

ROTATE SPEED METER



Users Manual

■. Introduction

Thank you for purchasing the rotate speed meter from us. Please take a few minutes to browse through this user manual before you begin to operate the meter to ensure that you are fully familiarized with how best to operate the meter as accurately and safely as possible. The meter is a rotational speed measuring instrument. It is normally used to measure rotational speed, e.g. of impellers, drums and spindles.



Warning! Keep to the safe distances from the detected objects! Danger of injury from rotating parts!

1.1 Precautions safety measures

To get the best service from this meter, please read this user's manual carefully and observe the detailed safety precautions strictly.

1.1.1 During use

1. For reliable measurements it is necessary to use

reflective markers. To apply the reflective markers, wait until the object to be measured has come to a standstill.

2. The ideal distance to the measurement object is between 10 and 40 cm. During the measurement, always aim at the reflective marker from an angle of approx. 30° . This avoids multiple reflections from the surface.
3. If no reflective marker can be attached, it must be checked whether the reflective properties of a reflective point on the measurement object are sufficient for rpm measurement. In this case, aim at the measurement object from the vertical, and check whether a value is displayed. If the measurement object displays several reflections per revolution, the number of ventilator vanes must be set (e.g. reflective ventilator with 5 vanes) in order to obtain correct rpm measurements.
4. If the OL symbol will show on the LCD, it means the

readings is outside the measuring range. Please keep to the permitted measuring range.

5. Never store the product together with solvents, acids or other aggressive substances.
6. When the battery voltage is under proper operation



requirement, the  symbol will show on the LCD and the battery need to be replaced with new.

1.1.2 Maintaining the product

- I Do not measure at a high temperature, high humidity places.
- I When not using the instrument for a long time, please remove the battery and avoid storing in high temperature and high humidity.

■. Features

1. Display: 6 digits LCD Display
2. Parameters: rpm, rps
3. Resolution: 0.1 rpm (100~999.9 rpm)
0.1 rps (1.7~100 rps)
1 rpm (1000~30000 rpm)
1 rps (100~500 rps)
4. Range: 100~30000 rpm
1.7~500 rps
5. Accuracy: $\pm 0.1\%$ reading (100.0~9,999rpm)
 $\pm 0.02\%$ reading (10,000~30,000rpm)
6. Sample rate: 1 time /sec
7. auto power off: about 2 minutes
8. Operating environment:
-10 ~ +50°C, +14 ~ +122°F
9. Storage environment:
-20 ~ +60°C, -4 ~ +140°F
10. Dimension and Weight:
121(L)x60(W)x30(H)mm, about 180g

11. Accessories: Reflective marker x 1pcs
String x 1pcs
Plastic box x 1pcs
DC1.5V (AAA) x 3pcs
Users manual x 1pcs
12. Laser power: <1mW

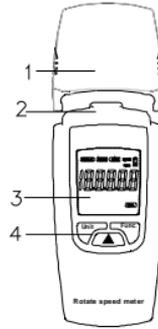


Warning: Do not point laser directly at eye or reflective surfaces.

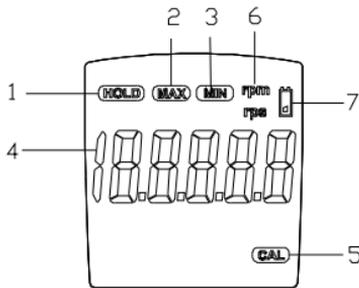
■. Names of parts

I Instrument Familiarization

1. Sensor cover
2. Photo transistor
3. LCD display
4. Function key



I LCD Display



The meaning of the symbols represented by the following table

Number of Order	Symbol	Functions
1		Indicating it is now in the data-holding state
2		Indicating the display value being the maximum value(MAX)
3		Indicating the display value being the minimum value(MIN)
4		The display zone for the meter's measurement value, showing all the measurement values
5		Indicating the calibration mode

6	rpm、 rps	rotational speed units
7		Indication to low voltage of the batteries, showing the energy of batteries will be exhausted soon

■. Operation instruction

1. Cut out a part of the reflective marker and attach it to the rotating object which is under test. And then start this rotating object.(Make sure to stop the rotating object first and then paste the reflective marker)
2. Put the instrument with enough battery power in the hand, press the ▲ key and the LCD will display 0.0 after power on.
3. Keep pressing the ▲ key, the meter will enter the measurement state and launch a beam of red laser. Point the laser to the position where the rotating

objects affixed with a reflective marker and maintain the fixed location. Adjust the distance between the instrument and rotating body to 10cm~60cm, the distance is based on the reliable and stable value which can be read by the instrument. At this point you can read the speed of the rotating body.

4. After completing the measurement, please release the ▲ key and the LCD will maintain the value since last measured. If you still need more operations, please see the description of keys instruction.

■. Keys instruction

1. ▲ key

Function:power on--- Press ▲ key to turn the power on when the meter is power off
measuring---Keep pressing the key to start measuring when the meter is power on.

***NOTE:**

There is no key for power off. When meter is working

and stop to press any key for two minutes, shutdown will occurs automatically.

2. **Func.** key

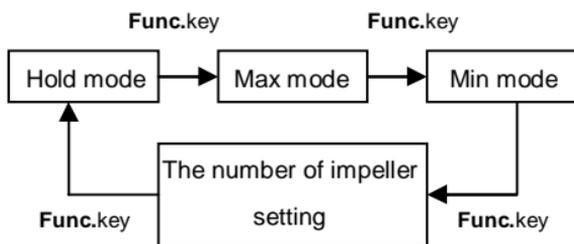
Press **Func.** key can select the state:

I MAX

I MIN

I The number of impeller setting

As shown in Figure:



Under the number of impeller setting mode:

Press the ▲ key to increase the number of impeller and press the **Func.** key again to exit the

state of setting.

3. **Unit** key

1) **Unit** set

Press the key can change the parameter unit: rpm,
rps.

2) Back light contrl

If press the key >2sec. the back light will be turned on,
Press the key once >2sec. the light will be turned off. If
the back light is not closed within 60 seconds, it will be
turned off automatically.

■. Maintenance

1. CLEANING INSTRUCTIONS

The meter may be wiped down with a wet sponge or cloth using a mild water based detergent or anti-bacterial soap and rinsed under a gentle stream of cold water.

NOTE:

This unit is not designed for complete submersion or washing in water.

2. BATTERY REPLACEMENT

Use the following procedure:

When the battery voltage drop below proper operation

range the  symbol will appear on the LCD display and the battery need to be replaced.

¥ Press the battery cover and towards arrowhead direction to open the battery cover.

¥ Replace the battery with three new 1.5V batteries

(AAA).

¥ Replace the battery cover.



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