BTMETER BT-856A / BT-846A Replacement Wind Sensor Wand

BTMETER BT-856A / BT-846A Replacement Wind Sensor Wand Instruction Manual

For Models: BT-856A and BT-846A Anemometers

1. INTRODUCTION

This document provides essential instructions for the proper use and maintenance of your BTMETER Replacement Wind Sensor Wand, designed for compatibility with BTMETER BT-856A and BT-846A Pro HVAC Anemometers. This sensor is a crucial component for accurate wind speed, air flow, and temperature measurements.
Important Note: This separated wind sensor wand does NOT include the main anemometer unit. It must be connected to a compatible BTMETER BT-856A or BT-846A anemometer for functionality.

2. PRODUCT FEATURES

- **Original Air Flow Sensor:** Designed as a direct replacement for BTMETER BT-846A and BT-856A Pro HVAC CFM meters.
- **Low Friction Impeller:** Features a low-friction impeller for precise measurement of low wind speeds, down to 0.001 units.
- **Wide Measurement Range:** Capable of measuring wind speeds from 0.001 to 100 mph with an accuracy of +/- 3% +/- 0.2 reading. Air temperature range is 32.0-113.0 °F (0-45 °C) with 0.1 resolution.
- **Extendable Separated Design:** Allows for measuring wind speed and air flow from higher or more distant areas that may be inaccessible with integrated anemometers.

[LOW FRICTION IMPELLER]

LOW FRICTION IMPELLER
A low friction impeller can help you pick up the low winds down to 0.001

HIGH PRECISION
0.001~100 mph
(Accuracy: +/- 3% +/- 0.2 reading)

USB ORIGINAL AIR FLOW SENSOR
Replacement USB wind sensor for your BTMETER BT-846A BT-856A Pro HVAC CFM meter, just plug the sensor into the main body, then it's ready to use

Figure 1: Illustration of the low friction impeller and USB connection point, highlighting high precision capabilities.

3. SETUP & INSTALLATION

3.1 Connecting the Sensor Wand

1. Locate the USB port on your BTMETER BT-856A or BT-846A anemometer unit.
2. Carefully insert the USB connector of the wind sensor wand into the anemometer's USB port. Ensure a secure connection.
3. The anemometer should automatically detect the connected sensor.

Just plug the sensor into the main body,then it's ready to use.

[   ]

Tripod Mounting Hole (Back of the wand)

79in Extensible (USB cable)

Telescopic Rod

Figure 2: Visual guide for connecting the USB wind sensor to the main anemometer unit. Also shows the tripod mounting hole and the extendable telescopic rod feature.

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Video 1: Demonstrates the connection of the replacement wind sensor to the BTMETER BT-846A anemometer and basic operation for CFM measurement.

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Video 2: Shows the connection process of the AP 846A handheld anemometer with its external wind sensor, demonstrating its use in various scenarios.

4. OPERATING INSTRUCTIONS

4.1 Basic Wind Speed and Temperature Measurement

1. Ensure the wind sensor wand is securely connected to the anemometer.
2. Power on the anemometer unit.
3. The display will show real-time wind speed and temperature readings.
4. Use the 'UNIT' button on the anemometer to cycle through different wind speed units (m/s, km/h, ft/min, knots, mph) and temperature units (°C/°F).

Figure 3: The wind sensor wand in use, demonstrating its high accuracy for wind speed measurement in an outdoor HVAC environment.

4.2 CFM (Cubic Feet per Minute) Measurement (for BT-846A/BT-856A)

To measure CFM, you will typically need to input the cross-sectional area of the duct or vent you are measuring. Refer to your main anemometer's manual for specific steps on entering area values.

1. Press the 'VEL FLOW' button on your anemometer to enter CFM mode.
2. Use the 'UNIT' button to select the appropriate area unit (FT² or M²).
3. Press the 'SAMPLE AREA' button to input the cross-sectional area of the measurement point.
4. Press 'OPTION ENTER' to begin the CFM test.

4.3 App Connection (for BT-856A with Computer Software)

For models with Bluetooth connectivity (e.g., BT-856A with computer software), you can connect the anemometer to a smartphone app for data logging and analysis.

