

Datasheet

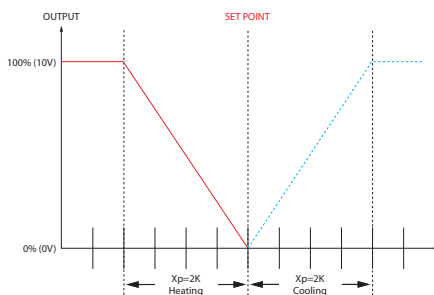
REP24 Range 0-10v Proportional Heat/Cool Thermostats

Features



The REP range offers 0-10v output proportional control designed for use controlling fan coil or chilled ceiling units or any other system that requires 0-10v proportional control. Available with various options for manual or auto fan speed control as well as options for using motorised or thermoelectric wax actuators, these thermostats provide an economic standalone solution for most manual fan coil or chilled ceiling requirements.

The thermostats use P+I (Proportional + Integral) control, with the output being proportional to the deviation from the set temperature within a 2k band (see diagram below).



The range consists of four models:

REP24

The REP24 is ideal for chilled ceiling applications. Having no fan outputs, a simple selection of motorised or wax actuator and whether the thermostat is to act as a heat or cool thermostat is all that is needed to set up this thermostat at time of installation.

REP24 CO

Like the REP24, the REP 24 CO is a temperature only proportional thermostat but with a manual heating

or cooling changeover switch present on the front of the unit.

REP24 CO1

The REP24 CO1 has a front mounted heat/cool changeover switch, as well as a single speed fan output. The fan works in either constant (constant on) or automatic (on/off dependant of output state). Fan operation mode is selected at time of installation via DIL switches within the case.

* Fan output can also be used for damper operation instead of a fan.

REP24 CO3

The REP24 CO3 offers all the features of the REP24 CO with the addition of a manually selectable 3 speed fan with front mounted switch. Fan operation mode is selected at time of installation via DIL switches within the case.

Visual feedback of the thermostat status is available at all times (not applicable to the REP24) via a combination of two bi-colour LEDs showing both the heat or cool output status as well as the fan ready state (continuous or auto).

Fan operation and actuator type selection is made on the rear of the thermostat prior to installation via the use of DIL switch. Two fan operation modes are available – Fan Auto or Fan Continuous. Setting the unit to Fan Continuous will enable the running of the fan whenever the unit is in either heating or cooling mode. Fan Auto setting enables the running of the fan only when the temperature is 0.2°C above or below the Setpoint (depending on heat/cool mode).

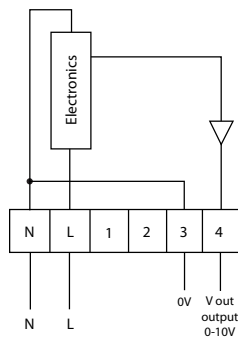
Due to the different operating characteristics of motorised and thermal wax actuators a DIL switch selection of either MOT (motorised actuator) or WAX (thermoelectric wax actuator) is possible. Changing this switch from MOT to WAX increases the integration time in the heat/cool algorithm compensating for the slower response time of the thermoelectric type actuators, likewise, selection of MOT reduces the integration time to allow for faster responding motorised actuators.

All models offer a range of standard features including active frost protection (fixed 8°C setpoint), standby mode (available in cooling only) and a range locking/limiting function.

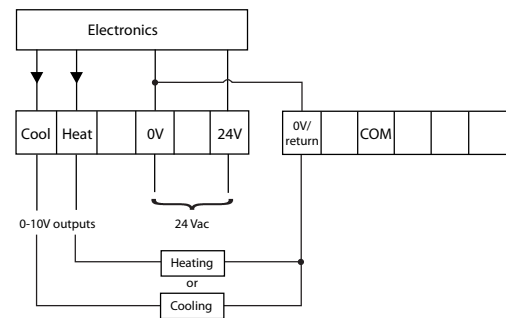
- 0-10v Proportional Control
- Frost Protection
- Standby Mode
- MOT or WAX actuator selection
- LED status indicators

Wiring

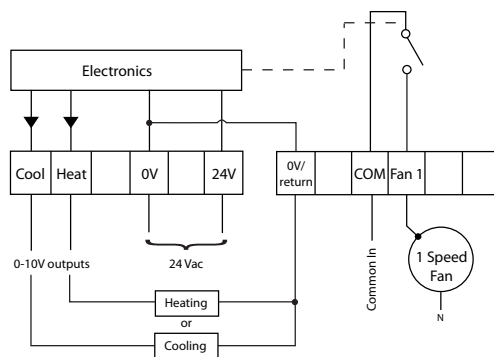
REP24



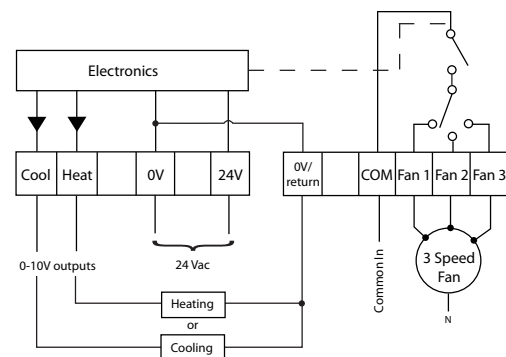
REP24 CO



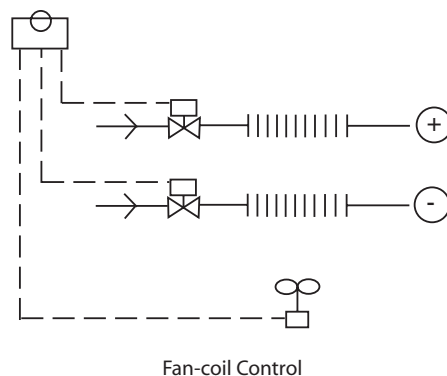
REP24 CO1



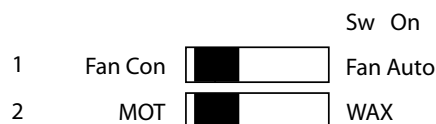
REP24 CO3



Application Example



DIL Switch Selection



Switch 1: Fan Con - Fan will run whenever thermostat is in heating or cooling mode.

Fan Auto - Fan will run whenever temperature is 0.2°C or more above/below (depending on heat/cool mode) setpoint. When temperature reaches setpoint, the fan will switch off.

Switch 2: MOT - Motorised valve actuator selection.
WAX - Wax valve actuator selection.

Specifications

	REP24	REP24CO	REP24CO1	REP24CO3
Code No.	087N775000	087N775200	087N775400	087N775600
Temperature Range	10-30°C			
Power Output	0-10 Vdc			
Power Supply	24 Vac/Vdc +/- 15%			
Switching Differential	<1°C			
Control Method	P + I			
Proportional Band	2°K			
Internal Heat/Cool Selection	•			
Front mounted Heat/Cool Switch		•	•	•
Fan Speeds	0	0	1	3
Manual fan speed selector	N/A	N/A	No	Yes
Auto/Manual Fan	N/A	N/A	•	•
Frost Protection	•			
Standby (Cooling)	•			
Motorised or Wax Actuator Selection	•			
Power LED	Yes	Yes	Yes	Yes
Output LED	Yes	Yes	Yes	Yes
Ambient Operating Temperature	-10 to +45°C			
Dimensions (mm)	85 w x 86 h x 42 d	110w x 90 h x 40 d	110 w x 90 h x 40 d	110 w x 90 h x 40 d

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