

ETC100 (Top Performer Control)

Installation Manual

Installation

WARNING: Do Not Use With 110V circuits. For Switching 110V, use a standard TPI Control.

Attaching ETC100 to Top Performer tank:

Place ETC100 so that temperature sensor lead goes through the hole in back. ETC100 should fit flush against the tank jacket.

Use self-tapping screw provided (Screw A) to attach ETC100 directly to the Top Performer.

Attaching ETC100 to tanks with immersion wells:

Place hole in back of ETC100 over immersion well. (See Diagram 1)

If ETC100 can fit flush against the tank without the immersion well protruding beyond the top of the ETC100 case, the ETC100 can be mounted as described above. Otherwise, the ETC100 can be mounted directly onto the immersion well itself.

Place square nut in the retaining well on the ETC100 box.

Use proper machine screw provided (Screw B or Screw C) to tighten against the immersion well.

Inserting the Temperature Sensor:

Connect the probe to the ETC100 by inserting the leads in the black openings on top of the probe connector while pushing both white buttons with finger nail or a tool (such as a screwdriver). This can also be done one side at a time. Release the white buttons and pull on each probe lead to check connection. See Diagram 5.

For tanks with integral probe, the sensor installation is complete.

For tanks with an immersion well, slide temperature sensor all the way into the immersion well – until it contacts the end. (See Diagram 1)

The sensor will measure temperature adequately by resting against the bottom of the immersion well.

(Note: Sensor does NOT need to make intimate contact with entire well surface to work properly)

Wiring the ETC100:

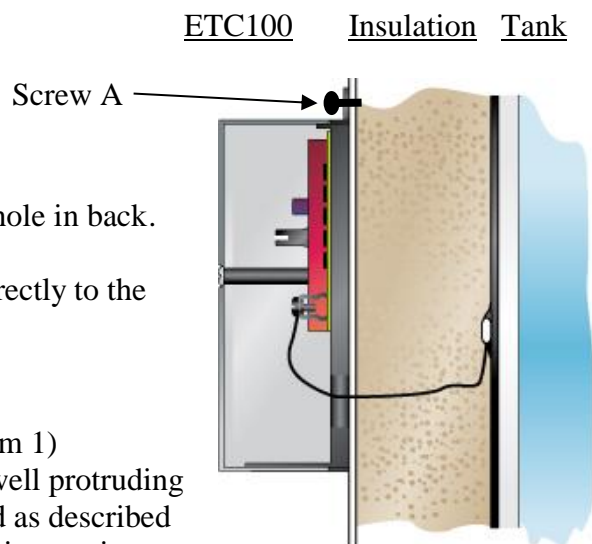
WARNING: Do Not Use With 110V circuits. For Switching 110V, use a standard TPI Control.

Run all 24VAC wiring thru the square notch on bottom of ETC100 case. (See Diagram 3)

Connect thermostat wiring to the TT connectors on the bottom left corner of the ETC100. (See Diagram 3)

For controlling zone valves, multi-zone controllers and switching relays, follow applicable wiring diagrams for low voltage thermostat circuits. (See Diagram 2)

For Newer Switching Relays: Some models need a resistor added to work with “Power Stealing” thermostats like the ETC100. If needed, install a 400 ohm 3 watt resistor between the W terminal and the C terminal (or the COM terminal of the 24V output) on the switching relay. (See Diagram 2)



ETC100 Cover:

Be certain to replace ETC100 cover using Black Screw provided.

Operation

Indicator Light operation:

The ETC100 has an integral indicator light at the top of the case. (See Diagram 3 or the inside cover)

Indicator light will come on (Green) when ETC100 is powered.

When ETC100 is calling for heat, the Indicator light will blink.

When ETC100 is satisfied, the Indicator light will be solid.

During normal operation, Indicator light is Green.

If ETC100 detects a failure, Indicator Light will flash Red. Replace ETC100.

Adjustments

Adjusting the Temperature Setting:

The temperature setting slide is on the right-hand side of the ETC100 (See Diagram 3 or the inside cover)

The ETC100 comes with a factory set temperature setting of 120°F.

To adjust the temperature setting, slide the lever to the desired setting, using the indicator scale.

ETC100 has a normal temperature setting range from 100°F to 140°F.

CAUTION: IT IS NOT RECOMMENDED TO SET TEMPERATURE ABOVE 140°F.
(SEE SCALD WARNING BELOW)

In order to set the temperature above 140°F, { **NOT RECOMMENDED** }, you must remove the SCALD DANGER label attached to the temperature slide.

