

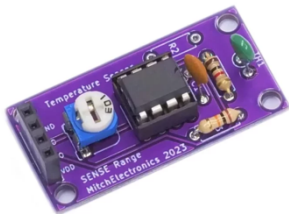
# TEMP SENSE

Electronic Kit | Data Sheet

PRODUCT IMAGE

SCAN FOR INSTRUCTIONS PAGE

SCAN FOR RESOURCE PAGE



|                        |   |
|------------------------|---|
| MANUFACTURER           | MitchElectronics  |
| COUNTRY OF ORIGIN      | United Kingdom  |
| ROHS / REACH COMPLIANT | Yes   |
| PRODUCT DESCRIPTION    | <p>The Temp Sense electronic kit uses a thermistor in a potential divider configuration to produce a variable voltage that depends on the temperature of the thermistor. The thermistor is an NTC variant, meaning that its resistance decreases as it increases in temperature, and the Temp Sense has two outputs; one digital and one analogue.</p> <p>The digital output of the Temp Sense is connected to the output of a comparator which compares the thermistor voltage to a potentiometer output. Thus, the potentiometer determines what temperature results in a logical one or zero. The analogue output of the Temp Sense is connected to an amplifier that is set with a gain of one, but a second resistor (soldered into R2), can increase this gain.</p> |

PRODUCT SPECIFICATION:

- Component Count: 8
  - Operating Voltage: 3V to 12V
  - Output Voltage (Digital): VCC – 1.7V
  - Operating Frequency: N/A
- Dimensions (PCB): 40mm x 20mm
  - Mounting Holes: Yes
  - Prebuilt: No – Kit form
  - Batteries Not Included

#### PARTS INCLUDED:

- 1 x LM358
- 1 x 8 DIP Socket
- 1 x 1K $\Omega$  NTC Thermistor
- 1 x 1K $\Omega$  Resistor
- 1 x 10K $\Omega$  Resistor
- 1 x 100nF Capacitor
- 1 x 10K $\Omega$  Potentiometer
- 1 x 4-Way Socket

#### APPLICATIONS

The Temp Sense is excellent for projects that need to react to changes in temperature, and the onboard potentiometer allows for tuning the trigger point. For example, the digital output of the Temp Sense can be used to control cooling fans and other environmental controls. The analogue output of the Temp Sense can be directly read by ADCs on microcontrollers for approximating the actual temperature, but note that NTCs require calibration due to their wide tolerances.

#### KIT INSTRUCTIONS

<https://mitchelectronics.co.uk/resources/temp-sense-kit-instructions/>

#### ELECTRONICS CONSTRUCTION MANUAL

<https://www.mitchelectronics.co.uk/documents/electronicsConstructionManual.pdf>

#### NOTES

Note that product specifics such as output frequency depend on the tolerance of the components. The numbers provided here are an approximation only. Also take note that the estimated delivery is not guaranteed (unless special delivery is chosen) and free delivery has a maximum waiting time of two weeks. Any product that is returned which is built using lead solder is ineligible for a refund.

All parts sold by MitchElectronics are compliant with RoHS and REACH directives which ensure that they can be used in commercial environments as well as complying with environmental laws.