

TC Laboratory Series

Ultra-stable Temperature Controller Instrument with IntelliTune® PID Control



FEATURES

- Three models: 5 A, 10 A, and 15 A output current
- Compliance voltages of 15 V (TC5 and TC10) and 20 V (TC15)
- Temperature stability better than 0.0009°C
- Compatible with a variety of sensors
 - » Thermistors
 - » 2, 3, or 4-wire RTDs
 - » Linear voltage sensors
 - » Linear current sensors
- Touchscreen with intuitive user interface
- Safety features protect your research
 - » Adjustable current limit, with Brick-Wall Never-Exceed circuitry
 - » Password protection available to lock out a selectable control set
 - » Over-temperature protection circuit
 - » Temperature limits on the load
 - » Shutdown signal to the QCL/laser driver load to protect against over- or under-temperature situations.
- IntelliTune® sets ideal PID control parameters for optimal time to temperature or disturbance rejection

FEATURES

- Complete command set for remote control from computer
- Auxiliary input for heatsink sensor
- Feature-rich for research projects
 - » USB and Ethernet interfaces with LabVIEW® Virtual Instrument application
 - » Automatic temperature scan function
 - » Data collection using a computer or USB flash drive
 - » Field upgradeable firmware
 - » Sophisticated error handling
 - » Save and recall functions for specific parameter sets
- CE compliant
- All instrument documentation and software are provided on a USB flash drive
- Optional rack mount kit: 2 U height, ½ rack width
- AC input, auto detect, 100-240 ±15% VAC, with a 50/60 Hz power-line frequency

* LabVIEW is a registered trademark of National Instruments.



406-587-4910

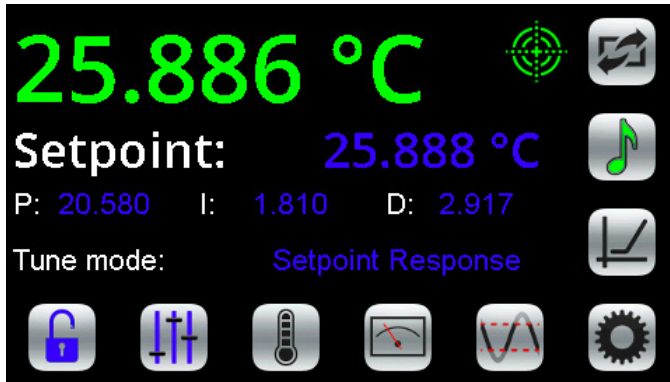
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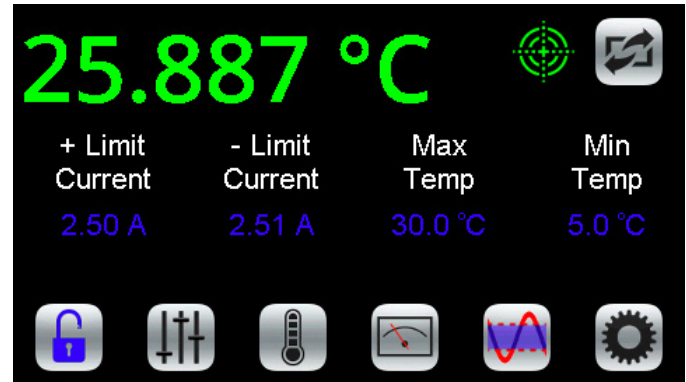
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INTUITIVE USER TOUCH SCREEN INTERFACE



Control Screen

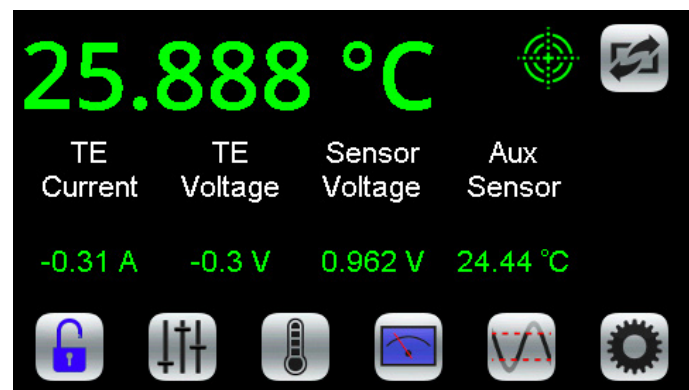


Limit Screen

APPLICATIONS

The advanced and reliable circuitry of the TC LAB Series instruments achieves better than 0.0009°C temperature stability with thermistors.

The ultra-stable temperature controller instruments are well-suited for research in electro-optical, medical, spectroscopy, and defense systems wherever precision temperature control is required.



Monitor Screen

ELECTRICAL SPECIFICATIONS

TEMPERATURE CONTROLLER SPECIFICATIONS

| DRIVER OUTPUT CURRENT | MIN | TYP | MAX | UNIT | NOTE |
|-------------------------|--------------|-----|-----|----------|---|
| Output Current | 5, 10, or 15 | | | A | 5 A for TC5 LAB, 10 A for TC10 LAB, 15 A for TC15 LAB |
| Compliance Voltage | 0-15 or 0-20 | | | V | ≤15 V for TC5 LAB and TC10 LAB, ≤20 V for TC15 LAB |
| Stability, 1 Hour | 0.0009 | | | °C | 25°C Ambient, On Ambient |
| Stability, 24 Hours | 0.002 | | | °C | 25°C Ambient, Off Ambient |
| Temperature Coefficient | 5 | 10 | 18 | ppm / °C | |

ORDERING INFORMATION

| | |
|---------------------|---|
| TC5 LAB | 5 A, 15 V Temperature Controller Instrument |
| TC10 LAB | 10 A, 15 V Temperature Controller Instrument |
| TC15 LAB | 15 A, 20 V Temperature Controller Instrument |
| RCKMT-LAB SNGL | 19" Single Unit Rack Mount Kit |
| RCKMT-LAB DUAL | 19" Dual Unit Rack Mount Kit |
| THERMISTORS | Various Thermistors Available |
| CABLES & CONNECTORS | Various connector kits and cables are available |

Free, effective, and responsive technical support is available.

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406-587-4910