Analog Output K–Type Thermocouple Amplifier – AD8495 Breakout



DESCRIPTION

Thermocouples are very sensitive, requiring a good amplifier with a coldcompensation reference. We have a couple digital thermocouple amplifiers in the shop already from Maxim. Now we're happy to introduce an excellent analogoutput amplifier. This is a very simple sensor to use, and if your microcontroller has analog input capability, you'll be ready to go really fast!

The AD8495 K-type thermocouple amplifier from Analog Devices is so easy to use, we documented the whole thing on the back of the tiny PCB. Power the board with 3–18VDC and measure the output voltage on the OUT pin. You can easily convert the voltage to temperature with the following equation: Temperature = (Vout – 1.25) / 0.005 V. So for example, if the voltage is 1.5VDC, the temperature is (1.5 – 1.25) / 0.005 = 50°C

Each order comes with a 2 pin terminal block (for connecting to the thermocouple), a fully assembled PCB with the AD8495 + TLVH431 1.25V precision voltage reference, and pin header (to plug into any breadboard or perfboard). Goes great with our 1m K-type thermocouple (not included). Not for use with any other kind of thermocouple, K type only!

- Works with any K type thermocouple
- Will not work with any other kind of thermocouple other than K type
- Easy to use analog output
- Temp range with 5V power: -250°C to +750°C output (0 to 5VDC)
- Temp range with 3.3V power: -250°C to +410°C output (0 to 3.3VDC)

Technical Details



AD8495 Datasheet

Sensing Accuracy Range: \pm 1°C around room temperature, \pm 2°C for -25°C to +400°C Sensing Temperature Max: 400°C Sensing Temperature Min: -25°C Supply Voltage: 3-18VDC

Dimensions:

20mm x 16mm x 2mm / 0.8" x 0.6" x 0.08" Weight: 1.1g