

3182•3183 DIGITAL POWER HI TESTER

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Accurately Quantifies Power Parameters of Commercial Appliances

- TRMS reading of voltage and current.
- Output terminals provided for recording or monitoring.
(Three channels, simultaneous output.)



The Model 3182 and 3183 are a single-phase power meter designed specifically for measuring power-consumption characteristics of household appliances and other low power-consumption devices. Voltage and current are further quantified by the true-root-mean-square method, making

measurements extremely accurate even for non-sinusoidal waveforms typically produced by thyristor-controlled devices. Three analog output channels are featured, and data on power, voltage, and current may be acquired simultaneously.

Instrument Specifications

Display: 3 1/2-digit light emitting diode (LED) (Max: 1999)

Measurement Functions:

- AC voltage (TRMS)
- AC current (TRMS)
- Single-phase effective power

Measurement Range:

	3182	3183
AC V	200/250V	200/250V
AC A	2/20A	0.2/2A
W	200/2000W	20/200W

Accuracy (Specified for 23°C ± 5°C, 50/60Hz freq., 1.0 power-factor)
 AC Voltage: ±0.7% of rdg. ±1 dgt.
 AC Current: ±0.5% of rdg. ±0.3% f.s.
 Single-phase power: ±0.5% of rdg. ±0.3% f.s.

Frequency Response (40 to 500Hz)

- AC Voltage: Within ±0.5%
- AC Current: Within ±0.5%
- Single-phase power: Within ±1.0% (cos φ = 1.0)

Effect of power-Factor on Accuracy:
 Within ±0.8% of rdg. at cos φ = 0.5)

Temperature Characteristics:

Less than ±2.0%, 0~40°C

Maximum Circuit Voltage: 250Vrms

Current Rating:

- 3182: 15A
- 3183: 4A
- (Max. continuous rating)

Crest-Factor:

- AC Voltage: 500V or less, peak value
- AC Current: The lesser of 2 at current rating (3182: or 30A peak value)

Single-phase power: Same as voltage and current.

Output Terminals:

Analog Output: DC 2V f.s. (Input resistance: Less than 1Ω), output simultaneous for voltage, current, and power.

Digital Output: Hi: 5V, Lo: 0V (CMOS level)

Power Source: AC 100V, 120V, 220V, 240V ±15%; 50/60Hz (specify one); 3.5W (approx.)

Effect of Source Voltage on Accuracy:
 Above specifications accurate within ±15% range of power source.

Dimensions/Weight: 85H × 250W × 220D (mm) / 2.1kg (approx.)

Accessories: Fuse (250V, 0.5A), 1 ea.;

Line cord, 1 ea.; Instruction manual, 1 ea.

Optional Accessories: 9084 Carrying Case.

Standard Packing (Double carton box)	Sets	N.W.	G.W.	M ³
	3	8kg	10kg	0.10

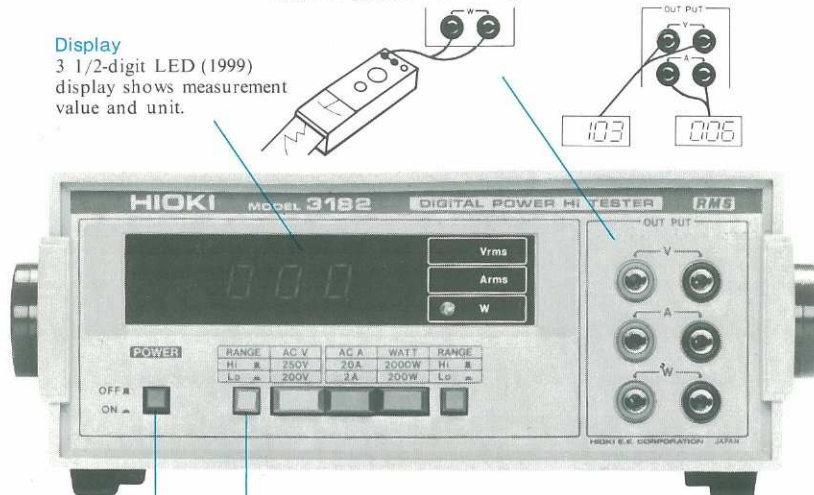
Output Terminals

Three channels produce simultaneous output of power, voltage and current (each channel, DC 2V f.s.). Recorder permits monitoring

or permanent records. Digital multimeters permit monitoring of all channels.

Display

3 1/2-digit LED (1999) display shows measurement value and unit.



Power Switch

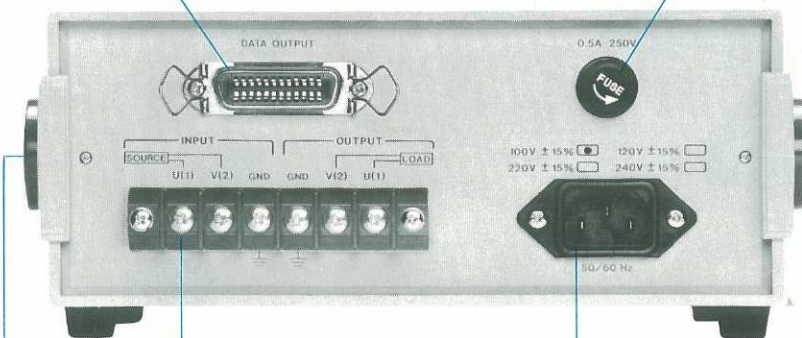
Voltage-Current-Power Range & Function Switch

Measurements are passed through TRMS converter for maximum accuracy, even for thyristor-controlled devices producing non-sinusoidal waveforms.

Data Output Connector

Serves to output information on function, range, decimal point, analog output, BCD data on measurement value, etc.

Fuse Holder



Connector Board

Used to connect the power source and appliance under test.

AC Power Receptacle

Source voltage marked above receptacle. (Specify when placing order.)

Handle

Bucket-bail handle with 12 click-stop positions.

Typical Applications: Production line quality-control testing; experiments and laboratory work; service and maintenance work.

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