

PICV

Actuator Options

Electro-Mechanical Actuators – Modulating with feedback

Forced convection (active) terminal units, i.e. FCU (Fan Coil Units) and active Chilled Beams are designed to be very responsive to changes in room temperature.

Modulating actuators enable flow rate changes, and consequently heat output changes, to quickly match demand requirements, therefore, modulating actuators should be chosen for forced convection terminal units.

Modulating actuators allow all intermediate flow rates between full flow and no flow.

The actuator can actively communicate its stroke position to the control system to monitor building operations.

Feedback signal allows customers to monitor the exact actuator position and can be a benefit for maintenance. On a typical site there will be hundreds of actuators and it can be difficult to diagnose a system fault.

Feedback signal can be used to identify issues e.g. valve is sticking, perhaps due to debris in the pipe. Variation in feedback signal during operation could also be an indication that the valve / actuator will require maintenance soon. This means feedback feature could be viewed as a tool for preventative maintenance.

It is important to note that the feedback signal reports the actual position of the actuator, and is not simply the control signal repeated. For example if the control signal is set to 5V (Linear control) and the feedback signal is 3V this would indicate there is a problem.

Thermal Actuators – On/Off

Natural convection (passive) terminal units, i.e. passive Chilled Beams and underfloor heating are designed to be less responsive to changes in room temperature than forced convection terminal units.

Therefore, thermal on/off actuators should be chosen for natural convection terminal units.

On/off actuators only allow for full flow or no flow.



APPLICATION	FIG NO.	PART NO	FUNCTION	VOLTAGE	CABLE LENGTH	IP RATING
Fan Coil Unit	ACTD995	0JG93140Y	Modulating Gap Detection with Feedback	24VAC/DC (0-10V Control Signal)	1.5m	IP54
Active Chilled Beams						
Fan Coil Unit, Active Chilled Beams	ACT991M	0EA08739E	Modulating with Gap Detection	24VAC/DC (0-10V Control Signal)	1.5m	IP54
Fan Coil Unit	ACT991TP	0EA08740W	3 Point/Floating Point	24VAC/DC	1.5m	IP43
Passive Chilled Beams	ACT991TH	0EA08733X	On/Off (Normally Closed)	24VAC/DC	2.0m	IP54

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