585-04-08 TECPak, 4A/8V

- **AutoTune automatic PID**
- 4A, 8V (32W) of TEC power
- 0.004°C stability
- Bi-polar output: heat & cool
- Thermistor & RTD sensors
- 4-wire RTD mode
- Small OEM enclosure
- Analog interface

Overview

The 585-04-08 TECPak is an excellent solution for OEM temperature control applications and for lab or benchtop applications where a user interface is not required. With up to 32W of TEC control and support for thermistor sensors (10μ or 100μ bias current) as well at 100ohm RTDs, it's a powerful unit. Housed in a compact enclosure, the 585-04-08 TECPak is an excellent mix of features, size, and price. For applications requring even more power, consider the 585-05-12, a 5A / 12V TECPak.

Analog Interface

In addition to the computer interfaces, the 585-04-08 offers full analog control. With the analog interface, you can turn the output on and off, monitor actual temperature via the analog out, and also recieve an indication that the unit has stabilized. Designed with embedded applications in mind, the analog interface allows you to integrate the TECPak into applications that do not have the option of computer control, or where simply on/off control is sufficient.

Excellent Stability

The 585-04-08 offers excellent short term and long term stability. At less than 0.004°C stability over one hour, and 0.01°C over 24 hours, the 585-04-08 provides an excellent solution for precision temperature control.

AutoTune Automatic PID Calculation

All Arroyo Instruments temperature controllers feature AutoTune for automatic PID calculation. With AutoTune, you no longer need to fiddle with PID parameters to find values that work with your application. Simply hook up your mount, set the appropriate limits, and start the AutoTune process. The instrument will automatically calculate PID parameters that will work with your mount.

Fully Adjustable PID

The TECPak comes with eight factory set gain settings for the temperature control loop, which are sufficient for most applications, but also offers fully adjustable PID settings, allowing you to fine tune the response of the instrument.

Simple Multi-Channel System

Using the 1402C-RM Rack Mount Tray, you can quickly rack groups of 3 or 5 Paks into a rack for a quick multi-channel system.

USB & RS232 Computer Interfaces

Includes for USB and RS232 computer interfaces standard.

Specifications

Key Specs

Power (A, V, W)	±4A, ±8V, 32W
Stability (1 hour, °C)	0.004
Stability (24 hours, °C)	0.01

Temperature

Range (°C)	-99 to 250
Resolution (°C)	0.01
100µA Therm Accuracy at 25°C (°C)	0.03
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
Range (kΩ)	0.1 – 450
Resolution (kΩ)	0.01
RTD	
Accuracy (±[% reading + Ω])	0.03 + 0.1
Range (Ω)	20 – 192
Resolution (Ω)	0.01
Bias (mA)	1

Current

Range (A)	±4
Compliance Voltage (V)	8
Max Power (W)	32
Resolution (A)	0.01
Accuracy (±[% value + A])	0 + 0.03
Noise/Ripple (A, rms)	< 0.005
Current Limit Accuracy (A)	0.05

Voltage (measurement only)

Accuracy (±[% reading + V])	0 + 0.05
Range (V)	±8
Resolution (V)	0.01

Analog Interface

Inputs	On/off control, analog temperature set
Outputs	Analog temperature monitor, on/off state, stable state

Other

TEC Connector	DB-15, female
Display Type	No display
Computer Interface	USB 2.0 Full Speed (USB Type B), RS-232 (DB-9, male)
Power	100V / 120V / 230V 50/60 Hz
Size (H x W x D) [inches (mm)]	3.0 (77) x 4.5 (115) x 8.5 (216)
Operating Temperature	+10°C to +40°C
Storage Temperature	-20°C to +60°C