

MINI VANEOMETER MVA-02 , MVA-03 , MVA-04 User Manual



CE

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INTRODUCTION

MVA-40X series measures air speed, temperature and humidity. It is ideal for spot measurements at air outlets on account of its 30mm vane. In addition to air speed and temperature, MVA-404 also measures air moisture and absolute pressure. In this way, air conditions can be reliably checked.

MAIN FEATURES

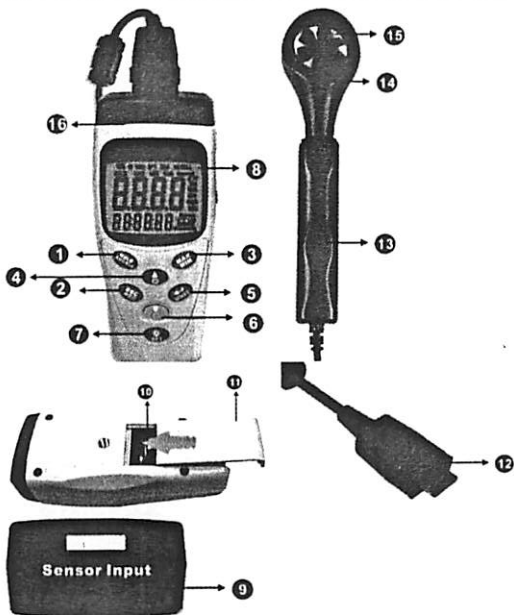
- 30mm 6 plastics blade.
- Measure from light air 0.4m/s
- Humidity sensor (MVA-03, MVA-04 only)
- Air flow calculate function.
- Max/Min/Avg and data hold.
- Auto power off with disable function.
- Low battery indication. "🔋"
- Memory capacity: 99 records.
- Memory recall function.
- Backlight function.
- Absolute Pressure Sensor(MVA-404 only).

FUNCTIONS CROSS TABLE

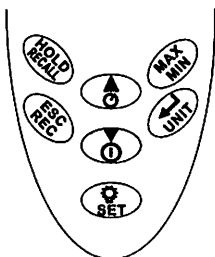
VEL: Air Velocity	TEMP:Temperature
FLOW: Air Volume	RH: Relative Humidity
99 REC: 99 memory	PRESSURE:Absolute Pressure

	VEL	FLOW	99 REC	TEMP	RH	PRESSURE
MVA-02	●	●	●	●		
MVA-03	●	●	●	●	●	
MVA-04	●	●	●	●	●	●

DESCRIPTION



1. HOLD and RECALL key
2. ESC and REC key
3. MAX, MIN and AVG key
4. Select up and Auto shutoff key
5. Enter and UNIT change key
6. Select down and Power key
7. Backlight and Set Key
8. Display and backlight
9. Probes input
10. Battery placement
11. Battery cover
12. Probes plug
13. Probes hold
14. Probes sensor (Temperature/Humidity)
15. Blades
16. Internal Pressure Sensor (MVA-404)





FULL DISPLAY

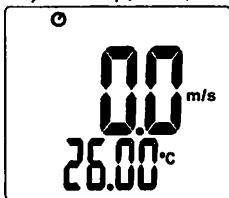
1. Primary display
2. Secondary display
3. Functional symbol display area
4. Lower battery indication.
5. Auto shutoff symbol indication.
6. Units of Primary display
7. Units of Secondary display





POWER ON/OFF

Press  key to turn on the meter. Press and hold  key to turn off the meter.

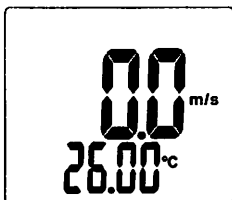
- *Do not turn off the meter manually while operating Set ,Unit change and recall mode.*
- *The key printing text in yellow stands for long press (press and hold) to set up,recall,record,...etc*




AUTO SHUTOFF

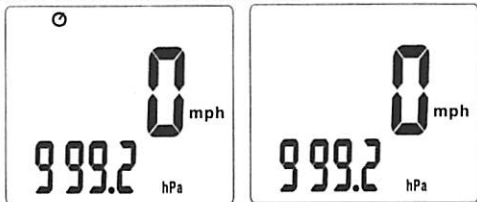
The device will auto shutoff in 15 minutes inactivity. To disable auto power off function, in normal mode, press and hold  key until the icon  is disappeared.

- *Do not turn off the meter manually while operating Set ,Unit change and recall mode.*



BACKLIGHT FUNCTION







Press  key to turn on backlight. Press key again to turn off backlight. The backlight will be unilluminated after 30 seconds.

