

# PT-120 Contact Tachometer

## Operation Manual

# SHIMPO INSTRUMENTS



### CAUTION

Be careful of clothing or appendages getting too close to moving machinery when taking readings.

Do not leave the device close to water or any other liquid to avoid damage.

If not using this instrument for extended periods of time, remove the batteries to prevent potential battery leakage from causing product damage.

Do not attempt to open housing or do maintenance.



The Shimpo Model PT-120 Contact Tachometer is a simple to use, ergonomic, rugged test instrument for rotational speed applications. This velocity analyzing and measuring device is ideal for rotational machine inspection and process speed analysis. The PT-120 possesses a large backlit LCD screen that provides clear viewing in any environment. With a simple selection switch users can obtain readings in either RPM, meters, meters per minute in metric models or RPM, feet and feet per minute in imperial models. During testing, the unit automatically saves maximum, minimum, last recorded values and up to 96 logged data readings. The compact, lightweight PT-120 Tachometer comes standard with 3 AAA batteries, protective carrying case, plus several contact adapters and contact wheel.

### SPECIFICATIONS

**Range:** PT-122: 0.5-19,999 RPM, 0.05-1999.9 m/min, 0.05-99,999 m; PT-121: 0.5-19,999 RPM, 0.16-6559.6 ft/min, 0.16-99999 ft

**Resolution:** 0.1 RPM (0.5-999.9 RPM), 1 RPM (above 1000 RPM); 0.01 m/min (0.05-99.99 m/min), 0.1 m/min (100+ up m/min); 0.02 m (0.05-99,999 m); 0.03 ft/min (0.16-99.99 ft/min), 0.3 ft/min (100 ft/min and up); 0.04 ft (0.16-99,999 ft)

**Display:** 5 digit, 0.7" (18 mm) LCD

**Accuracy:** +/-0.05% + 1 digit

**Sampling Time:** 0.8 second (over 60 RPM)

**Memory:** Automatically stores Maximum (UP), Minimum (dn), last value (LA) and up to 96 readings for review. Maximum speed for reading storage is every 0.8 seconds.

**Dimensions:** 6.7 x 2.8 x 1.4 (170 x 70 x 35 mm)

**Power:** 3 x 1.5V AAA battery

**Enclosure:** ABS plastic housing

**Product Weight:** 0.45 lb (0.20 kg)

**Package Weight:** 1.00 lb (0.45 kg)

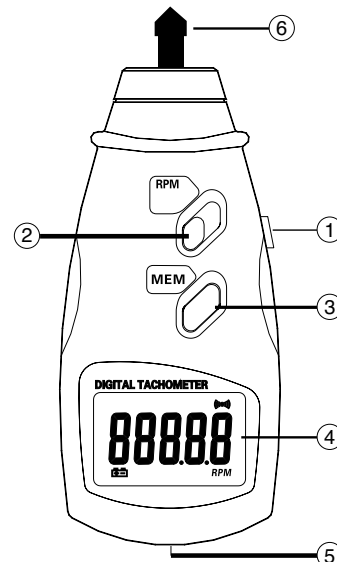
**Certification:** CE

**Warranty:** 1 Year

**Included Accessories:** 3 AAA batteries, protective carrying case. Large & small cone adapter, surface wheel, 3.87" ( 98.3 mm) cir.

### PRODUCT DIAGRAM

1. Measurement Button
2. Function Select Switch
3. Memory Button
4. LCD Display
5. Battery Cover (On Back)
6. Contact Adapter



## OPERATION

a. Loosen screw on battery cover and remove cover to install the 3 new AAA batteries.

b. Attach cone or wheel adapter securely to shaft.

### Measure RPM, Speed or Length

a. Slide the function switch (2) to select desired unit of measure.

b. Press and hold the measurement button (1); Make physical contact with equipment.

**NOTE:** When using wheel, due to wheel's outer and grooved circumferences varying, when using the groove for wire, cable and similar applications, the result is 0.9 of the displayed value.

c. After display data is stable and the desired amount of readings have been taken, release the measurement button. The maximum (UP), minimum (dn) and last value (LA) have been recorded over the test period.

d. Press "MEM" button (3) to cycle the display through the maximum (UP), minimum (dn), and last (LA) values. The MEM button must be pressed and released each time to cycle through the values (Fig. 2).

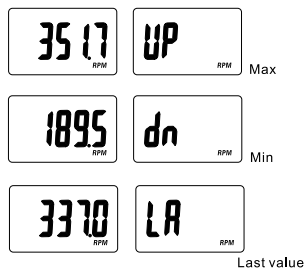


Fig. 2

A fourth press will begin a countdown. After the countdown reaches 1, "An" followed by the number of readings automatically recorded will be shown. For example, if 64 data points were saved during measurement, display will show "An 64" (Fig. 3).

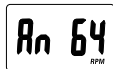


Fig. 3

Continue to press MEM to cycle through each stored data point reading. The data point rank followed by the value will be shown with each subsequent press of the MEM button (Fig. 4).

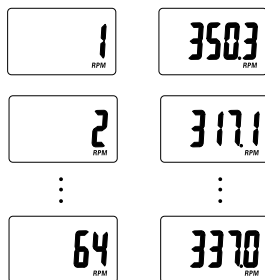


Fig. 4

After displaying all the saved data (maximum 96), the unit will cycle back to Max, Min, and last value.

**NOTE:** When measuring in feet or meters, these modes do not have max, min and data recall. Only the last test value is shown.

## Clear Stored Data

Press the measurement button (1) to delete all stored data. If you then press MEM, all statistical values will be zero. Or simply just start a new test with the measurement button to eliminate the old data and begin storing new data. (Note: When measured values vary significantly, the maximum number of data values will be less than 96.)

## NOTES

1. The unit comes with large and small cones plus cylinder adapter.

2. The cylinder and large cone are used for low RPM speeds while the small cones are used for high RPM speeds

## BATTERY REPLACEMENT

1. When the battery voltage is low, the left side of the LCD displays the battery symbol which indicates that battery replacement is needed.

2. Loosen screw and open battery cover to remove the batteries and replace with new batteries.

3. If the tachometer is not going to be in use for extended periods of time, please remove the batteries to prevent possible battery leakage which could damage the instrument.

## MAINTENANCE

Other than cleaning exterior with cloth, no maintenance can be performed on product. Do not attempt to take unit apart with the exception to battery cover. Damage to unit may result.