

Model 9700 Temperature Controller



General Description

The Scientific Instruments Model 9700 is an advanced, high performance temperature controller. The easy to use Model 9700 is designed with improved sensor input and interface flexibility, including the ability to interface with negative temperature coefficient RTD's and Chromel™ vs. Gold thermocouples. The Model 9700 can display two sensor inputs simultaneously using two high resolution 24-bit analog-to-digital converters with a separate current source for each input. Also included as standard equipment is communication interfaces via a serial RS-232 port and a parallel IEEE-488 bus. The Model 9700 is also equipped with 2 relays and *Accu-tune* autotuning in the control circuitry. It is backed by Scientific Instruments tradition of excellence in cryogenic sensors and instrumentation.

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General Specifications:

- Two channels, all diodes standard
- Two A/D's, 24 bit, 100 ms update time
- Dedicated constant current sources on each channel
- Dual line, 20 character VFD display (9 mm character height)
- Twenty key operator interface
- RS232 and IEEE-488 remote interface standard
- Analog output of temperature for both channels
- *Accu-tune* autotuning
- Two relays, both NO and NC contacts
- 16 bit processor, program in flash memory
- Heater output is 50 watts maximum
- Full short circuit protection on heater output
- Front panel bar graph indication of power
- Universal power supply (90-250 vac)
- Will fit 1/2 DIN rack (8.5" x 3.5" x 12")

Features:

- Low cost to support industrial diode applications
- High resolution, .001 K where sensor resolution permits
- RTD and TC by means of internal signal conditioning card, sensor specific, set at factory
- Dedicated A/D converter on each channel
- Continuous hardware display of heater power
- RS232 and IEEE-488 standard on all units
- PC based Graphical User Interface, (G.U.I., LabVIEW type design) to allow the user to download sensor calibration data, run time vs. temperature profiles, collect and store temperature data to disk, and perform instrument diagnostics
- LabView™ Driver

Options:

- RTD signal conditioning module (internal, 1 per channel) (includes current reversal to eliminate EMF voltage errors, gain and current set at factory for specific sensors)
- Thermocouple signal conditioning module
- External power booster available



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