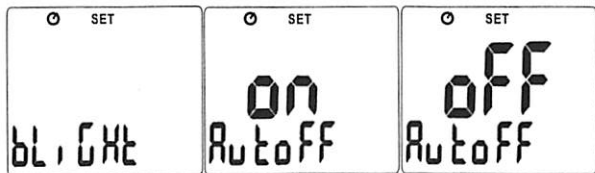


AUTO BACKLIGHT ON/OFF

Users can set on or off the 30-seconds auto-off backlight

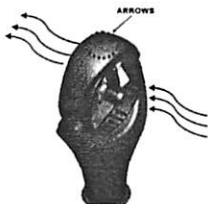
Press and hold  key into setting mode.

Press  or  key to select BLIGHT setting, as shown in figures. Press  key into Backlight setting. Press  or  key to select auto off on or off. Press  key to finish the setting mode.





AIR VELOCITY MEASUREMENT

1. Please insert probe plug onto the device sensor input socket at the top of the meter.
2. Follow the arrow mark to target to the air sources to measure velocity. As shown below:

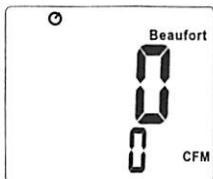
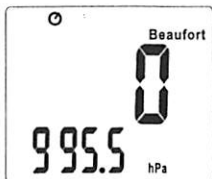


Please do not touch the blades by fingers or foreign body to avoid damage to the blades.

SECONDARY DISPLAY MODE




In the normal mode, press  or  key to change to secondary display mode. Selectable units are: RH% , CFM , hPa

- *During the Humidity mode, wait couple minutes to acquire stable and accuracy humidity reading.*

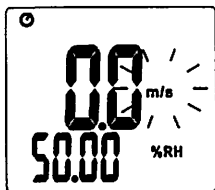
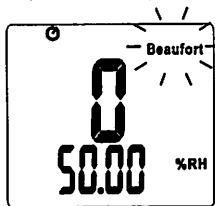


CHANGE UNITS

Press and hold  key into the setting units mode.

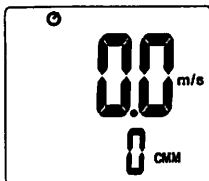
While in the setting units mode, unit on LCD is blinking, press  or  key to select desired unit, then press  key to save the setting.

Primary display units switch able among Beaufort, kts, fpm, m/s, mph, kph.







AIR FLOW CALCULATION





Make sure the secondary display is in the flow mode (CMM/CFM), the device will automatically calculate air flow only when users entered the area volume in advance.




SETTING AREA

Press and hold  key into the setting mode.

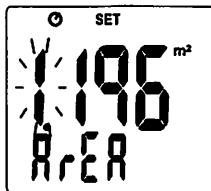
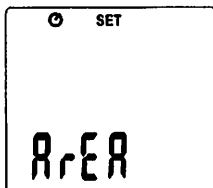
Press  or  key to select setting area mode, as shown in figures. Press  key into the setting area mode.

Digit is flashing for selecting the numbers from left to right, press  or  key to adjust digits to left or right. Press  or  key to increase or decrease figures.



Users can press and hold  key to change units (m^2 / ft^2) of area

Important Note:

- The units(m^2) setting range is $1.5 m^2 \sim 0.096 m^2$.
- The units(ft^2) setting range is $16.15 ft^2 \sim 1.03 ft^2$.





FREEZE DISPLAY (HOLD)

Users can press  key to freeze display, and press  key again to release holding.

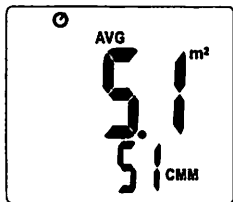
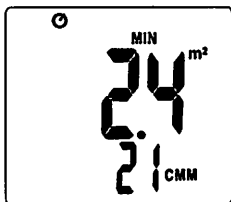
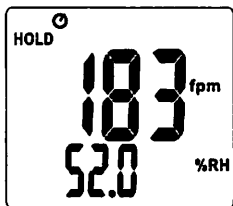
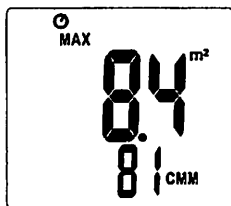
- *This function is not available while in the set , unit change and recall mode..*

MAX/MIN/AVG RECORD

The meter may record maximum, minimum and average readings. Viewing the figures by pressing  key to hold the MAX, MIN, and AVG while measuring. Press  key to switch viewing among MAX, AVG and MIN.


