Contact/Non-Contact Tachometer Instruction Manual



1.Product Introduction

Thank you for purchasing the Digital Tachometer.The Digital Tachometer is Contact and Non-Contact RPM (revolutions per minute)measuring instruments. Features include a 5 digits LCD,scan/hold function and auto power off(30 seconds).To measure,point the Laser spot or bring the contact probe to the object.Press the measuring trigger and hold on till the reading is stable and end of shot.

- 1-1 Features
- Measurement type:Rotation Speed(RPM) 、 Total revolutions(REV) 、 Surface Speed(I/M 、 M/M 、 Y/M、 F/M) and Length(M 、 YD 、 FT).
- Laser sighting.
- Contact measurements can be made with included contact adapters
- 5 digital microprocessor-controlled LCD display.
- Can store 10 sets of data, each group of data includes a MAX measurement, a MIN measurement, a AVG measurement.
- Auto back light

• Ultra low power consumption in shutdown mode.

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.
- Do not use an extension shaft as the adapters may come off of the shaft and cause damage or injury.
- If operating arrangements are used or pracedures carried out other than those described here in these

instructions, this can lead to dangerous exposure to radiation.

- 2-3 Symbols
- **(E** Indicates CE conformity

The device may not be disposed of with the trash.It Promotes the reuse 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,

3.Specification

Range of Non-Contact	7.0-99,999(RPM)
Range of Contact	7.0-25,000(rpm)
Range of Surface Speed	0.7-25,00.0 M/M (m/min)
	0.7-2734.0 Y/M (yard/min)
	23.6-98425 I/M (inch/min)
	2.0-8202.1 F/M (fee/min)
Lengh(cantact)	0.1-9999.9 M (m)
	0.1-10936 YD (yard)
	0.3-32808 FT (feet)
Total number of revolutions	1-99999(REV)
Accuracy	7.0-5999.9 RPM:±0.01%and±1digit
	5999.9-99999RPM:±0.05% and±1 digit
	Surface Speed,Length0.5% and ±1 digit
Detection	Laser Diode
Resolution	7.0-9999.9RPM:0.1RPM
	10000-99999RPM:1RPM
Response Time	1 second
Response Time Operating Temp	1 second 0 to 50°C(32 to 122°F), 10 to 90%RH
Response Time Operating Temp Auto power off	1 second 0 to 50°C(32 to 122°F), 10 to 90%RH Automatically after approx.30s
Response Time Operating Temp Auto power off Max/Min/Avg	1 second 0 to 50°C(32 to 122°F), 10 to 90%RH Automatically after approx.30s Yes
Response Time Operating Temp Auto power off Max/Min/Avg Memory	1 second 0 to 50°C(32 to 122°F), 10 to 90%RH Automatically after approx.30s Yes 40points
Response Time Operating Temp Auto power off Max/Min/Avg Memory Battery Type	1 second 0 to 50°C(32 to 122°F), 10 to 90%RH Automatically after approx.30s Yes 40points 4×1.5V AA Size Battery or 6V direct
Response TimeOperating TempAuto power offMax/Min/AvgMemoryBattery Type	1 second 0 to 50°C(32 to 122°F), 10 to 90%RH Automatically after approx.30s Yes 40points 4×1.5V AA Size Battery or 6V direct current stable voltage power
Response Time Operating Temp Auto power off Max/Min/Avg Memory Battery Type Dimensions	1 second 0 to 50°C(32 to 122°F), 10 to 90%RH Automatically after approx.30s Yes 40points 4×1.5V AA Size Battery or 6V direct current stable voltage power 160×73×40mm(7.17"x1.93"x1.14)
Response Time Operating Temp Auto power off Max/Min/Avg Memory Battery Type Dimensions	1 second 0 to 50°C(32 to 122°F), 10 to 90%RH Automatically after approx.30s Yes 40points 4×1.5V AA Size Battery or 6V direct current stable voltage power 160×73×40mm(7.17''x1.93''x1.14) Include Contact Adapters
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Response Time Operating Temp Auto power off Max/Min/Avg Memory Battery Type Dimensions Weight Standard Accessories	1 second 0 to 50°C(32 to 122°F), 10 to 90%RH Automatically after approx.30s Yes 40points 4×1.5V AA Size Battery or 6V direct current stable voltage power 160×73×40mm(7.17"x1.93"x1.14) Include Contact Adapters 156g Approx(without battery), Contact adapter:50g 4×1.5V AA Size Battery,Instruction
Response Time Operating Temp Auto power off Max/Min/Avg Memory Battery Type Dimensions Weight Standard Accessories	1 second 0 to 50°C(32 to 122°F), 10 to 90%RH Automatically after approx.30s Yes 40points 4×1.5V AA Size Battery or 6V direct current stable voltage power 160×73×40mm(7.17"x1.93"x1.14) Include Contact Adapters 156g Approx(without battery), Contact adapter:50g 4×1.5V AA Size Battery,Instruction manual,Cone adapter,Funnel
Response Time Operating Temp Auto power off Max/Min/Avg Memory Battery Type Dimensions Weight Standard Accessories	1 second 0 to 50°C(32 to 122°F), 10 to 90%RH Automatically after approx.30s Yes 40points 4×1.5V AA Size Battery or 6V direct current stable voltage power 160×73×40mm(7.17"x1.93"x1.14) Include Contact Adapters 156g Approx(without battery), Contact adapter:50g 4×1.5V AA Size Battery,Instruction manual,Cone adapter,Funnel adapter,Contact adapter,Master
Response TimeOperating TempAuto power offMax/Min/AvgMemoryBattery TypeDimensionsWeightStandard Accessories	1 second 0 to 50°C(32 to 122°F), 10 to 90%RH Automatically after approx.30s Yes 40points 4×1.5V AA Size Battery or 6V direct current stable voltage power 160×73×40mm(7.17"x1.93"x1.14) Include Contact Adapters 156g Approx(without battery), Contact adapter:50g 4×1.5V AA Size Battery,Instruction manual,Cone adapter,Funnel adapter,Contact adapter,Master Wheel(10cm),Reflective tape length

