

GPI 03A31GM-METHANOL

GPI 03A31GM-Methanol Turbine Flow Meter User Manual

Model: 03A31GM-METHANOL

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation, installation, and maintenance of your GPI 03A31GM-Methanol Turbine Flow Meter. Please read this manual thoroughly before using the product to ensure proper function and to prevent damage or injury.

The GPI 03A31GM-METHANOL is an aluminum turbine fuel flowmeter designed for accurate measurement of methanol. It features a 1-inch FNPT inlet/outlet and provides accurate readings for flow rates from 3-50 GPM (11-190 LPM).

2. SAFETY INFORMATION

Always observe safety precautions to reduce the risk of injury or damage to the equipment.

- **Compatibility:** This meter is specifically designed for use with methanol. **DO NOT USE WITH WATER** or other incompatible fluids, as this can damage the meter and lead to inaccurate readings or hazardous conditions.
- **Installation:** Ensure all connections are secure and leak-free before operation. Follow all local codes and regulations for installation.
- **Maintenance:** Disconnect power before performing any maintenance. Use only genuine GPI replacement parts.
- **Fluid Handling:** Always wear appropriate personal protective equipment (PPE) when handling methanol or other fluids. Refer to the Safety Data Sheet (SDS) for the fluid being measured.

3. PRODUCT OVERVIEW

The GPI 03A31GM-Methanol Turbine Flow Meter is a robust and reliable device for precise fluid measurement. Its compact design and nickel-plated aluminum housing ensure durability and compatibility with methanol.



Figure 3.1: Front view of the GPI 03A31GM-Methanol Turbine Flow Meter, showing the digital display and control buttons.

03A Series

Ranging from **0.3-50 GPM** | **1-190 L/min**

Use to configure
calibration parameters

4 Digit digital
LCD display

Arrow indicates
flow direction

Toggle between batch
& cumulative totals



Figure 3.2: Annotated diagram highlighting key components and functions: "CALIBRATE" button for configuration, "DISPLAY" button to toggle totals, arrow indicating flow direction, and the 4-digit digital LCD display showing "TOTAL1" (cumulative) and "FAC" (batch) readings.

Key Features:

- Nickel-plated aluminum housing for methanol compatibility.
- 6-digit LCD display with floating decimal.
- Two totals: resettable batch total and non-resettable cumulative total.
- Field calibratable for high accuracy.

- Powered by two field-replaceable lithium batteries (5-year life).
- Non-volatile memory protects data during battery replacement.
- Simplified internal parts for easy maintenance.
- Wetted materials: 316 Stainless Steel, Aluminum, Ceramic, PVDF, Tungsten Carbide.

4. SETUP AND INSTALLATION

Proper installation is crucial for accurate readings and safe operation.

1. **Unpacking:** Carefully remove the flow meter from its packaging. Inspect for any signs of damage.
2. **Mounting Position:** Install the meter in a horizontal or vertical position, ensuring the flow direction arrow on the meter body aligns with the fluid flow.
3. **Piping:** Connect the meter using the 1-inch FNPT inlet/outlet. Use appropriate thread sealant to ensure leak-free connections. Avoid overtightening.
4. **Power:** The meter is powered by two lithium batteries (included). Ensure they are properly installed.
5. **Initial Check:** Before introducing fluid, ensure all connections are secure.

5. OPERATING INSTRUCTIONS

The meter features a simple two-button interface for operation and calibration.

Display Functions:

- The 6-digit LCD display shows the current flow total.
- Press the **DISPLAY** button to toggle between the resettable batch total and the non-resettable cumulative total.
- The display will show "TOTAL1" for the cumulative total and "FAC" (or similar indicator) for the batch total.

Resetting the Batch Total:

1. Ensure the display is showing the batch total.
2. Press and hold the **DISPLAY** button for approximately 3 seconds until the batch total resets to zero.

Calibration:

The meter is factory calibrated in gallons. Field calibration is possible to fine-tune accuracy for specific applications or fluids.

- Press the **CALIBRATE** button to enter calibration mode.
- Follow the on-screen prompts to adjust calibration parameters. Refer to the detailed calibration procedure in the full PDF manual for precise steps.

