



## HDS120

## 4½ Digit Multimeter + Oscilloscope

- ◆ **Waveform Automatic Measurement:** including Vmax (maximum voltage), Vmin (minimum voltage), Vp-p (peak-to-peak voltage), Vavg (average voltage), Vrms (RMS voltage), and Hz (frequency).
- ◆ **Friendly user experience:** full button design, easy operation, and extended equipment life.
- ◆ **Smart Probe Detection:** automatically switches gears according to the insertion position of the test pen, effectively preventing damage to the instrument due to misoperation.
- ◆ **Efficient energy management:** powered by 18650 lithium battery, it provides longer use time and makes your measurement work more durable.
- ◆ **Safe high-voltage measurement:** compliant with CAT III 1000V standard, it can safely measure high-voltage waveforms up to 1000V, expanding the usage scenarios.
- ◆ **High-definition display experience:** The 2.8-inch IPS screen provides a wide viewing angle and excellent display effects, ensuring clear reading of data at any angle.
- ◆ **Environmentally adaptable display:** The high-brightness and high-contrast display in dual-theme mode provides a clear view whether in strong light or dark light environments, optimizing the user experience.

# Master with Precision: Your Handheld Laboratory



2-in-1, Complete Functionality

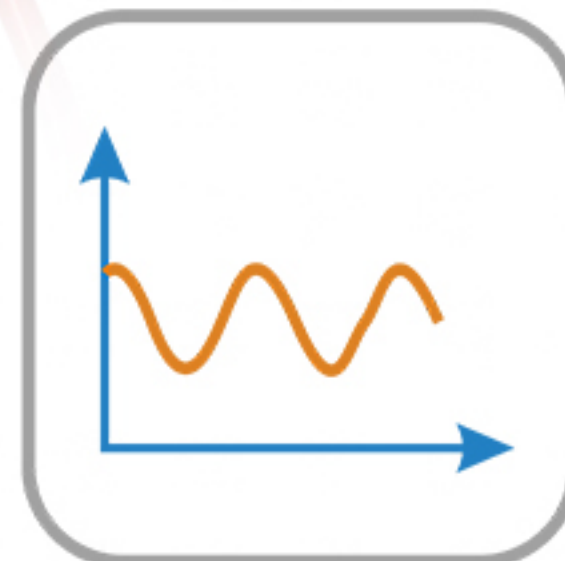


Multimeter

Oscilloscope



2-in-1



1MHz DSO



4½ Digit



True RMS



2.8-inch IPS



Full Keypad  
Operation



18650  
lithium Battery



CATIII 1000V



AC/DC  
Voltage



AC/DC  
Current



Resistance



Capacitance



Diode Test



On-off  
Warning



Duty Ratio  
Test



Frequency  
Test



Digital Hold



Automatic



Automatic  
Shutdown



Non-contact  
test

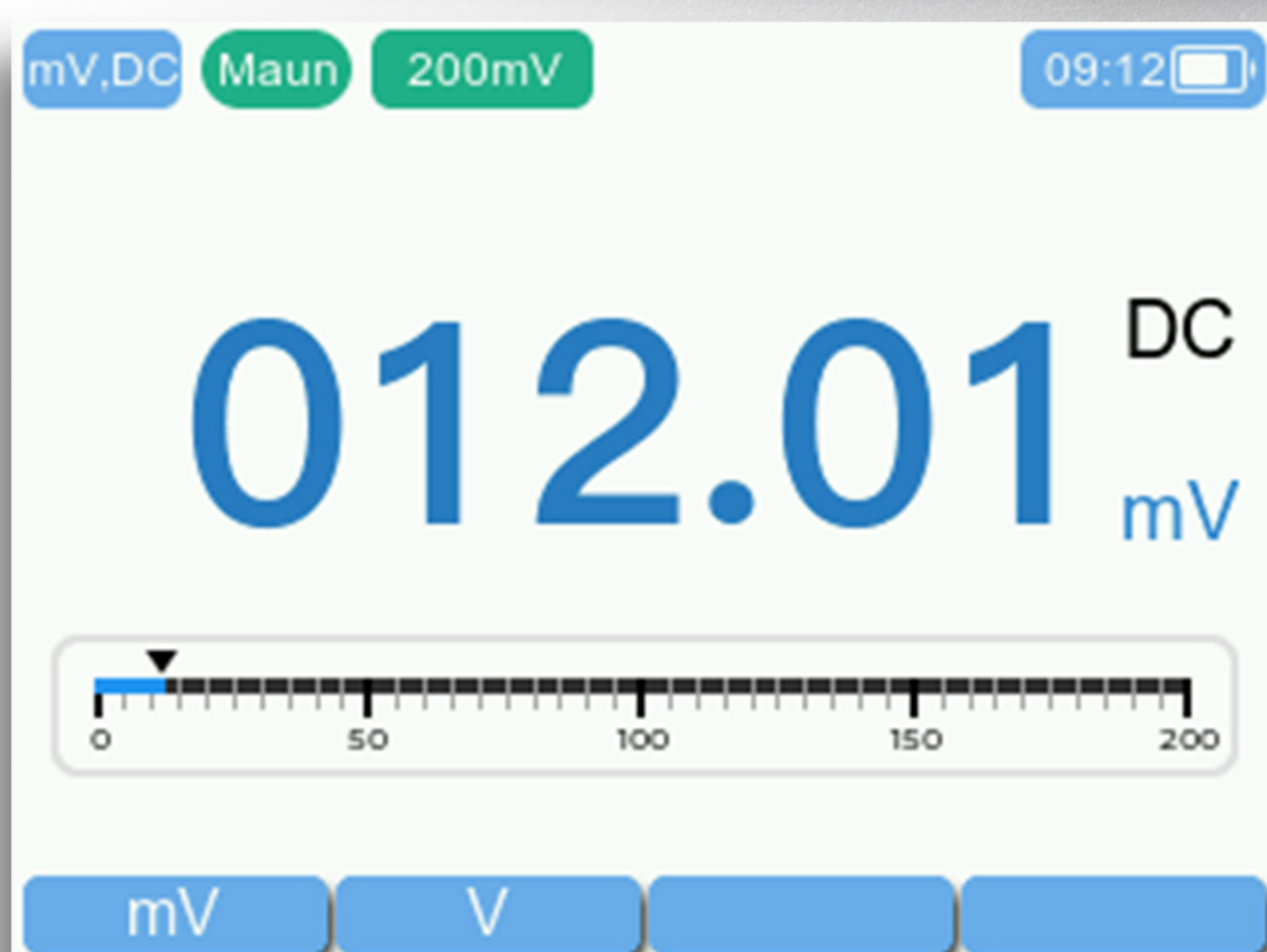


Reverse Display  
Backlight



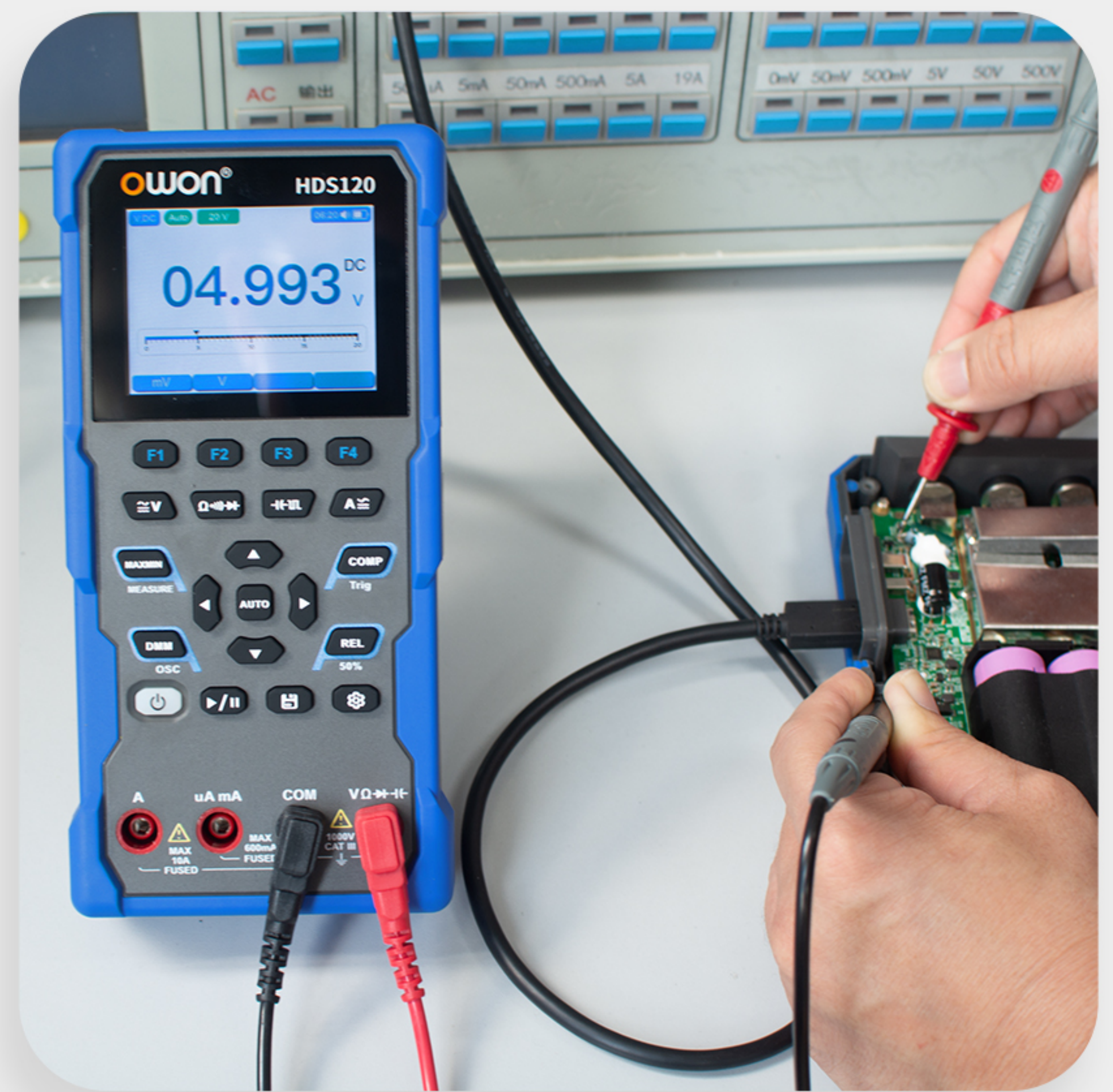
# Broad Vision, Brightness at Your Command

2.8-inch IPS screen with good viewing angle, suitable for outdoor use.



Dual theme display, Adapts to Different Lighting Conditions for Clear Visualization.

