

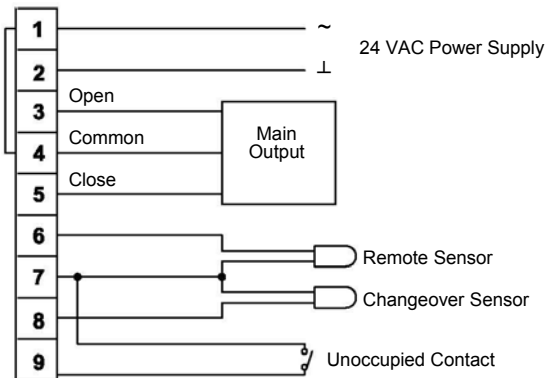
Modulating Temperature Controllers Installation and Operation Instructions

Application Notes

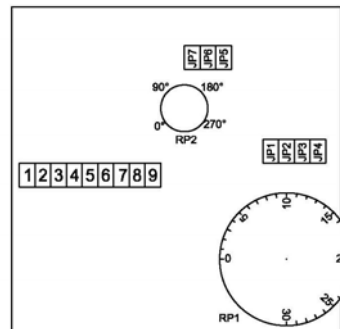
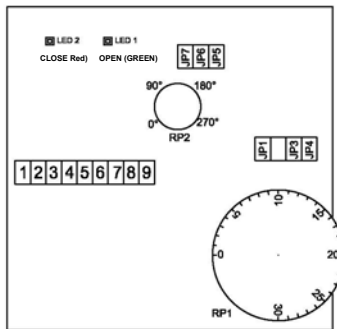
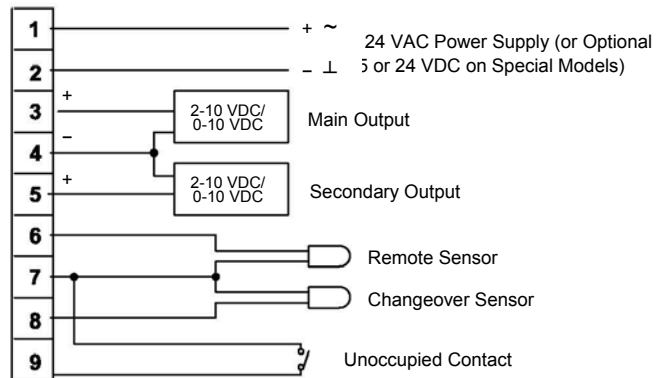
- The 3-wire floating controller output is a pulse/pause type signal which the on/off ratio of the pulse/pause cycle is directly proportional to. The pulse/pause duration is typically 10 seconds.
- On a dual-output unit, the main output is always associated with a cooling controlled device and the secondary output with a heating controlled device.
- On a single-output unit, i.e. a unit with only main output being available, connecting a seasonal changeover sensor or a shunting wire between Terminals 7 and 8 forces the unit to go into heating mode.
- Remove jumper JP1 if external sensor is wired to Terminals 6 and 7.
- The seasonal changeover sensor should be wrapped around the supply water pipe when associated with a water system. When the changeover sensor temperature exceeds 30 °C, the controller enters into heating mode.
- When using either or both of the remote temperature and seasonal changeover sensors, run the wires away from any electric motors or power wiring. Failure to do so may result in poor thermostat performance due to electrical noise.
- 22 or 24 AWG twisted shielded pair double-insulated cable is recommended as sensor wiring and its length must not exceed 50 m.
- Do not bundle and run power wiring and sensor wiring in the same conduit.
- It is highly recommended that the 24 VAC power supply is interlocked to the air-conditioning system so that the controller is shut down when the air-conditioning system is turned off.

Wiring Diagrams and Jumper Layouts

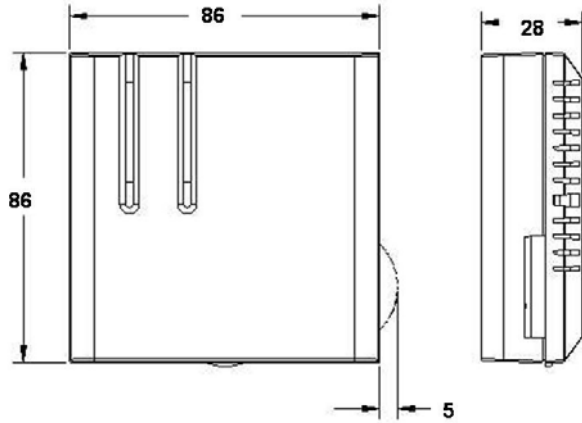
Floating Controller



2-10/0-10 VDC Proportional Controller



Dimensions in mm



Mounting

The temperature controller can be surface mounted or secured to a standard European 75 x 75 x 35 mm electrical box. See Figure 1: Mounting Details. Two mounting screws are included.

Jumper Settings

JUMPER	JUMPER IN CLOSED POSITION	JUMPER IN OPEN POSITION
JP1	With built-in sensor*	With remote sensor
JP3	P function only	PI function*
JP4	2 minutes integral time	20 minutes integral time*
For 2-10/0-10 VDC output models only		
JP2	0-10 VDC output*	2-10 VDC output
* factory settings		

Unoccupied Mode Jumper Settings		
JUMPER	JUMPER IN CLOSED POSITION (1)	JUMPER IN OPEN POSITION (0)
JP5	1	0
JP6	1	0
JP7	1	0
Unoccupied Set Points		
HEX	Cooling °C	Heating °C
000	22	22
001	23	21
010	24	20
011	25	19
100	26	18
101	27	17
110	28	16

LED Indicators

Floating Controller Only	INDICATOR	OUTPUT STATUS
	LED 1 Green	OPEN signal at Terminal 3
	LED 2 Red	CLOSE signal at Terminal 5

Potentiometer Settings

Proportional Band Settings		
Range Scale %	Potentiometer Position	Proportional Band Value
0	0	10 K
33.3	90°	7 K
66.7	180°	4 K*
100	270°	1 K