

500V

VNom

Dream bigger

GO
STOP

SAVE

Catalogue 2024



GENERAL CATALOGUE | 2024





We've been tracing lines of success for 40 years.

It's been 40 years.

40 years since HT moved its first ambitious steps into the world of electronic devices.

Decades of constant commitment for a recurring and unchanged satisfaction, of innovations and investments, always supporting transformations and targeted and defined goals.

Decades of renovations, even risky and courageous, of sacrifices and equally shared responsibilities, from the company's top management to the most trusted collaborators, who certainly deserve our applause and gratitude.

To look to the future with enthusiasm, however, HT cannot consider this important milestone other than as a substantial stage of the journey undertaken, a new point from which to start again to face the new challenges created by today's multicolored scenario with the same stubbornness, persistence and passion.

Forty years in which the many encouraging faces, reliable partners and indispensable relationships have followed one another and have characterized the most significant moments in the history of HT, and which have always allowed it to observe the market with that entrepreneurial foresight, attention to the customer and trust in the founding values, typical of those who want to live every story as a protagonist.

A culture of planning and doing that has allowed weaving and tracing exciting parables and winning paths over time.

This has allowed HT to trace lines of undeniable success.





1983 | 2023



Research and development

An office, **the beating heart of HT**, a point of reference for every **commercial strategy**, the starting point for every creation, with the task of supporting ideas and **making them innovative and highly performing tools**. A constantly burning fire that fuels a **continuously evolving reality**, a present that is always the future too.

Our headquarters

3.800
Square meters

The Warehouse

15.000
cubic meters

Our Italian Sales Network

15 AGENCIES

65 AGENTS ON THE TERRITORY

5 AREA MANAGERS



Calibrations and repairs

HT has been internally designing and building all the equipment intended for mains verification and analysis for over 25 years and is therefore able to guarantee a highly qualified level of technical support. To provide an increasingly quick service that meets the customer's expectations, thanks to an agreement with TRESICAL, it now hosts its own detached air-conditioned laboratory for the release of calibration reports according to standard ISO 9001 and accredited certificates (ACCREDIA) according to standard ISO/IEC 17025.

Distributors

186

Assisted sales points

3 REGIONAL MANAGERS

1160

Measuring instruments in the catalogue

more than
680

Our foreign Sales Network

70 DISTRIBUTORS

2 EUROPEAN BRANCHES



Building the future since 1983.

The care and attention for things done well, a wealth of experience accumulated over the years, an innate sense for innovation, a project for a future cultivated day by day, have made **HT** one of the **most important and representative companies in the market of measuring instruments** intended for electrical tests, a fundamental **point of reference** for those who, over time, have wanted or had to approach this world and for those who, from this world, have demanded the best.

Latest-generation technologies, cutting-edge infrastructures, unique skills in the sector, people, a team, the backbone which, year after year, **has guaranteed success** and which has allowed continuous **growth** on a global level, from every point of view.

Making know-how available, governing it and transforming it into exclusive and highly performing tools, satisfying every specific need, has been the challenge that has accompanied HT for over 40 years, and the way it has faced changes, to **invest in the skills** and trust of an increasingly demanding and advanced target.

The way to be the **added value** of a constantly evolving reality.

Certifications







Accredited laboratory
LAT174
by **TRESICAL MS**
at HT-Italia headquarters

Safety first

Further to carrying out their function, devices for electric measurement must focus on the **operator's safety** as a basic requirement as regards **protection from instant overvoltage** which may generate because of the presence of **complex charging networks, short circuits, atmospheric charges**, etc.

In this respect, international standard **IEC 61010-1** harmonized in Europe with **EN 61010-1** has devised precise rules which electric devices used for measurements in LV (<1000VAC) must comply with. Four "**Overvoltage Categories**" were created, which define the protection level against voltage spikes of each device according to the distance from the power supply source.

Devices in the highest category need a higher internal protection as they can operate near the power supply source.
A short description is outlined below:

	TYPE OF MEASUREMENT	APPLICATION
	Measurements carried out on circuits not directly connected to the distribution mains	Protected electronic devices, measurements on circuits not derived from mains
	Measurements carried out on circuits directly connected to the low-voltage installation	Household appliances, portable tools and similar devices
	Measurements carried out on installations inside buildings	Distribution panels, wirings, switches, sockets in fixed installations, electric motors, industrial devices
	Measurements carried out on a source of a low-voltage installation	Electricity meters, measurements on primary overcurrent protection devices, ripple control units.