- *Press and hold  key to disable this function.*

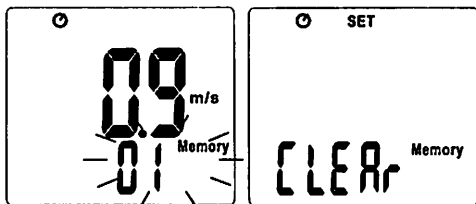
This function is not available while in the set , unit change and recall mode..




99 RECORDS




The meter can store air velocity data up to 99 records.



Press  key to store current reading, the number of the record will show on the LCD about 1 second. See below figure for reference.

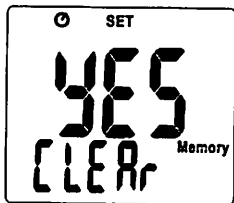


CLEAR MEMORY

When the memory (99 records) are full or you want to clear memory data, please follow the setup to clear memory. Press and hold  key into the setting mode, as shown in figures.

Press  or  key to select the clear memory mode. Press  key into the clear memory mode. Now LCD shows "yes" to reconfirm.

Press  key to leave or press  key to clear memory mode.






MEMORY RECALL

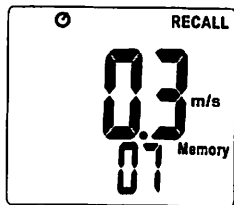
Users can recall the memory data to show on the display.

Press and hold  key into the RECALL mode.


The secondary display shows the memory number and primary display shows the stored velocity data.

Press  or  key to view last data or next data with memory number.

If you want to escape the recall mode, press and hold  key.



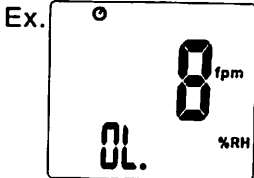
VIEW LCD/SOFTWARE VERSION

In the shutoff mode, press and hold  key to turn on meter, LCD will show the full display, then the software version appears in one second, the meter returns to normal mode for measurement.



TROUBLE SHOOTING

- "OL" is shown on the LCD
 - Reasons: a) The input value is over-ranged
 - b) The sensor is damaged
 - c) Humidity probe is not plugged on (If it is under %RH mode)
- Action: a) Enter available value or figures.
- b) Return the meter to the store you purchased for sensor repaired.
- c) Plug with vane probe to get RH%



BATTERY REPLACEMENT

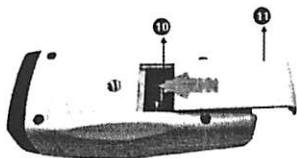


WARNING

If the symbol "  " appears on the LCD, please replace the battery immediately

Turn off the meter and disconnect the probe before replacing the battery.

Use only the correct type of batteries, properly install in the case to power on the meter.



END OF LIFE



Caution: This symbol indicates that equipment and its accessories shall be subject to a separate collection and correct disposal.

SPECIFICATIONS

Velocity:

Unit	Range	Resolution	Accuracy
m/s	0.4~25	0.1	±2% +0.2
Km/hr(kph)	1.5~90	0.1	±2% +0.8
mph	0.9~55	0.1	±2% +0.4
Knots(kts)	0.8~48	0.1	±2% +0.4
ft/min(fpm)	79~4921	1	±2% +40
Beaufort	1~10	1	--

Air Flow Calculation:

Unit	Range	Resolution	Accuracy
CMM	0~9999	1	-
CFM	0~9999	1	-

Temperature:

Unit	Range	Resolution	Accuracy
°C	-20~60	0.1	±1°C
°F	-4~140	0.1	±1.8°F

Humidity:

Unit	Range	Resolution	Accuracy
%RH	20~80	0.1	±3.5%RH
%RH	<20 , >80	0.1	±5%RH

Absolute Pressure:

Unit	Range	Resolution	Accuracy
hPa	350~1100	0.1	±2hPa
mmHg	263~825	0.1	±1.5mmHg
inHg	10.3~32	0.1	±0.1

- Display: 42mm(W)*33mm(L) Monochrome LCD with backlight
- Battery: 9V (NEDA 1604、IEC 6F22 or JIS 006P)
- Battery Life : Approx continuous used 100 hours.
- Shutoff Rate Power: 3uA
- Operate Maximum Power: 25mA
- Operating temperature and humidity: 5°C to 40 °C, below 80% RH.
- Storage temperature and humidity: -10°C to 60 °C, below 70%RH.
- Instrument dimensions: 130(L)*56(W)*38(H) mm. Weight: About 160g.
- Probe dimensions: 195(L)*47(W)*30(H) mm. Cable length: 95cm. Weight: About 100g.
- Replacement probe:(Optional accessories)
A-553 vane for MVA-02
A-554 vane for MVA-03, MVA-04
- Accessories: User's manual x1, 9V battery x1, Probe x1, Bag x1