Clamp Meter With Oscilloscope

RoHS Compliant

Standard conditions: The environment temperature is 18°C to 28°C, the relative humidity is less than 80%.

Note:

- When measuring AC voltage,AC current, accuracy guarantee range is 10% to 100% of the range.
- When measuring DC voltage, DC current or capacitance, accuracy guarantee range is 5% to 100% of the range.

Function		Measurement Range	Resolution	Function	
DC Voltage (V)	mV	20.000mV	0.001mV	±(0.1%+20°)	
		200.00mV	0.01mV	±(0.1%+6°)	
	V	2.0000V	0.0001V	±(0.1%+5°)	
		20.000V	0.001V		
		200.00V	0.01V		
		1000.0V	0.1V	±(0.15%+5°)	
AC Voltage (V)	mV	200.00mV	0.01 mV	VRMS Freq range: 40Hz-1000Hz	±(0.6%+10°)
	V	2.0000V	0.0001V		
		20.000V	0.001V		
		200.00V	0.01V		
		1000.0V	0.1V		±(0.8%+10°)
DC Current (A)	A	20.00A	0.01A	±(2.0%+10°)	
		200.0A	0.1A	±(2.0%+5°)	
		1000A	1A		
AC Current (A)	A	20.00A	0.01A	VRMS Freq range: 40Hz-1000Hz	±(3.0%+10°)
		200.0A	0.1A		±(2.5%+5°)
		1000A	1A		

Function		Measurement Range	Resolution	Function	
Inrush Current(A)	A	20.00A	0.01A	VRMS Freq range 40Hz-1000Hz:	±(10.0%+10°)
		200.0A	0.1A		
		1000A	1A		
NCV		Support			
Resistance(Ω)		200.00Ω	0.01Ω	±(0.8%+10°)	
		2.0000kΩ	0.0001kΩ	±(0.3%+10°)	
		20.000kΩ	0.001kΩ		
		200.00kΩ	0.01kΩ		
		2.0000MΩ	0.0001MΩ		
		20.000MΩ	0.001MΩ	±(0.5%+5°)	
		100.00MΩ	0.01MΩ	±(5.0%+10°)	
Capacitance(F)		2.000nF	0.001nF	±(5.0%+10°)	
		20.00nF	0.01nF	±(3.0%+10°)	
		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%+5°)	
		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%+3°)	
		0.1%-99.9% (≥1 kHz)		±(2.5%+10°)	
Diode		3.0000V	0.0001V	Open circuit voltage 3.2V	
On-Off		0-200.0Ω	0.1Ω	Buzzer limit 50Ω; The measurement value is displayed from 00 to 200.0Ω, 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.

Note: when measuring resistance and capacitance, the influence of the resistance reactance of the pen itself on the measured value should be considered

Oscilloscope Specification

Characteristics	Instruction
Analog bandwidth	Voltage: 1MHz Current: 1KHz
Sample mode	Real-time sample
Real-time sampling rate	5 MSa/s
Channel	1
Input impedance	≥10 MΩ
Maximum input voltage	Maximum peak voltage 1000V
Maximum sample current	Maximum peak current 1000A
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
Sensitivity 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 cancelled)
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 of time to shut down automatically.
Backlight function	√
LCD Size	2.8 inch
Weight	Approx. 0.35kg
Dimension	248mm (L) x 94.5mm (W) x 37.8mm (D)

Interval Period of Adjustment:

One year is recommended for the calibration interval period.

Note: The signal is within 5dB attenuation with an analog bandwidth of up to 1MHz.

Part Number Table

Description	Part Number
Clamp Meter With Oscilloscope, 20000, 20A To 1000A, 1MHz	MP101