TRMS, the true root mean square of HT instruments.

In modern domestic and industrial installations, the use of devices generating so-called **“non-linear loads”** (e.g. computer networks, variable speed devices, switching suppliers, etc...) is increasing. These loads contribute to the **sometimes remarkable deformation of the waveform of the signals applied to it**, taking it further and further from the traditional sinusoidal waveform typical of “linear” loads (consisting in resistors, inductance or capacity). Normal measuring devices (multimeters and clamp meters) for measuring alternating voltage and current of an **“average-value”** type allow for precise measurements **only on sinusoidal waveforms of signals, hence on linear loads**.

To measure non-linear loads, the generation of **harmonic components** which cause the **distortion of the waveform** of the signal, makes the use of **TRMS (True Root Mean Square) devices** necessary, since the average-value devices, taking only the value of the fundamental frequency of 50Hz into consideration, may bring to **even remarkable errors** of value reading.

Further to the **TRMS** value of the fundamental frequency, TRMS devices also provide the **TRMS value of the whole waveform, including harmonic components**, within the bandwidth they are designed for. Therefore, when measuring the same quantity with devices of both types, the obtained values will be identical only if the waveform of the signal is purely sinusoidal. In case of distorted waveforms, instead, **TRMS** devices always provide higher values than those measured by corresponding average-value devices.

Therefore, the use of **TRMS** measuring devices is essential when carrying out measuring and maintenance operations on industrial electric systems, in order to obtain **reliable reading values** of the measured quantities.



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PROFESSIONAL TRMS
MULTIMETERS

PROFESSIONAL TRMS MULTIMETERS

MAIN MEASUREMENTS

	 HT65	 HT64	 HT63	 HT62	 HT61	 JUPITER
TRMS	●	●	●	●	●	●
Voltage measuring range	1000VAC / 1500VDC	1000V	1000V	1000V	1000V	690V
Voltage	AC/DC	AC+DC	AC+DC	AC/DC	AC/DC	AC+DC
Measuring range of Current with leads		10A	10A	10A	10A	
Input for external current transducer		●	●	●	●	
Measurable Current	AC/DC	AC/DC	AC/DC	AC/DC	AC/DC	AC/DC
AC/DC voltage with low impedance (LoZ)	●	●	●	●	●	●
Voltage/Current harmonics + THD%						●
Reading 4-20mA%		●	●			
Frequency	●	●	●	●	●	●
Resistance	●	●	●	●	●	●
Continuity with buzzer	●	●	●	●	●	●
Capacitance	●	●	●	●		
Diode test	●	●	●	●	●	
Duty Cycle (%)	●	●	●	●	●	
Temperature with K-type probe	●	●	●	●		









ELECTRIC SAFETY MEASUREMENTS

Insulation measurement (50,100,250,500,1000VDC)						
Phase sequence						●
Test of general RCDs type A/F and AC						●
L-L,L-N,L-PE, RA loop impedance						●
Continuity of protective conductors with 200mA						

ADDITIONAL CHARACTERISTICS

	CAT IV 600V CAT III 1000V	CAT IV 600V	CAT IV 600V	CAT IV 600V	CAT IV 600V	CAT IV 600V CAT III 690V
Measuring Counts	4000	6000	60,000	6000	6000	9999
Backlight	●	●	●	●	●	●
IR sensor resolution						
Bluetooth function for connection to mobile devices						
Bargraph		●	●	●	●	●
Autorange	●	●	●	●	●	●
Auto power off	●	●	●	●	●	●
Detection of AC voltage without contact						
Data HOLD function	●	●	●	●	●	●
MIN/MAX/AVG functions		●	● MIN/MAX	● MIN/MAX	● MIN/MAX	● MIN/MAX
PEAK function		● (1ms)	● (1ms)			● (1ms)
ZERO function						
Automatic detection of AC/DC						●
Automatic detection of internal functions						
Relative measurement	●	●	●	●	●	
Data logger and graph		●				
Memory for data saving		●				
Built-in LED torch						
Power supply	1x 9V 6F22	1x7.4V rechargeable Li-ION battery,	4x 1.5V AAA	1x 9V 6F22	1x 9V 6F22	4x 1.5V AAA
Size in mm (L x W x H)	175x85x55	175x85x55	175x85x55	175x85x55	175x85x55	175x85x55
Weight in grams	360	400	400	400	400	420
Safety	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1
ORDER CODE	HR000065	HR000010	HR000001	HR000002	HR000003	HR00JUPI



