



INSTRUCTION MANUAL

MT782

1500V DC SOLAR CLAMP METER WITH DATA LOGGER & MOBILE APP



A black smartphone is shown next to the meter, displaying a "Recorded File" screen. The screen shows a list of recorded data points with columns for "No.", "V~", and "Time".

No.	V~	Time
33	U.U.P. 1	11:13
34	0.062	11:13
35	0.062	11:13
36	0.060	11:13
37	0.060	11:13
38	0.061	11:13
39	0.059	11:13
40	0.062	11:13
41	0.061	11:13
42	0.060	11:13
43	0.059	11:13
44	0.057	11:13
45	0.060	11:13
46	0.059	11:13
47	0.056	11:13



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1. INTRODUCTION

The MT782 is a CAT IV 600V True RMS 1000A AC/DC digital clamp meter. This clamp meter has a large 6000 count colour TFT LCD display with an analogue bargraph that provides fast sampling times and high accuracy measurements. The meter has been designed to measure 1500V DC purposely for the Solar industry, 1000V AC, K-Type temperature, frequency, capacitance, AC+DC Voltage and resistance measurements. The Low Z ACV range has a low pass filter to eliminate errors caused by "Ghost" voltages. The 100ms Inrush current detects starting up currents of electric motors, input surge current, or switch-on surge currents, this is the maximum instantaneous input current drawn by an electrical device when first turned on.

The meter has a built-in record and store function and displays trend capture, using the Bluetooth function the meter wirelessly transmits data to the Android or iOS mobile App allowing the user to view, save, organise and share recordings. Added features is Non-Contact voltage detection, Peak Hold, Min/Max and Average, Data hold function and a built-in flashlight for dimly lit areas. The double injection moulded housing is IP65 waterproof.

2. SAFETY

2.1. Safety Information



This symbol adjacent to another symbol, terminal or operating device indicates that the operator must refer to an explanation in the Operating Instructions to avoid personal injury or damage to the meter.



This WARNING symbol indicates a potentially hazardous situation, which if not avoided, could result in death or serious injury.



This CAUTION symbol indicates a potentially hazardous situation, which if not avoided, may result damage to the product.



This symbol advises the user that the terminal(s) so marked must not connected to a circuit point at which the voltage with respect to earth ground exceeds (in this case) 1000 VAC or VDC.



This symbol adjacent to one or more terminals identifies them as being associated with ranges that may, in normal use, be subjected to particularly hazardous voltages. For maximum safety, the meter and its test leads should not be handled when these terminals are energized.



This symbol indicates that a device is protected throughout by double insulation or reinforced insulation

2.2. Per IEC1010 Overvoltage Installation Category

Overvoltage Category I

Equipment of **OVERVOLTAGE CATEGORY I** is equipment for connection to circuits in which measures are taken to limit the transient overvoltages to an appropriate low level.

Note: Examples include protected electronic circuits.

Overvoltage Category II

Equipment of **OVERVOLTAGE CATEGORY II** is energy-consuming equipment to be supplied from the fixed installation.

Note: Examples include household, office, and laboratory appliances.

Overvoltage Category III

Equipment of **OVERVOLTAGE CATEGORY III** is equipment in fixed installations.

Note: Examples include switches in the fixed installation and some equipment for industrial use with permanent connection to the fixed installation.

Overvoltage Category IV

Equipment of **Overvoltage Category IV** is for use at the origin of the installation.

Note: Examples include electricity meters and primary over-current protection equipment.

2.3. Safety Instructions

This meter has been designed for safe use, but must be operated with caution. The rules listed below must be carefully followed for safe operation.

- Never apply voltage or current to the meter that exceeds the specified maximum:
- Use extreme caution when working with high voltages.
- Do not measure voltage if the voltage on the **COM** Input jack exceeds 1000V above earth ground.
- Never connect the meter leads across a voltage source while the function switch is in the current, resistance or diode mode, doing so can damage the meter.
- Always discharge filter capacitors in power supplies and disconnect the power when making resistance or diode tests.
- Always turn off the power and disconnect the test leads before opening the covers to replace the fuse or batteries.

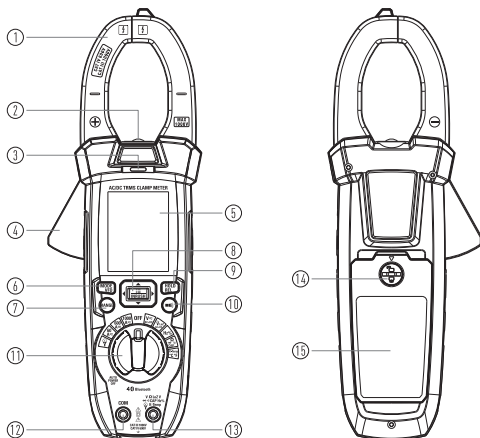
- Never operate the meter unless the back cover and the battery and fuse covers are in place and fastened securely.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

Function	Maximum Input
V DC/AC	1500VDC/1000VAC RMS
A AC/DC	1000ADC/AC RMS
Frequency, Resistance, Capacitance, Duty Cycle, Diode Test, Continuity	1000VDC/AC RMS
Temperature	1000VDC/AC RMS
Surge Protection	8kV peak per IEC 61010

3. DESCRIPTION

3.1. Meter Description

- | | |
|-----------------------------------|-----------------------------|
| 1 - Current Clamp | 9 - Hold/Relative Button |
| 2 - Work Light | 10 - Light Button |
| 3 - Non-Contact Voltage Indicator | 11 - Rotary Function Switch |
| 4 - Clamp Trigger | 12 - COM Input Jack |
| 5 - LCD Display | 13 - Positive Input Jack |
| 6 - MODE/VFD Button | 14 - Battery Cover Lock |
| 7 - RANGE Button | 15 - Battery Cover |
| 8 - INRUSH/Menu Button | |



3.2. Understanding the Push Buttons

The 9 push buttons on the front of the Meter activate features that augment the function selected using the rotary switch, navigate menus or control power to Meter circuits.

