

# REED

## Model R5015 True RMSmA Clamp Meter



## Instruction Manual

[www.reedinstruments.com](http://www.reedinstruments.com)

**REED Instruments**

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## Safety

The unit complies with CE/ETL certification (EN61010-1, EN61010-2-30, and EN61010-2-32), CAT II 600V & CAT III 300V overload protection.

Please read the manual carefully before use.

- Wear protective equipment to avoid damage caused by arc discharge when the live conductor is exposed.
- Before each use check the product carefully to ensure no damage.
- Hold the instrument by the handle when in use.
- Before changing the battery ensure unit is not connected to live wires.
- Do not use clamp meter in environments above 600V or 400Hz.
- Pay close attention to 60V DC, 30V AC or 42V AC (peak value) or above voltage as they may cause electric shock.
- Clean the instrument with a damp cloth and avoiding abrasive compounds or solvents.
- In case of any abnormality, stop using this instrument immediately.

## Features

- Measures AC/DC current/voltage, resistance and capacitance
- High resolution 0.1mA (AC) and 1mA (DC)
- True RMS for AC current/voltage
- 6000-count backlit LCD display
- Built-in non-contact voltage detector with LED indicator
- V.F.C (variable frequency control) mode for air-conditioner maintenance and diagnostics
- Low battery and over range indicators
- Diode test and continuity check functions
- Durable double molded plastic housing
- Cat. II 600V & CAT III 300V safety rating
- Auto shut-off
- Includes test leads, batteries and carrying case

## Specifications

### AC/DC Current

#### Range

AC: 600mA, 6000mA, 60A / V.F.C  
600mA-60A

DC: 6000mA, 60A

#### Accuracy

AC (@ 50/60Hz): 600mA  
 $\pm(1.5\% \text{ rdg. } +10 \text{ dgt.})$

6000mA $\pm(2.5\% \text{ rdg. } +5 \text{ dgt.})$

60A $\pm(2\% \text{ rdg. } +5 \text{ dgt.})$

V.F.C  $\pm(4\% \text{ rdg. } +10 \text{ dgt.})$

DC: 6000mA $\pm(2\% \text{ rdg. } +5 \text{ dgt.})$

60A $\pm(2\% \text{ rdg. } +3 \text{ dgt.})$

#### Resolution

AC: 0.1mA, 1mA, 0.01A / 0.1mA, 0.01A

DC: 1mA, 0.01A

AC/DC Voltage	
Range	AC: 6, 60, 600V / V.F.C 200-600V DC: 600mV, 6, 60, 600V
Accuracy	AC: $\pm(0.8\% \text{ rdg. } +3 \text{ dgt.}) /$ $\pm(4.0\% \text{ rdg. } +3 \text{ dgt.})$ DC: 600mV $\pm(0.7\% \text{ rdg. } +5 \text{ dgt.})$ $\pm(0.7\% \text{ rdg. } +3 \text{ dgt.})$
Resolution	AC: 1mV, 10mV, 0.1V, 1V / 0.1V DC: 10 $\mu$ V, 1mV, 10mV, 0.1V
Resistance	
Range	600 $\Omega$ , 6k $\Omega$ , 60k $\Omega$ , 600k $\Omega$ , 6M $\Omega$ , 60M $\Omega$
Accuracy	600 $\Omega$ : $\pm(1\% \text{ rdg. } +2 \text{ dgt.})$ 6/60/600k $\Omega$ : $\pm(0.8\% \text{ rdg. } +2 \text{ dgt.})$ 6M $\Omega$ : $\pm(1.2\% \text{ rdg. } +3 \text{ dgt.})$ 60M $\Omega$ : $\pm(1.5\% \text{ rdg. } +5 \text{ dgt.})$
Resolution	1pF, 10pF, 100pF, 1nF, 10nF, 100nF, 1 $\mu$ F, 10 $\mu$ F
Capacitance	
Range	6.2nF, 62nF, 620nF, 6.2 $\mu$ F, 62 $\mu$ F, 620 $\mu$ F, 6.2mF, 62mF
Accuracy	6.200nF $\pm(4\%+10)$ 62.00nF~ 620.0 $\mu$ F $\pm(4\%+5)$ 6.200mF~ 62.00mF $\pm 10\%$
Resolution	1pF, 10pF, 0.1 $\mu$ F, 1 $\mu$ F, 10 $\mu$ F
General Specifications	
Range Selection	Autoranging
True RMS	Yes
Display	6,000 count LCD display
Display Hold	Yes
Zero Push	
Button Adjustment	Yes
Diode Test	Yes
Backlit Display	Yes










