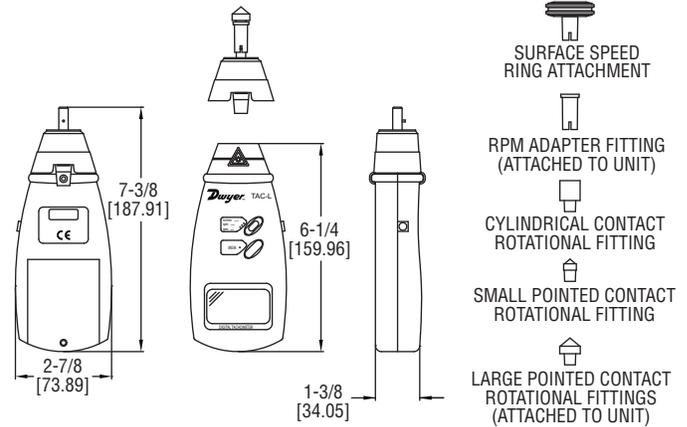




# Model TAC-L Photo/Contact Digital Tachometer

## Installation and Operating Instructions



**Model TAC-L Portable Digital Tachometer** measures rotational speed either by contacting a rotatable head to the shaft of the object, or using photo sensor to detect the reflections from the laser. The laser target can record from a distance of up to 20 inches and gives a more accurate measurement than LED targeting. Model TAC-L includes a large LCD with a backlight for use in dark areas. This tachometer is made of a strong, lightweight ABS plastic housing, which is designed to comfortably fit in the hand of the user. Supplied with this model are 3 contact rotational heads, a contact surface wheel, and a protective carrying case.

### PRODUCT OVERVIEW

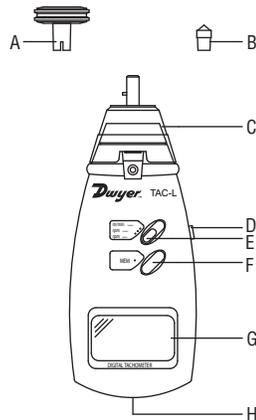


Figure 1

- |                             |                        |
|-----------------------------|------------------------|
| A. Surface speed wheel      | B. Contact test device |
| C. Contact measuring device | D. Measuring button    |
| E. Function switch          | F. Memory button       |
| G. Display                  | H. Battery cover       |

### NON-CONTACT MEASURING (RPM)

1. Apply a reflective mark to the object being measured.
2. Slide the function switch to "rpm photo" and remove the cap.
3. Depress the measuring button and align the visible light beam with the applied target. Verify that the monitor indicator lights when the target aligns with the beam.

#### NOTICE

In the case of measuring low RPM values with the non-contact laser, it is suggested that the user attach more reflective marks an average distance apart on the object, then measure as above, giving a more accurate measurement. The user then must divide the reading shown by the number of reflective marks to find the true RPM.

### SPECIFICATIONS:

**Accuracy:**  $\pm(0.05\% + 1 \text{ digit})$ .

**Display:** Backlit LCD; 5 digits, 7 segments, 0.7" (1.8 cm) H.

#### Range:

Non-contact (RPM): 2.5 to 99,999 RPM;

Contact (RPM): 0.5 to 19,999 RPM;

Surface Speed (m/min): 0.05 to 1999.9 m/min.

#### Resolution:

Non-contact (RPM): 0.1 RPM (2.5 to 999.9 RPM),  
1 RPM (1000 to 99,999 RPM);

Contact (RPM): 0.1 RPM (0.5 to 999.9 RPM),  
1 RPM (1000 to 19,999 RPM);

Surface Speed (m/min): 0.01 m/min (0.05 to 99.99 m/min),  
0.1 m/min (100.0 to 1999.9 m/min).

**Non-contact Measuring Distance Range:** 2 to 20" (5 to 50 cm).

**Sampling Time:** 0.8 s.

**Temperature Limits:** 32 to 122°F (0 to 50°C).

**Power Requirements:** (4) 1.5 V AA alkaline batteries, included, user replaceable.

**Weight:** 1.37 lb (.620 kg).

### CONTACT MEASURING (RPM)

1. Install the contact device, with the head piece that works best for the object being measured.

**NOTICE** The large tapered and pillar rubber pieces are more suitable for low speed. The small tapered piece is more suitable for high speed.

