Temperature Controller

FEATURES
120/240 VAC Operation  
(Field Selectable)
Sub-panel Mount
Time Proportioning with Manual Reset
Thermistor, RTD, and Thermo-couple Sensor Available
Relay or Solid State Output
Remote or Integral Set Point Potentiometer
Heating or Cooling Mode Available
Range Change Possible by Change of Bridge Board
Sensor Change Possible by Change of Bridge Board
Auxiliary Output Indication
Program Input Bridge Boards Available

GENERAL
The Series 201 is a sub-panel mount temperature controller with time proportioning and manual reset as the control mode. The adjustments for cycle time, proportional band, and manual reset are readily accessible through holes in the case.

The controller will accept thermistor, RTD, or thermocouple sensor inputs. It has three possible outputs: 10 amp relay, 1 amp triac, and 15 amp triac. The standard bridge boards will drive a full scale analog meter. Special bridge boards are available that feature a 5 mv/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.

DATA SHEET
201 SERIES

SPECIFICATIONS:
LINE VOLTAGE: 120/240 VAC, ± 20%, 50/60 Hz (field selectable).
POWER CONSUMPTION: Less than 4 V.A.
CONTROL MODE: Time proportioning with manual reset.
OUTPUTS:
1) S.P.D.T. relay rated 10A/120V, 5A/240V resistive, 50 V.A. inductive.
2) Solid state zero switching isolated triac rated at 1 ampere at 120/240 VAC.
   Note: Load current must be 0.05 amperes minimum to insure proper triac switching.
3) Solid state zero switching isolated triac rated at 15 amperes at 120/240 VAC.
   Note: Load current must be 0.1 amperes minimum to insure proper triac switching.

AUXILIARY OUTPUTS:
1) On the standard bridge boards available, there is a 0 to 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.

AUXILIARY INPUT:
On the special bridge boards, there is a program input that accepts a 5mv/LSD signal.

SENSOR: Thermistor, RTD, or thermocouple available.
OPERATING AMBIENT: 30 to 130°F.
CONTROL ACCURACY:
Typically ± 1/2°C, depending on design of thermal system.

SET POINT SHIFT W/ AMBIENT:
Typically 5 microvolts/°F ambient referred to the input (thermocouple models).
Typically ± 1°F (RTD and thermistor models).

SET POINT SHIFT W/LINE VOLTAGE:
± 20% change in line voltage will produce a set point shift of less than ± .25% of span.

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

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.

COLD JUNCTION COMPENSATION:
Thermocouple Models — Automatic; thermocouple is connected directly to unit.

PROPORTIONAL BAND: Adjustable, typically 5 to 50°F.
CYCLE TIME: Adjustable, 2 to 30 seconds.
MANUAL RESET: Adjustable over 100% of proportional band.

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Set Point
0 = Program input assembly
1 = Internal assembly
2 = Remote assembly
*(order separately)

Control Mode
1 = On-off
8 = TP/Manual reset

Output Mode
0 = Cooling
1 = Heating

Output
B = 10A relay
C = 1A triac
D = 8A triac

Sensor Type/Range Code No.

Program Input:
RH signal Conditioner

Remote Setpoint
Code No. Range Assembly, #
001 0 to 100% RH A006-188
007 0 to 99.9% RH A006-297

mV Scale Factor
5mV/%RH
50mV/%RH

Platinum Sensor Code No.

Remote Setpoint
004 0 to 250°F A006-307
005 -87 to +191°F A006-301
008 0 to 1000°F A006-308
009 0 to 199.9°F A006-329
011 -49.9 to +199.9°F A006-330
013 0 to 99.9°C A006-332
014 -120 to +500°F A006-334
015 0 to 800°C A006-335
022 0 to 399.9°C A006-374

No Program Input:

Remote Setpoint
Platinum RTD

Code No. Range Assembly, #
100 0 to 800°F/ -20 to +320°C A006-290
101 0 to 1000°F/ -20 to +540°C A006-291
102 0 to 250°F/ -20 to +120°C A006-316
103 0 to 140°F/ -20 to +60°C A006-309

Remote Setpoint
Thermocouple Code No. Range Assembly, #
300 0 to 140°F/ -20 to +60°C A006-283
301 0 to 250°F/ -20 to +120°C A006-284
302 200 to 600°F/ 63 to 320°C A006-285
303 150 to 400°F/ 65 to 230°C A006-317
304 50 to 150°F/ 10 to 85°C A006-318

Remote Setpoint
Thermocouple (TC)

Code No. Range Assembly, #
600 0 to 250°F/ -20 to +120°C A006-289
601 0 to 500°F/ -20 to +260°C A006-287
602 0 to 1000°F/ -20 to +540°C A006-288
603 0 to 2000°F/ -20 to +1100°C A006-288