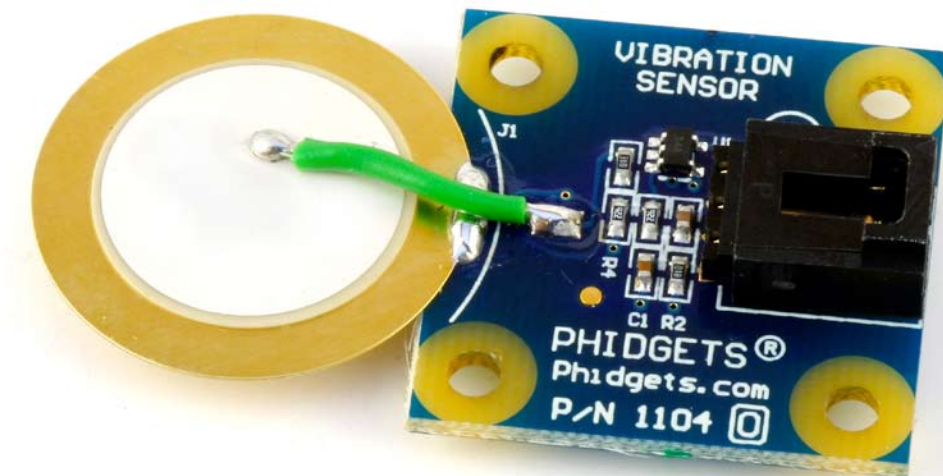


Vibration Sensor



This sensor buffers a piezoelectric transducer. As the transducer is displaced from the mechanical neutral axis, bending creates strain within the piezoelectric element and generates voltages.

Designed For Use With:

- **PhidgetInterfaceKit 8/8/8**
- **PhidgetTextLCD with InterfaceKit 8/8/8**

Examples:

You will find program examples in the download section of www.phidgets.com

Getting Started

Installing the hardware

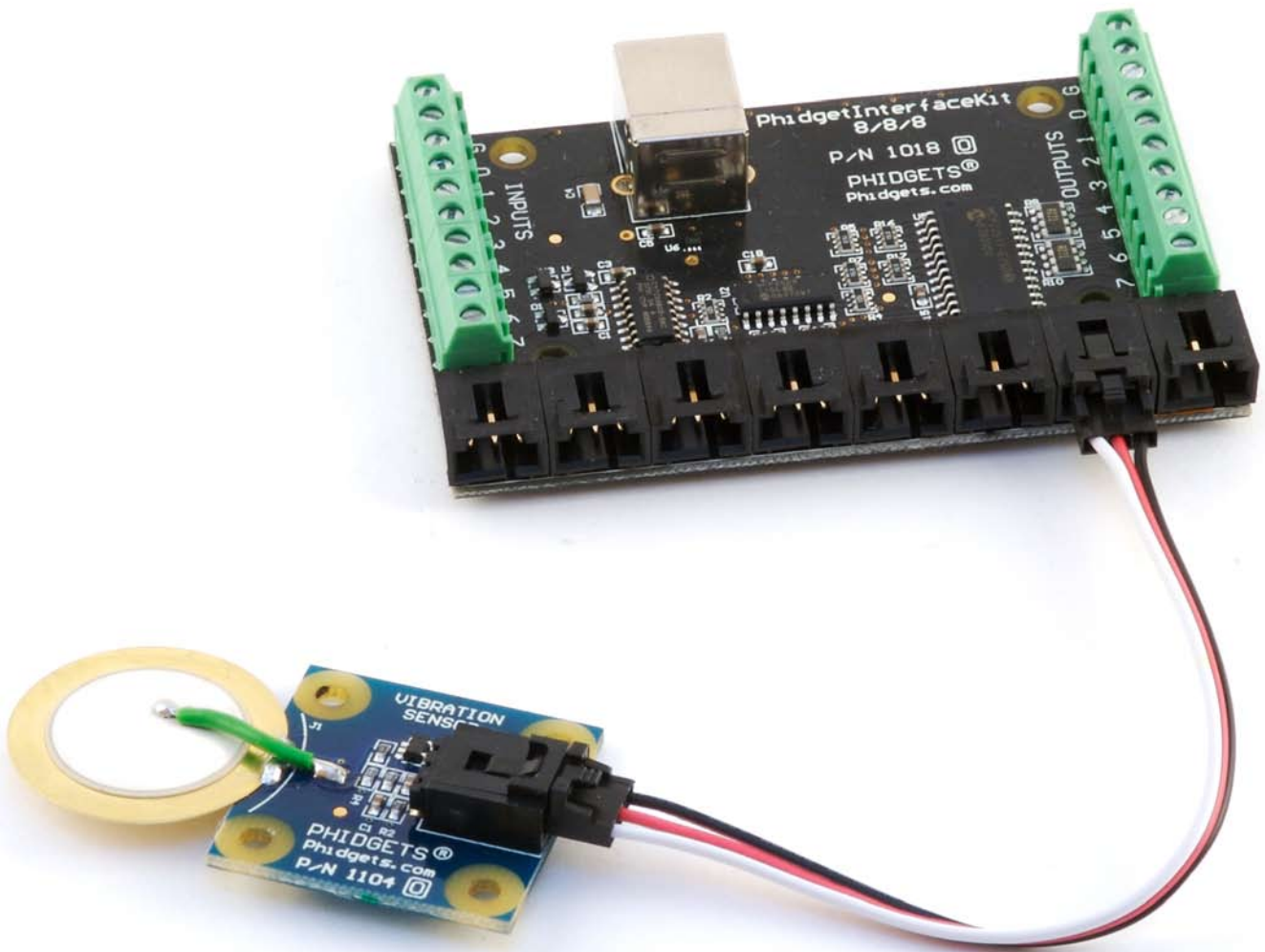
The Kit contains:

