

16x Isolated Digital Input Phidget

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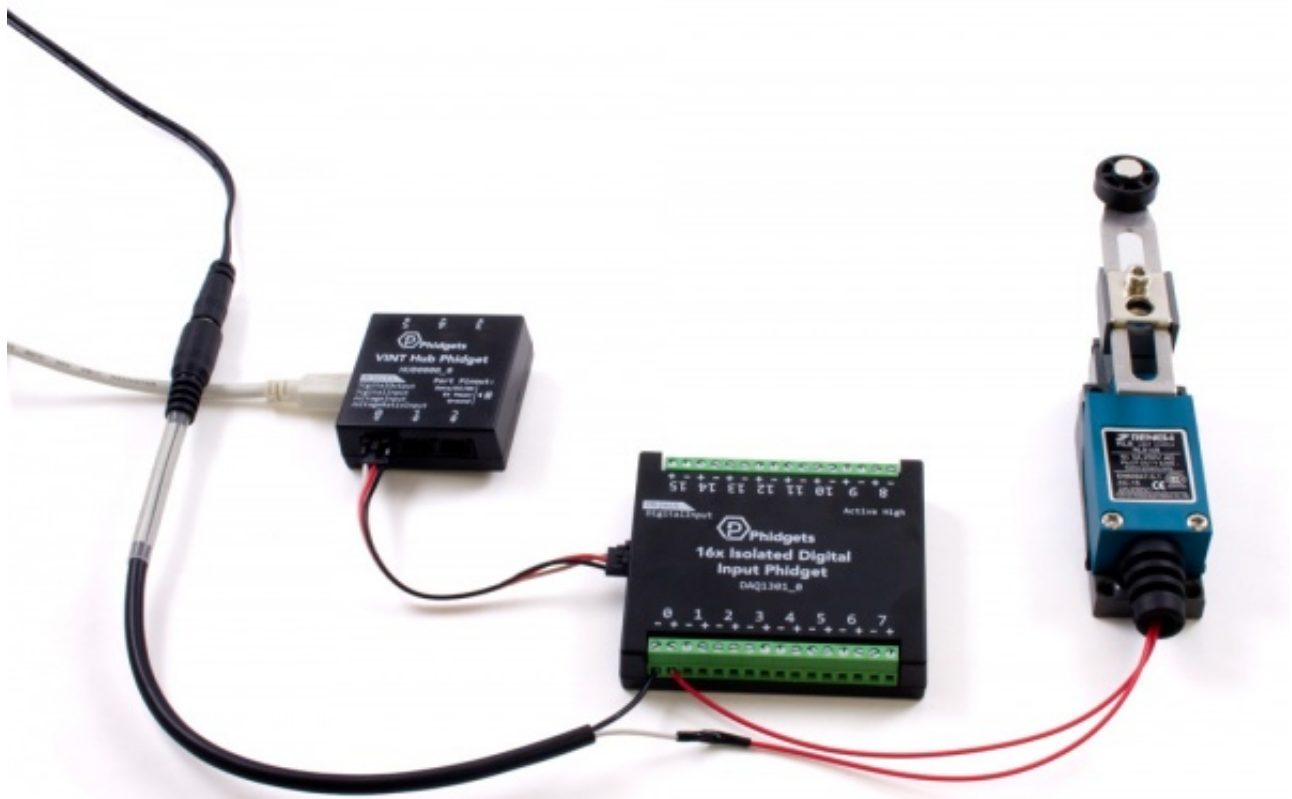
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Getting Started

Welcome to the DAQ1301 user guide! In order to get started, make sure you have the following hardware on hand:

- DAQ1301 - 16x Isolated Digital Input Phidget
- VINT Hub
- Phidget cable
- USB cable and computer
- something to use with the DAQ1301 (e.g. switch, digital sensor with a digital output, etc.)

Next, you will need to connect the pieces:



TO
TOP

1. Connect the DAQ1301 to the VINT Hub using the Phidget cable.
2. Connect the VINT Hub to your computer with a USB cable.
3. Connect a switch or digital sensor to one of the DAQ1301's inputs.

Now that you have everything together, let's start using the DAQ1301!

Using the DAQ1301

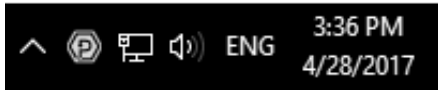
Phidget Control Panel

In order to demonstrate the functionality of the DAQ1301, the Phidget Control Panel running on a Windows machine will be used.


The Phidget Control Panel is available for use on both macOS and Windows machines.

Windows

To open the Phidget Control Panel on Windows, find the  icon in the taskbar. If it is not there, open up the start menu and search for Phidget Control Panel



macOS

To open the Phidget Control Panel on macOS, open Finder and navigate to the Phidget Control Panel in the Applications list. Double click on the  icon to bring up the Phidget Control Panel.

