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Data Sheet

August 2, 2026

STANFORD RESEARCH SYSTEMS

Stanford Research PTC10 Programmable temperature controller

Stanford Research PTC10 Programmable temperature controller The PTC10 provides a modular programmable temperature controller designed for precision thermal regulation with up to four I/O card slots supporting thermistor, diode, RTD, thermocouple inputs, and dedicated heater drive outputs. The system includes PID feedback, multi-purpose analog I/O, data logging, alarms, and remote control interfaces. Laser and optical component temperature stabilization; cryogenic and oven control with appropriate sensor cards; multi-zone thermal experiments; PID tuning for physics and photonics labs; data logging of temperature profiles; alarmed thermal safety interlocks; remote automated temperature cycling. The PTC10 provides a modular programmable temperature controller designed for precision thermal regulation with up to four I/O card slots supporting thermistor, diode, RTD, thermocouple inputs, and dedicated heater drive outputs. The system includes PID feedback, multi-purpose analog I/O, data logging, alarms, and remote control interfaces. Laser and optical component temperature stabilization; cryogenic and oven control with appropriate sensor cards; multi-zone thermal experiments; PID tuning for physics and photonics labs; data logging of temperature profiles; alarmed thermal safety interlocks; remote automated temperature cycling.



MODEL

Stanford Research Systems PTC10

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

PTC10

LISTING

<https://aumictechlabs.com/products/ptc10-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Stanford Research Systems PTC10 Programmable Temperature Controller delivers precision temperature measurement, heater control, and data logging across laboratory and industrial applications. Its modular architecture accommodates up to four I/O cards, supporting configurations from single-channel monitoring to 16-input multi-point systems with up to 6 independent PID feedback control loops operating at 50 Hz. Temperature resolution reaches 1 mK, with custom calibration curves accepting up to 200 points loaded via USB. Data logs to removable flash media in binary format, convertible to ASCII using included software. Four configurable 24-bit analog I/O channels (± 10 V input/16-bit output), eight bidirectional digital lines, and four relay outputs provide flexible hardware integration. Alarming functions enforce upper/lower limits and rate-of-change thresholds per input channel, triggering audible alerts and relay state changes. Advanced macro programming enables task automation, cascade feedback implementation, and behavioral customization. Three virtual channels support macro variable plotting, logging, and feedback input. Standard interfaces include USB, Ethernet, and RS-232; optional GPIB (IEEE 488.2) available. Power input accepts 10 A at 88–132 VAC or 176–264 VAC, 47–63 Hz, or DC. Physical footprint: 17" W $\times$ 5" H $\times$ 18" D; 25 lbs.

Technical Specifications

PID control channels: Up to 6
PID sampling rate: 50 Hz
Temperature resolution: 1 mK
Input channels: Up to 16 (card-dependent)
Configurable analog I/O: Four channels, 24-bit ± 10 V input or 16-bit ± 10 V output
Digital I/O: Eight bidirectional lines
Relays: Four configurable outputs
Custom calibration points: Up to 200 per curve
Virtual channels: Up to 3
Power: 10 A, 88–132 VAC or 176–264 VAC, 47–63 Hz, or DC
Dimensions: 17" W $\times$ 5" H $\times$ 18" D
Weight: 25 lbs

Key Features

Modular I/O card system (up to 4 cards)
Dual-voltage AC input and DC power option
USB, Ethernet, RS-232 standard; optional GPIB
Binary data logging to USB flash media
Per-channel alarm limits with relay triggering
Macro-based automation and custom feedback loops
Thermistor, RTD, diode, and specialty sensor support

Typical Applications

Multi-point cryogenic and laboratory temperature monitoring
Process control with feedback regulation
Data acquisition and logging over extended runs
Custom sensor integration via macro programming

Compatibility & Integration

Communications via USB, Ethernet, RS-232, or optional GPIB enable integration into networked test environments and legacy instrument setups. Custom calibration curves and macro capabilities support non-standard sensor types and application-specific control logic.

Features & description

From manufacturer datasheet

Features

- Modular programmable temperature controller
- Up to 4 I/O card slots
- PTC320: thermistor, diode, RTD inputs
- PTC321: 4-channel RTD
- PTC330: thermocouple types
- Heater drive output cards (ordered separately)
- Multi-purpose analog I/O
- PID feedback control
- Data logging and alarms
- Remote interfaces

PTC10 Characteristics / Specifications

PARAMETER	VALUE
Model	PTC10
Manufacturer	Stanford Research Systems
Instrument Type	Programmable Temperature Controller
Architecture	Modular, up to 4 I/O cards
PTC320 Card	Thermistor, diode, RTD sensor inputs
PTC321 Card	4-channel RTD
PTC330 Card	Thermocouple types
Heater Drive	Separate heater output cards
Control	PID feedback
I/O	Multi-purpose analog I/O
Features	Data logging, alarms
Interfaces	Remote control (per installed options)
Alias	PTC10 Standard Operating Conditions Install appropriate sensor and heater cards for each control loop. Configure PID limits and alarm thresholds before enabling heater outputs. Operate sensors and heaters within card and sensor manufacturer ratings.
PTC320	thermistor, diode, RTD inputs
PTC321	4-channel RTD
PTC330	thermocouple types

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications

Specifications

PARAMETER	VALUE
Model	PTC10
Manufacturer	Stanford Research Systems
Instrument Type	Programmable Temperature Controller
Architecture	Modular, up to 4 I/O cards
PTC320 Card	Thermistor, diode, RTD sensor inputs
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PTC330 Card	Thermocouple types
Heater Drive	Separate heater output cards
Control	PID feedback
I/O	Multi-purpose analog I/O
Features	Data logging, alarms
Interfaces	Remote control (per installed options)
Alias	PTC10

Standard Operating Conditions

Install appropriate sensor and heater cards for each control loop. Configure PID limits and alarm thresholds before enabling heater outputs. Operate sensors and heaters within card and sensor manufacturer ratings.

Operational Notes

I/O cards (PTC320, PTC321, PTC330, heater drives) are ordered separately—confirm installed card set matches application. Multi-loop configurations require sufficient card slots and wiring discipline. Alias PTC10.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.