1604

1/16 DIN Temperature Controller

- **Dual 4-Digit Display of Process and Setpoint**
- **Heat/Cool Control**
- **Three Outputs**
- **Heater Breakdown Current Monitoring Alarm**
- **Universal Inputs: TC, RTD, Voltage and Current**
- **SMART Self-Tuning with Fuzzy Logic**
- **Soft-Start Power Limiting on Power-Up**
- **NEMA 4X Faceplate**
- **Two Independent Setpoints Switched by Dry Contact Input**
- **RS-485 Digital Communications with ChromaSoft® Capability**

Description

The 1604 controller has all of the advanced control features of the 1601 and 1603 controllers, plus more. The dual display provides process and setpoint indication with 0.1 degree resolution. The optional third output may be used as a heater break down indication alarm. RS-485 Digital Communications and ChromaSoft® compatibility expand the applications and networking possibilities.

Features

- Heat/Cool Control Features Selection of Cooling Medium and Overlap
- Auto/Manual Control
- Two Independent (Run-Idle) Setpoints

  Dry contact input can be connected to toggle between setpoint #1 and setpoint #2.

  - LEDs give visual indication of active setpoint
  - Programmable ramp up/ramp down between two setpoints protects against overshoot/undershoot
- Independent Programmable Ramp on Setpoint Change

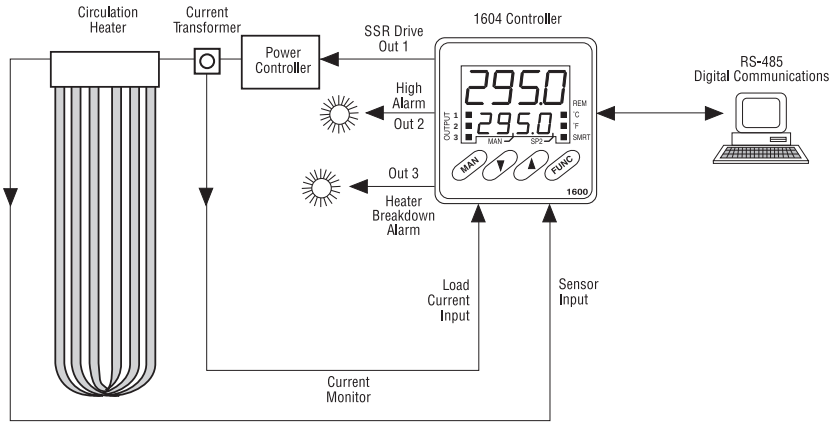
  Prevents overshoot/undershoot of process temperature when setpoint is changed.

  - Independently programmed Ramp Up/Ramp Down 1-100° per minute
  - Operates on any Setpoint Change (Manual or Run-Idle)
- Heater Breakdown Alarm/Current Monitoring

  Alarm is activated when load current reaches excessively low or high values, indicating an open load, disconnected wire or welded contact.

  - Prevents damage to sensitive processes and equipment
  - Displays load current without separate ammeter

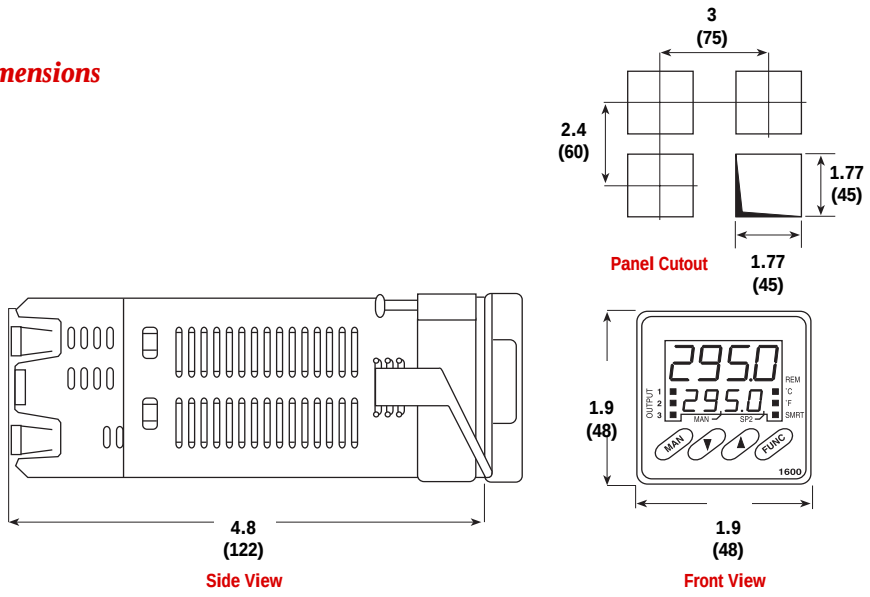
Application



1604

1/16 DIN Temperature Controller *(cont'd.)*

Dimensions



All Dimensions in Inches (mm)

Ordering Information

Complete the Model Number using the Matrix provided.

In Stock:

Model	PCN
1604-11030	306270
1604-61030	306288
1604-11050	328970
1604-61050	328989
1604-11130	306296
1604-61130	306309
1604-11230	306317
1604-61230	306325
1604-11330	306499
1604-61330	306501
1604-11430	306333
1604-61430	306341

Model	1/16 DIN Temperature Controller
1604	SMART Self-Tuning, 2 Outputs (Heat/Cool or Control/Alarm), Dual 4-Digit Display of Process and Setpoint, Field Selectable Universal Thermocouple, RTD, Voltage or Current Inputs, Auto-Manual Control, Programmable Alarms, 0.1 Degree Display Resolution, IEC 801-4 Noise Immunity, Optional Heater Break Alarm/Current Transformer Input, NEMA 4X Splashproof Faceplate, Optional RS-485 Digital Communications, Compatible with ChromaSoft® Remote Operator Interface Software

Code	Output 1 - Heat or Cool
1	Relay, 3 Amps at 240 Vac
6	SSR Drive, 14 Vdc at 20mA

Code	Output 2 - Cool or Alarm
1	Relay, 2 Amps at 240 Vac

Code	Options
0	None
1	Output #3, 2 Amps at 250 Vac (Resistive Load)
2*	Heater Break Down Input and Output #3
3	RS-485 Digital Communications and Output #3
4*	RS-485 Digital Communications, Heater Break Down Input and Output #3

Code	Power Supply
3	100/240 Vac
5	24 Vac/Vdc

Code	
0	Add to complete model number

1604	**-**	**1**	**1**	**0**	**3**	**0**	Typical Model Number

Accessories

*Controllers with the Heater Break Down option, model 1604-xx**2**xx and 1604-xx**4**xx require a Current Transformer to monitor the load current controlled by the 1604 controller. Specify one of the four Current Transformers listed below when ordering a controller with the Heater Break Down option.

	Part No.	PCN
Current Transformer, for 0.0-10.0 Amp Load Current	0149-01340	306480
Current Transformer, for 0-25 Amp Load Current	0149-01341	306350
Current Transformer, for 0-50 Amp Load Current	0149-01342	306368
Current Transformer, for 0-100 Amp Load Current	0149-01343	306376
ChromaSoft® Remote Operator Interface Software	SOFT-12000	—