

VANE ANEMOMETER HUMIDITY/TEMP.



Your purchase of this METER marks a step forward for you into the field of precision measurement.

Although this METER is a complex and delicate instrument, its durable structure will allow many years of use if proper operating techniques are developed. Please read the following instructions carefully and always keep this manual within easy reach.

OPERATION MANUAL

2. SPECIFICATIONS

2-1 General Specifications

Display	LCD size : 28 mm x 19 mm.	
Anemometer Unit	m/S (meters per second) Km/h (kilometers per hour) FPM (feet per minute) mph (miles per hour) Knot (nautical miles per hour)	
Temp. unit	°C, °F	
Humidity unit	%RH	
Dew point	°C, °F	
Circuit	Custom one-chip of microprocessor LSI circuit.	
Sensor Structure	Anemometer	Van probe with low friction ball bearing design.
	Humidity	Capacitance humidity sensor, semiconductor
	Temperature	Semiconductor
Data Hold	Freeze the display reading.	
Memory Recall	Maximum & Minimum value.	
Sampling Time	Approx. 1 second.	
Power off	Auto shut off saves battery life or manual off (REC function).	
Operating Temperature	0 to 50 °C.	
Operating Humidity	Less than 80% R.H.	

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1. FEATURES

- * Anemometer, Humidity, Temperature meter, 4 in one, professional.
- * Anemometer unit : m/S, Km/h, FPM, mph, Knot.
- * Humidity with Dew point measurement
- * Temperature measurement with °C, °F unit.
- * Vane anemometer, available for wind speed measurement, high reliability.
- * Fast response time for humidity measurement.
- * Two display can select the three mode (function) : Humidity/Temp., Humidity/Dew point, Anemometer/Temp..
- * Bright LCD display.
- * Microprocessor circuit ensures high accuracy and provides special functions and features.
- * Records Maximum and Minimum readings with recall.
- * Auto power off saves battery life.
- * Operates from DC 1.5V (UM4/AAA) x 4 PCs batteries.
- * Low-friction ball vane wheels is accurate in both high and low velocities.
- * Durable, long-lasting components, enclosed in strong, compact ABS-plastic housing.

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Operating Humidity	Less than 80% R.H.	

Power Supply	DC 1.5 V battery (UM4/AAA) x 4 PCs,
Power Current	Approx. DC 5.2 mA
Weight	182 g/ 0.4 LB. @ Battery is included.
Dimension	205 x 48 x 40 mm (8.1" x 1.9" x 1.6")
Accessories Included	Instruction manual.....1 PC
Optional Accessory	Soft carrying case with sash (210 x 80 x 50 mm), Model : CA-52A

2-2 Electrical Specifications (23± 5 °C)

Anemometer (Air velocity)

Measurement	Range	Resolution	Accuracy
m/S	0.4 to 30.0 m/s	0.1 m/S	≤ 20 m/s : $\pm 3\%$ F.S. > 20 m/s : $\pm 4\%$ F.S.
Km/h	1.4 to 108.0 km/h	0.1 Km/h	
FPM	80 to 5910 ft/min	1 Ft/min	
mph	0.9 to 67.0 mile/h	0.1 Mile/h	
Knot	0.8 to 58.3 knots	0.1 Knots	
<i>Note :</i> <i>m/S (meters per second) mph (miles per hour)</i> <i>Km/h (kilometers per hour) Knot (nautical miles per hour)</i> <i>FPM (feet per minute)</i>			

Temperature

Measuring Range	0 °C to 50 °C/32 °F to 122 °F
Resolution	0.1 °C/0.1 °F
Accuracy	± 0.8 °C/1.5 °F

Humidity / Dew point

a. Humidity

Range	10 % to 95 % R.H.
Resolution	0.1 % R.H.
Accuracy	$\geq 70\% \text{ RH}$ $\pm (3\% \text{ reading} + 1\% \text{ RH}).$ $< 70\% \text{ RH}$ $\pm 3\% \text{ RH}.$

b. Dew point

°C	Range	-25.3 °C to 48.9 °C
	Resolution	0.01 °C
°F	Range	-13.5 °F to 120.1 °F.
	Resolution	0.01 °F.
<i>Remark :</i> * <i>Dew Point display value is calculated from the Humidity/Temp. measurement automatically.</i> * <i>The Dew Point accuracy is sum accuracy value of Humidity & Temperature measurement..</i>		

- * Above specification tests under the environment RF Field Strength less than 3 V/M & frequency less than 30 MHz only.

