

# HP 3457A DIGITAL MULTIMETER

TYPE : DIGITAL MULTIMETER



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**DETAILS:**

## GENERAL SPECIFICATIONS

<b>Operating temperature</b>	0°C to 50°C		
<b>Storage temperature</b>	-40°C to 175°C		
<b>Warm-up time</b>	1 hr to meet all specifications		
<b>Humidity range</b>	95% relative humidity for temperatures between 0°C and 40°C		
<b>Power requirements</b>	100/120/240 volts $\pm$ 10% , 48Hz to 66Hz. 30VA maximum		
<b>Dimensions</b>	<b>Height</b>	<b>Width</b>	<b>Depth</b>
	89mm(with feet removed)	425mm	292mm
<b>Net weight</b>	5.05kgm		

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## GENERAL SPECIFICATIONS

Parameter	Range	Max reading	Best 6½ digit accuracy <sup>3</sup> ± (% rdg + cnts)		Input resistance
			% of reading	Count error	
<b>DC voltage</b>	30mV	30.03000mV	0.0040	365	10GΩ
	300mV	303.0000mV	0.0025	39	10GΩ
	3V	3.030000V	0.0017	6	10GΩ
	30V	30.30000V	0.0035	19	10MΩ
	300V	303.0000V	0.0050	6	10MΩ
<b>DC current</b>	300μA	303.0000μA	0.02	104	1000Ω
	3mA	3.030000mA	0.02	104	100Ω
	30mA	30.30000mA	0.02	104	10Ω
	300mA	303.0000mA	0.07	204	1Ω
	1A	1.000000A	0.07	604	0.1Ω

Parameter	Range	Max reading	Best 6½ digit accuracy <sup>3</sup> ± (% rdg + cnts)	
			% of reading	Count error
<b>Resistance</b>	30Ω	30.30000Ω	0.0065	315
	300Ω	303.0000Ω	0.0045	34
	3kΩ	3.030000kΩ	0.0035	6
	30kΩ	30.30000kΩ	0.0035	6
	300kΩ	303.0000kΩ	0.0040	7
	3MΩ	3.030000MΩ	0.0055	12
	30MΩ	30.30000MΩ	0.0250	80
	300MΩ <sup>3</sup>	303.0000MΩ	1.6	1000
	3.0G Ω <sup>3</sup>	3.030000GΩ	16.0	1000

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Max reading Rates(DCV, DCI Resistance up to 30kOhm) <sup>2</sup>	Power line cycles <sup>3</sup>	Max # of digits	Readings per second-60Hz(50Hz)		
			Auto zero ON	Auto zero OFF	NMR
	.0005	3½	300	1350	0
	.005	4½	280	1250	0
	.1	5½	140(128)	360(312)	0
	1.0	6½	26(22)	53(45)	60dB
	10	7½	2.5(2.0)	4.8(4.0)	80dB
	100	7½	.25(0.2)	0.5(0.4)	90dB
Reading rates(ACV And ACI)	Readings per second-60Hz(50Hz)				
	.0005	3½	1		9.5
	.005	4½	1		9.5
	.1	5½	1(1)		9.25(9.2)
	1.0	6½	1(1)		7.25(6.9)
	10	6½	0.7(0.65)		2.0(1.7)
	100	6½	0.2(0.17)		0.25(0.2)

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## TYPE : DIGITAL MULTIMETER

PARAMETER	TRUE RMS ACV and (AC+DC)V	TRUE RMS ACI and (AC+DC)I
<b>Band width</b>	20 Hz TO 1MHz	20 Hz TO 100 KHz
<b>Crest factor</b>	3.5 TO 1 at full scale	3.5 to full scale
<b>Common mode rejection ratio</b>	>76dB , DC TO 60Hz	-----
<b>Accuracy</b>	(90day) accuracy specified for sine wave inputs,>10%of range. dc component<10% of ac component after 1hr warm-up and within one week of autocal. AC band set to<400hz. dc coupled mode requires 2 hour warm-up.	(90day) accuracy specified for sine wave inputs,>10%of range. dc component<10% of ac component after 1hr warm-up and within one week of autocal. AC band set to<400hz. dc coupled mode requires 2 hour warm-up.
<b>Integration Time</b>	10PLC(POWER LINE CYCLES)	10PLC(POWER LINE CYCLES)

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## TRUE RMS ACV and (AC+DC) V

Range	Max reading	(100Hz to 20 kHz) best 5½ digit accuracy ± (% Rdg + Cnts)				
		AC coupled		DC coupled		Input impedance
		% of reading	count error	% of reading	count error	
30mV	32.50000M	0.13	116	0.17	364	1M Ohm±1% shunted by <90pf
300mV	v	0.13	116	0.17	364	
3.0V	325.0000m	0.13	116	0.17	364	
30.0V	V	0.13	116	0.17	364	
300V	3.250000V 32.50000V 303.0000V	0.19	116	0.23	364	

## TRUE RMS ACI and (AC+DC) I

Range	Max reading	(100Hz to 20 kHz) best 5½ digit accuracy ± (% Rdg + Cnts)			
		AC coupled		DC coupled	
		% of reading	count error	% of reading	count error
30mA	32.50000mA	0.25	290	0.3	1600
300mA	325.0000mA	0.25	290	0.3	1600
1.0A	1.000000A	0.35	290	0.4	1600

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**APPLICATION:** Used to measure different parameters.

**CODE:** DSE0MM0003457A0028.

**MANUAL NO.:** 0028.