3.2.1. Cursor Buttons: MAX ◀ REL ▲ PEAK ▶

Select an item in a menu, adjust display contrast, scroll through information, and perform data entry.

"REL ▲" Use Navigation UP buttons select PEAK function.

"MAX ◀" Use Navigation Left buttons to select REL function.

"PEAK ▶" Use Navigation Right buttons select MAX function.

3.2.2. Physical Buttons:

"HOLD/REL" Freezes the present reading in the display and allows the display to be saved.

"MODE/VFD" Press the MODE key to switch the functions.

"RANGE" Press the RANGE key to manual range.

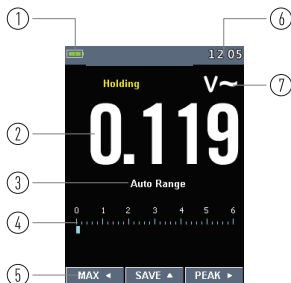
"IR/⏏" Press the IR key to switch DMM Mode and IR+DMM Mode.

"INRUSH/Menu" Enter function of the MENU or INRUSH selects.

3.3. Understanding the Display

3.3.1. Measurement on LCD Display

- 1 - Indication of Battery Charge Level
- 2 - Indication of Measuring Result
- 3 - Indication of Automatic/Manual Mode
- 4 - Analogue Bargraph
- 5 - Indications Associated with Function Keys
- 6 - Indication of the system's Time
- 7 - Indication of Measuring Unit



3.3.2. Icons on LCD Display

- Voltage is over 30V (AC or DC)
- Warning
- Flexible Coils
- Traditional Clamps
- Relative
- High Edge Time
- Variable Frequency Driver
- Inrush Current

- AC Voltage or Current
- DC Voltage or Current
- AC+DC Voltage or Current
- Continuity Function
- Diode Function
- Ohms
- Loz** VFD Loz Low Impedance Mode

3.4. Understanding the Rotary Switch

- Select a primary measurement function by positioning the rotary switch to one of the icons around its perimeter.
- For each function, the Meter presents a standard display for that function (range, measurement units, and modifiers).
- Button choices made in one function do not carry over into another function.

V $\overline{\sim}$ AC+DC DC and AC+DC Voltage Measurement

V \sim LoZ Low Impedance Mode AC voltage Measurement

Hz% Frequency and Duty Measurement

Ω \rightarrow \rightarrow CAP Resistance, Diode Test, Capacitance and Continuity Measurement

K-Temp $^{\circ}$ C $^{\circ}$ F Temperature Measurement

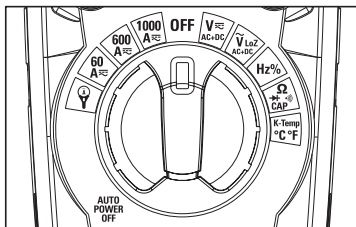
60A AC and DC 60 Amps Clamp Current Measurement

600A AC and DC 600 Amps Clamp Current Measurement

1000A AC and DC 1000 Amps Clamp Current Measurement



Flexible Coils Current



4. OPERATION

4.1. DC Voltage Measurement

CAUTION: Do not measure DC voltages if a motor on the circuit is being switched ON or OFF, Large voltage surges may occur that can damage the meter.

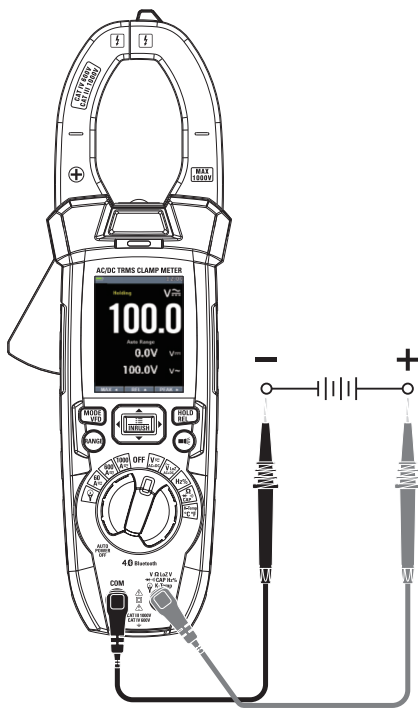
1. Set the function switch to the **V** $\overline{\text{DC}}$ Position.
2. Insert the black test lead banana plug into the **COM** Input jack; Insert the red test lead banana plug into the **Positive** Input jack.
3. Press the **MODE/VFD** Button to switch the **DC** Voltage functions.
4. Read the Voltage in the display.



4.2. AC+DC Voltage Measurement

CAUTION: Do not measure DC voltages if a motor on the circuit is being switched ON or OFF, Large voltage surges may occur that can damage the meter

1. Set the function switch to the **V $\overline{\sim}$ /AC+DC** Position.
2. Insert the black test lead banana plug into the **COM** Input jack; Insert the red test lead banana plug into the **Positive** Input jack.
3. Press the **MODE/VFD** Button to switch the **AC+DC** Voltage functions.
4. Read the AC+DC Voltage in the display.