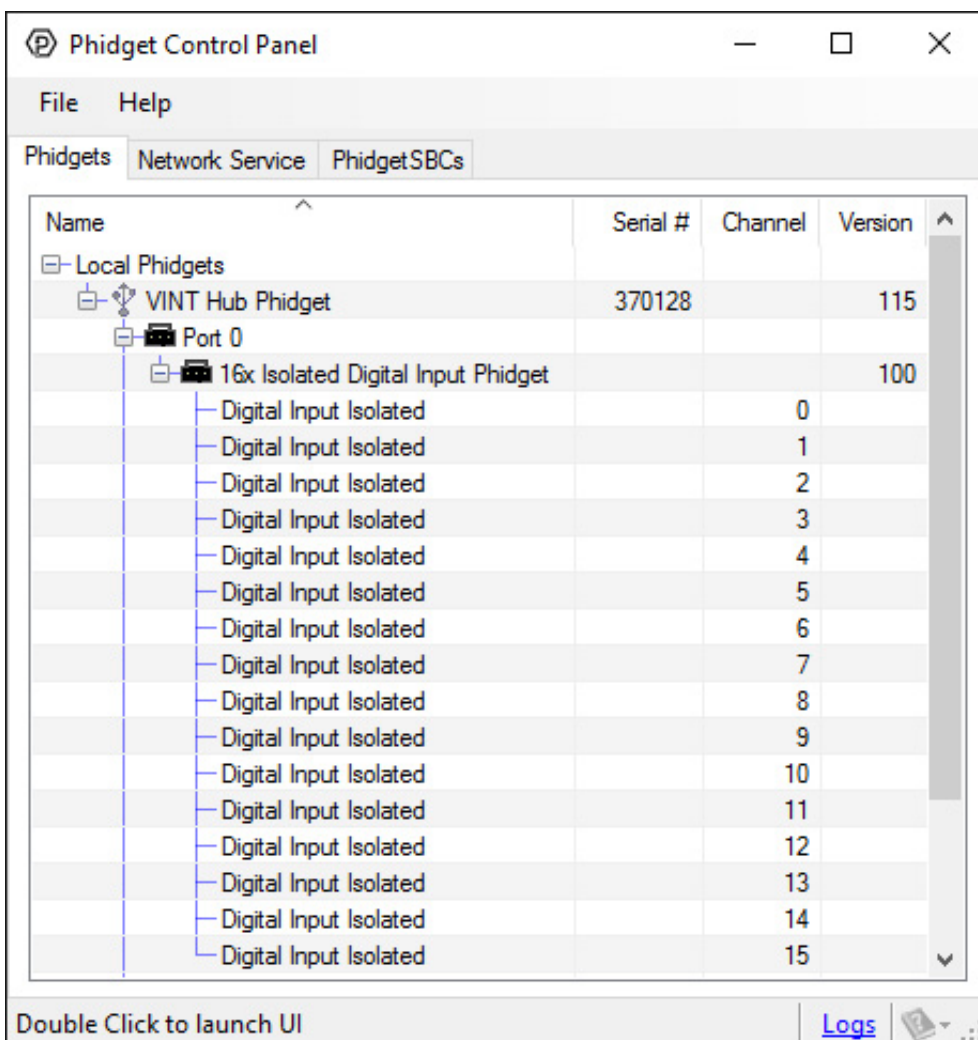
For more information, take a look at the getting started guide for your operating system:

- Getting started with Windows
- Getting started with macOS

Linux users can follow the getting started with Linux guide and continue reading here for more information about the DAQ1301.

First Look

After plugging the DAQ1301 into your computer and opening the Phidget Control Panel, you will see something like this:



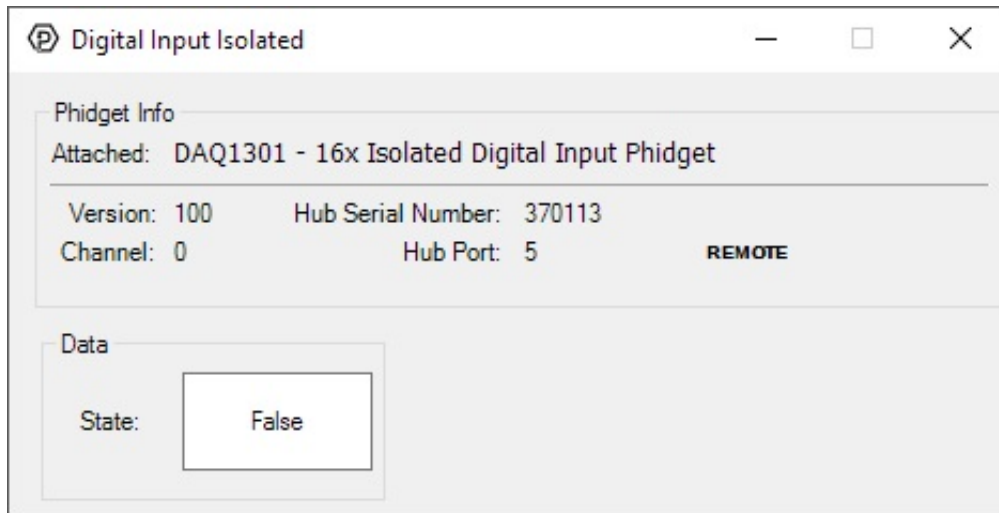
The Phidget Control Panel will list all connected Phidgets and associated objects, as well as the following information:

