

# series 100

## SUB PANEL TEMPERATURE CONTROL

**ZYTRON**

The Series 100 controller is designed for general purpose commercial and industrial temperature regulating and limiting applications. The latest solid state technology and an innovative modular packaging concept has produced an exceptionally flexible family of controllers. Low cost and many standard options make this controller uniquely suited for many OEM applications.

### PRODUCT applications

- Packaging Machines
- Environmental Chambers
- Solvent Reclamation Sys
- Commercial Dryers
- Refrigeration Equipment
- Incubators
- Laboratory Baths & Ovens
- Parts Washers & Degreasers
- Film Processors
- Plastic Molding Equipment
- Chillers

### HIGHLIGHTS

- low cost
- completely enclosed
- easy mounting
- compact package
- screw terminals for field wiring
- single or dual outputs
- full two-year parts & labor warranty

### FEATURES

- 115/230VAC field selectable input
- Power and load-on indicator lamps
- Screw terminals with clamping plates
- ON-OFF control with adjustable differential

### OPTIONS

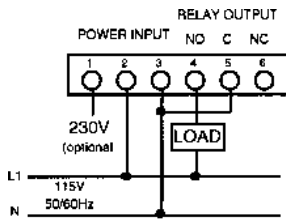
- Relay, triac or DC outputs
- PRTD, TC or Solid State sensors
- Integral or remote setpoint pot
- ON-OFF or proportioning
- PV & SV retransmission
- Remote temperature display capability
- Heat, cool, heat/cool and limit control action



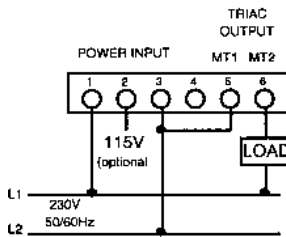
# series 100

## SUB PANEL TEMPERATURE CONTROL

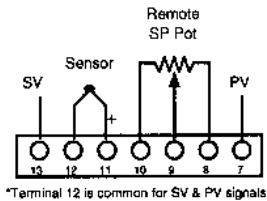
## specifications



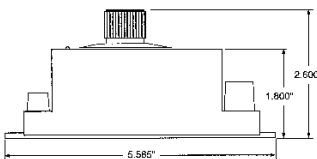
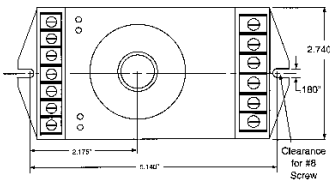
Typical Line Voltage Wiring  
(Relay Output)



Typical Line Voltage Wiring  
(Triac Output)



Typical Low Voltage Wiring  
(100-1B140-JT01)



**Power Input:** 115/230VAC +/-10%, 50/60Hz (field selectable);  
24VAC +/-10% optional

**Control Outputs:** Relay rated 10 or 20 Amp resistive and  
1 Amp Pilot Duty @ 120/240VAC;  
ZVS Opto Coupled Triac rated 1, 10 or  
20 Amp 120/240VAC resistive;  
24VDC to drive external Solid State Relay.  
\*Note: MOV's and Snubbers used where applicable.

**Control Action:** Heating (open-on-rise), Cooling (close-on-rise)  
or Heating & Cooling, Limit with Manual Reset

**Auxiliary Outputs:** 10mv/°C PV & SV retransmission or remote digital  
display outputs are optional.

**Sensors:** Platinum RTD, 100 ohms @ 0°C Thermocouple,  
types J, K, T or E thermocouple  
with automatic cold junction compensation

**Control Modes:** On-Off with adjustable hysteresis from .25°C to 5°C;  
Time proportioning with adjustable bandwidth from  
1°C to 10°C (standard cycle rate is 2 sec. for Triac output  
& 10 sec. for relay output, manual reset optional);  
Latching Hi Limit with manual reset.

**Setpoint Adjustment:** Fixed SP (trim pot adjustable), local potentiometer,  
remote potentiometer or 0 to 10VDC programming

**Setpoint Ranges:** See ordering info for standard ranges.  
(Contact factory for special ranges)

**Accuracy:** Typically better than 0.5% of set point span.

**Control Stability:** Typically better than ±1°C with ±10°C change in  
ambient temperature or ±10% change in line voltage.

**Sensor Fault Protection:** Open or shorted RTD or open thermocouple  
causes upscale output condition.

**Amb. Operating Temperature:** 0°C to 55°C (32°F to 130°F)

\* Contact factory for special requirements

**ZYTRON**

20 LEXINGTON AVENUE, TRENTON, NJ 08618  
TEL 609 771 0101 FAX 609 771 0020

© 2000-2001 Zytron Control Products, Inc. All Rights Reserved.

MODEL 1 0 2 - 1 E 0 1 1 - PT02 \*choose from the options below

**SERIES 100**

**CONTROL TYPE**

- 0 Heating
- 1 Cooling
- 2 Heating/Cooling
- 3 Heating with Tracking Alarm
- 4 Heating with Non-Tracking Alarm
- 5 Cooling with Tracking Alarm

**SETPOINT ADJUSTMENT**

- 0 Fixed Setpoint
- 1 Remote Potentiometer
- 2 Local Potentiometer
- 3 0 to 10VDC Programmable

**CONTROL MODE**

- A Proportioning (Adj. BW)
- B ON-OFF (Adj. Hysteresis)
- C Proportioning w/Manual Reset
- D Proportioning Heat/Cool
- E ON-OFF Heat/Cool
- F Proportioning Heat; ON-OFF Cool
- G ON-OFF Heat; Proportioning Cool
- H Hi Limit w/Manual Reset

**AUX. OUTPUT**

- 0 None
- 1 10mv/oC PV & SP
- 3 10mv/oC PV & +5VDC PWR

**OUTPUT 1**

- 0 None
- 1 10 Amp Rly
- 2 1 Amp Triac
- 4 10 Amp Triac
- 5 20 Amp Triac\*
- 8 20 Amp Rly\*
- 9 24 VDC

**OUTPUT 2**

- 0 None
- 1 10 Amp Rly
- 2 1 Amp Triac
- 4 10 Amp Triac
- 9 24 VDC

\* available on one output only

**STANDARD RANGES AND SENSORS**

\* NOTE: Use suffix 00 for un-calibrated ranges

**PLATINUM RTD**

- PT01 - 100C to +150C
- PT02 - 20C to +260C (0F to 500F)
- PT03 - 20C to +540C (0F to 1000F)
- PT04 0C to +100C (32F to 212F)
- PT05 - 20C to +120C (0F to 250F)
- PT06 +20C to +60C (68F to 140F)
- PT07 +10C to +150C (50F to 300F)
- PT08 +120C to +370C (250F to 700F)

**THERMOCOUPLE**

- \_\_T01 - 20C to +120C (0F to 250F)
- \_\_T02 - 20C to +260C (0F to 500F)
- \_\_T03 - 20C to +540C (0F to 1000F)
- \_\_T04 - 20C to +1100C (0F to 2000F)
- \_\_T05 - 20C to +150C (0F to 300F)

└ Insert prefix J, K, T or E for thermocouple type