Test Equipment Depot
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Visit us at www.TestEquipmentDepot.com

EM30

TACHOMETER

User Manual

■. Introduction

Thank you for purchasing this tachometer from SUPCO. 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 poss ble.

The meter is a rotational speed (measured in rpm) measuring instrument. It is normally used to measure rotational speed, e.g. of fan blades, impellers, drums and spindles.

Warning! Keep a safe distance from the rotating object being measured.

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 4” to 16”. During the measurement, always aim at the reflective marker from an angle of approximately 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 is displayed on the LCD, it means the readings are outside the measuring range. Please keep within the specified measuring range.
5. Never store the product together with solvents, acids or other aggressive substances.

1.1.2 Maintaining the product

- Do not measure at a high temperature, high humidity locations.
- 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 to 999.9 rpm）
   0.1 rps（1.7 to 100 rps）
   1 rpm（1000 to 30000 rpm）

1 rps（100 to 500 rps）

4. Range: 100 to 30000 rpm

1.7 to 500 rps

5. Accuracy: ±0.1％reading (100.0 to 9,999rpm)

±0.02％reading (10,000 to 30,000rpm)

6. Sample rate: once /sec

7. Auto power off: 2 minutes (app.)

8. Operating environment:

14°F to 122°F; (-10°C to +50°C)

9. Storage environment:

-4 °F to 140 °F (-20 °C to +60 °C)

10. Dimensions:

4.76”(L) x 2.36”(W) x 1.18”(H)

121mm(L) x 60mm(W) x 30mm(H)

11. Weight:

6.35 oz (app.)

180 g (app.)

12. Accessories:

Reflective marker (1)

Lanyard (1)

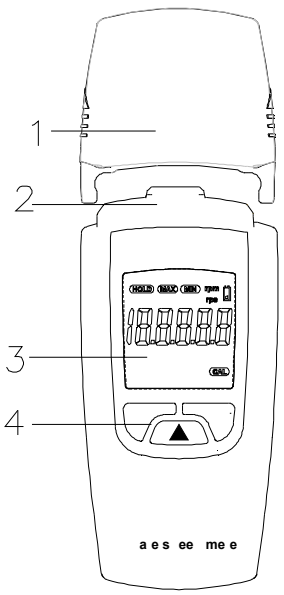
AAA Batteries (3).

Users manual

WARNING!

Do not point laser directly at eye or reflective surfaces.

■ Instrument Description



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

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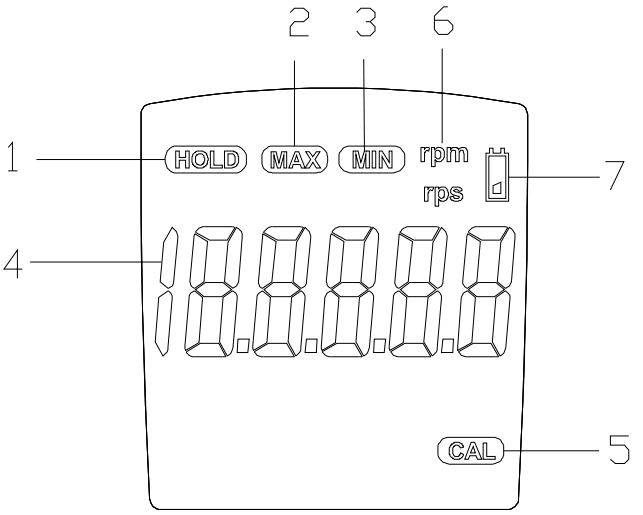
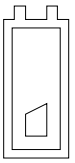
- **LCD Display**



Symbol Designations

Number of Order	Symbol	Functions
1	HOLD	Indicates Data Hold
2	MAX	Indicates Maximum Value Measured.

3	MIN	Indicating Minimum Value Measured
4	18.8.8.8.8	Measurement Value
5		Indicates cal bration mode
6	**rpm、rps**	Rotational speed units
7		Indicates a Low battery condition

■ Operating Instructions

1. Cut out a piece 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. Press the ON/ OFF key to turn the unit on.

3. Press the ▲ key and the LCD will display 0.0.

4. Keep pressing the ▲ key, the meter will enter the measurement state and launch a beam of red laser. Point the laser towards the rotating objects affixed with a reflective marker. Adjust the distance between the instrument and the rotating object to 4” to 16”. Now, an accurate measurement can be read.

4. After completing the measurement, release the ▲ key and the LCD will hold the last measured value.

■Function Keys

1. ▲ key

Press the ▲ key to turn the power on.

Continue pressing the key to start measuring

rotational speed.

***NOTE**:

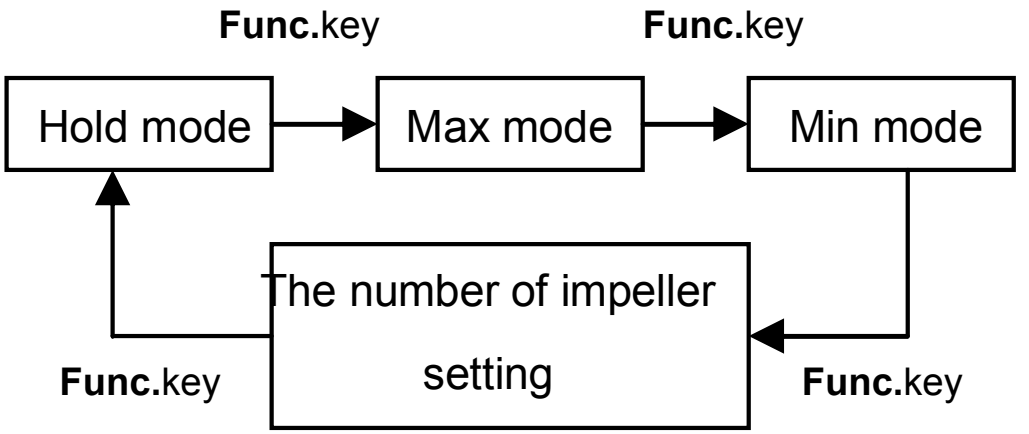
There is no key for power off. The meter automatically powers off after 2 minutes of non-use.

2. **Func.** key

Press **Func.** key to select the following:

- MAX
- MIN
- The number of impeller setting

As shown in Figure:



Under the number of impeller setting mode:

Press the ▲ key to increase the number of impellers and press the **Func.** key again to exit the setting mode.

3**. Unit** key

1) **Unit** set

Press the Unit key to change the parameter units: rpm, rps.

2) Back light control

Press the Unit key for more than 2 seconds and the back light will be turned on, Press the key again for more than 2 seconds and the backlight will be turned off. The backlight will also turn off after 60 seconds.

■. Maintenance

1. CLEANING INSTRUCTIONS

The meter may be wiped down with a wet sponge or cloth using a mild, water based detergent.

NOTE:

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

2. BATTERY REPLACEMENT

Use the following procedure:

When the battery voltage drops below proper operation range the symbol will appear on the LCD display and the battery needs to be replaced.

∞ Press the battery cover towards the arrowhead to open the battery cover.

∞ Replace the battery with three new AAA (1.5V) batteries.

∞ Replace the battery cover.

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