

Dwyer 477B-3

Dwyer 477B-3 Handheld Digital Manometer Instruction Manual

Model: 477B-3

1. INTRODUCTION

This manual provides comprehensive instructions for the safe and effective operation, setup, and maintenance of the Dwyer 477B-3 Handheld Digital Manometer. The 477B-3 is designed for precise measurement of air pressure, offering high accuracy and internal memory for data storage.

2. SAFETY INFORMATION

Always observe the following safety precautions to prevent injury and avoid damage to the instrument:

- Do not exceed the specified pressure range of the device.
- Ensure proper connection of pressure tubing to avoid leaks or incorrect readings.
- Do not expose the manometer to extreme temperatures, humidity, or corrosive environments.
- Use only the specified battery type for replacement.
- Keep the device clean and free from debris.

3. PRODUCT OVERVIEW

The Dwyer 477B-3 is a robust handheld digital manometer encased in an aluminum housing. It features a clear digital display and intuitive button controls for various functions.

3.1 Front Panel

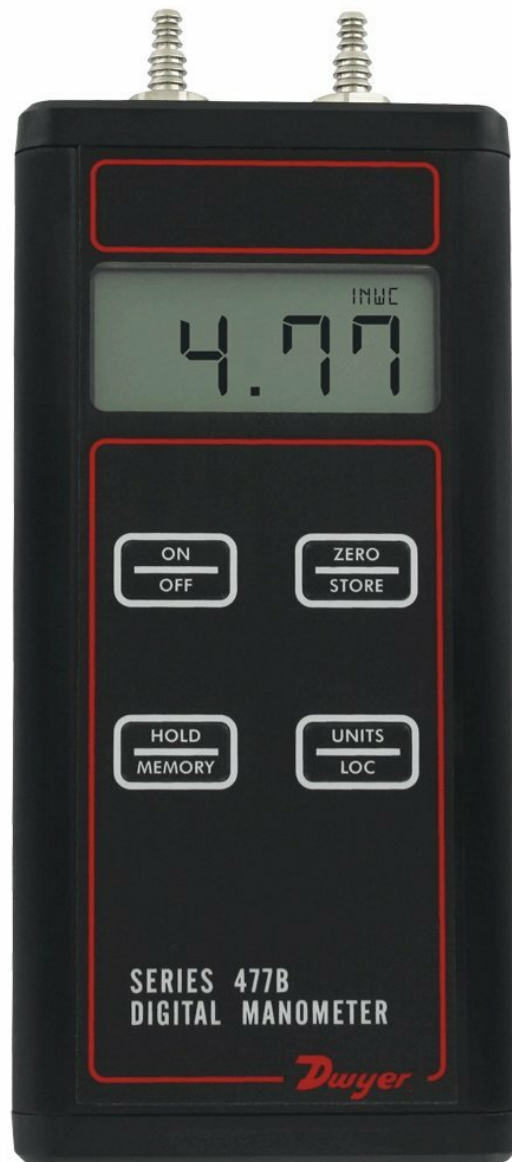


Figure 1: Front view of the Dwyer 477B-3 Digital Manometer, showing the digital display and control buttons.

The front panel includes:

- **Digital Display:** Shows pressure readings and operational indicators.
- **ON/OFF Button:** Powers the device on or off.
- **ZERO/STORE Button:** Zeros the reading or stores data in memory.
- **HOLD/MEMORY Button:** Holds the current reading or accesses stored data.
- **UNITS/LOC Button:** Changes measurement units or navigates memory locations.

3.2 Back Panel



Figure 2: Back view of the Dwyer 477B-3 Digital Manometer, displaying key operating instructions and specifications.

The back panel provides quick reference operating instructions and device specifications. It also houses the pressure ports at the top and the battery compartment at the bottom.

