

# SmokeCommand MCD

Multi-compartment Smoke Control Damper

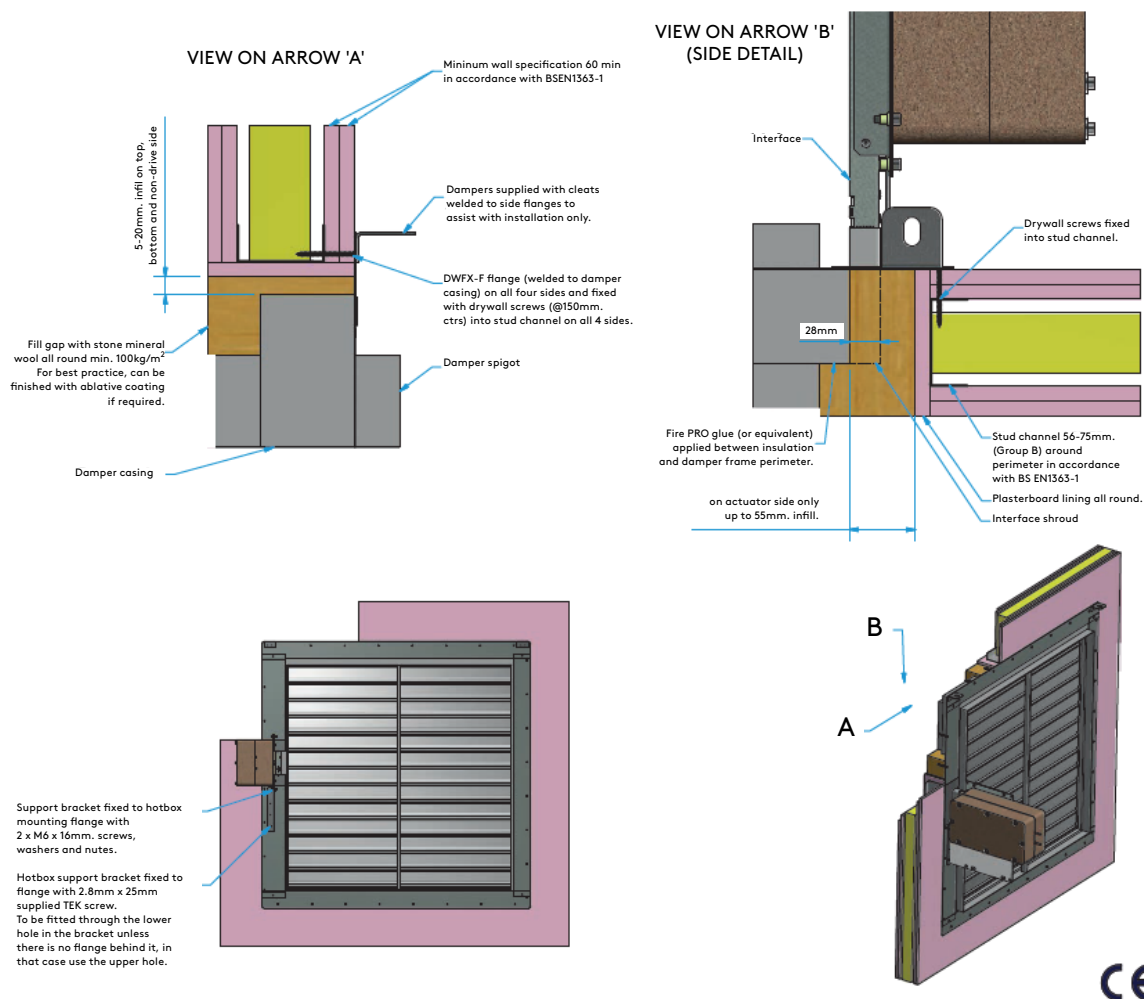
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## Health and safety

- This process must be undertaken by a competent person. More than one person may be required to ensure the safe handling of large dampers and other materials. Use must be made of access equipment to ensure unsafe practices are not used to approach walls or difficult access areas.
- Standard site PPE should be used (minimum steel toe cap boots, hard hat) together with any protective eye wear, gloves and masks, when drilling or cutting is being undertaken. The latter should also be used when handling the wall construction materials, as defined by the material suppliers. If loud equipment is being used, hearing protection should be used.
- All waste materials should be collected and disposed of as defined by the relevant supplier.
- Care must be taken when installing and inspecting dampers.
- Do not introduce any items, fingers or limbs inside the damper casing.
- Larger dampers are heavy and must be handled in accordance with current local regulations and good practice.
- All wiring should be carried out in accordance with the wiring details provided, to the IEC regulations.
- Dampers are life safety products and must be treated with care during handling, storage and installation.
- Actionair SmokeCommand MCD Dampers are designed for applications in normal dry filtered air systems and should be subjected to a planned inspection programme.