Overrange Indicator	Yes
Continuity Check	Audible signal if resistance $<10\Omega$
Non-Contact Voltage Detector	Yes
Autoshut off	Yes (after 15 mins)
Power Supply	2 AAA Batteries
Low Battery Indicator	Yes
Jaw Opening	0.67" (17mm)
Overvoltage Category	CAT. II 600V, CAT. III 300V
Product Certifications	CE, ETL, RoHS
Operating Temperature	32 to 104°F (0 to 40°C)
Storage Temperature	14 to 122°F (-10 to 50°C)
Dimensions	6.9x 2.4 x 1.3" (175 x 60 x 33.5 mm)
Weight	6oz (170g)

### *Overload protection: 100A*

- Accuracy guarantee scale: 5~100% of measuring range, <20 digit residual reading is allowed for 600mA open circuit.
- AC crest factor may reach 3.0 at 4,000 counts; for non-sinusoidal waveform, the error of crest factor increases with the following formula:
  - Add 3% when the crest factor is 1~2
  - Add 5% when the crest factor is 2~2.5
  - Add 7% when the crest factor is 2.5~3

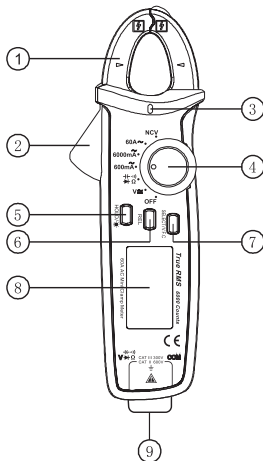
Overload protection: 600V-PTC

# Electrical Symbols

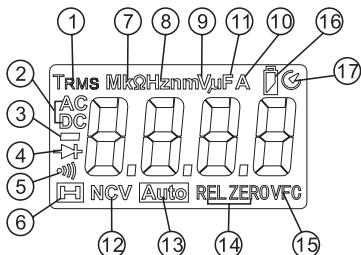
	Low battery		Warning
	AC (alternating current) / DC (direct current)		Double insulation
	Buzzer on/off		Diode
	Danger-high voltage		Earthing
	Conform to European Union directive		

## Product Description

1. Clamp Jaws
2. Clamp Trigger (Press the trigger to open the clamp)
3. Non Contact Voltage Indicator
4. Function Button (Change from ACV/DCV/Hz, Resistance  $\Omega$ /Diode/Capacity, Current ACA/DCA, NCV, Off)
5. HOLD/Backlight Button (To keep the current measurement on the screen / Hold button for 2 seconds for backlight to turn on)
6. ZERO Button (Return DCA to zero, measure the relative value of capacity & voltage)
7. SELECT Button
8. LCD Display
9. Input Jack / COM Input Jack



# LCD Description



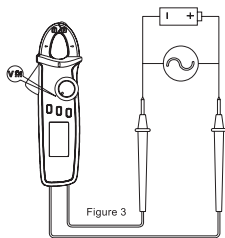
NO.	Symbol	Description
1	<b>TRMS</b>	Prompt for true RMS measurement
2	<b>AC/DC</b>	Prompt for AC/DC voltage measurement
3	<b>—</b>	Negative reading
4	<b>▶ </b>	Diode measurement prompt
5	<b>•))</b>	Circuit on/off detection prompt
6	<b>H</b>	Data hold prompt
7	<b>Ω kΩ MΩ</b>	Unit of resistance: ohm, kilo-ohm, megaohm
8	<b>Hz kHz MHz</b>	Unit of frequency: Hz, kHz, MHz
9	<b>mV、 V</b>	Unit of voltage: millivolt, volt
10	<b>mA、 A</b>	Unit of current: microampere, milliampere, ampere
11	<b>nF μF mF</b>	Unit of capacity: nanofarad, microfarad, millifarad
12	<b>(EF)NCV</b>	Sensor prompt for non-contact AC voltage
13	<b>Auto</b>	Prompt for auto range
14	<b>ZERO/REL</b>	Base number zero/relative measurement prompt
15	<b>VFC</b>	Conversion voltage/current measurement prompt
16	<b>🔋</b>	Built-in battery under-voltage prompt
17	<b>🔄</b>	Auto-off prompt

# Operating Instructions

## Measuring AC/DC voltage/HZ

1. Select AC voltage and Hz or DC voltage.
2. Insert the red probe in the red jack (positive terminal) and black probe in the black jack (COM terminal).
3. Touch the red and black probe to item under test.
4. The value will appear on the LCD.