WATER TEMPERATURE REGULATION

WARNING: Exposure to 125° F or hotter water can cause scalding injuries. Appropriate caution must be taken when using hot water. Special supervision must be given to those who cannot act quickly such as children, invalids or elderly persons.

The input of heat into the tank is controlled by a thermostat. These automatic controls are set at the factory to maintain a water temperature of 120° F*.

*Although these thermostats are designed to industry standards, they can fail to control temperature properly without any notice, and therefore should be tested periodically for your protection.

DANGER: IF YOU DISCOVER EXTREME HOT WATER COMING FROM THE FAUCET, IMMEDIATELY SHUT OFF THE MAIN SWITCH TO THE BOILER AND CALL COMPETENT SERVICE PERSONNEL. ANY OVERHEATED WATER IS A POTENTIAL HAZARD TO LIFE AND PROPERTY. DO NOT OPERATE UNTIL THE SOURCE OF THE PROBLEM HAS BEEN DETERMINED AND ELIMINATED.



Water temperature over 125° F can cause severe burns instantly or death from scalds.

Children, disabled and elderly are at the highest risk of being scalded.

See instruction manual before setting temperature at the water heater.

Feel water before bathing or showering.

Adjusting the Differential Setting:

The differential setting slide is on the left-hand side of the ETC100 (See Diagram 3 or Inside Cover of ETC100). The ETC100 comes with a factory set differential setting of 10°.

This means that the ETC100 will call for heat when the tank temperature has fallen to 10 degrees below the Temperature set point.

To adjust the differential setting, slide the lever to the desired setting, using the indicator scale.

Diagram 1 – For tanks with Immersion Wells

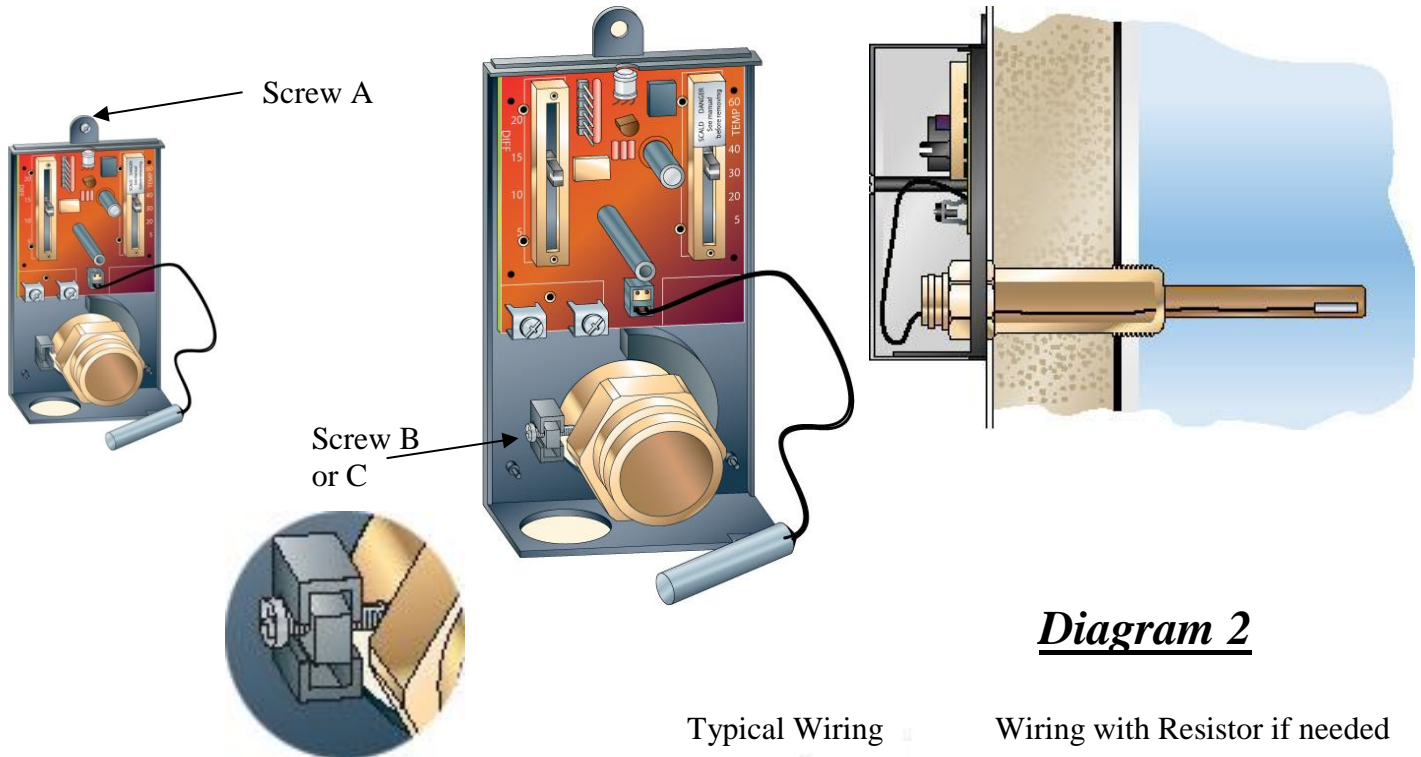
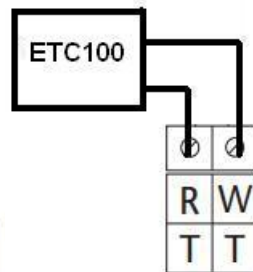


