

Dwyer 477AV-3

Dwyer® 477AV Handheld Digital Manometer

Model: 477AV-3

Brand: Dwyer

INTRODUCTION

The Dwyer® Series 477AV Handheld Digital Manometer is a versatile instrument designed for accurate measurement of pressure, air velocity, and air flow. It features a highly accurate differential pressure sensor, selectable English and metric units, and built-in calculations for air velocity and flow. This manual provides essential information for the proper setup, operation, and maintenance of your 477AV manometer.

The device is equipped with a backlight for the digital display, battery conservation features including low battery indication and automatic shut-off, and the ability to save up to 40 readings. It also includes field calibration capabilities for zero and span values, a damping feature for stable readings, and audible/visual alarms for over-flow, over-pressure, or over-velocity conditions.

PRODUCT OVERVIEW



Figure 1: Front View of the 477AV Manometer. This image shows the front of the Dwyer 477AV digital manometer, highlighting the LCD display and the control buttons: ON/OFF/MENU, ZERO/ENTER, HOLD/LIGHT, and STORE/MODE. Two pressure ports are visible at the top.

1. Locate the battery compartment cover on the back of the unit.
2. Remove the cover by sliding or unscrewing it (refer to the device for specific mechanism).
3. Insert a new 9V alkaline battery, ensuring the positive (+) and negative (-) terminals align correctly with the connectors in the compartment.
4. Replace the battery compartment cover securely.

2. Initial Power On

Press the **ON/OFF/MENU** button to power on the device. The display will illuminate, and the device will perform a brief self-check before entering the measurement mode.

OPERATING INSTRUCTIONS

Button Functions

- **ON/OFF/MENU:** Press to turn the unit on or off. Press and hold to access the menu.
- **ZERO/ENTER:** Press to set the zero point for measurements. In menu mode, press to confirm a selection.
- **HOLD/LIGHT:** Press to freeze the current reading on the display. Press and hold to activate/deactivate the display backlight.
- **STORE/MODE:** Press to store the current reading. Press and hold to toggle between pressure, flow, and velocity measurement modes.
- **Up Arrow (▲) / Down Arrow (▼):** Used for menu navigation (up/down) and incrementing/decrementing values. These are typically integrated with the HOLD and STORE buttons.

Measurement Modes

The 477AV supports Pressure, Air Velocity, and Air Flow measurements. To switch between modes, press and hold the **STORE/MODE** button.

- **Pressure Mode:** Displays differential pressure in selectable units (e.g., inWC).
- **Air Velocity Mode:** Calculates and displays air velocity. Requires proper setup with a Pitot tube (not included).
- **Air Flow Mode:** Calculates and displays air flow. Requires proper setup and input of duct area.

Unit Selection

The device allows selection of English and metric units for pressure, flow, and velocity. Refer to the menu structure (often printed on the back of the unit) for navigation to the UNIT setting.

Data Storage

The 477AV can store up to 40 readings. To store a reading, press the **STORE/MODE** button briefly. Stored readings can be viewed via the menu (MEM > ERAS).

Damping Feature

To stabilize fluctuating readings, activate the damping feature through the menu (DAMP). This averages input values for a more stable display.

Alarms

The device features audible and visual alarms to warn of over-flow, over-pressure, or over-velocity conditions. These alarms are pre-set or configurable via the menu.

MAINTENANCE

Battery Replacement

When the low battery indicator appears on the display, replace the 9V alkaline battery promptly to ensure accurate readings and continued operation. Follow the steps outlined in the "Setup" section for battery installation.

Cleaning

Clean the exterior of the manometer with a soft, damp cloth. Do not use abrasive cleaners or solvents, as they may damage the casing or display. Ensure no moisture enters the pressure ports or other openings.

Field Calibration

The Series 477AV can be field-calibrated for zero and span values. Access the calibration menu (CAL) to adjust these settings. Regular calibration ensures the accuracy of your measurements. Refer to the menu outline on the back of the unit or the full user manual for detailed calibration procedures.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Device does not power on.	Dead or improperly installed battery.	Replace the 9V alkaline battery, ensuring correct polarity.
Inaccurate or fluctuating readings.	Needs zeroing; Damping feature off; Sensor obstruction; Calibration required.	Press ZERO button. Activate damping via menu. Check pressure ports for blockages. Perform field calibration.
Display is dim or unreadable.	Backlight off; Low battery.	Press and hold HOLD/LIGHT to activate backlight. Replace battery if low battery indicator is on.
Cannot switch modes or access menu.	Incorrect button press duration.	Ensure you are pressing and holding the STORE/MODE or ON/OFF/MENU buttons for the required duration (typically 2-3 seconds).

SPECIFICATIONS

Feature	Specification
Brand	Dwyer
Model Number	477AV-3
Material	Aluminum

Feature	Specification
Item Dimensions (L x W x H)	10.5 x 7 x 2.5 inches
Item Weight	10.2 Ounces
Screen Size	0.42 Inches
Pressure Limits	30 psig
Temperature Limits	0 to 140°F (-17.8 to 60°C)
Compensated Temperature Limits	32 to 104°F (0 to 40°C)
Storage Temperature Limits	-4 to 176°F (-20 to 80°C)
Display	0.42" (10.6 mm) 4 digit LCD
Power Requirements	9 V Alkaline battery

WARRANTY AND SUPPORT

For specific warranty information, please refer to the documentation included with your Dwyer 477AV Handheld Digital Manometer or visit the official Dwyer Instruments, Inc. website. Dwyer Instruments, Inc. is the manufacturer of this product.

For technical support, troubleshooting assistance beyond this manual, or service inquiries, please contact Dwyer Instruments, Inc. customer service. Contact details can typically be found on the manufacturer's website or on the product packaging.

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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