

CEMELI DN15, DN10

CEMELI Liquid Fuel Oil Flow Meter User Manual

Models: DN10, DN15

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of the CEMELI Liquid Fuel Oil Flow Meter. This device is designed to accurately measure the flow rate of various liquid fuels, including diesel and gasoline, in industrial and automotive applications. Please read this manual thoroughly before using the product to ensure correct operation and to prevent damage.

2. PRODUCT OVERVIEW

The CEMELI Liquid Fuel Oil Flow Meter is a gear-type flow sensor engineered for precision and reliability. It provides a pulse output proportional to the volume of liquid passing through it, allowing for accurate monitoring and control of fuel consumption or transfer. The sensor features a robust design suitable for demanding environments.

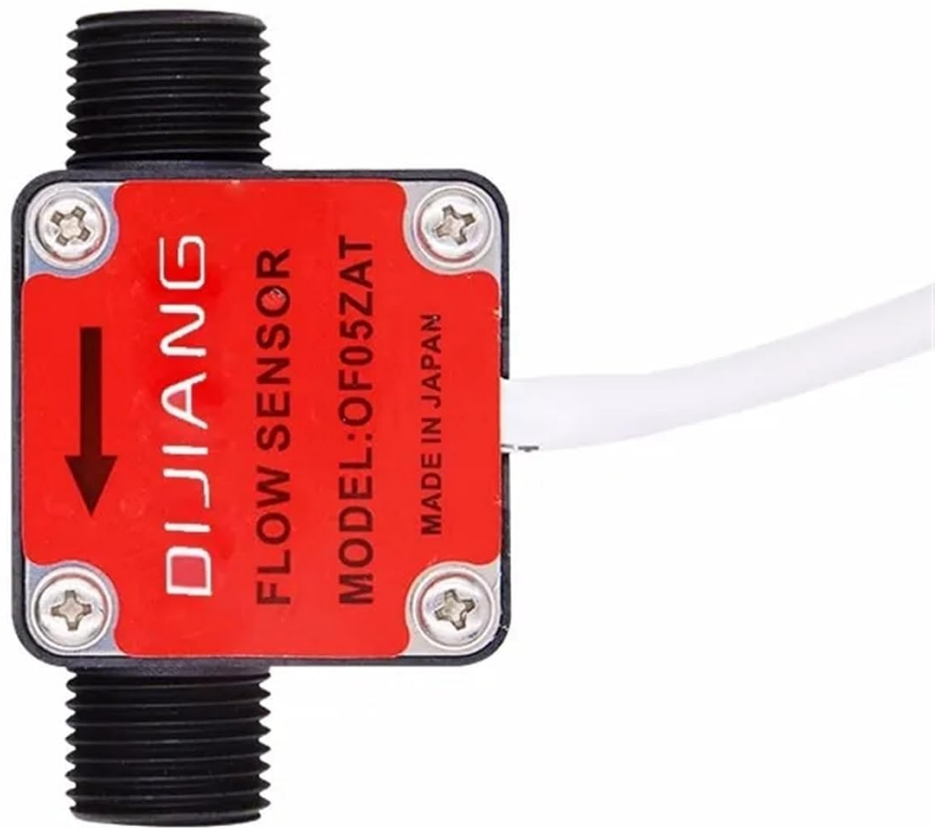


Figure 1: Close-up of the CEMELI Liquid Fuel Oil Flow Sensor, displaying the DIJIANG brand and model OF05ZAT.

Key Features:

- Accurate measurement of liquid fuel flow.
- Gear-type sensing mechanism for reliability.
- Pulse output for easy integration with control systems.
- Durable construction for various applications.
- Available in DN10 and DN15 connection sizes.

3. SPECIFICATIONS

Refer to the table below for detailed technical specifications of the CEMELI Liquid Fuel Oil Flow Meter.



Figure 2: Technical labels on the CEMELI Flow Sensor, indicating operational parameters.

Parameter	Value
Model Numbers	DN10, DN15
Maximum Pressure	1.0 MPa
Operating Temperature	-10°C to +70°C (14°F to 158°F)
Pulse Unit	ml/P (milliliters per pulse)
Wiring (Power)	Red wire: Power (+), Black wire: Power (-)
Wiring (Output)	Blue wire: Pulse Output
Item Weight	Approximately 1.76 ounces (50 grams)
Package Dimensions	Approximately 1.18 x 0.79 x 0.39 inches
Manufacturer	CEMELI

4. SAFETY INFORMATION

Adhere to the following safety guidelines to prevent injury or damage to the product and surrounding equipment:

- Always disconnect power before performing any installation or maintenance.
- Ensure proper ventilation when working with liquid fuels.
- Wear appropriate personal protective equipment (PPE), such as gloves and eye protection.
- Verify that the flow meter is compatible with the liquid being measured in terms of chemical resistance and temperature.
- Do not exceed the maximum pressure or temperature ratings specified for the device.
- Ensure all electrical connections are secure and insulated to prevent short circuits.
- Install the device in a location protected from excessive vibration, direct sunlight, and extreme weather conditions.