# Installation Methods

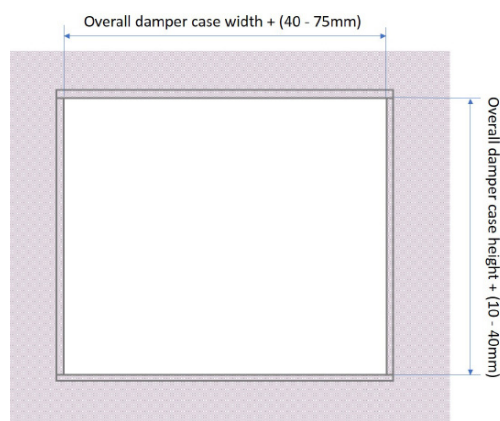


## DWFX-F Vertical Installation in Plasterboard Walls

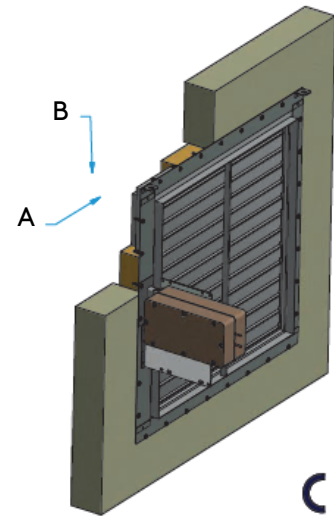
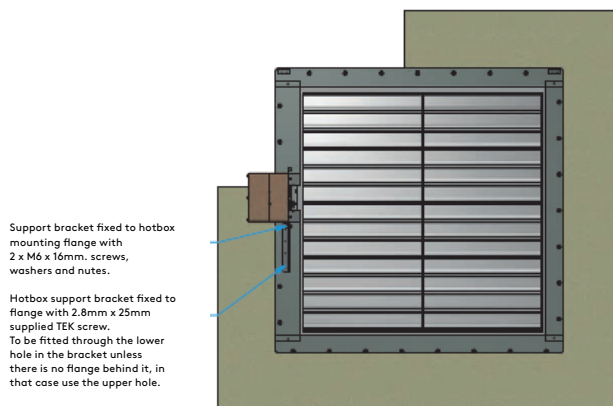
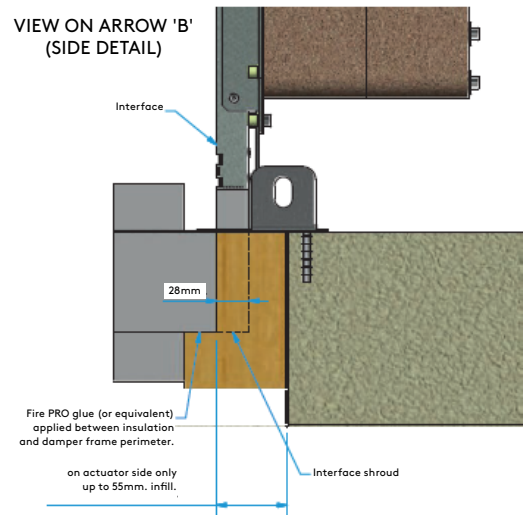
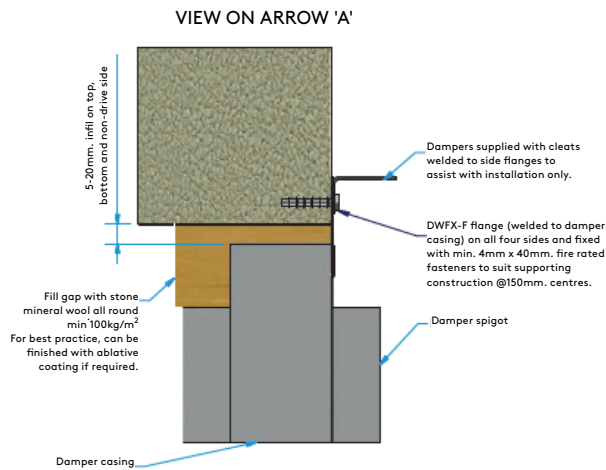
1. Measure the overall damper casing size, include the PTC shroud and do not include the peripheral flange.
2. Calculate the finished hole size as follows...