4.Operation 4-1 Quick Start

A.Remove the screws of the battery cabinet by a screwdriver. Slide the battery cover away from the Instrument and install the batteries into the case .

B.**Non-Contact:**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.

Contact:Attach the contact adapter to the tachometer(Do not over tighten!).Select to need the adapter and slides it onto the shaft of the contact adapter.Align the adapter with the alignment pin on the shaft of the contact adapter.

C.Hold the tachometer in your hand.

D.Press the MEAS button.Point the laser spot at the object(the reflective tape)or bring the contact probe to the object.Then read the measurement on the LCD display.

5



4-3 Display



a. Scan:Press the measuring button, the data will update and "SCAN" will show.

b. Hold:Release the measuring button,the data will freeze and "Hold" will appear.

c. Unit display:Displays measuring units.

d. Low battery display: When the battery current is weak , Will show.

e. Main display:5 digit LCD displays measurement readings.

f. Max/Min/Avg display:Displays minimum,maximum and average value.

g. Data:Displays the number of data storage.

c.

4-4 Function Descriptions

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

Memory mode:

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

To store a measurement:

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

1.See the flow chart 1 for a brief presentation of how to recall the stored data sequentially.

2.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 main display.Empty Memory locations will read"—".Maximum,minimum and average data will appear in the RPM,rPm,I/M,M/M,Y/M and F/M 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. 3sec to leap to next Data Set.



Contact and Non-Contact Measurement Mode Switch:

The functions are separated into two group of measurement. One is the rate measurement which is shown on the left side of the following flow chart. The other is the revolution and length measurements which are shown on the right side of the following flow chart. The user can press the "U" button once to change from

RPM,rPm....,to the next sequentially.

Press the "U"button and hold for approx.3sec to leap to next group.



- RPM:Non-Contact revolutions per minute measurements.
- rPm:Contact revolutions per minute measurements.
- I/M:Contact lnch per minute measurements.
- M/M:Contact Meter per minute measurements.
- Y/M:Contact Yard per minute measurements.
- F/M:Contact Feet per minute measurements.
- REV:Revolution measurements.
- M:Length(Using the master 10cm circumference wheel.)measurements in the unit of meter.
- Y D:Length(Using the master 10cm circumference wheel.)measurements in the unit of feet.

Remark

Non-contact 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.

