

586-04-56 TEC Pak, 4A/56V



Overview

The 586-04-56 TEC Pak is a high performance, compact temperature controller for applications that do not require (or need to omit) a full user interface. Powerful (224W), capable (two sensor inputs, interlock, fan controller), and compact, the 586-04-56 is an excellent mix of features, size, and price.

- **AutoTune automatic PID**
- 4A, 56V (224W) of TEC power
- 0.004°C stability
- Bi-polar output: heat & cool
- Thermistor, LM335, and RTD sensors
- 4-wire RTD mode
- Small OEM enclosure

Excellent Stability

The 586 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.

Fully Adjustable PID with AutoTune Automatic PID Calculation

Preprogrammed with eight factory set gain settings that support most applications, as well as fully adjustable PID settings. AutoTune for automatic PID calculation simplifies the determination of PID values for your mount.

Simple Multi-Channel System

Using the [1402C-RM Rack Mount Tray](#), you can quickly rack up to three 586 Paks into a rack for a quick multi-channel system.



Specifications

Key Specs

| | |
|--------------------------|------------------------|
| Power (A, V, W) | ±4A, ±56V, 224W |
| Stability (1 hour, °C) | 0.004 |
| Stability (24 hours, °C) | 0.01 |

Temperature

| | |
|------------------------------------------|------------|
| Range (°C) | -99 to 250 |
| Resolution (°C) | 0.001 |
| Thermistor (100µA) Accuracy at 25°C (°C) | 0.05 |
| LM335 Accuracy at 25°C (°C) | 0.05 |
| RTD Accuracy at 25°C (°C) | 0.05 |

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 |

LM335

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

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 + 0.01 |
| Range (A) | ±4 |
| Resolution (A) | 0.01 |
| Noise/Ripple (A, rms) | < 0.025 |

Voltage (measurement only)

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

Other

| | |
|--------------------------------|-----------------------------------|
| TEC Connector | 17W2, female |
| Computer Interface | USB 2.0 Full Speed (USB Type B) |
| Power | Universal 90 - 250 VAC, 50/60 Hz |
| Size (H x W x D) [inches (mm)] | 3.2 (82) x 5.1 (130) x 11.5 (292) |
| Operating Temperature | +10°C to +40°C |
| Storage Temperature | -20°C to +60°C |