

TRMS AC/DC CLAMP METER & OSCILLOSCOPE

NAGMAN 249

SALIENT FEATURES

3-in-1 AC/DC clamp meter with recorder and oscilloscope
 20,000-count true-RMS auto-ranging meter
 Records, compares, and stores data via i-meter app (Android/iOS)
 Full touch-key one-hand operation
 2.8" IPS LCD with dual-theme display for any lighting
 NCV (non-contact voltage) detection
 Long-lasting 18650 lithium battery



Typical Photo: Final Product look may vary

OSCILLOSCOPE SPECIFICATIONS

Analog Bandwidth ^[1]	Voltage: 1MHz Current: 1KHz
Sample Mode	Real-time sample
Real-Time Sampling Rate	5.0 MSa/s
Channel	1
Input Impedance	≥10 MΩ
Maximum Input Voltage	Maximum peak voltage 1000V
Maximum Sample Current	Maximum peak current 600A
Scan Speed	2.5 us/div - 10 s/div
Time Base Accuracy	±(0.01 % + 0.1 div)
Sensitivity	30 mV/div - 500 V/div
Displacement Range	±3 grid
DC Gain Accuracy	±(5%+0.2div)
Measurement Value	Rms, Freq, Max, Min, PK-PK, Avg
Trigger Mode	Auto
Trigger Type	Rise, Fall
Bluetooth Communication	A smart phone can be used to view the measurement data of the multimeter on the mobile phone side, perform remote control, display data charts, and store the measurement data in CSV format.
Automatic Shutdown	When all functions are not used, the meter will automatically shut down in about 10 minutes. (The default is 10 minutes of automatic shutdown when starting, which can be canceled)
True Effective Value	√
Display Mode	DMM or OSC
Return Zero Measurement	√
Input Protection	√
Digital Hold	√
Power	Single section 18650 3.7V
Low Battery Display	When the power is low, there will be a low power window, and wait for a period to shut down automatically.
Backlight Function	√
LCD Size	2.8 inch
Weight	Approx. 0.34kg
Dimension	233mm(L) x 94.5mm(W) x 37.8mm(D)
Interval Period of Adjustment	One year is recommended for the calibration interval period

[1] The signal is within -5dB attenuation with an analog bandwidth of up to 1MHz.

MULTIMETER SPECIFICATIONS

Function		Measurement Range	Resolution	Function	
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	200.00mV	0.01mV	VRMS Freq range : 40Hz-1000Hz	±(0.6%+10dig)
	V	2.0000V	0.1mV		
		20.000mV	1mV		
		200.00mV	10mV		
		700.0V	0.1V		±(0.8%+10dig)
DC Current (A)	A	20.00A	0.01A	±(2.0%+10dig)	
		200.0A	0.1A	±(2.0%+5dig)	
		600A	1A		
AC Current (A)	A	20.00A	0.01A	VRMS Freq range : 40Hz-1000Hz	±(3.0%+10dig)
		200.0A	0.1A		±(2.5%+5dig)
		600A	1A		
Inrush Current (A)	A	20.00A	0.01A	VRMS Freq range : 40Hz-1000Hz	±(10.0%+10dig)
		200.0A	0.1A		
		600A	1A		
NCV		Support			
Resistance (Ω)		200.00Ω	0.01Ω	±(0.8%+10dig)	
		2.0000kΩ	0.0001kΩ	±(0.3%+10dig)	
		20.000kΩ	0.001kΩ		
		200.00kΩ	0.01kΩ		
		2.0000MΩ	0.0001MΩ		
		20.000MΩ	0.001MΩ	±(0.5%+5dig)	
		100.00MΩ	0.01MΩ	±(5.0%+10dig)	
Capacitance (F)		2.000nF	0.001nF	±(5.0%+10dig)	
		20.00nF	0.01nF	±(3.0%+10dig)	
		200.0nF	0.1nF		
		2.000μF	0.001μF		
		20.00μF	0.01μF		
		200.0μF	0.1μF		
		2000μF	1μF		
		20.00mF ^[1]	0.01mF		
Frequency ^[2] (Hz)		200.00Hz	0.01Hz	±(0.1%+5dig)	
		2.0000kHz	0.0001kHz		
		20.000kHz	0.001kHz		
		200.00kHz	0.01kHz		
		2.0000MHz	0.0001MHz		
		20.000MHz	0.001MHz		
Duty Cycle ^[3] (%)		0.1% -99.9% (Typical: Vrms =1 V, f=100Hz)	0.10%	±(1.2%+3dig)	

	0.1%-99.9% (≥ 1 kHz)		$\pm(2.5\%+10\text{dig})$
Diode	3.0000V	0.0001V	Open circuit voltage 3.2V
On-Off	0~200.0 Ω	0.1 Ω	Buzzer limit 50 Ω ; The measurement value is displayed from 00 to 200.0 Ω and "OL" is displayed if the value exceeds

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

[2] 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

[3] 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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