

DIGITAL TACHOMETER OPERATION MANUAL



TABLE OF CONTENTS

1. FEATURES.....	1
2. SPECIFICATIONS.....	1
3. PHOTO TACHOMETER.....	5
4. CONTACT TACHOMETER.....	7
5. PHOTO/CONTACT TACHOMETER.....	9

CAUTION
BEAM OF LIGHT-DO NOT
STARE INTO EYE BEAM!

Detecting Distance: 50 to 500mm/2 to 20inch (photo)
Power:4×1.5V AA UM-3 Battery or 6V direct
current stable voltage power
Power consumption: approx. 50mA

2) MEMORY:

Memory call button operation A readout (the max. value, min. value, last value) obtained immediately before turning off the MEASURING BUTTON is automatically memorized. For example, please ret. following fig.1. That Memorized value can be displayed on the indicator by turn once depressing the memory button. The Symbol "UP" represents the Max. Value and "DN" the Min. Value, "LA" the Last Value.

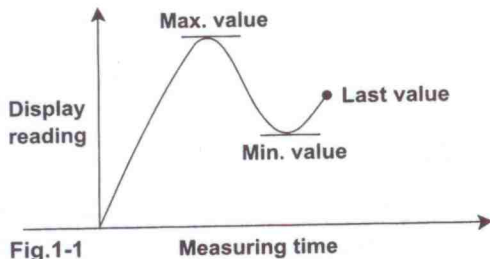


Fig.1-1

3) Data stored button operation:

(3-1) Display last value and for the fourth time press memory button, the tachometer will indicate whether to switch to another display mode. During display value changing from 20 to 1, it is switched if you release memory button that haven't change

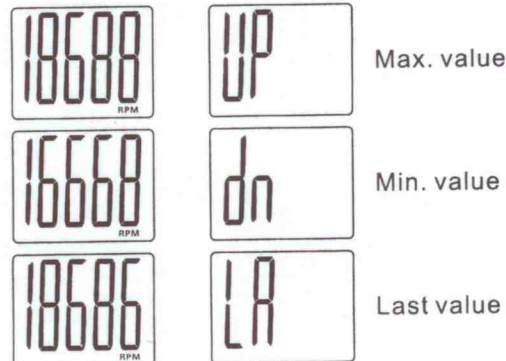


Fig.1-2

to max.value /min.Value / Last value will be displayed in turn by pressing memory button anytime.

(3-2) If the value changes from 20 to 1 (please ret. following fig. 2) and displaying "An**" (An is ab. Of anamnesis). The display is switched successfully. So the memory button is pressed, stored data will be displayed in turn. Display format is as fellow: the first is serial number of stored data and then display the concrete value. After all stored data is displayed (96s), the tachometer will automatically switch to display max. value/min.value/last value. (more difference of data value, less data stored)

eg.: the displaying is "An 88" when 88 s of measuring data is stored in one measuring (see fig. 3). The tachometer will display the stored data in turn by pressing the memory button. The first value is 978.6 RPM and the second 980.1

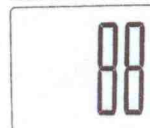
RPM, analogically the 88th value is 980.0 RPM (see fig. 4).



Fig. 2



Fig. 3



Ordinal number



Diagram data

Reminds: The contact line button don't stores max value/min value and measuring data but last value. All data will be canceled and the tachometer will start to measure and store data again if measuring button is pressed when looking over measured data.

4) Battery replacement:

(4-1) When it is necessary to replace the battery (battery voltage less than approx. 4.5V), will ap-

pear on the display.

(4-2) Slide the battery cover away from the instrument and remove the battery.

(4-3) Install the batteries into the case. Permanent damage to the circuit may result from incorrect installation.

5) Reminds:

(5-1) Reflective mark: cut and peel adhesive tape provided into approx. 12mm (0.5") squares and apply one square to each rotation shaft. The non-reflective area must always be greater than the reflective area. If the shaft is normally reflective, it must be covered with black tape or black paint before attaching reflective tape. Shaft surface must be clean and smooth before applying reflective tape.

