OPERATION

To operate the ***FireRight LT*** manually, proceed as follows:

1. Turn the kiln on.
2. Notice either the **HEAT** or **LIMIT** light glows, indicating that the system is on.
3. When operating manually, the controller has two modes; **soak** or **shut-off**. To select the **soak** mode, depress the pushbutton switch, leaving it latched in the "pressed' position. Push the button a second time to release the latch, leaving the control in the **shut-off** mode.
4. To **reset** the controller when latched off in the shut-off mode, depress the pushbutton, then press it again to release the latch.
5. Adjust the set point knob to the desired soak or shut-off temperature.
6. In the soak mode, the controller will maintain the kiln's temperature at the level you have set. In the shut-off mode, the controller will permit the kiln's temperature to rise to the limit you have set, then shut it off, allowing it to cool at its own natural rate.

SERVICE

If you have questions, please give the dealer or kiln manufacturer from whom you purchased your controller the first opportunity to assist you. ***FireRight*** **Controls** warrants ***FireRight LT*** units for one-year. We will repair or replace, without charge, units that fail because of defective material or workmanship. Factory service is available a reasonable flat rates for all other cases, and can be handled through your dealer, or factory-direct.

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INSTRUCTION SHEET

FireRight LT

Temperature Controller for Ceramic Kilns

GENERAL INFORMATION

The ***FireRight LT*** Controller is a simple non-indicating temperature controller specially designed for use with ceramic kilns. Soak and Shut-Off operation is provided for, over a temperature range of 0 to 2500°F. The controller is provided on a single panel, suitable for flush mounting on most kiln switch boxes.

The ***FireRight LT*** can be used to supply power for small kilns, and to operate high voltage power switching devices on larger kilns, such as definite purpose contactors and mercury relays. Standard push-on connectors permit wiring for either 110vac or 220vac, 50/60Hz power. A single-pole electrical contact, capable switching up to 15 amps at 240vac, constitutes the controller's output. Since all but the smallest kilns draw more than 15 amps, a power relay or definite purpose contactor is normally also required to complete the installation.

INSTALLATION

The ***FireRight LT*** kiln temperature controller may be installed on the kiln, or in a remote enclosure. If installed on the kiln, the temperature at the mounting location must not exceed 130°F during operation.

The control can be mounted in panels as follows:

1. Provide a rectangular cutout measuring 4 $^{1}/_{8}$" wide by 5 $^{1}/_{8}$" high.
2. Insert the ***FireRight LT*** in this cutout and mark the locations for its four mounting screws.
3. Remove the control and drill $^{7}/_{64}$" pilot holes at the marked locations.
4. Fasten the ***FireRight LT*** to the mounting panel using #6 self-tapping screws.

ELECTRICAL CONNECTIONS

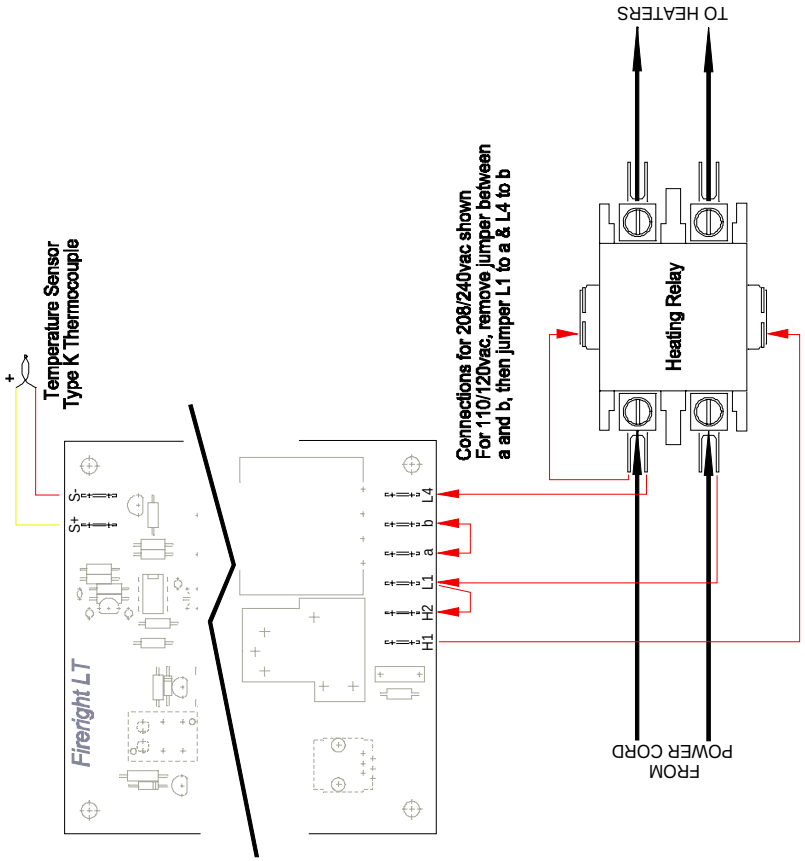
All electrical connections are made at the tabs provided at the top and along the bottom edge of the control's circuit board, using ¼" push-on terminals.

The ***FireRight LT*** will work with 50/60Hz input power, either 110/120vac or 208/240vac. Small kilns drawing less than 15 amps can be operated directly by the control's output contact. Larger kilns require a separate power relay, sized according to the nameplate current of the kiln.

The wiring diagram provided in this sheet illustrates a typical installation using a mechanical contactor (power relay) on a 208/240vac kiln. If the particulars of your installation are somewhat different:

1. Connect the temperature sensor to the **S+** (yellow wire) and **S-** (red wire) terminals. Any *Type K thermocouple* may be used. The ***FireRight LT*** is unaffected by sensor or extension wire resistance, although the sensor cable must by Type KX thermocouple extension wire (do not use copper hookup wire.)
2. For 120vac systems, connect terminal **L1** to **a** and terminal **b** to **L4**.
3. For 220vac systems, connect terminal **a** to terminal **b**.
4. Connect one leg of the input power to terminal **L1**, and the other to **L4**. (Most power relays have auxiliary terminals that are intended as a convenient source of control power. **L1** and **L4** can usually be connected to the power relay at these auxiliary terminals.)
5. Connect the output contact of the ***FireRight LT*** to interrupt current either to the kiln's electric heaters, or the solenoid coil of the power relay. This normally open contact is provided between terminals **H1** and **H2**.
6. If operating the kiln's electric heaters directly, connect one leg of the power line to **H1**, one end of the heating element to **H2**. Connect the other end of the heating element to the other leg of the power line.
7. If using a power relay, connect **H2** to **L1**, then connect **H1** to either one of the power relay's coil terminals. Next connect the second coil terminal to a **L4** auxiliary terminal on the same power relay.

Please note that the ***FireRight LT*** modulates power to the kiln on an *ON/OFF* basis. Kilns are often equipped with a motor-driven shut-off timers; in such cases, the power relay should be connected so that it does not interrupt power to the timer. Please also note that certain types of mercury relays, when used to switch high electrical heater current, can be highly inductive, and may cause the ***FireRight LT*** output contact to switch erratically. If any "chattering" is evident (**HEAT** light flickering), consider attaching a *snubber network* (available from any electrical supply) across the relay's solenoid coil.



Typical System Wiring – 208/240vac 50/60 Hz Connections