



Field Measuring Instrument

# HIOKI

1993



IEC348 and IEC1010 Conformance

## *Pocket digital multimeter designed for safety*

# 3243

DIGITAL HITESTER



### WARNING



- In some case, power lines may carry voltage spikes of several times the normal supply voltage. For reasons of safety, ordinary testers should not be used to measure power lines carry more than 250V.
- When measuring such power lines, always use a tester with built-in overcurrent protection to guard against short circuits (for example, the 3008).
- When measuring currents on power lines, use a clamp-on tester that is designed for measuring live lines.

Note : The term "power line" refers to the entire electrical circuit providing power to factories, buildings, and industrial machines. However, it does not include electrical circuits in ordinary dwellings (lines protected by fuses or circuit breakers).

Photograph is actual size.

Complying with IEC348 and all units tested for high-voltage insulation

# A highly reliable compact digital multimeter packed with functions and safety features

- **Conforms with IEC348\* and IEC1010\* (improved safety)**
- **Automatic AC/DC discrimination function**
- **Wide display up to 3249 count**
- **Maximum load voltage 500 V**
- **Fully tested for high-voltage insulation**
- **Frequency measurement function (up to 50 V)**
- **Pocket size**
- **Auto power save function**  
Thirty minutes after the last operation, the power save function activates, to save the battery. (Function can be disabled.)
- **Clock functions (V.TIME)**
  - 1 Measuring the time between crossing an dre-crossing a 1 V threshold value
  - 2 Stopwatch functions



\* Test leads tuck neatly into unit.

\* IEC348: International safety standard for electronic measuring equipment; all 3243 units are tested for high-voltage insulation, and are designed to conform with every detail of the specification.

\* IEC1010: International safety standard for measurement, control and research electrical equipment; the 3243 is designed to conform with every detail of the specification.

## General specifications

Measurement method: double integration method  
 Display: 3-1/2 digit LCD, maximum '3429'  
 Polarity indication: minus sign only lights automatically  
 Overflow indication: "OF" or "-OF"  
 Range switching: automatic or manual  
 Sampling rate: 2.5 times/s (V, Ω, (i)), 0.9 times/s (frequency, 3.2 kHz range), 4 times/s (frequency, 32kHz and 320 kHz ranges)  
 Withstand voltage : 5.55 kV AC between input connectors and casing  
 Maximum load voltage: 500 Vrms  
 Operating environment: 0 to 40°C, maximum 80% R.H. (no condensation)  
 Battery low indication: 'B' indication appears at 1.2 V ± 0.1 V  
 Power supply: LR-44 (or SR-44) × 2 (continuous use approximately 70 hours)  
 Power consumption: 5.0mW typ. (DC V)  
 Dimensions and weight: 120H × 68W × 19D mm ; 100g approx.  
 Accessories: soft case  
 Safety: complies with IEC348 safety class II and IEC1010-1 excess voltage category III

## Measurement ranges (at 23°C ± 5°C, maximum 80% R.H., no condensation)

	Range	Accuracy	Notes	
DC voltage	320mV	±2.0%rdg. ±4dgt.	Input impedance 100 MΩ minimum, resolution 100 μV 11 MΩ approx. 10 MΩ approx. 10 MΩ approx. 10 MΩ approx.	
	3.2V	±0.7%rdg. ±4dgt.		
	32V	±1.3%rdg. ±4dgt.		
	320V	±1.3%rdg. ±4dgt.		
AC voltage	450V	±1.3%rdg. ±4dgt.	Input impedance 11 MΩ approx. 10 MΩ approx. 10 MΩ approx. 10 MΩ approx.	
	3.2V	±2.3%rdg. ±8dgt.		
	32V	±2.3%rdg. ±8dgt.		
	320V	±2.3%rdg. ±8dgt.		
Frequency	450V	±1.3%rdg. ±4dgt.	Measurement frequency range 50 Hz to 500 Hz	
	3.2kHz	±0.1%rdg. ±1dgt.		
	32kHz	±0.1%rdg. ±1dgt.		
Resistance	320kHz	±0.1%rdg. ±1dgt.	Maximum measurement voltage 50 Vrms Measurement range 50 Hz to 320 kHz Max input sensitivity 3.0 Vrms (sine wave)	
	320kΩ	±2.5%rdg. ±6dgt.		
	3200kΩ	±2.0%rdg. ±6dgt.		
	32MΩ	±2.0%rdg. ±6dgt.		
	320kΩ	±2.0%rdg. ±6dgt.		
	3200kΩ	±2.0%rdg. ±6dgt.		
Continuity			Beeper sounds below threshold value of 250 Ω Open-circuit terminal voltage 1.7 V maximum	
Diode test			Test current 1.0 mA maximum Open-circuit terminal voltage 1.7 V maximum	
Time (V.TIME)			±0.1%rdg. ±1dgt. Min. resolution 0.1s (input min. pulse) Time indication 5'59.9 59'59 Threshold level 1 V approx.	

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