Therm Miser - Operating Instructions Robert Salem

For most applicants the instrument will be operating in the normal display mode. (except when required to adjust Set-point or Deviation Alarm).

Normal Start Up Procedure

From the off position, turn the main control knob to auto. The unit will ignite and control automatically.

Normal Shut Down Procedure

While unit is in operation, turn the main control knob to off. The gas flow will be cut off and the unit will shut off completely.

The low and high fire positions on the main control knob are for manual operation of the unit only. If either position is used the ignition switch must be depressed by hand immediately. (otherwise gas will be entering the unit but no flame will be present.)

Functions - Various functions can be displayed (and in some instances adjusted) from the front panel, using the function select button

A. Normal Display Mode - This function is a "read only" display.

B. Local Setpoint (SP) Displays setpoint value (up to set-point limit.)

C. Power Output (PWR%) - Also a "read only" display. Will show output power value (0 to 100%.)

D. Proportional Band (PB%) - Displays the proportional Band Value (0 for on/off control with preset differentia of .25%.)

E. Setpoint Limit Maximum (SP MAX) - Displays the setpoint limit valve (1252°F for this unit)

F. Lock - (Display 9999) - when in use, a four digit security code must be entered before the parameters can be altered from the front panel.

G. Deviation Alarm - (Dev Alm) - This parameter can be changed. If it is a ± value °F above or below the setpoint, for low and high fire control.

Adjustment of Parameters

Setpoint

To adjust the setpoint value (SP) the function select push button should be depressed so that the instrument displays the setpoint value (SP indicator and L.H. yellow indicator both on.) The new setpoint value can now be entered using the raise and lower push buttons. If any attempt is made to adjust the setpoint outside the range of the instrument, or outside the setpoint limit, the display will flash on and off. Once the new setpoint value has been entered, the function select push button should again be depressed until the instrument returns to the normal display mode.

Deviation Alarm

To adjust the deviation alarm (Dev Alm) the function select push button should be depressed so that the instrument displays the Dev Alm parameter. Now using the raise or lower push button, this parameter can now be changed. Once the new value has been entered, the function select push button should again be depressed until the instrument returns to the normal display mode.

Front Panel Indicators

Heat - This indicates when the unit is controlling at high fire.

Deviation Alarm

Red Indicator on = Alarm Condition

- Green Indicator on = safe condition

Deviation Display

When the instrument is in the normal display mode, the verticl group of seven rectangular indicators is used to show the deviation from the setpoint. The green indicator in the center shows that the instrument is on control (i.e. measured variable = setpoint + or - deviation switch weighting.) A positive deviation (process above setpoint) will cause the green indicator to go off and the red indicator immediately above it to come on. If the deviation increases above the first weighting level the next red indicator will come on. A negative deviation (process below setpoint) causes the red indicator (below the central green indicator) to come on in the same manner. (The two yellow indicators at the bottom of the amber function area on the front panel will not be on in this mode.

Push Buttons

Function Select - Pressing this push button enables the information for a particular function to be presented on the digital display. If the push button is held down for more than one second, the instrument starts stepping through the functions at a rate of three per second, until a return is made to the normal display mode.

Raise and Lower Push Buttons - These are used to raise and lower the value of a selected function, if permissible. (In our case to adjust the setpoint or deviation alarm.) If the button is depressed the value is incremented by one in the least significant digit. If the button is held down the value starts automatically incrementing at a rate of 25 per second.