KAIWEETS

User Manual

Smart Digital Multimete KM601
True RMS 10000 Counts

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Safety Information

A Warning identifies conditions and procedures that are dangerous to the user.

Warnings

- To prevent possible electrical shock, fire, or personal injury:
- · Read all safety information before you use the Product.
- Do not alter the Product and use only as specified, or the protection supplied by the Product can be compromised.
- · Carefully read all instructions.
- Comply with local and national safety codes. Use personal protective equipment (approved rubber gloves, face protection, and flame-resistant clothes) to prevent shock and arc blast injury where hazardous live conductors are exposed.
- Limit operation to the specified measurement category, voltage, or amperage ratings.
- Use Product-approved measurement category (CAT), voltage, and amperage-rated accessories (probes, test leads, and adapters) for all measurements.
- Do not touch voltages >30 V ac RMS, 42 V ac peak, or 60 V dc.

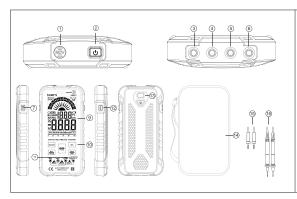
- · Use the correct terminals, function, and range for measurements.
- Do not use the Product around explosive gas, vapor, or in damp or wet environments.
- Do not operate the Product with covers removed or the case open. Hazardous voltage exposure is possible.
- Examine the case before you use the Product. Look for cracks or missing plastic. Carefully look at the insulation around the terminals.
- Disconnect power and discharge all high-voltage capacitors before you measure resistance, continuity, capacitance, or a diode
 junction.
- · Do not apply more than the rated voltage, between the terminals or between each terminal and earth ground.
- Remove circuit power before you connect the Product in the circuit when you measure current. Connect the Product in series
 with the circuit.
- Measure a known voltage first to make sure that the Product operates correctly.
- Do not use test leads if they are damaged. Examine the test leads for damaged insulation, exposed metal, or if the wear indicator shows. Check test lead continuity.
- · Remove the input signals before you clean the Product.

Symbols

Symbols	Description	Symbols	Description	
\triangle	WARNING. RISK OF DANGER.	A	WARNING. HAZARDOUS VOLTAGE. Risk of electric shock.	
4	Hazardous Voltage	CE	Conforms to European Union directives.	
CATII	Measurement Category II is applicable to test and measuring circuits connected directly to utilization points (socket outlets and similar points) of the low-voltage MAINS installation.			
CATI	Measurement Category III is applicable to test and measuring circuits connected to the distribution part of the building's low-voltage MAINS installation.			
CAT II	Measurement Category IV is applicable to test and measuring circuits connected at the source of the building's low-voltage MAINS installation.			
<u> X</u>	This product complies with the WEEE Directive marking requirements. The affixed label indicates that you must not discard this electrical/electronic product in domestic household waste. Product Category: With reference to the equipment types in the WEEE Directive Annex I, this product is classed as category 9 'Monitoring and Control Instrumentation' product. Do not dispose of this product as unsorted municipal waste.			

Product Familiarization

Overview



- 1 NCV Detection sensor
- ② Power button
- ③ 10A Jack
- 4 mA Jack5 COM Jack
- ⑥ LiveΩ+(→+···)) Jack
- 7 Flashlight button

- ® Alarm indication light
- Colorful LCD Screen
- 10 Functions&buttons
- ① Jack indication light
- 12 APO button
- [®] Flashlight
- (4) Organizer bag
- 15 K-Type Thermocouple
- 16 Test leads

Features

Button	Function	Button	Function
O	Press and hold the ' 🖒 ' button for about 2 seconds to turn on/off the meter.		Press ' □◀ ૄ ' button to turn on/off flashlight.
АРО	Press the 'APO' button to turn on/off Auto Power Off function. Without any operation in about 15 minutes, the meter will automatically turn off. 1 minute before turn off, there will be 5 beeps.		It will be on by default and 'C' symbol will be displayed.
AUTO	Power on is in SMART mode by default. Press the 'AUTO' button to manual mode. Then press again to switch measurement modes; Press and hold the 'AUTO' key for about 2 seconds to return to the SMART (auto) mode.		In SMART Mode, the 'AUTO' signal will be displayed on the screen, and the top left corner will display 'SMART'.