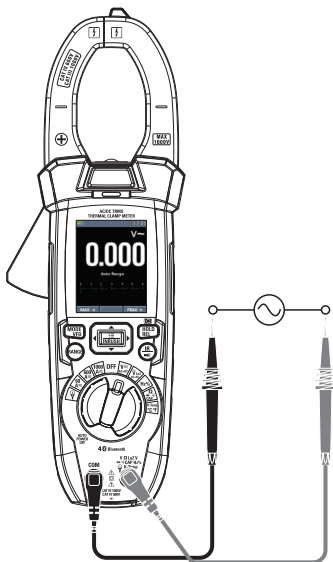


4.3. AC Voltage Measurement

WARNING: Risk of Electrocution. The probe tips may not be long enough to contact the live parts inside some 240V outlets for appliances because the contacts are recessed deep in the outlets. As a result, the reading may show 0 volts when the outlet actually has voltage on it. Make sure the probe tips are touching the metal contacts inside the outlet before assuming that no voltage is present.

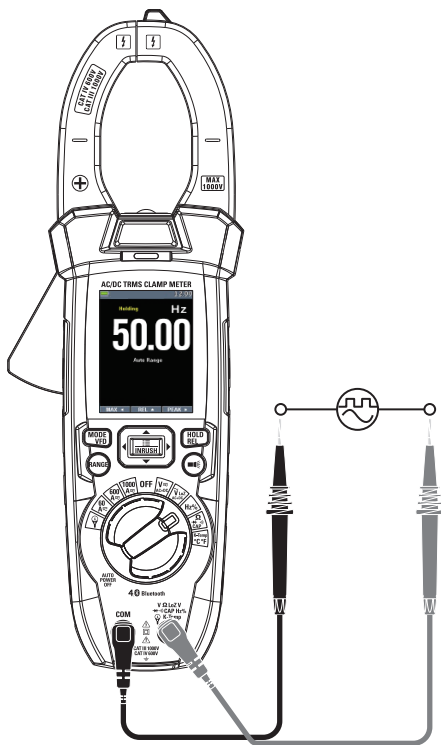
CAUTION: Do not measure AC voltages if a motor on the circuit is being switched ON or OFF, large voltage surges may occur that can damage the meter.

1. Set the function switch to the **V \sim /AC+DC** Position.
2. Insert the black test lead banana plug into the **COM** Input jack; Insert the red test lead banana plug into the **Positive** Input jack.
3. Press the **MODE/VFD** Button to switch the **AC** Voltage functions.
4. Read the Voltage in the display.



4.4. Frequency Measurement

1. Set the function switch to the **Hz%** Position.
2. Insert the black test lead banana plug into the **COM** Input jack; Insert the red test lead banana plug into the **Positive** Input jack.
3. Read the Frequency in the display.
4. Press the **MODE/VFD** Button to switch the **Duty(%)** functions.
5. Read the Duty in the display.

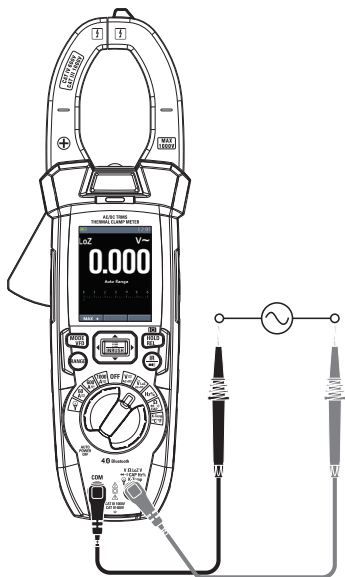


4.5. LoZ AC Voltage Measurement

WARNING: Risk of Electrocution. The probe tips may not be long enough to contact the live parts inside some 240V outlets for appliances because the contacts are recessed deep in the outlets. As a result, the reading may show 0 volts when the outlet actually has voltage on it. Make sure the probe tips are touching the metal contacts inside the outlet before assuming that no voltage is present.

CAUTION: Do not measure AC voltages if a motor on the circuit is being switched ON or OFF, large voltage surges may occur that can damage the meter.

1. Set the function switch to the **V~LoZ/AC+DC** Position.
2. Insert the black test lead banana plug into the COM Input jack; Insert the red test lead banana plug into the Positive Input jack.
3. Read the Voltage in the main display



4.6. Resistance Measurement

WARNING: To avoid electric shock, disconnect power to the unit under test and discharge all capacitors before taking any resistance measurements, remove the batteries and unplug the line cords.

1. Set the function switch to the Ω \rightarrow **CAP** Position.
2. Insert the black test lead banana plug into the **COM** Input jack; Insert the red test lead banana plug into the Positive Input jack.
3. Read the Resistance in the display.



