

UT373

Mini Non-contact Tachometer User Manual

I. Instruction

UT373 is a stable,safe and reliable non-contact tachometer. The core of the design is the microcontroller. photoelectric speed sampling processing, unique design makes it a superior performance tachometer.

⚠ Warning:

To avoid electric shock or injury, please read Safety Instructions and Warnings before operating this product.

II. Open Box Inspection

Open the package box and take out the device. Please check whether the following items are deficient or damaged and contact your supplier immediately if they are.

- 1.Battery 1.5V AAA----- 3 pcs
- 2.Reflective strips----- 6pcs
- 3.User manual----- 1pcs

III. Safety Instruction

In this manual, a Warning identifies conditions and actions that pose hazard(s) to the user or the test device.

- 1) Before use, inspect the tachometer for any damage. Pay particular attention to the insulation cover and the display screen. Do not use the meter if it is not working properly
- 2) Follow the operation instructions.
- 3) Do not point the laser directly into eyes.
- 4) Do not change the internal circuit.
- 5) When low power symbol  appears, replace the battery as soon as possible. Remove the battery if the meter is left unused for long time.
- 6) Do not store or use the meter in high temperature, high humidity, explosive, or strong magnetic field environments.
- 7) Use soft cloth and detergent to clean the case, do not use abrasants or solvents.

IV. Symbols

	Warning
	Low power
	Comply with European Union standards

V. Structure(figure 1)

- 1. Laser emission and receiving terminal
- 2. Case
- 3. Panel
- 4. Display screen
- 5. Functional buttons

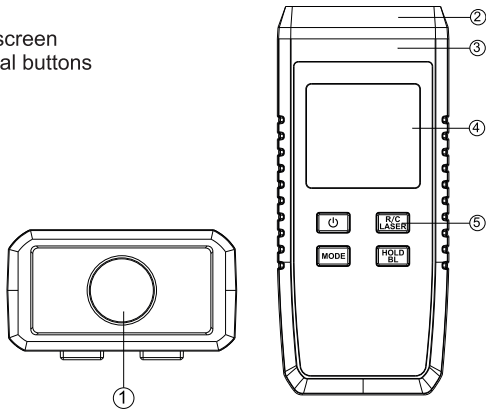


Figure 1

VI. Indicators (figure 2)

- 1. Data hold
- 2. Laser ON
- 3. Maximum value
- 4. Minimum value
- 5. Low power
- 6. Signal receiving
- 7. Count measurement
- 8. Auto power off
- 9. RPM measurement

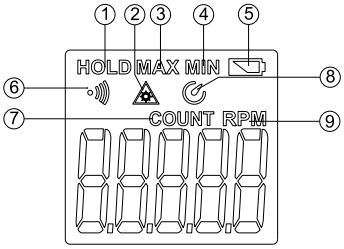


Figure2

VII. Buttons and setup

- 1. :Short press: Power ON/OFF, long press: switch ON/OFF auto power off function.  indicates auto power off .
- 2. :Short press: switch between RPM and COUNT modes. Long press: turn ON/OFF the laser.
- 3. :Under RPM mode: short press  to see past records (maximum or minimum value) ; long press  to delete the records. If there is signal input after power ON, maximum and minimum value will be recalculated. Under COUNT mode: press MODE to reset the count to zero.
- 4. :Short press to turn ON/OFF data hold function. Long press to turn ON/OFF backlight.

VIII. Operation instructions

- 1. RPM measurement (see figure 3)

⚠Warning:

To avoid injury and damage , keep the distance between tachometer and the object over 50mm.

- 1) Stop the rotating device
- 2) Cut the reflective strip(10mm *10mm) and place on rotating device.
- 3) Fix the meter to a location 50~200mm from the rotating object.
- 4) Short press  to turn on the meter, point the laser to the relective strip (vertical angle≤30°)
- 5) Turn on the rotating device to measure.

⚠ Note:

When measuring RPM<50, pulse period may be long. Keep the meter still to ensure accuracy. Wait for the above two pulse signals to be accurate. The reading does not change if pulse period longer than 7 seconds. If rotating speed>9999RPM, OL symbol appears to indicate overrange.

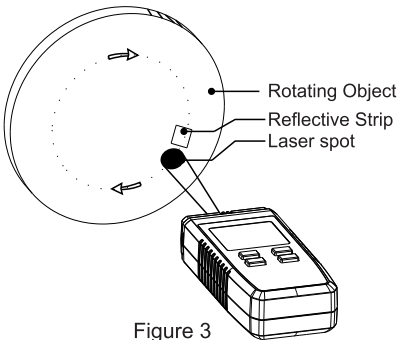


Figure 3

2. Count measurement

For illuminant objects

- 1) Fix the meter to a location 50~200mm from the rotating object. (vertical angle≤30°)
- 2) Short press  to turn on the meter and short press  to select mesurement mode. Point the laser to the objects to be measured.
- 3) After scanning the illuminant objects, the meter accumulate the count and display the quantity.

Note: Object to be measured should be illuminant.

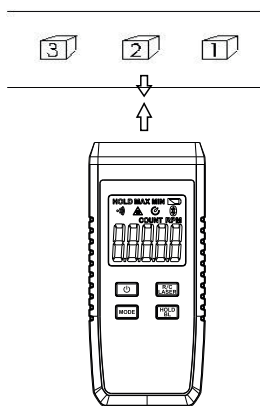


Figure 4

For objects with external optical source.

