

#### PROFESSIONAL TRMS MULTIMETERS













NEW

















	HT64	HT63	HT62	HT61	HT60	Jupiter	NEPTUNE	MERCURY	FLASHMETER	IRONMETER	HT39	HT701	HT401	HT712
MAIN MEASUREMENTS		F	PROFESSIONAL TR	RMS MULTIMETER	RS					PROFESSIONAL TR	MS MULTIMETERS			
TRMS	•	•	•	•	•	•	•	•	•	•	•	•	•	•
AC/DC voltage	• AC+DC	•	•	•	•	• AC+DC	• AC+DC	• AC+DC	•	•	•	•	• AC+DC	•
AC/DC voltage with low impedance (LoZ)	•	•	•	•	•	•	•	-	-	-	-	-	• AC	-
AC/DC current with external transducer	•	•	-	-	-	• Inrush	• Inrush	• AC+DC	-	-	-	-	-	-
AC/DC current with leads	• AC+DC	• AC+DC	•	•	-	-	-	•	-	•	•	•	• AC+DC	-
4-20mA% reading	•	•	-	-	-	-	-	-	-	-	-	-	-	-
Frequency	•	•	•	•	•	•	•	•	-	•	•	•	•	•
Resistance	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Continuity with buzzer	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Capacitance	•	•	•	-	•	-	-	•	-	•	•	•	•	-
Diode test	•	•	•	•	•	-	-	•	-	•	•	•	•	-
Duty Cycle (%)	•	•	•	•	•	-	-	•	-	•	•	-	-	-
Temperature with K-type probe	•	•	•	-	•	-	-	•	-	-	-	•	•	-
Insulation measurement (50,100,250,500,1000VDC)	-	-	-	-	-	-	•	-	-	-	-	•	-	-
Phase sequence and concordance	-	-	-	-	-	•	•	-	-	-	-	-	-	• + Conformity
Built-in LED torch	-	-	-	-	-	-	-	•		•	-	-	-	-
Test on A and AC general RCDs	-	-	-	-	-	•	-	-	-	-	-	-	-	-
L-L, L-N, L-PE, RA loop impedance	-	-	-	-	-	•	-	-	-	-	-	-	-	-
Voltage/Current harmonics + THD%	-	-	-	-	-	•	-	-	-	-	-	-	-	-
Continuity of protective conductors with 200mA	-	-	-	-	-	-	•	-	-	-	-	-	-	-

#### ADDITIONAL CHARACTERISTICS

ADDITIONAL CHARACTERISTICS															
Measurement category	CAT IV 600V	CAT IV 600V	CAT IV 600V	CAT IV 600V	CAT IV 600V	CAT IV 600V CAT III 690V		CAT IV 600V CAT III 1000V	CAT IV 600V CAT III 1000V	CAT IV 600V	CAT III 600V	CAT IV 600V CAT III 1000V	CAT IV 600V CAT III 1000V	CAT IV 600V CAT III 1000V	CAT IV 600
Measuring counts	6000	60.000	6000	6000	4000	9999		9999	6000	4000	4000	4000	10000	6000	4000
Backlight	•	•	•	•	•	•		•	•	•	•	•	•	•	-
IR sensor resolution	-	-	-	-	-	-		-	• 80 x 80 pxl	-	-	-	-	-	-
Bluetooth	-	-	-	-	-	-		-	with APP HTMercury	-	-	-	-	-	-
Bargraph	•	•	•	•	-	•		•	•	-	-	•	•	•	-
Autorange	•	•	•	•	•	•		•	•	-	•	•	•	•	•
Auto power off	•	•	•	•	•	•		•	•	•	•	•	•	•	•
Detection of AC voltage without contact	-	-	-	-	-	-		-	•	•	-	-	-	•	-
Data HOLD function	•	•	•	•	•	•		•	•	•	•	•	•	•	•
MIN/MAX/AVG functions	•	<ul> <li>MIN/MAX</li> </ul>	• MIN/MAX	<ul> <li>MIN/MAX</li> </ul>	-	MIN/MAX		• MIN/MAX	MIN/MAX	-	<ul> <li>MIN/MAX</li> </ul>	• MIN/MAX	•	• MIN/MAX	-
PEAK function	• (1 ms)	• (1 ms)	-	-	-	• (1ms)		• (1ms)	•	-	-	•	-	•	-
Automatic recognition of AC/DC	-	-	-	-	-	•		•	-	•	-	-	-	-	•
Automatic recognition of internal functions	-	-	-	-	-	-		-	-	•	-	-	-	-	-
Relative measurement	•	•	•	•	•	-		-	•	-	-	•	•	-	-
Data logger and graph	•	-	-	-	-	-		-	•	-	-	• (through SW)	-	-	-
Memory for data saving	•	-	-	-	-	-		-	(micro SD card)	-	-	-	•	-	-
Power supply	1x7.4V rechargeable Li-ION battery	4x 1.5V AAA	1x 9V 6F22	1x 9V 6F22	1x 9V 6F22	4x 1.5V AAA		4x 1.5V AAA	1x7.4V rechargeable Li-ION battery	2x 1.5V AAA	2x 1.5V AAA	1x 9V 6F22	4x 1.5V AA	1x 9V 6F22	2x 1.5V AAA
Size in mm (L x W x H)	175x85x55	175x85x55	175x85x55	175x85x55	175x85x55	175x85x55		175x85x55	190x75x55	135x75x40	120x85x45	164x82x44	207x95x52	190x94x48	250x51x30
Weight in grams	400	400	400	400	400	420		420	555	220	200	400	630	460	150
Safety	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IE	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010
Order code	HR000010	HR000001	HR000002	HR000003	HR000004	HR00JUPI		HR00NEPK	HR000MER	HR000011	HR000005	HR000039	HR000701	HR000401	HR000712

