

# High Precision Temperature Controller

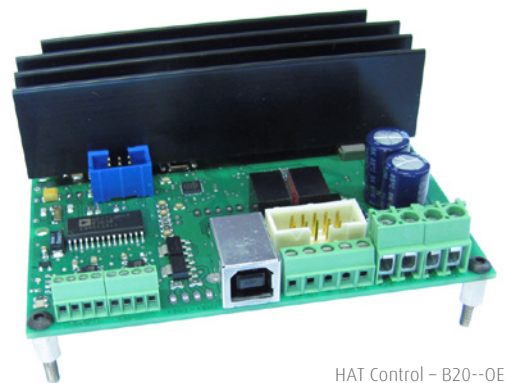
## technical specification

This high precision temperature controller fulfils maximum performance requirements whether you are using heating or Peltier elements. The outstanding and reliable temperature stability for various applications is achieved by the high resolution temperature measurement of 0.001 K and an optimized PID-loop. The controller is set up via a USB interface and comes complete with easy-to-use control software. The PID-parameters, temperature limits and further options can be configured on site by the customer. The controller can be easily integrated in your own lab software using an open ascii-protocol. The HAT Control - B20 owns two different measurement inputs for Pt100 and Pt1000 probes respectively. The second measurement input allows the implementation of additional monitoring- or safety measures and therefore it has separately adjustable temperature limits. For calibration or matching of multiple sensors the temperature offsets can be dynamically programmed. Furthermore, a controllable analog output provides the option to integrate a further device, like a fan unit for heat dissipation when implementing Peltier cooling. The HAT Control – B20 temperature controllers are also available as OEM-Version for integration in your own setups. These outstanding features allow the controller to fulfil challenging requirements in various sophisticated applications such as microscopy or laser spectroscopy.

## TEMPERATURE CONTROL SOLUTIONS



HAT Control – B20



HAT Control – B20--OEM

### general

description	high precision temperature controller
atmospheric moisture	0 ... 80 %
working temperature	10 ... 45 °C
weight	2.2 kg
dimensions	185 x 250 x 100 mm <sup>3</sup> (B20), 80 x 100 x 35 mm <sup>3</sup> (B20-OEM)

### controller

temperature resolution	0.001°C
metering range	-200...400 °C (Pt1000) -200...550 °C (Pt100)
measurement uncertainty	± 0,05 K* (* absolute, plus uncertainty of temperature sensors attached)
temperature coefficient	0.05 mK / K
control output	PWM with 300Hz max. 10 A
output voltages	customer configuration available* 12V 100W, max 8A 15V 150W, max 10A (standard) 24V 150W, max 6A * power supply not included in B20-OEM
control accuracy	down to ±0.002 K
interface	USB 2.0
auxiliary output	with PWM functionality, 12 V @ 0.3 A e.g. fan unit

### scope of delivery

temperature controller
line cord (B20 only)
Interface cable
mating connectors (B20 only)
heat transfer paste
application software for WinXP/Vista/7
manual