Width = Nominal case width +30mm +10-45mm

Height = Nominal case height +10-40mm



3. Calculate the hole to cut size by adding two board thicknesses to the finished hole width and height...
4. Hole To Cut Size = Cut Width = Width + 2 x lining board thickness
5. Cut Height = Height + 2 x Lining board thickness
6. Mark out the hole on the partition and cut it out, cutting the top and bottom edges first to maintain stability.
7. Frame out the hole with stud and track and line with board. Finish edges with joint filler.
8. Drill clearance holes in the damper flange at 150mm centres and such that they will allow screws to pull into the stud and track around the hole.
9. Install the damper centrally and fasten.
10. Back fill around the damper casing with mineral/ stone wool insulation 100Kg/m<sup>3</sup> density.
11. Line with a second piece of mineral stonewall overlapping damper case and previous surround fill, bond in using Fire PRO glue or equivalent.
12. For best practice finish with ablative coating (if required).

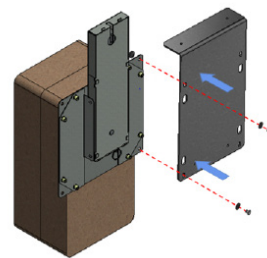


## DWFX-F Vertical Installation in Masonry Walls

1. Drill suitable clearance holes in the damper flange at 150mm centres.
2. Position damper into the aperture.
3. Using 4mm (MIN) x 40mm (MIN) fire rated fixings, secure damper back to structure through the clearance holes in the damper flange.
4. Back fill gaps to the rear with mineral/stone wool (min 100Kg/m<sup>3</sup>).
5. Line with a second piece of mineral stonewall overlapping damper case and previous surround fill, bond in using Fire PRO glue or equivalent.
6. For best practice finish with ablative coating (if required).

## Fitting the actuator (for both Plasterboard and Masonry Walls)

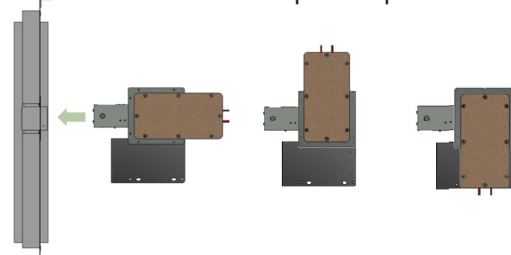
1. Fit Actuator to mounting plate in desired orientation.
2. Fit support bracket to mounting plate.



Support bracket fixed to hotbox mounting flange with 2 x M6 x 16mm. screws, washers and nuts.

Hotbox support bracket fixed to flange with 2.8mm x 25mm supplied TEK screw. To be fitted through the lower hole in the bracket unless there is no flange behind it, in that case use the upper hole.

3. Slide actuator interface into mounting slot until snap lock engages. Actuator can be positioned in one of three orientations to suit space requirements.



4. Use self drilling screw to fasten bracket to flange.

# Commissioning and periodic maintenance

## Access for Inspection

- It is imperative that the smoke control damper must be fitted in a manner that means it is accessible for maintenance.

## Maintenance Procedure

- Smoke control dampers must be inspected prior to commissioning and tested immediately post-commissioning.
- Check the actuator wiring, end-switch wiring and check the conditioning of the blades and seals for any potential damage.
- The units should be carefully inspected and cleaned of dust and debris by wiping over exposed surfaces with a light oil.
- Actuators should be used to check the operation of the damper to ensure both fully open and closing positions are reached.
- The open and closed positions can be checked by the actuator end switches. A visual check should also be done to confirm the actuator is attached to the damper and the end switches correspond to the damper blades position.
- Confirm that the damper fulfils its function as part of the smoke control system and leave the damper in its standby position.
- Note: Units operating in dusty atmospheres, should be checked often to suit the severity of the conditions.

