9.0 SPECIFICATIONS

Measuring Ranges

RPM	1.00 – 99,999 rpm (non-contact)
Resolution	.01 from 0 –100 .1 from 100 – 1,000 1 from 1000 – 99,999
Accuracy	± 0.02% of reading or ±1 digit
Display	5-Digit LCD, 10mm high
Decimal Point	Automatic
Memory System	Maximum, minimum, last reading and average (retained in memory for the life of batteries)
Measurement System	
Non-Contact	Visible LED light beam
Engineering units	
RPM	RPM
Sensing Distance	Up to 24 inches (60 *cm*)
Display Update Time	0.5 seconds
Auto Power Off	After 30 seconds of non-use (minimum, maximum, last and average reading retained in memory)
Battery Life	30 hours continuous use, approx.
Battery Type	2 AA (1.5V) or rechargeable
Weight	5 ounces (*140 grams*)
Housing Material	ABS Plastic
Operating Temperature	32 to 122° F (*0 to 50° C*)
Storage Temperature	– 4 to 150° F (*–20 to 70° C*)
Accessories Included	Reflective tape, 2 AA batteries and operating instructions in a foam-fitted, hard-plastic carrying case, NIST-traceable calibration certificate
Warranty	5 years

10.0 SPARE PARTS

P/N: CDT-TAPE 10 strips of reflective tape—1/2" x 4" *(12 x 100mm)*


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1.0 INTRODUCTION

The CDT-1000HD Digital Tachometer accurately measures RPM without contacting the rotating element or object. A small piece of reflective tape (supplied) is applied to the rotating element (shaft, wheel, etc.) The CDT-1000HD utilizes a visible LED light beam to accurately measure the RPM from a distance of up to 24 inches (60 cm) away from the "target."

The CDT-1000HD is supplied with a built-in memory system which permits the user to recall the maximum, minimum and last reading to the display for viewing. It is powered by two (2) AA batteries (supplied).

1.1 Applications

Non-Contact RPM — Used when contact measurement is not possible due to access space restrictions, safety concerns, etc.
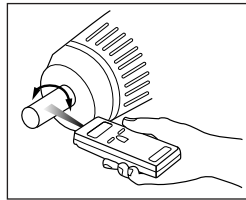
2.0 SAFETY PRECAUTIONS

All operators should wear safety goggles when using this or any other tachometer. Failure to do so could result in serious injury!

8.0 MEMORY SYSTEM

The CDT-1000HD is supplied with a built-in memory system which stores the *last* measurement, *maximum* measurement, *minimum* measurement, and the *average* measurement which occurred during a measuring period.
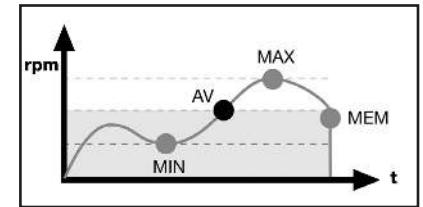

A measuring period is the interval of time while the Measure key is depressed. The stored values are retained in memory even when the power turns off (auto power off). To recall the stored values after auto power off:

1. Press the Measure key to turn the power on
2. Press the MEM key to recall the desired value

MEM   The Memory key accesses the CDT-1000HD's built-in memory. Each time the MEM key is pressed the values stored in memory will be recalled to the display in the sequence listed below. The appropriate memory indicator will be shown together with the recalled value on the display.

Note: When the batteries are removed, the values stored in memory will be lost.
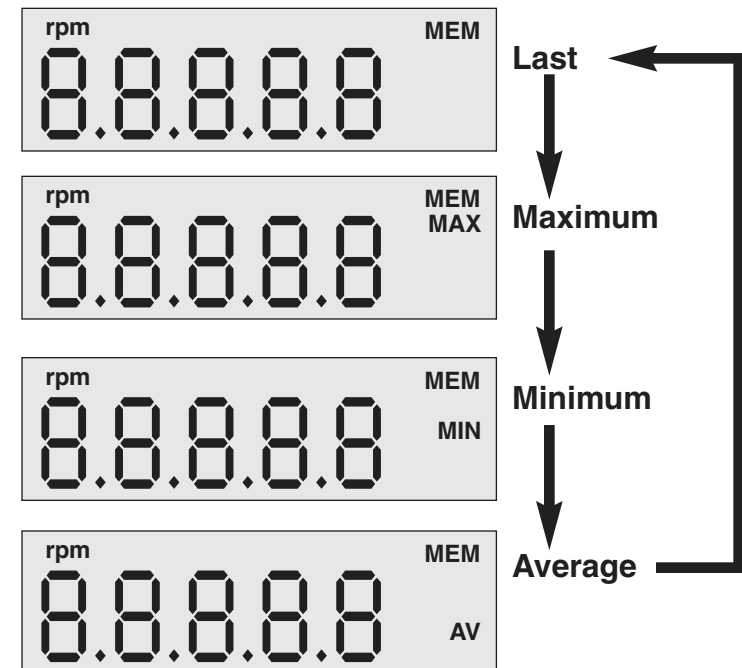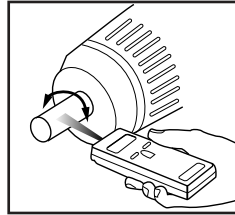
7.0 MEASURING RPM

