

# 4x Thermocouple Phidget



With this Phidget, you can connect up to four thermocouples to a single **VINT port**, making it ideal for temperature testing and comparison (See the “Compatible Products” tab for a list of VINT Hubs). You can use a J, K, E or T type thermocouple; set the appropriate type in software and it will convert sensor data into degrees Celsius automatically. If you have other thermocouple types, you can open the channel in VoltageInput mode and convert to temperature manually according to your thermocouple’s datasheet.

## **Long Wires**

One of the major advantages of using a thermocouple is the capability of using long wires. Thermocouples have been known to work with segments as long as 100m, while USB and other sensors suffer from voltage drops after 5 or 10m. You can find thermocouple extension wire on the Compatible Products tab. Please note that the longer you make your thermocouple wires, the more likely it is that you’ll experience noise and interference. For more information,

see our document on [Addressing Electromagnetic Interference](#).

## Product Specifications

### Board

Controlled By VINT  
Number of Thermocouple Inputs 4

### Thermocouple Input

Thermocouple Error Max (K-Type)  $\pm 2\text{ }^{\circ}\text{C}$   
Thermocouple Temperature Resolution (K-Type)  $0.04\text{ }^{\circ}\text{C}$   
Sampling Interval Min 100 ms/sample  
Sampling Interval Max 60 s/sample  
Thermocouple Voltage Resolution  $1\frac{1}{4}\text{V DC}$

### Onboard Temperature Sensor

Temperature Error Max  $\pm 1\text{ }^{\circ}\text{C}$   
Sampling Interval Max 60 s/sample  
Sampling Interval Min 500 ms/sample  
Temperature Error Typical (At  $25^{\circ}\text{C}$ )  $\pm 0.25\text{ }^{\circ}\text{C}$   
Temperature Resolution  $0.063\text{ }^{\circ}\text{C}$   
Temperature Max  $85\text{ }^{\circ}\text{C}$   
Temperature Min  $-40\text{ }^{\circ}\text{C}$

### Electrical Properties

Current Consumption Min  $10\frac{1}{4}\text{A}$   
Current Consumption Max 5 mA

### Physical Properties

Recommended Wire Size 16 – 26 AWG  
Operating Temperature Min  $-40\text{ }^{\circ}\text{C}$   
Operating Temperature Max  $85\text{ }^{\circ}\text{C}$