## Frequency of Operational Checks

- Following EN 12101-8:2011 Section 8.3, regular testing/inspection should be undertaken to meet regulatory requirements, or at intervals not exceeding six months. Some automatic systems may allow more frequent testing (48hr or less) and this may be required by a national standard.
- Units associated with systems may be required to be checked, as part of the system, as often as once per week or month to ensure ongoing confidence in the life safety system. This may be seen as analogous to fire alarm systems.
- In addition to the checks recommended above, the actuation of all smoke control systems should be simulated once every three months. All zones should be separately tested and it should be ensured that any fans and powered exhaust ventilators operate correctly, smoke dampers close (or open in some systems) etc.
- Annual inspections and tests of the following to be carried out by competent persons, for any defects to be logged and the necessary action taken, and for certificates of testing to be obtained.
- Arrangements should be made for all SmokeCommand dampers to be tested by a competent person on completion of the installation and at regular intervals not exceeding 2 years. They are to be repaired or replaced immediately if found to be faulty. SmokeCommand

dampers in dust laden and similar atmospheres should be tested much more frequently, at periods suited to the degree of pollution.

## Effects of Corrosion

- The effects of corrosion on the damper could prevent it from operating correctly when required, compromising the smoke extract system and/or breaching compartmentation.
- Checks for corrosion must be done during the maintenance inspection of the dampers by a suitably competent person, with any observations documented, the person with responsibility for the building notified and remedial actions taken if required – this may include replacement of the damper if the corrosion is sufficiently advanced that damper performance could be compromised.
- Should signs of surface corrosion start to appear, increase the frequency of the inspection and monitor for further changes, documenting the changes in the inspection log. Check the rest of the system for further signs of corrosion, and try and identify and mitigate the root cause.
- Specific areas of concern that should be inspected at each maintenance interval with regards to damper corrosion and associated function include:
  - Rivets
  - Holes
  - Clinches
- Failure to follow the maintenance instructions at the frequency specified could shorten the life span of the product.

# Mode SCHM5-2P PTC and SCHM6-2P PTC

## Overview

- Drive open / Drive closed. 60 seconds operation.
- This new 2 position control mode has been developed to provide drive open/ drive closed damper operation and it brings Actionair dampers in line with imminent European Standardisation for fire and smoke control, where for a given smoke control philosophy, or smoke source, a damper may be required to open or close to vent or contain the smoke. For EN 12101-8:2011 compliance actuators require powered opening and closing functionality.
- For part EN 12101-8:2011 compliance fail safe close is not applicable. For smoke control operation the damper needs to be able to remain under powered control.
- As with all PTC actuators, this series uses the snaplock™ interface. All modes have LSF cables. HOT400/30 classification means SmokeCommand can cycle and adjust position for 30 minutes at 400°C.

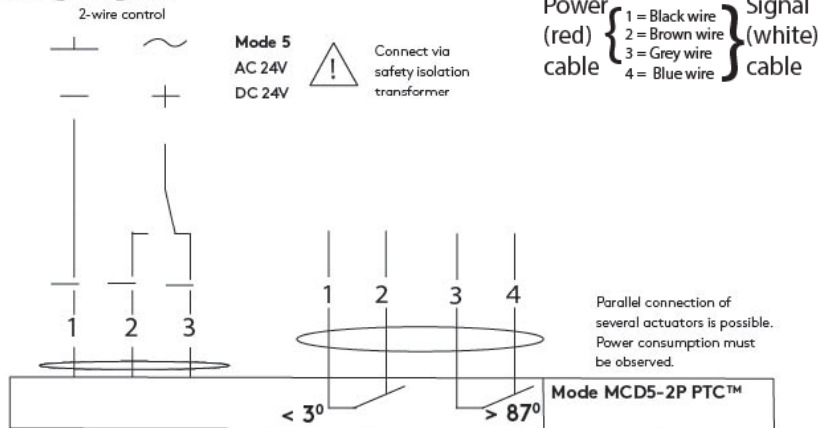
## Thermal Enclosure for Hot Modes

- Actionair use a proprietary thermal enclosure that is both lightweight and offers superior performance over other thermal enclosures. This enables the SmokeCommand damper range to perform to HOT 400/30.

