

# 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 Vmpp measurement



  
**ISO 9000**  
 CALIBRATION  
 CERTIFICATE  
 INCLUDED

$\overline{IR}$   


$\overline{10A}$

$\overline{V}$



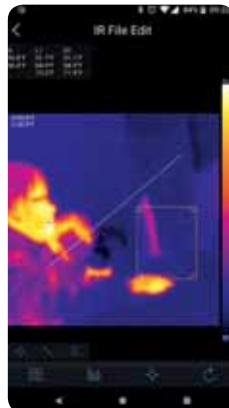
Available on the  
**App Store**  
 GET IT ON  
**Google play**

## App HTMercury

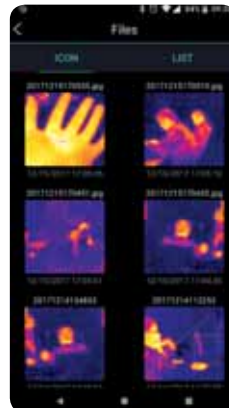
With **HTMercury APP** you can connect through **Bluetooth** to the **MERCURY** instrument in order to **save Multimeter** and **IR image** snapshots, **perform recordings**, **advanced analysis** and **create** and **share PDF reports**.



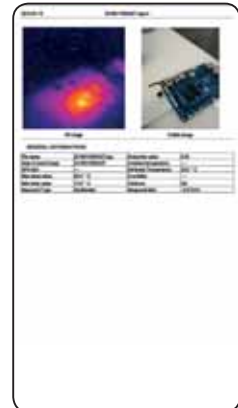
Function Data Logger



Advanced analysis



Images gallery



Report creation



# ...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 (**Impp**), 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.



PV string Impp 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
- **BATMCY** Spare part Li-ION battery 7.4V 1500mAh
- **A0MCY** Adapter multiplug for MERCURY with base charger
- Micro SD card 8GB, 10x
- **B0MCY** 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:  $\pm(0.2\% \text{reading} + 5 \text{digits})$

### AC TRMS, AC+DC TRMS voltage

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

### AC TRMS current with flexible clamp F3000U

Measuring range: 0.01A ÷ 3000A  
Basic resolution: 0.01A ÷ 1A  
Frequency range: 50Hz ÷ 1kHz  
Accuracy:  $\pm(1.0\% \text{reading} + 5 \text{digits})$

### DC current

Measuring range: 0.1µA ÷ 10A  
Resolution: 0.1µA ÷ 0.01A  
Accuracy:  $\pm(1.0\% \text{reading} + 3 \text{digits})$

### AC, AC+DC current

Measuring range: 0.1µA ÷ 10A  
Basic resolution: 0.1µA ÷ 0.01A  
Frequency range: 50Hz ÷ 1kHz  
Basic accuracy:  $\pm(1.2\% \text{reading} + 5 \text{digits})$

### Resistance and Continuity test

Measuring range: 0.1Ω ÷ 60MΩ  
Resolution: 0.1Ω ÷ 0.01MΩ  
Basic accuracy:  $\pm(0.5\% \text{reading} + 5 \text{digits})$   
Buzzer test: R<50Ω

### Frequency (electronic circuits)

Measuring range: 0.01Hz ÷ 10MHz  
Resolution: 0.01Hz ÷ 0.01MHz  
Basic accuracy:  $\pm(0.09\% \text{reading} + 5 \text{digits})$

### Frequency (electronic circuits)

Measuring range: 40Hz ÷ 10kHz  
Resolution: 0.01Hz ÷ 0.001kHz  
Accuracy:  $\pm 0.5\% \text{reading}$

### Duty Cycle

Measuring range: 0.1% ÷ 99.9%  
Resolution: 0.1%  
Accuracy:  $\pm(1.2\% \text{reading} + 2 \text{digits})$

### 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:  $1.5\% \text{reading} + 3\text{°C} / 1.5\% \text{reading} + 5.4\text{°F}$

### Capacitance

Measuring range: 0.01nF ÷ 6000µF  
Resolution: 0.01nF ÷ 1µF  
Basic accuracy:  $\pm(1.2\% \text{reading} + 8 \text{digits})$

### 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  
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)



# Diensten van EURO-INDEX

EURO-INDEX is fabrikant, importeur en distributeur van diverse A-merken op het gebied van test- en meetinstrumenten. Daarnaast leveren wij een groot aantal diensten om het gebruik van deze instrumenten in uw bedrijfsvoering te optimaliseren. Dit omvat uiteraard onderhoud, reparatie en kalibratie van de instrumenten, maar ook kennisdeling via EURO-INDEX Academy en verhuur van instrumenten.

## Geautoriseerd Service Centrum

EURO-INDEX b.v. is van alle vertegenwoordigde merken een Geautoriseerd Service Centrum. Dit betekent dat uw instrumenten worden behandeld door technici die zijn opgeleid door de fabrikant en beschikken over de juiste gereedschappen en software. Er worden uitsluitend originele onderdelen toegepast en de garantie van uw instrument, evenals de certificering (ATEX, EN50379, etc.) blijven intact.

## Kalibratielaboratorium

Het laboratorium in Nederland beschikt over een RvA accreditatie naar EN-ISO/IEC 17025. Deze accreditatie geldt voor grootheden, zoals gespecificeerd in de scope bij accreditatienummer K105. RvA kalibratiecertificaten zijn internationaal geaccepteerd en is gelijkwaardig aan BELAC.



## Mobiele Service

Naast de vaste kalibratielaboratoria in Zaventem en Capelle aan den IJssel beschikken wij ook over een laboratorium op wielen met de naam "Mobiele Service". Dit biedt vertrouwde service en kwaliteit, bij u voor de deur!

## KWS®

KWS® is een uniek servicesysteem voor uw meetinstrumenten met periodiek onderhoud en kalibratie tegen vaste, lage kosten. Via een gratis webportal ([mijnkws.be](http://mijnkws.be)) heeft u altijd en overal beschikking over uw kalibratiecertificaten.

## Verhuur van meetinstrumenten

- Uitgebreid assortiment
- Nauwkeurigheid aantoonbaar door actueel kalibratiecertificaat
- Deskundig advies
- Complete levering inclusief accessoires

## EURO-INDEX Academy

- Trainingen, seminars en workshops
- Demonstratie- en instructievideo's
- Application notes



Servicebalie



Onderhoud, reparatie en kalibratie



Trainingen en seminars



Mobiele Service

Wijzigingen voorbehouden EURO-INDEX® VL 23001



**BELGIË**  
Leuvensesteenweg 607  
1930 Zaventem  
T: 02 - 757 92 44  
F: 02 - 757 92 64  
[sales@euro-index.be](mailto:sales@euro-index.be)  
[www.euro-index.be](http://www.euro-index.be)

**NERLAND**  
Rivium 2e straat 12  
2909 LG Capelle a/d IJssel  
T: +31 - (0)10 - 2 888 000  
F: +31 - (0)10 - 2 888 010  
[verkoop@euro-index.nl](mailto:verkoop@euro-index.nl)  
[www.euro-index.nl](http://www.euro-index.nl)

