



PV string Imp measurement.



PV field thermography.



AC current measurement.



AC+DC current recording.



AC voltage measurement.



Switchboard thermography.



AC leakage measurement.



AC+DC current measurement comparison: 3.9A with RMS clamp, 4.7A with TRMS clamp, 6.1A with AC+DC TRMS clamp.

## Provided accessories

- **F3000U** Flexible clamp with full scale 30/300/3000A AC
- **4413-2** Couple of red/black 4mm, 90° professional test leads
- **BATMICY** Spare part Li-ION battery 7.4V 1500mAh
- **A0MICY** Adapter multiplug for MERCURY with base charger
- Micro SD card 8GB, 10x
- **B0MICY** Carrying case
- Alkaline battery type AAA IEC LR03, 2pcs
- Type K bead probe + adapter
- User manual
- Calibration certificate ISO9000

The accessories provided may vary according to the country.

## Technical Specifications

### DC voltage

Measuring range: 0.1mV ÷ 1000V  
Resolution: 0.1mV ÷ 1V  
Basic accuracy: ±(0.2%reading + 5digits)

### AC TRMS, AC+DC TRMS voltage

Measuring range: 1mV ÷ 1000V  
Frequency range: 50Hz ÷ 1kHz  
Resolution: 1mV ÷ 1V  
Basic accuracy AC voltage: ±(0.8%reading + 5digits)  
Basic accuracy AC+DC voltage: ±(2.0%reading + 20digits)

### AC TRMS current with flexible clamp F3000U

Measuring range: 0.01A ÷ 3000A  
Basic resolution: 0.01A ÷ 1A  
Frequency range: 50Hz ÷ 1kHz  
Accuracy: ±(1.0%reading + 5digits)

### DC current

Measuring range: 0.1µA ÷ 10A  
Resolution: 0.1µA ÷ 0.01A  
Accuracy: ±(1.0%reading + 3digits)

### AC, AC+DC current

Measuring range: 0.1µA ÷ 10A  
Basic resolution: 0.1µA ÷ 0.01A  
Frequency range: 50Hz ÷ 1kHz  
Basic accuracy: ±(1.2%reading + 5digits)

### Resistance and Continuity test

Measuring range: 0.1Ω ÷ 60MΩ  
Resolution: 0.1Ω ÷ 0.01MΩ  
Basic accuracy: ±(0.5%reading + 5digits)  
Buzzer test: R<50Ω

### Frequency (electronic circuits)

Measuring range: 0.01Hz ÷ 10MHz  
Resolution: 0.01Hz ÷ 0.01MHz  
Basic accuracy: ±(0.09%reading + 5digits)

### Frequency (electronic circuits)

Measuring range: 40Hz ÷ 10kHz  
Resolution: 0.01Hz ÷ 0.001kHz  
Accuracy: ±0.5%reading

### Duty Cycle

Measuring range: 0.1% ÷ 99.9%  
Resolution: 0.1%  
Accuracy: ±(1.2%reading + 2digits)

### Diode test

Maximum test current: 1.5mA

## Optional accessories

- **HT96U\*** Standard clamp with full scale 1/100/1000A AC and Hypertac connector
- **HT97U\*** Rigid standard clamp with full scale 10/100/1000A AC and Hypertac connector
- **HT98U\*** Standard clamp with full scale 1000A DC and Hypertac connector
- **HT4006** Standard clamp with full scale 40/400A AC/DC and banana connectors
- **NOCANBA** Adapter for clamp connection with Hypertac connector

\* Adapter NOCANBA necessary.

### Temperature with K-type probe

Measuring range: -40°C ÷ 1000°C / -40°F ÷ 1800°F  
Resolution: 0.1°C ÷ 1°C / 0.1°F ÷ 1°F  
Accuracy: 1.5%reading + 3°C / 1.5%reading + 5.4°F

### Capacitance

Measuring range: 0.01nF ÷ 6000µF  
Resolution: 0.01nF ÷ 1µF  
Basic accuracy: ±(1.2%reading + 8digits)

### Datalogger function

Max number of recordings which can be saved in the internal memory: 16  
Selectable sampling interval: 1s ÷ 15min  
Max selectable duration of recordings: 1s ÷ 10h

### IR camera function

Sensor resolution: 80 x 80pxl  
Temperature measuring range: -20°C ÷ 260°C / -4°F ÷ 302°F  
Sensitivity: <0.1°C (@ 30°C)  
Visual range (FOV): 21° x 21°  
Focusing / Lens: automatic / 7mm  
Image frequency: 50Hz