# Wiring Diagrams

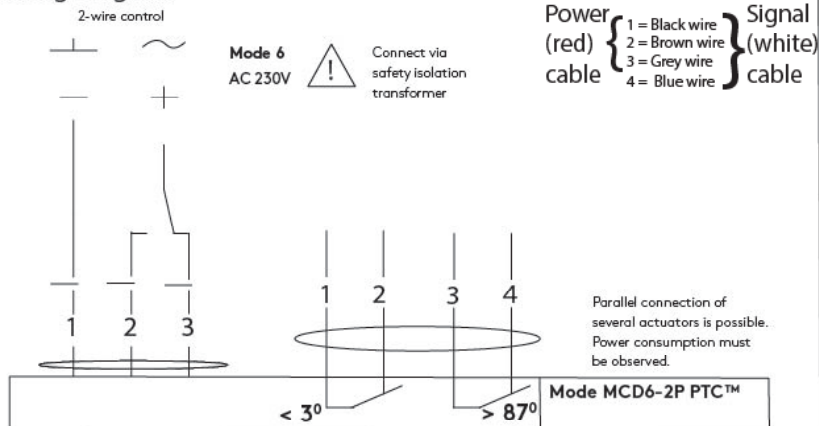
## Mode SCHM5-2P PTC

### Wiring Diagram

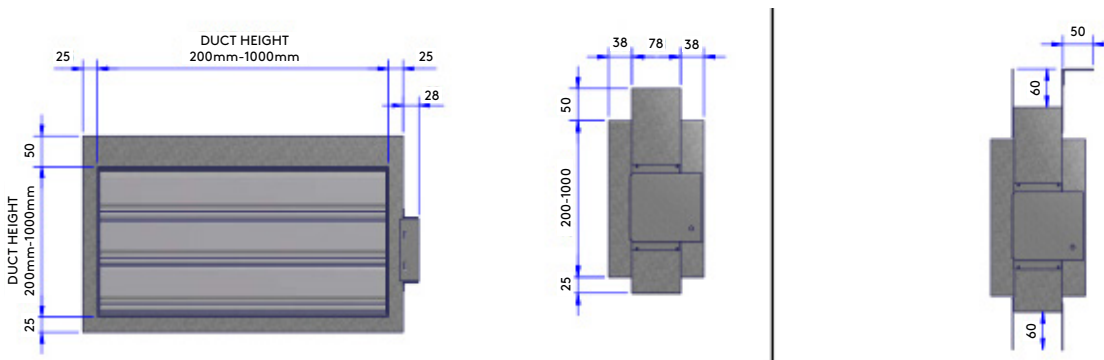


## Mode SCHM6-2P PTC

### Wiring Diagram



# Dimensions





# Inspection and handover check sheet

This certificate applies only to Swegon Fire Dampers and Smoke Control Dampers. The installer must complete this installation certificate when installing fire and smoke dampers. A separate certificate must be completed for each individual fire and smoke damper.

	Question	Action	
1	Are the dampers the correct type?	Confirm damper is correct type - SmokeCommand MCD or SCD	
2	Are the dampers located correctly?	The damper location is to be checked against the installation drawings/details	
3	Are the dampers correctly identified?	Unique system ID to be clearly indicated on the damper or other agreed location.	
4	Have supports for both the damper and the adjacent ductwork been installed in accordance with the approved manner?		
5	Are the dampers fitted in the correct orientation?	Confirm the damper is installed with the actuator on the left or right hand side. Not on the top or the bottom (i.e. blade pivot running vertically).	
6	Is access through the ductwork, to the damper unobstructed?	Unobstructed space should be provided for safe access to the damper. This must include access through ceiling voids and adjacent services. Damper installer to advise the system designer if problems are foreseen.	
7	Has the space around the damper and within the opening been left clear and not been used for other services?	Other services within the installation opening will invalidate the installation method. Damper installer to advise the lead contractor if problems are foreseen.	
8	Using the access opening provided, check that blades open and close.	Check position of damper blades.	
9	Has the damper been checked for internal cleanliness, free from damage and that vertical casings in particular are free from debris?	With the damper in the closed position, inspect for damage.	
10	At the time of damper handover, is the fire barrier and penetration seal complete?	Damper installer to record on the handover register if any following trades are still to complete their activities.	
11	Is the damper installation complete and available for handover prior to system commissioning?	Obtain the relevant acceptance of the damper installation from the CDM coordinator.	
12	Is the completed handover register cross-referenced back to the identification codes listed in the system designers damper schedule?		

Damper Unique System I.D.: .....  
 Name of installation location:.....  
 Address:.....  
 Installation location identification section/floor/room: .....  
 Damper product type: .....  
 Release fuse temperature: .....  
 Notes/Considerations: .....

Installed by: .....  
 Company Name: .....  
 Address: .....  
 Company Telephone No: .....  
 Installers Name: .....  
 Installers Telephone No: .....  
 Date of installation: .....

It is hereby verified that the damper detailed above has been installed and tested according to the manufactures recommendations:

Installers signature: .....Date: .....