

**Model 461891**  
**Digital Contact Tachometer**

- Measures from 0.5 to 19999 rpm
- Min/Max Memory Recall
- Cone, funnel, surface attachments included
- Quartz crystal time base

**1. INTRODUCTION**

Congratulations on your purchase of Extech's Digital Tachometer. This professional meter, with proper care, will provide years of safe reliable service.

## 2. SPECIFICATIONS

### 2.1 General Specifications

Circuit	Custom one-chip LSI microprocessor circuit
Time base	Quartz crystal
Display	5 digit, 10 mm (0.4") LCD multi function display
Measurements	Rotation Speed 0.5 to 19,999 rpm Surface Speed 0.2 to 6560 ft/min. 0.05 to 1999.9 m/min
Memory	Last and Max/Min readings
Sampling Time	1 second
Operating Temperature/RH	32 °F to 122 °F (0 °C to 50 °C) / <80% RH
Power Supply	4 x 1.5V AA batteries
Power Consumption	Approx. 10 mA
Weight	0.62 lb (280 g) including batteries
Dimensions	8.2 x 2.8 x 1.5" (208 x 72 x 37 mm)
Accessories	Cone rpm adaptor, funnel rpm adaptor, surface speed test wheel, and carrying case

### 2.2 Range Specifications

	Range	Resolution	Accuracy
rpm	0.5 to 19,999 rpm	0.1 rpm (0.5 to 999.9 rpm) 1 rpm (over 1000 rpm)	$\pm (0.05\% + 1d)$  @23± 5°C
ft/min	0.2 to 6560 ft/min	0.1 ft/min (0.2 to 999.9 ft/min) 1 ft/min (over 1000 ft/min)	
m/min	0.05 to 1999.9 m/min	0.01 m/min (0.05 to 99.99 m/min) 0.1 m/min (over 100 m/min)	

### 3. FRONT PANEL DESCRIPTION

- 1 Shaft with cone adapter attached
- 2 LCD display
- 3 Measure button
- 4 Function select switch
- 5 Memory button
- 6 Funnel adapter attachment
- 7 Surface wheel adapter attachment



### 4. OPERATION

#### 4.1 RPM Measurement

- a) Slide the Function Switch to the "RPM" position.
- b) Install the appropriate RPM Adapter on the Shaft
- c) Press the Measure button while lightly pressing the RPM adapter against the central opening of a rotating shaft in proper alignment. Release the Measure button when the display stabilizes (about 1 to 2 seconds).

#### 4.2 Surface Speed Measurement

- a) Slide the Function Switch to "ft/min" or "m/min"
- b) Attach the Surface Speed Wheel to the Shaft
- c) Press the Measure button and hold the surface speed wheel against the device being measured. Release the Measure button when the display stabilizes.

#### 4.3 Memory Recall

The last value and last max and min values obtained before releasing the Measure button are automatically stored by the meter. These memorized values can be displayed by pressing the Memory button as described below:

- a) Press once and hold - the last value is displayed followed by "LA"
- b) Press again and hold - the maximum value is displayed followed by "UP"
- c) Press again and hold - the minimum value is displayed followed by "dn"

## 5. MAINTENANCE

**5.1 Battery Replacement:** When the low battery indication appears ("LO" on the display), slide the battery cover off of the rear of the instrument, replace batteries with four 1.5V AA batteries and replace the cover. Remove the batteries if the instrument will not be used for a long period of time.

**5.2 Cleaning:** Use only a dry cloth to clean the plastic case.

## 6. CALIBRATION / REPAIR SERVICES

Extech offers complete repair and calibration services for all of the products we sell. For periodic calibration, NIST certification or repair of any Extech product, call customer service for details on services available. Extech recommends that calibration be performed on an annual basis to insure calibration integrity.

## 7. WARRANTY

EXTECH INSTRUMENTS CORPORATION warrants this instrument to be free of defects in parts and workmanship for one year from date of shipment (a six month limited warranty applies on sensors and cables). If it should become necessary to return the instrument for service during or beyond the warranty period, contact the Customer Service Department at (781) 890-7440 ext. 210 for authorization. A Return Authorization (RA) number must be issued before any product is returned to Extech. The sender is responsible for shipping charges, freight, insurance and proper packaging to prevent damage in transit. This warranty does not apply to defects resulting from action of the user such as misuse, improper wiring, operation outside of specification, improper maintenance or repair, or unauthorized modification. Extech specifically disclaims any implied warranties or merchantability or fitness for a specific purpose and will not be liable for any direct, indirect, incidental or consequential damages. Extech's total liability is limited to repair or replacement of the product. The warranty set forth above is inclusive and no other warranty, whether written or oral, is expressed or implied.

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### **Tech Support Hotlines**

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