SEL	Press 'SEL' button to select functions.	*Only valid for voltage test , current test and live test.
RANGE	Press 'RANGE' button to manual range mode. Then press to select range. Press and hold 'RANGE' button for about 2 seconds to return to autoranging.	*This function is invalid in SMART mode. *Only valid for voltage, resistance and mA test.
MAX	Press the 'MAX button to capture	*This function is invalid in capacitance, frequency/duty ratio, temperature, NCV/Live test.
	maximum/minimum values. Press and hold the 'MAN' key for about 2 seconds to return to normal measurement.	*In Maximum / minimum measurement, the meter will automatically enter the manual range mode.
REL HOLD	Press ' REL ' to turn on/ off data holding. Press ' REL ' for about 2 seconds to turn on/off Relative Value measurement.	*Data hold function is invalid in NCV / Live test. *Relative Value measurement is invalid in resistance, continuity, diode test, frequency/duty ratio, temperature, NCV / live. *In Relative value measurement, the meter will automatically enter the manual range mode.

Display

Symbol	Description	Symbol	Description	Symbol	Description
٧	Voltage	Α	Current		Low Battery
~	AC (Alternating Current)		DC (Direct Current)		Double insulated
→ +	Diode Test	÷	Earth	Ω	Resistance Test
-16-	Capacitance Test	Live	Live Wire Detection	NCV	Non-contact Voltage Detection
-	Fuse		Damaged Fuse	SMART	Smart Mode
Hz%	Frequency / Duty Ratio	01))	Audible Continuity Test	MANUAL	Manual Mode

Terminals

1 ② ③ 4 Jack indication light) 1 A rip cour victor A rip cour victor C € Auto Corona or □	Jack indication light When switching to other functions the light above the corresponding jack will lash for users to insert the right test leads to the right jack.
①	Input terminal for measuring ac and dc current to 10 A.
2	Input terminal for measuring ac and dc current to 600 mA.
3	Common (return) terminal for all measurements.
④	Input terminal for measuring other functions, like voltage, continuity, resistance, capacitance, frequency and testing diodes.

Making Measurements

When connecting the test leads to the circuit or device, connect the common (COM) test lead before connecting the live lead; when removing the test leads, remove the live lead before removing the common test lead.

Warnings

- Do not measure the voltage higher than DC1000V or AC750V, otherwise, the meter may be damaged.
- Pay attention to safety when measuring high voltage to avoid electric shock or personal injury.
- Before use, test the known voltage or current with the meter to confirm that the meter is in good condition.

SMART (AUTO) Measurement Mode

The Meter defaults to SMART mode. In the SMART mode, the Meter can test DC voltage, AC voltage, resistance, continuity, it selects the range with the best resolution automatically.

Turn on & Ready to use

1		' ப் ' button to turn on the meter, ' ரிய ட்டி' will pointer will swing by itself, indicating the SMART	Put o
2	19A AND COME WICKSON	Insert the red probe into 'LiveD#+**** jack and the bl	ack probe into the ' COM ' jack.
3		k test lead to check whether they are normal. or light will be on if normal. Use the continuity to check for opens and shorts.	The state of the s

Smart mode Connect the test leads with both ends of the circuit or resistance(in parallel), the Meter automatically selects measurement based on the input. Volts AC Volts DC Resistance Continuity NOTE: . When measuring AC voltage, the frequency will be displayed, and when measuring other settings, the ambient temperature

- will be displayed on the screen.
- When measuring resistance, if the resistance value is less than 50Ω, the meter will beep and the indicator will light up.
- The minimum measurable voltage in SMART mode is AC: 0.5V DC: 0.8V

MANUAL Measurement Mode

The Meter defaults to SMART mode. In the SMART mode, press the ' $\frac{AUTO}{FUNC}$ ' button to switch to manual mode and select function from left to right.

AC/DC voltage measurement

1	Turn on & Ready to use (look at page 10)		
2	Press the 'AUTO button to '♥' setting, 'DC signal and 'V' signal will be displayed on the screen, indicating DC voltage measurement.	. 0000	Volts DC
3	Press the 'SEL' button, '♣C' signal and 'V' signal will be displayed on the screen, indicating AC voltage measurement.	_0452	Volts AC
NOTE:	When measuring AC voltage, the frequency will be displayed.		
	When measuring DC voltage, the ambient temperature will be displayed on the screen.		
	Do not use the AC voltage test function to test DC voltage and vice versa.		
	Do not measure voltage exceeding 1000V DC or 750V AC to avoid damage to the meter.		

Resistance measurement

1	Turn on & Ready to use (look at page 10)
2	Press ' Auto ' button to select ' \(\Omega \) ' gear. ' \(\Omega \) ' signal will be displayed on the screen, indicating the resistance measurement.
NOTE:	 Do not change the resistance while taking measurements. Do not test parallel circuits. The accuracy of the measurement will be affected, and the results may not be accurate. Do not directly measure the internal resistance of micrometers, galvanometers, batteries, and other instruments.

