True rms AC V and (ac + dc)V

Bandwidth: 20 Hz to 1 MHz
Crest Factor: 3.5:1 at full scale
Common Mode Rejection: (1 k Ω unbalance in LO): > 76 dB, dc to 60 Hz
Accuracy: (90 day)

Accuracy specified for sine wave inputs, > 10% of range, dc component < 10% of ac component after 2-hour warmup and within one week of autocal. Integration time is 10 PLC, ac Band set to < 400 Hz.

Range	Maximum reading	(100 Hz to 20 kHz) best 5½-digit accuracy ± (% rdg + cnts)				
		AC coupled		DC coupled		Input impedance
		% of reading	Count error	% of reading	Count error	
30 mV	32.50000 mV	0.13	116	0.17	364	1 MΩ ± 1% shunted by < 90 pf
300 mV	325.0000 mV	0.13	116	0.17	364	
3 V	3.250000 V	0.13	116	0.17	364	
30 V	32.50000 V	0.13	116	0.17	364	
300 V	303.0000 V	0.19	116	0.23	364	

Resistance (2- and 4-wire Ω) (90 day accuracy)

Range	Maximum reading	Best 6½-digit accuracy ± (% rdg + cnts)		
		% of reading	Count error	Current output
30 Ω	30.30000 Ω	0.0065	315	1 mA
300 Ω	303.0000 Ω	0.0045	34	1 mA
3 kΩ	3.030000 kΩ	0.0035	6	1 mA
30 kΩ	30.30000 kΩ	0.0035	6	100 μA
300 kΩ	303.0000 kΩ	0.0040	7	10 μA
3 MΩ	3.030000 MΩ	0.0055	12	1 μA
30 MΩ	30.30000 MΩ	0.025	80	100 nA
300 MΩ	303.0000 MΩ	1.6	1000	100 nA
3 GΩ	3.030000 GΩ	16.0	1000	100 nA

For 2-wire Ω, add 200 mΩ to count error specifications. After 1-hr warmup with integration time of 100 power line cycles (PLC). Tcal is the temperature of the calibration environment between 18° and 28° C. For 2-wire Ω only, accuracy is specified following autocal (ACAL), under stable conditions (± 1 C).

Maximum Reading Rates (dc V, dc I, and resistance up to 30 kΩ)

Power line cycles	Maximum no. of digits	Readings per second 60 Hz (50 Hz)		NMR
		Auto zero on	Auto zero off	
.0005	3½	300	1350	0
.005	4½	280	1250	0
.1	5½	140 (128)	360 (312)	0
1.0	6½	26 (22)	53 (45)	60 dB
10	7½	2.5 (2.0)	4.8 (4.0)	80 dB
100	7½	.25 (0.2)	0.5 (0.4)	90 dB

Reading rates are specified with zero delay, fixed range, display off, and front panel off. The output is to internal reading memory using single integer format and internal timer. Integration time in PLC. Using Math HIRES mode for 7½ digits.

DC Current (90 day accuracy)

Range	Maximum reading	Best 6½-digit accuracy ± (% rdg + cnts)		Shunt resistance
		% of reading	Count error	
300 μA	303.0000 μA	0.02	104	1000 Ω
3 mA	3.030000 mA	0.02	104	100 Ω
30 mA	30.30000 mA	0.02	104	10 Ω
300 mA	303.0000 mA	0.07	204	1 Ω
1 A	1.000000 A	0.07	604	0.1 Ω

*After 1-hr warmup, with integration time of 100 PLC. Tcal is the temperature of the calibration environment between 18° and 28° C.

Common Mode Rejection (dB): 1 kΩ unbalance in low lead; dc ECMR 140 dB; ac ECMR: < 1 PLC, 76 dB; ac ECMR > 1 PLC, 156 dB for 50, 60 Hz ± .08%

Memory: 6235 available bytes that can be partitioned into 3 segments, one devoted to storing measurements, one devoted to storing measurement subprograms, and one devoted to storing instrument states.