	 NEPTUNE	 MERCURY	 FLASHMETER	 FLASHMETER PRO	 IRONMETER	 HT39	 HT701	 HT401
TRMS	●	●	●	●	●	●	●	●
Voltage measuring range	1000V	1000V	600V	600V	600V	1000V	1000V	1000V
Voltage	AC+DC	AC+DC	AC/DC	AC/DC	AC/DC	AC/DC	AC/DC	AC+DC
Measuring range of Current with leads					10A	10A	400mA	10A
Input for external current transducer				●				
Measurable Current	AC/DC	AC/DC		AC/DC	AC/DC	AC/DC	AC/DC	AC+DC
AC/DC voltage with low impedance (LoZ)	●			●				● AC
Voltage/Current harmonics + THD%	●							
Reading 4-20mA%								
Frequency	●				●	●	●	●
Resistance	●	●	●	●	●	●	●	●
Continuity with buzzer	●	●	●	●	●	●	●	●
Capacitance		●			●	●	●	●
Diode test		●			●	●	●	●
Duty Cycle (%)		●			●	●		
Temperature with K-type probe		●					●	●

Insulation measurement (50,100,250,500,1000VDC)	●						●	
Phase sequence	●							
Test of general RCDs type A/F and AC								
L-L,L-N,L-PE, RA loop impedance								
Continuity of protective conductors with 200mA	●							

	CAT IV 600V CAT III 1000V	CAT IV 600V CAT III 1000V	CAT IV 600V	CAT IV 600V CAT III 600V	CAT III 600V	CAT IV 600V CAT III 1000V	CAT IV 600V CAT III 1000V	CAT IV 600V CAT III 1000V
Measuring Counts	9999	6000	4000	4000	4000	4000	10000	6000
Backlight	●	●	●	●	●	●	●	●
IR sensor resolution		80 x 80 pxl with APP HTMercury						
Bluetooth function for connection to mobile devices								
Bargraph	●	●				●	●	●
Autorange	●	●	●	●	●	●	●	●
Auto power off	●	●	●	●	●	●	●	●
Detection of AC voltage without contact		●	●	●				●
Data HOLD function	●	●	●	●	●	●	●	●
MIN/MAX/AVG functions	● MIN/MAX	● MIN/MAX			● MIN/MAX	● MIN/MAX	●	● MIN/MAX
PEAK function	● (1ms)	●				●		●
ZERO function								
Automatic detection of AC/DC	●		●	●				
Automatic detection of internal functions			●	●				
Relative measurement		●				●	●	
Data logger and graph		●				(through SW)		
Memory for data saving		(micro SD card)					●	
Built-in LED torch		●	●	●	●			
Power supply	4x 1.5V AAA	1x7.4V rechargeable Li-ION battery,	2x 1.5V AAA	2x 1.5V AAA	2x 1.5V AAA	1x 9V 6F22	4x 1.5V AA	1x 9V 6F22
Size in mm (L x W x H)	175x85x55	190x75x55	140x80x45	140x80x45	120x85x45	164x82x44	207x95x52	190x94x48
Weight in grams	420	555	220	325	200	400	630	460
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
ORDER CODE	HR000NEP	HR000MER	HR000011	HR000PRO	HR000005	HR000039	HR000701	HR000401

ORDER CODE **HR000065**

HT65

ORDER CODE **HR000010**

HT64

ORDER CODE **HR000001**

HT63

ORDER CODE **HR000002**

HT62

ORDER CODE **HR000003**

HT61

Series of professional digital multimeters in CAT IV with Datalogger and Graph function (HT64)



The new series of HT's professional multimeters is the result of an important research work carried out among the most demanding users of this type of equipment, i.e. laboratories where the choice of a measuring instrument is conditioned by strict tests regarding **precision, reliability and safety** of measurements, **even under extreme conditions**. Therefore, this is a complete series of multimeters all capable of carrying out **TRMS measurements**, all made in **CAT IV** at 600V, with an **autorange** function available on all models and with the possibility of a backlit display. The design is extremely modern and attractive but, at the same time, ergonomic, to offer the best possible ease of use. Extremely defined display also in colour for the top model HT64. Model HT65 also stands out among the others, since it is made unique by its ability to measure DC voltage up to 1500V. The table summarizes all the characteristics that distinguish and give value to this innovative series of professional tools.

