SENSOR SELECTION DETAILS

Though different sensors are available to engineers, it is necessary that engineers make decision based on details to be discussed under the requirement section.

REQUIREMENTS

Major:

Application Type asset management, resource allocation, site safety and traffic control

Basic Operation

 magnetometer works by using a passive sensing technology to detect large ferrous objects (for example, a truck, automobile, or rail car) by measuring the change in the ambient magnetic field.

When a vehicle alters that magnetic field, the sensor detects those changes.

Basic Operation Requirements

Temperature range

Size

Protection class

Voltage range

Type of input/output. (Discrete or analog)

Response speed

Sensing range

Accuracy

Electrical connection

**Inductive sensors**

Inductive proximity sensors utilize Faraday’s law of induction to indicate presence of an object or an analog output position. The most critical aspect of selecting an inductive sensor is determining what type of metal the sensor is detecting because that determines sensing distances. Nonferrous metals can reduce the sensing range by more than 50% compared to ferrous metals. Sensor manufacturer data sheets should provide the necessary information for sample selection.