R4100

REED INSTRUMENTS

Anemometer with Air Volume

WARRANTY 1 YEAR WARRANTY

Instruction Manual

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Introduction

Thank you for purchasing your REED R4100 Anemometer with Air Volume. Please read the following instructions carefully before using your instrument. By following the steps outlined in this manual your meter will provide years of reliable service.

Product Quality

This product has been manufactured in an ISO9001 facility and has been calibrated during the manufacturing process to meet stated product specifications. If a certificate of calibration is required please contact the nearest authorized REED distributor or authorized Service Center. Please note an additional fee for this service will apply.

Safety

Never attempt to repair or modify your instrument. Dismantling your product, other than for the purpose of replacing batteries, may cause damage that will not be covered under the manufacturer's warranty. Servicing should only be provided by an authorized service center.

Features

- Measures fpm, m/s, km/h, mph, knots and beaufort
- Calculates air volume (CFM/CMM)
- Dual LCD display simultaneously displays air velocity and air temperature
- Basic accuracy of ±3%
- Internal memory up to 99 datapoints
- Min/Max/Avg and Data Hold Functions
- Low battery indicator and auto shut off

Included

- Vane Thermo-Anemometer
- Carrying Case
- Batteries

Specifications

Type:	Vane
Measuring Range(s):	fpm: 79 to 5866 m/s: 0.4 to 30 km/h: 1.5 to 106 mph: 0.9 to 66 knots: 0.8 to 58 Beaufort: 1 to 8 Temperature: -4 to 140°F (-20 to 60°C)
Accuracy:	fpm: ±(3% rdg. + 40 dgt.) m/s: ±(3% rdg. + 0.2 dgt.) km/h: ±(3% rdg. + 0.8 dgt.) mph, knots: ±(3% rdg. + 0.4 dgt.) Temperature: ±1.8°F (1°C)

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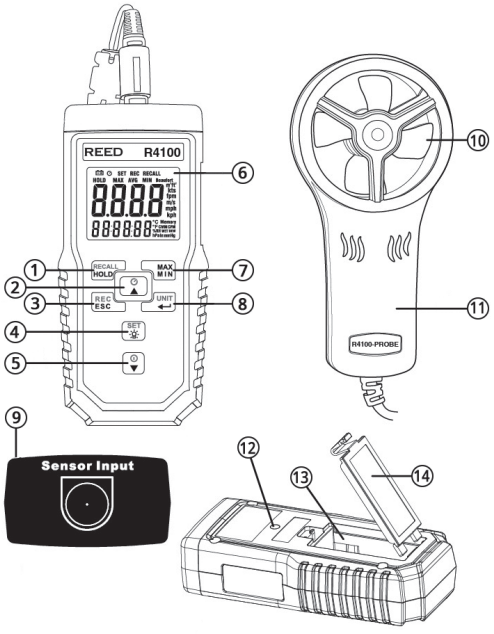
General Specifications

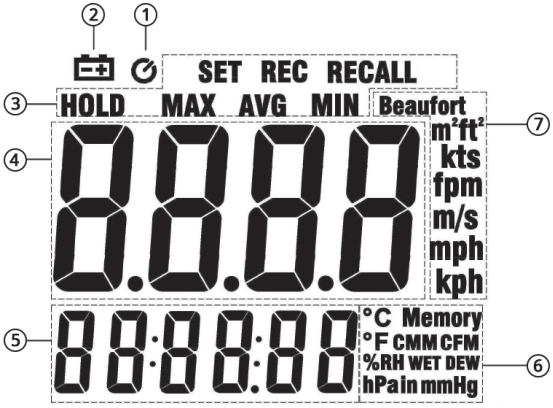
Vane Diameter:	1.96" (50mm)
Response Time:	1 sec.
Display:	4-digit, Dual LCD Display
Backlit Display:	Yes
Data Hold:	Yes
Min:	Yes
Max:	Yes
Average:	Yes
Air Volume Calculation (CFM/CMM):	Yes
Auto Shut-off:	Yes (after 15 mins/off)
Tripod Mountable:	Yes
Low Battery Indicator:	Yes
Power Supply:	9V battery
Product Certifications:	CE
Operating Temperature:	32 to 122°F (5 to 40°C)
Storage Temperature:	14 to 140°F (-10 to 60°C)
Operating Humidity Range:	10-80%
Dimensions:	5.5 x 2.6 x 1.5" (140 x 65 x 38mm)

