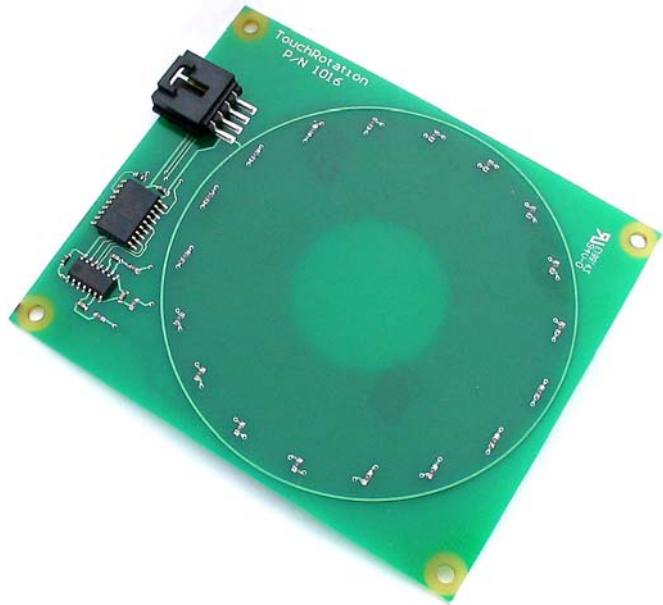


PhidgetCircularTouch

Phidgets are the most user-friendly system available for controlling and sensing the environment from your computer. People with absolutely no hardware knowledge or experience can include touch sensors into their projects. It is just a matter of plugging the PhidgetCircularTouch into the USB port on your computer. After that, you can use the simple to program Phidgets software libraries to access these devices.



The PhidgetCircularTouch changes value when it is touched. It can detect approximately 125 steps. The PhidgetCircularTouch will work through $\frac{1}{4}$ inch of glass, and appears to the Phidget software libraries as an Interface Kit.

The PhidgetCircularTouch can be controlled from Windows, Linux, and Mac OS X. High-level programming interfaces are available for Visual Basic, C, C++, Flash, .NET, Java, LabVIEW, etc.

What Can the PhidgetCircularTouch Do?

Touch sensors like being touched. When you need human beings to input values into your project then getting them to touch a sensor is quick and intuitive. The PhidgetCircularTouch will detect when you place your finger on it, and returns a value depending on where you place your finger. Sliding your finger over the sensor continuously changes the value returned. The PhidgetCircularTouch can be used to set a direction, heading, or angle of rotation.

Getting Started on Windows 2000 / XP

The PhidgetCircularTouch can be controlled from a variety of Software Development Environments. In Visual Basic the PhidgetInterfaceKit software component provide a high-level programmer interface. The PhidgetCircularTouch appears to the Phidgets software libraries as an Interface Kit. Here is how to get started under Windows 2000 or Windows XP.

Step 1. What you need to have ready

- Your PhidgetCircularTouch.
- The USB cable supplied with your touch sensor.
- A computer running Windows 2000 or Windows XP.
- An Internet connection and a Web browser.

Step 2. Assemble your hardware

- Plug the flat end of the USB cable into your PhidgetCircularTouch.
- Plug the rectangular end of the USB cable into the USB connector on your computer (you can do this at any time).

Step 3. Install the software

Phidgets use a library installed on your computer. This only has to be installed once no matter how many different types of Phidgets you have.

- Have you previously installed the Phidget library? If so, you can skip this step.
- To install the library go to www.phidgets.com >> Downloads >> Release.
- Select the PHIDGET.msi file.
- A dialog box will appear asking if you would like to open the file or save it to your computer. You can do either, but if you are unsure just select "Open" and follow the instructions.
- Do you want to update a previously installed Phidget library? If so, you must remove the old library when prompted to do so.