Continuity test

1	Turn on & Ready to use (look at page 10)	
2	Press ' AUTO ' button to setting, indicating the continuity measurement.	DAMESTO TO THE MENT OF THE PARTY OF THE PART
3	Use the continuity function as a fast, convenient method to check for opens and shorts. Connect the test leads to both ends of the circuit under test (in parallel). If the resistance of the circuit or resistor under test is less than 50Ω and the circuit is on position, the buzzer will beep and an indicator light will light up, and the screen will display the measured resistance value.	- -

Diode test

1	Turn on & Ready to	use (look at pa	age 10)			KANETS KNOOT
2	Press ' AUTO ' buttor	n to ' <mark>→</mark> ' setti	ng, indicating the did	ode testing.		O 249 t
3	Connect red test lead		. ,		· ·	polarity of the diode.
Forward Bias	KABELTS KAROO	deverse Bias	MANAGETS KM65	Open **	KAREETS MANAGE A CONTROL OF THE CON	Shorted Shorted
	Good Diode			Bad I	Diode	

Capacitance measurement

1	Turn on & Ready to use (look at page 10)		
2	Press ' AUTO button to ' + 'setting, ' nF' signal will be displayed on the screen, indicating capacitance testing.		
NOTE:	If the measured value is significantly different from the value marked on the capacitor, the capacitor is damaged.		
	Before measuring the capacitor, discharge the capacitor to avoid damage to the Meter. Do so by connecting the capacitor to		
	a high-powered resistor.		
	Discharge the capacitor after measurement to avoid any potential safety hazards.		
	If the capacitance is large, it may take a long time for the reading to stabilize.		

AC/DC mV voltage measurement

1	Turn on & Ready to use (look at page 10)		
2	Press the ' $\frac{\text{AUTO}}{\text{FUNC}}$ ' button to ' $\frac{\nabla}{\text{mV}}$ ' setting, ' $\frac{DC}{\text{C}}$ ' signal and ' V ' signal will be displayed on the screen, indicating DC mV voltage measurement.	· 249 ·	Volts DC mV
3	Press the 'SEL' button, '♣C' signal and 'V' signal will be displayed on the screen, indicating AC voltage measurement.	ACC NO. TO THE PART OF THE PAR	Volts AC mV
NOTE:	When measuring AC voltage, the frequency will be displayed.		
	When measuring DC voltage, the ambient temperature will be displayed on the screen.		
	Do not use the AC voltage test function to test DC voltage and vice versa.		
	Do not measure voltage exceeding 1000V DC or 750V AC to avoid damage to the meter.		

Frequency/Duty measurement

1	Turn on & Ready to use (look at page 10)	
2	Press the ' AUTO ' button to ' Hz% ' setting, ' Hz' signal and ' % ' signal will be displayed on the screen, indicating Frequency/Duty Ratio testing.	AAMETS AMAIOS OBB3 COGINA MACHMETER TRUE RING

Temperature measurement

1	Turn on & Ready to use (look at page 10)	
2	Insert the positive pole of the K-type thermocouple into the 'LiveQ-II++-iii' jack and the negative pole into the 'COM' jack.	15A MA COM VINCENTS (C ANTO POWER OF D STREET, STREE
3	Press the 'AUTO 'button to 'Ĉ/F, 'Ĉ'signal and 'F'signal will be displayed on the screen, indicating temperature testing.	KADETS NUMBER
4	Touch the end of the K-Type thermocouple to the object being measured. The reading may take few seconds to be stable.	OGIFAL MALTIMETER TRUE FINS
NOTE:	When the K-Type thermocouple does not in contact with the object under test, it will read th	e ambient temperature.

Non-contact AC voltage detection

2	Turn on & Ready to use (look at page 10) Press the ' AUTO ' button to ' NCV' setting, ' NCV' signal will be indicating the NCV testing.	e displayed on the screen,	NAMES OF THE PARTY
3	Place the NCV probe closer to the point to be tested gradually. When the indicator glows and the unit beeps, you know there's voltage present.		
	When the Meter detects a weak signal, the green indicator will light up, the buzzer will beep in a slow tone, and 'L' will be displayed on the screen.	When the meter detects a the red indicator will light u will beep in a fast tone, and displayed on the screen.	p, the buzzer

Live wire detecting

1	Turn on & Ready to use (look at page 10)		
2	Press the 'AUTO' button to 'NCV' setting, 'NCV' signal will be displayed oon the screen.	249 · NEU	
3	Press the 'SEL' button to display the 'LIVE' symbol.	PAGE STATE OF THE PAGE OF THE	
4	Insert the red probe into ' $^{ ext{LiveQ}(rac{1}{4}rac{1}{4} ho)}_{VHz\%C/F}$ · jack and remove the black probe.	CC ***********************************	

5

Touch the object under test with the red test lead point.

