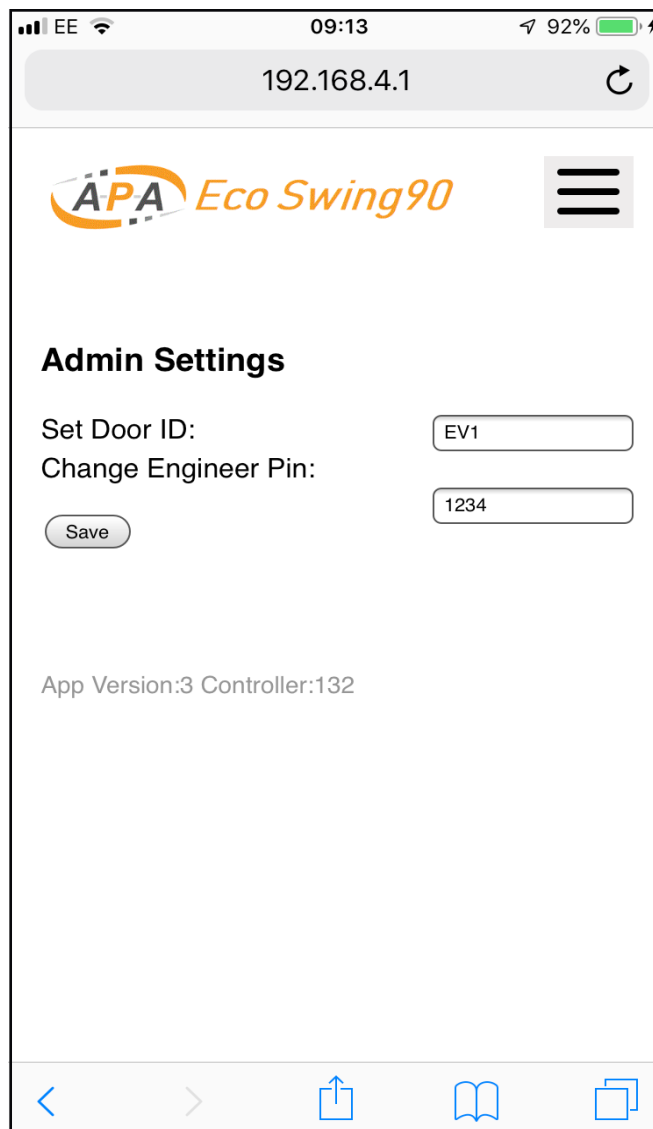
# Wi-Fi - Admin Page

The admin page allow you to change the units ID so units can be found individually, especially when they are fitted in pairs.

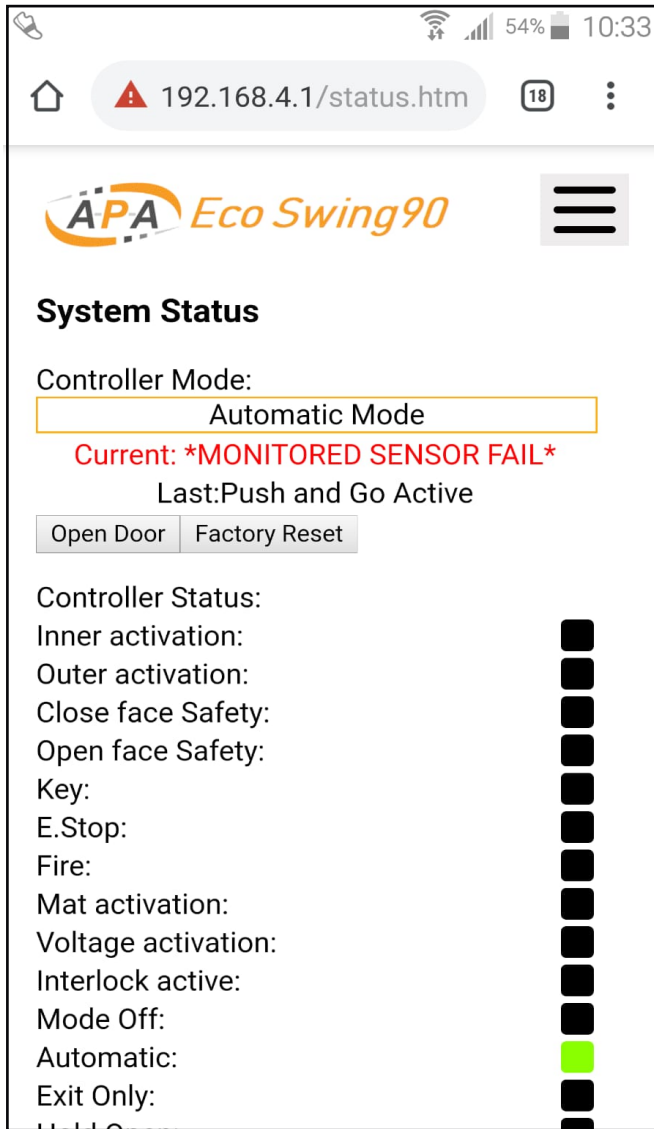
The ID can be letters and / or numbers. Maximum length is 12 digits

