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9224-213
CONTACT TACHOMETER
OPERATION MANUAL

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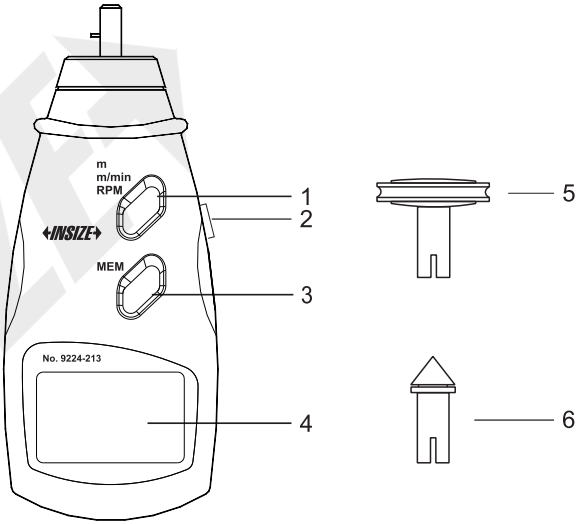
General introduction

- The tachometer uses microcomputer (CPU) technique, anti-jamming technique for contact measurement of rotation speed (RPM), surface speed (m/min), and contact length (m).
- Wide measuring range and high resolution.
- Large screen LCD display provides clear reading.
- White back light guarantee reading in any light environment.
- Automatically save Max, Min and last value, also save 96 set of continuous data. (The tachometer starts to store data after first reading)
- Low battery voltage indication.
- Surface speed wheel with groove to test surface speed or length of wire, cable, or rope conveniently.
- Smooth housing design, comfortable to hold and use.
- The instrument is delicate and rugged. It uses the durable, long-lasting components and a strong, light weight ABS plastic housing.

Panel description

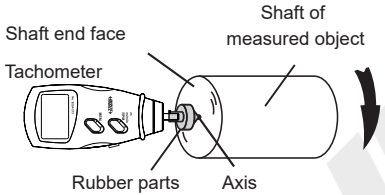


1. Function select switch
2. Measurement button
3. Memory button
4. LCD display
5. Surface speed wheel
6. Contact tacho part

Operation instructions

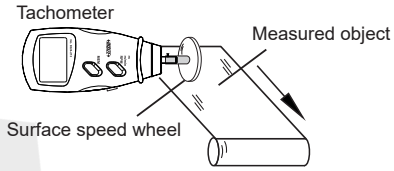
1. Measure RPM
   a. After install batteries, select function switch to RPM, and install contact tacho part.
   b. Bring rubber head in contact with test body, so it turns with the body at synchro-speed and coaxial rotation, as shown below.
   c. Hold measurement button to start measure, and release measurement button after display data is stabled, test result is automotive saved.

Schematic diagram of contact measurement speed



2. Measure surface speed (m/min)
   a. Select function switch to m/min, and install surface speed wheel.
   b. Bring surface speed wheel in contact with test body, so it turns with the body at synchro-speed, as shown below.
   c. Hold measurement button to start measure, and release measurement button after display data is stabled, test result is automotive saved

Schematic diagram of contact measurement surface speed



3. Measure contact length (m)
   a. Select function switch to m, and install surface speed wheel.
   b. Bring surface speed wheel in contact with test body, so it turns with the body at synchro-speed, as shown above.
   c. Hold measurement button to start measure, and release measurement button after display data is stabled, test result is automotive saved.

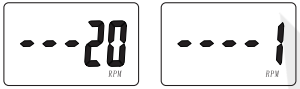
   Remark: Since surface speed wheel's outer and groove perimeters are different, real test result is 0.9 * display value when using groove for test, such as wire, cable, rope and linear materials.

Memory function

1.After measurement, release measurement button, data is saved but nothing is displayed on LCD. Press 'MEM' to display Max, Min, and last value. Each time

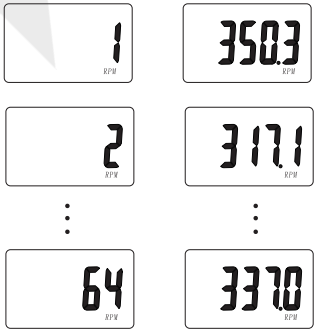
'MEM' is pressed, LCD display English symbol and value in turns. 'UP' is for Max, 'dn' for Min, and 'LA' for Last value, as below shown.

2. After display last value, press and hold 'MEM' button, meter is turned into a mode indicate whether to get a series of saved data, where display a count down from 20 to 1, as below shown.During this countdown, the meter still display Max, Min, and Last value if 'MEM' button is released before countdown to '1', otherwise will enter a mode to display series of data.



3. When countdown to '1', LCD display 'An *' (An is short for Anamnesis, * means the total amount of data that is saved). When '*' is zero, it mean there is not any data saved, as below shown.

Each time 'MEM' is pressed, queue number and saved value is displayed on LCD in turns, as below shown. After display all saved data (maximum 96),



meter will switch back to Max, Min, and Last value display (when measured values vary too big, the maximum sets of store data decrease). For example, 64 sets of data is saved during a measurement, it will display 'An 64' .

Remark: Contact length mode does not have Max, Min memory and data save function, only have shows the last test value. During memory mode, press measurement button anytime will lose all saved data and start new measurement and store data.

Specification

Measuring range	Rotary speed	0.5~19999RPM
	Line speed	0.05~500m/min
	Line length	0.05~99999m
Resolution	Rotary speed	0.1RPM (range 0.5~999.9RPM) 1RPM (range 1000~19999RPM)
	Line speed	0.01m/min (range 0.05~99.99m/min) 0.1m/min (range 100~500m/min)
	Line length	0.02m
Accuracy	Rotary speed	±(0.4%n+1d)RPM (n<300RPM) ±(0.05%n+1d)RPM (n≥300RPM) n is rotary speed, d is resolution
	Line speed	±(1%+1d)m/min d is resolution
	Line length	±(1%+1d)m d is resolution
Sampling time		0.8s (above 60RPM)
Operating temperature		0~40°C
Power supply		3×AA batteries
Dimension		171×71×35mm
Weight		162g

Battery Replacement

1. When battery voltage is too low, left side of LCD display ' + - ' symbol that indicate that battery replacement is needed.

2. Open battery cover and take out low voltage battery.

3. Enter new batteries as indicated.

Precautions

1. The Package comes with big cone, small cone and cylinder parts for rotation speed measurement. Big cone and cylinder rubber parts use for low RPM and small cone rubber part use for high RPM.

2. If meter is not going to use for a long time, please take out batteries to prevent leakage which damage the meter.