



Description

The mK2000B is the latest precision temperature controller from Instec Inc. Consistent temperature stability, ramp rates, and programmable temperature profiles are easily accessible via the integrated touchscreen interface. A single controller can be configured to control up to 4 process variables, each with independent PID parameters. Bi-directional voltage for thermoelectric stages is available.

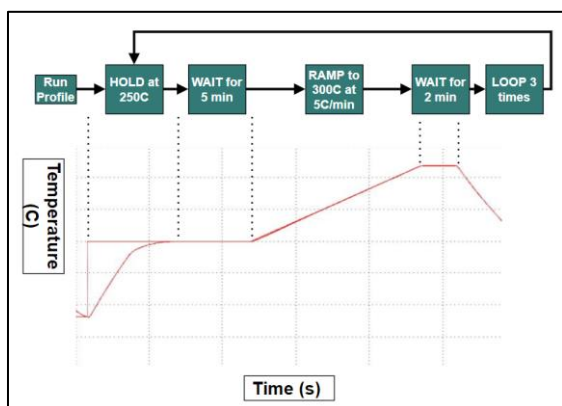
Temperature Control specifications

Temperature resolution	±0.001°C Thermistor ±0.01°C DIN Class A RTD (standard) ±0.1°C k-type thermocouple
Temperature stability	±0.05°C (Depending on stage model)
Minimum ramp rate	±0.01°C/min
Maximum ramp rate	200°C/min heating rate at 100°C (Up to 2000W output power)
Communication	USB2.0, Ethernet, Optional RS232
LVDC Output	Optional LVDC low-noise power supply

Features

- 4 sets of calibration tables, each supporting up to 20 calibration points
- Control up to 4 independent process variables
- Includes "InstecApp" companion software
- USB 2.0 interface, Ethernet, and other options
- Compatible with all Instec instrumentation equipment, including ALCT and LN2 systems
- Redundant safety mechanisms to protect against hardware failure

User-Defined Temperature Profiles



Build custom temperature profiles to automate test procedures

Product Dimensions



Width (W) 25.5 cm Length (L) 34.5 cm Height (H) 17 cm

Customization Options

Analog Temperature-to-Voltage Output

Convert temperature data to analog voltage, simplifying system integration

Multiple Sensor Types

Add sensors to monitor system parameters like pressure and humidity

Alternate Control Methods

Control the mK2000B via analog input or RS-232 interface

Add process Variables and Sensors

Control up to 4 process variables (8 sensors total) with a single controller

And more...

Contact Sales@instec.com for more information regarding mK2000B customization options

Free InstecApp Companion Software

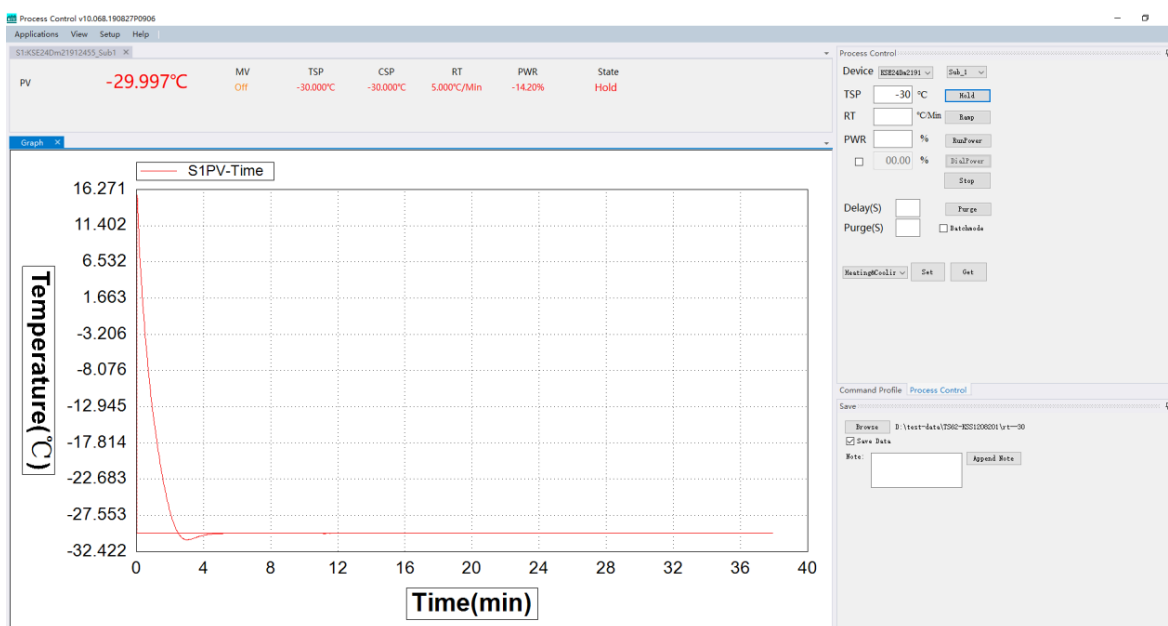


Figure: Screenshot of the Instec App Process Control window.

The InstecApp can be used to simultaneously record both the target value and actual value of each process variable. Data can then be exported as a .CSV file for further analysis. Utilize custom temperature profiles to setup automated experiments or complex test procedures. USB camera integration allows for capture still shots or generating videos of samples during temperature profiles.

Compatible with all Instec products including humidity control, external monitoring sensors, LN2 cooling system, and more.

Custom Software Support

Develop custom software applications and integrate the mK2000B with your existing experimental setup with incredible ease via our library of customized SCPI commands. Simply connect to the controller via USB or Ethernet, open a Virtual COM Port (VCP), and send simple text-based commands to set target temperatures, execute custom profiles, and more. Free software development kits (SDK) available upon request (C#, Python, LabView, and MATLAB).

Warranty, Recalibration, and Buyback Credits

1-year standard warranty assures that all Instec products conform to Instec specifications and are free of defects. Should an Instec product malfunction during the warranty due to any defect in workmanship or material, Instec will repair or replace it at no charge, provided the product has not sustained substantial abuse, misuse, or unauthorized alterations. 3-year extended warranties are available upon request.

Instec stages are always tested to ensure proper functioning and calibration. If a re-calibration is needed, Instec offers a service for recalibration. Please contact support@instec.com for more information.

Ask us about a system upgrade!

Older controller systems may not be compatible with modern PCs or ethernet communication. Ask sales@instec.com about our Buyback Program and receive a credit to put towards a new stage or controller.