

Smoke Shield PTC - 'E S' RATED FIRE DAMPER (Fire & Smoke barrier)

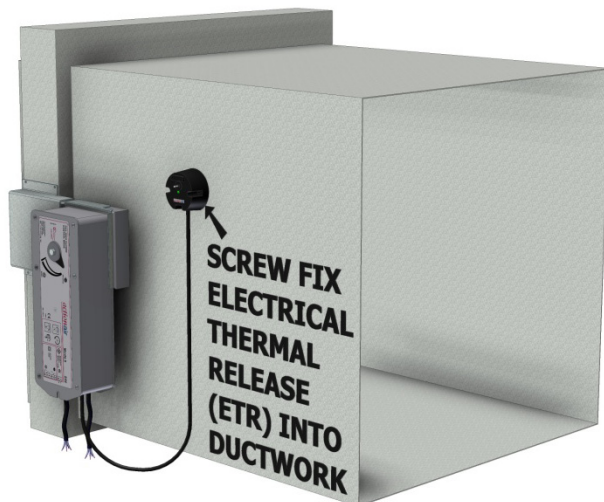
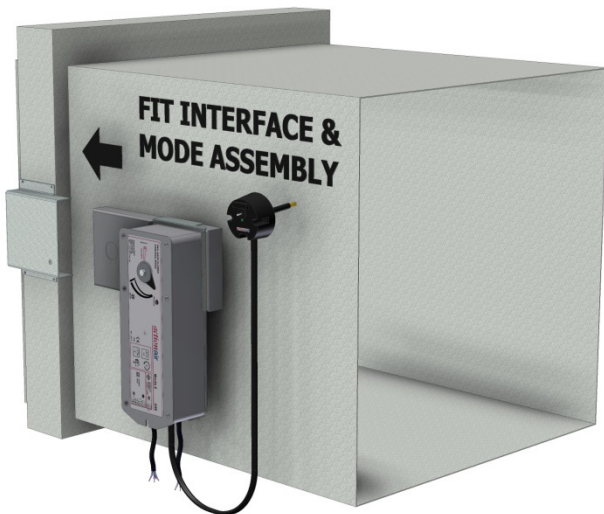
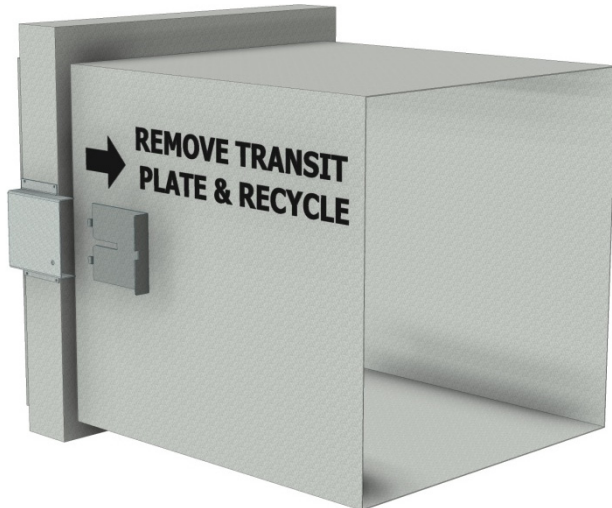
Installation, Operating & Maintenance Instructions

Health and Safety

All wiring should be carried out in accordance with the wiring details provided, the IEE and BS regulations, 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 introduce any items, fingers or limbs between the blades.

Larger dampers are heavy and must be handled in accordance with current regulations and good practice.



Control Mode Installation Procedure

Remove transit plate and recycle.

Slide the interface and mode assembly into the shroud, ensuring that the slots in the interface casing and the drive coupling, located on the rear of the interface, are in line.

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, if you have a space restrictions. This can easily be carried out by;

- Remove and retain the screw (8mm A/F) and washer, through the position indicator on the control mode.
- Remove the control mode and location plate.
- Taking care not to disturb the drive hexagon, replace the location plate, and control mode in the new orientation.
- Replace the washer and screw tight (Max 5Nm)

Select a suitable position for the Electrical Thermal Release (ETR) 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 ETR) and drill the necessary holes ($\varnothing 3\text{mm}$ & $\varnothing 9.5\text{...}\varnothing 11\text{mm}$).

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

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

If the ETR 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 by using the winder provided. This may be necessary if electrical power is not yet available. However, the ETR is not operable in this instance and the damper will not release automatically should the temperature rise or a fire occur.

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 ETR 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 ETR 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.

For clarity, damper not shown installed in supporting wall construction, please refer to the Actionair approved Fire and Smoke Dampers Installation Manual. The latest version can be found on our website: www.actionair.co.uk

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0832-CPR-P0002

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.

