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CPS ABM-100

CPS ABM-100 Digital Airflow Meter User Manual

Model: ABM-100

1. INTRODUCTION

The CPS ABM-100 Digital Airflow Meter is a portable device designed for measuring air volume and velocity. It is an essential tool for HVAC duct testing and system balancing, providing accurate data through a connected smartphone application. Its lightweight design and memory function enhance its utility in various professional settings.



Image 1.1: Front view of the CPS ABM-100 Digital Airflow Meter, showing the impeller and audio jack connector.

2. PACKAGE CONTENTS

Verify that all items are present in the package:

- CPS ABM-100 Digital Airflow Meter

Note: The required smartphone application is available for download separately.

3. PRODUCT FEATURES

- Measures air volume and velocity.
- Portable design, easily fits into a pocket.
- Connects to smartphones (iPhones, iPads, and most Android devices) via audio jack.
- Utilizes a free dedicated application for data display and analysis.
- Automatically generates and emails detailed reports.



Image 3.1: Side view of the CPS ABM-100 Digital Airflow Meter, highlighting its compact form factor.

4. SETUP

1. **Download the Application:** Search for the "CPS Link" application in your smartphone's app store (Apple App Store for iOS, Google Play Store for Android). Download and install the application.
2. **Connect the Meter:** Insert the 3.5mm audio jack of the ABM-100 meter into your smartphone's headphone port. If your smartphone does not have a headphone port, a compatible USB-C to 3.5mm adapter may be required.
3. **Launch the Application:** Open the "CPS Link" application on your smartphone. The application should automatically detect the connected ABM-100 meter.
4. **Initial Configuration:** Follow any on-screen prompts within the application for initial setup, such as unit preferences (e.g., CFM, FPM).

5. OPERATING INSTRUCTIONS

1. **Power On:** The ABM-100 is powered by the smartphone's audio jack. Ensure the meter is securely connected and the app is open.
2. **Positioning for Measurement:** Hold the meter so that the impeller (fan blades) faces directly into the airflow you wish to measure. Ensure no obstructions are blocking the airflow to the impeller.
3. **Taking Readings:** The application will display real-time air velocity and volume measurements. Observe the readings on your smartphone screen.
4. **Recording Data:** Use the application's features to record measurements. The app typically allows for logging data over time or taking snapshots of current readings.

5. **Generating Reports:** After collecting data, utilize the application's report generation function. This feature allows for creating detailed reports that can be emailed directly from your smartphone.
6. **Power Off:** Disconnect the ABM-100 meter from your smartphone to power it off. Close the application when finished.

6. MAINTENANCE

- **Cleaning:** Gently wipe the exterior of the meter with a soft, dry cloth. Do not use abrasive cleaners or solvents. Ensure no dust or debris accumulates on the impeller blades, as this can affect accuracy.
- **Storage:** Store the ABM-100 in a clean, dry environment away from extreme temperatures and direct sunlight. Protect the audio jack connector from damage.
- **Impeller Inspection:** Periodically inspect the impeller for any signs of damage or obstruction. Ensure it spins freely.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Meter not detected by app.	<ul style="list-style-type: none"> • Loose connection. • App not updated or incompatible. • Smartphone audio jack issue. • Adapter issue (if used). 	<ul style="list-style-type: none"> • Ensure the meter's audio jack is fully inserted into the smartphone. • Check for app updates or reinstall the "CPS Link" app. • Test the smartphone's audio jack with another device (e.g., headphones). • If using an adapter, ensure it is functional and compatible.
Inaccurate readings.	<ul style="list-style-type: none"> • Impeller obstructed or damaged. • Incorrect positioning during measurement. • Environmental factors (e.g., turbulence). 	<ul style="list-style-type: none"> • Clean the impeller and ensure it spins freely. • Ensure the meter is positioned directly in the airflow path. • Take multiple readings to account for variations.
App crashes or freezes.	<ul style="list-style-type: none"> • Software bug. • Insufficient smartphone resources. 	<ul style="list-style-type: none"> • Close and restart the app. • Restart your smartphone. • Ensure your smartphone's operating system is up to date.

8. SPECIFICATIONS

Model Number:

ABM-100

Brand:

CPS

Product Dimensions:

3.8 x 1 x 2 inches; 5.6 ounces

Material:

Copper (referring to internal components or connector)

Date First Available:

April 9, 2015

Manufacturer:

CPS

UPC:

850470006077

9. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries regarding your CPS ABM-100 Digital Airflow Meter, please refer to the official CPS website or contact their customer service department. Specific warranty terms and conditions may vary by region and purchase date.

Manufacturer: CPS

Website: Visit the CPS Store on Amazon (for general product information)