

PTC Damper Control Modes

Installation Method

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Drawings

Please visit our website to download the installation drawings, which are located on the relevant product download section.

Health and safety

- This process must be undertaken by competent persons. 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 eyewear, 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.
- Actuators: All wiring should be carried out in accordance with the wiring details provided by the IEE and BS regulations and by a competent person. Care must be taken when installing and inspecting dampers, as they are likely to close without warning due to loss of electrical power or a temperature rise in the ductwork. This is their prime function. Do not insert any items, fingers or limbs between the blades. Larger dampers must be handled in accordance with current regulations and good practice due to weight.

Control Mode Installation Procedure

1. Remove transit plate and recycle.
2. Slide the interface and mode assembly into the shroud. Ensure the slots in the interface casing and the drive coupling located on the rear of the interface are in line.
3. Push the assembly fully home until the interface sprung retaining pin engages through the locating hole in the damper shroud (snaplock™).

The control mode can be fitted in any of three orientations i.e. vertically down, horizontally and vertically up (For height restrictions). This can easily be carried out by the following:

1. Remove and retain screw (8mm A/F) and washer, through the position indicator on the control mode.
2. Remove the control mode and location plate.
3. Taking care not to disturb the drive hexagon. Replace the location plate and control mode in the new orientation.
4. Replace the washer and screw tight (Max 5Nm) Select a suitable position for the Electrical Thermal Release (BAT) to be mounted through the ductwork. Ideally this should be in the top half of the duct and/or above the level of the interface.

Apply the self-adhesive template (located on the rear of the BAT) and drill the necessary holes (Ø3mm & Ø9.5 & Ø11mm).

Push the BAT through the duct and ensure both screws are used to hold it in position. Both screws should be tightened fully to ensure that both sections of the BAT are closed together. It is a safety feature, if both sections are not closed the unit will not operate.

For ductless installations the BAT should be fitted onto the damper spigot (not casing) above the damper interface shroud and in accordance with the fitting instructions.

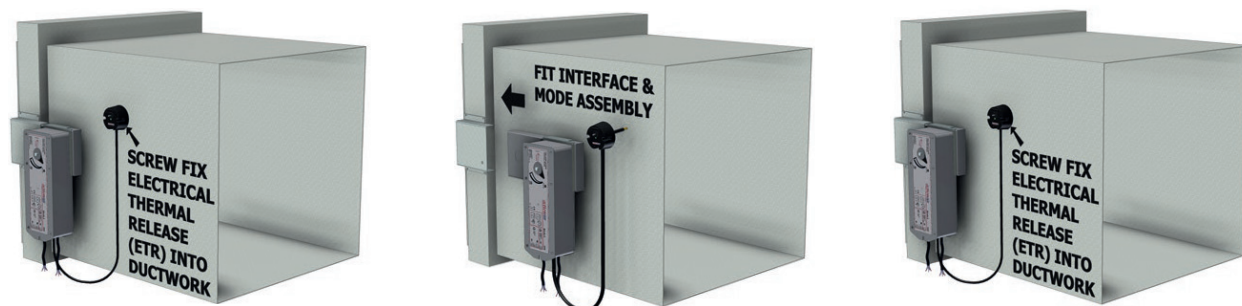
If the BAT is not fitted in the exact manner described above, the unit will not operate

The damper should be manually reset and released using the winder provided to ensure that correct mechanical operation is achievable. It is possible to mechanically lock open the SmokeShield PTC damper to allow air to pass through it using the winder provided, this may be necessary if electrical power isn't available yet. The BAT is not operable in this instance, the damper will not release automatically if the temperature rises or a fire occurs.

The unit must be wired as detailed. When power is available, the unit must be checked for correct electrical operation. Power on to reset, power off to release.

The unit must also be checked by pushing and holding the test switch on the BAT to confirm that the damper releases. When pressure is removed from the switch the damper resets. This may also be done after the initial installation test, to provide periodic operation of the damper to simulate actual fail-safe release under smoke/fire conditions.

The BAT cable must not cut to shorten or lengthen, and care must be taken not to damage it. Either will render the unit inoperable and void any warranties. This is due to a built in safety feature.