#### DIGITAL MULTIMETERS

























	H1211	H121	H125N	HI14D	H112	H110	HI8	HI/	H16
MAIN MEASUREMENTS		DIGITAL MULTIMETERS				DIGITAL MU	ILTIMETERS		
TRMS	•	-	-	-	-	-	-	-	-
AC/DC Voltage	•	•	•	•	•	•	•	•	•
AC Voltage with 1 terminal	-	-	-	-	-	•	•	•	•
AC Voltage with low impedance input	-	-	-	-	-	•	-	•	-
AC/DC Current	•	-	• DC	• DC	•	-	-	-	-
Frequency	•	•	-	-	•	-	-	-	-
Resistance	•	•	•	•	•	•	-	-	-
Continuity with buzzer	•	•	•	-	•	•	•	•	•
Capacitance	•	•	-	-	-	-	-	-	-
Diode test	•	•	•	•	-	-	•	-	•
Duty Cycle (%)	•	•	-	-	-	-	-	-	-
Temperature with K-type probe	•	-	-	-	-	-	-	-	-
Phase sequence and phase concordance	-	-	-	-	-	•	•	•	•
Built-in LED torch	-	-	-	-	-	•	•	•	•

#### ADDITIONAL CHARACTERISTICS

ADDITIONAL CHARACTERISTICS									
Measurement category	CAT III 600V	CAT III 600V	CAT III 600V	CAT III 300V CAT II 600V	CAT III 300V CAT II 600V	CAT III 1000V CAT IV 600V	CAT IV 600V CAT III 690V	CAT IV 600V CAT III 1000V	CAT IV 600V CAT III 690V
Measuring counts	4000	4000	2000	2000	3400	1999	6900	1999	LED indications
Backlight	•	•	•	-	-	•	-	•	-
Bargraph	-	-	-	-	•	-	-	•	-
Autorange	•	•	-	-	•	•	-	•	-
Auto power off	•	•	-	-	•	•	•	•	•
Data HOLD function	•	•	•	•	•	•	•	-	•
MIN/MAX function	•	-	-	-	-	-	-	-	-
PEAK function	-	-	-	-	-	-	-	-	-
Relative measurement	-	•	-	-	-	-	-	-	-
Power supply	2x 1.5V AAA	1x 9V 6F22	1x 9V 6F22	1x 12V MS21/MN21	2x 1.5V AAA	2x 1.5V AAA	2x 1.5V AA	2x 1.5V AAA	2x 1.5V AA
Size in mm (L x W x H)	138x68x37	138x68x37	150x70x48	105x50x25	128x87x24	270x70x30	255x60x35	240x78x40	255x60x35
Weight in grams	235	210	255	100	210	290	170	240	170
Safety	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1 IEC/EN61243-3:2014	IEC/EN61010-1
Order code	HR000211	HR000021	HR00025N	HR00014D	HR000012	HR000100	HR000008	HR000007	HR000006

















# HT64|HT63|HT62|HT61|HT60

SERIES OF TRMS / CAT IV PROFESSIONAL DIGITAL MULTIMETERS WITH DATA LOGGER FUNCTIONS (HT64)

The new series of HT professional multimeters is the result of an important research conducted at the most demanding users of this kind of equipment, namely laboratories where the choice of a measuring instrument is subject to strict tests concerning precision, reliability and safety of measurements even in extreme conditions.

Therefore, a complete range multimeters, all able to measure in TRMS, all within CAT IV 600V, autorange function available on all models, with backlight display. The design is extremely modern and attractive, but also ergonomic, to ensure maximum ease of use. Display with high resolution, even in color version, for the premium model HT64.

In the summary table you can find all the features that make this innovative set of professional instruments unique and valuable.

# **Functions**

	HT64	HT63	HT62	HT61	HT60
TRMS Measurements	•	•	•	•	•
Color display	•	-	-	-	-
AC/DC Voltage	• AC+DC	•	•	•	•
AC/DC Current	•	•	-	-	-
LoZ voltage measurement	•	•	•	•	•
Resistance/Continuity Test	•	•	•	•	-
Frequency	•	•	•	•	•
Capacity	•	•	•	•	•
Duty cycle	•	•	•	-	•
Diode test	•	•	•	•	•
Temperature probe type K	•	•	•	•	•
Reading 4-20mA%	•	•	•	-	•
Lettura 4-20mA%	•	•	-	-	-
Data HOLD	•	•	•	•	•
MAX/MIN/AVG	•	Max/Min	Max/Min	Max/Min	-
PEAK	• 1ms	• 1ms	-	-	-
Relative Measurement	•	•	•	•	•
Autorange	•	•	•	•	•
Backlight	•	•	•	•	•
Bargraph	•	•	•	•	-
Data loggers and graph	•	-	-	-	-
Internal memory	•	-	-	-	-
Auto Power OFF	•	•	•	•	•



Power supply:

Auto Power OFF:

#### **Main features**

4 digit LCD, 4000 pixels (HT60) Display:

4½ digit LCD, 6000 pixels (HT61, HT62) 41/2 digit LCD, 60000 pixels (HT63)

Color 4 41/2 digit TFT, 6000 pixels (HT64) 1x9v battery type 6F22 (HT60, HT61, HT62)

4x1.5 V batteries type AAA LR03 (HT63) 1x7.4V rechargeable Li-ION battery (HT64)

after 30 minutes of non-use (HT60)

after 15 minutes of non-use (HT61, HT62, HT63)

5min ÷ 60 min of non-use (HT64)

Safety: IEC/EN61010-1

Measurement CAT IV 600V - CAT III 1000V

category: Level of pollution: Max operating altitude:

2000m Dimensions (LxWxH): 175x85x55mm about 400 g

(batteries included):