1. Attach a piece of reflective tape to the rotating element (shaft, pulley, etc.).

Reflective Tape
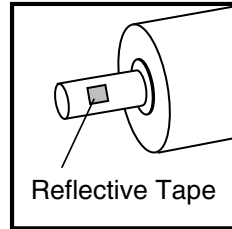
2. Aim the CDT-1000HD at the target using the red visible light beam for alignment assistance.

3. Press and hold the Measure key to begin taking measurements. The "On-Target" indicator on the LCD will flash on and off if the instrument is properly aimed at the target (reflective tape).

4. Release the Measure key prior to removing the instrument from the target. The last reading will be retained on the LCD display.

Hints for Non-Contact Measurements

1. The non-reflective area should be larger than the reflective area.

2. If the rotating element is highly reflective, cover it with black tape or paint to improve the contrast between the reflective tape and the surface of the rotating element.

3.0 CONTENTS OF COMPLETE OUTFIT

The CDT-1000HD is supplied with the following accessories in a foam-fitted, carrying case:

1. Meter with molded rubber shell
2. Reflective Tape (10 strips)
3. Two AA Batteries
4. NIST-traceable Calibrations Certificate (not shown)
5. Instruction Manual (not shown)

4.0 OVERVIEW OF CDT-1000HD


4.1 LCD Display

1. *On-Target Indicator* — Indicates that the unit is lined up correctly for an accurate measurement
2. *Memory Indicators* — Indicates which measurement stored in memory (last, max., min., avg) is displayed.
3. *Low Battery Indicator* — Illuminates to indicate that batteries need replacement.

4.2 Front Panel Key Functions

4. MEM: Acesses the memory. Each time the key is pressed the values stored in memory will be recalled to the display.

5. MODE: *Not functional* in this model.

6. MEASURE: Performs the following functions:
   • Turns on the power
   • Starts and stops the measuring period
   • Exits from the memory mode

5.0 INSTALLING BATTERIES

1. Turn the gauge over and locate the battery compartment. You do not have to remove the rubber shell.

2. Open the battery compartment by pulling down on the tab located at the top of the battery cover and remove the cover. Insert two AA batteries following the orientation engraved on the inside of the battery compartment.

3. Replace the battery cover by inserting the two tabs located on the bottom edge of the cover into the matching slots in the housing.

4. Push the cover closed until the tab at the top of the battery cover "clicks" into position.

5. Replace the cut-out section of the protective rubber shell.
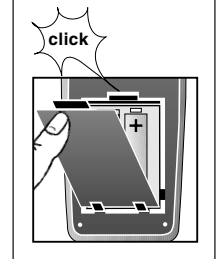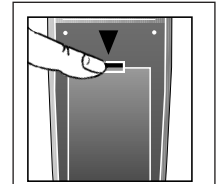
6.0 Removing Protective Rubber Shell

The gauge is supplied with a durable rubber shell that provides an added measure of physical and environmental protection in harsh applications.

To remove the shell, follow the procedure outlined below:

1. Using your thumbs, slide the rubber shell up and off of one corner of the gauge. Repeat for the other corner

2. Pull the shell down until it is completely off the corners of the gauge, the pull the gauge forward and out of the shell.

3. Replace the shell by sliding the gauge bottom first into the large center opening, then, one at a time, slip the corners of the shell back over the gauge.

12.0 WARRANTY

ELECTROMATIC Equipment Co., Inc. (ELECTROMATIC) warrants to the original purchaser that this product is of merchantable quality and confirms in kind and quality with the descriptions and specifications thereof. Product failure or malfunction arising out of any defect in workmanship or material in the product existing at the time of delivery thereof which manifests itself within one year from the sale of such product, shall be remedied by repair or replacement of such product, at ELECTROMATIC's option, except where unauthorized repair, disassembly, tampering, abuse or misapplication has taken place, as determined by ELECTROMATIC. All returns for warranty or non-warranty repairs and/or replacement must be authorized by ELECTROMATIC, in advance, with all repacking and shipping expenses to the address below to be borne by the purchaser.

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CDT-1000HD
Non-Contact Tachometer

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INSTRUMENTS

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