



INTRODUCTION

This instrument is a non-contact rotational speed meter. The meter measures the rotational speed in RPM (Revolutions Per Minute) and RPS (Revolutions Per Second) with reflective markers stuck on the rotating object to be measured.

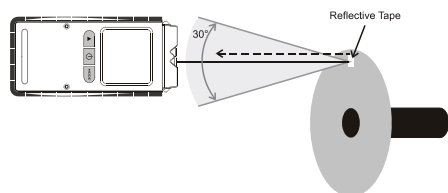
Using the meter:

Before start measuring, wait till the rotating object come to completely stops, stick the reflective marker(s) on the object to be measured. (The number of markers can be from 1 to 9. Please refer to MAX/MIN Mode for setting the number of markers).

Attention:

Do not expose the sensor to the light source directly or put reflective tape nearby reflective media, like glass or shiny material to ensure the correctness of reading.

When measuring, hold the meter steady and vertical (within 30°) to the surface of reflective markers.



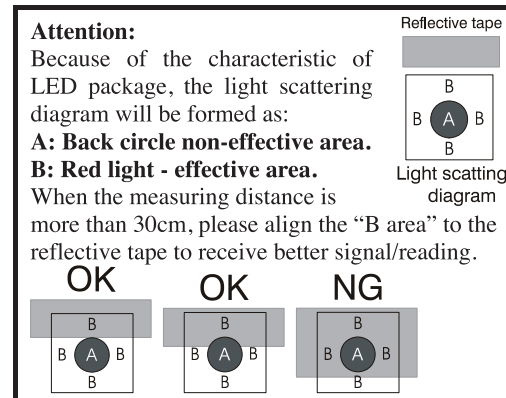
The ideal distance to the measurement object is between 10 and 40 cm.

Suggested reflective tape size:

Measuring distance between 10 and 20cm tape size 1cm*2cm(H*L).

Measuring distance between 20 and 30cm tape size 2cm*3cm(H*L).

Measuring distance between 30 and 40cm tape size 2cm*5cm(H*L).



SPECIFICATIONS

Measuring range: 100.0 to 99999 rpm

1.7 to 1666 rps

Resolution: 0.1 rpm (100.0 to 19999.9 rpm)

0.1 rps (1.7 to 333.3 rps)

1 rpm (20000 to 99999 rpm)

1 rps (334 to 1666 rps)

Accuracy: $\pm 0.02\%$ of reading + 1 dgt

Units: rpm, rps

Accuracy: Stated accuracy at $23^{\circ}\text{C} \pm 5^{\circ}\text{C}$, $<75\%$ R.H.

Temperature Coefficient: 0.1 times the applicable accuracy specification per $^{\circ}\text{C}$ out of $23^{\circ}\text{C} \pm 5^{\circ}\text{C}$.

Operating environment: 0°C to 50°C at $<70\%$ R.H.

Storage temperature: -20°C to 60°C , 0 to 80% R.H. with battery removed from meter.

Battery: 1.5Vx2pcs AAA size.

Battery Life: 30 hours typical with alkaline battery.

Low battery indication: The "⬇" is displayed when the battery voltage drops below the operating level.

Dimensions: 24.7mm(T) x 50.9mm(W) x 132.9mm(H).

Weight: Approx. 110g including batteries.

OPERATIONS

There are 3 operation modes, namely Measure-

ment Mode, Set Mode and MAX/MIN Mode.

1. Turning on and off the meter:

When power is off, a short push on "⏻" key turns on the meter and enter Measurement Mode. When power is on, press and hold "⏻" key for 2 seconds turns the power off.

Right after power on, all the indicators on the LCD display lights up for one second.

2. Measurement Mode:

Pressing Hold "▲" key to measure in rpm or rps. Release "▲" key, and stop measurement and will hold the measuring values.

Backlight:

In measurement mode, a short push on "⏻" key turns on the backlight for dark environment, it goes off automatically after 15 seconds if without further operation.

3. Set Mode:

In set mode, user can turn on/off APO function and select measurement unit rpm or rps.

(APO = Auto Power Off, when APO is ON, the meter power off automatically if no operation in 10 minutes.)

When power is off, press and hold "⏻" key for 2 seconds to enter Set Mode.

In Set Mode, press "Mode" key each time move settable position in following sequence (indicator of settable position blinks.)

3.1 Unit rpm/rps: short push on "▲" key switches between rpm and rps. Push "Mode" key to select the unit and enter APO ON/OFF setting.

3.2 APO ON/OFF: short push on "▲" key switches between ON and OFF. Push "Mode" key to select the APO ON/OFF and exit Set Mode and Entering Measurement Mode. (Please refer to the section of Measurement Mode.)

※**Note:** To turn off power in Set Mode abandon the current setting and previous settings remain unchanged. If "⬇" indicator appeared, the setting value can works till power off but did not save to meter.

4. MAX/MIN Mode:

In Measurement Mode, short push "Mode" key to enter MAX/MIN Mode. Display MAX, MIN, MAX-MIN, AVG value. For the last time the value of measurement.

Push "Mode" key each time the display changes in following sequence:

4.1 Maximum value recorded: with indicator

"MAX".

4.2 Minimum value recorded: with indicator "MIN".

4.3 Maximum-Minimum value recorded: with indicator "MAX-MIN".

4.4 Average of values recorded: with indicator "AVG".

4.5 Set the number of reflective marker (NO.1~9).

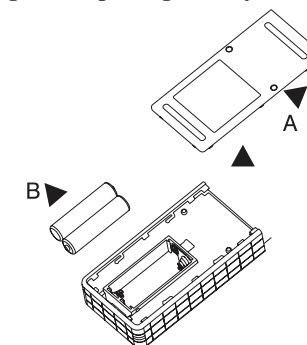
Press "▲" key to scroll the number of reflective markers from 1~9. Push "Mode" key to select the reflective markers and exit the MAX/MIN Mode and return to Measurement Mode.

To clear the recorded values:

In MAX/MIN Mode and during viewing MAX, MIN, MAX-MIN or AVG, press and hold "Mode" key for 2 seconds, to clear the recorded data and return to measurement mode.

MAINTENANCE

Installing and Replacing Battery



A. Battery Cover

B. Battery

- Power is supplied by 2pcs 1.5V (AAA SIZE).
- The "⬇" appears in the display when battery replacement is needed.
- Push the Battery Cover and lift it in the direction as shown in the figure.
- Remove the batteries from battery compartment.
- Replace with 2 new AAA batteries with polarity as indicated on the bottom of Battery Compartment.
- Replace the Battery Cover.

Cleaning

Periodically wipe the case with a damp cloth and detergent, do not use abrasives or solvents.

WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

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RETURN REQUESTS/INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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