5. SETUP AND INSTALLATION

Follow these steps for proper installation of your CEMELI Liquid Fuel Oil Flow Meter:

5.1 Mechanical Installation

1. **Choose Location:** Select a suitable location in the fluid line where the flow is stable and free from turbulence. Ensure there is sufficient space for installation and future maintenance.
2. **Prepare Piping:** Shut off the fluid supply and drain the line. Cut the pipe to the appropriate length to accommodate the flow meter.
3. **Orient the Sensor:** Observe the arrow marked on the body of the flow meter. This arrow indicates the direction of fluid flow. Install the sensor so that the arrow aligns with the actual flow direction in your system.
4. **Connect to Piping:** Use appropriate fittings (G1/2" or G3/8" depending on your model) to connect the flow meter securely into the fluid line. Ensure all connections are leak-tight.



Figure 3: CEMELI Flow Meter showing threaded connections and wiring. Note the flow direction arrow.

5.2 Electrical Wiring

The flow meter features a three-wire connection. Connect them as follows:

- **Red Wire:** Connect to the positive (+) power supply.
- **Black Wire:** Connect to the negative (-) power supply (ground).
- **Blue Wire:** This is the pulse output signal. Connect it to your counting device, microcontroller, or data acquisition system input.

Caution: Ensure correct polarity when connecting power to avoid damage to the sensor.

6. OPERATING INSTRUCTIONS

Once installed and wired correctly, the CEMELI Liquid Fuel Oil Flow Meter will begin generating pulse signals as fluid flows through it.

6.1 Understanding Pulse Output

The flow meter produces a series of electrical pulses. Each pulse corresponds to a specific volume of liquid, as indicated by the "Pulse Unit" specification (e.g., ml/P). To calculate the total volume or flow rate:

- **Total Volume:** Count the total number of pulses over a period and multiply by the pulse unit value.
- **Flow Rate:** Count the number of pulses per unit of time (e.g., pulses per second) and multiply by the pulse unit value to get the flow rate (e.g., ml/second).

Refer to the "Specifications" section for the exact pulse unit value for your model.

6.2 Initial Testing

1. After installation, slowly open the fluid supply valve.
2. Check for any leaks at the connections.
3. Verify that your counting device is receiving pulse signals when fluid is flowing.
4. Compare the measured flow with a known reference if possible, to ensure accuracy.

7. MAINTENANCE

Regular maintenance ensures the longevity and accuracy of your flow meter.

7.1 Routine Checks

- **Visual Inspection:** Periodically inspect the flow meter and connections for any signs of leaks, corrosion, or physical damage.
- **Wiring Integrity:** Ensure all electrical connections remain secure and free from damage.
- **Cleanliness:** Keep the exterior of the sensor clean. Avoid using harsh chemicals that could damage the housing.

7.2 Cleaning Internal Components

If the flow meter's accuracy degrades or flow is impeded, internal cleaning may be required. This should only be performed by qualified personnel.

1. Shut off the fluid supply and disconnect power.
2. Carefully remove the flow meter from the piping.
3. Disassemble the sensor according to manufacturer guidelines (if applicable and safe to do so).
4. Clean internal components, especially the gears, using a suitable solvent compatible with the materials and the fluid previously measured.
5. Reassemble carefully, ensuring all seals are correctly seated, and reinstall.

8. TROUBLESHOOTING

If you encounter issues with your CEMELI Liquid Fuel Oil Flow Meter, refer to the following troubleshooting guide:

Problem	Possible Cause	Solution
---------	----------------	----------

Problem	Possible Cause	Solution
No pulse output / No flow reading	- No power to the sensor. - Incorrect wiring (Red/Black wires). - No fluid flow. - Sensor installed against flow direction. - Internal blockage. - Faulty sensor.	- Check power supply and connections. - Verify Red (+) and Black (-) wire connections. - Ensure fluid is flowing through the line. - Check flow direction arrow on sensor. Reinstall if incorrect. - Inspect for blockages (requires disassembly). - Contact support if all else fails.
Inaccurate flow reading	- Air bubbles in the fluid. - Sensor not fully filled with liquid. - Internal debris affecting gears. - Incorrect pulse unit used in calculation. - Flow rate outside sensor's operating range.	- Bleed air from the system. - Ensure sensor is always submerged in liquid. - Clean internal components (see Maintenance). - Confirm the correct ml/P value for your model. - Verify flow rate is within specified limits.
Leaks at connections	- Loose fittings. - Damaged threads or seals.	- Tighten connections appropriately. - Inspect and replace damaged fittings or seals.

9. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries regarding your CEMELI Liquid Fuel Oil Flow Meter, please contact the manufacturer or your authorized dealer. Provide your product model (DN10 or DN15) and purchase details when seeking assistance.

Manufacturer: CEMELI

Please retain this manual for future reference.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question