SLICE-QTC Quad Temperature Controller

The SLICE-QTC is designed with four independent PID temperature loops for controlling TECs or heaters with high stability and precision. With fully adjustable PID loop parameters, high-power output capacity, and configuration flexibility, it is possible to control the temperature of a variety of plants with *sub-millikelvin temperature stability*.



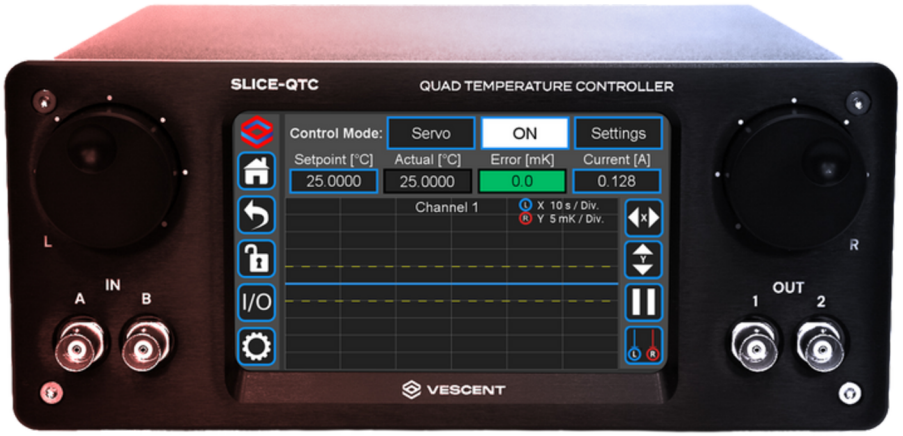
SLICE-QTC Quad Temperature Controller

The SLICE-QTC is highly configurable through the touchscreen, a host GUI, or serial commands. Easily control operating parameters such as set point temperature, maximum and minimum temperature limits, and slew rate.

Diagnostic signals such as the plant temperature, temperature error, and current output are available on the front panel so you always know how your loop is performing. With compliance voltages up to 18 V and current outputs up to 6 A, our proprietary low-noise power supply technology makes it easy to control a variety of different plants. DC control (not PWM) means high short-term stability and no radiated noise.

SLICE-QTC

Quad Temperature Controller



SLICE-QTC Touchscreen GUI



SLICE-QTC Back Panel

Features

- Four PID temperature control loops
- Up to 40 W user-routable capacity
- ***Sub-millikelvin stability***
- Sub-millikelvin set point resolution
- Auto tune for setting PID filters
- Assignable front-panel I/O
- Accepts all standard AC line voltages
- Large, bright touchscreen display
- Touchscreen GUI or remote API control

Applications

- Diode & quantum cascade laser
- Semiconductor amplifiers & tapered amplifiers
- Photonic integrated circuits (PICs)
- Nonlinear & photonic crystals
- Optical cavities, gas cells, and interferometers

SLICE-QTC Specifications

Parameter	Value
Performance	
Number of Channels	4
Loop Filter	PID
Control Range[1]	-20 to +120 C
Compatible Transducer	TEC or resistive heater
Compatible Sensor	NTC thermistor
Temperature Stability[2]	±0.2 mK
Precision	±0.2 mK
Control Capacity	40 W total, 20 W max per channel
Current Capacity[3]	6 A
Compliance Voltage	≤18 V
Input & Output	
I/O Voltage Range	±10 V
Triggering	TTL
User Controls	Front-panel touch screen, Serial API
Input Voltage	
Input Line Voltage	100-240 VAC
Frequency	50-60 Hz
Phase	1 phase
User-Serviceable Fuse	T 2.0 A L 250V
Environmental	
Operating Temperature	>15 and <30 °C
Humidity	<60%
Dew Point	<15 °C

1 Plant Dependent

2 Plant Dependent. Value Specified over 10 min. window for D2-200 laser

3 Per channel

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