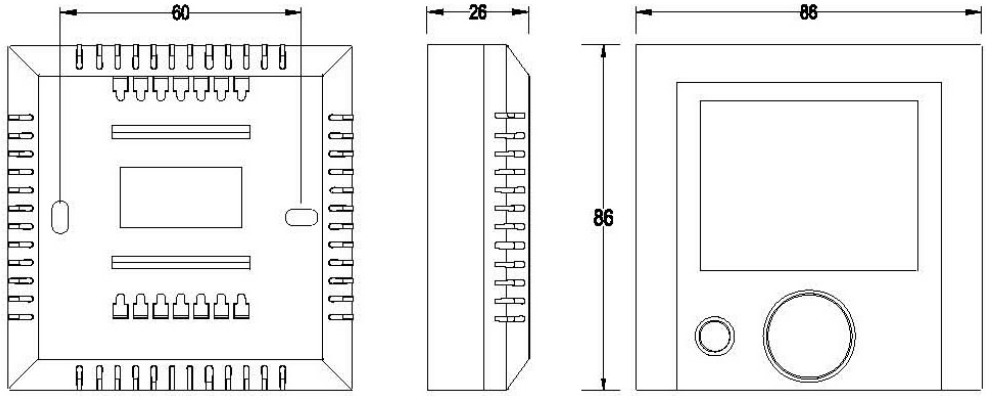
Issue Date June 7, 2015

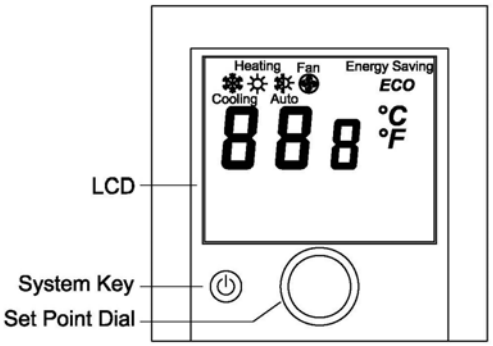
Temperature Setpoint Module with LCD for Remote Controller

Installation and Operation Instructions

Dimensions in mm

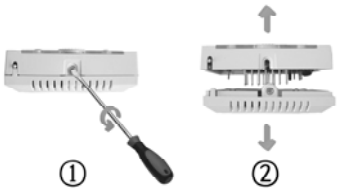


Display Control Unit and LCD Layout



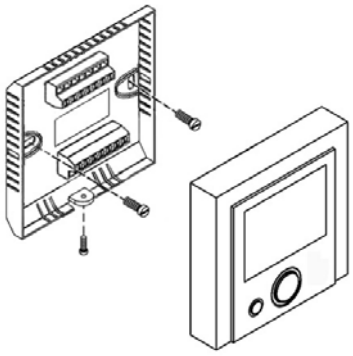
Note: System key is only available at TSM-02-xx model.

Cover Removal Procedure



1. Loosen the fixed screw.
2. Slightly twist the screw driver to crack open the cover from the base.
3. Hold the base firmly with one hand and remove the cover with another hand by pulling away from the base forcibly.

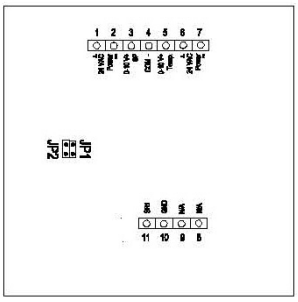
Mounting Details

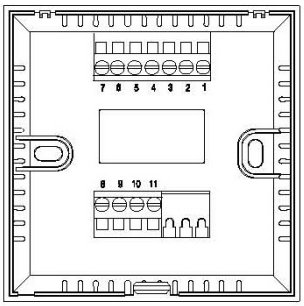


Mounting

The temperature controller can be surface mounted or secured to a standard European 75 x 75 x 35 mm electrical box. See Figure 4: Mounting Details. Two mounting screws are included.

Wiring Terminals and Jumper Settings





Jumper Settings		
Jumper Number	Jumper in Open Position	Jumper in Closed Position
JP1	With External Sensor	With Built-in Sensor
JP2	For 2-10 VDC Output	For 0-10 VDC Output
Note: Factory setting of JP2 is 0-10 VDC.		

Module Errors Reporting

When the following errors are reported on the LED display unit, these errors will prevent the controller from normal operation and all controller functions will be locked out:

E-1 EEPROM read/write error
E-2* Temperature sensor open-circuited
E-3 Temperature sensor short-circuited

* If jumper JP1 is cut open and external sensor is used, E-2 means the external sensor may have been disconnected from Terminals SR1 and GND. Check the external sensor's connectivity and resistive value. If E-2 error is still reported, return the thermostat to the manufacturer for repair.

When the error E-1 or E-3 is reported or when the error E-2 is reported without jumper JP1 being cut and external sensor being installed, return the thermostat to the manufacturer for repair.

Operation Notes

- LCD displays measured temperature constantly except when setpoint adjustment is being made.
- The backlight will turn on for 5 seconds when the adjustment dial is being rotated.
- Increase or decrease temperature set point by rotating the adjustment dial clockwise or counter-clockwise. During the dial rotation, the LCD shows the set point value.
- When the TSM-02-xx module is first powered up, there will be no LCD display until the system key is pressed momentarily. Meanwhile, the 24 VAC control signal output at Terminals 6 and 7 is turned on.
- Only TSM-02-xx module allows authorized service agent to change certain number of operating parameters in the field.

Application Notes

- Move jumper JP1 to open position if external sensor is wired to Terminals 10 and 11.
- Move jumper JP2 to open position if 2-10 VDC proportional output is required.
- 22 or 24 AWG twisted shielded pair double-insulated cable is recommended as external sensor wiring and its length must not exceed 25 m.
- Do not bundle and run power wiring and external sensor wiring in the same conduit.
- When using the external temperature sensor, run the wires away from any electric motors or power wiring. Failure to do so may result in poor module performance due to electrical noise.
- When the direct RTD output is connected, calibration may be required at the receiving controller to show the actual temperature..
- For standard models, It is highly recommended that the 24 VAC power supply is interlocked to the air-conditioning system so that the module is shut down when the air-conditioning system is turned off.

Wiring Diagrams