## **Technical specifications**

	HT64	HT63	HT62	HT61	HT60
DC Voltage	I	ı	ı	ı	ı
Reading range:	0.1mV ÷ 1000V	0.1mV ÷ 1000V	0.1mV ÷ 1000V	0.1mV ÷ 1000V	1mV ÷ 600V
Standard accuracy:	±(0.1%reading+5digits)	±(0.9%reading+5digits)	±(1.0%reading+2digits)	±(1.0%reading+2digits)	±(1.2%reading+2digits)
AC Voltage					
Reading range:	0.1mV ÷ 1000V	0.1mV ÷ 1000V	1mV ÷ 1000V	1mV ÷ 1000V	1mV ÷ 600V
Standard accuracy:	±(0.9%reading+5digits)	±(1.0%reading+5digits)	±(1.0%reading+8digits)	±(1.0%reading+8digits)	±(1.2%reading+4digits)
DC Current					
Reading range:	0.1μA ÷ 10A	0.1μA ÷ 10A	0.1μA ÷ 10A	0.1µA ÷ 10A	-
Standard accuracy:	±(0.9%reading+5digits)	±(1.5%reading+5digits)	±(1.0%reading+3digits)	±(1.0%reading+3digits)	-
AC Current					
Reading range:	0.1µA ÷ 10A	0.1μA ÷ 10A	0.1μA ÷ 10A	0.1µA ÷ 10A	-
Standard accuracy:	±(1.2%reading+5digits)	±(2.5%reading+5digits)	±(1.5%reading+3digits)	±(1.5%reading+3digits)	-
Resistance and continu	ity test				
Reading range:	$0.1\Omega \div 60M\Omega$	$0.1\Omega \div 60M\Omega$	$0.1\Omega \div 60M\Omega$	$0.1\Omega \div 60M\Omega$	0.1Ω ÷ 40MΩ
Standard accuracy:	±(0.8%reading+5digits)	±(1.2%reading+5digits)	±(1.0%reading+4digits)	±(1.0%reading+4digits)	±(1.0%reading+2digits)
Buzzer:	<25Ω	<35Ω	<100Ω	<100Ω	<30Ω
Frequency					
Reading range:	0.001Hz ÷ 1MHz	0.001Hz ÷ 1MHz	0.001Hz ÷ 1MHz	0.001Hz ÷ 1MHz	0.001Hz ÷ 10MHz
Standard accuracy:	±(0.09%reading+5digits)	±(1.0%reading+2digits)	±(0.1%reading+1digit)	±(0.1%reading+2digits)	±(1.2%reading+3digits)
Capacity					
Reading range:	0.01nF ÷ 6mF	0.01nF ÷ 6mF	0.01nF ÷ 1000μF	-	0.01nF ÷ 100μF
Standard accuracy:	±(1.2%reading+8digits)	±(2.5%reading+10digits)	±(3.5%reading+4digits)	-	±(3.0%reading+5digits)
Duty Cycle					
Reading range:	0.1% ÷ 99.9%	20% ÷ 80%	0.1% ÷ 99.9%	0.1% ÷ 99.9%	0.5% ÷ 99.9%
Standard accuracy:	±(1.2%reading+2digits)	±(1.0%reading+5digits)	±(1.2%reading+2digits)	±(1.2%reading+2digits)	±(1.2%reading+2digits)
Temperature probe type	e K				
Reading range:	-40°C ÷ 1350°C	-40°C ÷ 760°C	-45°C ÷ 750°C	-	-20°C ÷ 760°C
Standard accuracy:	±(1.0%reading + 3°C)	±(2.0%reading + 3°C)	±(3.5%reading + 5°C)	-	±(3.0%reading + 5°C)



Weight

#### **Included accessories**

4324-2	Pair of test leads with 2/4mm tip
TK101	Type K wire probe (HT60, HT62, HT63, HT64)
T10	Type K Probe adapter
A64	Power supply + adapter (HT64)
Calibration ce	rtificate ISO 9000 (HT61, HT62, HT63, HT64)
	Batteries, user manual and transport bag





LoZ

auto Range

**1000**V

**H/H%** 

THD%

# JUPITER

PROFESSIONAL DEVICE FOR ELECTRIC SAFETY VERIFICATIONS ACCORDING TO IEC/EN61557-1 WITH ADVANCED MULTIMETER FUNCTIONS

The new models JUPITER and NEPTUNE are innovative devices which, further to being used as powerful multimeters for TRMS measurements, allow performing electric safety tests (RCD, Ra, Loop, Insulation and Continuity) according to standard IEC/EN61557-1. They comply to CAT IV 600V, with autorange function available in all models, as well as the **backlit display**. The design is extremely modern, attractive and ergonomic to offer the best possible ease of use.













ORDER CODE HROOOMER

PROFESSIONAL MULTIMETER WITH IN-BUILT THERMAL CAMERA

Model MERCURY is a digital TRMS multimeter which mainly measures AC/DC voltage up to 1000V and AC/DC current up to 10A. Among its important functions, this device features mode AC+DC, which is used to also detect direct components possibly overlapping the alternate signal, and measurement of currents with the use of standard and flexible clamp transducers\* (accessory F3000U) directly connected to it. A **thermal camera** with resolution 80x80pxl is also built in the device in order to allow for a possible simultaneous reading of electric and thermal values of the item to be tested. MERCURY is also provided with a **Data Logger function** which allows it to perform and save recordings of every parameter which can be measured by the device and graphically display the trend of the values. The device allows saving pictures in BMP format on a micro SD card (provided), and also has a Bluetooth function to connect to mobile devices (tablets/smartphones) through the **dedicated APP HTMercury**, to create reports to share measured results.

\* Standard HT96U and flexible F3000U.