The Pass Code / Pin No is numeric only and a maximum of 8 digits

Click the save button after changing to save the new values.



# Wi-Fi - Error Messages



The ES90 control system generates multiple error messages and these are displayed on the status page as shown.

These error messages will be displayed in the Current & Last operation text positions and are clearly displayed in red within **\* error \***

**\*MAINS FAIL\***

No mains power detected, master unit

**\*BATTERY FAIL\***

Battery low voltage, master unit (if optional battery is fitted)

**\*FIRE ALARM\***

Fire alarm input active, master unit

**\*EMERGENCY STOP\***

Emergency stop input active, master unit

**\*OPEN OBSTRUCTION\***

Master door is blocked on opening

**\*COMMS FAIL TO SLAVE\***

Master controller cannot communicate with slave controller

**\*MONITORED SENSOR FAIL\***

Monitored safety sensor fails test, master unit

**\*SENSOR CONSTANTLY ACTIVE\***

Activation sensor active longer than 10 minutes, master unit

**\*SLAVE MAINS FAIL\***

No mains power detected, slave unit

**\*SLAVE BATTERY FAIL\***

Battery low voltage, slave unit (if optional battery is fitted)

**\*SLAVE FIRE ALARM\***

Fire alarm input active, slave unit

**\*SLAVE EMERGENCY STOP\***

Emergency stop input active, slave unit

**\*SLAVE OPEN OBSTRUCTION\***

Slave door is blocked on opening

**\*SLAVE CLOSE FORCE FAIL\***

Slave door is blocked on closing

**\*SLAVE MONITORED SENSOR FAIL\***

Monitored safety sensor fails test, slave door

**\*SLAVE SENSOR CONSTANTLY ACTIVE\***

Activation sensor active longer than 10 minutes, slave unit

# Status Messages

Test Button Active	Button on control unit pressed
Blocked Closing Failure	Door blocked during closing
Outer Sensor Active	External activation input active
Inner Sensor Active	Internal activation input active
Key Entry Active	Morning entry input active
Outer Safety Active	Outer safety input active
Inner Safety Active	Inner safety input active
Mains Power Failure	Mains power not detected
Battery Failure	Battery low voltage
Learn Cycle Fail	Could not complete learn cycle
Fire Alarm Active	Fire input active
Interlock lock Active	Interlock enabled, sister door open
Sensor Power Failure	24VDC supply to sensors missing or short circuited
Push and Go Active	Manual push activation detected
Open Force Failure	Door blocked (opening)
Close Force Failure	Door blocked (closing)
Cleared E-Stop	Emergency stop input reset
Emergency Stop Active	Emergency stop input active
Wait 10 Minutes	Wait 10 minutes for error to clear
Fire Clear	Fire alarm input reset
EStop Clear	Emergency stop input reset
Open Safety Active	Opening safety input active
Mat Active	Safety mat active
Close Safety Active	Closing safety input active
Door Blocked Failure	Door is blocked
Close on Spring Active	Door closing using spring only
Learn Pull home	Displayed during the first stage of the learn cycle
Find End stop	Displayed during opening phase of the learn cycle
Past End stop Failure	Displayed if the learn cycle doesn't detect the open stop
Safety Zone Bad Failure	Displayed if the controller can't learn the opening safety sensor blanking zone
Found End Stop	Displayed during learn cycle when open position is found
Find Home	Door closing to home point
Waiting for Slave	Master door waiting for slave to complete the opening phase of the learn cycle
Finished Learn	Learn cycle completed
Can't find home	Displayed if the learn cycle fails to find the closed position
Slave communication Failure	Master cannot communicate with slave
Slave: Can't find home Failure	Slave leaf failed to find the closed position
Slave: Past end stop Failure	Slave leaf failed to find the open stop
Slave: Over current Failure	Slave motor current excessive
Slave: Safety Zone bad Failure	Slave learn cycle detects a problem learning the opening safety sensor
Slave: Finished Learn	Slave learn cycle complete
Slave: Fully Open	Displayed during the slave learn cycle when open stop is found
Slave: Calibrate Home	Displayed during the first stage of the slave learn cycle
Slave: Closing Safety Active	Closing safety input active, slave leaf
Slave: Time out	Time out waiting for slave learn cycle
Rebate Timeout	Time out waiting for rebate close
Slave: Push and Go Active	Manual push activation detected, slave leaf
Slave: Reactivation	Slave leaf reactivating due to safety or obstruction
Found Home	Displayed during the learn cycle after the closed position is found
Slave: Open Safety Active	Opening safety input active, slave leaf
Learn Blocked Failure	Can't complete learn cycle due to obstruction
Slave: Learn Blocked Failure	Slave leaf can't complete a learn cycle due to obstruction
Voltage Activation	Voltage activation input active
Factory Reset	Factory reset initiated

