Arduino Input

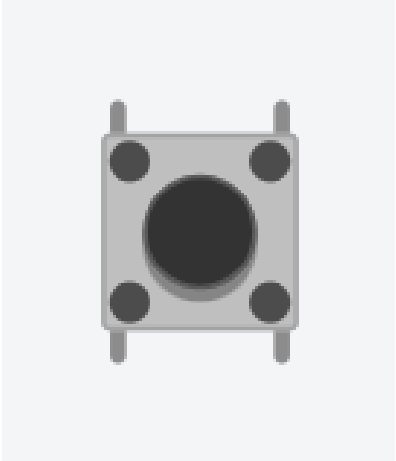
Input

Input refers to the data or signals that the Arduino board receives from the external environment. This can include signals from sensors, buttons, and other input devices.

List of Input

- Pushbutton
- Potentiometer
- Slidewitch
- photoresistor
- Phototiode
- Ambient Light Sensor
- Flex Sensor
- Force Sensor
- IR Sensor
- Ultrasonic Distance
- PIR Sensor
- Soil Moisture Sensor
- Tilt Sensor
- Temperature Sensor
- gas Sensor
- Keypad 4 x 4

Pushbutton



Functions

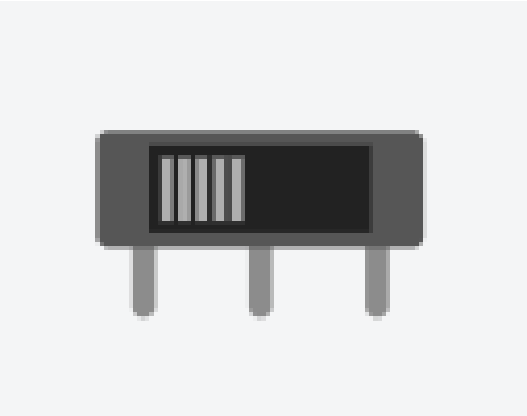
A pushbutton in Arduino is a switch that completes or breaks an electrical circuit when pressed. It's used to trigger actions like turning on/off LEDs, starting motors, or controlling functions in projects.

Pontentiometer

Functions

A potentiometer in Arduino adjusts voltage by turning a knob, changing resistance between its terminals. Arduino reads this resistance to control things like brightness, volume, or motor speed.

Slidewitch



Functions

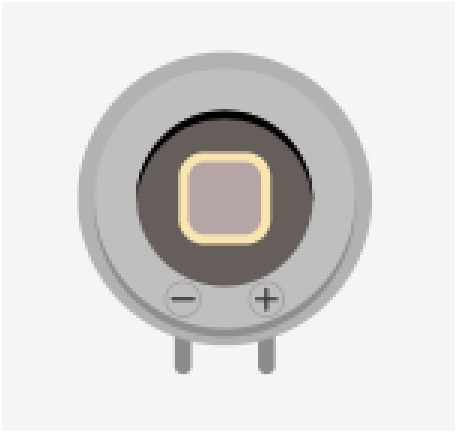
Slide switch in Arduino: A physical switch component that allows users to control circuits by sliding a lever between two positions, typically used to toggle power or signal flow.

Photoresistor

Functions

A photoresistor detects light intensity. When connected to an Arduino, it changes its resistance based on light levels, allowing the Arduino to read and react to light changes.

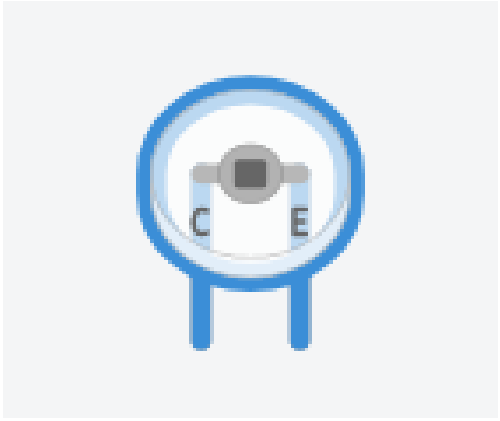
Photodiode



Functions

A photodiode in Arduino detects light, converting it into an electrical signal. This signal can be read by the Arduino to trigger actions based on light levels.