Instrument Description



1. HOLD/RECALL Button
2. Up/Auto Shut Off Button
3. ESC/REC Button
4. Backlight/Set Button
5. Down/Power Button
6. LCD Display
7. MAX, MIN and AVG Button
8. Enter/Unit Selection Button
9. Probe Input Socket
10. Rotating Vane
11. Probe Handle
12. Tripod Mount
13. Battery Compartment
14. Battery cover

Display Description



1. Auto Shut Off Indicator
2. Low Battery Indicator
3. Function Display area
4. Air Velocity Measurement Value
5. Secondary Display
6. Secondary Display Unit of Measurement
7. Primary Display Unit of Measurement

Operating Instructions

Power ON/OFF

Turn the meter on by pressing the button. To turn the meter off, press and hold the button for 2 seconds.

Auto Power Off

1. To preserve battery life, the meter is programmed to turn off after approx. 15 minutes of inactivity.
2. To turn this function off, press and hold the button while powering on the meter.
3. If the meter is turned off and then back on, the "Auto Power Off" feature will be enabled again.

Backlight

Press the button to turn the backlight on. The backlight will automatically turn off after 30 seconds. To turn off the backlight manually before the 30-second timer elapses, press the button again.

Enable/Disable Automatic Backlight

Users can enable or disable the 30-second auto-off backlight feature by following the steps below:

1. Press and hold the button to enter setup mode.
2. Press the or buttons until "bLiGHt" appears on the LCD as shown below.
3. Press the button to enter the backlight mode.
4. Press the or buttons to toggle the auto-off feature on or off.
5. Press the button to confirm the selection and resume normal operation.

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Air Velocity/Temperature Measurements

1. Plug the rotating vane into the Probe Input Socket while the meter is off.
2. Press the ⏻ button to turn on the meter.
3. Press the ▲ or ▼ buttons to select air temperature unit of measure, if it is not already selected. The secondary display will show either °C or °F to confirm that the air temperature function is active.
4. Press and hold the UNIT button to enter the unit of measure setup mode.
5. The current unit of measure will blink.
6. Use the ▲ and ▼ buttons to toggle through the available units: Beaufort → kts → fpm → m/s → mph → kph.
7. Press and hold the UNIT button to save the selection and skip to the next parameter.
8. Use the ▲ and ▼ buttons to select between °C and °F.
9. Press the UNIT button to save the selection and resume normal operation.

NOTE: You can press the UNIT button at any time to exit the Setup mode and resume normal operation.

10. Hold the rotating vane in the air stream, ensuring it aligns with the flow direction arrow on the instrument head. Keep the vane in the air stream for approximately five seconds to allow the meter to reach a steady speed.

Warning: Avoid bending or touching the vanes, as this may affect measurement accuracy. Do not immerse the instrument in liquids.

Air Flow (Volume) Measurements (CMM / CFM)

1. Plug the rotating vane into the Probe Input Socket while the meter is off.
2. Press the ⏻ button to turn on the meter.
3. Press the ▲ or ▼ buttons to select air flow mode. The secondary display will show either CFM or CMM to confirm that the air flow function is active.

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4. Press and hold the UNIT button to enter the unit of measure setup mode.
5. The current unit of measure will blink.
6. Press and hold the UNIT button again to switch to the air flow setup mode.
7. Use the ▲ and ▼ buttons to select the required air flow unit: CMM (cubic meters per minute) or CFM (cubic feet per minute).
8. Press the UNIT button to save the selection and resume normal operation.
9. Measure the dimensions of the duct or vent and calculate the area in square feet or square meters.

NOTE: If the dimensional measurements are made in inches (or cm), convert them feet (or meters) before calculating the square area.

10. Press and hold the SCALE button to enter the Area setup mode as indicated by "ArEA" on the LCD.
11. Press the UNIT button to begin entering the area in m2 or ft2.
12. The leftmost digit of the display will begin to flash.
13. Use the ▲ and ▼ buttons to update the flashing digit within the meters measurement range.