# Options - Display Board

## ES90 DISPLAY / ADJUSTMENT BOARD



The ES90 Swing door operator can be equipped with an add-on board to allow manual adjustment of door speeds & timers plus additional switching of certain functions.

Also equipped with a 7 segment display, this allows not just status codes to be displayed but also error messages.

### Program Mode Setting Codes

Automatic : **95**

Open : **96**

Exit Only : **98**

Off / Closed : **99**

### Status Codes

Outer Sensor : **1**

Inner Sensor : **2**

M- Open Safety : **3**

S- Open Safety : **4**

M-Closing Safety : **5**

S-Closing Safety : **6**

Key Entry : **7**

Mat : **8**

Voltage Act : **9**

Interlock : **10**

### Fault Codes

No Communication with Slave Door : **00**

Main Power Failure on Master Door : **21**

Main Power Failure on Slave Door : **22**

Outer Sensor Active Constantly : **23**

Inner Sensor Active Constantly : **24**

Key Input Active Constantly : **25**

Monitored Sensor Failure on Master Door Open Face Safety : **26**

Monitored Sensor Failure on Slave Door Open Face Safety : **27**

Monitored Sensor Failure on Master Door Closing Face Safety : **28**

Monitored Sensor Failure on Slave Door Closing Face Safety : **29**

Fire Alarm Input Active : **30**

Emergency Stop Input Active : **31**

Battery Low Voltage - Master Door : **32**

Battery Low Voltage - Slave Door : **33**

Home Position Not Found - Master Door : **34**

Home Position Not Found - Slave Door : **35**

Door Blocked - Master : **36**

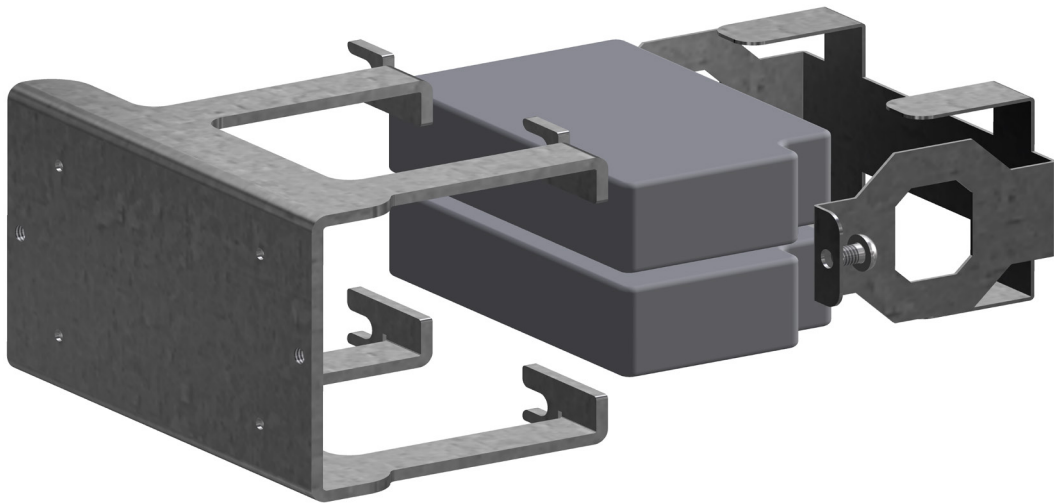
Door Blocked - Slave : **37**

# Options-Display/Batteries

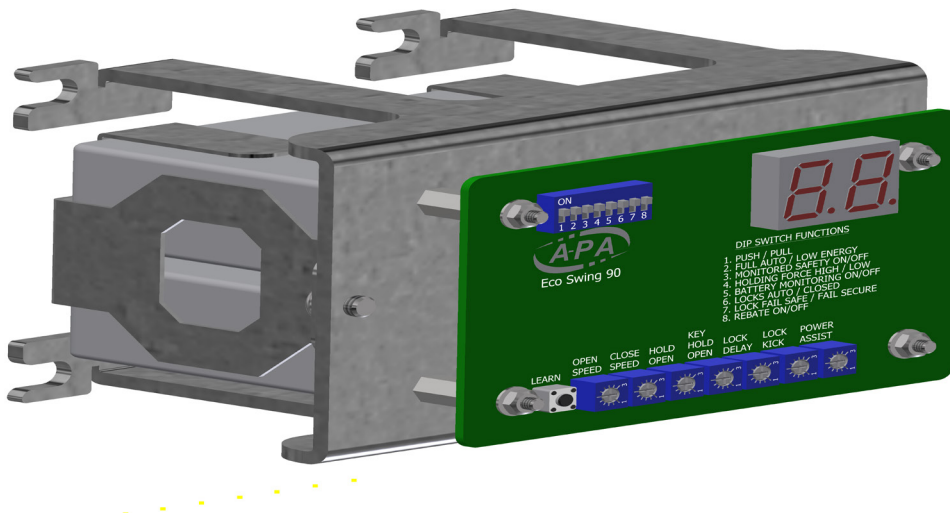
The Display / Adjuster board is fitted to the hinge side of the unit and fitting bracket is provided in the kit to fit the board to using M3 stand-off's.



This bracket also is used when battery backup is required. Additional battery extension leads are provided and the battery monitoring needs to be turned on within the operator settings.



Or indeed if both Display / Adjuster board & Battery Backup is required



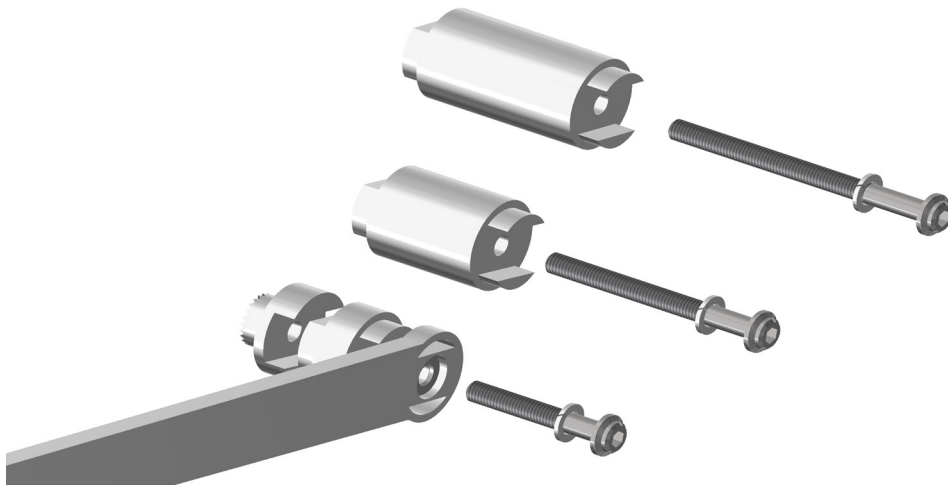
# Options-Spindle Extensions

There are times due to site conditions that the operator may need to be fitted a bit higher than the standard fitments and to facilitate this we have a range of arm spindle extension parts.