- **Serial number:** allows you to differentiate between similar Phidgets.
- **Channel:** allows you to differentiate between similar objects on a Phidget.
- **Version number:** corresponds to the firmware version your Phidget is running. If your Phidget is listed in red, your firmware is out of date. Update the firmware by double-clicking the entry.

The Phidget Control Panel can also be used to test your device. Double-clicking on an object will open an example.

Digital Input

Double-click on a Digital Input object in order to run the example:



General information about the selected object will be displayed at the top of the window. You can also experiment with the following functionality:

- This is an active-high device, therefore, it will be true when connected to a high voltage, and false when connected to ground.

Technical Details

General

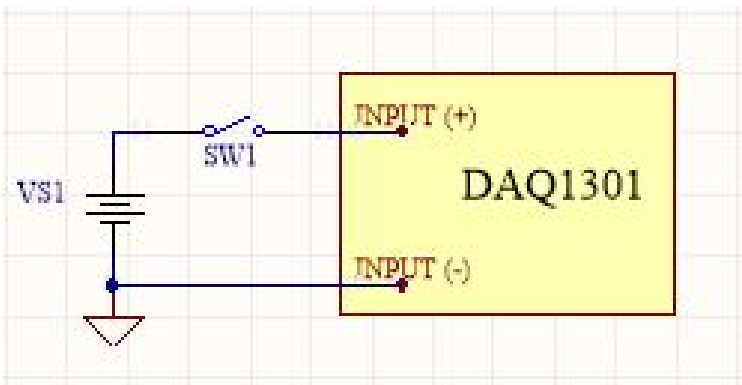
The DAQ1301 features sixteen isolated digital input terminals. Each input is isolated from all other inputs, which allows a single device to connect to a variety of sources, and prevents cross-channel interference.

Each input is active-high, meaning the (+) terminal must be pulled at least 2.5 volts above the (-) terminal to register as TRUE.

Example Use

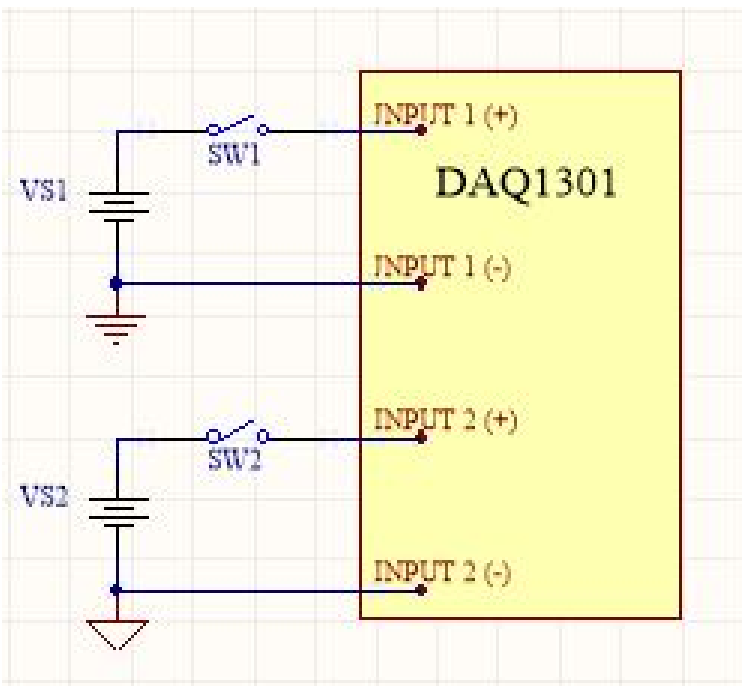
Here are a few things you can do with the DAQ1300 Digital Input Phidget