Diagram 2

Typical Wiring



Wiring with Resistor if needed

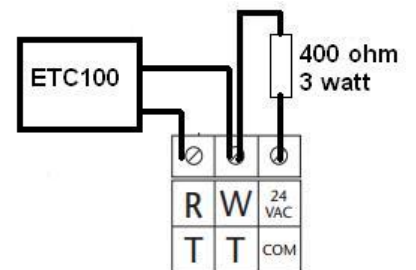


Diagram 3

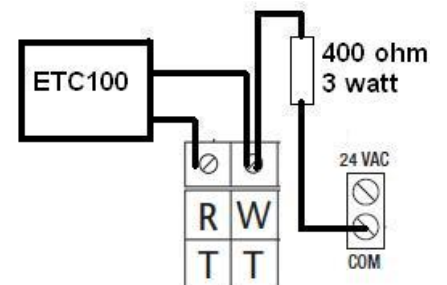
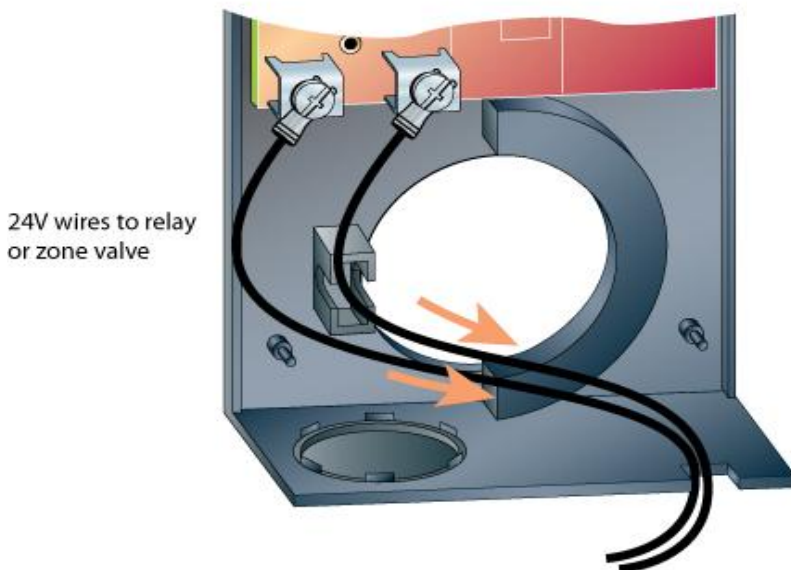


