KAOLALI 240-33 ohm_1

KAOLALI Fuel Level Sensor Instruction Manual

Model: 240-33 ohm_1

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of your KAOLALI Fuel Level Sensor. This high-quality sensor is designed for accurate measurement of fuel and water levels in various applications, including automotive and marine vehicles. Please read this manual thoroughly before installation and use to ensure proper function and safety.

Image 1.1: KAOLALI Fuel Level Sensor (example length 200mm)

2. Safety Information

Always observe the following safety precautions during installation and operation:

- Ensure the power supply is disconnected before performing any installation or maintenance to prevent electrical shock.
- Work in a well-ventilated area, especially when dealing with fuel tanks, to avoid inhaling fumes.
- Use appropriate personal protective equipment (PPE) such as gloves and eye protection.
- Verify all connections are secure and properly insulated to prevent short circuits or leaks.
- Do not modify the sensor or its components, as this may compromise its performance and safety.
- Consult a qualified professional if you are unsure about any part of the installation process.

3. Product Features

- **Material:** Constructed from high-grade 316 stainless steel for effective performance, advanced corrosion resistance, and long service life.
- **Durability:** Designed with anti-vibration and anti-explosion properties for reliable operation in demanding

environments.

- **Length Range:** Available in lengths from 200mm to 1000mm to suit various tank depths.
- **Signal Output:** Provides a standard 240-33 ohm signal output, compatible with most common fuel gauges.
- **Protection Rating:** IP67 rated, ensuring protection against dust and temporary immersion in water.
- **Wide Application:** Suitable for use with fuel, water, kerosene, chemical tanks, and any type of liquid without impurities.
- **Mounting:** Features a standard SAE 5-hole mounting pattern for easy installation.

4. Package Contents

Upon opening the package, please verify that all the following components are present:

- 1 x Fuel/Water Level Sender Unit
- 1 x Gasket
- 5 x M5 x 16 Screws

Image 4.1: Package Contents - Sensor, Gasket, and Screws

5. Specifications

Specification	Value
Material	316 Stainless Steel
Mounting Method	SAE 5-Hole Pattern
Length Range	200mm - 1000mm (depending on model)
Signal Output	240-33 Ohms
Protection Rating	IP67
Operating Temperature	-40 °C to +85 °C (-40 °F to +185 °F)
Screw Size	M5 x 16

6. Installation

Follow these steps for proper installation of the fuel level sensor:

1. **Prepare the Tank:** Ensure the tank is empty or the liquid level is below the installation point to prevent spills. Clean the mounting surface around the existing opening or prepare a new opening according to the SAE 5-hole pattern.
2. **Position the Gasket:** Place the provided gasket onto the mounting flange of the sensor. This ensures a watertight seal.
3. **Insert the Sensor:** Carefully insert the sensor into the tank opening. Ensure the float mechanism has free movement and does not obstruct any internal tank components.
4. **Secure the Sensor:** Align the 5 holes on the sensor flange with the holes on the tank. Insert the M5 x 16 screws and tighten them evenly in a star pattern to ensure a secure and leak-free seal. Do not overtighten.
5. **Wiring Connections:** Connect the sensor wires to your fuel gauge or monitoring system. The sensor typically has two wires: one for signal output (usually red or brown) and one for ground (usually blue or black). Refer to your gauge's wiring diagram for specific connections.

Image 6.1: Sensor Mounting Flange and Wiring

7. Operation

The KAOLALI Fuel Level Sensor operates by using a float that moves along a rod, changing the electrical resistance as the liquid level rises or falls. This resistance change is then interpreted by a compatible fuel gauge or monitoring system, which displays the current liquid level.

- Ensure your gauge is compatible with a 240-33 ohm input signal.
- Once installed and wired correctly, the gauge should provide an accurate reading of the tank's contents.
- The sensor is designed for continuous operation and does not require manual intervention during normal use.

8. Maintenance

The KAOLALI Fuel Level Sensor is designed for minimal maintenance. However, periodic checks can help ensure its longevity and accuracy:

- **Visual Inspection:** Periodically inspect the sensor for any signs of physical damage, corrosion, or loose connections.
- **Cleaning:** If accessible, gently clean any buildup or debris from the sensor rod and float. Avoid using harsh

chemicals that could damage the materials.

- **Seal Integrity:** Check the mounting gasket for any signs of wear or leakage. Replace if necessary to maintain a watertight seal.

9. Troubleshooting

If you experience issues with your fuel level sensor, consider the following troubleshooting steps:

Problem	Possible Cause	Solution
No reading on gauge	Loose or incorrect wiring Faulty gauge Sensor malfunction	Check all wiring connections for security and correct polarity. Test the gauge with a known good signal. If wiring and gauge are fine, the sensor may need replacement.
Inaccurate reading	Incorrect sensor length for tank Float obstruction Gauge calibration issue	Verify the sensor length matches the tank depth. Inspect the float for free movement. Check if the gauge requires calibration or is compatible with 240-33 ohm input.
Intermittent reading	Loose connection Internal sensor issue	Check all wiring connections. If connections are secure, the sensor may have an internal fault and require replacement.
Leakage at mounting point	Improperly tightened screws Damaged gasket	Ensure screws are tightened evenly. Inspect and replace the gasket if damaged.

10. Warranty and Support

KAOLALI provides a **1-year quality warranty** under regular use conditions for this product. If you have any questions regarding technical aspects, installation, or usage, please do not hesitate to contact us. We are committed to providing prompt assistance.
For support, please refer to the contact information provided with your purchase or visit the official KAOLALI website.