

## 3403&3404 TACHO HiTESTER

Field measuring instruments



**High 0.01 rpm resolution**  
**Wide range digital**  
**tachometer covers up to 100,000rpm**



3404

3403

Digital tachometers offering high resolution and resolution, and covering a wide range up through 100,000 rpm.

Choose from two models to match your needs: the basic 3403 and the multi-functional 3404.



ISO 9001  
JMI-0216



ISO14001  
JQA-E-90091



<http://www.hioki.co.jp/>

HIOKI company overview, new products, environmental considerations and other information are available on our website.

# Record RPM data with the Universal 3404

## High-precision, high-resolution

Maximum 0.01 rpm resolution and high  $\pm 1$  dgt. precision make the tachometer effective for precise measurements.

## Internal micro-computer for multi-functional performance (3404 only)

**MIN, MAX**-Holds minimum and maximum rpm/rps values.

**TOTAL**-Provides total rotation counts from 0 to 500,000 for real-time rotation count measurement.

**PERIOD**-Accurately measure rotation pulses from 600  $\mu$ s to 2.000 seconds.

## Analog output (3404 only)

Stable analog signal output from low to high speeds provides clear recording by merely connecting your present recorder. Output sampling mode can be set to slow or fast to meet different application needs.

## Double performance from one tachometer

By using the optional 9213 contact adapter the 3403 and 3404 become contact-type tachometers, while the period ring can be used in applications like measurement of conveyor line speed (period).

## Simple reflector detection check

LED and buzzer signals confirm that the light pulses reflected from the tape on the rotating body are being picked up. Signals can be turned on and off freely.

## rpm $\leftrightarrow$ rps

Switch units even during measurement.

## Auto-ranging function covers from 30 to 100,000 rpm.

## Tripod mounting socket included.

## AC and DC power supplies may be used.

## Measurement range

Note: Contact adapter may be used for rotations up to 20,000 rpm.

**NORMAL, MIN and MAX modes (MIN and MAX modes only on the 3404)**

**SLOW** sampling (3403 and 3404)

	Range	Accuracy
rpm	30.00 to 199.99	30.00 to 99.99 $\pm 1$ dgt. 100.00 to 199.99 $\pm 2$ dgt.
	200.0 to 1999.9	200.0 to 999.9 $\pm 1$ dgt. 1000.0 to 1999.9 $\pm 2$ dgt.
	2000 to 19999	2000 to 9999 $\pm 1$ dgt. 10000 to 19999 $\pm 2$ dgt.
	20000 to 99990	$\pm 10$ dgt.
rps	0.5000 to 1.9999	$\pm 2$ dgt.
	2.000 to 19.999	2.000 to 9.999 $\pm 1$ dgt. 10.000 to 19.999 $\pm 2$ dgt.
	20.00 to 199.99	20.00 to 99.99 $\pm 1$ dgt. 100.00 to 199.99 $\pm 2$ dgt.
	200.0 to 1600.0	200.0 to 999.9 $\pm 1$ dgt. 1000.0 to 1600.0 $\pm 2$ dgt.

Note: Display will read 0.0 below 30 rpm or 0.5 rps.

**FAST** sampling (3404 only)

	Range	Accuracy
rpm	120.00 to 199.90	$\pm 40$ dgt.
	200.0 to 1999.0	200.0 to 999.0 $\pm 20$ dgt. 1000.0 to 1999.0 $\pm 40$ dgt.
	2000 to 19990	2000 to 9990 $\pm 20$ dgt. 10000 to 19990 $\pm 40$ dgt.
	20000 to 99900	$\pm 200$ dgt.
rps	2.000 to 19.990	2.000 to 9.990 $\pm 20$ dgt. 10.000 to 19.990 $\pm 40$ dgt.
	20.00 to 199.90	20.00 to 99.90 $\pm 20$ dgt. 100.00 to 199.90 $\pm 40$ dgt.
	200.0 to 1600.0	200.0 to 999.0 $\pm 20$ dgt. 1000.0 to 1600.0 $\pm 40$ dgt.

Note: Display will read 0.0 below 120 rpm or 2 rps.