4.7. Continuity Check

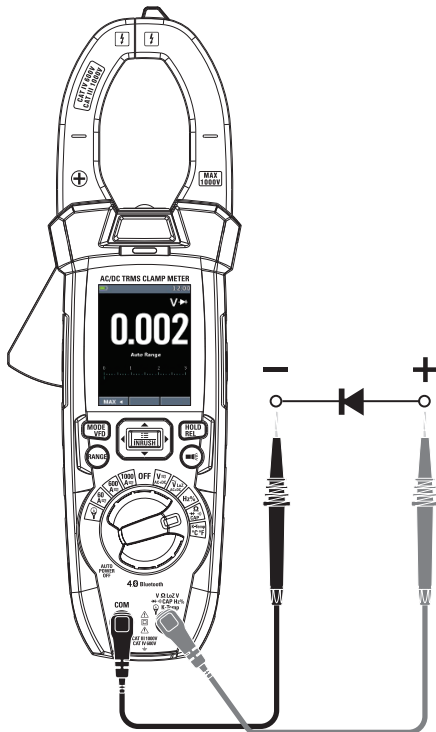
WARNING: To avoid electric shock, disconnect power to the unit under test and discharge all capacitors before taking any resistance measurements, remove the batteries and unplug the line cords.

1. Set the function switch to the Ω \rightarrow **CAP** Position.
2. Insert the black test lead banana plug into the **COM** Input jack; Insert the red test lead banana plug into the **Positive** Input jack.
3. Press the **MODE/VFD** Button to switch the continuity functions.
4. If the resistance is less than approximately 50 Ω , the audible signal will sound.
5. If the circuit is open, the display will indicate "OL".



4.8. Diode Test

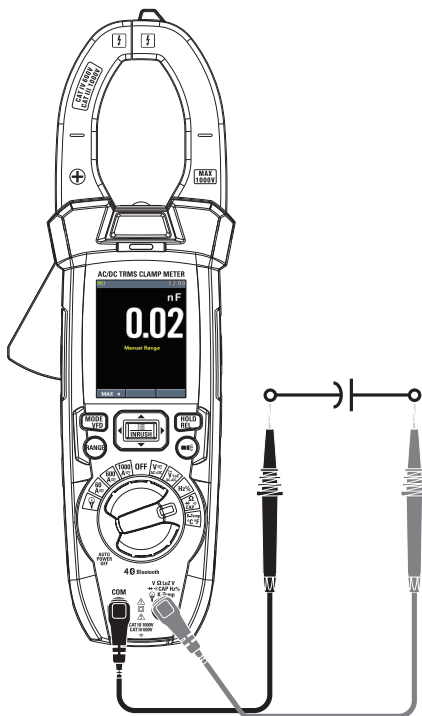
1. Set the function switch to the Ω \rightarrow **CAP** Position.
2. Insert the black test lead banana plug into the **COM** Input jack; Insert the red test lead banana plug into the **Positive** Input jack.
3. Press the **MODE/VFD** Button to switch the Diode functions.
 - Forward voltage will typically indicate 0.400 to 3.000V.
 - Reverse voltage will indicate "OL".
 - Shorted devices will indicate near 0V and an open device will indicate "OL" in both polarities.



4.9. Capacitance Measurement

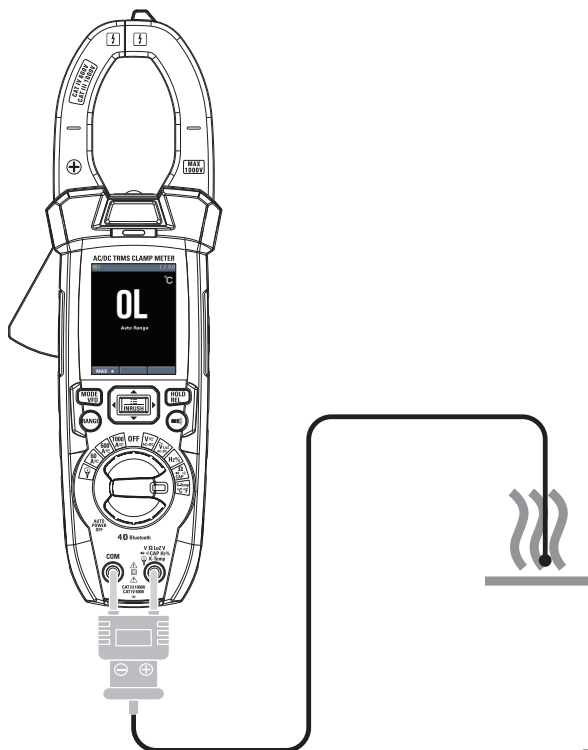
WARNING: To avoid electric shock, disconnect power to the unit under test and discharge all capacitors before taking any resistance measurements, remove the batteries and unplug the line cords.

1. Set the function switch to the Ω \rightarrow **CAP** Position.
2. Insert the black test lead banana plug into the **COM** Input jack; Insert the red test lead banana plug into the **Positive** Input jack.
3. Press the **MODE/VFD** Button to switch the Capacitance functions.
4. Read the Capacitance value in the Display.



