

FEATURES

- One relay output for heating or cooling
- Remote temperature sensor, having an accuracy of 1°C (2°F), can be extended up to 500 feet
- Cover is fastened to case by means of quarter turn screws which allow quick access to internal adjustments
- Protection against lightning and other voltage surges
- Overload protection on ventilation and heating outputs by means of fuses

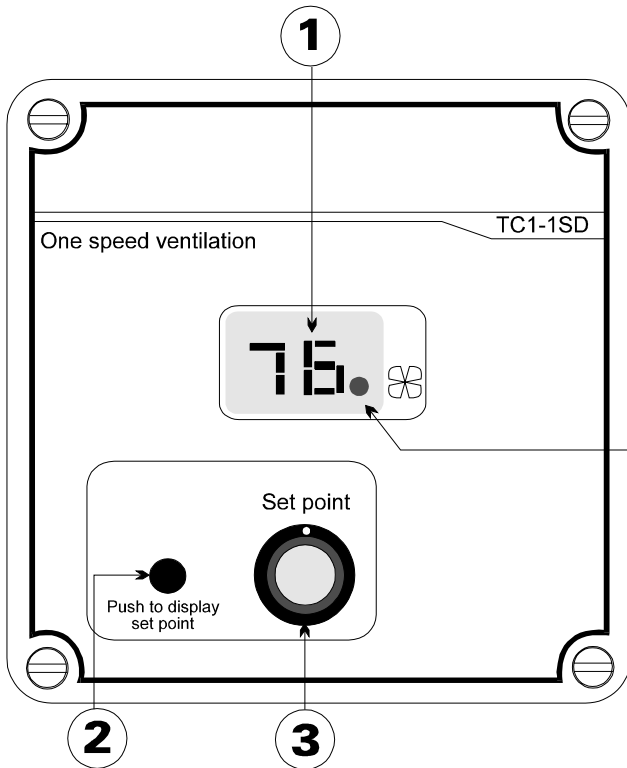


Figure 1 : Front cover

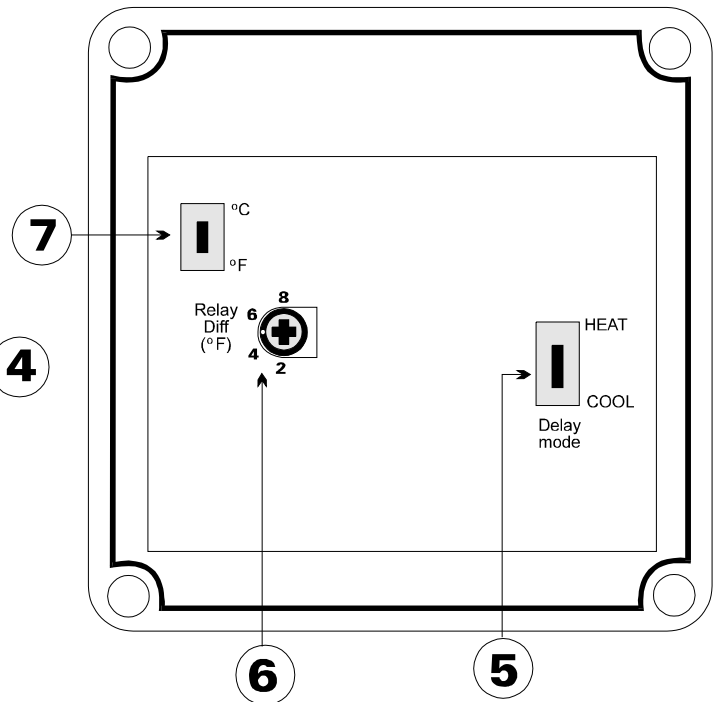


Figure 2 : Internal circuit

1- Digital display

Displays ambient temperature. Also displays temperature set point when push button 2 is used.

2- Push button

Press push button to visualize temperature set point on digital display 1.

3- Temperature set point knob

Simultaneously press push button 2 and turn the temperature set point knob until the desired temperature is displayed.

4- Pilot light

Illuminates when heating or cooling is activated.

5- Function selector switch

COOL position: When the controller is to activate the ventilation system if ambient temperature rises above set point.

HEAT position: When the controller is to activate the heating system if ambient temperature falls below set point.

