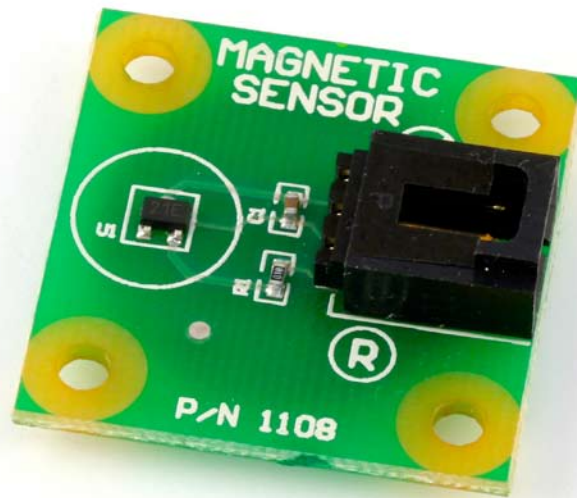


Magnetic Sensor



The Magnetic Sensor uses the Linear Hall Effect. This ratiometric Hall-effect sensor provides a voltage output that is proportional to the applied magnetic field.

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

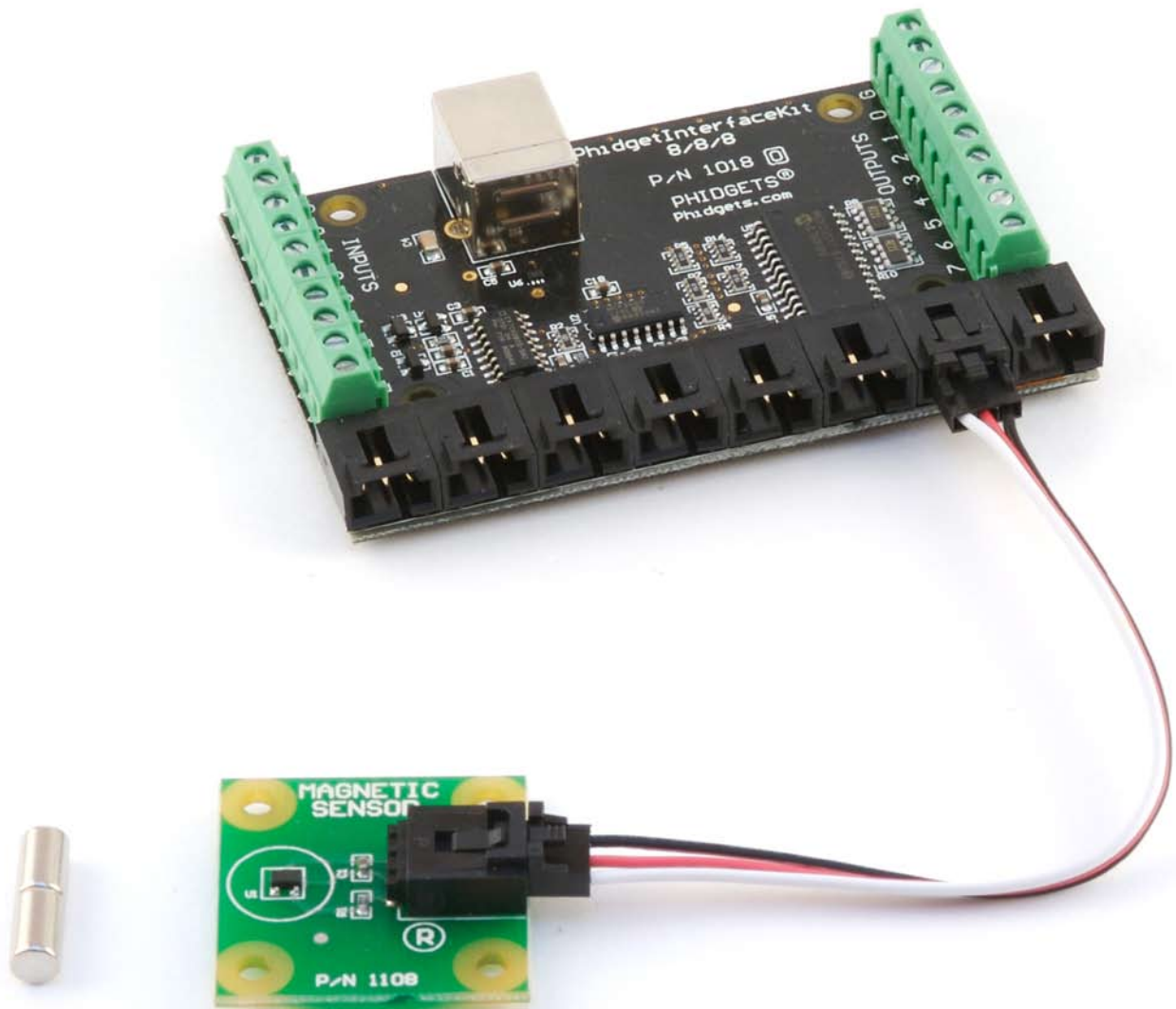
The Kit contains:

- A Magnetic Sensor
- A Sensor Cable
- 2 small magnets

You will also need:

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

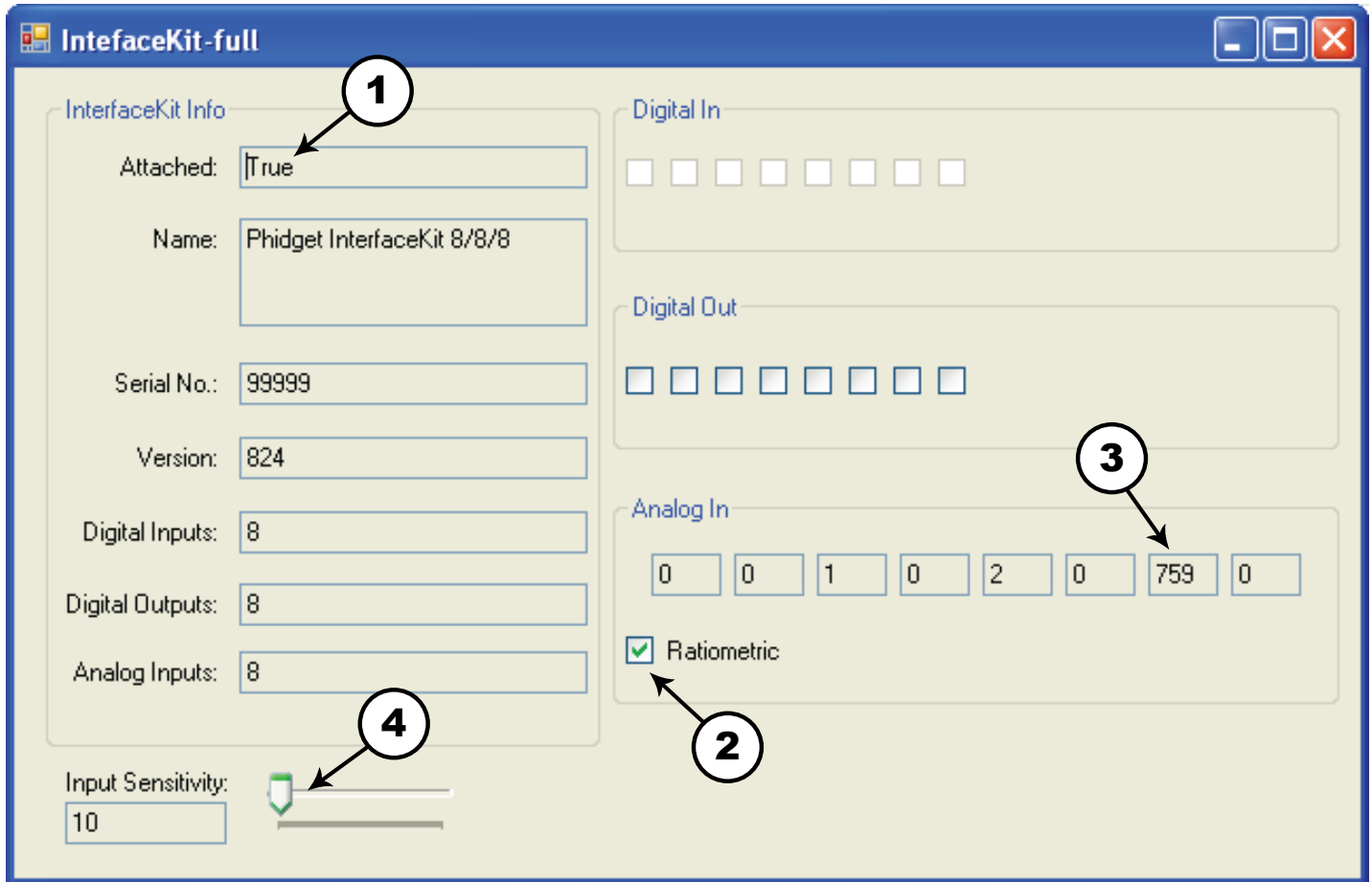
Connecting all the pieces



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

Testing the Magnetic 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. Move one of the magnets close to the sensor and watch the value in the Analog In box go from 500 to a 1000 or from 500 to 0 depending on the magnet polarity facing the sensor.
4. You can adjust the input sensitivity by moving the slider pointer.

Technical Information

This linear Hall-effect sensor is optimized, sensitive, and temperature- stable. It is a ratiometric Hall-effect sensor which provides a voltage output that is proportional to the applied magnetic field.

The Formula to translate SensorValue into Relative Humidity is:

$$\Phi (G) = 500 - [(SensorValue/1000) \times 1000]$$

To translate RawSensorValue into Distance:

$$\Phi (G) = 500 - [(RawSensorValue/4095) \times 1000]$$

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

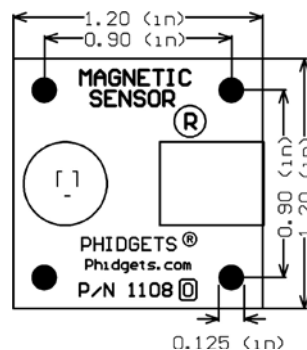
$$\Phi (G) = 500 - \{[Measured Value / (Max ADC Range - 1)] \times 1000\}$$

Device Specifications

Current Consumption	2mA
Output Impedance	1K ohms

Mechanical Drawing

1:1 scale



Product History

Date	Product Revision	Comment
June 2005	n/a	Product Release