

# Sensors

## What is a sensor?

Sensors are not a mechanical component but we do have robots where we introduce sensors for the first time so we cover them as a primary focus. There are many types of sensors available today - distance/ultrasonic, motion, touch, color, light, sound, temperature, gyroscopic are just a few of them.

Sensors are devices that convert physical parameters to electrical signals in order to enable some action in response to that physical parameter.

Some factors that are to be considered when using sensors:

- 1) **Accuracy**
- 2) **Environmental conditions** - especially applies to sensors such as temperature, humidity.
- 3) **Range** - Measurement limit of the sensor - especially applies to motion, ultrasonic.
- 4) **Calibration** - Essential for most sensors where the reading might change over time - for eg Light.
- 5) **Resolution** - smallest increment detected by the sensor.

In the WeDo kit we use 2 sensors - Motion and Tilt. Out of these the Motion sensor is the more sensitive and might lose its ability to sense motion accurately over a period of time.

