

DATA - SHEET 1029

No. 1029

Page. 1 of 4

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Digital Photo/Contact Tachometer



Digital Photo/Contact Tachometer

Code: 59-800-236

This Digital Photo/Contact Tachometer provides accurate measurement of spindle speeds in RPM and surface speed in m/min or ft/min.

Specifications

Clear LCD display 5 digits x 10 mm high

Method	Total Range	Resolution
Photo tachometer	2.5 to 99,999 RPM	0.1 RPM for 0.5 to 999.9RPM 1 RPM over 1000 RPM
Contact Tachometer	2.5 to 19,999 RPM	0.1 RPM for 0.5 to 999.9RPM 1 RPM over 1000 RPM
Surface Speed	0.05 to 1,999.9 m/min. 0.2 to 6,560 ft/min	0.01m/min over 10 m/min 0.1m/min over 100 m/min 0.1ft/min for 0.1 to 999.9 ft/min 1 ft/min over 1000 ft/min

Accuracy:

Tachometer ± (0.05% + 1 RPM)
Surface Speed ± (0.05% + 0.03m/min)

Sampling time:

Photo Tachometer 1 sec. (over 60 RPM)
Contact Tachometer 1 sec. (over 15 RPM)

Photo Tachometer:

Detecting Distance 50 – 150mm / 2 – 6”
 Maximum 300 / 12”

Range Selection

Automatic

Memory:

Last value, plus Max and Min values

Time base:

Quartz crystal

Circuit:

Single chip microprocessor, LSI-circuit

Power:

4 x 1.5v AA Batteries

Consumption:

Approx. 80mA during operation

Operating Temp.

0 - 50°C

Size:

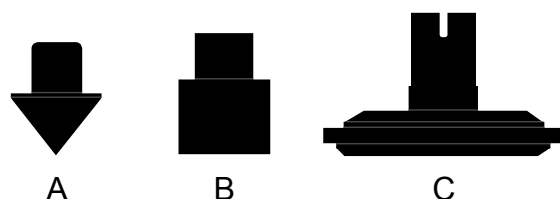
215 x 65 x 38mm

Weight:

300g (including batteries)

Parts Description

- 1 Signal Light Beam
- 2 Monitor Indicator
- 3 Display
- 4 Measure Button
- 5 Memory Button
- 6 Function Switch
- 7 Battery Cover
- 8 Rotating Spindle
- 9 Adapter Holder
- A Rubber Cone (Internal Fitting)
- B Rubber Cone (External Fitting)
- C Surface Speed Wheel



Measuring Procedure

Photo Tachometer

RPM Measurement:

Apply reflective tape to object being measured
Slide "Function Switch" to PHOTO/RPM position
Depress "Measure Button" and align visible light beam with the reflective tape/target
Check that the "Monitor Indicator" lights when the target passes through the light beam
Release the "Measure Button" when the reading stabilises (approximately 2 seconds)
RPM will now be displayed

If the rotational speed is less than 50 RPM, additional reflective tape can be applied, equally spaced around the rotating part. The displayed measurement can then be divided by the number of reflective marks to obtain the actual RPM. This method allows for better resolution and stability when working with low value revolutions.

The non-reflective area should always be greater than the reflective area.
If the shaft or disc is normally reflective, it must be covered with black tape or paint before applying the reflective tape.

Contact Tachometer

RPM Measurement:

Select correct Rubber Cone suitable for spindle or hole location and fit into "Adapter Holder"
Slide "Function Switch" to CONTACT/RPM position
Lightly press Rubber Cone into centre hole of rotating component or onto the end of revolving shaft
Ensure that the centrelines of both tachometer and component are correctly aligned and turn synchronously together.
Depress "Measure Button" until the reading stabilises (approximately 2 seconds). RPM will now be displayed.

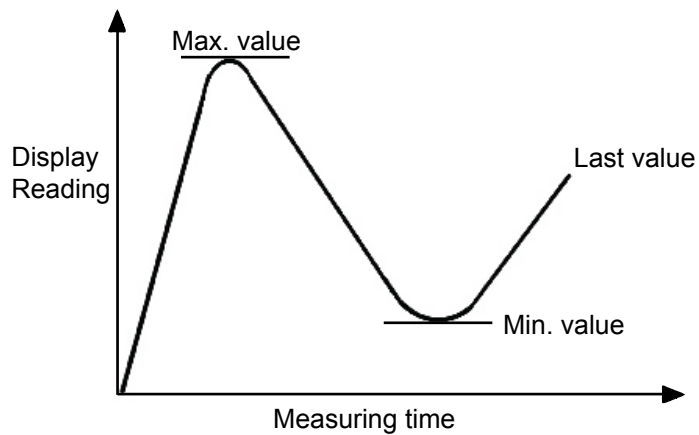
Surface Speed measurement:

Fit Surface Speed Wheel to Rotating Spindle
Slide "Function Switch" to SURFACE SPEED m/min or ft/min
Apply Surface Speed Wheel to moving item ensuring they both move synchronously
Depress "Measure Button" until the reading stabilises (approximately 2 seconds). m/min or ft/min will now be displayed.

Memory:

Following the release of the “Measure Button” the Last, Max. and Min. values can be recalled in turn by depressing the “Memory Button” separately for each value.

Last value symbol: “LA”
Max value symbol: “UP”
Min value symbol: “dn”



Battery Replacement:

When the battery voltage falls below 5v, a small battery image will appear on the display to indicate that the batteries need replacing.

Release the screws holding the battery cover and remove it from the instrument, remove old batteries and replace with 4 new 1.5v AA batteries, ensuring they are correctly aligned as marked inside case.

The batteries should be removed if the instrument is not to be used for an extended period of time.

