INSTRUCTION MANUAL

MT745

FLEXIBLE AC CURRENT TRMS CLAMP METER

Introduction

Congratulations on your purchase of the MT745 True RMS Flexible AC Current Clamp meter.

The MT745 features:

- Auto Power OFF
- Data Hold
- Inrush
- Frequency
- Data logger
- Backlit LCD display
- Bluetooth wireless transmit

Safety

International Safety Symbols

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 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.

Equipment is protected by double or reinforced insulation.

Safety Notes

- Do not exceed the maximum allowable input range of any function.
- Do not use when the instruments power is off.
- Remove the battery if the meter is to be stored for longer than 60 days.

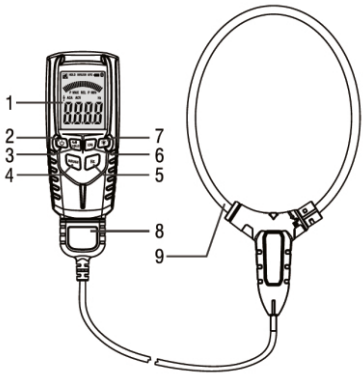
Cautions

- Improper use of this meter can cause damage, shock, injury or death. Read and understand this user manual before operating the meter.
- Inspect the condition of the test coil and the meter itself for any damage before operating the meter. Repair or replace any damage before use.
- Use with great care when making measurements if the voltages are greater than 25V AC RMS or 35V DC. These voltages are considered a shock hazard.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

Description

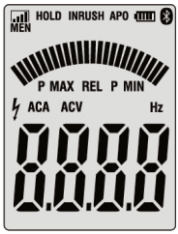
Meter Description

1. LCD display
2. Power button
3. Data Hold/BT wireless transmit button
4. Inrush button
5. Hz button
6. Data storage button
7. Backlight button
8. Current coil plug
9. Flexible current coil



Display icons Description

HOLD	Data Hold
3000	Counts
AC A	Alternating Current
	Low battery
Hz	Hertz (Frequency)
INRUSH	Inrush current
MEN	Memory storage
	Bluetooth wireless transmit
	Auto power off



Specifications

Function	Range	Resolution	Error
AC Current 50~400Hz True RMS	30.00A AC	0.01A	±(3.0% + 8d)
	300.0A AC	0.1A	±(3.0% + 5d)
	3000A AC	1A	±(3.0% + 5d)

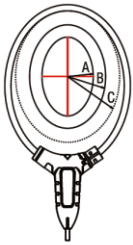
Note: Accuracy is given as ± (% of reading + counts of least significant digit) at 23°C ± 5°C, with relative humidity less than 80%RH.

Frequency:

50Hz- 400Hz

Position Error of clamp:

Accuracy and position error assumes centralized primary conductor at optimum position, no external electrical or magnetic field, and within operating temperature range.



	Flexible coil radius (mm)		Error
Distance from Optimum(mm)	A	35	1.0%
	B	50	1.5%
	C	60	2.0%

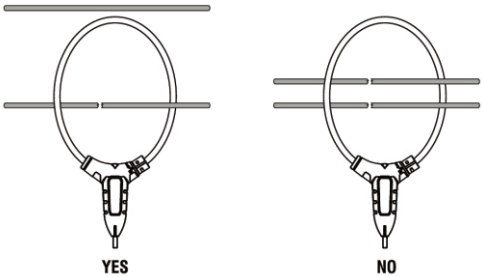
General Specifications

Display	3000 counts backlit LCD
Low Battery indication	"▭" is displayed
Over-range indication	" OL " display
Operating Temperature	5°C to 40°C (41°F to 104°F)
Storage Temperature	-20°C to 60°C (-4°F to 140°F)
Operating Humidity	Max 80% up to 31°C (87°F) decreasing linearly to 50% at 40°C (104°F)
Storage Humidity	<80%
Operating Altitude	2000 meters (7000 ft.) maximum.
Batteries	2 x AAA
Auto power OFF	After approx. 15 minutes
Safety Standard	EN61010-1, EN61010-2-032, EN61326-1. Overvottage Category III 1000V and Category IV 600V, Pollution Degree 2.

Operation

AC Current Measurements

First twist and unlock the flexible current coil. Pull out the coil wire, loop around the wire you would like to measure, twist and lock the current coil back into place. Press the power button to switch on, the current value will be displayed on the meter display.



Power button

Press the power button to boot, press and hold the power button to shut down.

Frequency button

In the process of measuring the AC current, the Hz key will enter the frequency measurement mode, and the frequency value will be displayed on the LCD screen.

Data Hold/ Button

In the alternating current AC current measurement and frequency measurement process, press the HOLD button, the data will remain on the LCD screen. Press and hold this button, to enter the Bluetooth transfer mode.

LCD Backlight Button

The LCD is equipped with backlighting for easier viewing, especially in dimly lit areas. Press the backlight button to turn the backlight on. Press again to turn the backlight off. Note that the meter does have an auto power off feature as described below.

Automatic Power OFF

In order to save power, the meter will automatically shutdown after ±15 minutes when inactive. Press the power button once again to turn on meter.

INRUSH Button

INRUSH current measurement function, is in the manual measurement mode. The need for the operator to predict the value of the inrush current and then select the appropriate measuring range, to ensure the accuracy of the measurement.

- Press the "**INRUSH**" key to enter "**INRUSH**" measurement mode, LCD screen displays "----", at this time the instrument is preset in the 3000A range.
- After entering the **INRUSH** measurement mode, hold down the "**INRUSH**" key, it will then convert to a 30A measurement range; hold down again, it will then convert to a 300A measurement range; hold down again, it will then convert to 3000A measurement range.
- The preset range, starting with electrical equipment, inrush current value will remain on the LCD screen. If you want to measure again, you need to re-enter the measurement model.
- Enter the "INRUSH" mode, and then press the "**INRUSH**" key, you can exit the measurement model.

LOG Button

Press the **LOG** key, the meter will display and will begin to record the current changes in the known period of time data, and store it on the meter for the Mobile APP to read and analyze. Hold down the key to enter Bluetooth mode, the meter will display , the data will be sent to the Mobile APP in immediately. With Bluetooth active, hold down the **LOG** key, the meter will display "**SEND**", you can send the data stored in the data to the Mobile APP, select send the complete automatic return to the measurement mode.

Note: Bluetooth Connect:

1. Turn on the Bluetooth function on the instrument using Menu Button
2. Turn on the Bluetooth of the Smartphone, press the **Meterbox Pro** icon and enter into the home interface. Then press **Connect Device** icon on the home interface, Bluetooth device name will appear.
3. Touch the device name listed in Bluetooth devices list to connect the meter.

Meterbox Pro for Android & iOS: Please search in the app stores with keyword Meterbox Pro, download and run.

Maintenance

Cleaning and Storage

Wipe the case with a damp cloth and mild detergent; do not use abrasives or solvents. If the meter is not going to be used for more than 60 days, remove the battery.

Battery Replacement

- Remove the Phillips head screw that secures the rear battery door.
- Open the battery compartment and replace the two 1.5V AAA batteries.
- Secure the battery compartment.

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