

# Mechanical Sensors



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Now a days Sensors are the most important part of Technology. They are in phones, cars, planes, trains, robots, mills, power plants, packaging lines etc. Modern technology could not exist without sensors. Mechanical sensors are sensitive to changes in mechanical properties, they are based on resistive materials or structures. Most popular mechanical sensors such as cantilevers and acoustic sensors play an important

role in molecular detection. Some important type of sensors which are used in mechanical Acoustic, sound, vibration Automotive, Chemical, Electric current, electric potential, magnetic, radio, Environment, weather, moisture, humidity, Flow, fluid velocity, Navigation instruments, Position, angle, displacement, distance, speed, acceleration, Optical, Pressure, Force, density, level, Thermal, heat, temperature, Speed sensor.

A Chemical sensor is an analyzer that has to respond to a particular analyte in a selective and reversible way, transforming a chemical concentration into an electric signal, with its key element being the sensing material. Gas Sensor are used for detecting a wide range gaseous substances in the atmosphere, including pollutants, toxins and combustible gases. Thermal Sensor built into the clothing provide a warning to fire-fighters of critical temperatures that will cause heat stress and burn. A Pressure Sensor are the pressure probe inserted radially into the flow upstream of the rotor to the mean radius indicates a flow angle of the axial direction.

Sensor/Detectors/Transducers are electrical, opto-electrical, or electronic devices composed of specialty electronics or otherwise sensitive materials, for determining if there is a presence of a particular entity or function. Many types of sensors, detectors, and transducers are available including those for detecting a physical presence such as flame, metals, leaks, levels, or gas and chemicals, among others. Some are designed to sense physical properties such as temperature, pressure, or radiation, while others can detect motion or proximity. They operate in a variety of manners depending on the application and may include electromagnetic fields, or optics, among others. Many applications over a wide range of industries use sensors, detectors, and transducers of many kinds to test, measure, and control various processes and machine functions. With the advent of the Internet of Things (IoT), the need for sensors as a primary tool to provide enhanced automation is increasing.