

## PES-110<sup>TM</sup>

### Eddy Current Proximity Sensor

The PES-110 eddy current proximity sensor is designed for non-contact measurements of relative vibration, displacement, and axial positioning. The sensor is equipped with built-in conditioning circuitry allowing it to be directly connected to processing instrumentation.

### General Specifications

#### Operation

- Measurement Type: Non-contact proximity, eddy current
- Measuring Range\*: 0 to 10 mm [0 to 394 mils]
- Outputs\*: 4 to 20 mA, 0 to 10 V
- Sensitivity\*: 1.6 mA/mm [40.6  $\mu$ A/mil], 1 V/mm [25.4 mV/mil]
- Accuracy: According to correction factor  $\pm$  5%
- Repeatability:  $\pm$  5%
- Bandwidth: DC to 500 Hz (-3dB)
- Load at Current Output: 500  $\Omega$  max.
- Load at Voltage Output: 10 k $\Omega$  min.
- Temperature Drift: < 10%
- Short Circuit Protection: Built-in

#### Power Requirements

- Voltage: 15 to 30 Vdc
- Consumption: 30 mA max.
- Voltage Reversal Protection: Built-in
- Warm-up Time: 5 minutes

#### Connection

- Connector Type: 4-pin M12 male
- Maximum Cable Length:
  - For Current Output: 300 m [984 ft]
  - For Voltage Output: 100 m [328 ft]

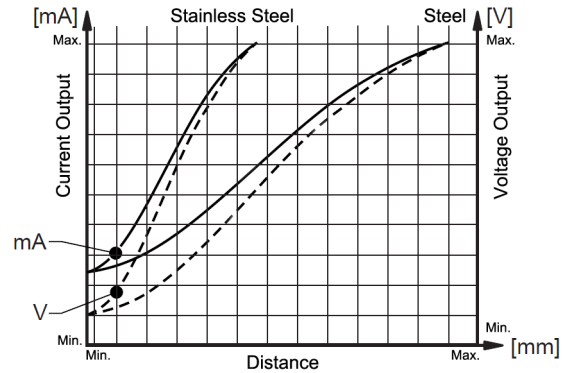
#### Environment

- Temperature Range:
  - Operating: 0 to 70 °C [32 to 158 °F]
  - Storage: -25 to 70 °C [-13 to 158 °F]
- Protection Rating: IP67

#### Physical Characteristics

- Sensor Body: Chrome-plated brass
- Sensing Face: PBTP

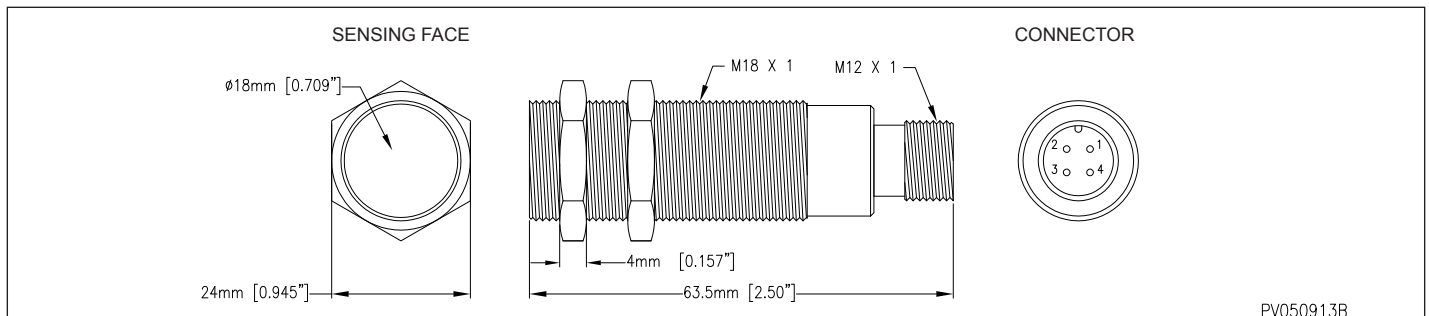
#### Typical Response Comparison (Steel vs. Stainless Steel)



**Warning:** Response of inductive sensors varies with target material, as shown in the graph above. A site calibration is required to calculate the appropriate correction factor to be applied.

\*Target material: FE360 steel

### Dimensions



PV050913B

Publication: 2015-10-22