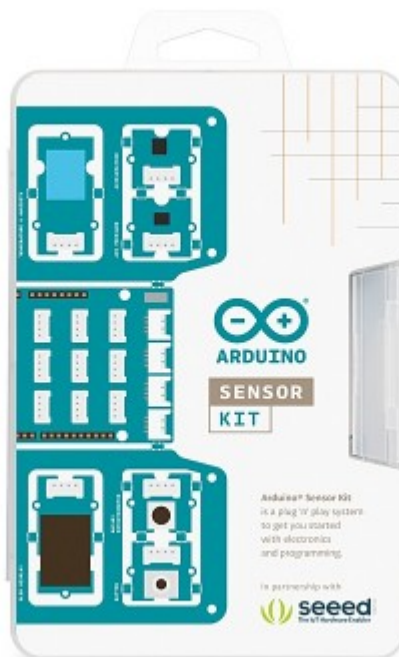# Arduino Sensor Kit - Base

Code: TPX00031

Barcode: 7630049202979

Learn to Plug, Sketch and Play with basic Grove sensors, actuators and Arduino.

All the modules are pre-wired on the PCB, just connect your Arduino Board to the Shield and start your measurements!

The kit includes:

HARDWARE

1 Base Shield that is designed to fit on top of an Arduino UNO board. It comes equipped with 16 grove connectors, which, when placed on top of the UNO, provides functionality to various pins. It includes:

- 7x digital connections

- 4x analog connections

- 4x I2C connections

- 1x UART connection

10 Grove modules included can be connected to the base shield, either through the digital, analog or I2C connectors on the shield. Let's take a quick look at them:

- The LED - simple LED that can be turned ON or OFF, or dimmed.

- The button - pushbutton that can either be in a HIGH or LOW state.

- The potentiometer - a variable resistor that increases or decreases resistance when turning its knob.

- The buzzer - a piezo speaker that is used to produced binary sounds.

- The light sensor - a photoresistor that reads light intensity.

- The sound sensor - a tiny microphone that measures sound vibrations.

- The air pressure sensor - reads air pressure, using I2C protocol.

- The temperature sensor - reads temperature and humidity at the same time.

- The accelerometer - a sensor used for orientation, used for detecting movement.

- The OLED screen - a screen that values or messages can be printed to.

6 Grove cables allows you to easily connect the modules to the Base Shield without any soldering required.

SOFTWARE

The Arduino Sensor Kit Library is a wrapper for that contains links to other libraries related to certain modules such as the accelerometer, air pressure sensor, temperature sensor and the OLED display. This library provides easy-to-use apis that will help you build a clear mental model of the concepts you will be using.

LEARNING MATERIALS

Access to an online platform with all the instructions required to plug, sketch and play with the different Grove Modules. There are 10 lessons and they are :

- 01 The LED

- 02 The Button

- 03 The Potentiometer

- 04 The Buzzer

- 05 The Light Sensor

- 06 The Sound Sensor

- 07 The Air Pressure Sensor

- 08 The Temperature Sensor

- 09 The Movement Sensor

- 10 The OLED Screen