

SPS-100 *Plunger Arrival Sensor*

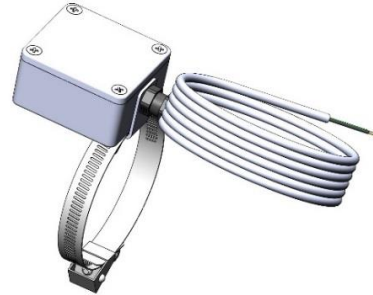
Specifications:

Supply Voltage: 6-24VDC

Operating Current: < 1mA

Signal Output Current Sink: 0.750A max

Operating Temperature: -40 to +70 °C



Installation:

1. Slide hose clamp through bracket on back side of sensor.
2. Locate suitable location on lubricator, in the area where the plunger is held during sales, and attach sensor using the hose clamp. Tighten with a 5/16" nut driver.
3. Connect opposite end of cable to automation equipment, per Table 1.

Operating Modes:

The sensor contains a 3-axis magnetometer and a 3-axis accelerometer, and operates in one of two modes: Combined Magnetic/Vibration Mode, and Magnetic Only Mode.

Combined Mag/Vibe Mode:

In this mode the sensor processes both magnetic data and acceleration data to determine when the plunger arrives at the lubricator. This mode provides a more robust sensing algorithm and seeks to eliminate false detections.

Magnetic Only Mode:

In this mode, only magnetic data from the 3-axis magnetometer is processed. This mode may be desired if the lubricator is exposed to excessive vibration from gas and fluid as the plunger arrives.

The operating mode is selected from the Sensitivity Rotary Switch according to Table 2.

Output Pulse Duration:

The Sensor drives the open collector output signal LOW when the plunger is detected. The output signal pulse duration is adjustable by means of the Pulse Width Rotary Switch according to Table 3.

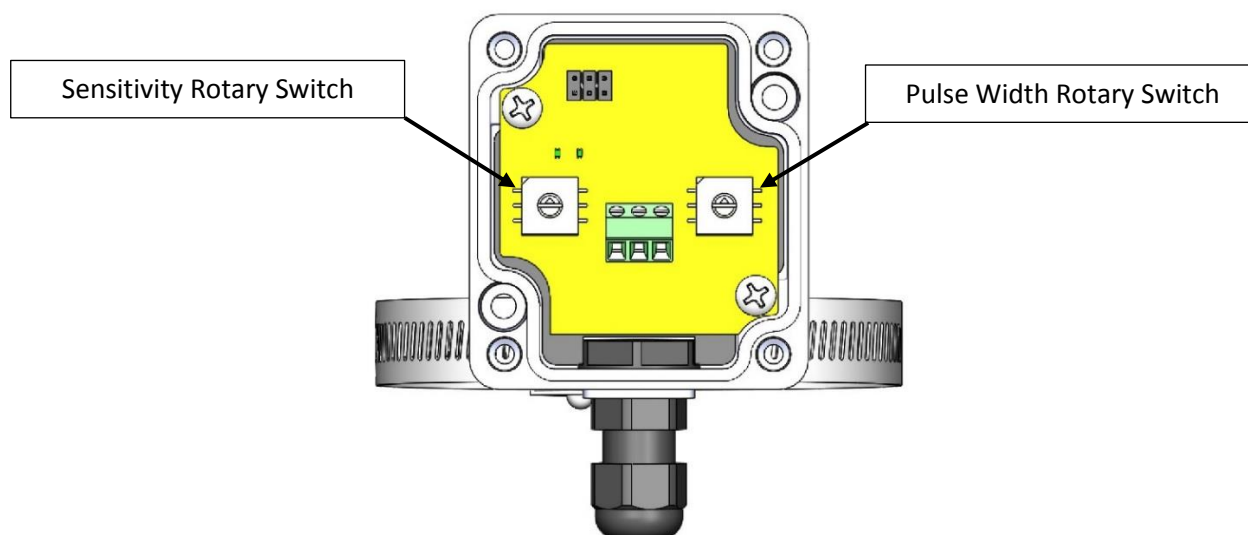


Table 1: Cable Pinout

Conductor Color	Function
RED	POWER: 6-24 VDC
WHITE	SIGNAL
BLACK	GND

Table 2: Sensitivity Rotary Switch Settings

Switch Position	Mode	Sensitivity
0	COMBINED	LOW
1		MEDIUM
2		HIGH
3		HIGHEST
4	MAGNETIC ONLY	LOW
5		MEDIUM
6		HIGH
7		HIGHEST

Table 3: Pulse Duration Rotary Switch Settings

Switch Position	Pulse Duration (Secs)
0	0.25
1	0.50
2	1
3	5
4	15
5	30
6	60
7	--