Math Functions: The HP 3547A performs the following math functions on measurements: NULL, SCALE, OFFSET, RMS FILTER, SINGLE POLE FILTER, THERMISTOR LINEARIZATION, DB, DBM, % ERROR, PASS/FAIL, LIMIT TESTING, and STATISTICS. Two math functions may be used at one time.

General Specifications

Operating Temperature: 0° to 55° C
Warmup Time: One hour to all specifications except where noted
Humidity Range: 95% RH, 0° to 40° C
Storage Temperature: −40° to +75° C
Power: 100/120/220/240 V ± 10%, 48 Hz to 66 Hz, 220 V, ± 10%, 48 Hz to 66 Hz. Fused at .2 A (115 V) or 0.08 A (230 V). < 30 V A.
Size: 89 mm H (without removable feet) × 425 mm W × 292 mm D (3.5 in × 16.75 in × 11.5 in). Height (with removable feet): 100 mm (4 in). Allow 76 mm (3 in) additional depth for wiring.
Weight: Net, 5.05 kg (11.1 lb); shipping, 9.3 kg (20.5 lb)

Plug-in Options

HP 44491A Armature Relay Multiplexer Assembly Input Characteristics: Eight 2-wire armature relay channels and two current/actuator channels. Maximum voltage (terminal-to-terminal or terminal-to-chassis) 250 V rms. Maximum current (per channel) 1.0 A dc or ac rms. Thermal offset < 3 μV. Closed channel resistance (end of relay life) < 2 Ω. Maximum switching and measurement speed 33 channels/second.

HP 44492A Reed Relay Multiplexer Assembly Input Characteristics: Ten 2-wire reed relay channels. Maximum voltage (terminal-to-terminal or terminal-to-chassis) 125 V peak. Thermal offset < 3 μV. Closed channel resistance (end of relay life) < 4 Ω. Specified for < 100 kHz ac volts and frequency operation. Maximum switching and measurement speed 300 channels/second.

HP 44497A High-Voltage Attenuator Assembly Input Characteristics: Two relay channels, channel 1 devoted to high-voltage measurements. Maximum high-to-low voltage of 1000 volts dc or ac rms. Maximum low-to-earth voltage of 350 V peak. Nondestructive overload voltage of 1700 V peak, 1200 volts dc. Attenuator accuracy to be added to HP 3457A range and function accuracy for total accuracy.

DC	0.030% of reading
20 Hz to 1 kHz	2.8% of reading
1 kHz to 10 kHz	12% of reading

Note: One-year accuracy applies to T_{cal} ± 5%, NPLC = 1 or greater. Specifications are for low-to-earth voltage less than 0.1 times high-to-earth voltage.

Ordering Information

	Price
HP 3457A Multimeter	$3,390
***HP 44491A** Armature Relay Multiplexer Assembly	$570
***HP 44492A** Reed Relay Multiplexer Assembly	$570
***HP 44497A** High Voltage Attenuator Assembly	$570
Opt 401 Side Handle Kit (5061-1171)	+ $51
Opt 700 CIIL Language	+ $1,050
Opt 907 Front Handle Kit (5061-1170)	+ $71
Opt 908 Rack Flange Kit (5061-1168)	+ $41
Opt 909 Rack Flange and Front Handle Kit (5061-1169)	+ $92
Opt 910 Extra Operating and Service Manual	+ $112
Opt W30 Extended Repair Service (see page 663)	+ $80
Opt W32 Three-year customer return repair coverage	TBD

Accessories

HP 44493A Screw Terminal Connector for HP 44491A (includes strain relief and housing)	$71
HP 44494A Screw Terminal Connector for HP 44492A (includes strain relief and housing)	$71
HP 44414A Four Thermistor Pack	$71

*Plug-in options may be ordered and shipped separately without a HP 3457A mainframe. Unless otherwise specified, optional plug-in assemblies will be shipped with the HP 3457A mainframe.

For the most current prices and product information, contact your local Hewlett-Packard sales office—see page 691.