4. SETUP

4.1 Battery Installation

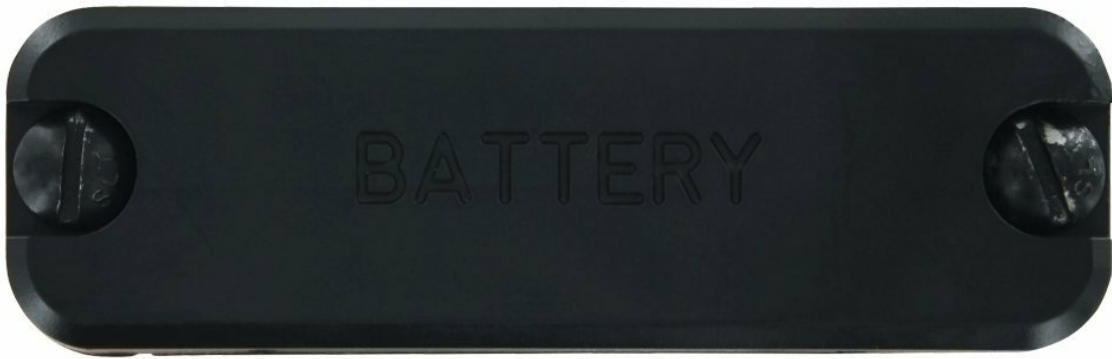


Figure 3: View of the battery compartment on the Dwyer 477B-3 Digital Manometer.

1. Locate the battery compartment cover on the bottom rear of the manometer.
2. Unscrew the retaining screws at the base of the instrument to remove the battery cover.
3. Insert a 9V battery (e.g., DURACELL MN 1604, EVEREADY 522, or equivalent), observing correct polarity.
4. Replace the battery cover and secure it with the screws.

4.2 Initial Power-On

After battery installation, press the **ON/OFF** button to power on the device. The display will illuminate, indicating the device is ready for use.

5. OPERATING INSTRUCTIONS

5.1 ON/OFF Function

- Press the **ON/OFF** button to toggle the device on and off.
- The device will automatically shut off after 20 minutes of inactivity to conserve battery life.
- To illuminate the display during power-on, hold the **ON/OFF** button.

5.2 ZERO Function

- Vent both pressure ports to the atmosphere.
- Press and hold the **ZERO/STORE** button until the LCD displays "----", then release it. The manometer is now zeroed.

5.3 UNITS/LOC Function

- Press the **UNITS/LOC** button to cycle through and select desired measurement units.

5.4 HOLD/MEMORY Function

- **Hold Reading:** Press the **HOLD/MEMORY** button to hold the current reading on the display. Press it again to resume measurement.
- **Memory Function:**
 - To store a reading, press and hold **HOLD/MEMORY** until "ST01" (or next available location) is displayed, then press **ZERO/STORE**. If needed, press **UNITS/LOC** to select another storage location before pressing **ZERO/STORE**.
 - To view stored data, press and hold **HOLD/MEMORY** until "LOC" is displayed. If needed, press **UNITS/LOC** to view other memory locations.
 - To exit memory mode, press **HOLD/MEMORY** again.
 - To clear all data, press and hold **HOLD/MEMORY** until "CLR" is displayed, then press **ZERO/STORE**.

5.5 DAMPING Function

- Press and hold **HOLD/MEMORY** until "DAMP" is displayed, then release the **HOLD/MEMORY** button.
- Press **ZERO/STORE** or **UNITS/LOC** to adjust the damping level from 1 to 8 (default is 3).
- To exit damping mode, press **HOLD/MEMORY** again.

6. MAINTENANCE

6.1 Cleaning

Wipe the exterior of the manometer with a soft, damp cloth. Do not use abrasive cleaners or solvents, as these may damage the housing or display.

6.2 Battery Replacement

When the "LOW BAT" indicator appears on the display, replace the 9V battery as described in Section 4.1. Prompt battery replacement ensures continued accurate operation.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Device does not power on.	Dead or incorrectly installed battery.	Replace battery, ensuring correct polarity.

