

# 197A

# 5½-Digit Portable DMM



- 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

This product is available with an Extended Warranty.

## 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 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–200V	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	NOMINAL I–SHORT	OUTPUT		ACCURACY ±(%rdg+counts)	
			MAX. V ACROSS UNKNOWN	24 Hr., 22°–24°C	1 Year, 18°–28°C	
200 Ω	1 mΩ	2mA	0.5 V	0.01 + 2	0.018 + 3	
2 kΩ	10 mΩ	2mA	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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