Dawson DAM110A

Digital Contact Tachometer



Table of Contents

LIMITED WARRANTY AND LIMITATION OF			
LIABILITY	3		
Out of the Box	4		
Accessories:	4		
Safety Information:	4		
Certifications	6		
INTRODUCTION	6		
Overview	6		
Figures and Components	7		
Buttons and Components	7		
Button description	9		
Display Description	10		
USING THE METER	11		

	Select Idler Wheel Size	12
	Rotation Speed Measurement	12
	Speed Measurement	13
	Maximum/Minimum	14
	Saving Data	15
	Read/ Recall Data	15
SP	ECIFICATIONS	16
	General Specification	16
	Operating environment	16
	Technical Parameters	17
M	AINTENANCE AND REPAIR	18
	Repair	18
	Replacing Batteries	19
cc	ONTACT DAWSON	19

LIMITED WARRANTY AND LIMITATION OF LIABILITY

This instrument from Dawson Tools Inc. will be free from defects in workmanship and material for three years from the date of original purchase. This warranty does not cover defects resulting from damage caused by the user such as drops, neglect, misuse, unauthorized alteration, usage outside of specified conditions, contamination, or improper repair/maintenance. To receive service on the instrument if it becomes necessary during the warranty period, contact your nearest Dawson authorized service center at (800) 898-6991 or visit www.DawsonTools.com to obtain a return authorization (within the US only). A return authorization is necessary before returning any instrument to Dawson; no service will be provided without a return authorization. The user is responsible for properly packing the unit and charges such as shipping, freight and insurance charges. The extent of Dawson's liability is limited solely to the repair/replacement of the instrument. The above warranty in its entirety is inclusive and no other warranties, written or oral, are expressed or implied.

Out of the Box

Check the Meter and accessories thoroughly before using the Meter. Contact your local distributor if the Meter or any components are damaged or malfunction.

Accessories:

•	6 in. idler wheel	1pc
•	0.1m idler wheel	1pc
•	Concave touch tip	1pc
•	Protruding touch tip	1pc
•	Extension rod	1pc
•	User's Manual	1pc
•	1.5V AAA Battery	4pcs
•	Soft Case	1pc

Safety Information

⚠ WARNING

TO REDUCE THE RISK OF FIRE, ELECTRICAL SHOCK, PRODUCT DAMAGE OR PERSONAL INJURY, PLEASE FOLLOW THE SAFETY INSTRUCTIONS DESCRIBED IN THE USER'S MANUAL BEFORE USING THE METER.

△ WARNING

TO ENSURE SAFE OPERATION AND LIFE OF THE METER, DO NOT PLACE THE METER IN ANY ENVIRONMENT WITH HIGH PRESSURE, HIGH TEMPERATURE, DUST, EXPLOSIVE GAS OR VAPOR.

- Avoid shaking, dropping or any kind of impacts when using or transporting the Meter.
- To avoid possible electric shock or personal injury, repairs or servicing not covered in this manual should be performed only by qualified personnel.
- Avoid direct exposure to sunlight to ensure extended life of the Meter.
- Do not place Meter in a strong magnetic field; this may cause false readings.
- Use only the batteries indicated in the Technical Spec.
- Avoid exposing batteries to humidity. Replace batteries as soon as the low battery indicator appears.

- Please keep the original packing for future shipping purposes (ex. Calibration)
- After opening the box, check for any damage during delivery.

Certification:

CE The Meter is compiled to EMC requirements.

Introduction

Overview

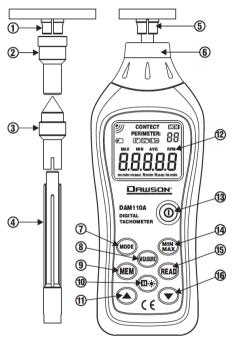
The DAM110A is a contact-type digital tachometer with stable performance, high reliability and a high safety standard. This Meter uses a compact high-speed integrated chip capable of measuring rotation speeds from 50RPM to 19999RPM. The backlit LCD allows measurements and readings in low light.

Figures and Components

Buttons and Components

- (1) 6 In. Idler Wheel
- (2) Concave Touch Tip
- (3) Protruding Touch Tip
- (4) Extension Rod
- (5) 0.1 M. Idler Wheel
- (6) Measurement Bearing
- (7) Mode Switch Button
- (8) Measurement Button
- (9) Data Storage Button
- (10) Backlight and Hold Button
- (11) Plus Button
- (12) LCD
- (13) Power Button
- (14) Maximum and Minimum Button
- (15) Data Storage Read Button
- (16) Minus Button

Front Panel



-

Button Description

Power On/Off Press the "①" key to turn on/off

the meter

MIN/MAX Switch measurement mode

between maximum (MAX) and

minimum (MIN)

MODE Switch measurement between

m/min, m/sec, ft/min, ft/sec,

in/min and RPM

MEASURE Press and hold the key to read the

current measurement

MEM Save current measurement.

