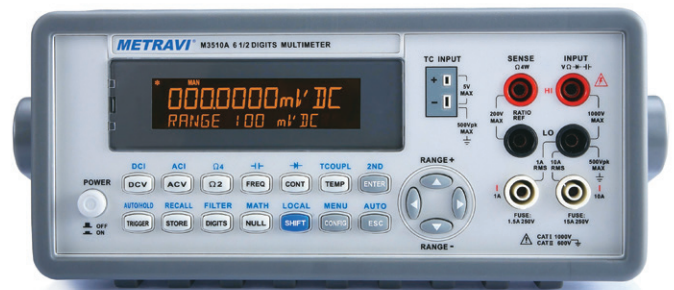


INTRODUCTION

- Best performance / price ratio
- High-speed sampling rate (50000 Rdgs/sec)
- Direct thermocouple Measurement (Built-In cold junction Compensation to improve Accuracy)
- Dual measurement & Dual Display (Including Thermocouple Measurement)
- Capacitance Measurement
- Several Measurements & Mathematic Functions
- Wide Range Current Measurement (Up to 10A)
- DCV Accuracy (0.012% in 1 year)
- High Sensitivity (DCV : 0.1µV & Resistance : 100µΩ)
- Plug & Play Interface : Built - In USB (USBTMC)
- High Storage Memory (Up to 2000 Readings)
- Free Application Software

Note: The 1-year accuracy is subject to calibration accuracy.



In addition, the M3510A provides wide ranges for general measurements, such as...

1. **DCV** : 100mV, 1V, 10V, 100V & 1000V
2. **ACV** : 100mV, 1V to 750V
3. **DCI** : 10mA, 100mA, 1A, 3A & 10A (3A range not available in M-3511A)
4. **ACI** : 1A, 3A & 10A (3A range not available in M-3511A)
5. **2 & 4-wired resistance** : 100Ω, 1KΩ, 10KΩ, 100KΩ, 1MΩ, 10MΩ & 100MΩ
6. **Capacitance** : 1nF, 10nF, 100nF, 1µF, 10µF, 100µF, 1000µF & 10000µF
7. **Thermocouple (only in M- 3510A)** : -250°C ~ 2316°C
8. **RTD** : 2W & 4W
9. **Frequency & Period** : 100mV to 750V (From 3Hz to 300KHz)
10. **Diode** : 1V
11. **Continuity (for 2W)** : 1000Ω

Some additional capabilities of M3510A include:

- Full Math Functions - Percent, Average, Null, Limits, MX+ B, dB & dBm.
- Resolution Adjustment -0.001, 0.006, 0.02, 0.06, 0.2, 0.6, 1. 2, 10 & 100 NPLC
- USB & GPI B (Optional) remote control interface.
- Through M3510A AP software (PT - TOOL) for simulating the real operation on PC.
- Through Microsoft Office Word & Excel (PT - LINK) for remotely storing and recalling the measured values.

*Technical Specifications & Appearance are subject to change without prior notice

ACCESSORIES

- One M3510A Multimeter unit. (88.8 [H] x 214.6 [W] x 280.7 [D] mm, approx. 2.23 Kg)
- One power line cord
- One USB cable
- Standard Test Leads
- One CD (including this electronic User's Manual and software application)
- Optional accessories (According to the Table 1-1) as you ordered

1. M3510A is provided with a Standard Test lead set, described below

Test Lead Ratings :

IEC 61010-031 CAT III

Operating Voltage : 1000V DC

Current : 10 Amperes

UL / CE Rated

DC CHARACTERISTICS

Function	Range	Resolution	1 year Accuracy ²
DVC	100.0000 mV	0.1 μ V	0.0080 + 0.0045
	1.000000 V	1.0 μ V	0.0090 + 0.0010
	10.00000 V	10 μ V	0.0120 + 0.0020
	100.0000 V	100 μ V	0.0120 + 0.0020
	1000.000 V	1 mV	0.0200 + 0.0030
DCI	10.00000 mA	10 nA	0.050 + 0.020
	100.0000 mA	100 nA	0.050 + 0.010
	1.000000 A	1 μ A	0.150 + 0.020
	3.00000 A	10 μ A	0.200 + 0.030
	10.00000 A	10 μ A	0.0250 + 0.050
2W Ω^3 / 4A Ω	100.0000 Ω	100 $\mu\Omega$	0.020 + 0.005
	1.000000 K Ω	1 m Ω	0.020 + 0.002
	10.00000 K Ω	10 m Ω	0.020 + 0.002

