

SLICE-QTC

Four-channel PID Temperature Controller

The SLICE-QTC is a SLICE of our Integrated Control Electronics Line: 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.

The SLICE-QTC is highly configurable through the touch screen, a host GUI, or through 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 temperature controller

Control SLICE through the front panel, a PC GUI, or API commands



Features:

- Four PID temperature control loops
- Up to 40 W user-routable capacity
- Assignable front-panel I/O
- Sub-millikelvin stability
- <2 mK set point resolution
- Accepts all standard AC line voltages
- Large, bright touch screen display
- PC GUI, API, or touch screen control

Applications:

- Diode lasers, tapered amplifiers, SOAs
- Nonlinear & photonic crystals
- Photonic integrated circuits (PICs)
- Gas cells, optical cavities, and interferometers
- WDM devices

SLICE-QTC Performance Specifications

Performance	
Channels	4
Loop Filter	PID, adjustable time constants and gains
Control Range ¹	-20 to +120°C
Compatible Transducer	TEC or resistive heater
Compatible Sensor	Negative Thermal Coefficient (NTC) Thermistor
Temperature Stability ²	±0.2 mK over 1 hr
Set Point Resolution	<0.2 mK
Slew Rate Limit	Yes
Load Limits	40 W total ³ 6 A/channel 18 V Compliance Voltage
Slew Rate Control	Yes
Interface	
Control	Front-panel touch screen, PC GUI, Serial API
Connections	Host control: USB Type B
Power Input	100 - 240 VAC; 50 - 60 Hz

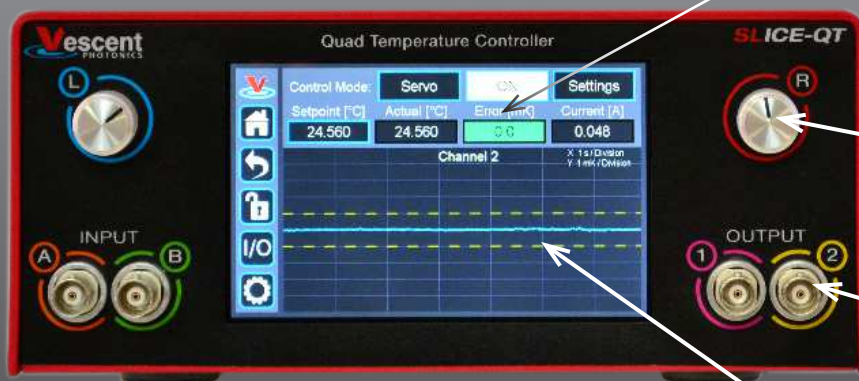
All specifications subject to change without notice.

¹Proper choice of thermistor can extend this range (see owner's manual)

²In loop; plant dependent; value specified for Vescent D2-100 laser head

³User-distributable over four channels; 20 W per channel max

SLICE-QTC temperature controller



Touch screen for easy set up and control

Rotary knob interface allows fast, precise value entry

User-assignable front-panel I/O for monitor and control inputs

Monitor performance of lock in real time

Vescent Photonics, LLC
14998 W. 6th Ave., Suite 700
Golden, CO 80401
USA
+1 (303) 296-6766
www.vescent.com

