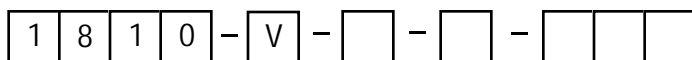


1/8 DIN Temperature Controller

- PID Control with no complicated menu setup
- Type J or K Thermocouple Input
- Front-Panel Linearized Analog Setpoint Dial
- Deviation Bargraph consisting of 10 LEDs
- Four Output Types Available
- Selectable Fixed-Ratio Control
- Auto-Resets for Load Change
- Output #1 De-Energizes When Open Sensor Is Detected
- LED Indication When Output Is Present
- LED Indication When Temperature Exceeds Setting and Relay Is Energized (Dual Output Models)
- Optional Alarm and Proportional Cooling Available



Ordering Information



Output #1
 B = SPDT relay
 F = 4-20 mA dc
 T = SPDT SS relay
 S = Pulsed dc

Output #2 (SPDT 2 A/240 Vac relay)
 0 None
 B High alarm only
 C Low alarm only
 D High and low alarm
 P Proportional (Cool)

Standard Thermocouple Scale Range	Code	Range	Input
	03F	0 to 300 °F	Type J
	08F	0 to 800 °F	Type J
	01F	0 to 1000 °F	Type J
	05C	0 to 500 °C	Type J
	16F	100 to 600 °F	Type J
	02F	0 to 2000 °F	Type K
	01C	0 to 1000 °C	Type K



SERIES 1810 TEMPERATURE CONTROLLER SPECIFICATIONS

INPUT SPECIFICATIONS

Sensor	Thermocouple types J, K
Cold Junction Compensation	Electrical
Thermocouple Break Protection	Built-in upscale, failsafe to open sensor
Common Mode Rejection*	Maximum error, $\pm 1^{\circ}\text{C}$ or equivalent $^{\circ}\text{F}$ with 240 V 60 Hz applied as a common mode signal between sensor input and chassis ground
Series Mode Rejection*	Maximum error, $\pm 1^{\circ}\text{C}$ or equivalent $^{\circ}\text{F}$ with series mode signal of 100 mV pk-to-pk at 60 Hz

*Applies to all models except "F" and "S" output types when used with other than Athena® SCRs or stagers

OUTPUT SPECIFICATIONS

Output #1 Types	B = mechanical relay, 10/8 A @ 120/240 Vac T = SS relay, 1 A holding, 10 A inrush S = pulsed dc, 0-20 Vdc F = 4-20 mA dc
Output #2 (optional)	SPDT 2A/240Vac relay (for temperature deviation or for proportional cooling applications, adjustable $\pm 0.5\%$ to $\pm 5\%$ of span)

PERFORMANCE SPECIFICATIONS

Ambient temperature Range	32 to 131°F (0 to 55°C)
Setpoint Resolution	0.25% of span
Proportional Band	Heat: 5% fixed, Auto-Adjust cycle time 10 second minimum Cool: 2% of range, fixed
Calibration Accuracy	0.5% of span at calibrated points
PID Time Constant	
Fast	Rate (Derivative): 0.1 sec Reset (Integral): 20 sec
Medium	Rate (Derivative): 15 sec Reset (Integral): 80 sec
Slow	Rate (Derivative): 50 sec Reset (Integral): 330 sec

DISPLAYS AND INDICATORS

Temperature	Direct reading scale
Deviation	LED bar graph
Outputs	Red LEDs indicate when output is present and (dual output only) when temperature has exceeded the setting and the relay is energized

ELECTRICAL POWER SPECIFICATIONS

Input Voltage	102-264 V
Frequency	50-60 Hz
Power Usage	Less than 5 VA