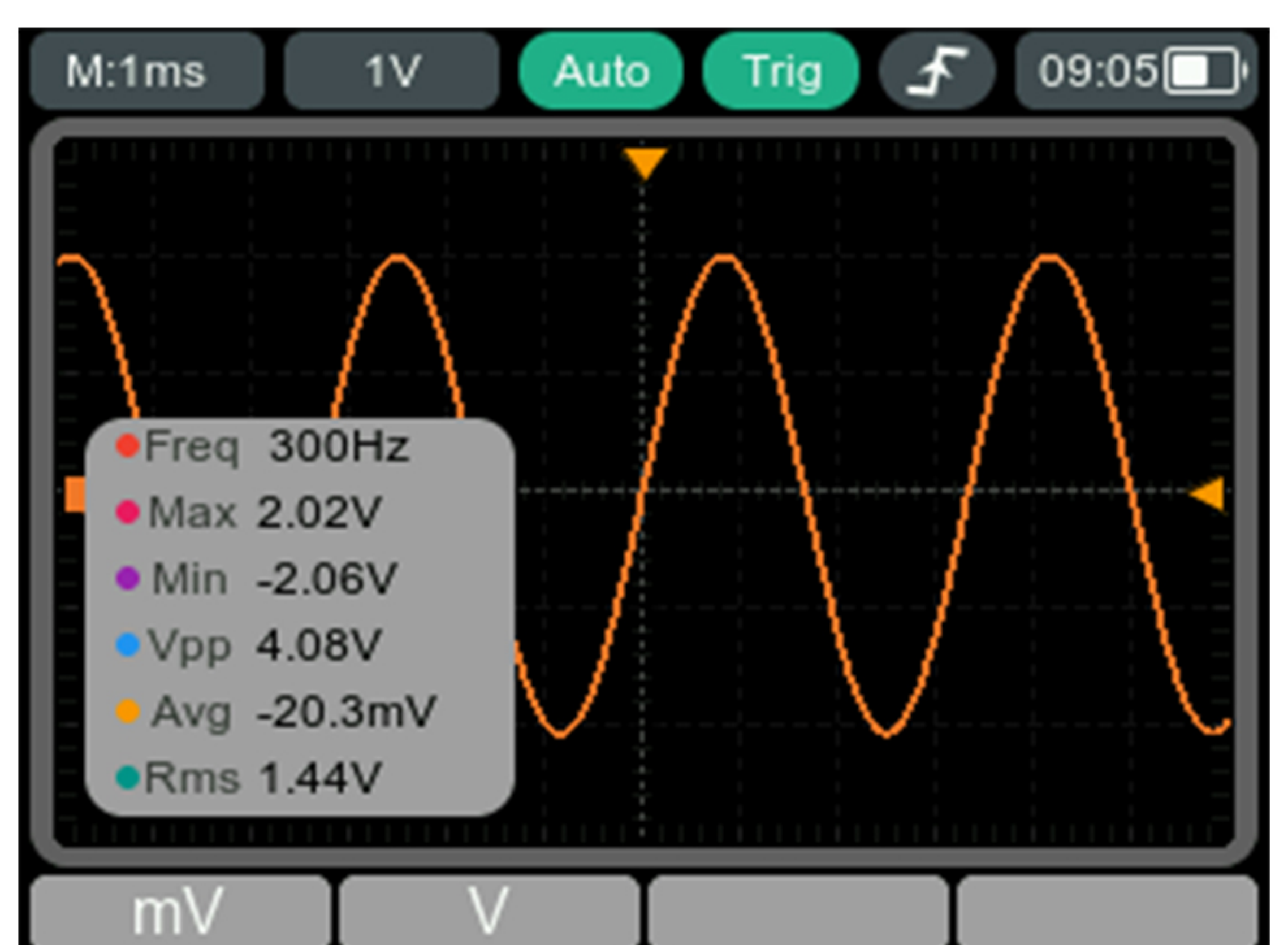
