

# Portable Electronic Sensors eLearning Course | Proximity Sensors, Photoelectric Sensors, and More

Introduction to Electronic Sensors - WX11142-XA01UEN-E1

Objective 5: Describe the Operation of an Inductive Proximity Sensor and Give an Application

### Inductive Proximity Sensor Application

One application for an **inductive proximity sensor** is the measurement of fluid flow rate.

An **inductive proximity sensor** is mounted on the end of the metal pipe. As the turbine blades rotate, they pass through the sensor's magnetic field, which causes the sensor to output a signal.

**Inductive proximity sensor**  
Uses the principle of induction to sense the presence of a metallic object. It creates a magnetic field used to sense when a metallic part comes into range then turns on a transistor output.

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## eLearning Course: M11142

Amatrol's Portable Electronic Sensors eLearning course (M11142) teaches the operation of non-contact sensors and their applications in industry, such as sensing movement, detecting metal versus non-metal, and determining speed. This online course covers a variety of sensors, including inductive, capacitive, magnetic reed, hall effect, and photoelectric sensors.

## Teach Types of Electronic Sensors

### Electronic Sensor Skills

Electronic sensors are used in industrial applications for feedback to systems like electrical relay controls and programmable logic controllers. Amatrol's Portable Electronic Sensors eLearning course builds a strong foundation from the basics. In addition to in-depth theoretical knowledge of electronic sensors, learners will also gain valuable skills with five different electronic sensors. For example, learners will study a magnetic reed sensor to understand its operation and applications, such as sensing the position of a pneumatic cylinder. Learners will also learn how to measure and analyze magnetic reed sensor performance.

### What are the Types of Electronic Sensors?

There are many types of electronic sensors. Each type of electronic sensor uses a different electrical principle to sense the presence of an object, and offers unique advantages for certain applications.

In all, there are five common types of sensors:

- Inductive Proximity Sensor
- Capacitive Proximity Sensor
- Magnetic Reed Switch

- Hall Effect Sensor
- Photoelectric Sensor

## Interactive eLearning

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### Amatrol's Sensors eLearning Course Features Engaging Multimedia

Amatrol's extensive, thorough [multimedia](#) covers portable electronic sensor features. Interactive screens paired with instructive graphics teach about an array of portable electronic sensors from inductive to photoelectric sensors. With the optional hardware, learners can then apply this theoretical knowledge to immediate hands-on skills. For example, electronic sensors eLearning students study the function, applications, and characteristics of magnetic reed sensors and then operate, measure, and analyze this sensor for themselves. This combination of theory and practice ingrains concepts in a learner's mind and makes more advanced topics easier to comprehend.

## Additional Info

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### Requires:

- Computer: [See requirements](#)

### Options:

- Portable Electronic Sensors Learning System (990-SN1)

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