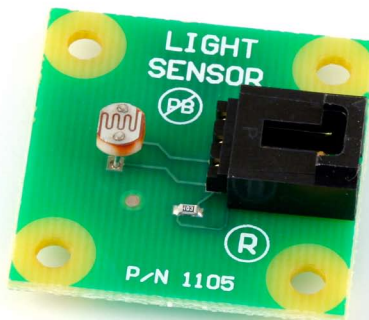


Light Sensor



Product Features

- Uses a Standard CdS photocell resistance that varies with the amount of light.
- The sensor is Ratiometric

Designed to be used with:

- 1018 PhidgetInterfaceKit 8/8/8
- 1202/1203 PhidgetTextLCD with InterfaceKit 8/8/8

Getting Started

Installing the Hardware

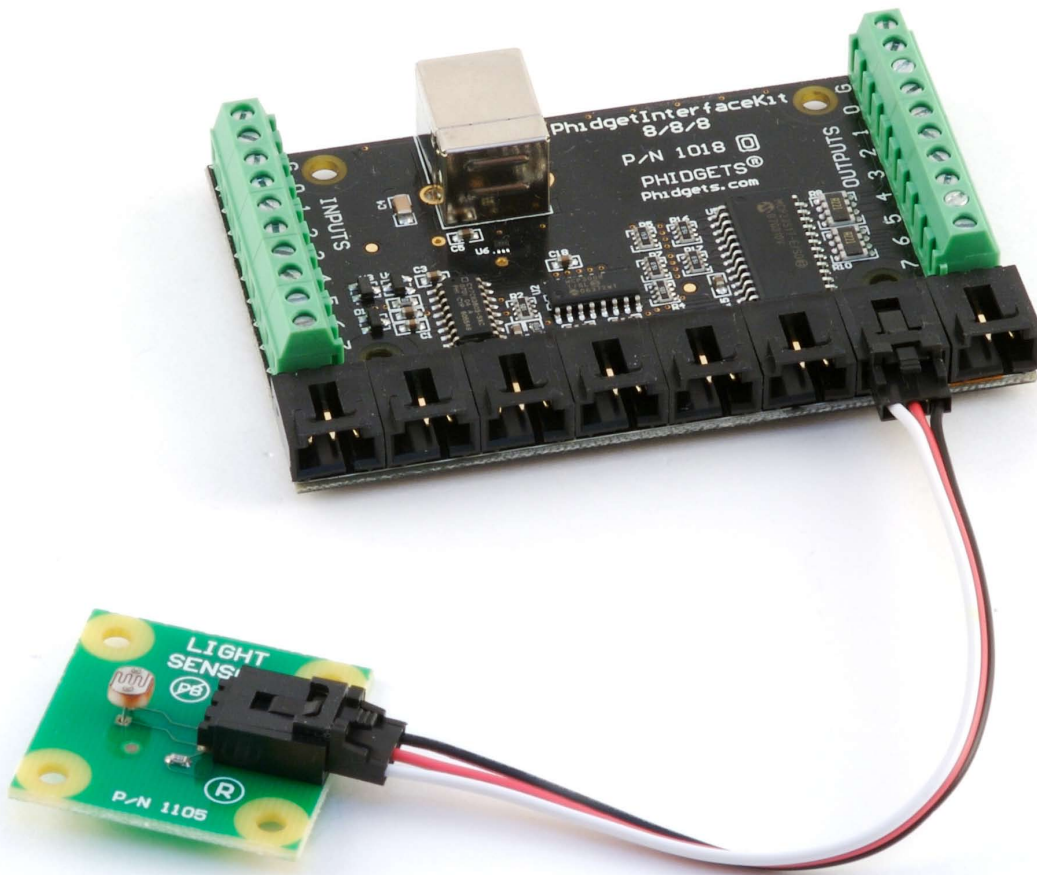
The Kit contains:

- A Light Sensor
- A Sensor Cable

You will also need:

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

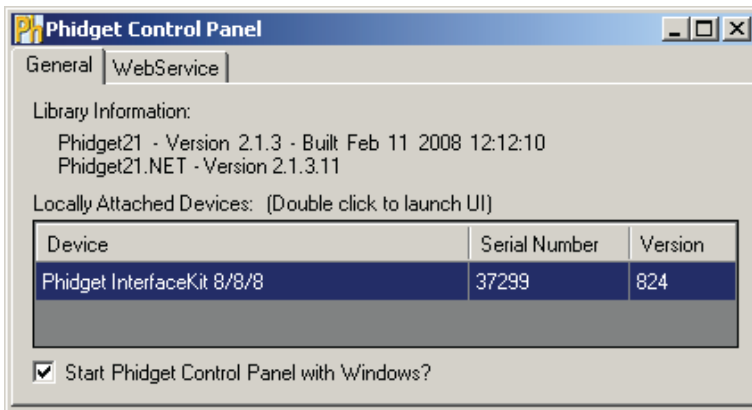
Connecting all the pieces



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

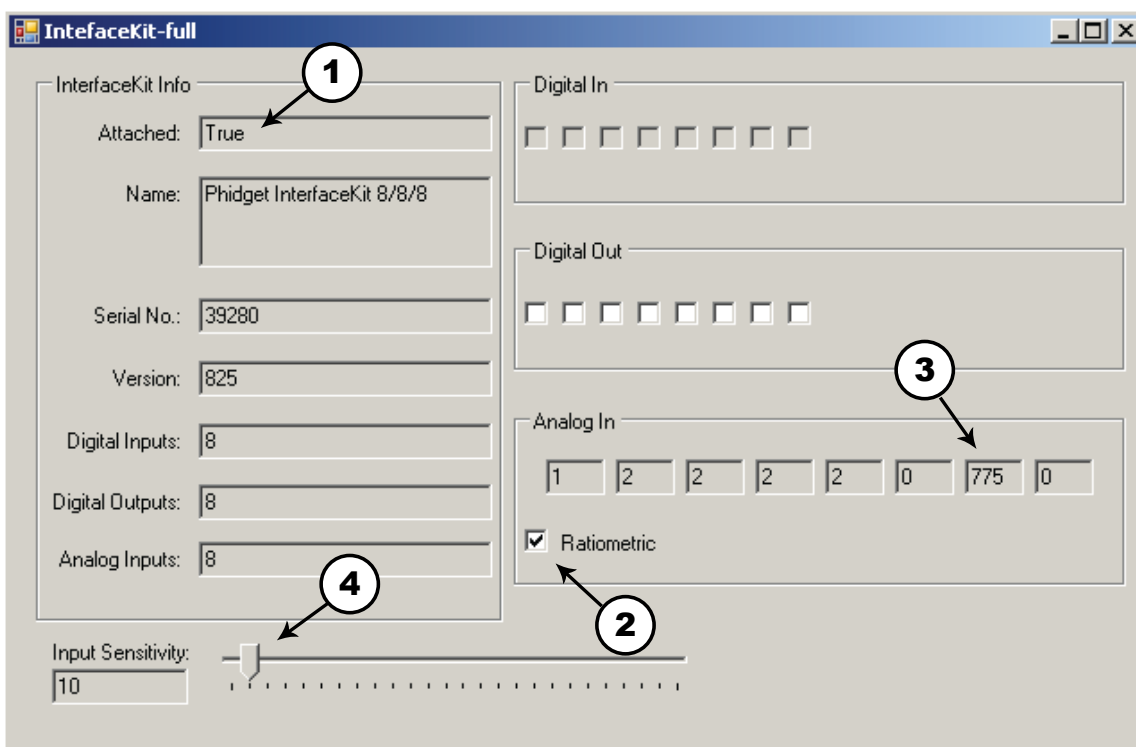
Testing the Light Sensor connected to an InterfaceKit 8/8/8

Using Windows 2000/XP/Vista



Double Click on the  icon to activate the Phidget Control Panel and make sure that the **Phidget InterfaceKit 8/8/8** is properly attached to your PC.

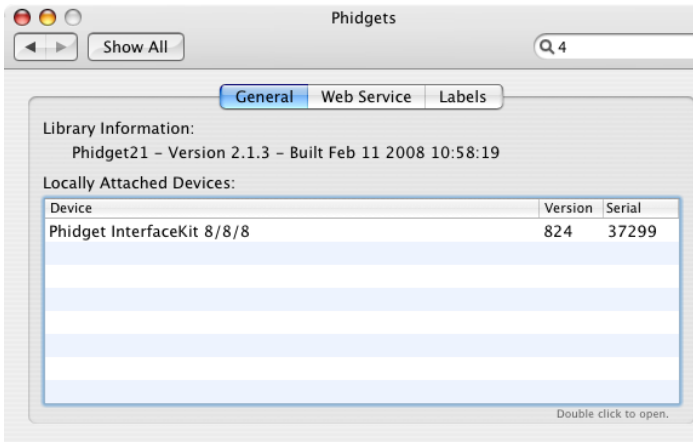
1. Double Click on Phidget InterfaceKit 8/8/8 in the Phidget Control Panel to bring up InterfaceKit-full and check that the box labelled Attached contains the word True.



2. Make sure that the Ratiometric box is Ticked.
3. As you move the sensor to areas with different light levels, the value in the Analog In box will vary from 0 (dark) to 1000 (bright).
4. You can adjust the input sensitivity by moving the slider pointer.