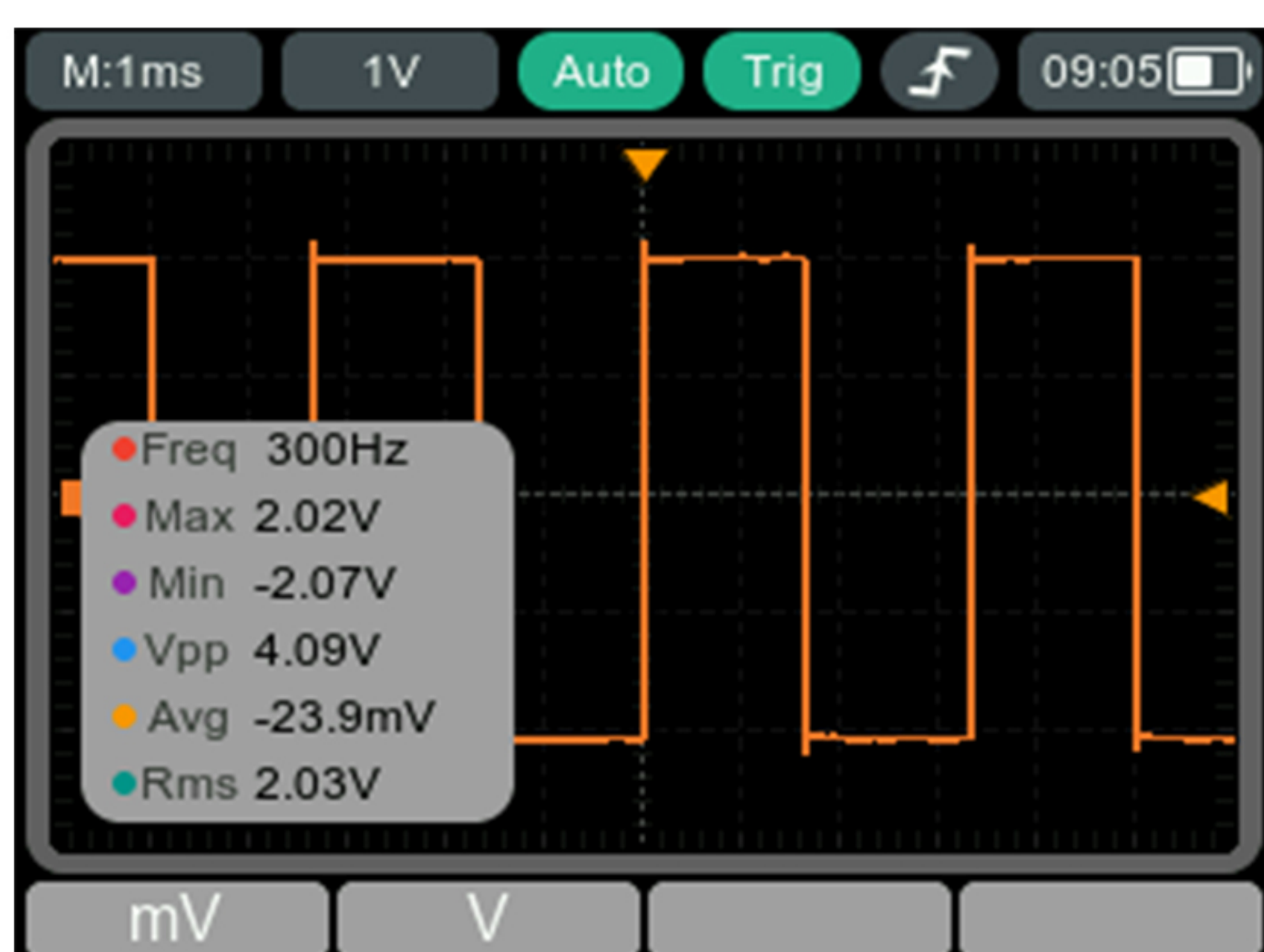
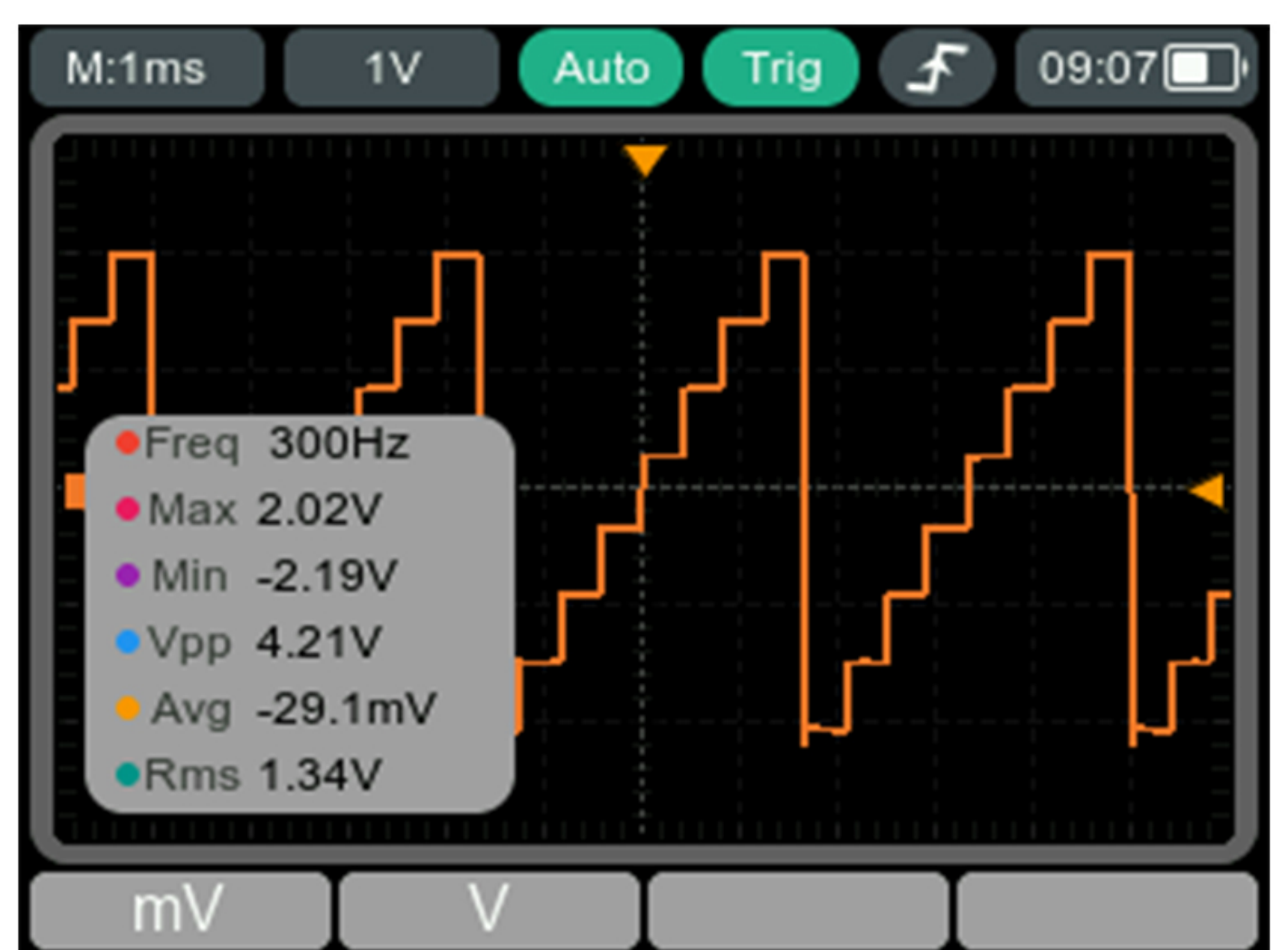
