

MAXIMUM COMFORT AND CONTROL IN HEATING

TSSHHC-2D - DIAPHRAGM LINE VOLTAGE THERMOSTAT

OVERVIEW

The TSSHHC-2D Electric Heating Thermostat provides precise, accurate line voltage control of ENERJOY Radiant heating equipment. A snap action switch makes heating circuit on temperature fall, and features double line break in the "Off" position.

TSSHHC-2D FEATURES

- Vapor-filled dual diaphragm sensing element provides high temperature sensitivity with minimum droop.
- CSA Performance Certified up to 20 A. CSA Certified, UL listed up to 5 kW at 277 Vac.
- Long life, industrial grade MICRO SWITCH Mechanism. Rugged, engineering plastic mounting base with captive mounting screws.
- Color-coded flyleads for fast installation compatible with aluminum wire. Replaces any standard wall-mounted electric heat thermostat.
- Contemporary white "aerodynamic" styling.
- Range: 50° F to 80° F (10° C to 30° C). Celsius and Fahrenheit models available. Optional thermometer.
- Altitude compensation. "Frost protection" setting. Optional locking cover and range stops available.

Setting and Checkout

After thermostat has been installed and wired, simulate normal operation as follows:

1. Turn setting dial all the way clockwise - the switch will click and the electric heater should start to heat.
2. Turn dial all the way counterclockwise - the power circuit should be broken and the electric heater should start to cool.
3. Because TSSHHC-2D is a more accurate thermostat, users can be comfortable at lower setpoint settings. In turn, this will save energy and lower heating costs. To determinate final seeing, begin with dial indicator at 68°F [20°C] on the scale. After at least 2 hours operation, if this setting is not satisfactory, adjust setpoint to raise or lower the temperature. Move indicator only a few degrees each time an adjustment is necessary.

CALIBRATION

TSSHHC-2D is accurately calibrated at the factory (*) under controlled conditions. The snap switch turns on heat when the set point knob is raised to room temperature.

* Do not assume a thermostat is out of calibration until it has been installed and allowed to operate for several hours.

The vapor-filled diaphragm sensor is affected by barometric pressure and altitude. Deviations up to 1°F (±1/2°C) are within normal operation. Control point drops 2°F every 1000 feet (1°C/300 m) above sea level. See figures 1 & 2.

Fig.1—Altitude correction for TSSHHC-2D thermostat

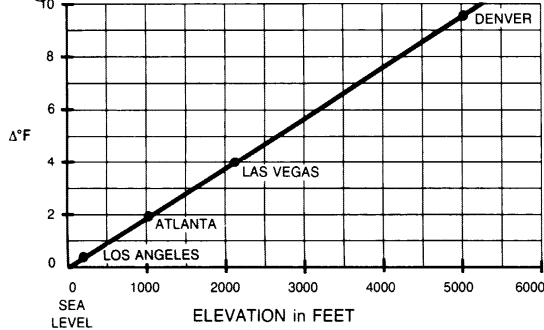
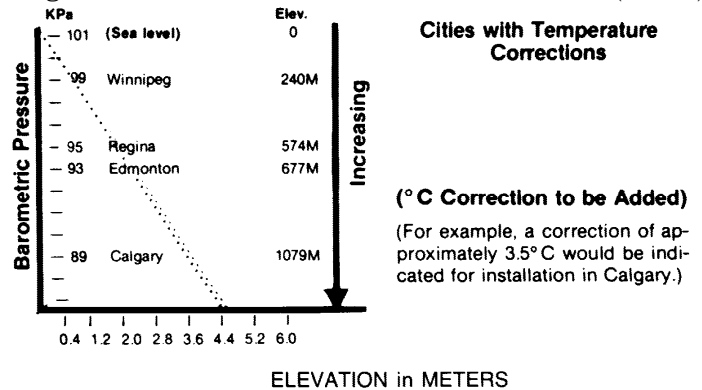


Fig. 2—Altitude correction for TSSHHC-2D thermostat (meters).

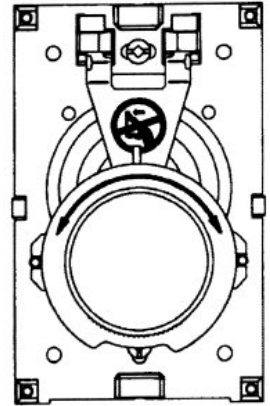


To Recalibrate, Figure 3

1. Remove cover and set it down where it will sense room temperature. Note: it may take several minutes for the thermometer to stop being affected by the heat from your hand.

