

5400-20-56 20A / 56V TECSource



The new **5400-20-56 TECSource** pushes temperature control power to new levels, with 840 watts available for your most demanding thermal applications.

The **5400** brings precision temperature control with a high contrast VFD display and standard computer interfaces in an economic design. It features ultra-stable performance and fully adjustable PID control, multiple sensor support, and an integrated fan power supply.

- **High Power, up to 960 Watts!**
- AutoTune for automatic PID calculation
- Fully adjustable PID settings plus 8 standard gain settings
- Two selectable high precision temperature sensor inputs plus AD590
- Four auxiliary temperature inputs for enhanced thermal monitoring
- Digital I/O for triggering, monitoring, and linking to other instruments
- Interlock
- Bi-polar, linear output
- Large, clear VFD display, easily viewable with laser goggles
- Simultaneous display of temperature set point, actual temperature, current, and voltage
- USB / RS-232 computer interfaces that are command set compatible with Newport and ILX temperature controllers.
- 2U rack-mountable controller

- **Up to 960W of TEC power**
- 0.004°C stability
- Up to 7 sensor inputs
- AutoTune automatic PID
- Bi-polar output: heat & cool
- Thermistor, RTD, LM335, & AD590 sensors
- 4-wire RTD mode

Interconnect Cables

Because each customer's application is different, cables are not included with the product. Choose from the [1264 TECSource Cable](#), which has 17W male/female connectors, or the [1265 TECSource Cable](#), which has a 17W2 male connector for the instrument and bare wires on the mount end to custom termination into your mount or connector. To make your own cables, you can also purchase a 17W2 connector kit, which has either male or female connectors sets.

USB & RS232 Computer Interfaces



Rack Mount Kit

For applications requiring rack mounts, the [1403-RM Rack Mount Kit](#) allows you to quickly and easily rack the 5400 in 2U of rack space.

Specifications

Key Specs

Power (A, V, W)	±20A, ±56V, 960W (max)
Stability (1 hour, °C)	0.004
Stability (24 hours, °C)	0.01

Temperature

Range (°C)	-99 to 250
Resolution (°C)	0.01
Thermistor (100µA) Accuracy at 25°C (°C)	0.03
AD590 Accuracy at 25°C (°C)	0.90
LM335 Accuracy at 25°C (°C)	0.90
RTD Accuracy at 25°C (°C)	0.35

Thermistor, 100µA Range

Accuracy (±[% reading + kΩ])	0.05 + 0.005
Range (kΩ)	0.05 – 45
Resolution (kΩ)	0.001

Thermistor, 10µA Range

Accuracy (±[% reading + kΩ])	0.05 + 0.05 Auxilliary inputs: 0.20 + 0.05
Range (kΩ)	0.1 – 450
Resolution (kΩ)	0.01

LM335

Accuracy (±[% reading + mV])	0.3 + 1
Range (mV)	1730 – 4250
Resolution (mV)	0.1
Bias (mA)	1

AD590

Accuracy (±[% reading + µA])	0.03 + 0.1
Range (µA)	173 – 473
Resolution (µA)	0.01
Bias (V)	4.5

RTD

Accuracy (±[% reading + Ω])	0.03 + 0.1
Range (Ω)	20 – 192
Resolution (Ω)	0.01
Bias (mA)	1

Current

Accuracy (±[% value + A])	0.5 + 0.06
Range (A)	±20
Resolution (A)	0.01
Noise/Ripple (A, rms)	< 0.015

Voltage (measurement only)

Accuracy (±[% reading + V])	0.2 + 0.05
Range (V)	±56
Resolution (V)	0.01

Auxiliary Interface

Sensor Inputs	4, thermistor only
Digital Inputs	2
Digital Outputs	2
Auxiliary Power	5V, 100mA
Relay	Form C, 2A/30VDC or 0.5A/125VAC max

Other

TEC Connector	17W2, female
Auxilliary Interface Connector	DB-25, female
Interlock Connector	Phoenix 2-pin
Computer Interface	USB 2.0 Full Speed (USB Type B), RS-232 (DB-9, male)
Display Type	4 x 20 VFD
Power	Universal 90 - 250 VAC, 50/60 Hz
Size (H x W x D) [inches (mm)]	3.5 (90) x 12 (305) x 14 (356)
Operating Temperature	+10°C to +40°C
Storage Temperature	-20°C to +60°C