

197A

# 5½-Digit Portable Multimeter



- 1μV, 1mΩ, 1nA sensitivity
- TRMS AC measurements to 100kHz
- 100-point data logger, relative reference, dB
- Backlit display
- Battery option

## Ordering Information

197A Autoranging Microvolt DMM

197A/1978

Autoranging Microvolt DMM with Rechargeable Battery Pack

Extended warranty, service, and calibration contracts are available.

## Accessories Supplied

Instruction Manual and Model 1751 Safety Test Leads

The Model 197A is a lightweight, portable DMM with a battery pack option. It combines 5½-digit resolution (on a 220,000-count display) with 1μV, 1nA, 1mΩ sensitivity. Basic DCV accuracy is 0.011%.

## Extended Performance

Measure voltage over nine decades from 1μV to 1000V. Input resistance on the two lowest voltage ranges exceeds 1GΩ. TRMS AC measurements can be made to 100kHz. Make 2- or 4-terminal ohms measurements over 11 decades from 1mΩ to 220MΩ. Six current ranges measure from 1nA to 10A.

## Battery Option

The Model 1978 battery pack option enables data to be collected in locations where AC power is not available or where isolation from line voltage is required for safety.

## ACCESSORIES AVAILABLE

1681	Clip-On Test Lead Set
1754	Safety Univ. Test Lead Kit
5806	Kelvin Clip Leads
1978	Rechargeable Battery Pack

## GENERAL

**DISPLAY:** Backlit ±220,000-count LCD, 0.45 in height; polarity, function, range, and status indication.

**RELATIVE:** Pushbutton allows zeroing of on range readings. Allows readings to be made with respect to baseline value. Front panel annunciator indicates REL mode.

**DATA LOGGER and MIN/MAX:** 100 reading storage capacity; records data at one of six selectable rates from 3 readings/second to 1 reading/hour or by manual triggering. Also detects and stores maximum and minimum readings continuously while in data logger mode.

**CONVERSION RATE:** 3 readings/second.

**OVERRANGE INDICATION:** "OL" displayed.

**ENVIRONMENT:** Operating: 0°–50°C; <80% relative humidity up to 35°C; linearly derate 3% RH/°C, 35°–50°C. Storage: –40° to +70°C.

**WARM-UP:** 1 hour to rated accuracy.

**POWER:** 105–125V or 210–250V (external switch selected), 90–110V available; 50–60Hz, 12VA. Removable power cord. Optional 5 hour battery pack, Model 1978.

**DIMENSIONS, WEIGHT:** 89mm high × 235mm wide × 275mm deep (3½ in × 9¼ in × 10¾ in). Net weight 1.8kg (3 lb, 14 oz).

## DC VOLTS

RANGE	RESOLUTION	INPUT RESISTANCE	ACCURACY ±(%rdg + counts)
			1 Year, 18°–28°C
200 mV	1 μV	>1 GΩ	0.016 + 3
2 V	10 μV	>1 GΩ	0.011 + 2
20 V	100 μV	11 MΩ	0.015 + 3
200 V	1 mV	10 MΩ	0.015 + 2
1000 V	10 mV	10 MΩ	0.015 + 2

## TRMS AC VOLTS

RANGE	ACCURACY (1 Year) 18°–28°C ±(%rdg + counts)				
	20Hz–50Hz	50Hz–10kHz	10kHz–20kHz	20kHz–50kHz	50kHz–100kHz
200 mV	1.00 + 100	0.35 + 100	0.6 + 200	1.5 + 250	5 + 400
2V–200 V	1.00 + 100	0.35 + 100	0.6 + 200	1.5 + 250	3 + 400
750 V	1.25 + 100	0.75 + 100	1.0 + 200	1.8 + 250	3 + 400

## OHMS

RANGE	RESOLUTION	OUTPUT		ACCURACY ±(%rdg+counts)	
		NOMINAL I-SHORT	MAX. V ACROSS UNKNOWN	24 Hr., 22°–24°C	1 Year, 18°–28°C
200 Ω	1 mΩ	2 mA	0.5 V	0.01 + 2	0.018 + 3
2 kΩ	10 mΩ	2 mA	4.0 V	0.01 + 2	0.018 + 2
20 kΩ	100 mΩ	400 μA	4.0 V	0.014 + 2	0.026 + 2
200 kΩ	1 Ω	40 μA	4.0 V	0.014 + 2	0.026 + 2
2 MΩ	10 Ω	4 μA	4.0 V	0.02 + 2	0.035 + 2
20 MΩ	100 Ω	400 nA	4.0 V	0.10 + 2	0.12 + 2
200 MΩ	10 kΩ	400 nA	5.0 V	2.00 + 1	2.00 + 1

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