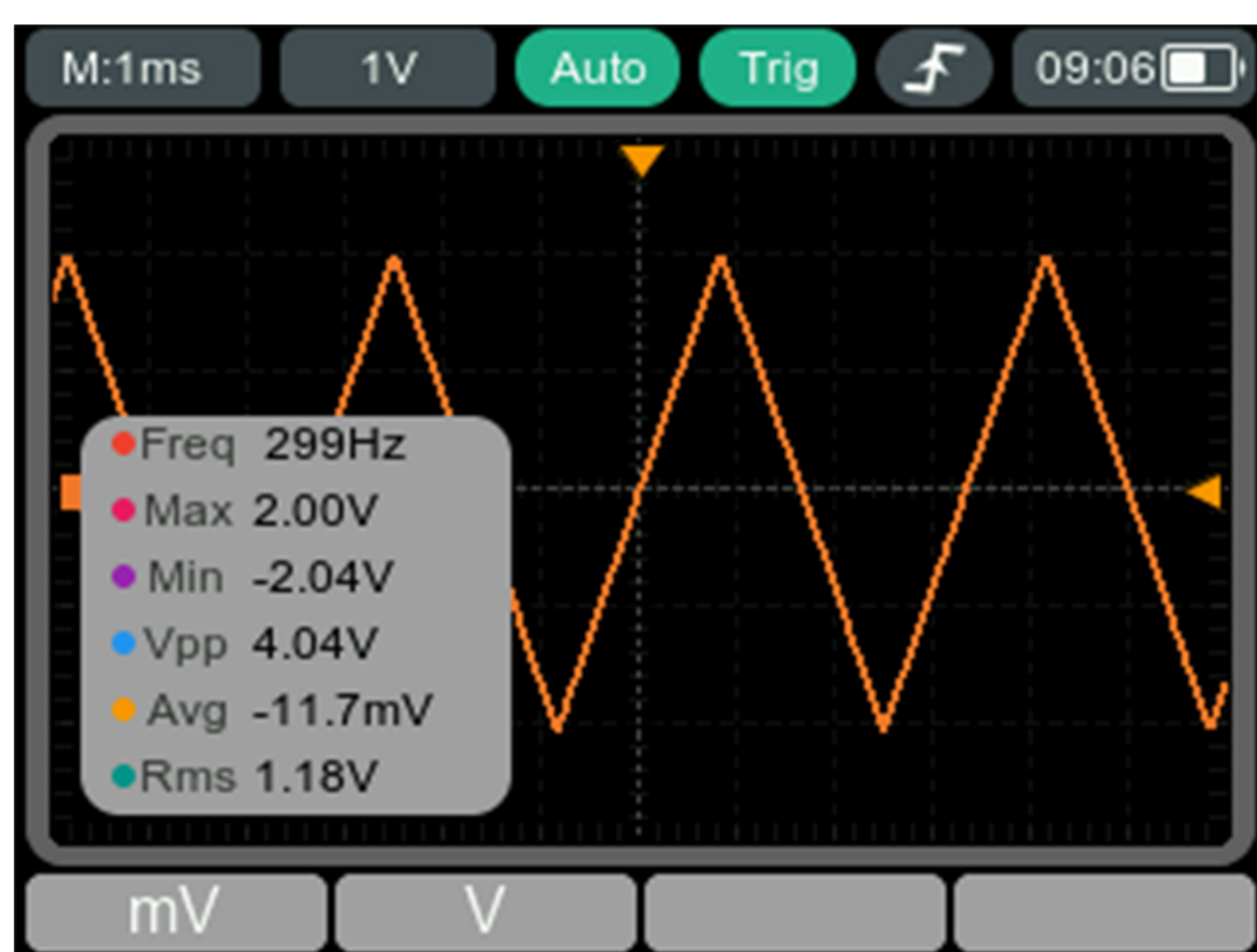
# Full button setting, easy and quick to use.



