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2-Channel Exhaust Gas Temperature Display



This board was designed for car enthusiasts who wish to monitor the temperature of their exhaust gas in order to fine tune their engine's performance. This board has 2 TC inputs (type K) and a back-lit LCD to display the 2 temperatures. The design is based on the Analog Devices AD595 (type K) Thermocouple Amplifier and has additional circuitry to enable its use in automotive applications. The unit can display either degrees C or F by changing a jumper on the board.

The maximum temperature that can be displayed is 1000 degrees C (1800 F). This board can be powered from car power ranging from 12 to 24V DC.

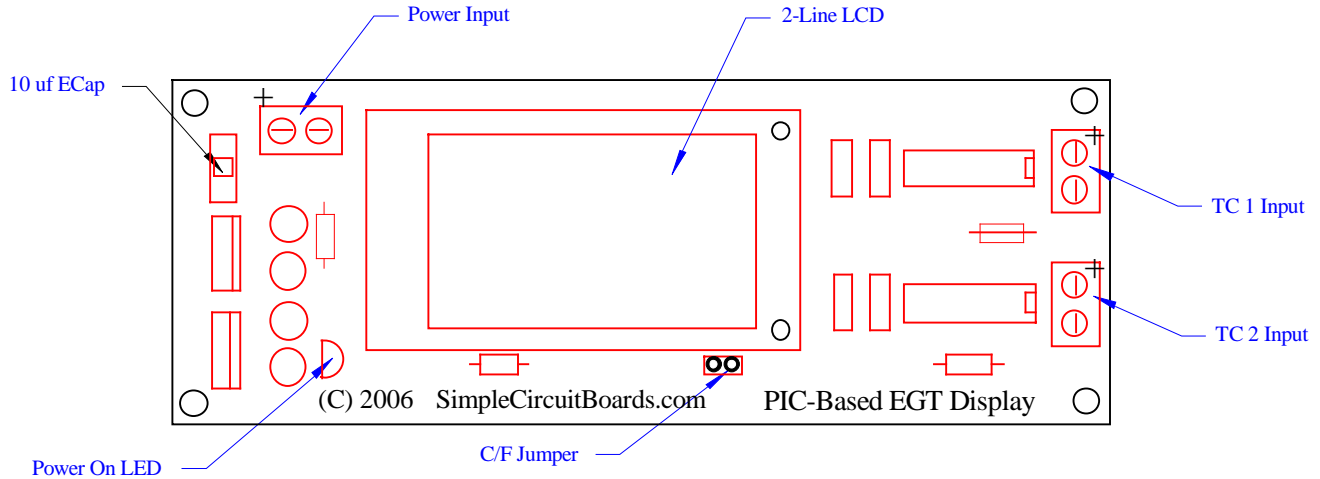
Thermocouples are not included.

Details:

As mentioned above, this board was designed for automotive applications in which the user wishes to measure very high temperatures such as those found in exhaust systems. It has an on-board voltage regulator that will take the DC voltage from the car and clean it up for the board's electronics. The board requires 12V DC minimum but will handle up to 24V DC maximum. The board has connections for two type K thermocouples (type J TC capability is available upon request), and DC power. The maximum temperature that can be measured is 1000 degrees C (or 1800 degrees F). There is a jumper just below the LCD that will select whether degrees C or Degrees F is displayed. The LCD is back-lit allowing for viewing at night or low light conditions. There is an on/off slide switch that is indicated with a red LED when on.

Miscellaneous Information:

- For all thermocouples, the red wire connects to the negative terminal

Board Layout:**Specifications:**

- Input Power: 12 – 24 VDC
- Resolution: 1 °C / 1 °F
- Temperature Range: 0 to 1000 °C (32 to 1800 °F)
- Thermocouple Type: Type K
- Board Dimensions: 1.85 x 5.0 inches

Disclaimer:

These boards are designed for educational use only. In no circumstances should these circuit boards be used in critical situations where failure could mean injury or property damage.

Please check out the other circuit board designs that I offer at www.SimpleCircuitBoards.com. Here are just a few examples:

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- 8-Bit Digital to Analog Converter
- DC to DC Converters
- TTL-Driven Relay Boards – 1 Amp and 10 Amp
- TTL-Driven Latching Relay Board
- Voltage Amplifier Board
- Water Level Monitors
- Water Level Control Boards
- Motor Control Boards
- Programmable Relays
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