

DIGITAL MULTIMETER & OSCILLOSCOPE

NAGMAN 250

SALIENT FEATURES

- 4½-digit multimeter with built-in oscilloscope
- Instantly shows Vmax, Vmin, Vp-p, Vavg, Vrms, and frequency
- Full-key design for simple operation and longer device life
- Auto-switches range to prevent damage from wrong connections
- Powered by 18650 lithium batteries for extended use
- CAT III 1000 V safety rating for direct high-voltage waveform measurement
- 2.8-inch IPS screen with wide viewing angle and sharp visuals
- Bright, high-contrast dual-theme mode for any lighting condition



Typical Photo: Final Product look may vary

GENERAL SPECIFICATIONS

Sleep Mode	√
Low battery indication	√
Backlight	√
Input Protection	√
Input Impedance	≥ 10 MΩ
Battery	Single 18650 3.7V
Display	2.8 inch IPS:320*240 resolution
Weight (without package)	Approx. 0.33kg(without battery)
Dimension	188mm(Length)* 93mm(Width)*41.5mm(Depth)
Working temperature	0°C to 40°C
Storage temperature	—10°C to 60°C
Relative Humidity	≤ 80%
Altitude	Operating: 3,000 meters Non-operating: 15,000 meters
Interval Period of Adjustment	One year is recommended for the calibration interval period.

OSCILLOSCOPE SPECIFICATIONS

Analog bandwidth ^[1]	1MHz (only ACV scale)
Maximum sample	5.0 MSa/s
Channel	1
Input impedance	approximately 10MΩ
Time base range	2.5us~10s/grid
Time base accuracy	±(0.01% + 0.1div)
Voltage vertical sensitivity range	30mV~500V/grid
Current vertical sensitivity range	100μA~5A/grid
DC Gain Accuracy	±(5% + 0.2div)
Maximum voltage limit	1000V DC + AC Peak value
Maximum current limit	15A DC + AC Peak value
Trigger mode	Auto / Normal / Single
Autoset	Time base / Vertical amplitude / Trigger value
Trigger edge	Rise edge / Fall edge
Measurement function	Vmax, Vmin, Vpp, Vavg, Vrms, Freq

[1] The simulated bandwidth of 1MHz attenuates to -5 dB.

MULTIMETER SPECIFICATIONS

Function		Measurement Range	Resolution/ Frequency Range	Accuracy ± (% of reading + LSB)	
DC Voltage (V)	mV	20.000mV	0.001mV	±(0.1%+20dig)	
		200.00mV	0.01mV	±(0.1%+6dig)	
	V	2.0000V	0.1mV	±(0.1%+5dig)	
		20.000mV	1mV		
		200.00mV	10mV		
		1000.0V	0.1V	±(0.15%+5dig)	
AC Voltage (V)	mV	20.000mV	0.001mV	VRMS Freq range : 40Hz-1000Hz	±(0.6%+10dig)
		200.00mV	0.01mV		
	V	2.0000V	0.1mV		
		20.000mV	1mV		
		200.00mV	10mV		
		700.0V	0.1V		±(0.8%+10dig)
DC Current (A)	μA	200.00μA	0.01μA	±(0.6%+10dig)	
		2000.0μA	0.1μA	±(0.5%+10dig)	
	mA	20.000mA	1μA	±(0.6%+10dig)	
		200.00mA	10μA	±(0.5%+10dig)	
	A	2.0000A	100μA	±(1.0%+10dig)	
		10.000A ^[1]	1mA	±(2.0%+10dig)	
AC Current (A)	μA	200.00μA	0.01μA	VRMS Freq range : 40Hz-1000Hz	±(0.8%+10dig)
		2000.0μA	0.1μA		
	mA	20.000mA	1μA		
		200.00mA	10μA		
	A	2.0000A	100μA		±(1.5%+10dig)
		10.000A ^[1]	1mA		±(2.5%+10dig)
Resistance(Ω)		200.00Ω	0.01Ω	±(0.8%+10dig)	
		2.0000kΩ	0.1Ω	±(0.3%+5dig)	
		20.000kΩ	1Ω	±(0.3%+5dig)	
		200.00kΩ	10Ω		
		2.0000MΩ	100Ω		
		20.000MΩ	1kΩ	±(0.5%+5dig)	
		100.00MΩ	10kΩ	±(5.0%+10dig)	
Capacitance(F)		2.000nF	1pF	±(5.0%+10dig)	
		20.00nF	10pF	±(3.0%+10dig)	
		200.0nF	100pF		
		2.000μF	1nF		
		20.00μF	10nF		
		200.0μF	100nF		
		2.000mF	1μF		
		20.00mF ^[2]	10μF		
Frequency ^[3] (Hz)		200.00Hz	0.01Hz	±(0.1%+5dig)	
		2.0000kHz	0.1Hz		
		20.000kHz	1Hz		
		200.00kHz	10Hz		
		2.0000MHz	0.1kHz		
		20.000MHz	1kHz		

Duty Cycle^[4] (%)	0.1% -99.9% (Typical: Vrms =1 V, f=100Hz)	0.1%	±(1.2%+3dig)
	0.1%-99.9% (≥ 1 kHz)		±(2.5%+10dig)
Diode	3.0000V	0.0001V	±(1.0%+10dig)
Continuity	1000.0Ω	0.1Ω	
Maximum Reading	20000		

[1] When measuring current, for 10A the measuring duration should not be over 2 minutes within 10 minutes, and in this 10 minute, no other current should flow through except within the measuring duration.

[2] When measuring capacitance, for the 20.00mF range, the measuring duration should be over 30 seconds.

[3] When measuring frequency, the typical waveform is Square or Sine. The signal meets the following conditions:

Frequency	Amplitude(rms)
1 Hz – 20 MHz	≥ 1 V

[4] When measuring duty cycle, the typical waveform is Square.

STANDARD INCLUSIONS

- Basic Instrument
- 1 set of probes
- USB-TYPE C line
- Conformance Certificate
- Instruction Manual

OPTIONAL

- Calibration Certificates are issued in Accordance with our Scope as granted by NABL per ISO/IEC 17025:2017 Standards

Manufactured by



Since 1972

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AN ISO 9001:2015 CERTIFIED COMPANY

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Specifications subject to change owing to continuous development. Contact us for latest Datasheet.

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