



MODEL PC100

1/4 DIN CONTROLLER

- **Universal Sensor Input**
RTD's, T/C's, Solid State, Current & Voltage
- **Dual PID Control**
- **8 On/Off Process Control Outputs**
- **Automatic Ramping**
- **Guaranteed Soak Timing**
- **10 Local Programs**
- **Time of Day Auto Start**
- **Auto Restart After Power Failure**
- **Two Analog Outputs**
Chart Recorder & Process Control
- **Remote Interfaces Built In**
IEEE-488 (GPIB), RS232, & RS422/485
- **Safety Features**
Upper Limit, Lower Limit, Failsafe
- **Battery Backed Memory/Clock**



Sun Systems Model PC100 is a single channel, 1/4 DIN, digital process controller with a host of advanced features. The unit was designed to be easy to use while still providing all the features most users will ever need. The PC100 consists of the controller and two flat cable connected assemblies. The IEEE-488, RS232, and RS422/RS485 interface connectors are provided on a small assembly to allow for mounting at an easily accessible location in your equipment. The Process I/O board provides for the line input power connection and outputs to control your high power process circuits. All the line voltage related connections are located on the process I/O board allowing only low voltage flat cable connections to the controller.

Programming can be performed locally from the 20 key front panel or remotely. From the front panel you can set a single segment (Rate/Wait/Set) or an entire program can be entered via the local program EDIT mode. The Model PC100 provides for 10 separate local programs. The programs can either be entered via the front panel or down loaded from a host computer. Local programs can also be uploaded to a host computer for storage. Battery backed-up memory is provided so that programs entered will not be lost when the PC100 is turned off or when power is removed from the controller.

Local programs can be run immediately or programmed to run at a particular time of day. A local program can typically have 100+ segments with FOR-NEXT loops for cycling and programs may call other programs as subroutines. Remote control of the PC100 is performed by the IEEE-488, RS232 or RS422/RS485 remote interfaces. These interfaces come as a standard feature of the PC100.

A front panel MENU key is provided for configuration. The Menu items include, but are not limited to, Sensor type Selection, Sensor Calibration, C,F,K or User Units selection, Analog or Chart Recorder Output setup, Baud Rate, Deviation Limit, Low Limit, High Limit, Enable/Disable Buzzer, Compressor Control, Cool Boost Output, Heat and Cool PID adjustment and it allows you to run a local program at a settable time of day.

Call Sun Systems for further information on the Model PC100.

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Model PC100 - Specifications

INPUTS

SENSOR INPUTS

- RTD's, T/C's, Solid State, Current & Voltage
- Easily Configured & Selectable from Frontpanel
- C,F, K or User Units
- Open/Short Probe Detect
- Automatic Lead Compensation
- Automatic Cold Junction Compensation
- Standard Sensor Input Selection

RTD	-200C to +325C
Solid State	-60C to +160C
J t/c	-200C to +760C
K t/c	-200C to +1250C
T t/c	-200C to +325C
0 to 20mA	User Units
4 to 20mA	User Units
0 to 5V	User Units

- For other Sensor Input Selections contact factory

OTHER INPUTS

- Two TTL Level
- One 5 Volt 8 bit A/D
- External Failsafe

OUTPUTS

8 PROCESS CONTROL OUTPUTS (#0 to #7)

- #0 Heat
Goes on when heating is required (+/- logic)
- #1 Cool
Goes on when cooling is required (+/- logic).
- #2 Compressor Control or User Useable
Compressor Control is front panel selectable.
Easily Configured for +/- Logic also.
- #3 Boost Cooling or User Useable
Boost Cooling is frontpanel selectable.
Easily Configure for +/- Logic also.
- #4 to#6 User definable outputs (Open Collector 12 Volt, 100mA)
- #7 Power On/Off

ANALOG OUTPUT

- Two 0 TO 5Volt outputs one for charting, one for process control

REMOTE CONTROL

- IEEE-488
- RS232
- RS422/RS485

DIMENSIONS

- 6.62" Depth x 3.81"Width x 3.81"Height
- Panel Cutout 3.62" x 3.62"
- Weight [Net/Shipping] 2.75 / 4.0 Pounds

POWER

- Power Consumption 10 Watts
- Voltage 110/220/240
- Frequency 50/60 Hz
- Data Retention upon power failure via non-volatile memory.

LOCAL OPERATION

- 20 key keypad
- 2 line alphanumeric LCD
- 32 character alphanumeric LCD, 16 characters per line

RESOLUTION = selected range / 32768. (.02 deg C typ)

CONTROL TECHNIQUE

- PID Algorithm with user controlable auto tune
- Pulse Width Modulation on/off or 0-5 V analog control

ALARMS

- User Adjustable Upper, Lower and Deviation Limits
- Internal and External Failsafe

ACCURACY

- Line Voltage Sensitivity +/- .025% for a 10% Line Voltage Change
- Absolute Error after probe calibration +/- .05%
- Long Term Stability (per month) +/- .025%

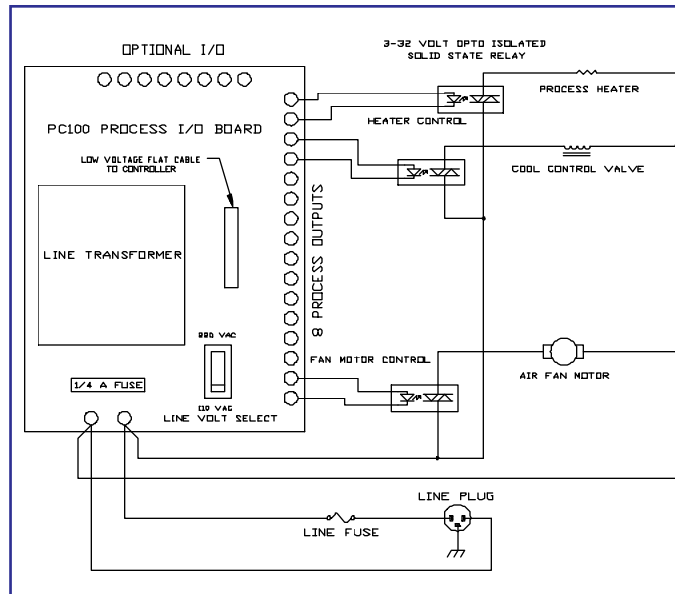
RANGE

- Temperature see SENSOR INPUTS
- Time 1.0 sec to 99 hr: 59 min: 59 sec or Continuous
- Ramping Rate .1°/min up to 1000

REMOTE, CONTROLLER, I/O



EXAMPLE PROCESS CONNECTION



PC100/0111

For further information on our complete line of temperature & process controllers, environmental chambers, and calibrators - CALL SUN SYSTEMS.

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