## General specifications

### General characteristics

Instrument safety: IEC/EN61010-1  
EMC: IEC/EN 61326-1  
Insulation: double insulation  
Pollution level: 2  
Measurement category: CAT IV 600V, CAT III 1000V  
Functions: Data HOLD, MAX/MIN/PEAK, REL., Laser, Bluetooth, LED illuminator  
Memory for data saving: micro SD card, BMP format

### Mechanical characteristics

Size (L x W x H): 185 x 75 x 55mm  
Weight (batteries included): 555g  
Mechanical protection: IP65

### Power supply

Battery type: 1x7.4V rechargeable Li-ION battery, 2300mAh  
Auto power off: 15,30,60min (selectable)

### Display

Type of display: 4 dgt LCD, max 6000 dots, decimal sign, point backlight and bargraph, indication of polarity  
Updating frequency: 3 times/s  
Conversion: TRMS



**HT ITALIA S.R.L.**

Via della Boaria, 40  
48018 Faenza (RA) Italia  
Tel. +39 0546 621002  
Fax +39 0546 621144  
E-mail [export@htitalia.it](mailto:export@htitalia.it)  
[ht-instruments.com](http://ht-instruments.com)

**HT INSTRUMENTS AMERICAS LLC**

2804 Patricia Lane  
Billings, MT 59102  
USA  
Tel. 1 719 421 9323  
E-mail: [sales@htinstruments-us.com](mailto:sales@htinstruments-us.com)  
[ht-instruments.us](http://ht-instruments.us)

**HT INSTRUMENTS GMBH**

Am Waldfriedhof, 1b  
D-41352 Korschenbroich, Deutschland  
USA  
Tel. + 49 (0)2161 564 581  
Fax + 49 (0)2161 564 583  
E-mail: [info@ht-instruments.de](mailto:info@ht-instruments.de)  
[ht-instruments.de](http://ht-instruments.de)

**HT INSTRUMENTS SL**

C/ Legalitat, 89  
08024 Barcelona, España  
Tel. +34 93 4081777  
Fax +34 93 4083630  
E-mail: [info@htinstruments.es](mailto:info@htinstruments.es)  
[ht-instruments.es](http://ht-instruments.es)

photo grafica bsh\_Mercury2015\_Em-00

# MERCURY

## TRMS THERMAL MULTIMETER



# I am a multimeter...



- ▶ **Data logger function** and **real-time display of graphs** of measured data
- ▶ **DC, AC TRMS, AC+DC TRMS voltage** up to **1000V**
- ▶ **DC, AC TRMS, AC+DC TRMS current** up to **10A**
- ▶ **DC, AC TRMS, AC+DC TRMS current by means of external clamp transducer**
- ▶ Measurement of **frequency** and **duty cycle**
- ▶ **Resistance** and buzzer for **continuity test**
- ▶ Measurement of **capacitance**
- ▶ **Diode test**
- ▶ **Temperature** measurement by means of external K-type probe
- ▶ **MAX/MIN/PEAK/HOLD/REL** functions
- ▶ **Selectable sampling rate:** from 1s to 15min
- ▶ Built-in white-light torch
- ▶ TFT high-contrast colour display (320x240pxl)
- ▶ **6000 measuring spots**
- ▶ Measured **data saving** on micro SD card
- ▶ **IP65 protection (dust-tight and washdown protection)**
- ▶ Auto power OFF

## Why choose Mercury?

- ▶ As a **single device**, I carry out all measurements normally performed with **multimeters and IR cameras**.
- ▶ My **built-in IR camera** allows me to simply and quickly detect hot spots caused by **electrical problems or malfunctions**. Once repair works are completed, I can check whether the problem was solved or not
- ▶ My **multimeter function** allows me to **troubleshoot installations**, measuring voltage and current.
- ▶ I log to my **internal memory** the trend of **voltage and current** with **selectable sampling rate**.
- ▶ I **save** and download onto the PC **IR images, measures and data recordings** to generate professional reports.
- ▶ I connect **Bluetooth** to mobile devices. In this way, the operator can set the instrument on the measuring spot, move away from a possible dangerous area and read measures on the tablet/smartphone through the App HT MERCURY.
- ▶ **CAT IV 600V/CAT III 1000V** allows me to be used in **industrial and domestic applications**.
- ▶ I can be connected to a wide range of (rigid and flexible) clamp transducers for measuring **AC TRMS, DC, AC+DC current**.
- ▶ I can be connected to a wide range of external K-type probes to measure **temperature**.
- ▶ Thanks to my **colour display**, detecting possible problems through a thermographic image will be very easy and quick.
- ▶ The two rechargeable **Li-ION batteries** provided allow for a **long continuous working duration**.
- ▶ I am **portable, compact and resistant**. I am dust-tight and protected against water jets (IP65).