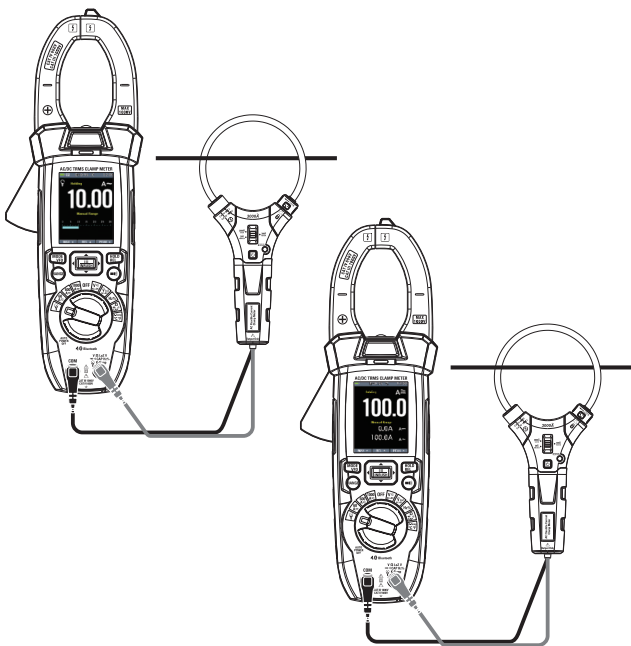
4.10. Temperature Measurement

1. Set the function switch to the **K-Temp** Position.
2. Insert the Temperature Probe into the input jacks, making sure to observe the correct polarity.
3. Press the MODE/VFD Button to switch the Unit ($^{\circ}\text{C}$ or $^{\circ}\text{F}$).
4. Read the Temperature in the display.



4.11. Flexible Coil Current Measurement (MT740 Option Extra)

1. Set the function switch to the **Flexible Coil** Φ Position.
2. Insert the black test lead banana plug into the **COM** Input jack; Insert the red test lead banana plug into the **Positive** Input jack.
4. Read the Current in the display.
5. Press the **MODE/VFD** Button to switch the AC and AC+DC Current.
6. Press the **RANGE** Button to switch range: 1000mA, 10A, 30A, 40A, 100A, 300A, 400A, 1000A, 3000A.
7. The current measurement of flexible coil has only three ranges, which are AC 30.00A; AC 300.0A; AC 3000A.



4.12. DC Clamp Current Measurement

1. For current measurements up to **60A DC**, set the function switch to the **60A** Position.
2. For current measurements up to **600A DC**, set the function switch to the **600A** Position.
3. For current measurements up to **1000A DC**, set the function switch to the **1000A** Position.
4. Press the **MODE/VFD** Button to indicate "===" on the display.
5. Press the **REL** Button to remove the dynamic zero.
6. Clamp the cable to be measured.
7. Read the DC Current in the display.



NO



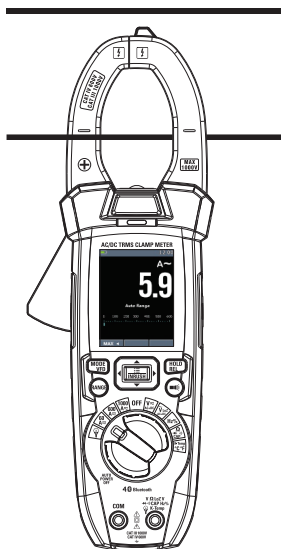
YES

4.13. AC Clamp Current Measurement

1. For current measurements up to **60A AC**, set the function switch to the **60A** Position.
2. For current measurements up to **600A AC**, set the function switch to the **600A** Position.
3. For current measurements up to **1000A AC**, set the function switch to the **1000A** Position.
4. Clamp the cable to be measured.
5. Read the AC Current in the display.



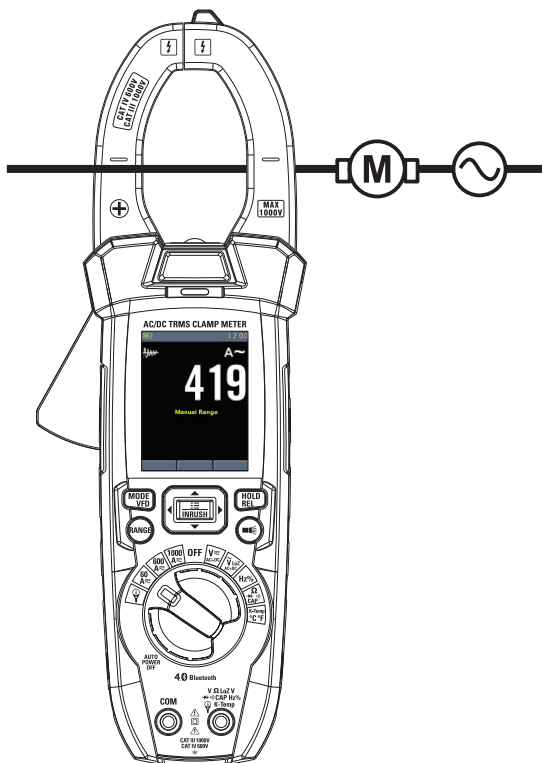
NO



YES

4.14. Inrush Current Measurement

1. Set the function switch to the **60A** or (**600A**, **1000A**) Position.
2. Press the **INRUSH** Button (Enter key 2 second) to indicate "INRUSH" on the display, Then measurement display "----".
3. Clamp the cable to be motor.
4. Start the motor.
5. Read the inrush current on the display.



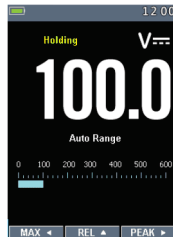
4.15. VFD Mode

1. Set the function switch to the **60A** or (**600A, 1000A**) Position to AC Current measurement, or switch to the **V \sim** Position to AC Voltage measurement.
2. Press the **MODE/VFD** Button (2 second) to indicate "VFD" on the display, to variable frequency driver measurements.
3. Read measurement on the display.



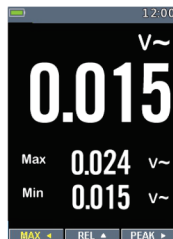
4.16. Hold Mode

- To freeze the display for any function, press the **Hold/Relative** Button.
- And again press the **Hold/Relative** Button to release freeze.