(5-2) Very low RPM measurement: as it is easy to get high resolution. If measuring the very low RPM values, suggest user to attach more "REFLECTIVE MARKS" averagely. Then divide the reading shown by the number of "REFLECTIVE MARKS" to get the real RPM.

(5-3) Contact tachometer parts include large taper, rubberpart is suitable to low speed and but the small high speed.

(5-4) If the instrument is not to be used for any extended period, remove batteries.

3. PHOTO TACHOMETER

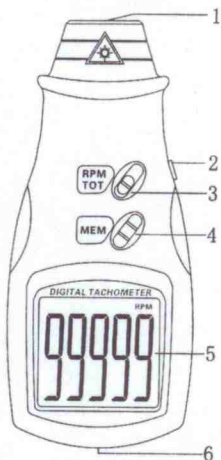
Test Range: 2.5 to 99,999 RPM (r/min)

Resolution: 0.1 RPM (2.5 to 999.9 RPM)

1 RPM (over 1000 RPM)

Total Test Range: 1 to 99,999

FRONT PANEL DESCRIPTIONS



- 1, Signal light beam
- 2, Measure Button
- 3, Function Switch
- 4, Memory Button
- 5, Display
- 6, Battery Cover

MEASURING PROCEDURE:

(1) PHOTO RPM MEASUREMENT

A. Apply a reflective mark to the object being measured. Slide the function switch to "RPM" position.

B. Depress the MEASURE BUTTON and align The visible light beam with the applied target. Verify that the MONITOR INDICATOR lights when the target aligns with the beam.

(2) TOTAL MEASUREMENT

A. Apply a reflective mark to the object being measured. Slide the function switch to "TOT" position.

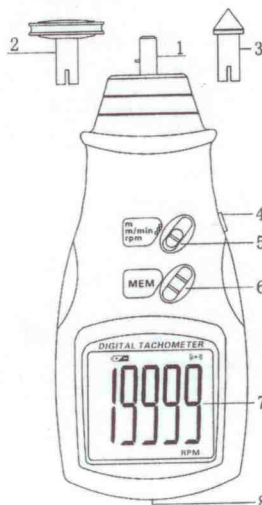
B. Install the batteries and press measuring button, then you see light beam in line with the target, start measuring. The value will add 1 as the object rotate a circle or passed one reflective mark, herein, the total value will stored in the meter until loosen the button.

C. It will display total value as you press "MEM" button.

Accessories: Carrying case1 pc.
Reflecting tape marks (600mm)
Operation manual.....1 pc.

4. CONTACT TACHOMETER

FRONT PANEL DESCRIPTIONS



- 1. Shaft
- 2. Surface speed wheel
- 3. RPM adapter
- 4. Measure button
- 5. Function switch
- 6. Memory call button
- 7. Display
- 8. Battery cover

Test Range:

CONTACT TACH(RPM): 0.5 to 19,999RPM

SURFACE SPEED(m/min):0.05 to 1999.9m/min

SURFACE LONG(m):0.05 to 99,999m

Resolution:

CONTACT TACH: 0.1RPM (0.5 to 999.9RPM)

1RPM (over 1000RPM)

SURFACE SPEED: 0.01m/min (0.05 to 99.99m/min)

0.1m/min (over 100m/min)

SURFACE LONG: 0.02m (0.05 to 99,999m)

Dimension: 195×76×40mm

MEASURING PROCEDURE:

(1) CONTACT TACH MEASUREMENT

A. Slide the FUNCTION SWITCH to “ rpm ” position. Install the proper RPM ADAPTER on the SHAFT.

B. Depress the MEASURING BUTTON and lightly pressing the RPM ADAPTER against the center hole of rotating shaft. Be certain to keep alignment straight. Release the MEASURING BUTTON when the display reading stabilizes.