Smoke Shield Mode 5 PTC (24V System)

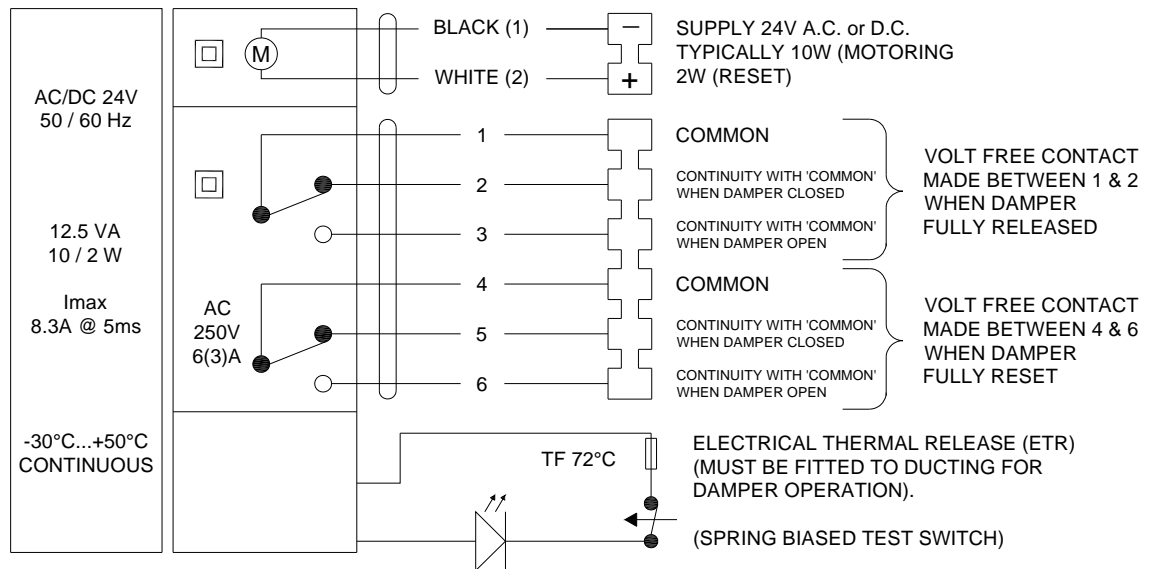
Supply on - Damper motors open
Supply off - Damper spring close

Electrical thermal release (ETR)
(Must be fitted to ducting for damper operation)

Spring close time ~ 22 seconds
Motor open time ~ 60 seconds

(Connect 24V via a safety isolating transformer.)

IP54 rated



Smoke Shield Mode 6 PTC (230V System)

Supply on - Damper motors open
Supply off - Damper spring close

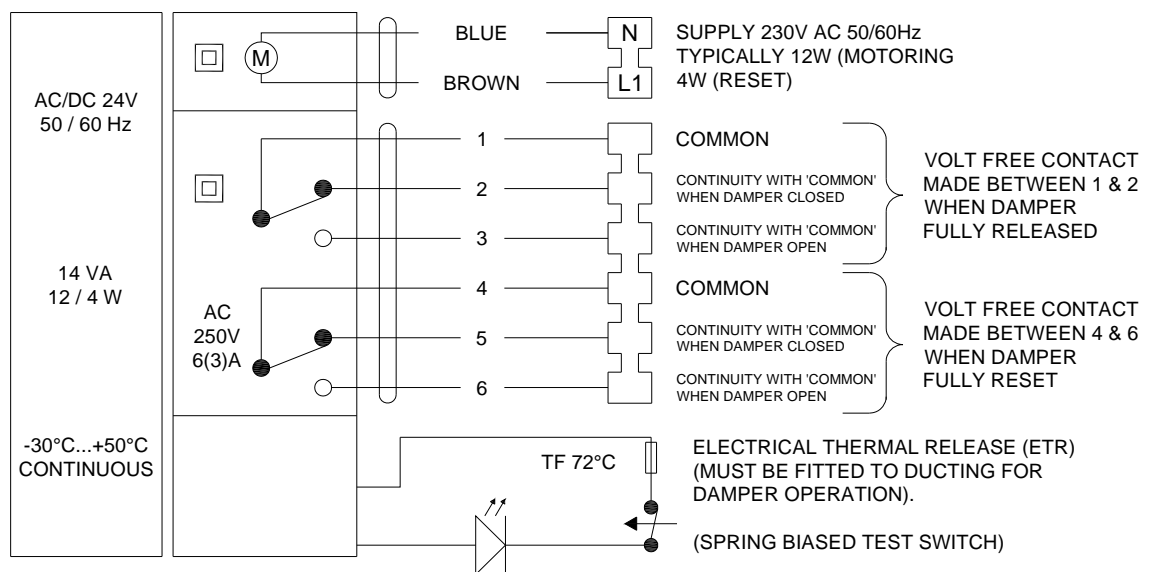
Electrical thermal release (ETR)
(Must be fitted to ducting for damper operation)

Spring close time ~ 22 seconds
Motor open time ~ 60 seconds

(To isolate from main power supply, the system must incorporate a device which disconnects the phase conductors, with at least 3mm contact gap)

120V A.C. version available

IP54 rated



Smoke Shield Mode 5-3P PTC (24V System)