Diagram 4

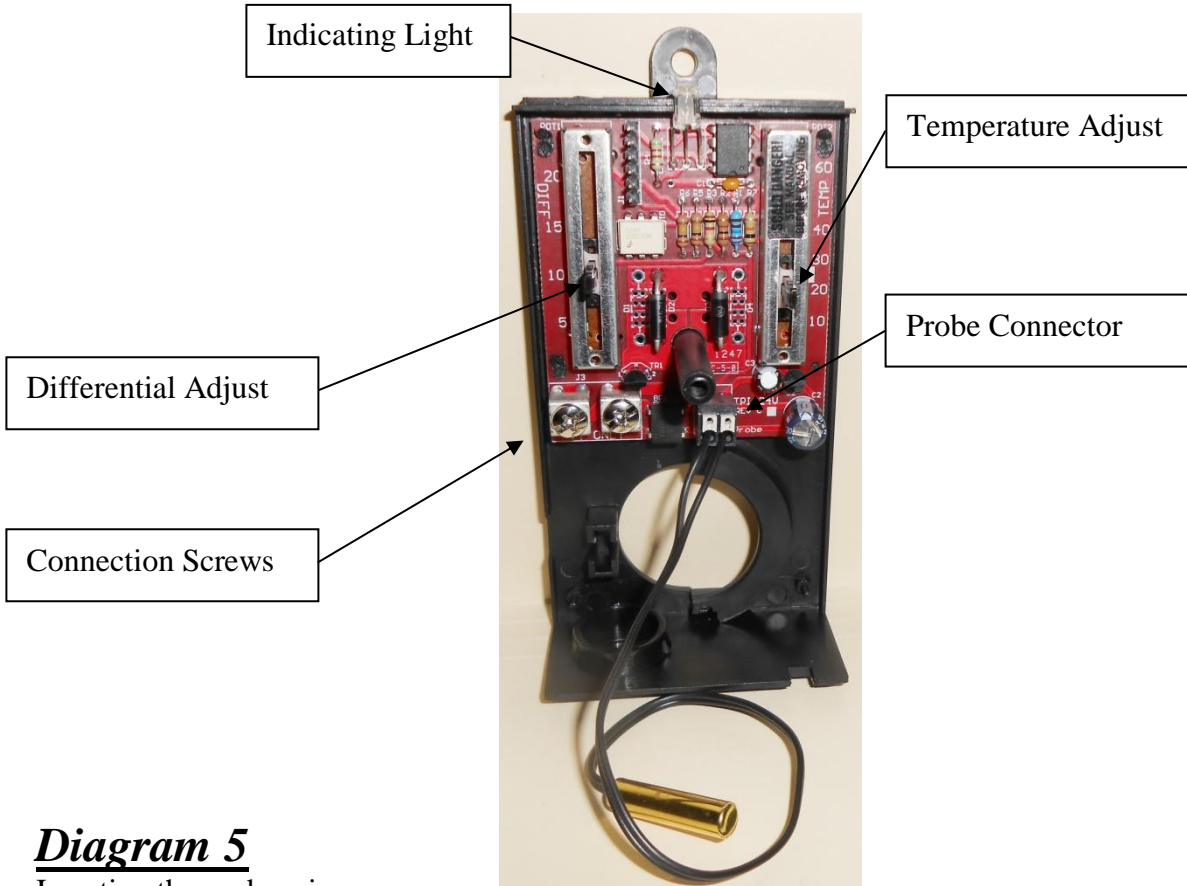
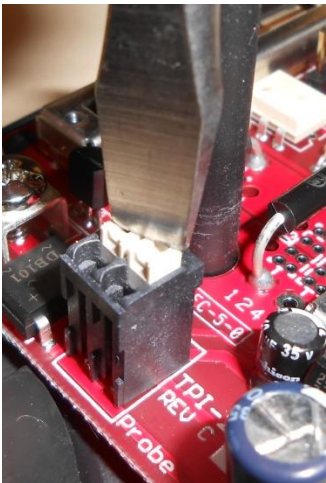


Diagram 5

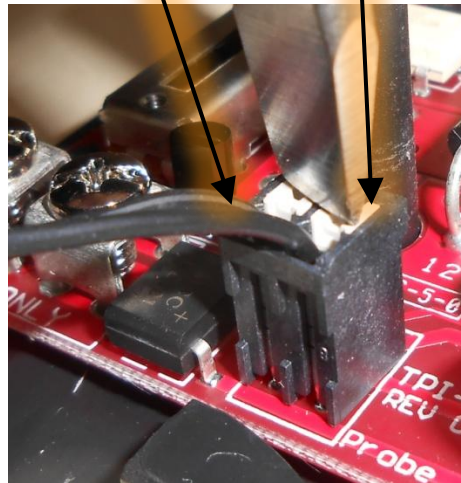
Inserting the probe wires

- 5.A – Position tool (such as screwdriver) on top of white buttons
- 5.B – Push Down on white buttons and push wires Down into black holes in top of connector
(This can also be done one side at a time)
- 5.C – Tug on each wire to make sure they don't move easily

5.A Buttons up



5.B Buttons down, Wires pushed down



5.C Buttons up, Wires tight

