

# DIGITAL MULTIMETERS

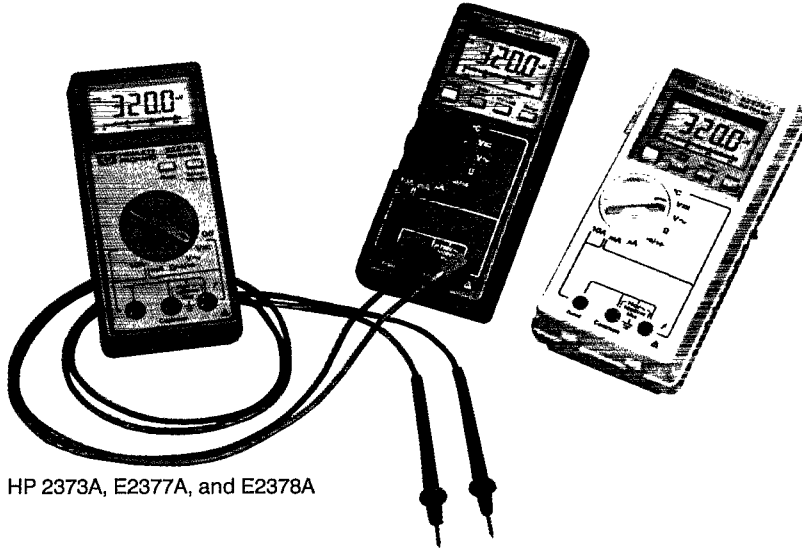
## 3½-Digit Handheld Multimeters

HP E2373A, E2377A, E2378A

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- Choice of general-purpose or rugged model
- 0.3% or 0.7% basic DCV accuracy

- 3-year standard warranty on all models
- 3200-count analog/digital display



HP 2373A, E2377A, and E2378A

### HP E2300 Series Handheld Multimeters

The HP E2300 Series of handheld multimeters is ideal for portable basic measurements. Standard features on all three models include:

- dc and ac volts, dc and ac current, resistance, audible continuity, and diode test
- Maximum 1 kV dc, 750 V rms, 10 A
- Choice of auto-ranging or manual range hold
- Large 3200-count digital display (samples approx. 2 times/s) with 32-segment analog bar (samples approx 12 times/s)
- Display annunciators for all functions (except temperature on E2377A and E2378A), also for low-battery indication, overload, range hold, and data hold (E2377A and E2378A)
- Built-in tilt stand and three terminal input jacks
- One-year calibration cycle
- Three-year warranty

### Three Models to Choose From

The basic HP E2373A multimeter is ideal for troubleshooting. It offers all the standard features above, along with a basic Vdc accuracy of 0.7 percent. Audible continuity and a choice of auto or manual ranging make this low-cost meter an excellent choice.

For more exacting tasks, the HP E2377A has a basic Vdc accuracy of 0.3 percent and a 1-kHz bandwidth. It also adds data hold and temperature functions to the solid feature set of the HP E2373A. The temperature function is built in and can be used with any K-type thermocouple probe.

For outside use and rougher applications, the HP E2378A has the same functions and accuracy as the HP E2377A, and is encased in a yellow splash-proof case.

Refer to the following chart to determine which of the three models best suits your needs.

	HP E2373A	HP E2377A	HP E2378A
Basic dc accuracy	0.7%	0.3%	0.3%
Basic ac accuracy	1.2%	1%	1%
Maximum ac bandwidth	500 Hz	1 kHz	1 kHz
Audible continuity and diode test	Yes	Yes	Yes
Data hold function	No	Yes	Yes
Temperature function	No	Yes	Yes
Input protection up to 300 mA range	0.5 A/250 V unfused	0.5 A/250 V 15 A/250 V	0.5 A/250 V 15 A/250 V
10 A range	AA (1.5 V) × 2	AAA (1.5 V) × 2	AAA (1.5 V) × 2
Power supply (low mercury, alkaline batteries)			
Battery life (minimum)	2500 h	1000 h	1000 h

### Specifications

23° C ± 5° C, < 80% RH

Function	Range	Resolution	Accuracy <sup>1</sup> ± (% rdg + number of digits)	
			HP E2373A	HP E2377A HP E2378A
dc voltage	300 mV	100 μV	0.5% + 2	0.3% + 2
	3 V	1 mV	0.5% + 1	0.3% + 2
	30 V	10 mV	0.5% + 1	0.4% + 1
	300 V	100 mV	0.7% + 1	0.4% + 1
	1000 V	1 V	0.7% + 1	0.4% + 1
ac voltage	3 V	1 mV	1.2% + 4	1.0% + 3 <sup>2</sup>
	30 V	10 mV	1.2% + 4	1.0% + 3 <sup>2</sup>
	300 V	100 mV	1.2% + 4	1.0% + 3 <sup>2</sup>
	750 V	1 V	1.2% + 4	1.0% + 3 <sup>2</sup>
dc current	300 μA	100 nA	—	1.0% + 2
	3 mA	1 μA	—	1.0% + 2
	30 mA	10 μA	1.0% + 2	1.0% + 2
	300 mA	100 μA	1.5% + 2	1.5% + 2
	10 A	10 mA	1.5% + 2	1.5% + 2
ac current	300 μA	100 nA	—	2.0% + 5
	3 mA	1 μA	—	2.0% + 5
	30 mA	10 μA	2.0% + 5	2.0% + 5
	300 mA	100 μA	2.0% + 5	2.0% + 5
	10 A	10 mA	2.0% + 5	2.0% + 5
Resistance	300 Ω	100 mΩ	0.7% + 2	0.7% + 2
	3 kΩ	1 Ω	0.7% + 1	0.7% + 1
	30 kΩ	10 Ω	0.7% + 1	0.7% + 1
	300 kΩ	100 Ω	0.7% + 1	0.7% + 1
	3 MΩ	1 kΩ	1.5% + 1	0.7% + 1
	30 MΩ	10 kΩ	3.0% + 1	2.0% + 1

**Input Resistance (dc voltage):** 300 mV range > 1000 MΩ  
3 V range 11 MΩ  
30 to 1 kV ranges 10 MΩ

**Maximum Input:** ± 1000 Vdc or 750 Vac rms

**Continuity Check:** 300 Ω range; approx 20 Ω threshold

**Temperature Test:** -20° C to 700° C with 1° resolution (not E2373A)

**Diode Test:** 0.6 mA test current, ± (3% + 2 mV) accuracy

<sup>1</sup> One digit corresponds to the range's resolution.

<sup>2</sup> 40 to 500 Hz range.