PV string Voc measurement



PV string Vmp measurement



ISO 9000  
CALIBRATION  
CERTIFICATE  
INCLUDED



## ...with a thermal soul!



### I see what others can't see. IR range from -20°C to 260°C.

- ▶ My TFT 320x240 pixel **colour graphic display** allows an optimum display of images.
- ▶ I am provided with an infrared sensor with **80x80 pixel resolution** and **0,1°C sensitivity**, which allows me - from a safe distance - to precisely pick the spot where a problem is present, displaying and highlighting possible anomalous temperature values due to electric or mechanical malfunctions (high-voltage devices, transformers, motors, bearings, terminals, connectors, fuses, insulating devices and switches, etc.).



### Photovoltaic installations? I see anything. Reliable current and voltage measurements.

- In a photovoltaic string, I can measure **voltage and current (fully safely)** thanks to my clamp transducer, immediately detecting any problem in the system. I measure:
- ▶ Open-circuit string voltage (**Voc**)\*;
  - ▶ String operating voltage (**Vmpp**)\*;
  - ▶ The current provided by the string in operating conditions (**Imp**), allowing the operator to check that, from string to string, readings do not differ by more than 5%;
  - ▶ The status of filter capacitors found in the inverter (one of the most critical elements);
  - ▶ The status of locking and by-pass diodes;
  - ▶ I **thermographically analyze** photovoltaic modules in order to search for the presence of **overheated modules or cells**.



### Measuring current\*? Couldn't be any easier! Accurate DC/AC and AC+DC TRMS current measurements.

- ▶ I measure current even **without breaking the circuit** to serially connect the multimeter.
- ▶ By using AC/DC transducers, I can measure currents in **TRMS AC+DC** mode and also provide values only from DC and AC components.
- ▶ The measuring range virtually becomes unlimited: from mA to kA. The sensitivity/full range is only determined by the type of transducer connected.
- ▶ The current transducer is connected to the same inputs used for measuring voltage (protected even if no fuses are used), thus **protecting the instrument from any possible wrong connection**.
- ▶ The transducer may also be placed in very **uncomfortable positions** and then be connected, through its long connection cable, to the instrument for a **comfortable reading** of the value of current on the display.



### I sure can keep a distance. Bluetooth connection with mobile devices.

- ▶ I am able to **connect Bluetooth** to any tablet and smartphone through the App HT MERCURY.
- ▶ I am provided with a **micro SD card** to save measures and thermographic images.
- ▶ The App HT MERCURY displays in real time and saves the recordings onto tablets and smartphones (snapshots).
- ▶ I create, save and record reports with thermographic images through the App HT MERCURY in order to professionally validate the operator's job.



### An excellent memory. Data saving onto micro SD card.

- ▶ I am a **data logger** saving and displaying **graphs and recordings** in the **internal memory**.

\* Through external transducer.

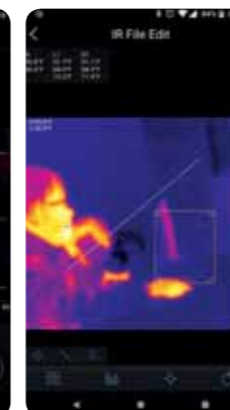


### App HTMercury

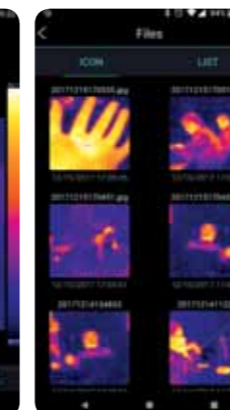
With **HTMercury APP** you can connect through **Bluetooth** to the MERCURY instrument in order to **save Multimeter and IR image snapshots, perform recordings, advanced analysis and create and share PDF reports**.



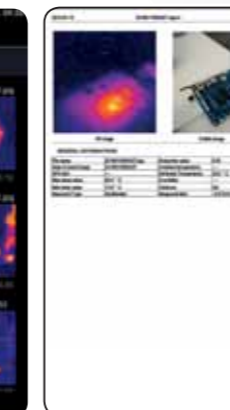
Function Data Logger



Advanced analysis



Images gallery



Report creation