Ambient Light Sensor



Functions

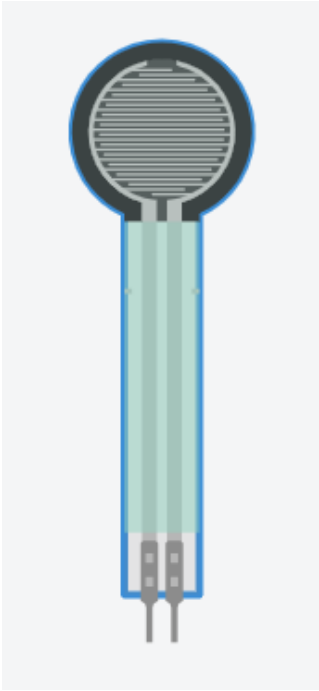
Ambient Light Sensor in Arduino detects brightness levels in its surroundings, converting light intensity into electrical signals that Arduino can interpret, useful for projects needing automated lighting adjustments or data collection.

Flex sensor

Functions

A Flex sensor for Arduino detects bending or flexing. It changes resistance based on how much it bends, allowing Arduino to measure and respond to the degree of bending.

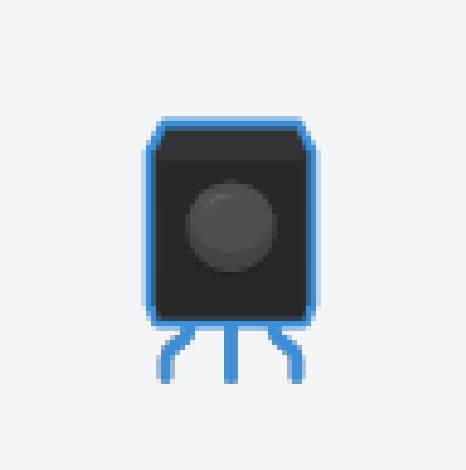
Force sensor



Functions

A force sensor for Arduino measures pressure or weight applied to it. It converts physical force into electrical signals, enabling Arduino to detect and respond to changes in force.

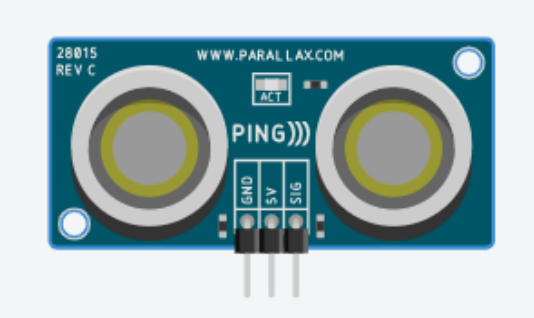
IR sensor



Functions

An IR sensor for Arduino detects infrared light emitted by objects, converting it into electrical signals. It's commonly used for proximity sensing, object detection, and obstacle avoidance in projects.

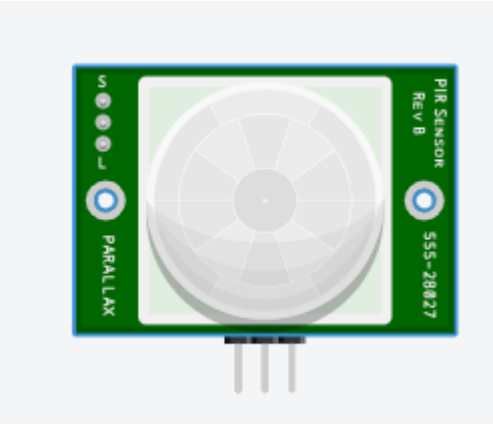
Ultrasonic Distance



Functions

An Arduino ultrasonic distance sensor measures distance by sending sound waves and calculating the time it takes for them to bounce back. Distance = (Time / 2) * Speed of Sound.

