

**TRACEABLE®
TOUCHLESS/
CONTACT
TACHOMETER
INSTRUCTIONS**

WARRANTY, SERVICE, OR RECALIBRATION
For warranty, service, or recalibration, contact:

Traceable® Products are ISO 9001:2018 Quality-Certified by
DNV and ISO/IEC 17025:2017 accredited as a Calibration
Laboratory by A2LA.

Cat. No. 4059

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SPECIFICATIONS

Photo Tachometer—

Range: 5.0 to 99,999 RPM (revolutions per minute)

Resolution: 0.1 under 1000 RPM
1 over 1000 RPM

Detecting Distance: 2 to 12 inches (50 to 300 mm)
(depending on ambient light)

Contact Tachometer—

Range: 0.5 to 19,999 RPM (revolutions per minute)

Resolution: 0.1 under 1000 RPM
1 over 1000 RPM

Surface Speed Measurement—

Range: 0.05 to 1999.9 m/min (meters per minute)

Resolution: 0.01 under 100 m/min
0.1 over 100 m/min

Range: 0.2 to 6560 ft/min (feet per minute)

Resolution: 0.1 under 1000 ft/min
1 over 1000 ft/min

Sampling Time: 1 second (over 60 RPM)

Memory Sampling Time: 10 seconds minimum

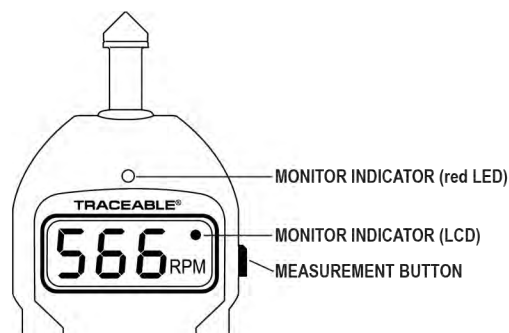


PHOTO TACHOMETER MEASUREMENT

1. Create a reflective mark by cutting a strip of the reflective tape into a 0.5" square.
2. Set the function switch to the **RPM** position.
3. Stop the rotating object to be measured and apply the reflective mark to the object. Make certain that the surface of the object is smooth and clean so that the reflective mark will adhere.

The non-reflective area must always be greater than the reflective area. If the object being measured is normally reflective, then it must be covered with black tape or paint before applying the reflective mark.

4. Allow the object to rotate.
5. Press and hold the measurement button and align the visible light beam with the reflective mark.
6. Verify that the light beam is properly aligned by making certain that the monitor indicators blink each time the reflective mark passes through the beam of light.
7. Record the result when the reading stabilizes. (This will occur in approximately 2 to 10 seconds)
8. Release the measurement button once measurement is complete.

If the measured rotation is less than 50 RPM, increase the accuracy of the reading by applying additional reflective marks to the object. Place the additional marks approximately 180 degrees from each other. To determine the actual RPM, take the displayed result and divide by the number of marks.

Use special care when measuring the rotation of the flat end of the shaft with a relatively small diameter. Completely cover the flat end with non-reflective black tape. Place the reflective mark on top of the black tape, as close to the edge as possible.

CONTACT TACHOMETER MEASUREMENT

1. Set the function switch to the **RPM**  position.
2. Place the RPM cone or RPM funnel on to the end of the spindle. Some objects will be more accurately measured by using the RPM funnel rather than the RPM cone. To use the RPM funnel, first remove the RPM cone from the spindle and replace it with the RPM funnel.
3. Press and hold the measurement button.
4. Place the spindle lightly against the rotating object. The spindle should be positioned on the center of the rotating axis of the object that is being measured.
5. Record the result when the reading stabilizes. (This will occur in approximately 2 to 10 seconds)
6. Release the measurement button once measurement is complete.

SURFACE SPEED MEASUREMENT

1. Set the function switch to the **M/MIN** or **FT/MIN** position.
2. Remove the RPM cone/funnel assembly from the spindle and replace it with the surface speed wheel assembly. Remove both the cone/funnel and the sleeve that fits over the spindle.
3. Press and hold the measurement button.
4. Place the surface speed wheel in contact with the moving surface.
5. Record the result when the reading stabilizes. (This will occur in approximately 2 to 10 seconds)
6. Release the measurement button once measurement is complete.

MEMORY RECALL

The memory feature will recall the last reading, highest reading, and lowest reading achieved during measurement. Readings are normally retained in memory for several minutes.

After taking a measurement:

The first press of the **MEMORY** button will display the last reading ("LA" will appear on the display).

The second press of the **MEMORY** button will display the highest reading achieved ("UP" will appear on the display).

The third press of the **MEMORY** button will display the lowest reading achieved ("DN" will appear on the display).

CONTRAST ADJUSTMENT

The LCD display contrast can be adjusted using the **CONTRAST** knob. Simply turn the knob left or right until the desired LCD contrast is obtained. If the display shows "88888" when the measurement button is pressed, but no measurement is being taken, the contrast needs to be adjusted. Turn the contrast knob to the left until a single "0" appears.

ALL OPERATION DIFFICULTIES

If this meter does not function properly for any reason, replace the batteries with new, high quality batteries (see the "Battery Replacement" section). Low battery power can occasionally cause an number of "apparent" operational difficulties. Replacing the batteries with new fresh batteries will solve most difficulties.

BATTERY REPLACEMENT

An erratic display, faint display, no display or “LO” appearing on the display are all indicators that the batteries need replacement. Remove the battery cover located on the back of the unit. Remove the exhausted batteries and replace them with four new AA alkaline batteries. Place the batteries in the proper direction as indicated by the illustration in the battery compartment. ***Incorrectly installed batteries may damage the electronics.*** Replace the battery cover.