

K-type to 0-5V Thermocouple Amplifier

K-type to 0-5V thermocouple Amplifier is a precision thermocouple amplifier providing high accuracy temperature measurement in range of 0 - 1250°C. It converts the thermocouple type-k non-linear millivolts signal to 0-5V linear (4mV/°C) analog output so it's compatible with our **CANchecked** multidisplay, standalone ECU's, most industrial applications and data-loggers. It has built-in cold junction compensation, so any length wires can be used. Our K-type to 0-5V converter is available in single, dual or quad channel.

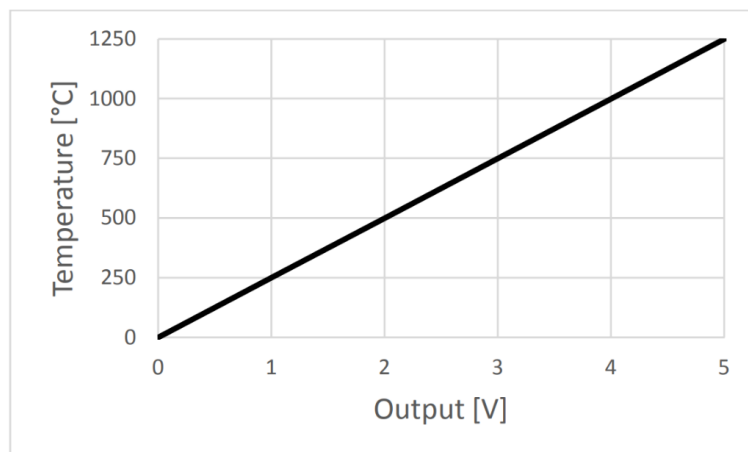


Example application:

- Works perfect with our **CANchecked** multidisplay and gauge, for measuring and display exhaust gas temperatures, water temperatures, oil temperatures, gear temperatures, fuel temperatures, and any other temperatures
- Standalone ECU's, automotive gauges and data-loggers - as an amplifier for exhaust temperature (EGT) measurements, coolant temperature, cylinder head, brakes etc. (working with EMU, VEMS, AEM EMS, GReddy e-MANAGE, Motec, Stack, ACR systems, HRC etc.)
- Industrial applications (which require 0-5V linear signal on input)
- Oven temperature measurements and control
- Hobbyist electronics (as a thermocouple signal converter from millivolts to 0-5V linear, e.g. for Arduino projects, as a ADC input signal for microcontrollers etc.)

Technical data:

- Measurement range: 0-1250°C (32-2282°F)
- Compatible thermocouples: Type K probe
- Built-in cold junction compensation
- Output signal analog 0-5V, 4mV/°C (0V = 0°C, 5V = 1250°C), o output function: $T [^{\circ}\text{C}] = 250 * \text{OUT} [\text{V}]$ (a = 250 ; b = 0)



- Filters: input low-pass $f_c = 160\text{Hz}$, output low-pass $f_c = 16\text{Hz}$
- Accuracy (gain error): +/- 1.5% (EGT-K is based on AD8495 precision thermocouple amplifier with cold junction compensation – more info on AD8495 datasheet for characteristics),
- ADC input resistance: >100kOhm (recommended >1MEG)
- Power supply: 8-32V DC for full range of measurement 0-1250°C (lower voltage will limit maximum range, e.g. +5V power supply limit output range to +3,2V)
- Dimensions: 85mm x 54mm x 6mm (without terminal blocks)

