



SNS COLLEGE OF ENGINEERING

(Autonomous)

DEPARTMENT OF MECHANICAL ENGINEERING



SENSORS AND INSTRUMENTATION



Guess Today's Topic????





Proximity sensor



- Proximity sensors are commonly used in measurement systems for velocity sensing and control. There are several types of proximity sensors that can be used for velocity measurement, including inductive, capacitive, and optical sensors.





Proximity sensor



- Inductive sensors can be used for velocity measurement by detecting changes in the magnetic field produced by a moving object. As the object moves, it causes a change in the inductance of the sensor, which can be used to calculate the velocity. Inductive sensors are commonly used in applications such as conveyor belt speed measurement, automotive speed sensing, and RPM sensing.





Proximity sensor



- Capacitive sensors can also be used for velocity measurement by detecting changes in the capacitance of the sensor as a moving object passes by. The rate of change in capacitance can be used to calculate the velocity of the object. Capacitive sensors are commonly used in applications such as non-contact speed sensing of rotating machinery.





Proximity sensor



- Optical sensors can be used for velocity measurement by detecting changes in the position of a moving object over time. The sensor can use a variety of optical methods to detect the position, such as through laser or photoelectric methods. Optical sensors are commonly used in applications such as motion control systems and speed measurement in high-speed machinery.





Proximity sensor



- The choice of proximity sensor for velocity measurement depends on the specific requirements of the application, such as the desired measurement range, accuracy, and environmental conditions. Each type of sensor has its advantages and disadvantages, and the selection of the appropriate sensor requires careful consideration of these factors.





Proximity sensor





*Thank
you*