Supply on - Damper motors open
Supply off - Damper spring close

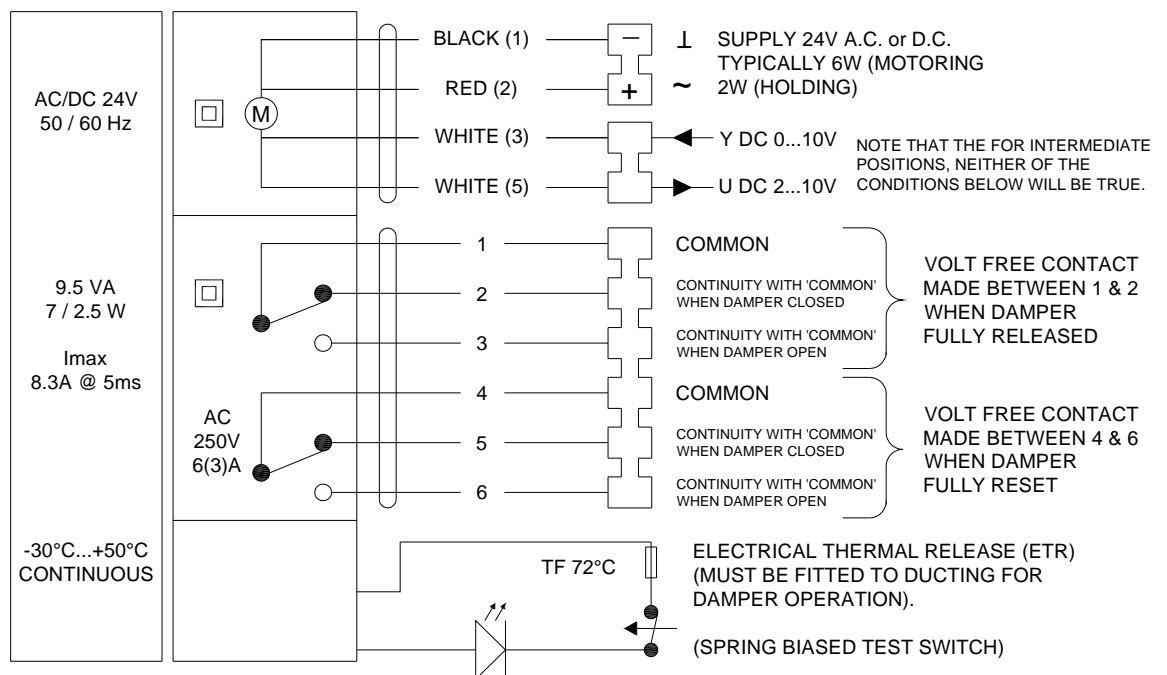
The M5-3P-1 is controlled by a standard 0...10V control signal. The actuator motors to the position specified by the control signal. If the ETR is activated, power supply lost or removed the device springs the damper to the fail-safe position.

Electrical thermal release (ETR)
(Must be fitted to ducting for damper operation)

Spring close time ~ 16 seconds
Motor open time ~ 120 seconds

(Connect 24V via a safety isolating transformer.)

IP54 rated



DIAGRAMS SHOWS ACTUATOR IN FULLY CLOSED STATE

General

One metre of halogen free low smoke and fume electric cable is fitted to each control mode for convenience of onsite wiring. This provides the distinct safety advantage of all electricians terminating outside the duct, eliminating potential in-duct 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 ETR allows periodic operation of damper, simulating actual fail-safe release under smoke/fire conditions.



Smoke Shield PTC
product brochure
Please scan
QR code for
smart phone
version.

<p>LPCB CE LPS 1162: Issue 4 Cert No : 017a / 04 0832-CPR-P0002</p>
<p>Ruskin Air Management LTD Actionair, Whitstable, Kent CT5 3DU</p>
<p>12 RAM-F-024 A</p>
<p>EN 15650:2010 SMOKE SHIELD PTC LEAKAGE RATED SS I/F E120 (ve ho i→o)S</p> <p>SS DWFX-C SS DWFX-F SS OSW E120 (ve i→o)S SS S&A E120 (ve i→o)S E120 (ho i→o) E90 (ho i→o)S</p>
<p>Sensing element: Response temperature: 72°C Load Bearing capacity: N/A Closure times M5 & 6: ~22s (@ t_{amb} = 20°C) M5-3P: ~16s (@ t_{amb} = 20°C)</p>
<p>Corrosion tested to En 60068-2-52: Pass</p>
<p>Operational reliability: 20,000 cycles: Pass</p>
<p>Ambient leakage test: Pass</p>



Assessed to ISO 9001:2008
 LPCB Cert No. 17



LPS1162 Cert No. 017a



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Troubleshooting

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 ETR is not correctly fitted to duct.	Screw fix to duct ensuring both parts of the ETR are fully together. Do not over tighten.
	The mode is incorrectly wired.	Check wiring in accordance with procedures.
	The ETR 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 is not 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.

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