4.17. Capturing Minimum and Maximum Values

- The MAX/MIN Record mode captures minimum, and maximum input values.
- When the input goes below the recorded minimum value or above the recorded maximum value, the Meter beeps and records the new value.
- This mode is for capturing intermittent readings, recording minimum and maximum readings unattended, or recording readings while equipment operation precludes watching the Meter.
- To activate the MAX/MIN mode, press soft key labeled " \blacktriangleleft ".
- If the meter is already in MAX/MIN function, press " \blacktriangleleft " causes the Meter to turn off MAX/MIN function.



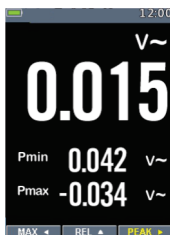
4.18. Relative Values

- **REL** key can be used as the “ZERO” function of dc current as well as relative value measurement of other functions.
- Hold down the **Hold/Relative** Button to enter REL function.
- Hold down the **Hold/Relative** Button again to quit REL function.



4.19. Capturing Peak Values

- To activate the peak mode, press the soft key labeled “►”.
- If the Meter is already in the peak function, press “►” causes the Meter to turn off peak.



4.20. Non-Contact AC Voltage Detector (100 to 1000V AC)

WARNING: Risk of Electrocution, before use, always test the Voltage Detector on a known live circuit to verify proper operation.

WARNING: Insulation type and thickness, distance from the source, and other factors may effect operation, always verify live voltage using other methods before working on electrical circuits.

- The non-contact voltage detector operates when the meter is set to any measuring function.
- The detector does not operate when Auto Power Off turns the meter off or when the rotary function switch is set to the off position.
- Slowly move the detector probe closer to the conductor being tested.
- If AC voltage within the specified range is present, the indicator light will illuminate.

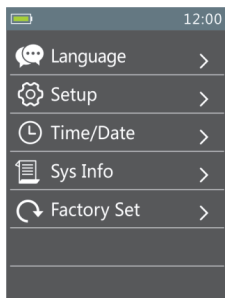


Notes: The detector is designed with high sensitivity, static electricity and other sources of electrical energy may randomly activate the detector. This is normal operation, the detector only activates the indicator light when AC voltage is present, it does not indicate the voltage level on the LCD display.

5. SETTINGS MENU

5.1. Using Settings Menu

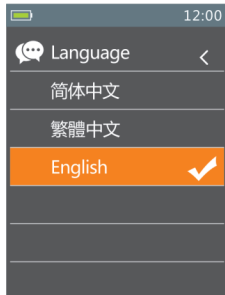
- Press **MENU** button to open the Settings Menu, as show.
- Press **UP/DOWN** Button to select menu item or change the value of current focus item.
- Press **RIGHT/MENU** Button to enter the submenu or set focus on the current selected item.
- Press **LEFT** Button to return to the previous menu.
- If want to exit settings menus, can press **MODE/RANGE/HOLD** Button or press **LEFT** Button in root menu.



5.2. Settings Details

5.2.1. Language 🗨️

- Press **RIGHT/MENU** Button to enter language menu.
- Three options are available: Simplified Chinese, Traditional Chinese and English.
- Use **UP/DOWN** Button to select language and use **RIGHT/MENU** Button to set selected language to be valid.



5.2.2. Setup

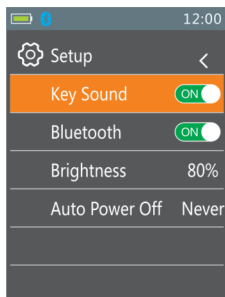
- Press **RIGHT/MENU** Button to enter Setup menu.
- These options are available: Beep, Bluetooth, Brightness and Auto Power Off.

Beep: Use **RIGHT/MENU** Button to set beep on or off.

Bluetooth: Use **RIGHT/MENU** Button to set bluetooth power on or off.

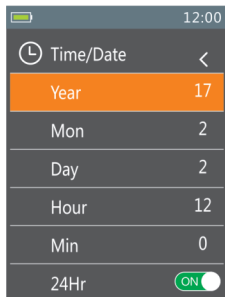
Brightness: Press **RIGHT/MENU** Button to set focus on this option, In focus state, use **UP/DOWN** Button to change LCD's brightness, use **LEFT/RIGHT/MENU** Button to exit focus state, The available brightness's range is 100% to 10% in 10% steps.

Auto Power Off: Press **RIGHT/MENU** Button to set focus on this option, In focus state, use UP/DOWN Button to choose the time period after which the meter enters the sleep mode.



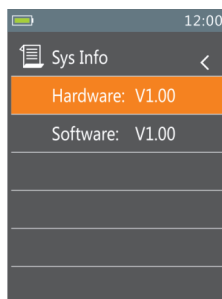
5.2.3. Time/Date

- Press **RIGHT/MENU** Button to enter time menu.
- In this menu, year, month, day, hour, minute and time format can be set.
- The changes take effect after exiting settings menus.



5.2.4. System Info

- Press **RIGHT/MENU** Button to enter system information menu.
- This menu contains software's version, hardware's version.