#### **Functions and characteristics**

	JUPITER	NEPTUNE
Multimeter section		
DC / AC, AC+DC TRMS voltage	•	•
DC / AC / AC+DC TRMS voltage with low impedance (LoZ)	•	•
AC TRMS current up to 3000A with optional flexible clamp transducer F3000U	•	•
Automatic recognition of AC and DC quantities	•	•
Inrush current (Dynamic INRUSH - DIRC)	•	•
Current/voltage harmonics up to the 25th and THD% calculation	•	•
Resistance and continuity with buzzer	•	•
Current and voltage frequency	•	•
MAX/MIN/PEAK/HOLD functions	•	•
9999 measuring spots	•	•
Auto-Power-Off function	•	•
Bargraph function	•	•
Funzione bargraph	•	•
Electric verification section		
Overall earth resistance L-PE without RCD tripping	•	-
Loop impedance L-L, L-N and calculation of assumed short-circuit current	•	=
Measurement of tripping time on General RCDs type A and AC (30mA, 100mA, 300mA)	•	-
Measurement of tripping current on General RCDs type A and AC (30mA)	•	-
Phase sequence with 1 terminal	•	•
Insulation with test voltage 50, 100, 250, 500, 1000V with PI and DAR calculation	-	•
Continuity of protective conductors with 200mA	-	•



#### **Included accessories**

C2065	Three wire cable Red, Black, Green with Schuko plug <i>(JUPITER)</i>
4324-2	Pair of test tips Red/Black 2/4mm straight banana
YABAT0001HT0	Alkaline battery 1.5V, type AAA, IEC LR03, 4 pcs
YABRS0002HT0	Carrying bag
YAMUM0066HT0	User manual on CD-ROM
YAMUM0065HT0	Quick reference guide
	Calibration certificate ISO9000



## **Optional accessories**

606-IECN	Connector with magnetic terminal
F3000U	AC flexible clamp with 30/300/3000A full scales
HT96U*	AC current clamp with 1/100/1000A full scales
HT97U*	AC current clamp with 10/100/1000A AC full scales
HT98U*	DC current clamp with 1000A full scale
HT4006	AC/DC current clamp with 40/400A full scales
NOCANBA	Hypertac-to-banana adapter
5004-IECR	Red alligator clip
5004-IECN	Black alligator clip

The standard accessories can be different depend on countries



#### **Functions and characteristics**

- DC voltage
- AC and AC+DC TRMS voltage
- · DC current
- AC and AC+DC TRMS current
- AC and AC+DC TRMS current with standard clamp transducers.
- AC TRMS current with flexible clamp transducer F3000U
- "Voltsense" for AC voltage detection without contact
- · Resistance and Continuity test
- · Diode, Capacitance and Frequency tests
- · Temperature with K-type probe
- · Infrared temperature with in-built thermal camera In-built datalogger
- Data HOLD
- MIN/MAX/PEAK
- · Relative measurement
- Bargraph
- Backlight
- · Input protective fuses
- Auto Power OFF



## Main features

Power supply: 1x7.4V rechargeable Li-ION battery, 1200mAh

Safety: IEC/EN61010-1

CAT IV 600V, CAT III 1000V Measurement category:

Insulation: double insulation

Pollution level: Mechanical protection IP65

index:

Max operating altitude: 2000m

Size (LxWxH): 190x75x55mm Weight (batteries approx 555g

included):



#### Included accessories

F3000U	Flexible clamp with full scale 30/300/3000A AC and banana connectors
4324-2	Pair of Red/Black banana connectors with 2/4mm tip
BATMCY	Spare battery Li-ION 7,4V 1500mAh
AOMCY	Multiplug power supply for MERCURY with recharging base
	Micro SD card 8GB,10x
BOMCY	Carrying bag
	Alkaline battery type AAA IEC LR03, 2 pieces <i>(for F3000U)</i>
	Type K bead probe + adapter
	User Manual
	Calibration certificate ISO9000



### **Optional accessories**

HT96U**	Standard clamp with full scale 1/100/1000A AC and Hypertac connector
HT97U**	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

The standard accessories can be different depend on countries

\* Adapter NOCANBA required.





ORDER CODE HR000005 | HR000011

# IRONMETER FLASHMETER

TRMS MULTIMETERS WITH BUILT-IN LED TORCH AND TOTAL AUTORANGE (FLASHMETER)

**IRONMETER** is the true tester for construction sites, realized with a very **sturdy structure** capable of resisting every shock, ready to rise again after any fall **(even from 3 m high)** and keep working with the very same precision and reliability. It is provided with all of the typical functions of everyday use, but also features an **in-built LED torch** to illuminate poorly lit environments, when necessary. **FLASHMETER**, according to the quantity present at the input, **automatically switches** between voltage and resistance measurement.





ORDER CODE HR000039

HT39

TRMS MULTIMETER 4000 DOTS WITH SERIAL INTERFACE RS-232

HT39 is a professional TRMS multimeter which mainly measures AC/DC voltage and AC/DC current in total Autorange, further to Peak values, useful in industrial verifications. The device is also provided with serial interface RS-232 for PC connection and real-time display of the quantities to be measured. Under these conditions it is possible (through optional dedicated software) to activate and save recordings of the parameters, with programmable sampling period. HT39 is designed to reach category CAT III 1000V and CAT IV 600V and is provided with a fuse with high breaking capacity on the current input.



	IRONMETER	FLASHMETER
TRMS Measurements	•	•
Automatic selection of measurements	-	•
AC/DC Voltage	• (600V)	• (600V)
AC/DC Current	• (10A)	-
Resistance/Continuity Test	•	•
Detection of AC voltage without contact	•	•
Frequency	•	-
Capacitance, Diode test	•	-
Duty cycle	•	-
Built-in flashlight	•	•
Auto HOLD function	-	•
Autorange	•	•
Backlight	•	•
Auto Power OFF	•	•



#### **Main features**

**Power supply:** 2x1.5V batteries type AAA IEC LR03

Safety: IEC/EN61010-1

Measurement CAT III 600V

category: Insulation:

double insulation

Pollution level: 2
Max operating altitude: 2000m

**Display:** 4 LCD, 4000 dots, decimal sign and point

Protection fuses: Yes (IRONMETER)

Dimensions (LxWxH): 120x65x45mm (IRONMETER) 140x75x40mm (FLASHMETER)

Weight (batteries 200g (IRONMETER) included): 220g (FLASHMETER)



