

actionair PTC™ Accessories



Control Modes and Accessories for the PTC™ Damper Interface



Introduction

For many years Actionair has been at the forefront in the development of Fire and Smoke Damper Technology.

To further enhance this reputation considerable design effort has been put into the new control modes, ensuring the use of up to the minute advances in Damper Technology, as well as complying with imminent European Standardisation for Fire and Smoke Control.

The comprehensive range of Actionair Control Modes are the ideal solutions to the many variable and complex Fire and Smoke Damper Control requirements, and fully complement the PTC™ Damper range, Control Panels and Ancillaries.



Actionair SmokeShield with PTC™ interface and Mode 6 actuator fitted

Control Mode 5 PTC™ (24v) and Control Mode 6 PTC™ (230v)

Control Mode 5 PTC and Control Mode 6 PTC 60 seconds MAX Reset/20 seconds Release operation

These new series of control modes achieve 60 seconds to drive to the end position, with a 20 second spring return time. As with all PTC modes, this series uses the snaplock™ interface.

Fire rated dampers are primarily designed to be fitted into a wall or floor, and the interface displaces the mode from the line of the wall. Dampers may be installed and finally the mode removed from storage for easy fitting, thus preventing damage to the mode before it is required.

End switches and LSF cable are provided as standard on all modes. Versions are available to allow fail-safe close for fire safety (SmokeShield) or fail-safe open for smoke extract (VentShield) and may be combined with protective enclosures (HotShield) to provide enhanced operation for 2 hours at 300°C.

NOTE: Actuators are supplied with 1m cable as standard, 5m cables are available. Please see the Actionair price book or contact your sales representative to find out more.

Mode 5 PTC as supplied with actuator, drive interface and ETR



SmokeShield™ and VentShield™

Model	Voltage	Switching	Product No.	Specification
Mode 5 PTC 10/2W (12.5VA MAX)	24V	end switches SPDT 250V 6(3)A	XNNN00015	Smoke/Shield thermal release/power off - fail safe close
Mode 6 PTC 12/4W (14VA MAX)	230V	end switches SPDT 250V 6(3)A	XNNN00016	Smoke/Shield thermal release/power off - fail safe close
Mode 5 PTC Vent 10/2W (12.5VA MAX)	24V	end switches SPDT 250V 6(3)A	XNNN00019	Vent/Shield thermal release/power off - fail safe open
Mode 6 PTC Vent 12/4W (14VA MAX)	230V	end switches SPDT 250V 6(3)A	XNNN00020	Vent/Shield thermal release/power off - fail safe open
Mode 5 PTC Non ETR 10/2W (12.5VA MAX)	24V	end switches SPDT 250V 6(3)A	XNNN00017	Smoke/Shield/power off - fail safe close
Mode 6 PTC Non ETR 12/4W (14VA MAX)	230V	end switches SPDT 250V 6(3)A	XNNN00018	Smoke/Shield/power off - fail safe close
Mode 5 PTC Vent Non ETR 10/2W (12.5VA MAX)	24V	end switches SPDT 250V 6(3)A	XNNN00021	Vent/Shield/power off - fail safe open
Mode 6 PTC Vent Non ETR 12/4W (14VA MAX)	230V	end switches SPDT 250V 6(3)A	XNNN00022	Vent/Shield/power off - fail safe open

SmokeShield M5 PTC and M6 PTC are supplied as standard with the Electrical Thermal Release (ETR). The units Fail-safe by means of the unique and patented ETR device which operates at 72°C, or if the power supply is off/interrupted. Complying with BS 5588 Part 9. Non ETR versions fail-safe when the power is off/interrupted.

Snaplock™

The snaplock™ Interface is a damper/ actuator interface with a unique and dedicated Proportional Torque Control system for optimised torque performance.