- Button design, one-handed direct switching improves work efficiency.
- 100,000 times durability test, durable and not easily affected by the environment.

## 1MHz analog bandwidth

Automatically calculate and test Vmax, Vmin, Vp-p, Vavg, Vrms, Hz



# Rapid Measurement of Strong Electrical Waveforms (e.g. Three-Phase Electricity)



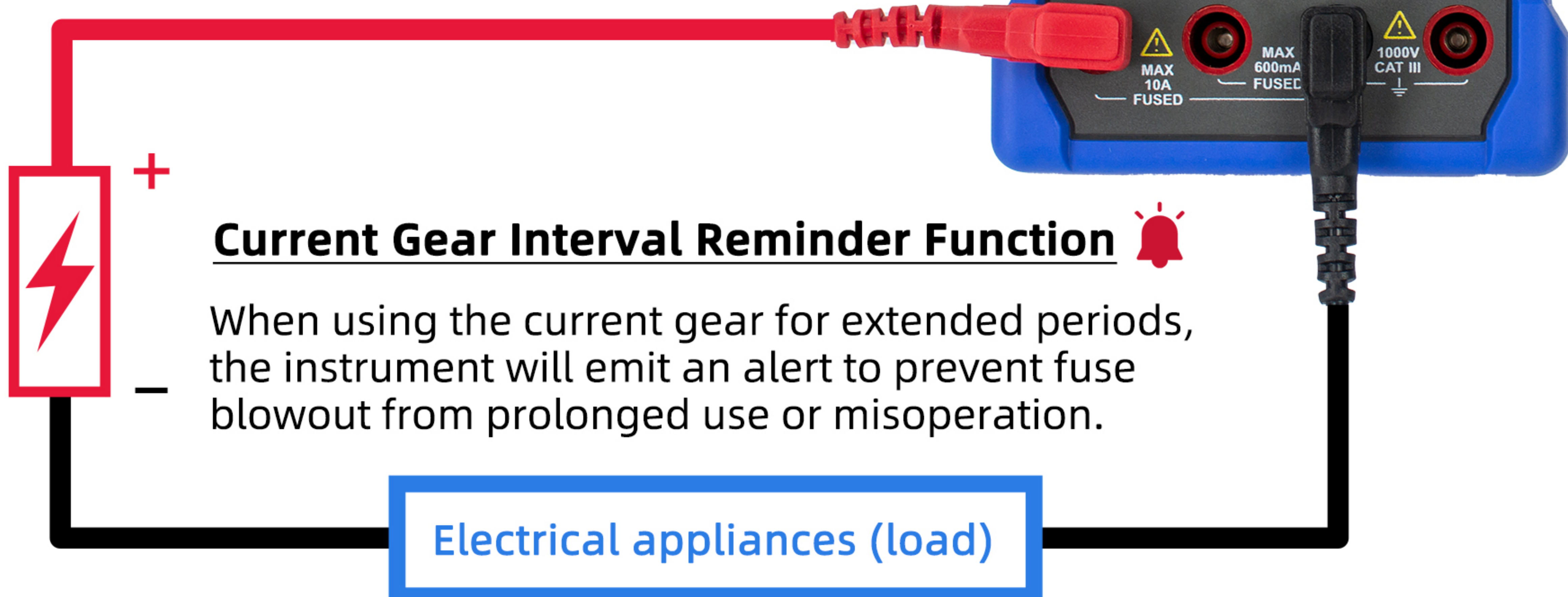
The current waveform can be directly measured using a probe



# No Safety Compromises Our Commitment to Professionalism in Every Operation.

## Automatic detection function of test pens

Automatically switches gears according to the insertion position of the test pen, effectively preventing damage to the instrument due to misoperation.