**TOTAL** mode (3404 only) - 0 to 499999 5-digit display. (decimal point code used for 100,000 counts and over)

**PERIOD** mode (3404 only) 600  $\mu$ s to 2.000 s  $\pm 1$  dgt. for 4 digit display,  $\pm 2$  dgt. for 4 1/2 - digit display.

## Specifications

<b>Measurement method</b>	:Visible light reflectance
<b>Display</b>	:LCD 4 1/2 digits (5 digit display for 20,000 counts or higher, lowest digit fixed to zero). <b>TOTAL</b> measurement 5 digits (3404 only). <b>HOLD</b> • rpm • rps • $\square$ mark (MAX. • MIN. • TOTAL • PERIOD • $\mu$ sec • msec • sec [3404 only] )
<b>Overscale display</b>	:----- displayed
<b>Detection range</b>	:50 to 200 mm
<b>Reflected light detection check</b>	:Buzzer and LED
<b>Operating temperature/humidity</b>	:0 to 40 °C 80% RH maximum (no condensation)
<b>Analog output</b>	:1000m VDC f.s. (3404 only). Output accuracy $\pm 1\%$ rdg. $\pm 1m$ V, output resistance 1k $\Omega$
<b>Power supply</b>	:SUM3 (AA) $\times$ 4 Continuous battery operation time approx. 16h AC adapter also available (6V 300mA)
<b>Dimensions and weight (approx.)</b>	:180H $\times$ 62W $\times$ 38Dmm, 250g(3403), 260g (3404)

## Selection guide


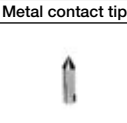


	Single-function type	Multi-function type
	3403	3404
<b>Measurement method</b>	Non-contact	Non-contact
<b>Sampling rate</b>	0.7 to 2.0 sec	<b>SLOW</b> mode 0.7 to 2.0 sec <b>FAST</b> mode 0.18 to 0.5 sec
<b>Mode select</b>		
<b>FAST/SLOW mode select</b>	—	$\bigcirc$
<b>MAX., MIN., TOTAL (total count measurement) PERIOD (period measurement)</b>	—	$\bigcirc$
<b>Analog output</b>	—	$\bigcirc$
<b>Auto-range function</b>	$\bigcirc$	$\bigcirc$
<b>Data hold function</b>	$\bigcirc$	$\bigcirc$
<b>Tripod mounting</b>	$\bigcirc$	$\bigcirc$
<b>AC power jack</b>	$\bigcirc$	$\bigcirc$
<b>Accessories</b>	9211 Reflective tape (1 sheet) Carrying case	9211 Reflective tape (1 sheet) 9094 Output cord Carrying case

## Optional accessories

### 9211 Reflective tape (10 sheets)

(30 pieces per sheet, each sheet 12  $\times$  12 mm)

### 9094 Output cord (1.5 m)

9213	(includes 9032, two 9033 and 9212)		
Contact adapter	9032	9033	9212
	Metal contact tip	Rubber contact tip	Peripheral ring
			

9213 dimensions: 70H  $\times$  62W  $\times$  39Dmm (Not including contact tip)

### Standard packing (double carton box)

Sets	N.W.kg	G.W.kg	M <sup>3</sup>
20	16	18	0.1

# HIOKI

HIOKI E. E. CORPORATION

#### HEAD OFFICE :

81 Koizumi, Ueda, Nagano, 386-1192, Japan  
TEL +81-268-28-0562 / FAX +81-268-28-0568  
E-mail: os-com@hioki.co.jp

#### HIOKI USA CORPORATION :

6 Corporate Drive, Cranbury, NJ 08512 USA  
TEL +1-609-409-9109 / FAX +1-609-409-9108  
E-mail: hioki@hiokiusa.com

#### Shanghai Representative Office :

1704 Shanghai Times Square Office  
93 Huaihai Zhong Road  
Shanghai, 200021, P.R.China  
TEL +86-21-6391-0090, 0092  
FAX +86-21-6391-0360  
E-mail: info@hioki.cn

DISTRIBUTED BY