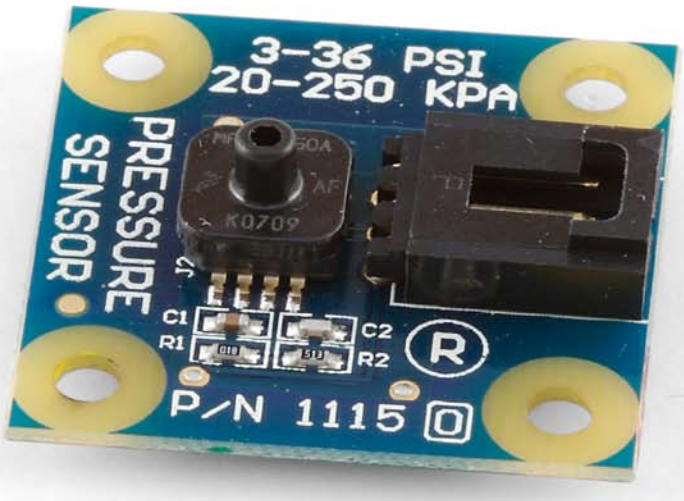
Pressure Sensor



The Pressure Sensor measures absolute gas pressure from 20 to 250 kPa (2.9 to 36.3 psi).

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

What can the Absolute Pressure Sensor do?

The Pressure Sensor measures gas pressure from 20 to 250 kPa (2.9 to 36.3 psi).

Measures with respect to a fixed reference, making it suitable for measuring vacuum, or atmospheric pressure; the sensor can be used as a crude barometer.

Getting Started

Installing the Hardware

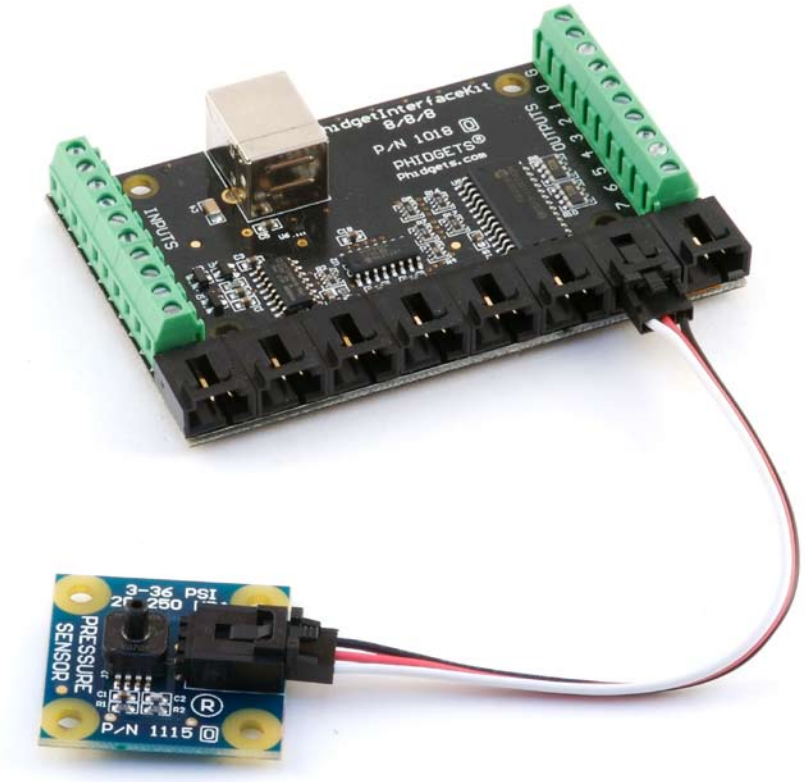
The Kit contains:

- A Pressure Sensor
- A Sensor Cable

You will also need:

