

DLKULJMR ESP-100

Oil Pressure Sensor User Manual

Model: ESP-100 / ESP2-100

1. PRODUCT OVERVIEW

The DLKULJMR ESP-100 and ESP2-100 Oil Pressure Sensors are designed for use in diesel generator systems to monitor oil pressure. These sensors provide a signal to an oil pressure meter and trigger an alarm light when the oil pressure falls below a critical threshold. They feature a 1/8NPT thread for easy installation and are capable of measuring pressure from 0 to 10 bars.

1.1. Working Principle

The sensor operates within a working range of 0 to 10 bars. It incorporates an alarm switch that activates when the oil pressure drops to approximately 0.8 ± 0.2 bars.

- **Normal Operation:** When the oil pressure value is between 0 and 10 bars, the alarm switch remains open, and the alarm light will be off.
- **Alarm Condition:** When the oil pressure value drops to 0.8 ± 0.2 bars, the alarm switch will close, causing the alarm light to turn on, indicating low oil pressure.



Figure 1: Front view of the ESP-100 Oil Pressure Sensor, showing its cylindrical body and threaded base.

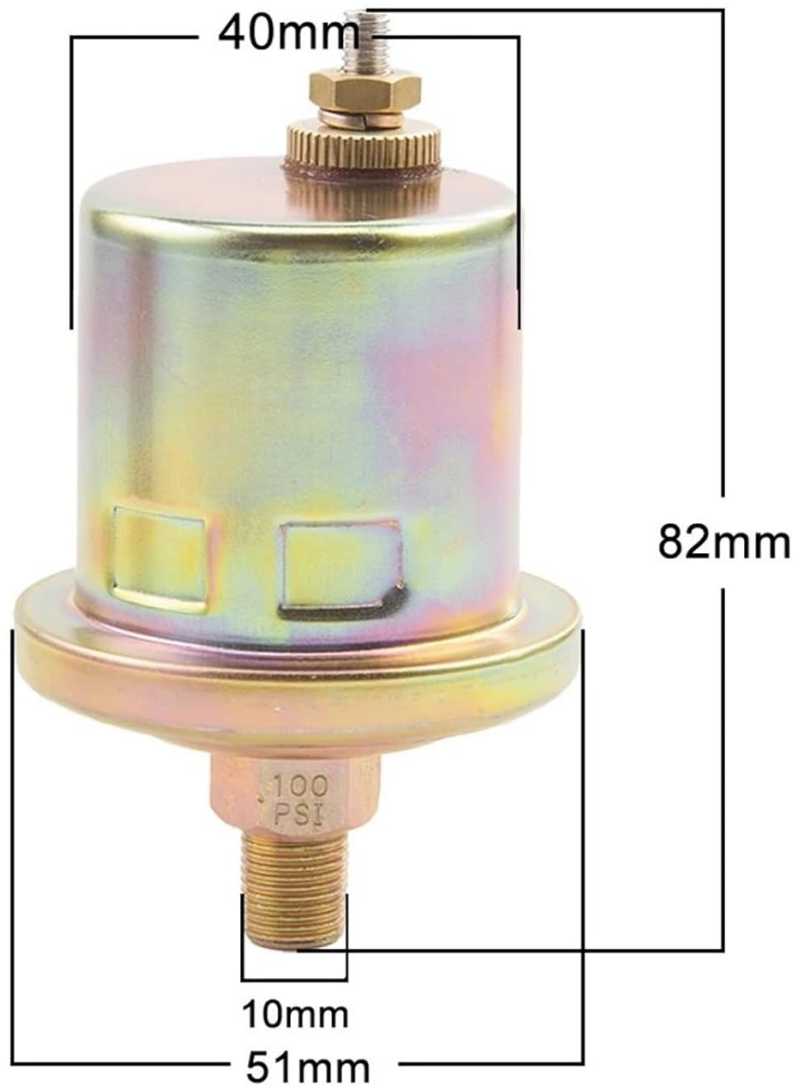


Figure 2: Dimensions of the ESP-100 Oil Pressure Sensor, indicating a height of 82mm and a base width of 51mm.