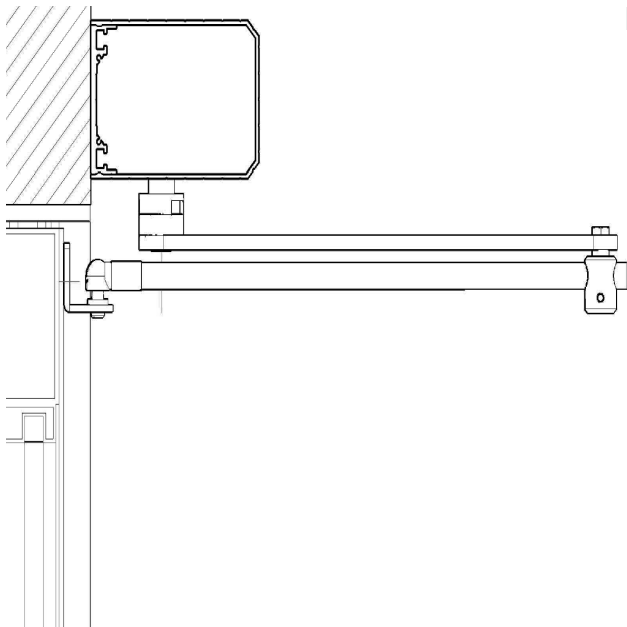
To use an extension part, you also need to use the supplied connection boss and longer bolt.

The extension parts come in 20mm / 50mm & 70mm extension sizes.

**Note :** The “Connection Boss” which attaches the extension to the gearbox is different to the standard arm “Connection Boss”. Please ensure you use the correct part

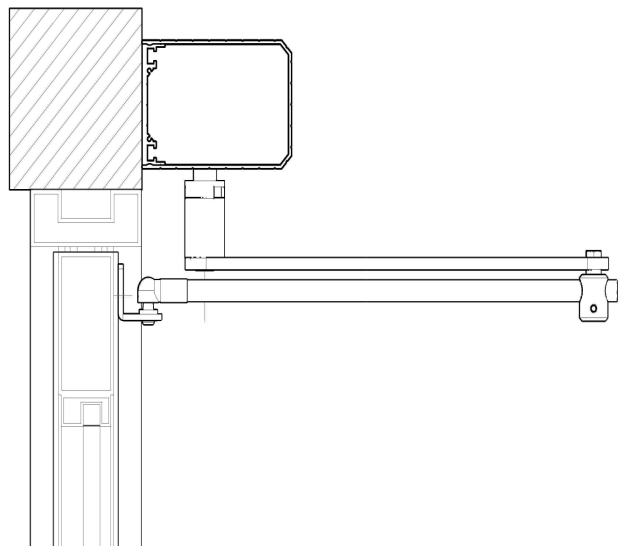


## Examples



Fitting using a 20mm extension piece

Fitting using a 70mm extension piece



# Warranty

The Company warrants to the authorised distributor that all products will be free from defects in materials and construction under normal use and for its intended purpose.

The Company obligation is limited to repairing or replacing components from its factory within the 18 month period from purchase.

The Batteries are only warranted for a 12 month period. The warranty does not cover misuse, accidental damage or negligence.

There is no warranty or guarantee of fitness for a particular installation as each are bespoke to user and site conditions.

The Company does not authorise any distributor to offer any other warranty to any user on behalf of the Manufacturer.

The Company shall not be liable in any event for special or subsequent damages from the buyer or third parties against the buyer.

Unauthorised modifications to the operator exclude the manufacturer from any warranty or resulting damage or liability.

All units are fitted with security type serial number labels and these need to be undamaged.

## Declaration Of Conformity CE

Manufactures Name: Automation Products & Accessories Ltd

Manufacturers Address: Unit 14, Maylands Business Centre, Redbourn Road,  
Hemel Hempstead, Hertfordshire HP2 7ES

Certifies That;

Product: Eco-Swing-90 / Eco-Swing-90IH

Description: Automatic Door Control Equipment

This Equipment is designed to be Incorporated into an Automatic door set, not to be used  
Independently and must not be “put into service” until the complete door set has been  
Declared compliant to the EC Machine Directive

Conforms with the protection requirements of the following directive (EEC Council)

73-25 EEC (Low Voltage Directive) LVD  
89-336 EEC (Electromagnetic Compatibility) EMC

Date: 31st December 2018

Mr R Thomas (Managing Director