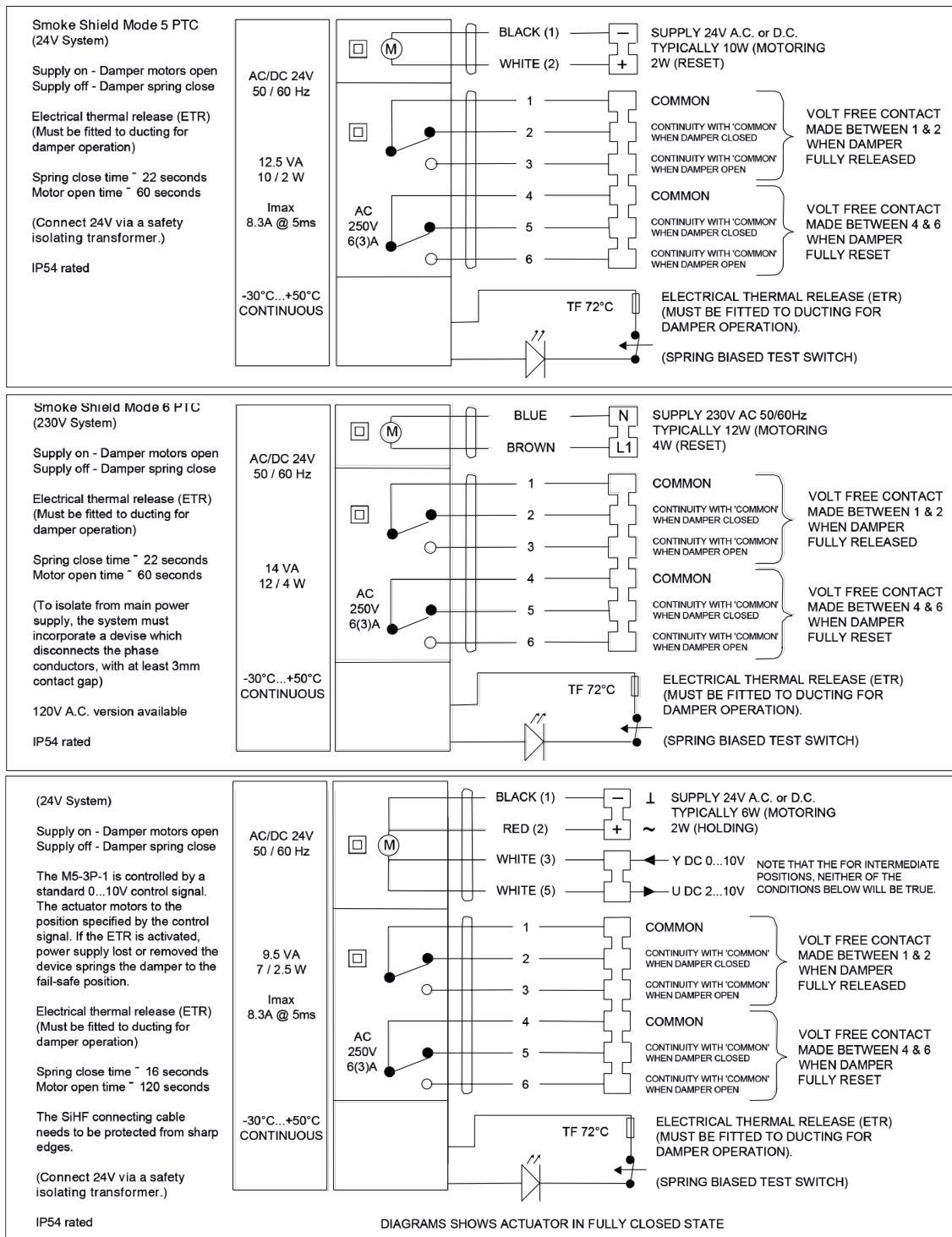
Control Mode Wiring Procedure

If integrating this unit with an Actionpac damper control system (LNS, EMS or EMB) please refer to the relevant catalogue and specific project details.

General

One metre of halogen free low smoke and fume electric cable is fitted to each control mode for convenience of on-site wiring. This provides the distinct safety advantage of all electrics terminating outside the duct, eliminating potential induct fire hazards from wiring faults. The Electrical Thermal Release is prewired with 0.5m halogen free low smoke and fume cabling to Control Modes 5 and 6.

A Manual test switch fitted on the BAT allows periodic operation of damper, simulating actual fail-safe release under smoke/fire conditions.



General

Product Commissioning & Maintenance Available

Below is a quick guide to problems that may be encountered.

Please note modifications made to units will invalidate warranties etc

Fault	Possible Problem	Recommended Action
Interface Mode Assembly does not fit into the shroud on the damper	Damper drive shaft not in line with shroud	Gentle adjustment made by manually setting blades to fully closed
	Mode not in released position	Release clutch on motor using manual key. Check the slot on rear of interface
	Slots on the non-access side of the shroud may be blocked (due to removal of transit plate prior to backfilling)	Ensure adequate clearance
Control mode does not operate electrically	The BAT is not correctly fitted to duct	Screw fix to duct ensuring both parts of the BAT are fully together. Do not over tighten
	The mode is incorrectly wired	Check wiring in accordance with procedures
	The BAT cables have been damaged or tampered with	Replace with new mode
Control Mode operates, but limited, or no movement of damper blades is observed	The Mode isn't correctly synchronised with the interface	Remove motor from interface. Check motor in fully released state. Set position of interface, and refit motor with label upmost, include motor location pointer and washer
	The damper is damaged or poorly installed	New damper or re-install
	Interface not fitted correctly to damper	Fit interface correctly, ensure retaining pin protrudes through location hole in the shroud
	Foreign matter is impeding blade movement	Check and remove
	Motor location pointer omitted	Fit new pointer
	Mode not screwed down correctly	Check and tighten