- A Vibration Sensor
- A Sensor Cable

You will also need:

- A PhidgetInterfaceKit 8/8/8 or a PhidgetTextLCD
- A USB Cable

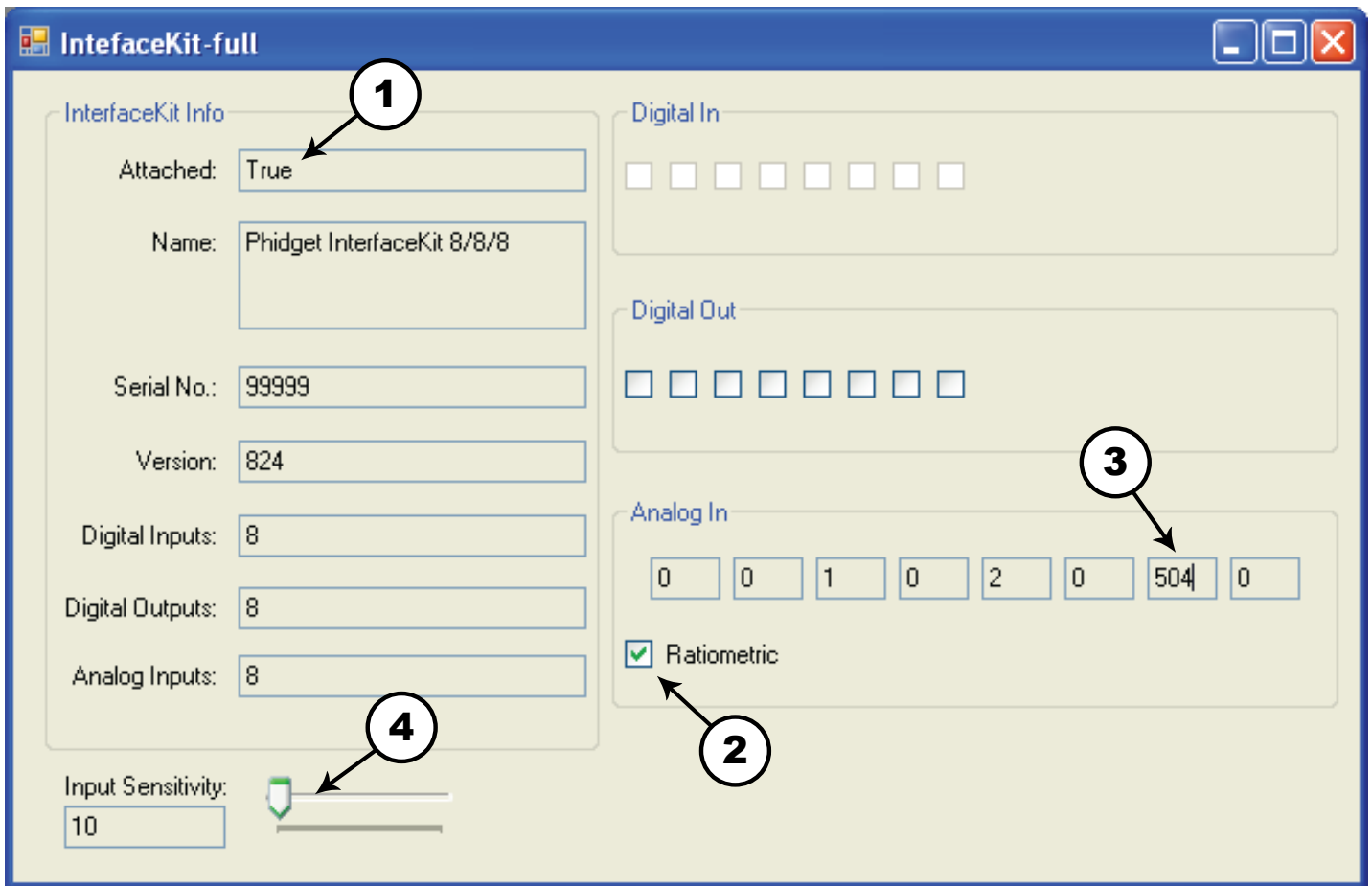
Connecting all the pieces



Connect the Vibration Sensor to an Analog Input on the PhidgetInterfaceKit 8/8/8 board using the sensor cable.

Testing the Vibration Sensor using Windows

Run the Program **InterfaceKit-full**.



1. Run the program **InterfaceKit-full** and check that the box labelled Attached contains the word True.
2. Make sure that the Ratiometric box is Ticked.
3. Lightly touch the sensor disk and you will see the Analog In value fluctuate between 0 and 1000.
4. You can adjust the input sensitivity by moving the slider pointer.

Technical Information