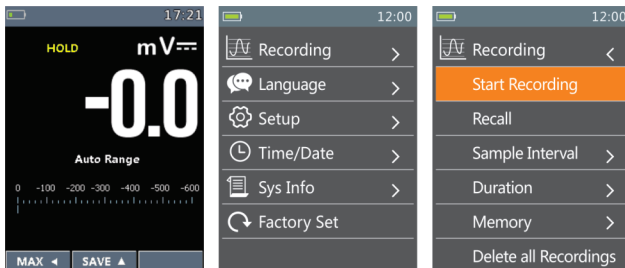
5.2.5. Factory Set

- When select Factory Set option, after press **RIGHT/MENU** Button, the dialog box will be displayed as show below.
- Select "YES" Button, system parameter will be reset.

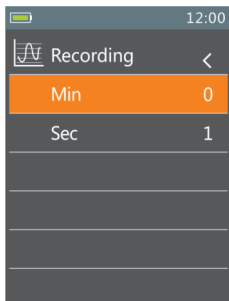


5.3. Record Measurements

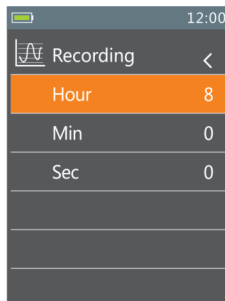
- With a measurement on the display, press Button key **Menu** to enter the instrument's general menu.
- The screen is shown on the display, Press the Button "▲" or "▼" key to select Record Item.
- Press the Button "▶" Enter Record Menu.



- In Record Menu, Press the Button "▲" or "▼" key to select Sample Interval Item or Duration Item.
- Press the Button "▶" Enter Record setting, Then Press the Button "▲" or "▼" key to adjust time.

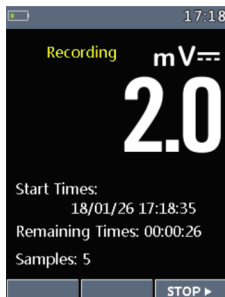


Setting of sampling interval from 1s to 59min:59s.

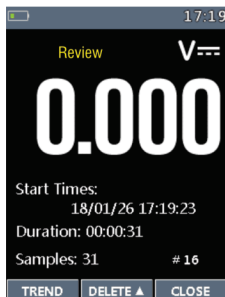


Setting of recording duration from 1min to 9h:59min.

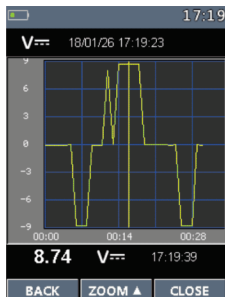
- In Record Menu, Press the Button "▲" or "▼" key to select Start record Item.
- Press the Button "►" Enter Save Record measurement.
- In Save Record measurement, Press the Button "►" to stop record and Press the Button "▲" Save.



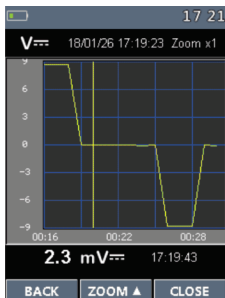
- In Record Menu, Press the Button "▲" or "▼" key to select Review Item.
- Press the Button "►" Enter View Record measurement.



- Press the Button MODE key to Trend record, and Press the Button "◀" or "▶" key to select previous record measurement or next record measurement.
- And press the Button ESC key to exit view record measurement.



- In Record View Display, and Press the Button "◀" or "▶" key to move the cursor on the graph.
- Press the Button "▲" key to activate the Zoom function of the graph, increasing resolution (symbol "Zoom Xy" where y=max zoom dimension appears at the top of the display on the right side).
- You can zoom X1 for at least 10 measuring points, X2 for at least 20 measuring points, X3 for at least 40 measuring points and so on for maximum 6 zooming operations.
- In Record Menu, Press the Button "▲" or "▼" key to select Delete all Recordings Item.
- Press the Button "▶" Enter Delete Box, and select Yes or No.



6. SPECIFICATIONS

6.1. General Specifications

Basic Functions	Range
Reference Standards	
Safety	IEC/EN61010-1
EMC	IEC/EN 61326-1
Insulation	Double Insulation
Pollution Level	2
Overvoltage Category	CAT IV 600V, CAT III 1000V, CAT II 1500V
Max Operating Altitude	2000m (6562ft)
Power Supply	
Battery Type	1 x 7.4V Rechargeable Li-ion Battery, 1200mAh
Battery Charger Power Supply	100/240VAC, 50/60Hz, 12VDC, 2A
Low Battery Indication	Symbol "□" on the Display
Auto Power Off	After 15 to 60min Minutes' Idling (May be disabled)
Display	
Conversion	TRMS
Characteristics	Colour TFT, 6000 Dots with Bargraph
Sampling Frequency	3 times/s
Environmental Conditions for Use	
Reference Temperature	18 to 28°C (64 to 82°F)
Operating Temperature	5 to 40°C (41 to 104°F)
Allowable Relative Humidity	<80%RH
Storage Temperature	-20 to 60°C (-4 to 140°F)
Storage Humidity	<80%RH

6.2. Technical Specifications

6.2.1. DC Voltage

Range	Resolution	Accuracy
600.0mV	0.1mV	±(0.8% + 8 digits)
6.000V	0.001V	±(0.5% + 5 digits)
60.00V	0.01V	±(0.5% + 5 digits)
600.0V	0.1V	±(0.8% + 5 digits)
1500V	1V	±(0.8% + 5 digits)

Input impedance >10MΩ;

Protection against overcharge: 1500VDC/1000VAC rms

6.2.2. AC TRMS Voltage

Range	Resolution	Accuracy
6.000V	0.001V	50Hz-60Hz: $\pm(1.2\% + 5 \text{ digits})$ 61Hz-1kHz: $\pm(2.5\% + 5 \text{ digits})$
60.00V	0.01V	
600.0V	0.1V	
1000V	1V	

Protection against overcharge: 1000VDC/ACrms.