2. Slide the function switch to "rpm contact."
3. Lightly press the rpm adapter against the center hole of the rotating shaft.
4. Depress the measuring button, being sure to keep the alignment straight.
5. Release the measuring button when the display reading stabilizes.

### SURFACE SPEED MEASURING (M/MIN)

1. Install the surface speed ring attachment.
2. Slide the function switch "m/min contact."
3. Lightly press the speed ring to the object being measured.
4. Depress the measuring button, being sure to keep the alignment straight.
5. Release the measuring button when the display reading stabilizes.

### MEMORY

The memory button is able to recall the records from the last time the measuring button was pressed. Press and hold the memory button each time. The first time the button is pressed, the maximum recorded value is shown, alternated with "UP." See Fig. 2.

**NOTICE** Recorded data is reset every time the measuring button is pressed.

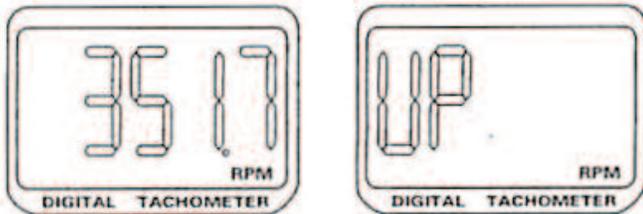


Figure 2

The second time the button is pressed, the minimum recorded value is shown, alternated with "DN." See Fig. 3.

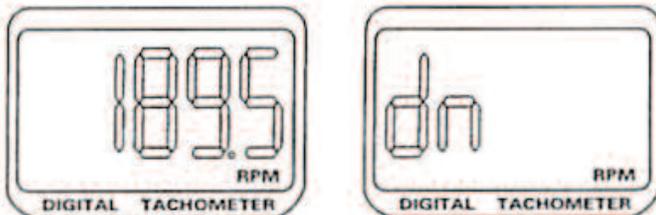


Figure 3

The third time the button is pressed, the last recorded value is shown, alternated with "LA." See Fig. 4.

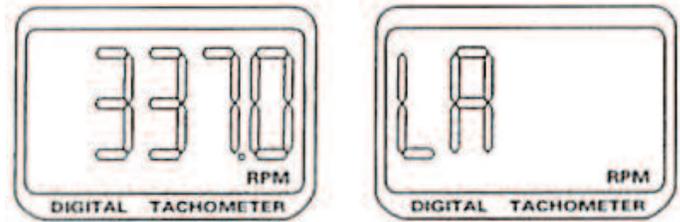


Figure 4

The fourth time the button is pressed, there will be a countdown from 20 to 1. After this, the display will show "An \*\*." The number that is displayed after "An" is the number of seconds that the tachometer was recording for during the last session. In the case of Figure 5, the tachometer recorded for 64 seconds.

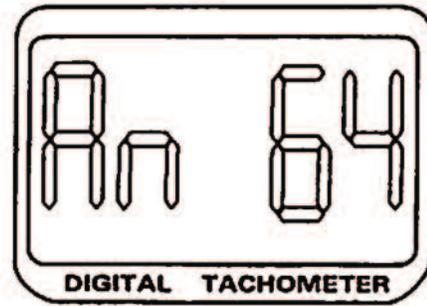


Figure 5

Each time the button is pressed after that, it will show the recorded value for each second it was recording. After having gone through all of the values, pressing the button will start from the beginning with the maximum measurement.

### REPLACING THE BATTERIES

When the batteries need to be replaced, the battery icon will appear in the bottom left corner of the display. To replace the batteries, slide the battery cover off of the tachometer and remove the 4 batteries. Install the new batteries in the same position as the previous ones.

### MAINTENANCE/REPAIR

Upon final installation of the Model TAC-L, no routine maintenance is required besides changing the batteries. The Model TAC-L is not field serviceable and should be returned if repair is needed. Field repair should not be attempted and may void warranty.

### WARRANTY/RETURN

Refer to "Terms and Conditions of Sale" in our catalog and on our website. Contact customer service to receive a Return Goods Authorization number before shipping the product back for repair. Be sure to include a brief description of the problem plus any additional application notes.