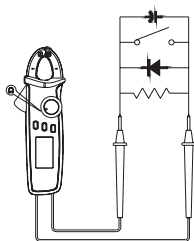
**Note: Do not exceed 600V (AC/DC) as there is a risk of electric shock and potential damage to the instrument that may occur.**



## Measure Resistance/Diode/Circuit On/Off/Capacity

- Insert the red probe in the red jack (positive terminal) and black probe in the black jack (COM terminal).
- Connect the probe in parallel with the tested component to measure.
- The value will appear on the LCD.

**Note: When measuring the voltage/capacity/diode range, do not exceed DC 60 V or AC 30V to avoid personal injury.**





## Measuring AC/DC Current

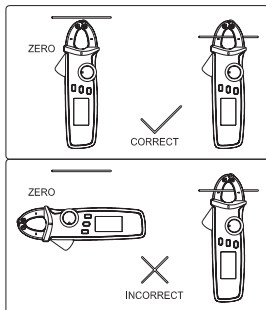
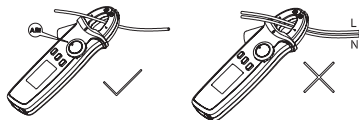
### AC current

- Select your desired range for AC current (600mA~, 6,000mA~, 60A~).  
Open the clamp head and attach the wire on the hook. Ensure that the hooks are firmly closed. Value will display on the LCD.

### DC current

- Press the SELECT button and enter in the DC current range (6,000mA, 60A). Press the ZERO button to bring the reading back to zero. Press it multiple times if pressing it once doesn't work. Open the clamp head and attach the wire on the hook. Ensure that the hooks are firmly closed. Value will display on the LCD.

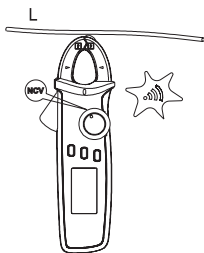
**NOTE:** Pull out the testing probe to avoid electric shock. The clamp should be in the same direction as the measured object in process of zeroing obtain accurate reading because of the product's high sensitivity.



## Measuring Non-Contact Field Measurement

To measure the detected AV voltage or magnetic field close the clamp around the object to detect the motion. The analog quantity is “EF” when it is  $\leq$  critical voltage and will display as “— — —”, different variations of buzzing will distinguish the intensity of detected field.

**Note: When the unit is in NVC measurement mode, pull out the testing probe to avoid electric shock.**



## Backlight

Press the HOLD button for 2 seconds to turn on the LCD backlight.

## Automatically Turns Off

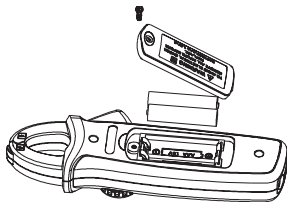
If the unit is left unused for 15 minutes it will automatically turn off to save power. Press the SELECT button in shutdown mode to power it on. The buzzer will make 5 sounds prompting the cancellation of the auto off function. Turn it off and then restart, the auto off function will be recovered. The buzzer will send 5 continuous alarming sounds, and then 1 long alarming sound before the product automatically shuts down. When the auto off function is canceled, it will send 5 alarming sounds every 15 minutes.

## Functions

When pressing any function button or turning any switch the buzzer will make a “beep” noise. When the measuring voltage or current the buzzer will also send a continuous “beep” intermittent sound to warn the outrange. The functions are: AC/DC voltage >about 600V, mA AC/DC current >620mA (or 6200mA), A AC/DC large current >62A.

## Battery Replacement

1. Ensure the power switch is set to “OFF” and pull the probe out of input jack.
2. Remove the battery cover with a screwdriver.
3. Install two new AAA batteries.
4. Replace the cover and screw in the battery cover.



For service on this or any other REED product or information on other REED products, contact REED Instruments at [info@reedinstruments.com](mailto:info@reedinstruments.com).

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