Problem	Possible Cause	Solution
Inaccurate or fluctuating readings.	Manometer not zeroed; pressure leaks; unstable pressure source.	Perform ZERO function; check all tubing connections for leaks; ensure stable pressure source.
"LOW BAT" indicator displayed.	Battery is low.	Replace the 9V battery.

8. SPECIFICATIONS

- **Model:** 477B-3
- **Range:** 0 to 200" wc (0 to 49.82 kPa)
- **Accuracy:** $\pm 0.1\%$ F.S.
- **Housing Material:** Aluminum
- **Memory:** 40 readings
- **Power Source:** 9V battery (DURACELL MN 1604, EVEREADY 522, or equivalent)
- **Manufacturer:** Dwyer
- **UPC:** 782568954475

9. WARRANTY AND SUPPORT

Specific warranty information for the Dwyer 477B-3 Digital Manometer is not provided in the product data. Please refer to the official Dwyer website or contact your authorized dealer for detailed warranty terms and conditions.

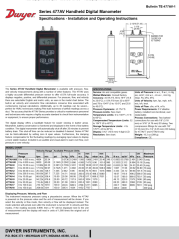

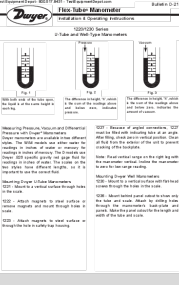
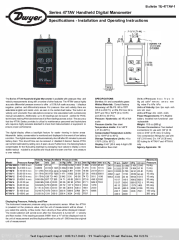
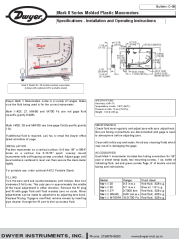
For technical support or service inquiries, please contact Dwyer Instruments, Inc. directly or consult their official documentation.

Related Documents - 477B-3



[Dwyer 477B Series Handheld Digital Manometer - Product Overview](#)

Detailed overview of the Dwyer 477B Series handheld digital manometer, featuring high accuracy, multiple pressure ranges, selectable units, data logging, and optional NIST calibration. Includes specifications and accessory information.

	<p>Dwyer Series 477AV Handheld Digital Manometer: Specifications, Installation, and Operating Instructions</p> <p>Comprehensive guide to the Dwyer Series 477AV Handheld Digital Manometer, covering specifications, installation, operating instructions, features, and maintenance for pressure, flow, and velocity measurements.</p>
	<p>Dwyer Series 490W Wireless Hydronic Differential Pressure Manometer: Installation & Operation Guide</p> <p>Comprehensive guide for the Dwyer Series 490W Wireless Hydronic Differential Pressure Manometer, covering specifications, installation, operation, troubleshooting, and maintenance. Features wireless transducers for accurate hydronic system balancing.</p>
	<p>Dwyer Flex-Tube Manometer Installation & Operating Instructions (Series 1220/1230)</p> <p>Comprehensive installation and operating instructions for Dwyer Flex-Tube U-Tube and Well-Type Manometers, Series 1220/1230. Covers mounting, filling, operation, and maintenance for pressure, vacuum, and differential pressure measurements.</p>
	<p>Dwyer Series 477AV Handheld Digital Manometer: Specifications, Installation, and Operation</p> <p>A comprehensive guide to the Dwyer Series 477AV Handheld Digital Manometer, detailing its features for measuring pressure, flow, and velocity. This manual covers specifications, installation, operation, advanced functions like data logging and calibration, and maintenance advice, making it an essential resource for HVAC professionals and technicians.</p>
	<p>Dwyer Mark II Series Molded Plastic Manometers: Specifications, Installation, and Operating Instructions</p> <p>Comprehensive guide to Dwyer Mark II Series Molded Plastic Manometers, covering specifications, installation, operation, maintenance, and applications like air filter gaging and velocity measurement.</p>