

General Characteristics

- ▶ This meter measures air flow and temperature by placing the sensor into an airway such as a duct or a vent.
- ▶ Heavy Duty Hot Wire Thermo-Anemometer with Holster, 1.4" LCD Display, Includes Probe, Measures airflow and temperature.
- ▶ Telescoping probe is ideal for measuring in HVAC ducts and other small vents; extends up to 4ft (1.22m) long
- ▶ Super large 1.4" (36mm) dual LCD display
- ▶ Min/Max, Data Hold
- ▶ The sensor is situated at the end of the telescoping wand for convenience and has a protective cover that slides up and down.
- ▶ The meter includes a PC Interface jack for use with Data Acquisition software and interface cable kit.
- ▶ Careful use of this meter will provide years of reliable service.



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Product Applications

- ▶ For Industrial and Commercial use. Proper for HVAC Technicians and Engineers.

Warranty

- ▶ Manufacturer's Warranty: 1 year.

Specific Characteristics

Item #	Range of measure		Includes	Weight and Dimension with Packaging	
	Wind	Temperature		Weight (Lbs)	L,W,H (In)
USAIW-001	0.2 – 20.0 m/s, ±3%	32 to 122 °F, ± 1.5°F	PC Interface	1.10	7.8,3.9,3.9

Scale Specifications

Air speed scale specifications	Range	Resolution	Accuracy % reading
m/s (meters per sec)	0.2 – 20.0 m/s	0.1 m/s	±(3.0%rdg+0.3m/s)*
km/h (kilometers per hour)	0.7 – 72.0 km/h	0.1 km/h	±(3.0%rdg+1.1km/h)*
ft/min (feet per minute)	40 - 3940 ft/min	1 ft/min	±(3.0%rdg+59ft/min)*
mph (miles per hour)	0.5 – 45.0 MPH	0.1 MPH	±(3.0%rdg+0.67MPH)*
knots (nautical miles per hour)	1.0 – 31.0 knots	0.1 knots	±(3.0%rdg+0.58knots)*
*or, ±(1.0%FS+3d) whichever is greater			
Temperature scale specifications	Range	Resolution	Accuracy
Fahrenheit °F, Centigrade °C	32 to 122 °F (0 to 50°C)	0.1°F/C	1.5°F (0.8°C)

Specification

Circuit configuration	Custom one-chip LSI microprocessor circuit
Display	3-1/2 digit (2000 count) dual LCD display
Measurements	m/s (meters per second), km/h (kilometers per hour), ft/min (feet/per minute), knots (nautical miles per hour), MPH (miles per hour), Temperature: °C, °F
Data hold	Freezes reading on display
Sensor Structure	Air velocity sensor: Glass bead thermistor Temperature sensor: Precision thermistor
Min/Max Recording	Record and Recall Maximum (MAX) and Minimum (MIN) readings
PC Interface	PC serial interface jack for use with software and interface cable kit
Operating Temperature	32 to 122°F (0 to 50 °C)
Operating Humidity	Max. 80% RH
Power Supply	Six (6) 1.5V 'AAA' batteries
Power Consumption	Approx. 30 mADC
Weight	0.78 lb (355 g) including batteries & probe
Dimensions	Main instrument: 7.1 x 2.8 x 1.3" (180 x 72 x 32 mm) Sensor: 0.5" (12mm) diameter Telescope: 7' (2.1m) maximum length with cable

Description

1. LCD display – Indicates air velocity and temperature readings, units of measure, low battery icon, and other user alerts

2. Push-buttons:

- POWER: Turn meter ON and OFF
- HOLD: Freezes the displayed reading
- C/F: Select the temperature units
- RECORD: Press to track the highest (MAX) and lowest (MIN) reading
- RECALL: Displays MAX/MIN readings
- UNIT: Air velocity units of measure
- ZERO: Press to zero the display (sensor cover must be closed)

