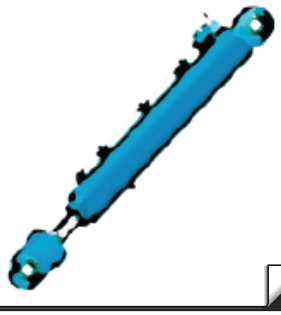
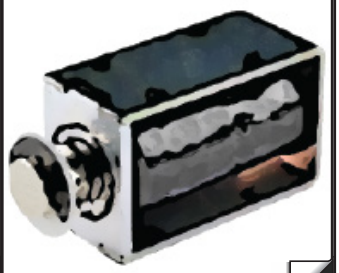


Hydraulic Actuator

What: Produce linear motion
How: Liquid pressure
Uses: construction equipment



Solenoid

What: Produce linear motion over short distances
How: By creating a magnetic field
Uses: latching systems, valves

Gripper

What: Opens and closes two "fingers"
How: Compressed air
Uses: Grasping items

Artificial Muscle

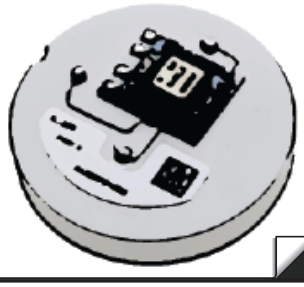
What: mimic a human muscle
How: Changing pressure
Uses: machinery, medical devices

Suction Cup

What: Attaches to smooth surfaces
How: forcing air out, makes cup a vacuum
Uses: Picking up or climbing on items

Stepper Motor

What: Rotates in specified steps/degrees
How: Electrical power
Uses: Precise rotational positioning of objects

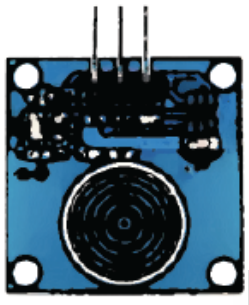


Light Sensor

What: Senses light
How: Changes in Cadmium-Sulfide, a substance sensitive to light
Uses: lamps, brightness control, agriculture

Camera

What: Captures images and video of the world
How: focuses light that reflects off of objects
Uses: recording video, taking pictures

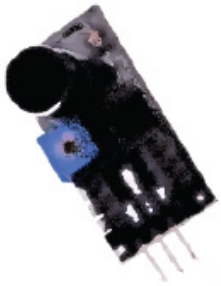


Touch Sensor

What: Recognizes touch
How: Change in conductivity from air
Uses: Touchscreens, mousepads

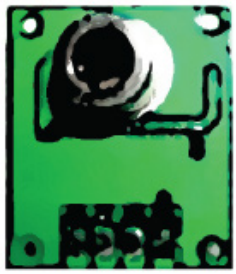
SMELL SENSOR

What: Senses smell
How: Chemical gas sensors
Uses: Detecting toxins, explosives



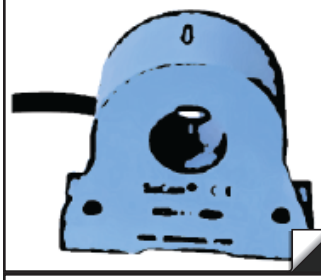
Sound Sensor

What: Detects sound
How: Changes in air pressure
Uses: security system, voice assistant



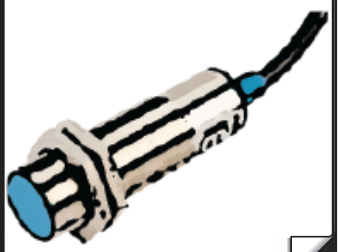
Speaker

What: Generates noise
How: converts sound waves into mechanical movement that compresses air
Uses: playing music



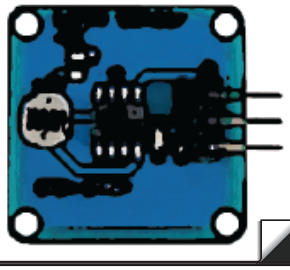
Electric Current Sensor

What: detects changes in electric sensor
How: magnetic field
Uses: power meters, surge protectors



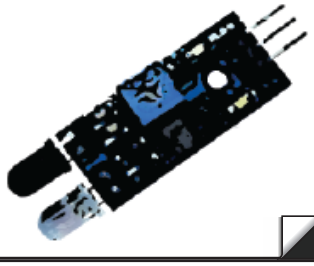
Pressure Sensor

What: pressure sensor
How: sensing strain in a material
Uses: keyboards, aircraft



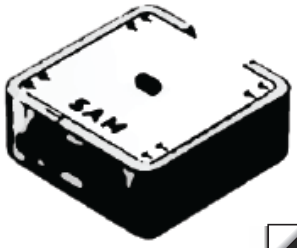
Proximity Sensor

What: detects presence of nearby objects
How: electromagnetic field
Uses: security systems



Speed Sensor

What: detects speed
How: Rotating magnet creates voltage
Uses: car speedometer



Heat Sensor

What: detects temperature
How: temperature differences cause voltage changes
Uses: cooking, AC

Infrared Sensor

What: detects infrared radiation
How: emits radiation that is reflected back
Uses: night vision, detect human bodies

Hand

What: feels, grasps
How: muscles contract, sensory nerves send messages to brain
Uses: picking things up, feeling things

Ear

What: listens
How: sound waves cause eardrum to vibrate
Uses: listening to music, listening to conversation

Fingertip

What: feels
How: Sensory nerves in skin send messages to your brain
Uses: feeling things, poking things

Eye

What: sees
How: light reflected from objects is focused in the eye
Uses: looking at the world

Mouth/Tongue

What: talks, tastes
How: taste receptors sense flavors, muscle moves to speak
Uses: tasting food, having conversations

Nose

What: smells
How: air passes over odor receptor cells
Uses: sniffing flowers