Step 4. Download the sample programs

- Go to www.phidgets.com >> Downloads >> Release.
- Select the Examples.zip file.
- Save the zip file to a place of your choosing, and then uncompress it.
- You will find many executables in the Visual Basic folder, and their source in the sub-folders.
- PhidgetMonitor.exe will show you what Phidgets are plugged in. If you have followed Step 2 and Step 3, a Phidget device should be displayed in the list, along with its serial number. The source for this .exe is in the PhidgetManagerExamples folder.
- All PhidgetInterfaceKit samples have a "interface" prefix. Try them! All source code can be found in the PhidgetInterfaceKitExamples folder.

Step 5. Try Programming a Phidget

- Go to www.phidgets.com >> Documentation.
- Read the documentation for the PhidgetManager, the IPhidget, and read the documentation under the PhidgetInterfaceKit heading.
- Based on this documentation, we recommend you examine the source of the sample programs mentioned in Step 4.
- Now try modifying the samples. Or code your own from scratch.

Step 6. Learning more ...

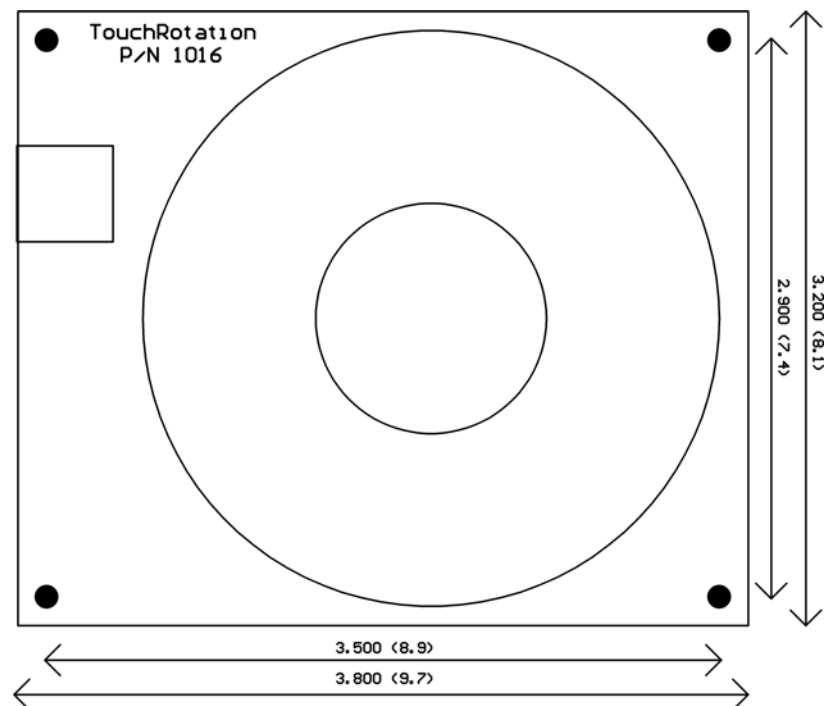
- Explore www.phidgets.com. We recommend you visit Projects and Examples to see what other people have done. For new applications or other programming languages visit the Forums.

Step 7. Read the license agreement

Go to www.phidgets.com >> Documentation and select the License link. Note that the term Phidget™ is trademarked, and that the name PhidgetCircularTouch is synonymous with Phidget™.

Hardware Description

The PhidgetCircularTouch changes value when it is touched. It can detect approximately 125 steps. More specifically, The Phidget-CircularTouch is actually a capacitive change sensor; when the capacitance changes the sensor goes to zero. The side of the circuit board opposite the connector is the side to touch. Sliding a finger on the touch sensor varies the value. When the finger is removed, the final value is retained. The PhidgetCircularTouch will work through $\frac{1}{4}$ inch of glass



The PhidgetCircularTouch appears to the Phidget software libraries as an Interface Kit. The position touched appears on analog input 0 as a value between 1000 and 0. Digital input 1 moving to True signifies proximity to the sensor, and digital input 0 moving to True signifies actual touching. The digital inputs are intended to be used as a quality measure, the value on the analog input being trusted only when they are both True.

The PhidgetCircularTouch incorporates a QProx QT510 sensor.

Device Specification

Analog Input Update Rate	Approx. 30 Hz
Digital Input Update Rate	Approx. 30 Hz
USB Current Consumption	100 mA each