6. MAINTENANCE

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

Battery Replacement:

- The meter uses two field-replaceable lithium batteries with an approximate 5-year life.
- When the battery indicator appears or the display becomes dim, replace the batteries.
- The non-volatile memory will protect your cumulative total data during battery replacement.

- Refer to the full PDF manual for detailed instructions on accessing and replacing the batteries.

Cleaning:

- Clean the exterior of the meter with a damp cloth. Do not use harsh chemicals or abrasive cleaners.
- If internal cleaning is required due to debris, consult the full PDF manual or contact GPI support.

Internal Parts:

The meter features simplified internal parts for ease of maintenance. If replacement of internal components is necessary, use only genuine GPI parts and follow the instructions in the detailed manual or seek professional assistance.

7. TROUBLESHOOTING

This section addresses common issues you might encounter.

Problem	Possible Cause	Solution
No display or dim display	Low or dead batteries	Replace batteries.
Inaccurate readings	Incorrect calibration; Air in line; Meter used with incompatible fluid (e.g., water)	Perform field calibration; Bleed air from the system; Ensure only methanol is being measured.
No flow reading	No fluid flow; Meter installed backward; Obstruction in meter	Verify fluid flow; Check flow direction arrow and reinstall if necessary; Inspect for and remove obstructions.
Leakage at connections	Loose connections; Insufficient thread sealant	Tighten connections; Reapply thread sealant if necessary.

If problems persist, refer to the comprehensive troubleshooting guide in the full PDF user manual or contact GPI customer support.

8. SPECIFICATIONS

Attribute	Detail
Model Number	03A31GM-METHANOL
Flow Rate Range	3-50 GPM (11-190 LPM)
Accuracy	+/-1.5% of reading
Inlet/Outlet Size	1-inch FNPT
Housing Material	Nickel-plated Aluminum
Display	6-digit LCD with floating decimal
Totals	Resettable Batch, Non-resettable Cumulative
Power	2 x Lithium Batteries (5-year life)
Wetted Materials	316 Stainless Steel, Aluminum, Ceramic, PVDF, Tungsten Carbide

Attribute	Detail
Compatibility	Methanol (Do not use with water)
Package Dimensions	9 x 4 x 4 inches
Item Weight	1.59 Pounds

9. WARRANTY AND SUPPORT




For warranty information, technical support, or to purchase replacement parts, please contact GPI directly.



- **Manufacturer:** GPI (Great Plains Industries)
- **Official Website:** www.gpi.net
- **User Manual (PDF):** For a comprehensive guide, download the official PDF manual:[Download PDF Manual](#)

Please have your model number (03A31GM-METHANOL) and serial number ready when contacting support.

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Related Documents - 03A31GM-METHANOL

	<p>GPI GM50 Series Positive Displacement Flowmeter Instruction Manual</p> <p>Comprehensive instruction manual for the GPI GM50 series positive displacement flowmeters, covering installation, operation, troubleshooting, parts, and warranty information for industrial and commercial applications.</p>
	<p>GPI Electronic Digital Meter Calibration Quick Reference Guide</p> <p>A quick reference guide for field calibration of GPI Electronic Digital Meters, detailing steps for setting calibration curves and points.</p>
	<p>GPI Oil Transfer Pump Product Owner's Manual - Models L 5020, L 5116, L 5132</p> <p>This Product Owner's Manual from Great Plains Industries provides critical information for the safe and effective operation, installation, and maintenance of GPI Oil Transfer Pumps, models L 5020, L 5116, and L 5132. It includes detailed safety instructions, product specifications, troubleshooting guides, and parts lists.</p>

	<p>GPI M-150S, M-180S, M-240S Fuel Pump Owner's Manual and Installation Guide</p> <p>Comprehensive owner's manual for Great Plains Industries (GPI) M-150S, M-180S, and M-240S DC electric gear fuel pumps. Includes detailed instructions for installation, operation, maintenance, troubleshooting, repair, and specifications. Learn how to safely use and maintain your GPI fuel pump for gasoline, diesel, and kerosene transfer.</p>
	<p>FLOMEC TM Series Electronic Water Flowmeters User Manual</p> <p>Comprehensive user manual for FLOMEC TM Series Electronic Water Flowmeters (3-inch and 4-inch models TM30XXXXXX, TM40XXXXXX). Covers installation, operation, maintenance, specifications, and troubleshooting for reliable water flow measurement.</p>