

VALUE[®]

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**Anemometer
Operating Instruction
VMA-1**



VALUE • Quality Assurance

NAVTEK[™]
High-end Series

1. Introduction

VMA-1 is a stable, safe, reliable digital anemometer, widely used in mining, electric, iron and steel, petrochemical, energy-saving, navigation, fan manufacturing, exhaust ventilation, sporting and many more industries. This operating manual includes relevant safety information and warnings. Please read this manual carefully and observe all the cautions strictly.

⚠ Warning:
Before using the product, please read the operation safety rules carefully.

2. Out of the Box

Open the packing box and take out the meter. Please check carefully if any items below are missing or damaged.

1. AAA Batteries -----3
2. Operating manual -----1

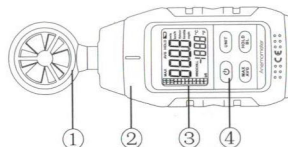
3. Operation Safety

1. Please check the meter and the accessories before using and beware of any damage or abnormal phenomenon. If you find the case is damaged or the LCD shows nothing, or you consider that the meter could not work properly anymore, please stop using it.
2. Observe the operating instructions while measuring.
3. Do not open the meter at will or change internal wiring to avoid damages to the meter.
4. When the LCD displays "☐", replace the battery timely. Remove the battery if the meter is not used for a long time.
5. Do not store or use the meter in high temperature, high humidity, flammable, combustible, or strong electromagnetic environment.
6. Please use soft cloth and neutral detergent to clean the case for maintenance. Do not use grinding agent and solvent to avoid case corrosion and damaging the meter.

⚠ Warning:
Based on the principle of magnetic induction wind speed measurement, the product may be subject to interference under strong battery radiation condition. Please stay from those conditions as far as possible.

4. Product Outlook

1	Vane	2	Meter
3	LCD display	4	Function keys



5. Display Interface



1	Maximum measurement	2	Average value
3	Data hold	4	Low battery
5	m/s	6	km/h
7	ft/min	8	Knots
9	Mph	10	Celsius
11	Fahrenheit	12	Temperature value
13	Wind chill notification	14	Wind speed value
15	Beaufort scale		

6. Key functions and setup


- 1. ON/OFF:**
Short press once to start up; short press again to power off.
Note: Product's auto power off feature can be disabled: Press and hold "HOLD" and then press "ON/OFF" key to enable/disable auto power off, LCD will display "APO OFF" to indicate status.
- 2. UNIT: Unit conversion key:**
Short press this key and the wind speed value cycles m/s, km/h, ft/min, knots, and mph. Long press this key and the temperature unit changes between °C and °F.
- 3. MAX/AVG:**
Pressing this key can select maximum, average and normal value measurement; select maximum and the meter will always show the maximum reading; select average and the meter will always show the average reading.
- 4. HOLD/BL:**
HOLD: Short press this key once to hold the measurement; short press this key again to exit data hold and continue normal measurement.
BL: Long press this key to turn on backlight; long press this key again to turn off backlight.

7. Technical Specification

1. Wind Speed and Temperature

Function	Range	Resolution	Accuracy	Description
Wind Speed	0-30m/s (as standard)	0.1m/s	± (5%rdg+0.5)	
	1.4~108 Km/h (refer only)		± (5%rdg+15dgts)	
	0.7~58 Knots (refer only)		± (5%rdg+10dgts)	
	0.8~67 mph (refer only)		± (5%rdg+10dgts)	
	78~5905 ft/min (refer only)		± (5%rdg+180dgts)	
Temperature	-10~50°C	0.1°C	±2°C	
	14~122°F	0.2°F	±4°F	
Beaufort Wind Scale	0~12	1	± 1	Only for reference
Sampling Rate			0.5s	Sampling rate is twice per second.
Overload Indication			OL	Shows "OL"
MAX/AVG			MAX/AVG	Shows "MAX/AVG"
Data Hold			HOLD	Shows "HOLD"
Backlight			BL	Manually turn on or off
Auto Power off			5mins	Automatically power off after 5mins without operating
Low Battery			3.0~3.5V	Shows low battery prompt when power is 3.0~3.5V
Wind Chill Notification			WIND CHILL	Wind speed with 5m/s and Temperature under 0°C will be display "WIND CHILL"

2. General Type

- LCD display: 4-bit LCD display. The displayed maximum is 9999.
- Overload indication: When the wind speed is over 45m/s or the temperature is lower than -10°C or higher than 50°C, "OL" will be displayed.
- Low battery display: Prompt "  ". The new battery should be replaced in time.
- Sampling rate: 2/s
- Sensor type: Magnetic induction type wind speed sensor and NTC negative temperature coefficient sensor.
- When the temperature is lower than 0°C and the wind speed is over 5m/s, the meter shows "WINDCHILL".
- Impact strength: Can withstand the impact of landing from 1 meter's height.
- Power requirement: 1.5V batteries (AAA) ×3
- Product size: 164×57×30mm
- Weight: 95g

3. Environment Specification

- Indoor use
- Altitude height: 2000m
- Pollution level: 2
- Working temperature and humidity:
0°C~40°C (not greater than 80%RH)
40°C~50°C (not greater than 45%RH)
- Storage temperature and humidity:
-20°C~60°C (not greater than 75%RH)

4. Electrical Specifications

- Accuracy: Wind speed: ±5%rdg+0.5 Temperature: ±2°C
- Environment temperature: 23°C±5°C
- Environment humidity: ≤80%RH

5. General Maintenance

- Warning: please do not open the meter case to avoid affecting device accuracy or damage to the meter.
- Maintenance and service of the meter should be accomplished by professional personnel or designated maintenance department.
 - Clean the case by dry cloth periodically, detergent with abrasive or solvent composition shall not be used.

6. Battery Installation and Replacement

- The meter uses 3 pieces of AAA 1.5V batteries. Please see below for steps of battery installation and replacement.
- Turn the panel down, push the battery cover open in the direction of the arrow, lift the cover and remove the batteries; install new batteries in accordance of polarity indications.
- Please use batteries of same type instead of improper ones.
- Close the cover tightly after installing new batteries.



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