FEATURES
120/240 VAC Operation (Field Selectable)
Sub-panel Mount
Dual Solid State Outputs
Thermistor, RTD, and
Thermocouple Sensor Inputs
Remote or Integral Set Point
Range Change Possible with
Change of Bridge Board
Sensor Change Possible with
Change of Bridge Board
Auxiliary Output Indication
Program Input Bridge Boards
Output One: Time Proportioning
and Output Two: Choice of Time Proportioning or
on-off.

GENERAL
The Series 250 is a sub-panel mount, dual
output, heat/cool temperature controller.
The control mode is time proportioning for
the primary output and a choice of time
proportioning or on-off for the secondary
output. The secondary output is slaved to
the primary output and is adjustable from
5°C to 100°F, either above or below the
primary. The standard controller comes
with the adjustment above the primary, but
an option allows for the adjustment to be
made below the primary. Outputs are dual
solid state zero switching triacs.

The controller will accept thermistor, RTD,
or thermocouple inputs. The standard bridge
boards will drive a full scale analog meter
and the special bridge boards will feature a
5mv/LSD output capable of driving a digital
meter. The special bridge boards will accept
the standard set point assemblies or will
accept a 5 mv/LSD program input.

SPECIFICATIONS:

CONTROL MODE:
1) Output One is Time Proportioning.
2) Output Two is Time Proportioning or On/Off.

PROPORTIONAL BAND: Adjustable, typically 0 to 50°F. When at
0°F, the controller reverts to an on-off mode. Switching sensi-
tivity is 2°F when in an on-off mode.

CYCLE RATE: Fixed. Typically 10 seconds.

NULL BAND: Second set point adjustable from 5°F to 100°F
either above or below set point.

SENSOR: Thermistor, RTD, or thermocouple available.

OUTPUTS:
1) Dual solid state zero switching triacs rated at 1 amperes,
120/240V. Note: Load current must be 0.05 amperes
minimum to insure proper triac switching.
2) Heating: Solid state zero switching triac rated at 15
amperes, 120/240V. Note: Load current must be 0.1
amperes minimum to insure proper triac switching.
Cooling: Solid state zero switching triac rated at 1 amperes,
120/240V. Note: Load current must be 0.05 amperes
minimum to insure proper triac switching.

Auxiliary Outputs:
1) On the standard bridge boards available, there is a 0-1
mV output to drive a calibrated full scale analog meter.
2) On the special bridge boards available, there is a 5 mV/LSD
output to drive a digital meter. RTD models only.

Auxiliary Input:
On the special bridge boards, there is a pro-
gram input that accepts a 5 mV/LSD signal.

Line Voltage: 120/240 VAC, ± 20%, 50/60 Hz. (field selectable).

Power Consumption: Less than 3.5 V.A.

Operating Ambient: 30 to 130°F.

Control Accuracy:
Typically ± ¼°C depending on design of the thermal system.

Set Point Shift / Line Voltage:
± 20% shift in line voltage will produce a set point shift
of less than ± 25% of span.

Set Point Shift / Ambient: Typically 5 microwatts/°F ambient
referred to the input (thermocouple models).
Typically ± 1°F (RTD and thermistor models).

Isolation:
Thermocouple Models — T.C. input to line and load.
RTD and Thermistor Models — Sensor and control circuitry
are isolated from line and load.

Coil junction compensation:
Thermocouple Models — Automatic, thermocouple is connected directly to unit.

Sensor Protection:
RTD and Thermocouple Models — In the event of an open
sensor, load power will de-energize.
Thermistor Sensor — In the event of a shorted sensor, load
power will de-energize.