

# Non-Contact Tachometer

**MODEL:ST 722**



## ***Instruction Manual***



RoHS  
COMPLIANT

REACH  
(SVHC)





# **Non-Contact Tachometer**

# **Instruction Manual**



# Table Content

---

<b>1.Product Introduction-----</b>	<b>1</b>
1-1Features-----	1
1-2Application-----	2
1-3Warnings!-----	2
<b>2.Safety Information-----</b>	<b>3</b>
2-1Laser Warning Note!-----	3
2-2Cautions!-----	4
2-3Symbols-----	4
<b>3.Specification-----</b>	<b>6</b>
<b>4.Operation-----</b>	<b>7</b>
4-1Quick Start-----	7
4-2Unit Diagram-----	8
4-3Display-----	9
4-4Function Descriptions-----	10
<b>5.Maintenance-----</b>	<b>13</b>

# 1. Product Introduction

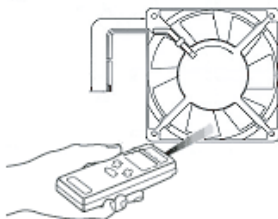
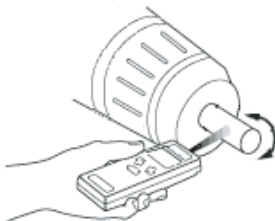
Thank you for purchasing the Digital Tachometer. The Digital Tachometer is non-contact RPM (revolutions per minute) measuring instruments. Features include a 5 digits LCD, scan/hold/auto function and auto power off (30 seconds). To measure RPM, point the Laser spot at the object. Press the measuring trigger and confirm that the reflective tape is attached. Hold on till the reading is stable and end of shot.

## 1-1 Features

- Measurement type : Revolutions Per Minute (RPM).
- Non-contact RPM measurements up to 100cm away from target.
- Laser sighting.
- 5 digital microprocessor-controlled LCD display.
- 40 reading memories: 10 selectable MAX measurements, 10 selectable MIN measurements, 10 selectable AVG measurements and 10 selectable DATA measurements.
- Electronic trigger lock.
- Ultra low power consumption in shutdown mode.

## 1-2 Application

- Gear Boxes
- Engines
- Motors
- Pumps
- Compressors
- Centrifuges
- Couplings
- Fans
- Shafts
- Grinders
- Pulleys



## 1-3 Warnings!

You may receive harmful laser radiation exposure if you do not adhere to the warnings listed below:

- Use of controls or adjustments or performance of procedures other than those specified here may result in hazardous radiation exposure.
- Do not look at the laser beam coming out of the lens or view directly with optical instruments - eye damage can result.

- Use extreme caution when operating the laser sighting.
- Never point the laser beam at a person.
- Do not attempt to open the tachometer. There are no user serviceable parts.
- Keep out of the reach of all children.

Refer to the inside back cover for product warning label.

## **2. Safety Information**

Read the following safety information carefully before attempting to operate or service the meter. Only qualified personnel should perform repairs or servicing not covered in this manual.

### **2-1 Laser Warning Note!**

- Do not look directly into the laser beam. Permanent eye damage may result.
- Do not point the laser at anyone's eyes.
- Use caution when operating the laser around reflective surfaces.

## 2-2 Cautions!

- This product contains a Class 2 laser; use caution when operating this device with the laser on.
- Do not submerge the unit in water.
- If operating arrangements are used or procedures carried out other than those described here in these instructions, this can lead to dangerous exposure to radiation.

## 2-3 Symbols



Dangerous, refer to this manual before using the meter.



CE Certification.

This instrument conforms to the following standards:

**EN61326:**Electrical equipment for measurement, control and laboratory use.

**IEC61000-4-2:**Electrostatic discharge immunity test.

**IEC61000-4-3:**Radiated, radio-frequency, electromagnetic field immunity test.



**RoHS** Restrict to use of six substances within electrical and electronic equipment (EEE), thereby contributing to the protection of human health and the environment.



The device may not be disposed in the trash. It promotes the re-use recycling and other forms of recovery of used materials and components, and to improve the environmental performance of all operators (manufacturers, traders and treatment facilities) involved in the life cycle of products. Dispose of the product appropriately in accordance with the regulations in force in your country.

**REACH** The device of used materials content no substances that list of proposed REACH substances of very high concern.