3. Protective holster – Rubber jacket that surrounds the meter (must be removed to access battery compartment)

4. Battery compartment - Located on the lower back of the meter

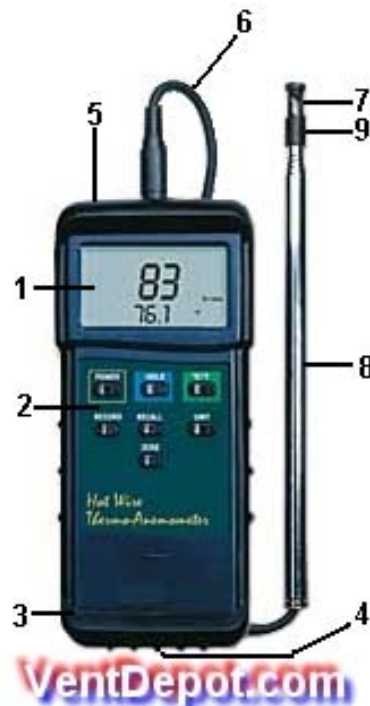
5. PC Interface jack – Accepts a 3.5mm plug from a PC interface cable (cable and data acquisition software available using part number 407001)

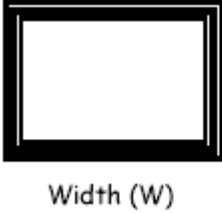
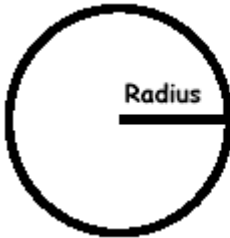
6. Sensor input jack – Insert the sensor plug

7. Sensor opening – Air must flow through this opening for proper measurement

8. Telescoping sensor handle – Extends to 39" (1m)












9. Sensor protective cover – Slide DOWN to open when in use and slide UP to protect sensor when not in use (close the cover when zeroing the meter)










Equations	
Area equation for rectangular or square ducts	 <p style="text-align: right;">Height (H)</p> <p style="text-align: center;">Width (W)</p> <p style="text-align: right;">Area (A) = Width (W) x Height (H)</p>
	 <p style="text-align: right;">Area (A) = $\pi \times r^2$ Where $\pi = 3.14$ and $r^2 = \text{radius} \times \text{radius}$</p>
Air Flow equations	<p>CFM (ft³/min) = Air Velocity (ft/min) x Area (ft²) CMM (m³/min) = Air Velocity (m/sec) x Area (m²) x 60</p>

Unit Conversion Table					
	M/s	1 ft/min	knots	Km/h	MPH
M/s	1	196.87	1.944	3.6	2.24
1 ft/min	0.00508	1	0.00987	0.01829	0.01138
1 knot	0.5144	101.27	1	1.8519	1.1523
Km/h	0.2778	54.69	0.54	1	0.6222
1 MPH	0.4464	87.89	0.8679	1.60071	1

Product Benchmark

Image	Item #	Product	Wind Velocity (ft/min)	Air flow (ft ³ /min)	Temperature (°F)	Relative Humidity
	USAIW-001	AirWire	40 to 3940	--	32 to 122	10 to 80%.
	USANA-001	AnemoAir	80 to 4921	0-999.9	32 to 122	10 to 80%.
	USANF-001	AnemoFold	100 to 5500	--	0 to 122	10 to 95%
	USAGS-001	AnemoGoose	80 to 5900	--	32 to 122	10 to 80%.
	USANP-001	AnemomePro	80 to 4921	--	32 to 122	10 to 70%
	USAMI-001	AnemoMini	80 to 5900	0-9999	14 to 140	10 to 80%.
	USAPN-001	AnemoPrint	60 to 5000	0-9999.9	-4 to 144	0 to 100 %
	USANV-001	AnemoVane	80 to 4930	--	32 to 122	10 to 80%.
	USAXT-001	AnemoXtreame	100 to 6890	0-999.9	32 to 135	10 to 80%.
	USBGW-001	BigWind	80 to 5910	--	32 to 140	10 to 80%.
	USCPL-001	CupLogic	144 to 6895	--	--	--

Product Benchmark

Image	Item #	Product	Wind Velocity (ft/min)	Air flow (ft ³ /min)	Temperature (°F)	Relative Humidity
	USDLG-001	DataLogger	60 to 8800	0-999900	32 to 113	10 to 80%.
	USHOW-001	HotWire	40 to 3346	0-1,271.200	32 to 122	10 to 80%.
	USLSA-001	LaserAir	80 to 5900	0-9999	14 to 140	10 to 80%.
	USMFL-001	MiniFold	100 to 5500	--	0 to 122	10 to 80%.
	USPRW-001	ProWire	160 to 2358	0-999.900	32 to 176	10 to 80%.
	USTLG-001	Trilogic	80 to 5910	--	32 to 122	10 to 70%
	USVNW-001	VaneWind	80 to 5900	--	14 to 122	10 to 80%.