



TM-5210

Contact and Non-Contact Digital Tachometer



KEY FEATURES

- Contact and non-contact in one instrument
- 2 to 200,000 RPM, non-contact
- $\pm(0.05\% + 1 \text{ digit})$, quartz time base
- Laser sighting from 50 mm to 2500 mm
- Surface speed and length off the wheel
- Ten sets with maximum, minimum and average

Touch It, Or Point At It.

A handheld tachometer that takes the reading either way. Put a wheel or a cone tip on the shaft, or stand off and aim the laser at a strip of reflective tape. The same instrument, the same accuracy, whichever the machine allows.

Non-contact measurement runs from 2 to 200,000 RPM at a sighting distance of 50 mm to 2500 mm. One reflective mark passes the beam once per revolution, which is what lets a guarded, hot or otherwise unreachable shaft be read from a safe distance without stopping it.

In contact, the cone tip sits in the shaft centre for 2 to 20,000 RPM, and the surface wheel reads a belt, roller or web directly in metres, inches, feet or yards per minute. The same wheel totalises length, so a run of material can be measured off as it passes.

Accuracy is $\pm(0.05\% + 1 \text{ digit})$ with a quartz crystal time base, and a reading settles in half a second above 120 RPM. Ten measurement sets are held, each keeping the maximum, minimum and average alongside the reading itself.

IDEAL FOR

- Motor, pump and fan speed checks
- Belt, roller and conveyor surface speed
- Spindle and drive speed verification
- Guarded or unreachable rotating parts
- Laboratory and teaching measurement

MEASUREMENT RANGES

Range	Accuracy	Resolution	Notes
Rotation speed			
2 to 200,000 RPM	$\pm(0.05\% + 1 \text{ digit})$	0.001 RPM to 1 RPM	Non-contact, laser and reflective mark
2 to 20,000 RPM	$\pm(0.05\% + 1 \text{ digit})$	0.001 RPM to 1 RPM	Contact, cone tip or surface wheel
Counting and frequency			
1 to 200,000	—	1	Total revolutions counted
Frequency, Hz	$\pm(0.05\% + 1 \text{ digit})$	—	Contact or non-contact
Surface speed and length · contact, from the 10 cm circumference wheel			
m/min, in/min, ft/min, yd/min	—	—	Surface speed of a belt, roller or web
m, in, ft, yd	—	—	Length totalised from the wheel
Measuring conditions			
50 mm to 2500 mm	—	—	Sighting distance, non-contact
0.5 seconds	—	—	Sampling time above 120 RPM

Resolution steps with the range, finest at the bottom of the scale. Non-contact measurement counts one reflective mark per revolution, so the mark must be the only reflective feature the beam sees: a shaft that is already bright needs masking first. Below about 120 RPM a single mark leaves a long gap between counts. Applying several marks at equal spacing and dividing the reading by their number brings a slow shaft back into the fast sampling window.



WHAT'S IN THE BOX

- TM-5210 tachometer
- Reflective tape for non-contact measurement
- Cone tip for shaft centres
- Surface speed wheel, 10 cm circumference
- 9 V battery
- Carrying case, instruction manual and warranty certificate

REFLECTIVE TAPE · Cut into squares of about 12 mm and applied one to a shaft, as close to the outer edge as the part allows. The surrounding surface must stay less reflective than the mark, and it must be clean and smooth for the tape to hold.

GENERAL SPECIFICATIONS

Code	Item	Part Number
TM-5210	Contact and non-contact digital tachometer, 2 to 200,000 RPM, laser sighting	915210

MEASURES

Rotation speed, total revolutions, frequency, surface speed and length

SPEED RANGE

Non-contact 2 to 200,000 RPM · contact 2 to 20,000 RPM

RESOLUTION

0.001 RPM to 1 RPM, according to range

SIGHTING DISTANCE

50 mm to 2500 mm, non-contact

SURFACE SPEED

m/min, in/min, ft/min and yd/min · length in m, in, ft and yd, from the 10 cm circumference wheel

DISPLAY

Backlit LCD · English interface · low battery indication

POWER

9 V battery · consumption about 45 mA · powers down about 15 seconds after the measure button is released

COMPLIANCE

EN 61326 · CE

ACCESSORIES

Cone tip, surface speed wheel and reflective tape supplied · replacements available

MODES

Non-contact by laser and reflective mark · contact by cone tip or surface wheel

ACCURACY

$\pm(0.05\% + 1 \text{ digit})$

SAMPLING TIME

0.5 seconds above 120 RPM

TOTAL REVOLUTIONS

1 to 200,000

TIME BASE

Quartz crystal

MEMORY

Ten measurement sets, each holding the maximum, minimum, average and the reading

OPERATING

0 °C to 50 °C · relative humidity 85% or less, non-condensing

DIMENSIONS

160 × 60 × 42 mm · 160 g

WARRANTY

1 year, subject to product registration with GPS LTD · service and calibration available