### 3. Specification

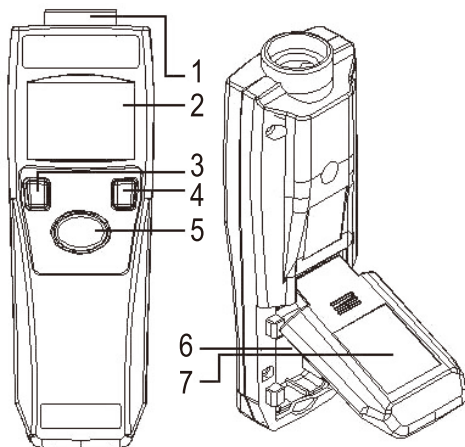
Range	6.0 - 99,999
Accuracy	6.0 – 5999.9 RPM : $\pm 0.01\%$ and $\pm 1$ digit 6000.0 – 99999 RPM : $\pm 0.05\%$ and $\pm 1$ digit
Detection	Laser Diode
Resolution	6.0 – 9999.9 RPM : 0.1RPM 10000 – 99999 RPM : 1RPM
Response Time	1 second
Operation Temp.	0 to 50°C (32 to 121°F ), 10 to 90%RH
Auto power off	Automatically after approx. 30s.
Max/Min/Avg	Yes
Memory	40 point
Battery Type	9V(006P, IEC6F22, NEDA1604)
Dimensions	147x49x29mm(5.79"x1.93"x1.14")
Weight	95g (3.35oz.) Without battery
Standard Accessories	9V Battery, Instruction manual, Certificate of calibration, Reflective tape 15x525mm (0.59"x20.67"), Carrying Case

## 4. Operation

### 4-1 Quick Start

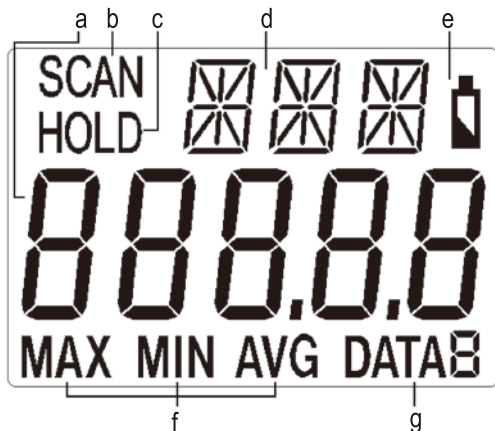
- A. Flip open the battery compartment cover and install a 9V Battery.
- B. Attach a piece of reflective tape on the object to be measured.
- C. Stick the self- adhesive reflective tape on the object whose rotational speed is to be measured. The reflective tape should be stocked as close to the outer edge of the object to be measured as possible.
- D. Hold the tachometer in your hand.
- E. Press the MEAS button and point the laser spot at the object (the reflective tape). Then read the RPM on the **LCD** display.


## 4-2 Unit Diagram



- 1 Laser beam outlet: Used for Non-contact RPM measurements.
- 2 Display section: Displays measurements.
- 3 **M** button: Data Storage and Recall Data.
- 4 Lock button: Electronic trigger lock.
- 5 MEAS button: Turns the tachometer on and records measurements.
- 6 Battery and cover.
- 7 Laser warning and certification label.

## 4-3 Display



- a Main display: 5 digit LCD displays measurement readings.
- b Scan: Press the measuring button, the data will update and **"SCAN"** will show.
- c Hold: Release the measuring button, the data will freeze and **"Hold"** will appear.
- d Unit display: Displays measuring units.
- e Low battery display: When the battery current is weak,  will show.
- f Max / Min / Avg display: Displays minimum, maximum and average value.
- g Data: Displays the number of data storage.

## 4-4 Function Descriptions

In Scan mode, the current RPM is displayed on the main RPM display. The main RPM display will hold the last values until the tachometer automatically turns off.

### **Memory mode:**

The tachometer can store or recall 10 selectable MAX measurements, 10 selectable MIN measurements, 10 selectable AVG measurements and 10 selectable DATA measurements.

#### **To store a measurement:**

Press the MEAS button until the RPM reading displayed on the LCD display. Observe the reading and press the **M** button to record. The maximum, minimum, average and data during one shot measurement will be stored into a memory set. And the Data number will addition one.

