

# CONTACT TYPE DIGITAL TACHOMETER INSTRUCTION MANUAL TM-7020

Thank you for purchasing our digital tachometer.  
Please read this instruction manual carefully before using to ensure the correct usage of this device.  
Please keep this instruction manual for future reference.

 **Attention**

Please note that misuse of this device may lead to injury to the user or damage to the device.

Customer Service

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## Safety Precautions

For safe usage of this device, observe all statements regarding precautions and warnings in this instruction manual.

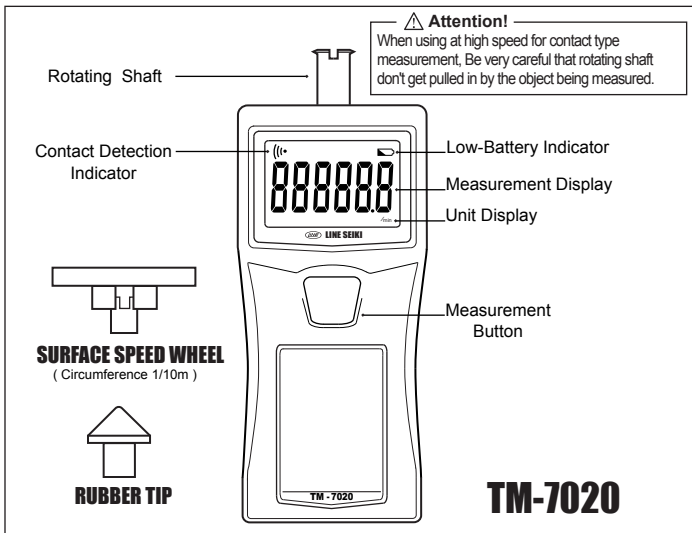
 **Attention**

- Do not use this device for any use other than as directed.
- Do not use this device for measuring anything except rotational, linear or surface speed.
- Do not use this device near machines that emit strong electromagnetic fields or objects that store static electricity.
- Do not drop this device or submit it to strong impact.
- Do not use or store the device where it can be exposed to direct sunlight, dust, high temperature and high humidity.
- Inspect the device before conducting measurements.
- See the battery case markings to ensure that the battery is properly installed.
- Remove the battery when the device will not be used for a long period of time.
- Do not attempt to disassemble or modify this device.
- Be careful that the portion being measured don't get dragged on.

## 1. Preparations

1. Installing the batteries
  - a. Press and slide down the battery cover at the back side of the main unit.
  - b. Install the four batteries (AAA 1.5V) noting the polarity as indicated inside.
  - c. After installing the batteries, replace and slide back the cover.

## 2. Components



## 3. Measurement

1. Taking Measurements
  - a. To start measuring, press the measurement button. The " (⊖ ) " mark will appear confirming that the sensor is working.
  - b. If the measurement is out of range, "-----" will appear.
2. Using the Rubber Tip
  - a. Use the rubber tip correctly by touching it perpendicular to the center of the axle of the rotating object under test.
  - b. To measure the peripheral speed of the items such as belts, replace the rubber tip with the surface speed wheel.
3. Using the Surface Speed Wheel
  - a. To attach the surface speed wheel, pull out the rubber tip with your hand and press the surface speed wheel axle so that the boss of the wheel axle is inserted into the slit of the adaptor axle. Pull the surface speed wheel gently to confirm that it does not come off.
  - b. When measuring the circumferential velocity, the surface speed wheel should touch the measured object so that the surface speed wheel turns in parallel with it.

**Note**  
If circumference 1/10m is used, 1.0 /min reading display is equivalent to an actual reading of 10 cm/min. If circumference 1/10y is used, 1.0 /min reading display is equivalent to an actual reading of 1/10 y/min.

## 4. Auto-Power Off

After the measurement button is released, the display is held for about 3 minutes then the unit automatically turns OFF if no further measurements are made during that time.

## 4. Battery Replacement

When " (⊖ ) " appears and starts to flash at the right portion of the screen, replace the batteries. Refer to 'Installing the Batteries' for the battery replacement procedure.

- **Warning!** When changing batteries, all previous data will be erased and settings will return to the default state.
- Replace all batteries with new ones.
- Be careful not to mix different types of batteries - i.e. manganese batteries and alkaline batteries together.

\* The instrument cannot measure accurately after low battery indicator is displayed. Please replace the battery immediately.

## 5. Storage

When storing this device, please avoid areas which are very humid, exposed to direct sunlight, high temperature, subject to vibration, dusty, dirty, saline, subject to organic gases.

● SPECIFICATIONS (MAIN UNIT)	
Measuring Range	1.0 ~ 6000.0 r/min
Resolution	0.1 r/min
Accuracy	±0.01% ±1 digit
Sampling Time	1.0~2.0 seconds
Display	Measurement Display ⊠ 6 digits, 7 segment LCD Low-battery ⊠ : (⊖ ) mark Contact Detection ⊠ : (⊖ ) mark Display Unit ⊠ : /min
Auto Power-off	After 3 minutes from last measurement
Data Hold Time	Until the next data is defined
Measuring Method	Contact type measurement : using rubber tip or surface speed wheel
Power Supply	4 pcs. of AAA alkaline battery
Battery Life ★	approx. 30 hours continuous measurement
Storage Temperature	-10~+60°C (Non-Freezing)
Operating Temperature	5~40°C (Non-Freezing)
Operating Humidity	35 ~ 85%RH (Non-Condensing)
Dimension / Weight	144(H) x 58(W) x 36(D)mm / 170g (Battery Included)

★ The battery life varies depending on battery type, storage conditions and operating environment. It is only for reference.

● MODEL		
<b>TM-7020</b>	TM-7020 Main Unit	Rubber Tip, 3 pcs. Surface Speed Wheel (1/10m), 1pc. AAA Alkaline Battery, 4 pcs. Instruction Manual
<b>TM-7020K</b>	TM-7020 Main Unit	Rubber Tip, 3 pcs. Surface Speed Wheel (1/10m), 1pc. AAA Alkaline Battery, 4 pcs. Instruction Manual + Carrying Case

● OPTIONS			
<b>ZTM004 - SET</b>	Rubber Tip, 3 pcs.	<b>ZM4052</b>	Surface Speed Wheel (1/10 m), 1pc.
<b>ZM4053</b>	Surface Speed Wheel (1/10 y), 1pc.	<b>C-7020</b>	Carrying Case

This device conforms to the following EMC regulations:  
EMI : EN61000-6-3 EMS : EN61000-6-1 **CE RoHS**

This manual is last revised on August. 16, 2010. 4TM7002A  
Specifications are subject to change without prior notice.  
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