6- Temperature differential

Sets temperature difference relative to set point at which the heating or the ventilation system starts.

7- Temperature unit selector switch

The temperature is displayed in Celsius or Fahrenheit degrees according to the position of the selector switch.

HOW TO ADJUST THE TC1-1SD

When adjusting the TC1-1SD for the first time, read these instructions carefully and follow the different steps in the described order.

INTERNAL ADJUSTMENTS :

- 1- **Select the desired temperature unit with selector switch 7.**
- 2- **Set function selector switch 5 at the required position.**
 - If the controller is connected to a ventilation system, set the selector switch at COOL. If the controller is connected to a heating system, set the selector switch at HEAT.
- 3- **Use adjustment 6 to set the temperature differential.**
 - Select the temperature difference relative to set point at which the heating or ventilation system starts. The temperature differential for ventilation can be adjusted from 0.5° to 9°C (1° to 15°F).

EXTERNAL ADJUSTMENTS :

- 5- **Use knob 3 to select the temperature set point.**
 - Simultaneously press button 2 and turn knob 3 until the desired temperature appears on the display.

FIGURE 3 AND 4 ILLUSTRATE HOW THE CONTROLLER OPERATES IN THE COOL AND HEAT MODES.

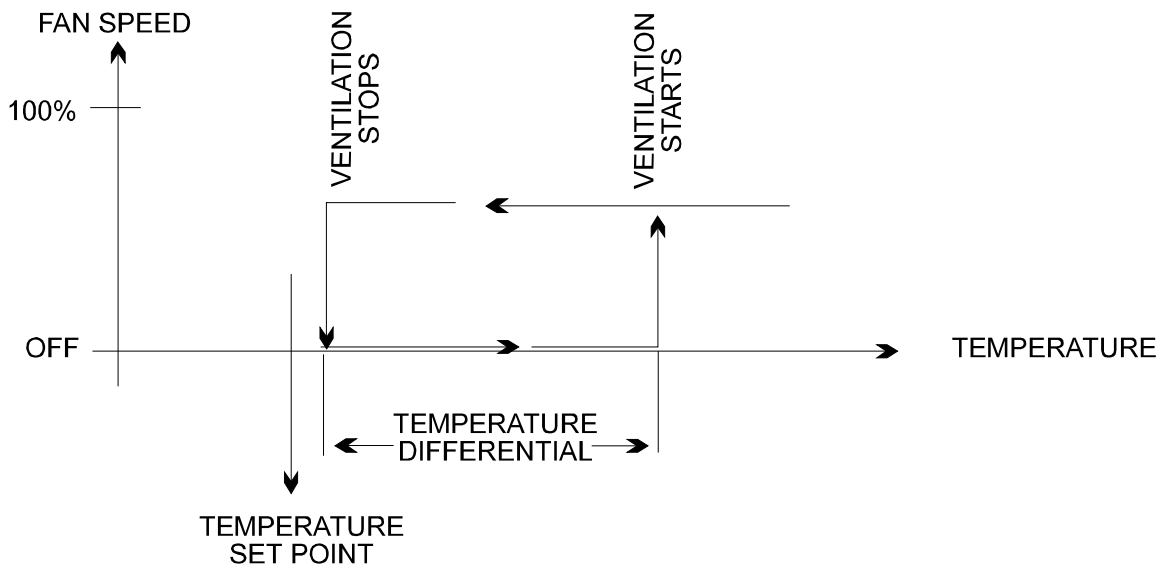


Figure 3 : Operation of the TC1-1SD in COOL mode

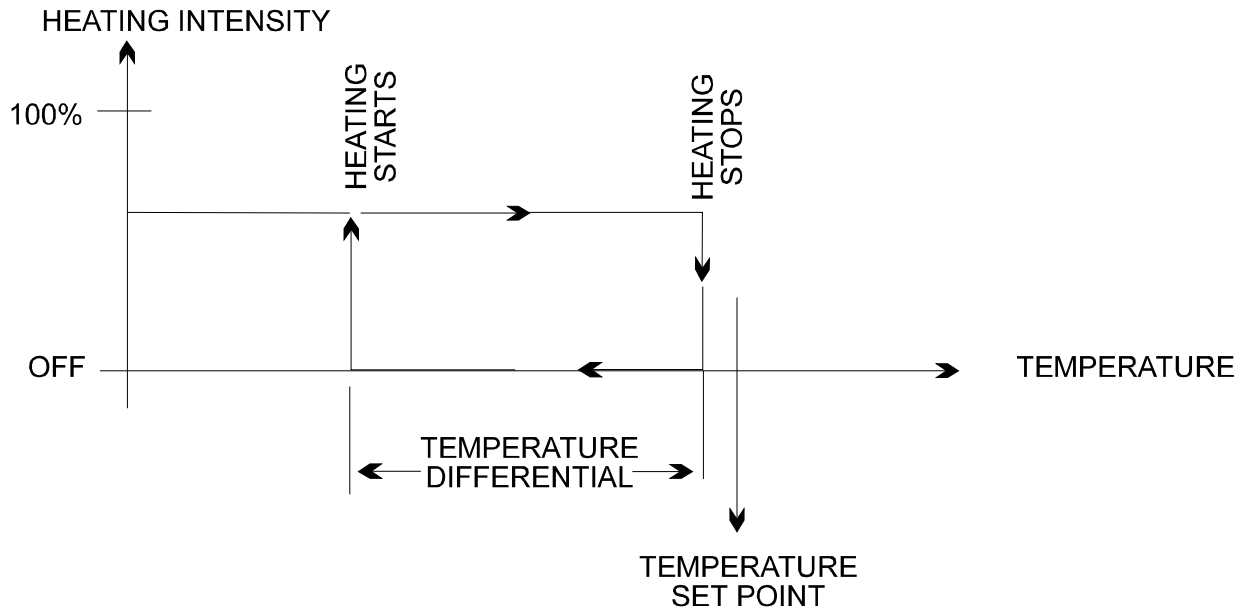


Figure 4 : Operation of the TC1-1SD in HEAT mode

INSTALLATION

- Place the required number of cable holders in the provided holes at the bottom of the controller. If the controller is installed in a dusty or humid environment, use water-tight cable holders.
- The ambient temperature where the control is installed MUST ALWAYS REMAIN BETWEEN 0° and 40°C (32° and 104°F).
- Mount the controller on the wall with screws through the mounting holes located at the back of the case.
- FASTEN THE SUPPLIED BLACK CAPS ON EACH OF THE MOUNTING HOLES.

WIRING

- For typical hook-up, refer to figure 5 or 6.

CAUTION

DISCONNECT THE POWER SUPPLY BEFORE MAKING WIRING CONNECTIONS TO PREVENT ELECTRICAL SHOCK AND EQUIPMENT DAMAGE.

ALL WIRING MUST COMPLY WITH APPLICABLE CODES, ORDINANCES AND REGULATIONS.

INSTALLATION MUST BE DONE BY AN AUTHORIZED ELECTRICIAN.

Set the line voltage selector switch according to the line voltage being used.

If metal cable holders are used to secure cables entering the TC1-1SD case, use the furnished ground plate. The ground wire must be connected to the screw on the ground plate.