READ Read the data saved by "MEM"

□Press to turn on/off the Hold

function. Press 3 seconds to turn

on/off the backlight

▲ Plus button: increase the number

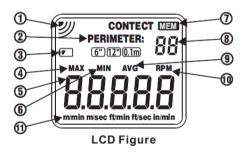
when reading or to saving data

Minus button: decrease the

number when reading or saving

data

Display Description



- (1) Signal Symbol
- (2) Idler Wheel Size
- (3) Low Battery Symbol
- (4) Maximum Measurement Mode
- (5) Rotation Speed Reading
- (6) Minimum Measurement Mode
- (7) Memory Symbol
- (8) Storage Number in Memory
- (9) Average Measurement Value
- (10) Rotation Speed Unit
- (11) Speed Measurement Unit

Using the Meter

↑WARNING:

KEEP A SAFE DISTANCE FROM HIGH-SPEED ROTATING OBJECTS TO AVOID ANY MECHANICAL DAMAGE OR PERSONAL INJURY.

Select Idler Wheel Size

Hold the "MODE" button then press "①" button to turn on the meter and enter idler wheel selection mode.



The default selection is the 0.1m idler wheel for m/min and m/sec measurement. For ft/min, ft/sec and in/min measurements, press "▲ " or " ▼ " to select 6" or 12" idler wheel. Once desired measurement mode is selected, press "MAX/MIN" to confirm the selection.

Rotation Speed Measurement

- Install extension rod and touch tip to the meter.
- Make sure the object to be measured is at a stable rotating speed.

- After selecting the idler wheel, "RPM" appears above the numbers. Move the edge of touch tip to contact the object smoothly.
- Hold the "MEASURE" button and read testing result on LCD screen. Signal symbol will blink during measurement.

NOTE:

- "MEASURE" button must be held down in order for the meter to read the rotation speed
- Remove the extension rod if the reading above 10000 RPM as the vibration of the extension rod will lead to inaccurate reading under high RPM.

Speed Measurement

- After selecting the idler wheel, press "MODE" button to select the desired measuring units; m/min, m/sec, ft/min, ft/sec or in/min.
- 2. Install the selected idler wheel.
- Move the edge of touch tip to contact the moving object smoothly.

 Press and hold the "MEASURE" button and read the testing result from the LCD screen.
 Signal symbol will blink during measurement.

NOTE:

"MEASURE" button must be held down in order for the meter to read the speed

Maximum/Minimum

- To show the maximum measurement, press "MAX/MIN" button till "MAX" is displayed.
- To show the minimum measurement, press "MAX/MIN" button till "MIN" is displayed.
- To show current readings, press "MAX/MIN" button till the LCD does not display "MAX" or "MIN".

NOTE:

"MAX/MIN" cannot be used in real time; no current data will be shown or updated when "MAX/MIN" is used.

Saving Data

- Press "MEM" button and "MEM" will appear on the upper right corner of LCD screen; default storage number is "00". Press "▲" or " ▼ " to select storage number.
- 2. Press " * " to save the reading in the specified storage number; value will flash once. The current rotation speed value is stored in the selected storage number.
- 3. Press "READ" to exit data saving.

Read/ Recall Data

- 1. Press "READ" to recall the saved data.
- Press " ▲ " or " ▼ " to select the storage number; stored value will be displayed.
- 3. Press "MEM" to exit.

Specifications

General Specification

- Rotation speeds from 50 to 19999RPM;
 display will read 0.00 if below 50 RPM
- Auto power off: 30 sec
- Low battery symbol " is displayed if batteries are lower than 4.5V
- Power supply: 4 × 1.5V AAA batteries
- Dimension(LxWxH): 7.5" x 2.4" x 1.1" (155 x 60 x 27 mm)
- Weight: 0.3lb (120gm)

Operating Environment

- Elevation < 6560 ft (2000 m)
- Relative humidity (RH) ≤ 80%RH
- Operating temperature: 32° 104°F (0 40°C)

Technical Parameters

Measuring Scope	Accuracy*	Resolutions
50~ 99.99 RPM	±(0.03%±2d)	0.01RPM
100~ 9999.9RPM		0.1RPM
10000~ 19999 RPM		1RPM

^{*}All accuracies indicated in this document are stated in laboratory conditions and can be guaranteed for measurements carried out in the same conditions, or with required conditions.

Maintenance and Repair

Repair

Please follow these steps closely if the Meter is not functioning properly:

- Check batteries; replace with new batteries if low battery indicator " appears.
- Follow User's Manual to confirm all procedures.
- Before sending Meter back for repair, include a description of the problems encountered.
 Remove batteries and pack Meter well to avoid damage in delivery, Dawson does not cover damage due to delivery.
- Repair or service not covered in this manual should be performed only by the authorized service center or qualified personnel.

Replacing Batteries

Follow these steps to replace batteries:

- Turn off the Meter.
- Loosen the battery compartment door and remove the door from the case bottom.
- Remove batteries and replace with new batteries.
- Re-attach the battery compartment door to the case bottom and tighten screw.

Contact Dawson

Dawson Tools, Inc. 1142 S. Diamond Bar Blvd., #858 Diamond Bar, CA 91765 Phone: (310) 728-6220

www.DawsonTools.com



(Back Page)

Features

- LCD Display
- Auto Ranging
- Auto Power Off
- MAX/MIN/AVG Display
- Back Light
- Data Hold
- Low Battery Indicator