## Current Gear Interval Reminder Function

When using the current gear for extended periods, the instrument will emit an alert to prevent fuse blowout from prolonged use or misoperation.

## Charging protection function

To ensure measurement safety, the instrument cannot be charged via USB when it is plugged in.



# Accurate Measurement, Right at Your Fingertips



● 1 kHz Frequency  
Oscilloscope Measurement



● 1 kΩ Resistance Measurement



● 10 mV Voltage Measurement



● 20 mA Current Measurement

## Product performance parameters

**MODEL: HDS120**

### Multimeter Specification

	Measurement Range	Accuracy
DC Voltage(V)	20.000mV	±(0.1%+20 dig)
	200.00mV	±(0.1%+6 dig)
	2.0000V/20.000V/200.00V	±(0.1%+5 dig)
	1000.0V	±(0.15%+5 dig)
AC Voltage (V)	20.000mV/200.00mV/2.0000V/20.000V/200.00V	±(0.6%+10dig)
	750.00V	±(0.8%+10dig)
DC Current (A)	200.00uA	±(0.6%+10dig)
	2000.0uA	±(0.5%+10dig)
	20.000mA	±(0.6%+10dig)
	200.00mA	±(0.5%+10dig)
	2.0000A	±(1.0%+10dig)
	20.000A	±(2.0%+10dig)
AC Current (A)	200.00uA/2.0000mA	±(0.8%+10dig)
	20.000mA/200.00mA	
	2.0000A	±(1.5%+10dig)
	10.000A	±(2.5%+10dig)
Resistance(Ω)	200.00Ω	±(0.8%+10dig)
	2.0000kΩ/	±(0.3%+5dig)
	20.000kΩ/200.00kΩ/2.0000MΩ	±(0.3%+5dig)
	20.000MΩ	±(0.5%+10dig)
	100.00MΩ	±(5.0%+10dig)
Capacitance(F)	2.0000nF	±(5.0%+10dig)
	20.000nF/200.00nF/2.0000μF/20.000μF 200.00μF/2.0000mF/20.000mF	±(3.0%+10dig)
Frequency (Hz)	200.00Hz/2.0000kHz	±(0.1%+5dig)
	20.000kHz/200.00kHz/2.0000MHz/20.000MHz	
Duty Cycle	0.1%~99.9%(typical value: Vrms=1V,f=1kHz)	±(1.2%+3dig)
	0.1%~99.9%(≥1kHz)	±(2.5%+3dig)
Diode	3.0000V	±(1.0%+10dig)
On-Off	1000.0Ω	
Display	20000	

### Oscilloscope Specification

Analog bandwidth	1MHz (only ACV scale)	Maximum sample	5.0Msps
Channel	1	Input impedance	≈10MΩ
Time base range	2.5uS~10S/div	Time base accuracy	± (0.01% + 0.1div)
Voltage vertical sensitivity range	30mV~500V/grid	Current vertical sensitivity range	100μA~5A/grid
Vertical amplitude accuracy	± (5% + 0.2div)	Measurement function	Vmax,Vmin,Vp-p,Vavg,Vrms,Hz
Maximum voltage limit	1000V DC+AC Peak value	Maximum current limit	15A DC+AC Peak value
Trigger mode	Auto/Normal/Single	Trigger edge	Rise edge/Fall edge
Autoset	Time base/Vertical amplitude/Trigger value		

### Other Specification

Low battery indication	√	Sleep Mode	√	Relative Measurement	√
Backlight	√	Input Protection	√	Input Impedance	≥10MΩ
Safety Compliance	CATIII1000V	LCD Size	2.8" LCD	Weight(without package)	0.35kg
Battery	18650	Dimension (L*W*H)	93mm x 41.5mm x 188mm		