When the indicator light lights up that means the measured position for the fire line, please be careful!

When the Meter detects a weak signal, the green indicator will light up, the buzzer will beep in a slow tone, and '--L' will be displayed on the screen. This means the test leads may not be fully connected to the socket, please test again after full connection.



a strong signal, the red indicator will light up, the buzzer will beep in a fast tone, and '--H' will be displayed on the screen.

When the meter detects



Ampere (A) current measurement

1	Turn on & Ready to use (look at page 10)	
2	Insert the red probe into the ' $10A$ ' jack and the black probe into the COM jack. The Meter will automatically adjust to the ' $\frac{\pi}{4}$ ' gear.	(€ milestrate
3	'DC' signal and 'A' signal will be displayed on the screen, indicating DC current measurement.	249. 0000
4	Press the 'SEL' button, 'A' signal and 'AC' signal will be displayed on the screen, indicating of AC current measurement.	O O O O O O O O O O O O O O O O O O O

NOTE:

- When measuring AC current, the frequency will be displayed, and when measuring DC current, the ambient temperature will be displayed on the screen.
- 'LEAD' signal will be displayed on the screen and the indicator light will turn red when the test leads are connected incorrectly, please insert the red test lead into '10A' Jack.
- The meter will turn on the current testing function when you insert the red test lead into '10A' Jack and the black test lead into 'COM' Jack in any mode. For safety, users cannot press the "button to switch the functions.
- The meter will beep regularly to remind users to use the current testing function correctly.
- Do not measure current > 10 A in this gear, in case of the 10A fuse burnt.



mA current measurement

1	Turn on & Ready to use (look at page 10)	
2	Insert the red probe into ' MA ' jack and the black probe into the ' COM ' jack.The Meter will automatically adjust to the ' $\overline{m}A$ ' gear.	C € Mante Common Com
3	'DC' signal and 'mA' signal will be displayed on the screen, indicating DC current measurement.	NATES OF THE PROPERTY OF THE P
4	Press the 'SEL' button, 'mA' signal and 'AC' signal will be displayed on the screen, indicating of AC current measurement.	MAINTS ON THE STATE OF THE STAT

NOTE:

- When measuring AC current, the frequency will be displayed, and when measuring DC current, the ambient temperature will be displayed on the screen.
- 'LEAD' signal will be displayed on the screen and the indicator light will turn red when the test leads are connected incorrectly, please insert the red test lead into 'mA' Jack.
- The meter will turn on the current testing function when you insert the red test lead into 'mA' Jack and the black test lead into 'COM' Jack in any mode. For safety, users cannot press the 'AUTO FUNC' button to switch the functions.
- The meter will beep regularly to remind users to use the current testing function correctly.
- Do not measure current > 600mA in this gear, in case of the mA fuse burnt.



Maintenance

Cleaning

Turn off the power to the Meter and remove the test leads.

Wipe the case with a damp cloth and mild detergent. Dirt or moisture in the terminals can affect readings.

Install Batteries

Remove test leads from the Meter before opening the case or battery door.

 \bigcirc

Remove the rubber case on the outside of the multimeter.





Remove the screw under the flashlight and remove the Install 3 x 1.5V AAA batteries. battery door . *Please pay attention to the battery polarity. AAA.1.5 V] 🕀 Then inserted into the battery door. Install and Put on the insulating rubber case. tighten the battery door screw.

Cleaning

' == ' signal will be displayed on the screen when the fuses are blown, current testing function is not working, then please change the fuses.

To avoid shock, injury, or damage to the Meter:

Use ONLY a fuse with the amperage, interrupt voltage, and speed ratings specified.

• mA: F600mA/250V fuse; Size: φ6*32mm

• A: F10A/250V fuse; Size: φ6*32mm

Remove test leads from the Meter before opening the case or battery door.



Remove the screw under the flashlight and remove the battery door .





Remove the screws on 4 corners with a screwdriver, and remove the cover.





Remove the blown fuses and replace them with new fuses of the same specification, make sure that the fuses are loaded into the fuse clip and clamped tightly.