- User friendly**
The snaplock™ drive interface ensures user friendly, easy and secure connection of the Control Mode to the damper.
- Ease of connection**
The drive interface which is totally independent of the ductwork, eliminates the need for costly dedicated duct sections, and provides ease of connection to square, rectangular, circular and flat oval ductwork.
- Interface guarantee**
This drive interface guarantees that only the correct, genuine and certified Actionair products can be used.
- Kept away from danger**
The drive interface also allows the actuators to be bought after the damper has been installed into a wall prior to commissioning – allowing the actuators to be kept well away from any potential damage.



Thermal Enclosure for Hot Modes

Actionair has developed a new thermal enclosure to surround the actuator when used in Hig Operating Temperature Scenarios.

Our new enclosure is manufactured from a technically advanced material we call PyroCork470, designed specifically for Actionair. This makes the new enclosure is far more robust and offers improved performance over previous enclosures.

The enclosure is made specially designed lightweight material with excellent endothermic properties,

which means the thermal enclosure has the ability to absorb heat energy when subjected to extremely high temperatures.

It is possible to buy our Hot Modes with the cables to the actuator terminated inside the box. Please contact our sales team or use the Actionair price book to obtain part numbers.



HotShield™ and HotVentShield™

Model	Voltage	Switching	Product No.	Specification
HM5 PTC 10W (12.5VA)	24V	end switches SPDT 250V 6(3)A	XNNN00281	Power off - fail safe close
HM6 PTC 12W (14VA)	230V	end switches SPDT 250V 6(3)A	XNNN00282	Power off - fail safe close
HMV5 PTC Vent 10W (12.5VA)	24V	end switches SPDT 250V 6(3)A	XNNN00283	Power off - fail safe open
HMV6 PTC Vent 12W (14VA)	230V	end switches SPDT 250V 6(3)A	XNNN00284	Power off - fail safe open

HotShield and Hot/VentShield Control Modes HM5 PTC and HM6 PTC (operational for 2 hours @ 300 °C) are NOT supplied with the Electrical Thermal Release (ETR). They Fail-safe when the power is off/interrupted).

Control Mode 5–3P PTC™

Control Mode 5 – 3P PTC with additional facility for third (control) Position

This new 3 position control mode allows a damper to be moved to both the reset and release position, with the additional facility to move the damper to a third control position.

The mode is given a 2-10V DC signal, defining the position that the damper needs to be set at. A return signal of 2-10V DC is provided to allow monitoring of position.

Important note: 2-10V DC is required to operate the actuator.

To support this actuator and allow positioning to be set local to the damper, Actionair have developed the M5-3P-CMS control unit or 3P SFDI.

End switches, LSF cable, and Electro Thermal Release (ETR) are provided as standard on all modes.

Versions are available to allow fail-safe close for fire safety or fail-safe open for smoke venting and may be combined with protective enclosures (HotShield) to provide further protection for 2 hours at 300°C.



Three Position Actuators

Model	Voltage	Switching	Product No.	Specification
Mode 5 3P PTC 7/2W (10VA)	24V	end switches SPDT 250V 6(3)A	XNNN00289	Smoke/Shield thermal release/power off - fail safe close 2-10V set position
Mode 5 3P PTC Non ETR 7/2W (10VA)	24V	end switches SPDT 250V 6(3)A	XNNN00291	Smoke/Shield/power off - fail safe close 2-10V set position
Mode 5 3P PTC Vent 7/2W (10VA)	24V	end switches SPDT 250V 6(3)A	XNNN00292	Vent/Shield thermal release/power off - fail safe open 2-10V set position
Mode 5 3P PTC Vent Non ETR 7/2W (10VA)	24V	end switches SPDT 250V 6(3)A	XNNN00293	Vent/Shield/power off - fail safe open 2-10V set position

SmokeShield M5 PTC and M6 PTC are supplied with the Electrical Thermal Release (ETR). The units Fail-safe by means of the unique and patented ETR device which operates at 72°C, or if the power supply is off/interrupted. Complying with BS 5588 Part 9. Non ETR versions Fail-safe when the power is off/interrupted.