2. Rotate set point knob clockwise until you hear switch click.
3. Hold the set point knob firmly and rotate the set point scale ring counter-clockwise until the 12:00 o'clock position of the ring agrees with cover thermometer.
4. The heat from your hand will also affect the diaphragm sensor. Wait 5 minutes and re-check calibration.

Fig. 3



Installation

CAUTION

- Disconnect power supply before making wiring connections to prevent electrical shock or equipment damage.
- All wiring must comply with applicable codes and ordinances.
- Thermostats are designed to be used with a limit control in the appliance.

WARNING

This thermostat is a line voltage (120-277 volt) control. Do not install this thermostat if you are not completely familiar and competent with electrical wiring. If improperly handled, there can be risk of 120-277 volt electric shock hazard which may cause serious injury or death.

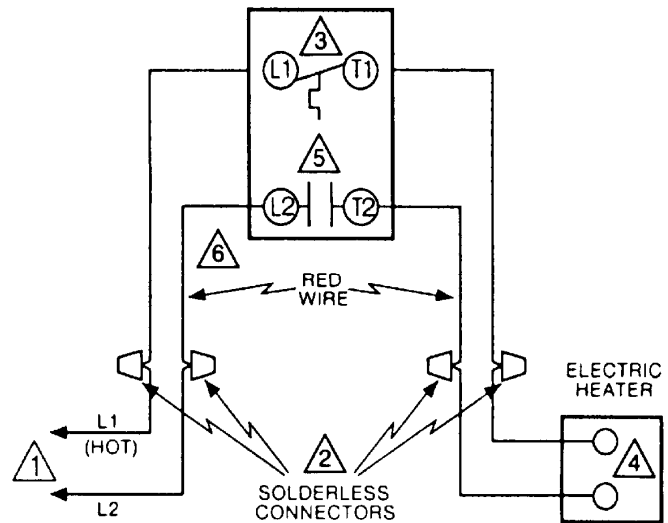
CAUTION

When using aluminum conductors, all wiring connections to this thermostat must be made to the factory installed leadwires, using approved CO/ALR solderless connectors.

1. Leave cover on the thermostat while making wiring connections. *Be sure that all wire connectors are tight. If you are installing security features, DO IT NOW.*
2. Pre-bend the solid conductors and push these into the electrical box.
3. Remove the thermostat cover by grasping the top and bottom and pulling outward.

1. POWER SUPPLY. PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION AS REQUIRED.
2. SPECIAL SERVICE CO/ALR SOLDERLESS CONNECTORS MUST BE USED WHEN CONNECTING ALUMINUM CONDUCTORS: OTHERWISE, A FIRE HAZARD MAY RESULT.
3. BREAKS AT POSITIVE OFF, AND REMAKES BELOW -31°F [-35°C] OTHERWISE THERMALLY ACTIVATED: BREAKS ON TEMPERATURE RISE, MAKES ON TEMPERATURE FALL.
4. THERMOSTATS ARE DESIGNED TO ENABLE USE WITH A LIMIT CONTROL LOCATED IN THE APPLIANCE
5. BREAKS AT POSITIVE OFF ONLY, NOT THERMALLY ACTIVATED
6. DO NOT CONNECT GROUNDED CONDUCTOR (i.e. neutral) ON 120 OR 277V CIRCUITS INSULATE AND TAPE, OR CUT OFF RED WIRES IF UNUSED (SINGLE POLE APPLICATION).

Fig. 4 – Typical hookup for TSSHC-2D



LOCATION:

TSSHC-2D must be mounted on an approved electrical junction box. Install this box vertically 4 to 5 feet (1.5 m) above the floor on an inside wall where the thermostat will be subjected to average room temperature. The thermostat should be located away from concealed warm or cold water pipes, light switches and dimmers, refrigerators or drafts from hallways, fireplaces, or stairways or fans.

When replacing an old line voltage thermostat, remove the old thermostat carefully to avoid damaging the insulation on the wiring. Check the old insulation for cracks, nicks, or fraying and apply approved electrical tape where necessary to achieve adequate insulation.

CONNECTIONS:

Make line voltage wiring connections directly to the leadwires installed on the thermostat using wire connectors approved for the number and size of conductors.

1. Turn dial so that the set point indicator is at the 12 o'clock position. This will prevent accidental damage to the dial stop during mounting.
2. ***Handle thermostat with care:*** excessive pressure may damage the control knob or sensing element.
3. Using a screwdriver, secure the thermostat to the box by tightening the two mounting screws. You will find it easier to thread the screw in the horizontal slot first.
4. Level thermostat for appearance. Tighten screws and replace cover.