#### **Included accessories**

4324-2	Pair of test leads with tip 2
	Batteries
	Transport bag
	User Manual



#### **Functions**

· TRMS Measurements

DC Voltage: 1000VAC Voltage: 750V

AC/DC Current: 10A

Resistance/Continuity Test

Frequency

Capacitance and Diode test

Data HOLD, MAX/MIN/PEAK

Relative measurement

RS-232 interface

Backlight

Bargraph

Auto Power OFF



#### Included accessories

Pair of test leads
Batteries
Protective case with support
User Manual



#### Main features

**Power supply:** 1x9V batteries type 6F22

Safety: IEC/EN61010-1

Measurement CAT IV 600V, CAT III 1000V

category: Insulation:

double insulation

Pollution level: 2

**Max operating altitude:** 2000m

**Display:** 4 LCD, 4000 dots, decimal sign and point

Protection fuses: Ye

Dimensions (LxWxH): 164x82x44mm

Weight (batteries

included):



#### **Optional accessories**

400g

B80 Soft carrying bag

SW39 Windows software + RS-232 cable











ORDER CODE HR000701

PROFESSIONAL MULTIMETER FOR INSULATION MEASUREMENT UP TO 1000V

Professional TRMS multimeter with 10.000 measuring spots and measurement of insulation resistance with selectable test voltage between 50, 100, 250, 500, 1000VDC. HT701 is capable of saving the results of measurements in its internal memory and has been designed in compliance with safety standard IEC/EN61010-1 in CAT III 1000V and CAT IV 600V with double protective insulation.



Remote switch probe for insulation









#### ORDER CODE HR000401

PROFESSIONAL MULTIMETER FOR AC+DC TRMS MEASUREMENT AND LoZ INPUT

Professional digital multimeter in TRMS with 6000 measuring spots which mainly carries out measurements of AC/DC voltage and AC/DC current. Among the many functions of the device there are the AC+DC mode, used to consider also continuous components possibly overlapping the alternate signal and AC voltage measurements in conditions of **low impedance (LoZ)** in order to reduce the influences when measuring between adjacent conductors.

#### **Functions**

- DC/AC TRMS voltage
- DC/AC TRMS current
  Insulation with test voltage up to 1000VDC
- Resistance and Continuity test
- Frequency
- Diode test
- Capacity
- Temperature with K-type probe
- Internal memory for measured data saving
- Data HOLD, MAX/MIN, Relative measurement
- Automatic/Manual Range
- · Backlight, Bargraph Auto Power OFF



#### Main features

Display: LCD, 10000 dots

4x1.5V alkaline batteries type AA LR6 Power supply: after 20 minutes' idling Auto Power OFF:

IEC/EN61010-1. IEC/EN61557-1-2

Safety: CAT III 1000V, CAT IV 600V Measurement category

double insulation Insulation:

Pollution level:

Max height: 2000m 207x95x52mm Size (LxWxH): Weight (batteries included):



#### Included accessories

4413-2	Pair of test leads
YAAMK0001HT0	Pair of alligator clips
PR701	Probe for insulation measurement
TK101	K-type wire probe
T10	Adapter for K-type probes
	Belt with magnetic terminal
	Protective case, battery and user manual



#### **Technical Specifications**

- Measuring range: 0.01mV ÷ 1000V
  Resolution: 0.01mV ÷ 0.1V
  Basic accuracy: ±(0.08%reading + 2 digits)
  Protection: 1000V DC/ACrms

- AC TRMS voltage

  Measuring range: 0.01mV ÷ 1000V

  Resolution: 0.01mV ÷ 0.1V

  Basic accuracy: ±(0.9%reading + 3 digits)

  Protection: 1000V DC/ACrms

#### DC current

- Measuring range: 0.01mA ÷ 400mA
  Resolution: 0.01mA ÷ 0.1A
- Basic accuracy: ±(0.2%reading + 2 digits)
   Protection: Fuse F440mA/1000V

#### AC TRMS current

- Measuring range: 0.01mA ÷ 400mA
   Resolution: 0.01mA ÷ 0.1mA
   Basic accuracy: ±(1.5%reading + 2 digits)
   Protection: Fuse F440mA/1000V

#### **Resistance and Continuity test**

- Measuring range: 0.1Ω ÷ 40MΩ
   Resolution: 0.1Ω ÷ 0.01MΩ
- Resolution: 0.112 = 0.01MΩ
  Basic accuracy: ±(0.5%reading + 2 digits)
  Continuity test:<30Ω</li>
  Protection: 1000V DC/ACrms

#### Frequency

- Measuring range: 0.01Hz ÷ 100kHz
- Resolution: 0.01Hz ÷ 0.01kHz
   Basic accuracy: ±(0.1%reading + 5 digits)
   Protection: 1000V DC/ACrms

#### Capacity

- Measuring range: 0.001µF ÷ 40mF
  Resolution: 0.001µF ÷ 0.01mF
  Basic accuracy: ±(1.2%reading + 2 digits)
  Protection: 1000V DC/ACrms

#### Temperature with K-type probe

- Measuring range: -200°C ÷ 1200°C
  Resolution: 0.1°C
  Basic accuracy: ±(1.0%reading + 1°C)
  Protection: 1000V DC/ACrms

#### Insulation measurement

- Test voltage: 50,100,250,500,1000VDC
- Measuring range: 2MΩ ÷ 22GΩ
- Resolution:  $0.001M\Omega \div 0.1G\Omega$
- Basic accuracy: ±(1.5%reading + 5 digits)
   Protection: 600V DC/ACrms



#### **Functions**

- · DC/AC TRMS voltage
- DC/AC TRMS current
- AC+DC measurements
- AC voltage measurement with low impedance "LoZ"
- "VoltSense" for AC voltage detection without contact
- · Resistance and Continuity test
- Frequency
- Diode test
- Capacity
- Temperature with K-type probe
  Data HOLD, MAX/MIN/PEAK
- Relative measurement · Automatic/Manual Range
- · Backlight, Bargraph



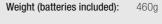
## Main features

LCD, 4 digits, 6000 dots Display: 1x9V alkaline battery type 6F22 Power supply: 150 hours Battery life:

Auto Power OFF: after 20 minutes' idling IEC/EN61010-1 Safety: CAT III 1000V, CAT IV 600V Measurement category:

