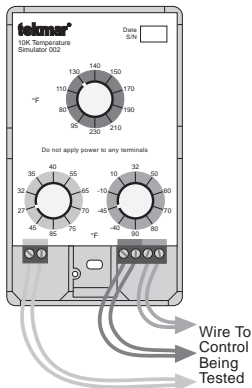


# tekmar® - Data Brochure

## 10K Temperature Simulator

D 002

09/94



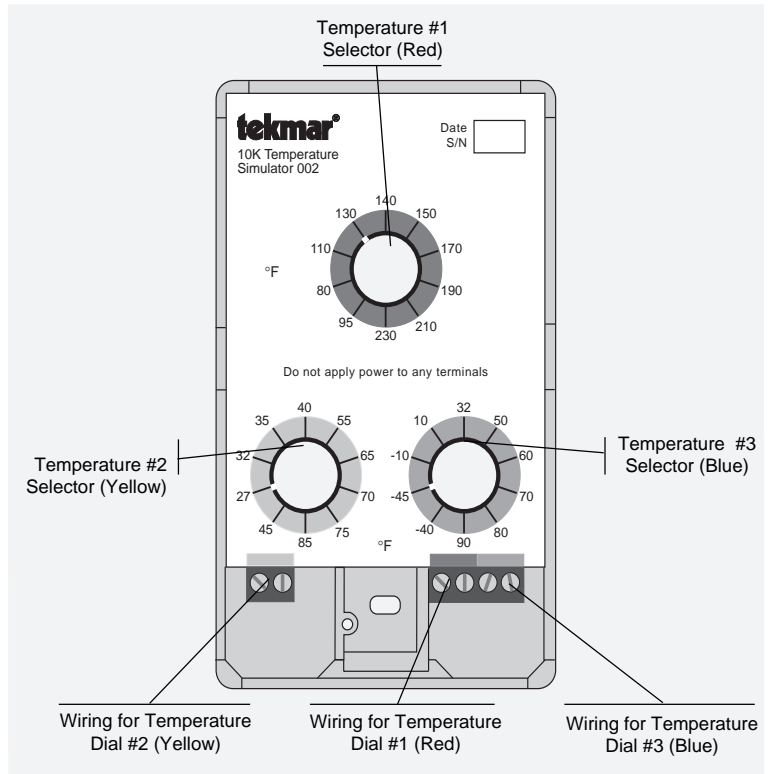
The tekmar 10K Temperature Simulator 002 can be used to test any tekmar control using 10K thermistor sensors. With this simulator, checking control operation on a counter or in a boiler room is a simple process. The simulator is also ideal for use at trade shows or product training schools to demonstrate the features and operation of various tekmar controls. Up to three different sensors can be individually simulated using the three separate rotary switches. The simulator is designed to provide sensor resistance values for a 10kΩ @ 77°F (25°C ± 0.2°C), β=3892, NTC thermistor. Other controls that use thermistor sensors with a different resistance curve **cannot** be tested correctly with this simulator. (This includes all older tekmar controls with 2K sensor inputs.)

### Sequence of Operation

After connecting up the simulator and applying power to the control being tested, simulation can begin. Using the data brochure for the control being tested, select temperatures from the simulator to verify the operation of the control.

As an example, Figure 3 shows a One Stage Boiler Control 250 being tested. The following are typical features you can test with the simulator — WWSD, Boiler Minimum, Boiler Differential and Heating Curve. Some calculations may be required to determine if correct control operation is taking place.

**Note: Understanding the operation of the control being tested is required to ensure correct conclusions are made. Do not apply power to the simulator as damage to the simulator may result.**



### Installation

#### Blue Dial (Wiring)

The blue dial temperature settings have been selected to be representative of outdoor air temperatures. The two blue wires running from the simulator are typically connected to the input terminals of the outdoor sensor of a tekmar control (see figure 3).

#### Red Dial (Wiring)

The red dial temperature settings have been selected to be representative of boiler supply temperatures. The two red wires running from the simulator are typically connected to the input terminals of the supply sensor of a tekmar control (see figure 3).

#### Yellow Dial (Wiring)

The yellow dial temperature settings have been selected to be representative of indoor feedback readings. The two yellow wires running from the simulator are typically connected to the 10K Sen input terminals of a tekmar control.

### Using the tekmar 10K Temperature Simulator to test the operation of a Boiler Reset control.

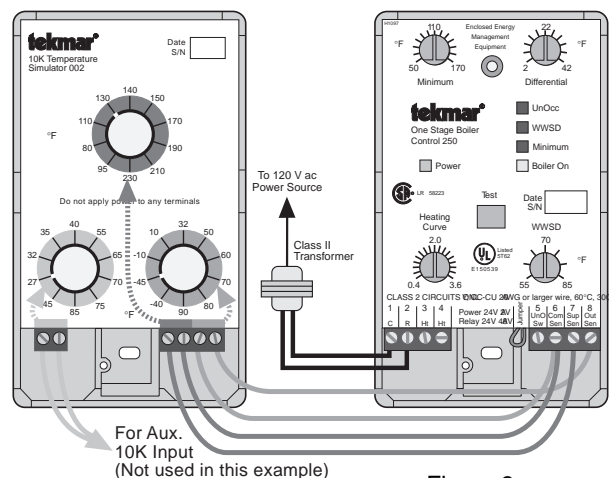


Figure 3

**In North America:** tekmar Control Systems Ltd., Canada  
 tekmar Control Systems, Inc., U.S.A.  
 Head office: 4611 - 23rd Street  
 Vernon, B.C. Canada V1T 4K7  
 Tel. (604) 545-7749 Fax. (604) 545-0650