3. FRONT PANEL DESCRIPTION

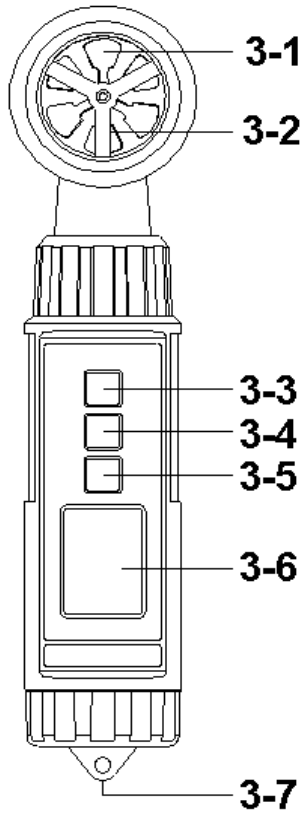


Fig. 1

- 3-1 Vane
- 3-2 Humidity/Temp. Sensor
- 3-3 Power Button
- 3-4 Hold Button, Unit Button
- 3-5 REC Button, Mode Button
- 3-6 LCD Display
- 3-7 Battery Compartment/Cover

4. MEASURING PROCEDURE

4-1 Mode (Function) selection

1) Turn on the meter by pressing the " Power Button " (3-3, Fig. 1) momentarily.

** Pressing the " Power Button " (3-3, Fig. 1) momentarily again will turn off the meter.*

2) The meter can select three kind mode (function) as :

a. Humidity/Temp.

b. Humidity/Dew point

c. Anemometer/Temp.

Pressing the " Mode Button " (3-5, Fig. 1) continuously (not release the button), the Display will show the following text in sequence :

An : For " Anemometer/Temp. " measurement

rH : For " Humidity/Temp. " measurement

dP : For " Humidity/Dew point " measurement'

Until the Display show the desired model (Function), just release the " Mode Button " (3-5, Fig. 1), the meter will execute this function with default.

4-2 Unit selection

- 1) The Unit selection only available for the mode (function)
of " Humidity/Temp. " measurement
- 2) Turn on the meter by pressing the " Power Button "
(3-3, Fig. 1) momentarily.
- 3) Pressing the " Unit Button " (3-4, Fig. 1)
continuously (not release the button), the Display
will show the following indicator in sequence :

m/S, Km/h, FPM, mph, Knot

Until the Display show the desired unit,
just release the " Unit Button " (3-4, Fig. 1), the
meter will execute this measuring unit with default.

4-3 Temp. Unit (°C, °F) selection

- 1) Power off the meter.
- 2) Use one finger to press (not release) the " Hold
Button " (3-4, Fig. 1),
turn on the meter by pressing the " Power Button "
(3-3, Fig. 1) momentarily, until the Display light,
then release the " Hold Button " will change
the Temp. unit from °C to °F or °F to °C with default.

4-4 Anemometer measurement

- 1) Turn on the meter by pressing the " Power Button "
(3-3, Fig. 1) momentarily.
- 2) For the above 4-1 mode (function) selection, please
set to :
c. Anemometer/Temp.
(Upper display show air velocity value, lower
display show Temp. value)

4-5 Humidity measurement

- 1) Turn on the meter by pressing the " Power Button "
(3-3, Fig. 1) momentarily.
- 2) For the above 4-1 mode (function) selection, please set to :
 - a. Humidity/Temp.**
(Upper display show humidity value , lower display show Temp. value)

4-6 Dew point measurement

- 1) Turn on the meter by pressing the " Power Button "
(3-3, Fig. 1) momentarily.
- 2) For the above 4-1 mode (function) selection, please set to :
 - b. Humidity/Dew point**
(Upper display show humidity value , lower display show dew point value)

4-7 Data Hold

- * During the measurement, press the " Hold Button "
(3-4, Fig. 1) momentarily to hold the measured value. The LCD will show a " HOLD " symbol.
- * Press the " Hold Button " once again to release the data hold function.

4-8 Data Record (Max., Min. reading)

- 1) The data record function records the maximum and minimum readings. Press the " REC Button " (3-5, Fig. 1) momentarily to start the Data Record function, shows " REC " on the display.
- 2) With the " REC " symbol on the display.
 - a) Press the " REC Button " (3-5, Fig. 1) momentarily, the " REC MAX " symbol along with the maximum value will appear on the display.
 - b) Press the " REC Button " (3-5, Fig. 1) momentarily again, the " REC MIN " symbol along with the minimum value will appear on the display.


** When display shows " REC MAX " or " REC MIN ", press the " Hold Button " (3-4, Fig. 1) momentarily will delete the max. (min.) value, the display will show the " REC. " only and execute the memory function continuously.*

- c) To exit the memory record function, press the " REC " button for 2 seconds at least. The display will revert to the current reading, not show " REC "

4-9 Auto power off management

- 1) The instrument has built-in "Auto Power Shut-off " function in order to prolong battery life. The meter will switch off automatically if none of the buttons are pressed within 10 min.
- 2) To de-activate this feature, Select the memory record function during measurement, by pressing the " REC Button " (3-5, Fig. 1).

5. BATTERY REPLACEMENT

- * Replace the batteries when the left corner of the LCD displays the low battery icon "  ", using 4 fresh 1.5 V (UM4, AAA) batteries.
- * To change the batteries, open (rotate clockwise direction) the " Battery Cover " (3-7, Fig. 1).
- * Make sure the " Battery cover " (3-7, Fig 1) is secured after changing the batteries.

6. OPTIONAL CARRYING CASE



Soft carrying case with sash.
Size : 210 x 80 x 50 mm
Model : CA-52A