Insulation: Double insulation

Pollution level: Max height: 2000m Size (LxWxH): 190x94x48mm





#### Included accessories

4413-2	Pair of test leads	
TK101	K-type wire probe	
T10	Adapter for K-type probes	
	Protective case, battery and user manual	



#### **Technical Specifications**

- Measuring range: 0.01mV ÷ 1000V
- Resolution: 0.01mV ÷ 0.1V
- Basic accuracy: ±(0.08%reading + 2 digits)
- Protection: 1000V DC/ACrms

#### AC TRMS voltage

- Measuring range: 0.01mV ÷ 1000V
- Resolution: 0.01mV ÷ 0.1V
- Basic accuracy: ±(0.8%reading + 5 digits)
- Protection: 1000V DC/ACrms

#### DC current

- Measuring range: 0.01mA ÷ 10A
- Resolution: 0.01mA ÷ 0.01A
- Basic accuracy: ±(0.8%reading + 3 digits)
- Protection: Fuse F440mA/1000V Fuse F11A/1000V

#### **AC TRMS current**

- Measuring range: 0.01mA ÷ 10A
- Resolution: 0.01mA ÷ 10A
- Basic accuracy: ±(1.2%reading + 3 digits)
- Protection: Fuse F440mA/1000V Fuse F11A/1000V

#### Resistance and Continuity test

- Measuring range: 0.1Ω ÷ 40MΩ • Resolution:  $0.1\Omega \div 0.01M\Omega$
- Basic accuracy: ±(0.8%reading + 2 digits)
- Continuity test:<30Ω</li>
- Protection: 1000V DC/ACrms

#### Frequency

- Measuring range: 0.01Hz ÷ 100kHz
- Resolution: 0.01Hz ÷ 0.01kHz
- Basic accuracy: ±(0.1%reading + 2 digits)

#### • Protection: 1000V DC/ACrms

#### Capacity

- Measuring range: 0.001µF ÷ 10mF
- Resolution:  $0.001\mu\text{F} \div 0.01\text{mF}$
- Basic accuracy: ±(1.2%reading + 2 digits)

#### • Protection: 1000V DC/ACrms Temperature with K-type probe

- Measuring range: -40°C ÷ 400°C
- Resolution: 0.1°C
- Basic accuracy: ±(1.0%reading + 10 digits)
- Protection: 1000V DC/ACrms

#### PROFESSIONAL TRMS MULTIMETERS







ORDER CODE HR000712

HT712

DIGITAL MULTIMETER WITH MEASUREMENT OF VOLTAGE AND PHASE SEQUENCE WITH 1 LEAD

Model HT712 has been designed to practically and functionally perform the basic functions of a common digital tester in an extremely easy and quick way, thanks to its narrow and long structure. The device measures AC/DC voltage, Frequency, Resistance, and performs Continuity tests. Thanks to the innovative and patented 1-terminal method, it is possible to measure Voltage and Frequency, while the Phase sequence can also be measured directly on the isolating sheaths of the cables

## **Functions**

- TRMS measurement
- DC/AC voltage
- AC voltage with 1 terminal
- Automatic recognition of AC/DC
- Resistance and Continuity test
- Frequency
- Frequency with 1 terminal
- Phase sequence with 1 terminal
- Data HOLD
- LED indications OK/FAIL
- Autorange
- Measurement category (@ 600V)
- AutoPowerOFF



#### **Main features**

Display:LCD, 3¾ digits, 4000 dotsPower supply:2x1.5V batteries type AAAAuto Power OFF:after 5 minutes' idlingSafety:IEC/EN 61010-1Insulation:double insulation

Pollution level: 2

Size (LxWxH): 250x51x30mm Weight (batteries included): 150g



## **Technical Specifications**

#### DC voltage

- Measuring range: 0.5V ÷ 600V
- Resolution: 0.1V
- Basic accuracy: ±(0.8%rdg + 1digit)

#### AC voltage with 2 terminals

- Measuring range: 1.5V ÷ 600V
- Resolution: 0.1V
- Basic accuracy: ±(1.5%rdg + 5digits)

#### Resist. and Continuity test

- Measuring range:  $1\Omega \div 1500\Omega$
- Resolution: 1Ω
- Basic accuracy: ±(1.0%rdg + 5digits)
- Continuity: <100Ω

#### Frequency with 2 terminals

- Measuring range: 40Hz ÷69Hz
- Resolution: 0.1Hz
- Basic accuracy: ±(0.5%rdg + 1digit)

#### Phase sequence with 1 terminal

- Measuring range: 100V ÷ 600V
- Resolution: 1V



#### **Included accessories**

P711EU	Red measuring lead
P710EU	Black measuring lead
B700	Holster
	ISO9000 calibration certificate
	Ratteries and user manual



# ORDER CODE **Hr000021** | **Hr000021** | **Hr000025N**HT211 | HT21 | HT25N



COMPACT DIGITAL MULTIMETERS IN CAT III











	HT211	HT21	HT25N
TRMS	•	-	-
AC / DC voltage	•	•	•
AC / DC current	•	-	• DC
Resistance / Continuity test	•	•	•
Frequency	•	•	-
Capacity	•	•	-
Diode test	•	•	•
Duty Cycle	•	•	-
Temperature with K-type probe	•	-	-
Battery test 1.5V/9V	-	-	•
Data HOLD	•	•	•
Relative measurement	•	•	-
Backlight	•	•	•
Auto Power OFF	•	•	•



#### **Main features**

LCD 31/2 digits, 2000 dots (HT25N) Display:

4 digits LCD display, 4000 dots, decimal sign

and point (HT21)

3¾ digits LCD display, 4000 dots plus decimal

sign and point (HT211)

1x9V batteries type IEC 6F22 (HT21, HT25N) Power supply:

2x1.5V batteries type AAA IEC LR03 (HT211)

after 15 minutes' idling (HT211) Auto Power OFF:

after 30 minutes' idling (HT21)

Safety: IEC/EN 61010-1 Measurement CAT III 600V

category:

Pollution level:

Insulation: double insulation Size (LxWxH): 145x70x60mm

Weight 210g **(HT21, HT211)**, 255g **(HT25N)** 

(batteries included):



#### **Included accessories**

KIT4000A	Pair of test leads
	Adapter T10 + K-type wire probe (HT211)
	Soft carrying bag for (HT21, HT211)
	Ratteries and user manual



Models HT21, HT210 and HT25N are compact digital multimeters capable of carrying out mainly measurements of AC/DC voltage up to 600V and DC current up to 10A (HT25N) with complementary functions of Resistance, Continuity test, Diode test and 9V and 1.5V alkaline battery tests. These devices have been designed in compliance with safety standard IEC/EN61010-1 with double protective insulation in CAT III 600V. They are provided with a wide LCD display with backlight and each function can be selected through its relevant switch. A further function of this device is Data HOLD to freeze data on the display and REL for relative measurements. HT210 also offers the possibility of measuring temperature with the provided K-type probe, but also with the optional TK1xx probes.

## **Technical Specifications**

	HT21 - HT211	HT25N	
DC voltage			
Measuring range:	20mV ÷ 600V	1mV ÷ 600V	
Resolution:	0.001V÷1V	0.1mV÷1V	
Basic accuracy:	±(1.2%reading + 2digits)	±(1%reading+ 3digits)	
Protection:	600VDC	200Vrms for scale 200.0mV 600V AC/DC	
AC voltage	<u>'</u>		
Measuring range:	20mV ÷ 600V	1V ÷ 600V	
Resolution:	0.001V÷1V	0.1V ÷ 1V	
Basic accuracy:	±(1.2%reading + 4digits)	±(1.5%reading+12digits)	
Protection:	600VAC	600VAC	
DC current			
Measuring range:	400.0μA ÷ 10A AC/DC (HT211)	2mA ÷ 10A DC	
Resolution:	0.1μA ÷ 0.01A <b>(HT211)</b>	1μA ÷ 0.01A	
Basic accuracy:	±(1%reading+3digits) (HT211)	±(1.5%reading+3digits)	
Protection:	Rapid fuse 500mA / 600V Quick fuse 10A / 600V for scale 10A (HT211)	Rapid fuse 200mA / 600V Quick fuse 10A / 600V for scale 10A	
Battery test			
Measuring range:	-	1.5 / 9V	
Resolution:	-	1.5V=1mV / 9V=10mV	
Basic accuracy:	-	±(1.5%reading+3digits)	
Protection:	-	1.5V=100mA / 9V=6mA	

	HT21 - HT211	HT25N
Resistance and Continui	ty test	
Measuring range:	2Ω ÷ 40MΩ	1Ω ÷ 2MΩ
Resolution:	$0.1\Omega \div 0.01M\Omega$	0.1Ω ÷ 1KΩ
Basic accuracy:	±(1%reading + 2digits)	±(1.2%reading + 4digits)
Continuity test	<150Ω	<60Ω
Protection:	250Vrms	250Vrms < 15sec
Frequency		
Measuring range:	25mHz ÷10MHz	-
Resolution:	0.001Hz ÷10KHz	-
Basic accuracy:	$\pm$ (1.2%reading + 3digits)	-
Protection:	250Vrms	-
Capacity		
Measuring range:	0.2nF ÷ 100μF	-
Resolution:	0.01nF ÷ 0.1μF	-
Diode test		
Resolution:	1mV	1mA
MAX Open-circuit voltage:	1.5VDC	2.8VDC
Basic accuracy:	±(10%reading+5digits)	ND
Duty Cicle		
Measuring range:	0.5% ÷ 99%	-
Resolution:	0.1%	-
Basic accuracy:	$\pm$ (1.2%reading + 2digits)	-
Protection:	250Vrms	-
Temperature with K prol	oe (only HT211)	
Measuring range:	-20°C ÷ 760°C	-
Resolution:	0.1°C ÷ 1°C	-
Basic accuracy:	±(3%reading + 5°C)	-







ORDER CODE **HROOO14D** 

POCKET DIGITAL MULTIMETER

Model HT14D is a **compact** digital multimeter capable of carrying out mainly measurements of **AC/DC voltage** up to **500V** and **DC current** up to **200mA** with complementary functions of **Resistance**, **Diode test** and **9V alkaline battery test**. This device has been designed in compliance with **safety standard IEC/EN61010-1** with double protective insulation in **CAT III 300V**. HT14D is provided with a wide **LCD display** and each function may be selected through its relevant switch. A further function of this device is **Data HOLD** to freeze data on the display.



- DC/AC voltage
- AC/DC current integrated clamp sensor
- Resistance and continuity test with buzzer
- Current and voltage frequency
- Data HOLD
- Automatic / manual selection of measuring range
- Auto Power OFF



#### Main features

Display:LCD, 3¾ digits, 3400 dotsPower supply:2x1.5V battery type AAA LR03Auto Power OFF:after 10 minutes' idlingSafety:IEC/EN 61010-1

Measurement category: CAT III 300V, CAT II 600V

Pollution level: 2

Insulation: double insulation
Size (LxWxH): 128x87x24mm

Weight (batteries included): 210g



#### Included accessories

Anti-shock protection shell

Integrated measuring leads and clamp meter

Batteries and user manual



#### **Technical Specifications**

#### DC voltage

- Measuring range: 0mV ÷ 600V
- Resolution: 0.001mV ÷ 0.1V
- Basic accuracy: ±(1.5%reading + 4digits)
- · Protection against overcharge: 720VDC/AC for 10 seconds

#### AC voltage

- Measuring range: 0V ÷ 600V
- Frequency band: 50Hz ÷ 400Hz
- Resolution: 0,001V ÷ 1V
- Basic accuracy: ±(1.5%reading + 5 digits)
- Protection against overcharge: 720VDC/AC for 10 seconds

#### AC/DC current integrated clamp sensor

- Measuring range: 0A ÷ 60A
- Resolution: 0.1A
- Frequency range: 50Hz ÷ 60Hz
- Basic accuracy: ±(2%reading + 5digits)
- Protection against overcharge: 72A DC/AC for 10 seconds