(2) SURFACE SPEED MEASUREMENT

A. Slide the FUNCTION SWITCH to “ m/min ”, install the SURFACE SPEED WHEEL on the SHAFT instead of the RPM ADAPTER.

B. Depress the MEASURING BUTTON and simply attaching the SURFACE SPEED WHEEL to the detector. Release the MEASURING BUTTON when the display reading stabilizes.

(3) SURFACE LONG MEASUREMENT

Slide the FUNCTION SWITCH to “ m ” and use

~ 8 ~

The corresponding part. The other same as (2).

Note: Because of the difference between the girth of outer surface and inner flute of line speed sensor. For contact line speed or length measurement. The displaying result is correct when outer surface of the sensor contacts with the measured object contact and but when inner flute of the sensor and the measured object, that the reading multiply 0.9 is the real result (eg.: measure wire ,cable and rope etc.)

Accessories:

Carrying case	1 pc
Operation manual	1 pc
Contact speed measurement fitting	1 pc
Contact rotational speed measurement fitting	3 pcs

5. PHOTO TACH/CONTACT TACH

Test Range:

PHOTO TACH 2.5 to 99,999RPM

CONTACT TACH 0.5 to 19,999RPM

SURFACE SPEED 0.05 to 1999.9m/min

Resolution:

PHOTO TACH: 0.1RPM (2.5 to 999.9 RPM)

1RPM (over 1000 RPM)

CONTACT TACH: 0.1RPM (0.5 to 999.9 RPM)

1RPM (over 1000 RPM)

SURFACE SPEED:

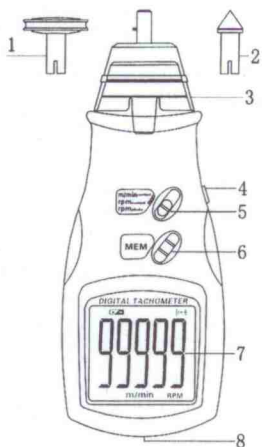
0.01m/min (0.05 to 99.99m/min)

0.1m/min (over 100m/min)

Dimension: 205×76×40mm

~ 9 ~

FRONT PANEL DESCRIPTIONS



1. Surface speed wheel
2. RPM adapter
3. Contact measuring device
4. Measure button
5. Function switch
6. Memory call button
7. Display
8. Battery cover

MEASURING PROCEDURE:

(1) PHOTO MEASUREMENT

A. Apply a reflective mark to the object being measured. Slide the function switch to “ rpm photo ” position.

B. Depress the MEASURE BUTTON and align The visible light beam with the applied target. Verify that the MONITOR INDICATOR lights when the target aligns with the beam.

(2) CONTACT TACH MEASUREMENT

A. Slide the FUNCTION SWITCH to “rpm contact” position. Install the proper RPM ADAPTER on the SHAFT.

~10~

B. Depress the MEASURING BUTTON and lightly pressing the RPM ADAPTER against the center hole of rotating shaft. Be certain to keep alignment straight. Release the MEASURING BUTTON when the display reading stabilizes.

(3) SURFACE SPEED MEASUREMENT

A. Slide the FUNCTION SWITCH to “ m/min contact ” position. Install the SURFACE SPEED WHEEL on the shaft instead of the RPM ADAPTER.

B. Depress the MEASURING BUTTON and simply attaching the SURFACE SPEED WHEEL to the detector. Release the MEASURING BUTTON when the display reading stabilizes.

Note: Because of the difference between the girth of outer surface and inner flute of line speed sensor. For contact line speed or length measurement. The displaying result is correct when outer surface of the sensor contacts with the measured object contact and but when inner flute of the sensor and the measured object, that the reading multiply 0.9 is the real result (eg.: measure wire , cable and rope etc.)

Accessories:

Carrying case	1 pc
Operation manual	1 pc
Reflecting tape marks	600mm
Contact speed measurement fitting	1 pc
Contact rotational speed measurement fitting	3 pcs

~11~