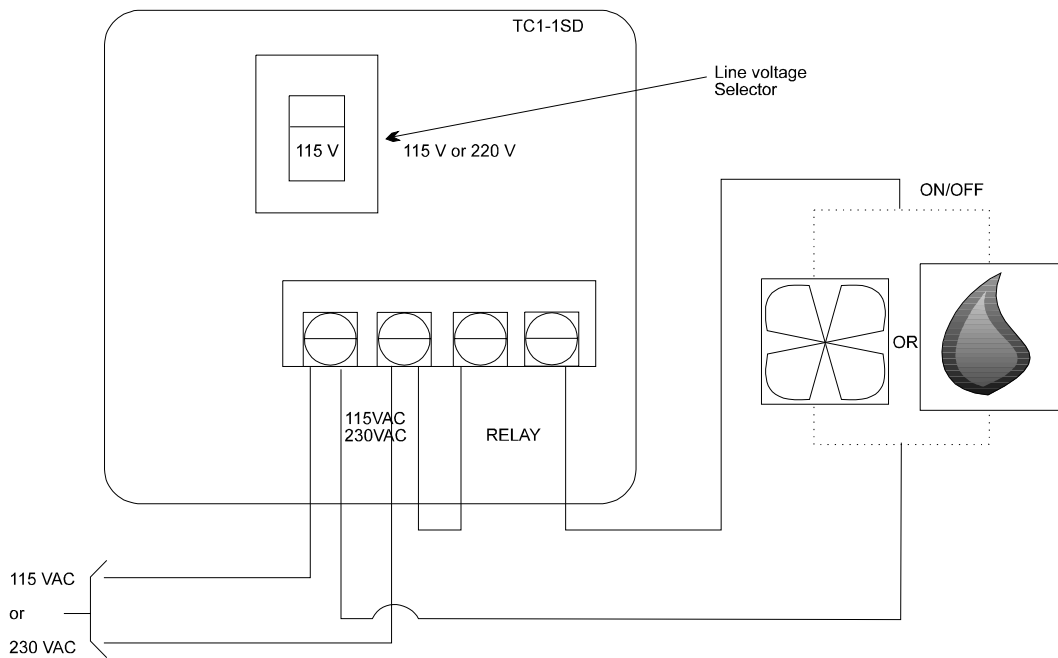


Figure 5 : Wiring when the TC1-1SD and the heater use the same power source

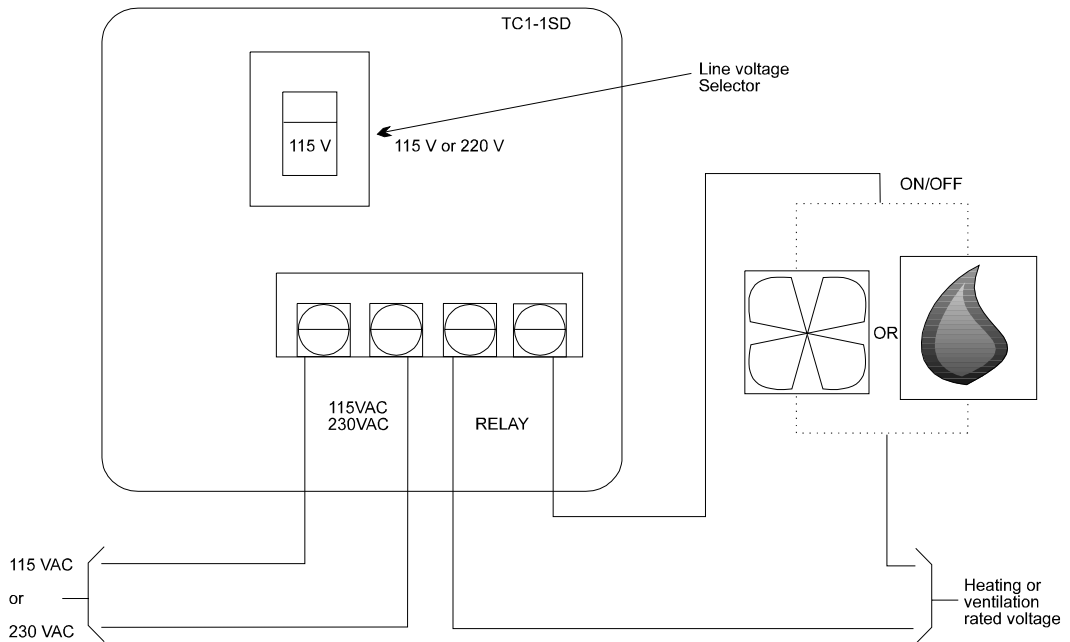


Figure 6 : Wiring when the TC1-1SD and the heater use different power sources

TEMPERATURE PROBE :

The temperature probe operates at low voltage and is completely isolated from line voltage. It can be extended up to 500 feet. To extend the probe :

- Use shielded cable with an outside diameter between .245 and .260 inch to ensure cable entry is dust-tight.
- Isolate this cable from any other cable.

ELECTRICAL RATINGS

- **Power source :** 115 VAC or 230 VAC, 60 Hz
- **Fan output :** 10 Amp. MAX., variable voltage from 0 Volt up to supply voltage. *Fuse :* 15 Amp., slow blow
- **Probe :** Low voltage (< 5v), isolated from line voltage, can be extended up to 500 feet. Accuracy : 1°C (1.8°F) between 5° and 35°C (41° and 95°F)
- **Operating temperature range :** 0° to 40°C (32° to 104°F)
- **Casing :** ABS, moisture and dust-tight.

WARNING

DO NOT SPLASH WATER ON CONTROLLER