

# Linear Position Sensor

## Description:

FEMA Corporation is developing a Linear Position Sensor (LPS) for pressurized applications with up to 21mm of travel. The LPS features dual sense elements for fully redundant operation, including redundant supply, ground, and sense pins. The contactless sense technology allows for LVDT-grade accuracy and excellent reliability in demanding applications.

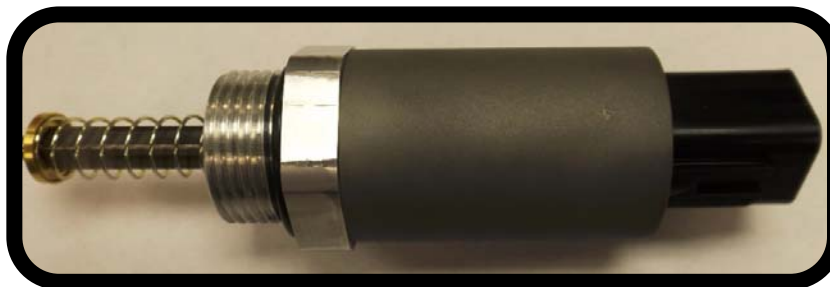
## Operation:

The LPS threads into an industry standard cavity and interfaces via a sealed, Ampseal-16 connector. When supply voltage and ground pins are connected, motion of the spring-returned sense rod is transmitted electronically to the sensor signal pin with options for digital or analog output signals. The output signal is linear to the sense rod displacement.



## Features & Performance Targets

- ◆ Sense Stroke: 21mm (smaller versions available)
- ◆ Mechanical stroke of 25mm
- ◆ Full Scale Linearity  $\pm 1\%$  from  $-40^{\circ}\text{C}$  to  $125^{\circ}\text{C}$
- ◆ Temperature Rating:  $-40^{\circ}\text{C}$  to  $125^{\circ}\text{C}$
- ◆ Environmentally sealed and EMI shielded for use in harsh environments
- ◆ Rugged design rated for high vibration and long life
- ◆ Supply Voltage:  $5 \pm 0.5$  VDC
- ◆ Supply Current  $< 10$ mA nominal
- ◆ Output Signal: Analog (0-5 VDC) or digital (PWM)
- ◆ Diagnostics & Protection:
  - ◆ Protected against short circuit, reverse polarity, and overvoltage
  - ◆ Fully configurable clamping voltage, filtering, and hysteresis
  - ◆ Several optional fault detection strategies
- ◆ Pressure Rating: 200 Bar (High pressure variants available)



## About Us

FEMA Corporation features a number of unique engineering capabilities, innovative products, exceptional production competencies, distinctive cultural philosophies, and attentive services which continually exceed our customers' expectations. We have a rich history, built on the foundation of technical engineering prowess and operational excellence, which has resulted in long-term, stable growth.



# Dimensions and Typical Performance