1. The specification are under 2 hour warm-up condition with the setting 10 PLC, and they're relative to the calibrator specifications in PICO TEST

2. (% of reading + % of range). (23°C 5°C)

3. The Null function must be used when the 2W Ω is selected

	100.0000 K Ω	100 m Ω	0.020 + 0.002
	1.000000 M Ω	1 Ω	0.020 + 0.004
	10.00000M Ω	10 Ω	0.100 + 0.004
	100.0000 M Ω	100 Ω	1.500 + 0.005
DIODE	1.00000 V	10 μ V	0.020 + 0.020
CINTINUITY (for 2W Ω)	1000.00 Ω	10 m Ω	0.020 + 0.030

FREQUENCY & PERIOD

Function	Range	Frequency	1 year Accuracy
FREQUENCY & PERIOD	100mV to 750V ⁴	10-40	0.03
		40-300K	0.02

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DC CHARACTERISTICS

Function	Range	Resolution	Frequency	1 year Accuracy ²
ACV (TRMS)	100.0000 mV	0.1 μ V	10 - 20K	0.1200 + 0.050
			20K - 50K	0.2500 + 0.050
			50K - 100K	0.6500 + 0.80
			100K - 300K	4.8000 + 0.800
	1.000000 V to 750.0000 V	1.0 μ V to 1mA	10 - 20K	0.1200 + 0.040
			20K - 50K	0.2500 + 0.050
			50 K - 100K	0.6500 + 0.80
ACI ⁶ (TRMS)	1.000000 A	1 μ A	10 - 1K	0.200 + 0.040
			1K - 5K	1.00 + 0.100
			10 - 1K	0.300 + 0.060
	3.00000 A	10 μ A	1K - 5K	1.500 + 0.150
	10.00000 A	10 μ A	10 - 1K	0.500 + 0.120
1K - 5K			2.50 + 0.20	

4. The Range 750V is limited to 100KHz

5. Bandwidth : 3Hz. Specifications are for sine wave input > 5% of range. For <50 KHz and inputs within 1% ~ 5% of range, and 03% of range additional error. For 50KHz ~ add 035% of range.

6. For 10A range, > DC 10A or AC 10Arms 30 seconds ON and 30 seconds OFF

CAPACITANCE CHARACTERISTICS

Function	Range	Test Current	1 year Accuracy
CAPACITANCE ⁷	1 nF	10 μ A	2.0 + 0.80
	10 nF	10 μ A	1.0 + 0.50
	100 nF	100 μ A	1.0 + 0.50
	1 μ V	100 μ A	1.0 + 0.50
	10 μ V	100 μ A	1.0 + 0.50
	100 μ V	1 mA	1.0 + 0.50
	1000 μ V	1 mA	1.0 + 0.50
	10000 μ V	1 mA	2.0 + 0.50

TEMPERATURE CHARACTERISTICS

Function	Range	Test Current	1 year Accuracy
TEMPERATURE	B	600°C ~ 1820°C	1.5°C
	C	0°C ~ 2316°C	1.5°C
	E	-250°C ~ 1000°C	1.5°C
	J	-210°C ~ 1200°C	1.5°C
	K	-200°C ~ 1372°C	1.5°C
	N	-200°C ~ 1300°C	1.5°C
	R	0°C ~ 1767°C	1.5°C
	S	0°C ~ 1767°C	1.5°C
	T	250°C ~ 400°C	1.5°C

GENERAL SPECIFICATIONS

item	Limitation & description
Power Supply Power Line Frequency	100V / 120V / 220V (230V) / 240V
	50/60 Hz
E Power Consumption Operating Temperature	25 VA Maximum 0°C to 50°C
Operating Humidity	Maximum relative humidity 80% for temperature up to 35°C.
Storage Temperature Operating Altitude Bench Dimension for Rack (W x H x D)	- 40°C to 70°C Up to 2000 M 214.6 x 88.6 x 280.7 mm
Weight	2230g EN61010-1:2010 (3rd Edition) EN61010-2-030:2010 (1st Edition)
Safety	Installation CAT II, Measurement CAT II 600V
EMC	Pollution Degree 2 EN61326-1:2006, EN61326-2-1:2006
VIBRATION	MIL- 28800F, 3.8.4.2 VI VIBRATION, SINUSOIDAL CLASS 1,2
SHOCK	MIL- PRF-28800F, 4.5.5.4 MECHANICAL
Warranty	One Year

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