#### Resistance and Continuity test

- Measuring range:  $0\Omega \div 34M\Omega$
- Resolution:  $0.1\Omega \div 0.01M\Omega$
- Basic accuracy: ±(1%reading + 3digits)
- Protection against overcharge: 720VDC/AC for 10 seconds
- Continuity buzzer: R<30 $\Omega$   $\pm$  10 $\Omega$

#### Frequency

- Current measuring range: OHz ÷ 10kHz
- Voltage measuring range: OHz ÷ 300kHz
- Basic accuracy: ±(0.1%reading + 1digit)
- Resolution: 0,001kHz ÷ 0.01MHz
- Protection against current overcharge: 72A DC/AC for 10 seconds
- Protection against voltage overcharge: 720VDC/AC for 10 seconds

## Functions

- DC/AC voltage
- DC current
- · Resistance and Continuity test
- Diode test
- · Battery test 9V
- Data HOLD

#### Main features

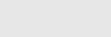
Display: LCD, 3½ digits, 2000 dots
Power supply: 1x12V batteries type MS21/MN21

Safety: IEC/EN61010-1 Insulation: double insulation

Pollution level:

Size (LxWxH): 105x50x25mm Weight (batteries 100g

included):



#### **Included accessories**

KIT4000A

Measuring leads

Batteries and user manual

#### **Technical Specifications**

#### DC voltage

- Measuring range: 200mV ÷ 500V
- Resolution: 0.1mV ÷ 1V
- Basic accuracy: ±(0.5%rdg + 2digits)

#### AC voltage

- Range: 1V ÷ 500V
- Resolution: 0.1V ÷ 1V
- Basic accuracy:  $\pm (1.2\% rdg + 10 digits)$

#### **Resistance and Continuity test**

- Measuring range:  $1\Omega \div 2000\Omega$
- Resolution:  $0.1\Omega \div 1k\Omega$
- Basic accuracy:  $\pm (0.8\% \text{rdg} + 4 \text{digits})$

#### DC current

- Measuring range: 2000µA ÷ 200mA
- Resolution:  $1\mu A \div 0.1 mA$
- Basic accuracy:  $\pm (1.2\% \text{rdg} + 2 \text{digits})$



ORDER CODE HR000100 | HR000008 | HR000007 | HR000006

# HT10|HT8|HT7|HT6



You Tube

TWO-POLE MULTIFUNCTION TESTERS WITH IN-BUILT LED TORCH

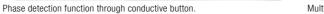






Use of the integrated LED torch.







Multimeter function with display and LED indication.



Measurement of phase sequence.

# Functions

	HT10	НТ8	HT7	HT6
AC/DC Voltage	(1000V)	(690V)	(690V)	(690V)
AC Voltage with 1 terminal	•	•	•	•
AC Voltage with low impedance input	•	-	•	-
Phase sequence	•	•	•	•
Continuity test with buzzer	•	•	•	•
Resistance measurement	•	-	-	-
Diode test	-	•	-	•
LED indications and sound notifications	•	•	•	•
LCD display	•	•	•	-
Integrated torch	•	•	•	•



Weight

(batteries included):

#### **Main features**

Display: LCD, 4digits, 6900 dots (HT8) LCD, 31/2 digits, 1999 dots (HTT, HT10) 2x1.5V battery type AAA LR03 Power supply: IEC/EN61010-1, Safety: IEC/EN61010-2-030 (HT8), IIEC/EN61243-3:2014 CAT IV 600V - CAT III 690V (HT7, HT8) Measurement CAT IV 600V - CAT III 1000V (HT10) category: Pollution level: Insulation: double insulation Size (LxWxH): 255x60x35mm (HT6, HT8) 240x78x40mm (HT7)

> 270x70x30mm (HT10) 170g (HT6, HT8) 240g (HT7) 290g (HT10)

# **Technical Specifications**

	HT10	НТ8	HT7	HT6
DC/AC voltage				
Measuring range:	6V ÷ 1000V	10V ÷ 690V	6V ÷ 690V	12V ÷ 690V
Frequency band:	40Hz ÷ 400Hz	16Hz ÷ 400Hz	50Hz ÷ 60Hz	16Hz ÷ 400Hz
Resolution:	1V	0.1V	1V	1V
Basic accuracy:	±(3%reading + 5digits)	±(3%reading + 5digits)	±(1%rdg+3dgt) (DC) ±(1.5%rdg+5dgt) (AC)	In compliance with EN61243-3
Protection against overcharge:	1000VDC/AC	690VDC/AC	690VDC/AC	690VDC/AC
AC voltage with 1 terminal				
Measuring range:	100V ÷ 1000V	100V ÷ 690V	100V ÷ 690V	100V ÷ 690V
Frequency band:	50Hz ÷ 400Hz	50Hz ÷ 60Hz	50Hz ÷ 60Hz	50Hz ÷ 60Hz
Protection against overcharge:	1000VDC/AC	690VAC	690VAC	690VAC
Phase sequence				
Measuring range:	100V ÷ 1000V	120V ÷ 400V (Phase-Earth)	100V ÷ 690V	120V ÷ 400V (Phase-Earth)
Frequency band:	50Hz ÷ 60Hz	50Hz ÷ 60Hz	50Hz ÷ 60Hz	50Hz ÷ 60Hz
Protection against overcharge:	1000VDC/AC	690VAC	690VAC	690VAC
Continuity test with LED and	d buzzer			
Measuring range:	0Ω ÷ 400kΩ	0Ω ÷ 500kΩ	0Ω ÷ 200kΩ	0Ω ÷ 500kΩ
Test current:	<5μA	<7μΑ	<1µA	<7μΑ



#### **Included accessories**

	Protection cap for lead, 2 pieces	
	Adapter 4mm for lead, 2 pieces	
PR9	Mobile lead (HT6, HT8)	
	Batteries and user manual	



#### **Optional accessories**

_	PR9	Mobile lead (HT6, HT8)
_	B71	Carrying bag (HT7)