Accuracy specified from 10% to 100% of the measuring range, sine wave;

Input impedance: $> 9\text{M}\Omega$;

Accuracy PEAK function: $\pm 10\%$ rdg, PEAK response time: 1ms.

6.2.3. LowZ AC TRMS Voltage

Range	Resolution	Accuracy
6.000V	0.001V	$\pm(3.0\% + 40 \text{ digits})$
60.00V	0.01V	
300.0V	0.1V	

LowZ Input impedance: $3\text{k}\Omega$; Protection against overcharge: 1000V DC/AC rms. Accuracy specified from 10% to 100% of the measuring range, sine wave.

6.2.4. AC+DC TRMS Voltage

Range	Resolution	Accuracy
6.000V	0.001V	$\pm(2.5\% + 20 \text{ digits})$
60.00V	0.01V	
600.0V	0.1V	
1000V	1V	

Input impedance $> 10\text{M}\Omega$; Protection against overcharge: 1000VDC/ACrms.

6.2.5. LowZ AC+DC TRMS Voltage

Range	Resolution	Accuracy
6.000V	0.001V	$\pm(3.5\% + 40 \text{ digits})$
60.00V	0.01V	
300.0V	0.1V	

LowZ Input impedance: $3\text{k}\Omega$; Protection against overcharge: 1000V DC/AC rms.

6.2.6. DC Current

Range	Resolution	Accuracy
60.00A	0.01A	$\pm(2.0\% + 8 \text{ digits})$
600.0A	0.1A	
1000A	1A	

Protection against overcharge: 1000ADC/ACrms.

6.2.7. AC TRMS Current (50Hz-60Hz)

Range	Resolution	Accuracy
60.00A	0.01A	$\pm(2.5\% + 5 \text{ digits})$
600.0A	0.1A	
1000A	1A	

Protection against overcharge: 1000ADC/ACrms.

Accuracy specified from 10% to 100% of the measuring range, sine wave.

Accuracy Inrush function integral time 100ms, and reading for reference only.

6.2.8. Flexible Coil Current (50Hz-400Hz)

Range	Resolution	Accuracy
30.00A	0.01A	$\pm(3.0\% + 5 \text{ digits})$
300.0A	0.1A	
3000A	1A	

Protection against overcharge: 1000ADC/ACrms.

Accuracy specified from 10% to 100% of the measuring range, sine wave.

6.2.9. Resistance and Continuity Test

Range	Resolution	Accuracy
600.0 Ω	0.1 Ω	$\pm(1.0\% + 10 \text{ digits})$
6.000k Ω	0.001k Ω	$\pm(0.8\% + 5 \text{ digits})$
60.00k Ω	0.01k Ω	
600.0k Ω	0.1k Ω	
6.000M Ω	0.001M Ω	
60.00M Ω	0.01M Ω	$\pm(2.5\% + 10 \text{ digits})$

Buzzer<50 Ω ; Protection against overcharge: 1000VDC/ACrms.

6.2.10. Diode Test

Range	Accuracy
Test Current: <1.5mA	Max Voltage with Open Circuit: 3.3VDC

6.2.11. Frequency (Electronic Circuits)

Range	Resolution	Accuracy
60.00Hz	0.01Hz	$\pm(0.2\% + 5 \text{ digits})$
600.0Hz	0.1Hz	
6.000kHz	0.001kHz	
60.00kHz	0.01kHz	
600.0kHz	0.1kHz	
6.000MHz	0.001MHz	
10.00MHz	0.01MHz	

Protection against overcharge: 1000VDC/ACrms.

Sensitivity: >2Vrms (at 20%-80% duty cycle) and $f < 100\text{kHz}$;

>5Vrms (at 20%-80% duty cycle) and $f > 100\text{kHz}$.

6.2.12. Duty Cycle

Range	Resolution	Accuracy
10.0%-90.0%	0.1%	$\pm(1.2\% + 8 \text{ digits})$

Pulse frequency range: 40Hz-10kHz; Pulse amplitude: $\pm 5\text{V}$ (100us-100ms).

6.2.13. Capacitance

Range	Resolution	Accuracy
60.00nF	0.01nF	$\pm(3.0\% + 20 \text{ digits})$
600.0nF	0.1nF	$\pm(3.0\% + 8 \text{ digits})$
6.000 μF	0.001 μF	
60.00 μF	0.01 μF	
600.0 μF	0.1 μF	
6000 μF	1 μF	$\pm(3.5\% + 20 \text{ digits})$
60.00mF	0.01mF	Unspecific
100.0mF	0.1mF	

Protection against overcharge: 1000VDC/ACrms.

6.2.14. Temperature with K-Type Probe

Range	Resolution	Accuracy
-40.0 to 600.0°C	0.1°C	$\pm(1.5\% + 3^\circ\text{C})$
600 to 1000°C	1°C	
-40.0 to 600.0°F	0.1°F	$\pm(1.5\% + 5.4^\circ\text{F})$
600 to 1800°F	1°F	
245.0 to 600.0K	0.1K	$\pm(1.5\% + 3\text{K})$
600 to 1273K	1K	

Protection against overcharge: 1000VDC/ACrms.



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