

User's Guide



MultiMeter Tachometer Adapter

Model 461900

- RPM Measurements to 19, 990
- Connects to any standard DMM
- Portable, Battery Operated
- Up to 12" measurement distances



Introduction

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

Specifications

Measurement Range	Range A: 100 to 999 RPM; Range B: 1000 to 9990
Resolution	1 or 10 RPM depending upon range
Adapter Output	0.1mVDC per 1 RPM in Range A; 10 RPM in Range B
Accuracy	$\pm (1.2\% + 2 \text{ digits})$
Detection distance	2 to 6" (50 to 150mm); 12" (300mm) distances possible with low ambient light
Power Supply	Four 1.5V 'AA' batteries (UM-3 or equivalent)
Dimensions/Weight	6.7x2.8x1.5" (170x72x37mm); 0.55 lbs. (250g)

Description (see front cover diagram)

1. Tachometer Light Source
2. Status LEDs for Battery and Target
3. Range Select Switch
4. Measure key
5. Adapter-to-DMM cable leads

Measurements

1. Connect the Adapter-to-DMM cable to the DMM as follows: RED lead to the '+' Terminal and BLACK lead to the '-' terminal.
2. Set the DMM to a dc mV range.
3. Affix a small piece (approx. 0.5") of supplied reflective tape to the object under test.
4. Align the Photo-Tachometer light source with the reflective tape mark on the moving object.
5. Select Range A or Range B with the Range Switch (Start with B if range unknown).
6. Press the Measure Button and read the RPM measurement on the DMM display.
7. The TARGET LED Status Indicator lights up on the front of the Adapter when the light source beam has been broken by the object under test.

NOTE: To obtain better accuracy for low RPM measurements (less than 50 RPM) use more than one piece of reflective tape. Divide the meter reading by the number of reflective tape pieces for accurate measurement data.

Maintenance

Battery Replacement

The low battery status LED lights up when it is nearing the time to replace the four 1.5V 'AA' batteries. Reliable readings can still be obtained, however, for several hours after the first appearance of the low battery indicator. To replace the batteries:

- a) Remove the battery compartment cover on the rear of the meter.
- b) Replace the batteries and reinstall the compartment cover

Cleaning

Caution: Use only a dry cloth to clean the plastic case.

Calibration and 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 ensure calibration integrity.

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 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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