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

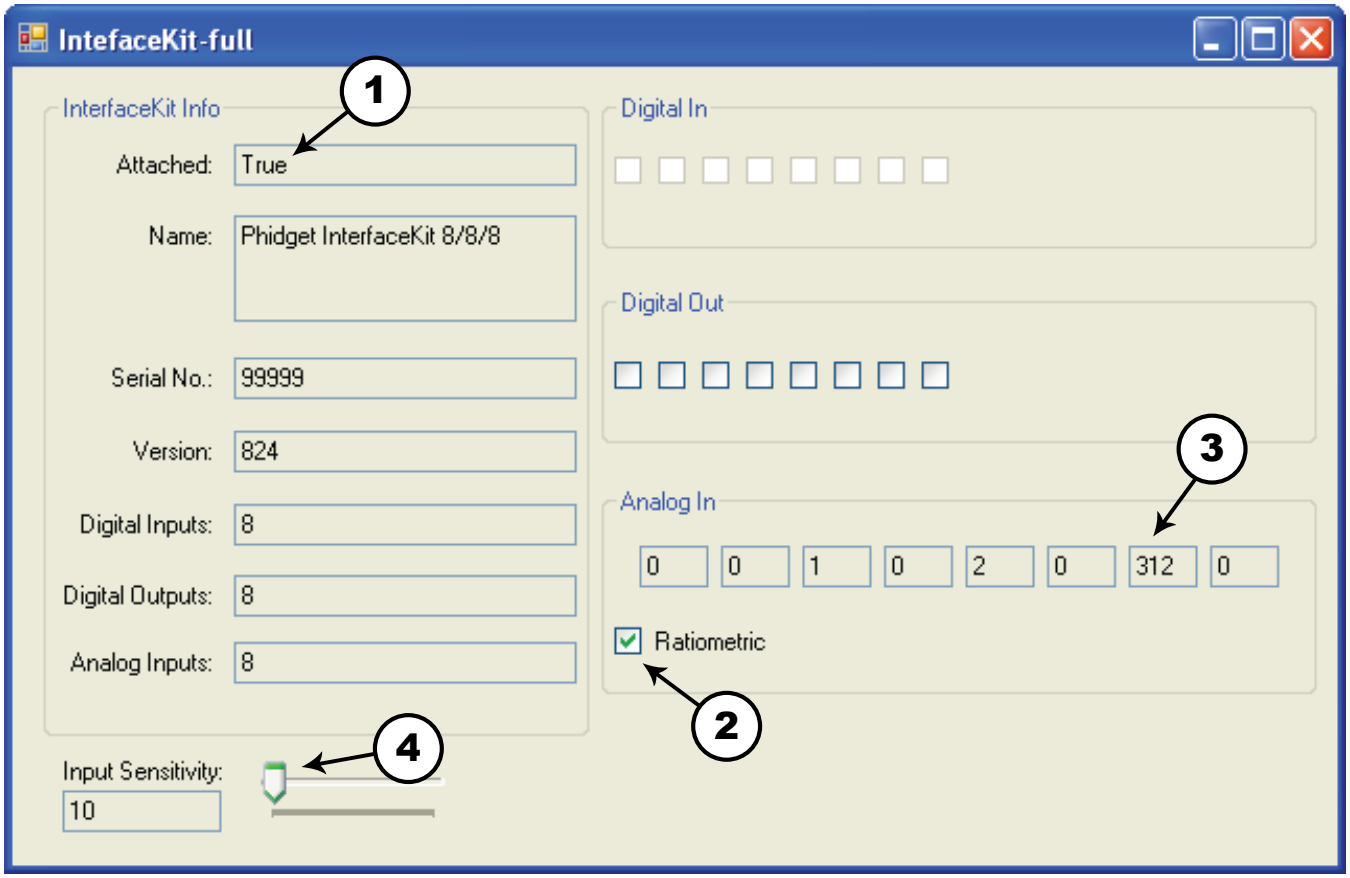
Connecting all the pieces



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

Testing the Pressure Sensor using Windows

Run the Program InterfaceKit - Full



1. Check that the box labelled Attached contains the word True.
2. Make sure that the Ratiometric box is Ticked.
3. The number in the Analog In box gives you the current air pressure in the room. The value of 312 in the picture above correspond to 90.5 Kilopascal.
4. You can adjust the input sensitivity by moving the slider pointer.

Technical Information

Measures absolute gas pressure from 20 to 250 kPa.

The Formula to translate SensorValue into Pressure is:

Pressure (in kilopascals) = [(SensorValue/1000) x 250] + 10

To translate RawSensorValue into Pressure is:

Pressure (in kilopascals) = [(RawSensorValue/4095) x 250] + 10

If you are using a generic Analog to Digital Converter (not a Phidget device):

Pressure (in kilopascals) = {[Measured Value / (Max ADC Range - 1)] x 250} + 10

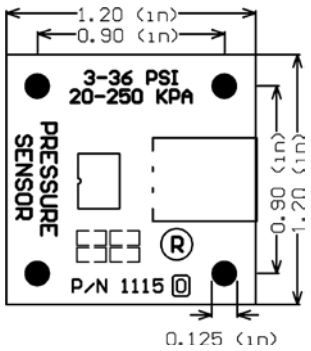
If you are interested in the difference in pressure between two points (Atmospheric vs. Human lungs for example) this sensor would not be appropriate. The gas pressure sensor required for this type of application is referred to as differential.

Device Specifications

Current Consumption	5mA
Output Impedance	1K ohms

Mechanical Drawing

1:1 scale



Product History

Date	Product Revision	Comment
August 2004	n/a	Using MPXA4250 sensor
October 2007	n/a	Using MPXA6250 sensor