

# PhidgetInterfaceKit 8/8/8



**Note:** The 1018\_2B is identical to the 1018\_2, except that it comes pre-assembled in a plastic shell enclosure and you have the option of which length of USB cable you want to include.

## **Analog Inputs**

The analog inputs are used to measure continuous voltage outputs generated by various sensors such as temperature, humidity, position, or pressure. Phidgets offers a wide variety of sensors that can be plugged directly into the board using the cable included with the sensor.

Sampling rates can be set at 1ms, 2ms, 4ms, 8ms and multiple of 8ms up to 1000ms.

For more information about these inputs and their connectors, have a look at the Analog Input Primer.

## **Digital Inputs**

The Digital Inputs have a Digital Input Hardware Filter to eliminate false triggering from electrical noise. They can be used to convey the state of

devices such as push buttons, limit switches, relays, and logic levels.

## Digital Outputs

The Digital Outputs can be used to drive LEDs, solid state relays (such as the 3052 SSR Relay Board), transistors; in fact, anything that will accept a CMOS signal.

## Product Specifications

| Board                                      |                                                              |
|--------------------------------------------|--------------------------------------------------------------|
| Controlled By                              | USB (Mini-USB)                                               |
| API Object Name                            | DigitalInput, DigitalOutput, VoltageInput, VoltageRatioInput |
| USB Voltage Min                            | 4.6 V DC                                                     |
| USB Voltage Max                            | 5.5 V DC                                                     |
| Current Consumption Min                    | 13 mA                                                        |
| Current Consumption Max                    | 500 mA                                                       |
| Available External Current                 | 487 mA                                                       |
| Recommended Wire Size                      | 16 – 26 AWG                                                  |
| USB Speed                                  | Full Speed                                                   |
| Operating Temperature Min                  | 0 B°C                                                        |
| Operating Temperature Max                  | 70 B°C                                                       |
| Voltage Inputs                             |                                                              |
| Number of Voltage Inputs                   | 8                                                            |
| Voltage Input Resolution                   | 10 bit                                                       |
| Input Impedance                            | 900 k $\Omega$                                               |
| Input Voltage Min                          | 0 V DC                                                       |
| Input Voltage Max                          | 5 V DC                                                       |
| 5V Reference Error Max                     | 0.5 %                                                        |
| Voltage Input Update Rate Min              | 1 samples/s                                                  |
| Voltage Input Update Rate Max (4 Channels) | 1000 samples/s                                               |
| Voltage Input Update Rate Max (8 Channels) | 500 samples/s                                                |

Voltage Input Update Rate Max (WebService) 62.5 samples/s

### **Digital Inputs**

|                                 |                 |
|---------------------------------|-----------------|
| Number of Digital Inputs        | 8               |
| Pull-up Resistance              | 15 k $\Omega$   |
| Low Voltage Max (True)          | 900 mV DC       |
| High Voltage Min (False)        | 4.2 V DC        |
| Low Voltage Trigger Length Min  | 4 ms            |
| High Voltage Trigger Length Min | 15 ms           |
| Digital Input Voltage Max       | B $\pm$ 15 V DC |
| Digital Input Update Rate       | 125 samples/s   |

### **Digital Outputs**

|                            |              |
|----------------------------|--------------|
| Number of Digital Outputs  | 8            |
| Series Resistance          | 300 $\Omega$ |
| Digital Output Current Max | 16 mA        |
| Digital Output Voltage Min | 0 V DC       |
| Digital Output Voltage Max | 5 V DC       |