To re-assemble the Meter, first attach the case bottom to the case top, then install the screws. Put the battery and battery cover back and lock the cover with screws. Finally, insert the Meter into its holster.



Specifications

Display Counts	9999 counts	Power	3×1.5V AAA batteries
Sampling Speed	3 Times / Second	Weight	Approximately 265g
LCD Dimensions	54 x 73mm	Dimensions	165x83 x25 mm
Range Selection	Auto range	Environmental conditions	CAT. IV 600V ; CAT. III 1000V
Range Selection	Automatically Displayed	MAX. Voltage between terminals and earth ground	DC1000V / AC750V
Range Selection	'0L' Displayed	Fuse protection	mA: F600mA / 250V fuse 10A: F10A / 250V fuse
Low Battery Indication		Work Environment	32~104 °F; 0~40 °C, at < 80%RH
Damaged Fuse Indication		Storage Temperature	14~122 °F; -10~60 °C, at <70%RH
Jack Indication	flash 5 times		

Accuracy Specifications

Accuracy is specified for 1 year after calibration, at operating temperatures of 18 °C to 28 °C, with relative humidity at 0 % to 80 %. Accuracy ± ([% of Reading] + [Counts])

DC voltage

Range	Resolution	Accuracy
99.99mV	0.01mV	
999.9mV	0.1mV	±(0.5% +3)
9.999V	0.001V	Input Impedance: Approx.10MΩ
99.99V	0.01V	
999.9V	0.1V	

AC voltage

Range	Resolution	Accuracy
99.99mV	0.01mV	±(0.8%+3)
999.9mV	0.1mV	Input Impedance:
9.999V	0.001V	Approx.10MΩ
99.99V	0.01V	Frequency Response:
750V	0.1V	40Hz~1kHz; TRMS

AC/DC current

Range	Resolution	Accuracy
9.999mA	0.001mA	
99.99mA	0.01mA	±(0.8%+3)
600.0mA	0.1mA	
9.999A	0.001A	±(1.2%+3)

Overload protection:

mA: F600mA/250V fuse 10A: F10A / 250V fuse

Frequency Response: 40Hz~1kHz; T-RMS

NOTE: The time to measure ampere current must be less than

15 seconds

Capacitance

Resolution	Accuracy	
0.001nF	±(4.0%+3)	
0.01nF		
0.1nF		
0.001µF		
0.01µF		
0.1µF		
0.001mF	±(5.0%+5)	
0.01mF		
Overload protection: 250V		
	0.001nF 0.01nF 0.1nF 0.001µF 0.01µF 0.1µF 0.01µF 0.001mF	

Diode/ Continuity

→	Display diode voltage drop
(Approx. 50: Buzzer will sound and the indicator light will be	

Resistance

Range	Resolution	Accuracy
999.9Ω	0.1Ω	
9.999ΚΩ	0.001 ΚΩ	
99.99 ΚΩ	0.01 ΚΩ	±(1.0%+5)
999.9 ΚΩ	0.1 ΚΩ	
9.999ΜΩ	0.001 ΜΩ	
99.99 MΩ	0.01 ΜΩ	±(2.0%+10)
Overload protection: 250V		

Frequency/Duty

Resolution	Accuracy
0.001Hz	
0.01Hz	
0.1Hz	
0.001KHz	±(1.0%+3)
0.01kHz	
0.1kHz	
0.001MHz	
0.1%	±(1.0%+3)
	0.001Hz 0.01Hz 0.1Hz 0.001KHz 0.01kHz 0.1kHz 0.1kHz

Temperature

Range	Accuracy	
°C	-40°C ~ 0°C	±5.0% or ±3°C
	0°C ~400°C	±1.0% or ±2°C
	400°C ~1000°C	±2.0%
°F	-40 °F ~32 °F	±5.0% or ±6 °F
	32 °F ~752°F	±1.0% or ±4 °F
	752 °F ~1832 °F	±2.0%

Resolution: 1°C /1 °F

Note: Please use K-type thermocouple probe

3 years Warranty

KAIWEETS will repair, without charge, any defects due to faulty materials or workmanship for three years from the date of purchase provided that:

- · Proof of purchase is produced.
- · Service/repairs have not been attempted by unauthorized persons;
- · The product has been subject to fair wear and tear;
- · The product has not been misused;

Defective products will be repaired or replaced, free of charge, or at our discretion, if sent together with proof of purchase to our authorized distributor(s). For further detail of warranty coverage and warranty repair information, send an email to support@kaiweets.com.