

197A

5½-Digit Portable DMM



- 1 μ V, 1m Ω , 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 Recharge-
able 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 1 μ V, 1nA, 1m Ω sensitivity. Basic DCV accuracy is 0.011%.

Extended Performance

Measure voltage over nine decades from 1 μ V to 1000V. Input resistance on the two lowest voltage ranges exceeds 1G Ω . TRMS AC measurements can be made to 100kHz. Make 2- or 4-terminal ohms measurements over 11 decades from 1m Ω to 220M Ω . 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 \pm 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 \times 235mm wide \times 275mm deep (3½ in \times 9¼ in \times 10¾ in). Net weight 1.8kg (3 lb, 14 oz).

DC VOLTS

RANGE	RESOLUTION	INPUT RESISTANCE	ACCURACY	
			\pm (%rdg + counts)	1 Year, 18°–28°C
200 mV	1 μ V	>1 G Ω	0.016 + 3	
2 V	10 μ V	>1 G Ω	0.011 + 2	
20 V	100 μ V	11 M Ω	0.015 + 3	
200 V	1 mV	10 M Ω	0.015 + 2	
1000 V	10 mV	10 M Ω	0.015 + 2	

TRMS AC VOLTS

RANGE	ACCURACY (1 Year)				
	18°–28°C \pm (%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 MAX. V ACROSS UNKNOWN	ACCURACY	
				\pm (%rdg + counts) 24 Hr., 22°–24°C	1 Year, 18°–28°C
200 Ω	1 m Ω	2mA	0.5 V	0.01 + 2	0.018 + 3
2 k Ω \rightarrow	10 m Ω	2mA	4.0 V	0.01 + 2	0.018 + 2
20 k Ω	100 m Ω	400 μ A	4.0 V	0.014 + 2	0.026 + 2
200 k Ω \rightarrow	1 Ω	40 μ A	4.0 V	0.014 + 2	0.026 + 2
2 M Ω	10 Ω	4 μ A	4.0 V	0.02 + 2	0.035 + 2
20 M Ω	100 Ω	400 nA	4.0 V	0.10 + 2	0.12 + 2
200 M Ω	10 k Ω	400 nA	5.0 V	2.00 + 1	2.00 + 1

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