Three Position Actuators (HOT)

Model	Voltage	Switching	Product No.	Specification
HM5-3P PTC 7W (10VA)	24V	end switches SPDT 250V 6(3)A	XNNN00294	Power off - Fail-safe Close 2-10V Set position
HMV5-3P PTC Vent 7W (10VA)	24V	end switches SPDT 250V 6(3)A	XNNN00295	Power off - Fail-safe Close 2-10V Set position

HotShield and Hot/VentShield Control Modes HM5 – 3P PTC (operational for 2 hours @ 300 °C) are NOT supplied with Electrical Thermal Release (ETR) and Fail-safe when the power is off/interrupted.

The 24v CMS and 230v CMS Monitoring Stations

The M5-3P CMS (Control Monitoring Station) this control unit gives the user the opportunity to set a control position using an integral potentiometer, or use an externally supplied control voltage.

It provides visual (lamp) and volt free (relay) indication of damper position (Released, at Control Position, Reset). A terminal is provided to allow feedback of the 2-10V DC monitoring voltage. In addition, a fire alarm input may be made (NC) which will cause the damper to Release if the contact is

broken. A second input is available to cause the damper to fully Reset to allow full air flow for smoke venting as an example. The fire alarm Release input takes precedence. Switches are provided that allow the unit to be driven to Release or Reset positions for testing purposes.



24v CMS

Control Mode 5-2P PTC™ and Control Mode 6-2P PTC™

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.

This is a radical alternative to the traditional spring return actuator, where upon power failure, instead of moving to fail-safe position, it remains in its desired emergency position.

For any smoke control emergency situation, this is an absolute necessity. These modes do not have ETR's. As with all PTC actuators, this series uses the snaplock™ interface. All modes have LSF cables. Versions are available combined with protective enclosures (HotShield) to provide further protection for 60 mins at 300 °C or 30 mins at 600 °C.

Two Position Actuators

Model	Voltage	Switching	Product No.
Mode 5 2P PTC 12/0.5W (18VA)	24V	end switches SPDT 250V 6(3)A	XNNN00296
Mode 6 2P PTC 12/0.5W (18VA)	230V	end switches SPDT 250V 6(3)A	XNNN00297

Two Position Actuators (HOT)

Model	Voltage	Switching	Product No.
HM5-2P PTC 7W (10VA)	24V	end switches SPDT 250V 6(3)A	XNNN00298
HM6-2P PTC 8W (12.5VA)	230V	end switches SPDT 250V 6(3)A	XNNN00299

HM5-2P and HM6-2P are NOT supplied with ETR and remain in the desired emergency position when power is interrupted.



Mode 9 PTC™

Pneumatic Actuator

This mode has been developed to provide pneumatic operation of the damper and is available in spring return versions for fail-safe operation. A pneumatic thermal release (PTR) assembly is available to react to fire conditions. As with all PTC actuators, this series uses the snaplock™ interface. Switch box and solenoid accessories available, in addition a 250 °C for 1 hour hot version is available.



Model	Product No.	Specification
Mode 9 PTC Pneumatic	XNNN00300	Thermal release - air off fail close
Mode 9 PTC Vent Pneumatic	XNNN00303	Thermal release - air off fail open
High Temperature Mode 9 PTC Pneumatic	XNNN00301	Air off fail safe close
High Temperature Mode 9 PTC Vent Pneumatic	XNNN00304	Air off fail safe open



Image shows PTR assembly

Schischek

The Schischek ATEX rated control modes are suitable for a variety of special applications.

Please liase with our technical teams to determine product suitability for these specialised products.