#### **To recall the stored data from memory:**

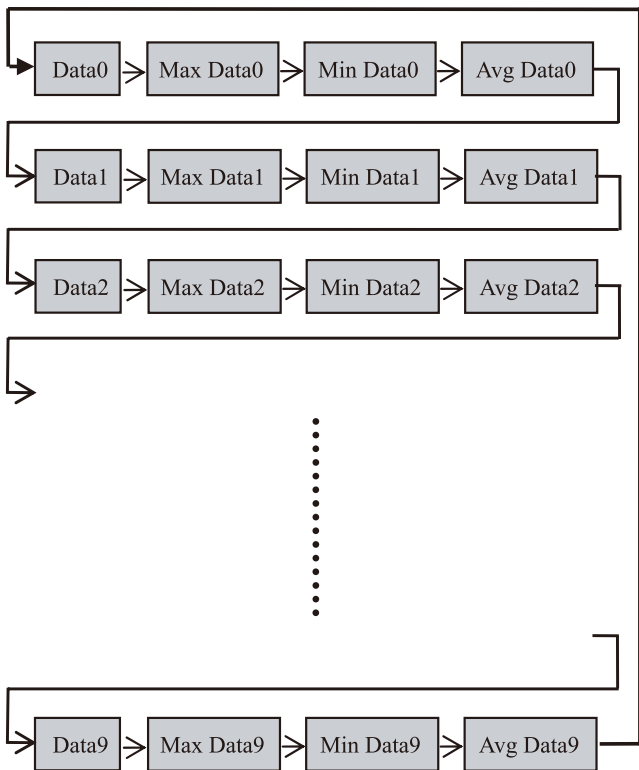
Use the M button to scroll and view the stored data point.

- a) See the flow chart 1 for a brief presentation of how to recall the stored data sequentially.
- b) See flow chart 2 for a brief presentation of how to quick access or leap the data set to the next.

Stored data points will appear in the RPM display. Empty memory locations will read "----". Maximum, minimum and average data will appear in the RPM display with MAX/MIN/AVG symbol.

## Chart 1

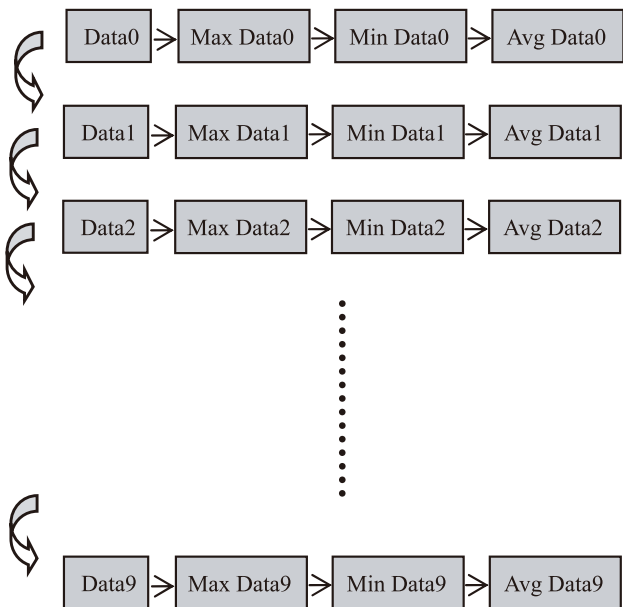
Press the “M” button once to next Storage



## Chart 2


Press the “M” button and hold for approx.


3 sec to leap to next Data Set





## Lock mode (Continuous measurement):

This tachometer may be electronically locked so that it continuously scans. To activate this feature, press the  button.

When active, the "hold" icon will not appear on the screen. You can cancel lock function by pressing  button again.

### ★ Remark

Measurement should avoid the blinking light source in the front or around the target, such as the fluorescent lamp which will cause the wrong reading.

## 5. Maintenance

### Cleaning the lens:

Blow loose particles from the lens using clean compressed air. Gently brush remaining debris away with a camel's hair brush. Carefully wipe the surface with a cotton swab moistened with water.

### NOTE:

DO NOT use solvents to clean the lens.

### Clean the housing:

Use soap and water on a damp sponge or soft cloth.

### NOTE:

Be careful not to allow any liquids or moisture to get inside the tachometer.





***SENTRY***<sup>®</sup>

**SENTRY OPTRONICS CORP.**

3F., No.122, Sec. 1, Sanmin Road, Banqiao Dist.,  
New Taipei City 220, Taiwan (R.O.C.)

TEL: 886-2-2956-8198

FAX: 886-2-2956-7662

<http://www.sentrytek.com.tw>

PA05-0000722-01

Ver. 02 17/Feb