- 1) Fix the meter to a location 50~200mm from the rotating object. (vertical angle $\leq 30^\circ$)
- 2) Fix the optical source to the location at the other side of objects and opposite to the meter. (figure 5)
- 3) Short press to turn on the meter, long press to turn off the laser.
- 4) When the objects pass by the meter and optical source the meter will accumulate the count and display quantity.

Note: If quantity >99999, OL symbol appears to indicate overrange. Press to reset the reading to 0.

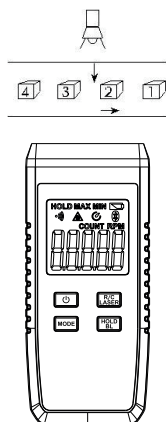


Figure 5

IX. Technical specifications

1. General specifications

- Maximum display: 99999
- Overrange display: OL
- Low power:
- Refresh rate: 1s~7s (according to rotating rate)
- Sensor type: photosensitive diode and laser tube
- Measuring distance: 50mm~200mm
- Drop test: 1m
- Battery: 1.5V(AAA)

2. Operating environment

- Indoor
- Altitude: ≤ 2000 meters
- Safety standards: EN61010-1; EN61010-031; EN61326
- Class of pollution: 2
- Operating temperature: $0^\circ\text{C} \sim 50^\circ\text{C}$ ($32^\circ\text{F} \sim 122^\circ\text{F}$) ($\leq 80\% \text{RH}$)
- Storage temperature: $-20^\circ\text{C} \sim +60^\circ\text{C}$ ($-4^\circ\text{F} \sim 140^\circ\text{F}$) ($\leq 80\% \text{RH}$)

3. Electric specifications

- Ambient temperature: $23^\circ\text{C} \pm 5^\circ\text{C}$ ($64.4 \sim 82.4^\circ\text{F}$)
- Ambient humidity: $\leq 80\% \text{RH}$

(1) RPM

Range	Resolution	Accuracy
10~9999.9r/min	0.1r/min	$\pm (0.04\% + 2)$
10000~99999r/min	1r/min	

(2) COUNT

Range	Resolution	Max input frequency
0~99999	1 digit	10KHz, 5% of pulse width

⚠ Warning:

To avoid false reading and injury, please do not open the case of the meter.

X. Maintenance

1. General maintenance

- The maintenance and service must be implemented by qualified professionals or designate departments.
- Clean the case with a dry cloth. Do not use abrasants or solvents.

2. Battery installation & replacement.

The meter uses three AAA 1.5V alkaline batteries for operation.

To install or replace the battery:

- Unscrew the battery cover, remove the cover and install new batteries ensuring that the correct polarity is observed.
- Use the batteries of the same type
- Replace the battery and screw up.

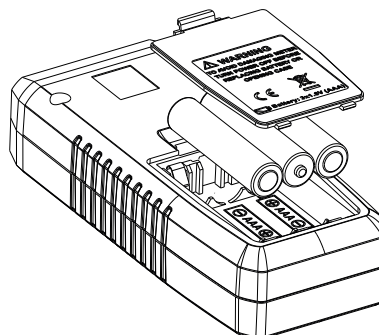


Figure 6

UNI-T

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Warnings and safety information

For all information on handling and use, please refer to the instruction manual or product label. Before using the products, read its contents and follow the instructions contained therein.

Also read the following information before use:

Safety of use

1. Use measuring tools for their intended purpose. Do not use measuring tools for tasks for which they were not designed to avoid damage or erroneous measurement results.
2. Always make sure a tool is in good working condition before using it. Damaged tools, such as cracked cases or damaged displays, can lead to incorrect measurements or risk of accidents.
3. Calibrate measuring tools regularly to ensure accuracy and reliability of measurements. Incorrectly calibrated devices can lead to erroneous results.

Precautions

1. Use appropriate eye protection, especially when working with measuring tools that may emit radiation.
2. Keep measuring tools away from children and untrained people to prevent accidental damage or misuse.
3. Avoid using measuring tools in extreme conditions of temperature, humidity or in an atmosphere with a high concentration of dust, which can affect their accuracy and functionality.
4. Be careful not to damage delicate measuring components (e.g., sensors, probes) when working with measuring tools.

Safe use

1. Always make sure that the measuring tool is properly aligned and fixed to avoid measurement errors or damage.
2. Use measuring tools only in designated areas that provide adequate stability and minimize the risk of accidents, such as slippery or uneven surfaces.
3. Never take measurements on live components or in conditions that may pose a safety hazard.

Rules for use in appropriate conditions

1. Store measuring tools in a dry, cool place, away from moisture and direct sunlight, which can damage the devices or affect their accuracy.
2. When using measuring tools, make sure they are well seated and will not be subjected to shocks or impacts that can damage them.
3. Avoid using measuring tools in areas with extreme conditions, such as high vibration, hot surfaces, dust, or moisture, unless the tool is rated for this by the manufacturer.

Maintenance instructions

1. Regularly check the condition of measuring tools, especially measuring components (e.g., sensors, probes, displays) and batteries.
2. Follow the cleaning instructions provided by the manufacturer. Use appropriate cleaning materials (e.g., soft cloths) to avoid damaging delicate components.
3. Calibrate measuring tools regularly, according to the manufacturer's recommendations, to maintain measurement accuracy.

Safe disposal

1. Dispose of used or damaged measuring tools in accordance with current environmental and electronics recycling regulations.
2. Do not dispose of measuring tools in regular waste containers, as they may contain elements harmful to the environment.
3. Contact local authorities or recycling companies for information on proper disposal of used measuring tools.

Statement of compliance

The products have been designed in accordance with the safety requirements of **Regulation (EU) 2023/988** on general product safety, ensuring their compliance with applicable standards for the safety and health protection of users.

EU REP

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