Schischek benefits:

- IP66 rated
- 3-10 second selectable closure speeds
- 1 second closure option
- replaceable thermal release



INMAX

InMax actuators are NOT Explosion proof and only for use in safe area IP66

REDMAX

Explosion proof Zone 2 & 22 gas and dust
PTB-certified
II 3(1) G Ex nC (ia) IIC T6
II 3 G Ex nC ia IIC T6
II 3 D Ex tD A22 IP66 T80 oC
ATEX 94/9/EC
IEC-Ex

EXMAX

Explosion proof Zone 1, 2, 21 & 22 gas and dust
PTB-certified
II 2(1) G Ex nC (ia) IIC T6
II 2 G Ex nC ia IIC T6
II 2 D Ex tD A22 IP66 T80 oC
ATEX 94/9/EC
IEC-Ex

Schisehek ExPro-TT-72 thermal release

Fail-safe is by means of a ExPro-TT which operates at 72 °C, or if power supply is interrupted.

A manual test switch allows periodic operation of the damper for testing purposes, simulating actual fail-safe release under fire conditions. The associated electrical control modes are available in one Universal version with 24 - 230V AC/DC supply



ExPro-TT-72 thermal release

Schischek

The Schischek ATEX rated control modes are suitable for a variety of special applications.

Smoke/Shield with STS		Description
XNNN00732	INMAX 15-BF1	INMAX -15-BF1 24-230V AC/DC 1 SEC REL + INPRO-TT THERMAL FUSE
XNNN00733	INMAX 15-BF	INMAX -15-BF 24-230V AC/DC + INPRO-TT THERMAL FUSE
XNNN00734	REDMAX 15-BF1	REDMAX -15-BF1 24-230V AC/DC 1 SEC REL + EXPRO-TT THERMAL FUSE
XNNN00735	REDMAX 15-BF	REDMAX -15-BF 24-230V AC/DC + EXPRO-TT THERMAL FUSE
XNNN00736	EXMAX 15-BF1	EXMAX -15-BF1 24-230V AC/DC 1 SEC REL + EXPRO-TT THERMAL FUSE
XNNN00737	EXMAX 15-BF	EXMAX -15-BF 24-230V AC/DC + EXPRO-TT THERMAL FUSE
XNNN00821		SCHISCHEK BRACKET ASSEMBLY FOR 'S' SIZE ACTUATORS




Smoke/Shield non STS		Description
XNNN00794	INMAX 15-SF1	INMAX -15-SF1 24-230V AC/DC 1 SEC REL - NON STS
XNNN00795	INMAX 15-SF	INMAX -15-SF 24-230V AC/DC - NON STS
XNNN00796	REDMAX 15-SF1	REDMAX -15-SF1 24-230V AC/DC 1 SEC REL - NON STS
XNNN00797	REDMAX 15-SF	REDMAX -15-SF 24-230V AC/DC - NON STS
XNNN00798	EXMAX 15-SF1	EXMAX -15-SF1 24-230V AC/DC 1 SEC REL - NON STS
XNNN00799	EXMAX 15-SF	EXMAX -15-SF 24-230V AC/DC - NON STS
XNNN00821		SCHISCHEK BRACKET ASSEMBLY FOR 'S' SIZE ACTUATORS

Vent/Shield non STS		Description
XNNN00806	INMAX 15-SF1	INMAX -15-SF1 24-230V AC/DC 1 SEC REL - NON STS
XNNN00807	INMAX 15-SF	INMAX -15-SF 24-230V AC/DC - NON STS
XNNN00808	REDMAX 15-SF1	REDMAX -15-SF1 24-230V AC/DC 1 SEC REL - NON STS
XNNN00809	REDMAX 15-SF	REDMAX -15-SF 24-230V AC/DC - NON STS
XNNN00810	EXMAX 15-SF1	EXMAX -15-SF1 24-230V AC/DC 1 SEC REL - NON STS
XNNN00811	EXMAX 15-SF	EXMAX -15-SF 24-230V AC/DC - NON STS
XNNN00822		SCHISCHEK BRACKET ASSEMBLY FOR 'S' SIZE ACTUATORS