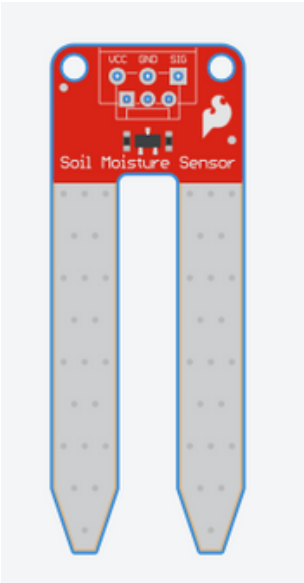
PIR sensor



Functions

A PIR (Passive Infrared) sensor detects motion by sensing changes in infrared radiation emitted by objects. It sends a signal to Arduino when motion is detected, useful for security and automation.

Soil moisture sensor



Functions

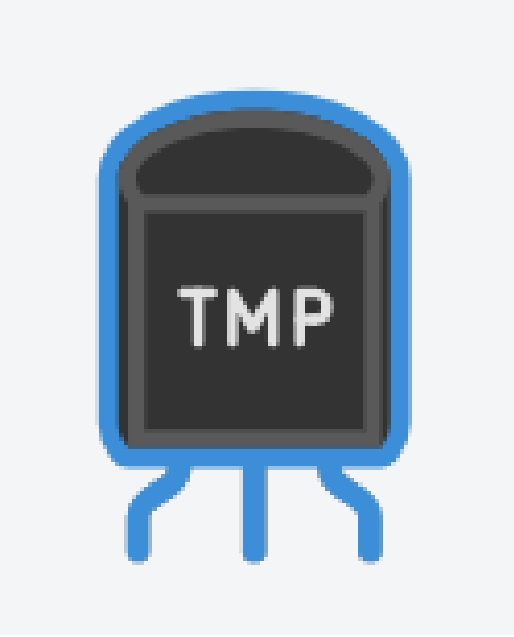
A soil moisture sensor measures moisture levels in soil, helping Arduino projects determine when plants need watering by detecting changes in conductivity, sending data to Arduino for analysis and actions.

Tilt sensor

Functions

A tilt sensor for Arduino detects orientation changes. It triggers actions when tilted beyond a threshold, useful for alarms, interactive games, or orientation-sensitive devices like robotic platforms.

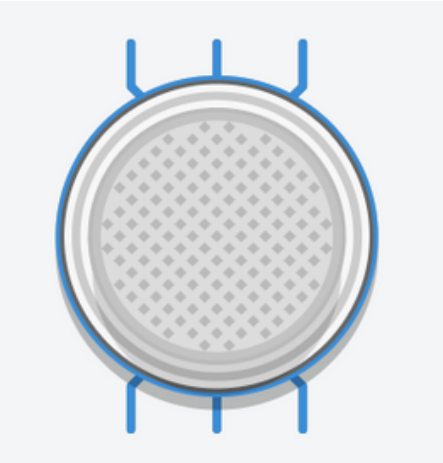
Temperature sensor



Functions

A temperature sensor in Arduino measures the surrounding temperature and sends the data to the Arduino. This allows the Arduino to react based on temperature readings in various projects.

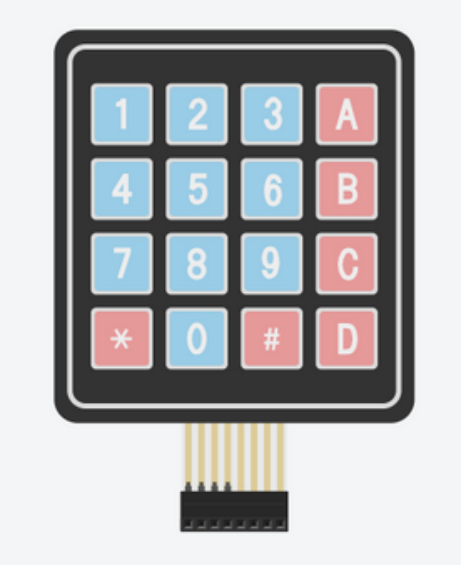
Gas sensor



Functions

A gas sensor for Arduino detects gases like methane or carbon monoxide in the air, sending signals to Arduino. It alerts or triggers actions based on preset thresholds for safety or automation.

Keypad 4 x 4



Functions

A 4 x 4 Keypad function for Arduino reads Keypresses. It scans rows and columns to detect which Key is pressed, returning its value. Useful for inputting numbers or commands in projects.