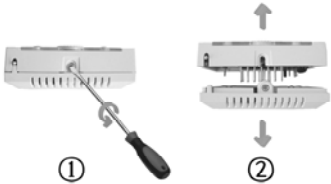


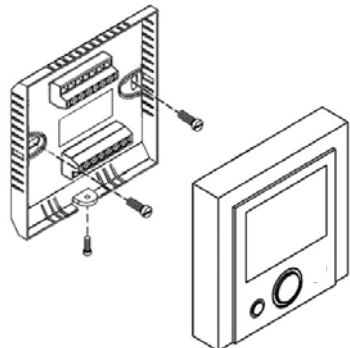
## TSM Temperature Setpoint Module with Digital Display Installation and Operation Instructions

### Cover Removal Procedure



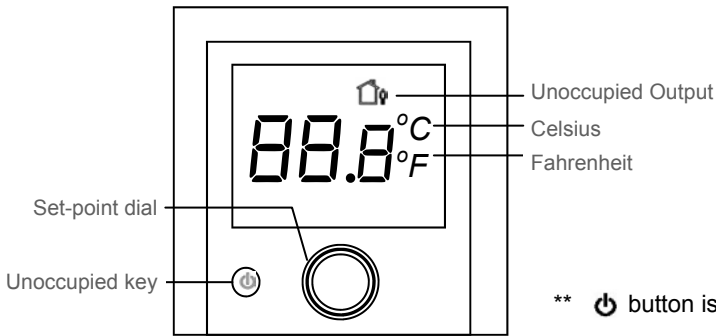
1. Loosen the fixed screw.
2. Slightly twist the screw driver to crack open the cover from the base.
3. Hold the base firmly with one hand and remove the cover with another hand by pulling away from the base forcibly.

### Mounting Details

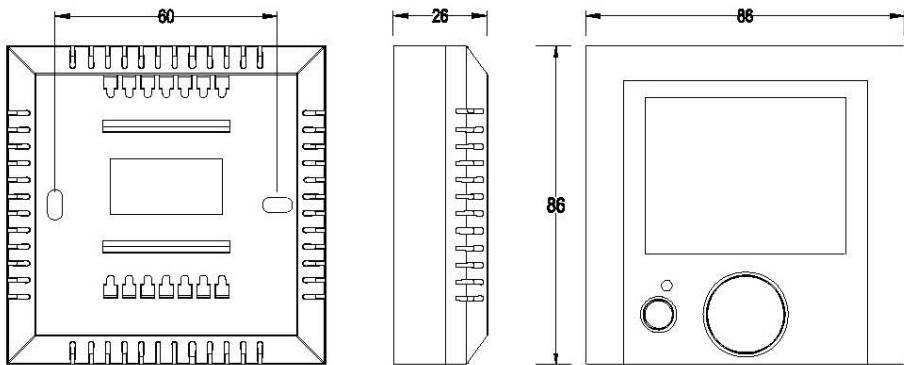


**Mounting**  
The Setpoint Module can be surface mounted or secured to a standard European 75 x 75 x 35 mm electrical box. See Figure 4: Mounting Details. Two mounting screws are included.

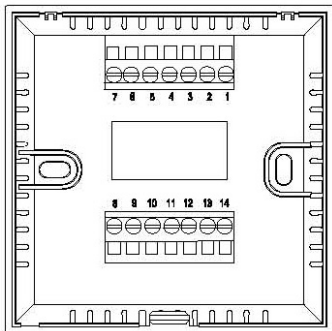
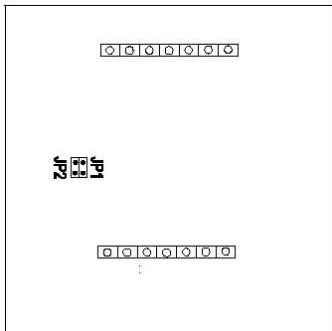
### Display Control Unit and LCD Layout



### Dimensions in mm



### Wiring Terminals and Jumper Settings



| JUMPER SETTINGS |                         |                           |
|-----------------|-------------------------|---------------------------|
|                 | 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: JP2 is available in 0-10 VDC/2-10 VDC output models only. Factory setting is 0-10 VDC.*

## 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

|                                    |  |
|------------------------------------|--|
| Temperature Display                | LCD shows measured temperature constantly except when temperature set point adjustment is being made   |
| Backlight                          | The backlight will light up for 5 seconds when any button is pressed   |
| Temperature Set-point              | Increase or decrease temperature set point by rotating the adjustment dial clockwise or counter-clockwise. When the dial is rotated, the LCD shows the set point temperature |
| Unoccupied Button                  | TSM-02 provides 24 VAC output signal to external controller by pressing the  button  |
| Parameter setup menu (TSM-02 only) | The thermostat allows authorized service agents to change certain number of operating parameters, please refer to parameter setup manual for details.                        |

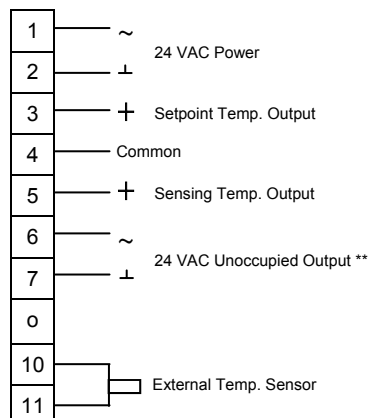
## Application Notes

- TSM Temperature Setpoint Module is always turned on when power supply is connected.
- 0...10 VDC output of terminal 3 and 4 is directly proportional temperature setpoint.
- 0...10 VDC output of terminal 4 and 5 is directly proportional sensing temperature.
- Pressing unoccupied button to active the 24 VAC output at terminal 6 and 7 (only available on TSM-02).
- Remove jumper JP1 if external sensor is wired to terminals 10 and 11.
- Remove jumper JP2 if 2-10 VDC proportional output is required.
- 22 or 24 AWG twisted shielded pair double-insulated cable is recommended as remote sensor wiring and its length must not exceed 25 m.
- Do not bundle and run power wiring and remote sensor wiring in the same conduit. Failure to do so may result in poor

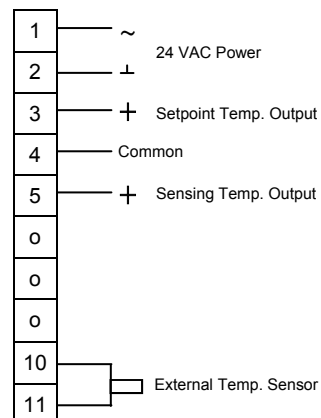
## Temperature Setpoint Module Wiring Diagrams

### WARNING

Incorrect wiring connection may cause permanent equipment damages to the thermostat



**TSM-02**



**TSM-01**