14. Press the UNIT button to confirm the selection and skip to the next digit.
15. Repeat steps 13 and 14 for the remaining digits.
16. After all of the digits are entered, press the UNIT button to confirm the selections and resume normal operation.
17. Hold the rotating vane in the air stream, ensuring it aligns with the flow direction arrow on the instrument head. Keep the vane in the air stream for approximately five seconds to allow the meter to reach a steady speed.
18. The secondary display will indicate the air flow measurement.

NOTE: The temperature function is not active in the Air Flow mode.

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Maximum, Minimum and Average Functions

1. Press the MAX MIN button to select the maximum reading as indicated by the "MAX" symbol. The Max value is updated when a new maximum data value has been attained.
2. Press the MAX MIN button again to select the minimum reading as indicated by the "MIN" symbol. The Min value is updated when a new minimum data value has been attained.
3. Press the MAX MIN button a third time to select the average reading as indicated by the "AVG" symbol. The average value is updated when a new average data value has been attained.
4. Press and hold the MAX MIN button to exit and resume normal operation.

Data Hold

1. While taking a measurement, press the RECALL HOLD button to freeze the current reading on the display.
2. While in this mode, an "HOLD" will appear on the LCD.
3. Press the RECALL HOLD button again to exit and resume normal operation.

Saving Measurement Values

NOTES: Once data is stored, the units cannot be changed. You can store up to 99 data points.

1. To store the current measurement value, press the REC ESC button to initiate data storage mode.
2. The storage number will briefly flash on the secondary display to confirm data storage, after which the device will automatically resume normal operation.
3. Repeat step 1 to store additional measurement values.

Recalling Measurement Values

1. While in the main interface screen, press and hold the RECALL HOLD button to view the stored measurement values.
2. Use the ▲ and ▼ buttons to scroll through the stored measurement values.
3. Press and hold the RECALL HOLD to exit storage mode and resume normal operation.

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Clearing Measurement Values

If the memory is full or you want to clear stored data, follow the steps below:

1. Press and hold the SET button to enter the setup mode.
2. Press the ▲ or ▼ buttons until "CLEAr" appears on the LCD as shown below.
3. Press the UNIT button to enter the clear memory mode. The LCD will display "yes" to confirm.
4. Press the REC/ESC button to exit without clearing, or press the UNIT button to clear the memory and resume normal operation.

Battery Replacement

1. When the low battery icon appears on the display, replace the battery.
2. Remove the battery cover.
3. Insert a new "9V" battery.
4. Secure the battery cover back into place.

Applications

- HVAC/R and Refrigeration Servicing
- Detecting Filter Blockage
- Condensers and Chillers
- Flow Hood Monitoring

Accessories and Replacement Parts

R4100-PROBE Replacement Rotating Vane Probe

Don't see your part listed here? For a complete list of all accessories and replacement parts visit your product page on www.reedinstruments.com.

Product Care

To keep your instrument in good working order we recommend the following:

- Store your product in a clean, dry place.
- Change the battery as needed.
- If your instrument isn't being used for a period of one month or longer please remove the battery.
- Clean your product and accessories with biodegradable cleaner. Do not spray the cleaner directly on the instrument. Use on external parts only.

Product Warranty

REED Instruments guarantees this instrument to be free of defects in material or workmanship for a period of one (1) year from date of shipment. During the warranty period, REED Instruments will repair or replace, at no charge, products or parts of a product that proves to be defective because of improper material or workmanship, under normal use and maintenance. REED Instruments total liability is limited to repair or replacement of the product. REED Instruments shall not be liable for damages to goods, property, or persons due to improper use or through attempts to utilize the instrument under conditions which exceed the designed capabilities. In order to begin the warranty service process, please contact us by email at 1-877-849-2127 or info@reedinstruments.com to discuss the claim and determine the appropriate steps to process the warranty.

Product Disposal and Recycling

Please follow local laws and regulations when disposing or recycling your instrument. Your product contains electronic components and must be disposed of separately from standard waste products.

Product Support

If you have any questions on your product, please contact your authorized REED distributor or REED Instruments Customer Service by phone at 1-877-849-2127 or by email at info@reedinstruments.com.

Please visit **www.REEDInstruments.com** for the most up-to-date manuals, datasheets, product guides and software.

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