Accessory Items		Description
XNNN00739	INBOX-BF	INBOX-BF TERMINAL BOX FOR INMAX-BF ACTUATORS
XNNN00738	REDBOX-BF	REDBOX-BF TERMINAL BOX FOR REDMAX-BF ACTUATORS
XNNN00578	EXBOX-BF	EXBOX-BF TERMINAL BOX FOR EXMAX-BF ACTUATORS
XNNN01012	INMAX	INPRO-TT-72 THERMAL FUSE
XNNN01013	REDMAX	EXPRO-TT-72 THERMAL FUSE
XNNN01013	EXMAX	EXPRO-TT-72 THERMAL FUSE

PTC™ Accessories




A range of indicator panels, push button switches and damper test units are also available. The housing for these units are manufactured in rigid ABS plastic. The Damper Connection Box is in galvanised steel.

Unit	Model	Voltage
 Damper Test Unit Reset (open) and release (closed) indication Spring bias (power OFF) test switch Power normally ON	DTU24 DTU120 DTU230	24V AC/DC 120V AC 230V AC
 Damper Status Indicator Reset (open) and release (closed) indication	DS124 DS120 DS1230	24V AC/DC 120V AC 230V AC
 Damper Control Unit Switch ON/OFF function Reset (open) and release (closed) indication	DCU24 DCU120 DCU230	24V AC/DC 120V AC 230V AC

Damper Release and Indication Module (DRIM)



- This is designed for control and monitoring of the electrically operated Smoke Shield PTC™ Fire and Smoke dampers.
- It will operate from 24V, 120V or 230V supplies, 50 or 60 Hz.
- Selection of the operating voltage is by use of internal links on the PCB, prior to installation and connection of actuator and supply.
- The DRIM may be used singly to provide local damper control, or in pairs to provide control from either side of a damper. It can also operate 2 actuators when dampers are provided in 2 multiple sections.
- LED position and operation indication is provided.
- Operation is by push button to close and twist to re-open damper.
- Tested to BS EN 61010 -1: 2001 and is CE compliant. IP44 rated.
- Operating range 5 - 40 °C

Unit	Model	Voltage
	DRIM	24v-230v AC/DC
 Damper Connection Box (All Voltages)	DCB	24-230V AC/DC
 M5 – 3P – CMS (24V) Control Unit	M53PCMS	24V AC/DC
 M5 – 3P – CMS (230V) Control Unit	230V M53PCMS	230V AC

Actionpac Damper Control Systems

Addressable System

Actionpac LNS5

Intelligent Damper Control and Monitoring System



The Actionpac LNS5 system represents a new generation of Fire/Smoke damper control. The system has been designed with the user in mind, providing an advanced tool that simplifies installation and commissioning of Fire/Smoke dampers and peripheral devices. The Panel PC operates on a Windows™ platform making it universally accepted and utilises solid state technology for optimum reliability.

It's server architecture delivers new benefits such as reduced commissioning time, simplified operation and scope for future growth.

The Actionpac LNS5 system is designed to protect life and property from damage caused by smoke and fire, by providing the means to:-

- Compartmentalise fire zones
- Reduce the spread of smoke and fire
- Keep escape routes and fire-fighting access open
- Allow pressurisation and smoke extract by combined operation of dampers and fans

Benefits

- Actionair experience and know-how in the damper market
- Actionair Fire/Smoke Dampers LPCB approved
- Allows for phased commissioning and future expansion
- Backward compatible
- CE marked, EMC and LVD compliant
- Customer testimonials available
- Hundreds of prestigious reference sites
- Powerful and very flexible functionality accommodates any last minute changes to strategy, zones, damper quantities, references and descriptions etc and enables standardisation of software (no bespoke site specific versions required)
- Off site system witnessing can be arranged
- Open and interoperable protocol (LonWorks®) allows possible support by others and future proof lifecycle preventative maintenance costs
- Optional networking of panels to a central control and monitoring panel - up to 32 networked panels to meet practically any building's damper requirements
- Optional remote access via internet
- System designed to cater for environmental occupancy (energy saving) as well as the building's smoke/fire strategy

actionair | air-diffusion | airfiltrera | airolution | naco

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