1. Install the companion app (e.g., "Intelligent Anemometer") on your smartphone by scanning the QR code in your main anemometer's manual or searching in your app store.
2. Enable Bluetooth on your smartphone. Ensure other irrelevant Bluetooth devices are disconnected.
3. Open the app and power on your anemometer.
4. Wait for the app to connect to the anemometer. The 'START' button in the app will typically turn blue when connected.
5. Press 'START' in the app to begin recording measurements.

6. Use the 'SAVE' function in the app to export data in TXT/EXCEL format.

Your browser does not support the video tag.

Video 3: Illustrates the process of connecting the BTMETER BT-856A anemometer to a smartphone app via Bluetooth and recording high-resolution wind speed data.

5. MAINTENANCE

- **Cleaning:** Gently clean the impeller blades and the sensor body with a soft, dry cloth. Avoid using harsh chemicals or abrasive materials.
- **Storage:** Store the sensor wand in a clean, dry environment when not in use. Protect it from extreme temperatures and direct sunlight.
- **Impeller Inspection:** Periodically check the impeller for any obstructions or damage. Ensure it spins freely without resistance.

6. TROUBLESHOOTING

- **No Reading/Erratic Readings:**
  - Ensure the USB connection between the sensor and the anemometer is firm and secure.
  - Check for any physical obstructions or damage to the impeller.
  - Verify that the anemometer unit has sufficient battery power.

- **App Connection Issues:**
  - Confirm Bluetooth is enabled on your smartphone and the anemometer.
  - Restart both the anemometer and the smartphone app.
  - Ensure the app is updated to the latest version.

7. SPECIFICATIONS

Feature	Specification
Wind Speed Range	0.001 ~ 100 mph
Wind Speed Accuracy	+/- 3% +/- 0.2 reading
Wind Speed Resolution	0.001
Air Temperature Range	32.0-113.0 °F (0-45 °C)
Air Temperature Resolution	0.1
Connection Type	USB
Material	Plastic
Product Dimensions	9.88 x 2.83 x 1.18 inches (approx. 25.1 x 7.2 x 3 cm)
Item Weight	5.29 ounces (approx. 150 grams)

[PRODUCT DESCRIPTION]

Wind Speed Range: 0.001~100 mph	**Speed unit**: m/s, km/h, ft/min, knots, mph
Resolution: 0.001	**Wind temperature range**: 32.0°F-113.0°F

2.83IN (72MM)

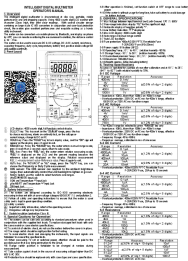Extensible (USB cable)

6.49IN (165MM)

FLOW ANEMOMETER

Figure 4: Detailed product dimensions and key specifications for the BTMETER Replacement Wind Sensor Wand.

8. WARRANTY & SUPPORT

For warranty information, technical support, or service inquiries, please refer to the documentation included with your main BTMETER anemometer unit or visit the official BTMETER website. Keep your purchase receipt for warranty claims.

Related Documents - **BT-856A / BT-846A Replacement Wind Sensor Wand**

[BTMETER BT-1500 Quick Start Guide](#)

A quick start guide for the BTMETER BT-1500 infrared thermometer, covering battery installation, basic operation, and display interpretation.

[BTMETER BT-570CAPP Bluetooth Connection Guide](#)

Step-by-step instructions for connecting the BTMETER BT-570CAPP clamp meter to your smartphone via Bluetooth.

[Digital Multimeter Operator's Manual - BTMETER BT-39K](#)

Operator's manual for the BTMETER BT-39K Digital Multimeter, detailing its features, specifications, operating instructions, safety precautions, and maintenance.

[BTMETER BT-1500 Non-Contact Infrared Thermometer User Manual](#)

User manual for the BTMETER BT-1500 non-contact infrared thermometer, covering its introduction, how it works, safety warnings, quick start guide, maintenance procedures, and detailed specifications.

[6000 Digits Clamp Multimeter Operation Manual](#)

Operation manual for the 6000 Digits AC/DC Auto Cal Clamp Multimeter, detailing safety information, specifications, measuring instructions, and maintenance.