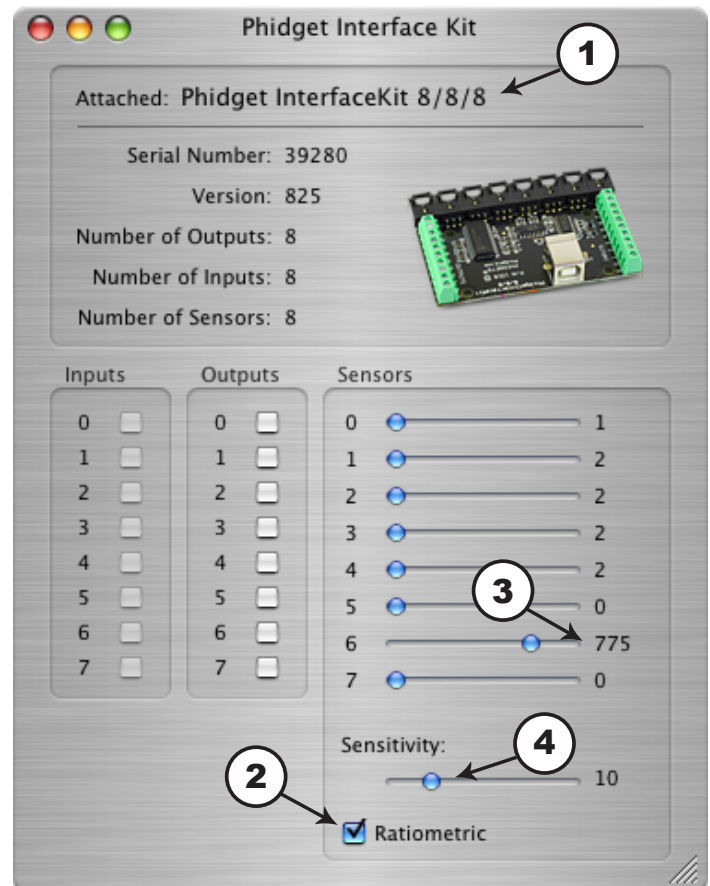
Testing the Light Sensor connected to an InterfaceKit 8/8/8

Using Mac OS X



Click on System Preferences >> Phidgets (under Other) to activate the Preference Pane. Make sure that the Phidget InterfaceKit 8/8/8 is properly attached.

1. Double Click on Phidget InterfaceKit 8/8/8 in the Phidget Preference Pane to bring up the Phidget Interface Kit Example and check that the Phidget InterfaceKit 8/8/8 is attached.
2. Make sure that the Ratiometric box is Ticked.
3. As you move the sensor to areas with different light levels, the value in the Sensors box will vary from 0 (dark) to 1000 (bright).
4. You can adjust the input sensitivity by moving the slider pointer.



Technical Information

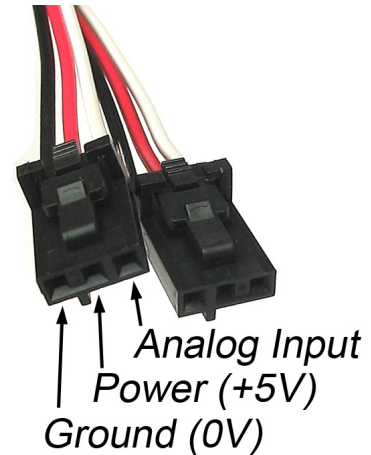
In the dark, the value produced is approximately zero. As the amount of light increases, the value increases towards 1000.

With no light the resistance of this sensor is 500 k ohm. At 10 lux the resistance falls to between 10 k and 5 k ohm. This resistance is in a voltage divider with a 7.5 k ohm resistor.

The sensor uses a standard CdS (Cadmium Sulfide) photoresistor.

Analog Input Cable Connectors

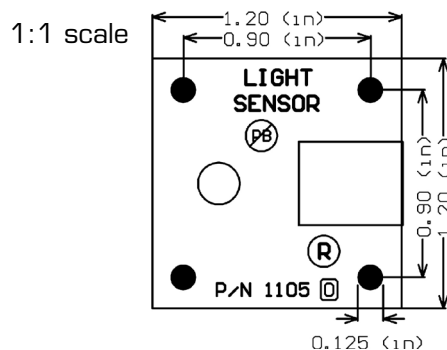
Each Analog Input uses a 3-pin, 0.100 inch pitch locking connector. Pictured here is a plug with the connections labeled. The connectors are commonly available - refer to the Table below for manufacturer part numbers.



Cable Connectors		
Manufacturer	Part Number	Description
Molex	50-57-9403	3 Position Cable Connector
Molex	16-02-0102	Wire Crimp Insert for Cable Connector
Molex	70543-0002	3 Position Vertical PCB Connector
Molex	70553-0002	3 Position Right-Angle PCB Connector (Gold)
Molex	70553-0037	3 Position Right-Angle PCB Connector (Tin)
Molex	15-91-2035	3 Position Right-Angle PCB Connector - Surface Mount

Note: Most of the above components can be bought at www.digikey.com

Mechanical Drawing



Device Specifications

Current Consumption	500uA Max
Output Impedance	10K ohms

Product History

Date	Product Revision	Comment
June 2002	n/a	Product Release
August 2004	n/a	Analog input connector changed from stereo jack to 3-pin Molex