2. SPECIFICATIONS

Specification	Value
Working Range	0-10 bars
Alarm Pressure	0.8 ± 0.2 bars
Thread Size	1/8NPT
Item Weight	99 Grams
Package Dimensions	1.18 x 0.79 x 0.39 inches
Manufacturer	DLKULJMR
Model Number	DLKULJMR (ESP-100 / ESP2-100)

3. SETUP AND INSTALLATION

Proper installation is crucial for the accurate operation of the oil pressure sensor. Ensure the engine is off and cooled down before beginning installation.

3.1. Wiring Instructions

The sensor has two primary connection points for integration into your system:

- **G Terminal:** Connect this terminal to the positive input of your oil pressure meter. This connection provides the pressure reading to the gauge.
- **WK Terminal:** Connect this terminal to the positive input of your alarm light. This connection activates the alarm light when low pressure is detected.

Ensure all connections are secure and insulated to prevent short circuits or signal interference. Refer to your generator's wiring diagram for specific integration points.



Figure 3: Top view of the sensor, highlighting the G and WK terminals for electrical connections.



Figure 4: Angled view of the sensor, providing a clearer perspective of the terminal connections for wiring.

4. OPERATING INSTRUCTIONS

Once installed and wired correctly, the oil pressure sensor operates automatically to monitor the engine's oil pressure.

- **Normal Operation:** With the engine running and oil pressure within the safe operating range (above 0.8 ± 0.2 bars), the oil pressure meter will display the current pressure, and the alarm light will remain off.
- **Low Pressure Alert:** If the engine's oil pressure drops to or below 0.8 ± 0.2 bars, the sensor will trigger, causing the connected alarm light to illuminate. This indicates a critical low oil pressure condition that requires immediate attention.

Always refer to your generator's specific operating manual for recommended oil pressure ranges and actions to take during a low-pressure alarm.

5. MAINTENANCE

The ESP-100/ESP2-100 oil pressure sensor is designed for durability and requires minimal maintenance.

- **Regular Inspection:** Periodically inspect the sensor and its wiring for any signs of damage, corrosion, or loose connections.
- **Cleaning:** If necessary, gently clean the exterior of the sensor with a soft, dry cloth. Avoid using harsh chemicals or abrasive materials that could damage the sensor body or connections.
- **Pressure Port:** Ensure the 1/8NPT pressure port remains clear of debris or blockages that could affect accurate pressure readings.

Do not attempt to disassemble the sensor, as this will void any warranty and may damage the internal components.

6. TROUBLESHOOTING

If you experience issues with your oil pressure sensor, consider the following common troubleshooting steps:

Problem	Possible Cause	Solution
Alarm light constantly on (engine off)	Wiring error, faulty alarm light, or sensor issue.	Check WK terminal wiring. Verify alarm light functionality. If issues persist, consult a professional.
Alarm light never comes on (even with low oil)	Faulty alarm light, incorrect wiring, or sensor malfunction.	Test alarm light independently. Check WK terminal wiring. Ensure actual oil pressure is low enough to trigger.
Inaccurate pressure readings on meter	Loose G terminal connection, faulty oil pressure meter, or sensor issue.	Verify G terminal connection. Test oil pressure meter with a known good signal. Ensure sensor port is clear.
Oil leakage around sensor	Improper installation, damaged threads, or missing/damaged seal.	Ensure proper torque during installation. Check threads for damage. Use appropriate thread sealant or gasket.

For issues not covered here or if troubleshooting steps do not resolve the problem, it is recommended to consult a qualified technician or contact DLKULJMR customer support.

7. WARRANTY AND SUPPORT

For information regarding warranty coverage, technical support, or replacement parts for your DLKULJMR ESP-100/ESP2-100 Oil Pressure Sensor, please refer to the purchase documentation or contact the manufacturer directly.

Manufacturer: DLKULJMR

Model Numbers: ESP-100, ESP2-100

ASIN: B0F62RYP42 (for ESP-100 variant)

When contacting support, please have your product model number and purchase details readily available.