This sensor buffers a piezoelectric transducer. As the transducer is displaced from the mechanical neutral axis, bending creates strain within the piezoelectric element and generates voltages. If the assembly is supported by its mounting points and left to vibrate “in free space” the device will behave as a form of vibration sensor. The sensing element should not be treated as a flexible switch, and is not intended to be bent.

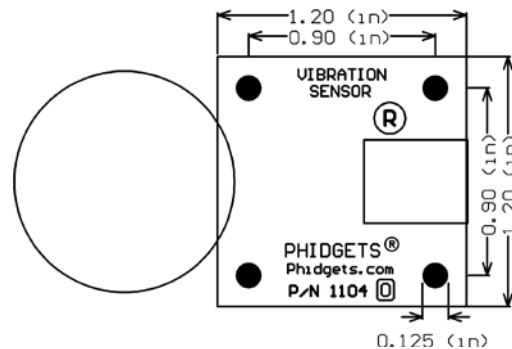
SensorValue 500 roughly corresponds to $0g$ acceleration. Acceleration will deflect the sensing element up or down, causing SensorValue to swing either way. This sensor is not meant to measure precise acceleration and vibration - use it to detect an acceleration impulse, or the presence of vibration.

Device Specifications

Current Consumption	400uA
Output Impedance	1k ohms

Mechanical Drawing

1:1 scale



Product History

Date	Product Revision	Comment
September 2005	n/a	Product Release