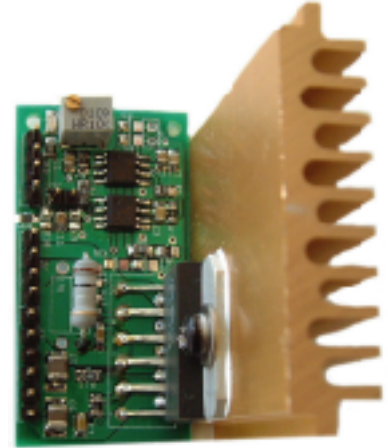


## Features

- High output current - up to 6 Amp
- Pure analog circuit with low ripple in output current
- Bi-directional output with dual power supplies
- Internal thermal protection



## Description

The TA-600 module is a Bi-directional Temperature Controller for Thermoelectric Cooler (TEC) used in fixed temperature applications. The module is designed to operate with a Negative Temperature Coefficient (NTC) thermistor. The TA-600 can provide temperature stability of  $\pm 0.01^{\circ}\text{C}$ .

The TA-600 provides an internal 10T potentiometer for temperature setpoint adjustment. The temperature can also be set with an external voltage signal. Gain adjustment is achieved by an external resistor ( $R_g$ ), Integral time adjustment is achieved by an external capacitor ( $C_i$ ). Power to the TEC is delivered via a high current operational amplifier. It can provide up to 6A low ripple current output. To achieve bi-directional current drive, dual power supplies are required. The module is intended to be mounted on an external user supplied heat-sink. Forced air cooling is recommended, as the thermal dissipation is in the range of 5 to 25Watts.

## Specifications

Temperature control range:  $0\text{-}50^{\circ}\text{C}$

Temperature stability:  $\pm 0.01^{\circ}\text{C}$

6 Amp bi-polar drive capability

Current ripple  $< 0.5\%$

Preset current limit: 6 Amp

5 to 12 VDC dual power supplies

SMD construction

Size:  $1.85\text{''} \times 1.18\text{''}$  in ( $47\text{mm} \times 30\text{mm}$ )

We reserve the right to change the details of design, materials and finish in any way that will not alter function performance.

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