Use With a Switch



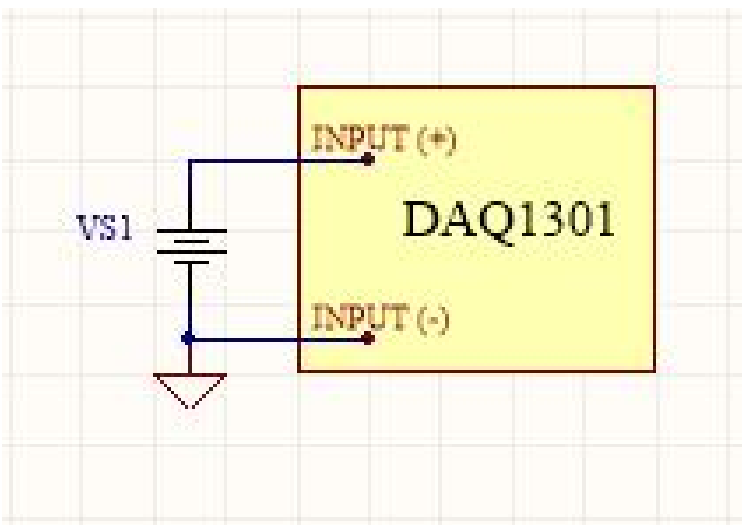
To interface a switch with the DAQ1301, an external voltage source must be provided to pull the input HIGH.

Multiple Sources



All inputs on the DAQ1301 are isolated from one another, so a variety of signals from different sources can be monitored with a single device.

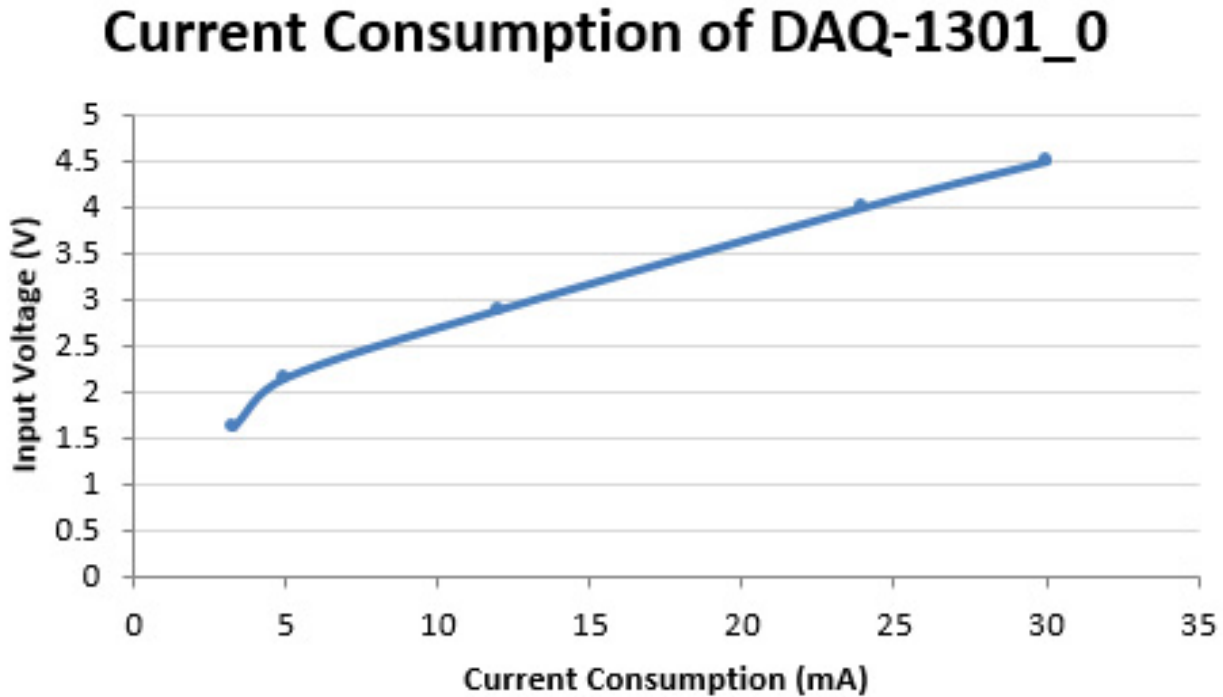
Detecting an External Voltage



The DAQ1301 can be used without additional circuitry to detect the presence of a voltage on a line (from a power source or a signal), by wiring the input terminals to the line and its corresponding ground.

Digital Input Current

The current consumption of this device varies depending on the voltage applied at the input. It ranges from 1.6mA to 4.5mA, according to the curve below:



What to do Next

- [Software Overview](#) - Find your preferred programming language here to learn how to write your own code with Phidgets!
- [General Phidget Programming](#) - Read this general guide to the various aspects of programming with Phidgets. Learn how to log data into a spreadsheet, use Phidgets over the network, and much more.
- [Phidget22 API](#) - The API is a universal library of all functions and definitions for programming with Phidgets. Just select your language and device and it'll give you a complete list of all properties, methods, events, and enumerations that are at your disposal.