

## LOW OIL LEVEL SENSOR

(available with flashing LED indicator)



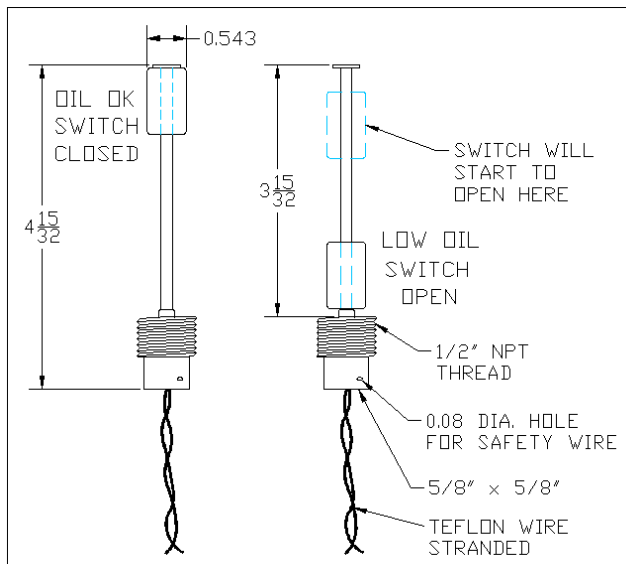
Sensor shown installed in a Lycoming O360-A1A

### DESCRIPTION:

This sensor is a "float type" Low Oil Level Sensor that can be installed in the bottom of an oil sump using spare drain holes. When a low oil condition is sensed, a NC contact will open, indicating a low oil level. This sensor was designed for the high vibration environment of an aircraft engine. It is also available with electronics and a flashing LED indicator. This sensor indicates a low oil level that is less than 4 quarts in a Lycoming O-360-A1A. This sensor is compatible with many engines. Please review page 2 to determine if this sensor will work for your application.

### SPECIFICATIONS:

- Material: Stainless Steel construction
- Switch: Normally closed when normal oil level  
(This switching method was chosen to allow a "fail safe" mode.)  
30V @ 0.35A dc max.
- Temperature: -20°F to +280°F
- Model: LOLS1, Sensor only  
LOLS1E, Sensor with blinking red LED (LED blinks when oil level is low)
- Compatibility: The drawing below is provided for you to determine compatibility on other engines.



**(PLEASE review Page 2 before ordering.)**

# LOW OIL LEVEL SENSOR

(Additional Information)

## FAIL SAFE

This sensor package was designed to be "Fail Safe". By "Fail Safe", we mean that if you utilize this sensor in the oil drain plug position, and you forget to reconnect the sensor to the electronics after an oil change, the panel light will come on indicating a low level. This scenario also holds true if you lose electrical connection to the sensor.

## THE ELECTRONICS

A small, reliable, light weight electronics package is provided with the sensor to allow its fail safe mode of operation. This electronics package is easily "wire tied" up under the instrument panel along with all the other instrument wiring. No mounting hardware is required. The electronics is powered by +12Vdc. It can be made 24V compatible by adding a small zener diode in series with the electronics. See below.

## WARNING LIGHT

You can utilize our "flashing panel light", or utilize your own panel indicator. The maximum current draw for any light is 0.150Adc. Our light is included in the electronics package. The light can be mounted in the instrument panel using a 0.249" to 0.254" diameter mounting hole. The light supplied will operate from a +12Vdc system. To adapt this system for a +24V system, you will have to add a 12V zener diode in series with only the light. This zener should be a 12V, 1W, 1N4742 or equivalent. You can purchase this part from most electronic supply houses. Double check the zener installation polarity before applying power. Please refer to our diagram.

## WHEN WILL THE SENSOR INDICATE A LOW LEVEL?

This sensor package indicates a low oil level that is less than 4 quarts in a Lycoming O-360-A1A. The actual oil capacity will vary with engine and oil pan type. Since the Lycoming manual for this engine says that it will run on just 2 quarts of oil, you should have plenty of time to find an adequate landing spot to add oil! The sensor will indicate an alarm when the oil level is less than 3" from the bottom of the oil pan plug hole. To find out where your low oil level will be, you will have to add oil to the engine slowly and see where the alarm goes away. Make sure you check your engine's lowest operating oil level against the actual oil level that is indicated by this sensor before relying on this sensor for your low level warning.

## **PLEASE READ THIS before ORDERING!**

We would like to guarantee that this sensor will work for you before you order it. In order to do this, you will need to ensure that you have 3.5" of vertical clearance up into your oil pan to utilize this sensor. This distance is measured from the very bottom of the 1/2" NPT plug hole. The position of the bottom of this hole may not be located at the bottom of your oil pan. Most plugs extend a little lower than the bottom of the oil pan. You should remove your oil pan plugs, insert a ruler, and measure the distance it takes to insert this ruler before you feel an obstruction. If this distance is 3.5" or greater, the sensor will work!

For example, the Lycoming O-360-A1A oil pan can have 1, 2, or 3 ports on the bottom of the oil pan. Some are closed off, others are just plugged. On this engine, you will have to use one of the ports on the Pilot's side of the oil pan to utilize this sensor. The passenger's side of this oil pan cannot accept this sensor because there is an air intake pipe that enters the oil pan on that side. The bottom of this pipe measures approximately 2.75" above the bottom of the plug opening. This distance is less than the required 3.5" needed to utilize this plug.