Main features

- Display:** LCD, 4 digits, 4000 counts (HT65)
LCD, 4½ digits, 6000 counts (HT61, HT62)
LCD, 4½ digits, 60000 counts (HT63)
Colour, TFT 4½ digits, 6000 counts (HT64)
- Power supply:** 1x9V battery type 6F22 (HT65, HT61, HT62)
4x1.5V batteries type AAA LR03 (HT63)
1x7.4V rechargeable Li-ION battery (HT64)
- Auto Power OFF:** after 15 minutes' idling (HT65, HT61, HT62, HT63)
5min ÷ 60 minutes' idling (HT64)
- Safety:** IEC/EN61010-1
- Overvoltage category:** CAT IV 600V - CAT III 1000V
- Pollution level:** 2
- Max operating altitude:** 2000m
- Size (LxWxH):** 175x85x55mm
- Weight (batteries included):** approx 400g

Provided accessories

- 4324-2** Pair of test leads with 2/4mm tip
- TK101** K-type wire probe (HT65, HT62, HT63, HT64)
- T10** Adapter for K-type probe
- A64** Power supply + adapter (HT64)
- ISO calibration report**
Batteries, Transport bag and User manual

Functions

	HT65	HT64	HT63	HT62	HT61
TRMS measurements	●	●	●	●	●
Colour display	-	●	-	-	-
AC/DC voltage	●	●	●	●	●
AC/DC voltage with low impedance (LoZ)	●	●	●	●	●
AC/DC current with external transducer	●	●	●	-	-
AC/DC current with leads	-	●	●	●	●
Resistance/Continuity test	●	●	●	●	●
Frequency	●	●	●	●	●
Capacitance	●	●	●	●	-
Duty cycle	●	●	●	●	-
Diode test	●	●	●	●	●
Temperature with K-type probe	●	●	●	●	-
Reading 4-20mA%	-	●	●	-	-
Data HOLD	●	●	●	●	●
MAX/MIN/AVG	-	●	Max/Min	Max/Min	Max/Min
PEAK	-	● 1ms	● 1ms	-	-
Relative measurement	●	●	●	●	●
Autorange	●	●	●	●	●
Backlight	●	●	●	●	●
Bargraph	-	●	●	●	●
Data logger and graph	-	●	-	-	-
Internal memory	-	●	-	-	-
Auto Power OFF	●	●	●	●	●

Technical Specifications

	HT65	HT64	HT63	HT62	HT61
DC VOLTAGE					
Measuring range:	0.1mV ÷ 1500V	0.1mV ÷ 1000V	0.1mV ÷ 1000V	0.1mV ÷ 1000V	0.1mV ÷ 1000V
Basic accuracy:	±(1.2%reading+4digits)	±(0.1%reading+5digits)	±(0.9%reading+5digits)	±(1.0%reading+2digits)	±(1.0%reading+2digits)
AC VOLTAGE					
Measuring range:	1mV ÷ 1000V	0.1mV ÷ 1000V	0.1mV ÷ 1000V	1mV ÷ 1000V	1mV ÷ 1000V
Basic accuracy:	±(1.2%reading+10digits)	±(0.9%reading+5digits)	±(1.0%reading+5digits)	±(1.0%reading+8digits)	±(1.0%reading+8digits)
DC CURRENT					
Measuring range:	0.30A ÷ 1000A (with clamp)	0.1µA ÷ 10A	0.1µA ÷ 10A	0.1µA ÷ 10A	0.1µA ÷ 10A
Basic accuracy:	±(1.5%reading+6digits)	±(0.9%reading+5digits)	±(1.5%reading+5digits)	±(1.0%reading+3digits)	±(1.0%reading+3digits)
AC CURRENT					
Measuring range:	0.30A ÷ 3000A (with clamp)	0.1µA ÷ 10A	0.1µA ÷ 10A	0.1µA ÷ 10A	0.1µA ÷ 10A
Basic accuracy:	±(2.5%reading+10digits)	±(1.2%reading+5digits)	±(2.5%reading+5digits)	±(1.5%reading+3digits)	±(1.5%reading+3digits)
RESISTANCE AND CONTINUITY TEST					
Measuring range:	0.1Ω ÷ 40MΩ	0.1Ω ÷ 60MΩ	0.1Ω ÷ 60MΩ	0.1Ω ÷ 60MΩ	0.1Ω ÷ 60MΩ
Basic accuracy:	±(1.0%reading+2digits)	±(0.8%reading+5digits)	±(1.2%reading+5digits)	±(1.0%reading+4digits)	±(1.0%reading+4digits)
Buzzer:	<50Ω	<25Ω	<35Ω	<100Ω	<100Ω
FREQUENCY					
Measuring range:	0.001Hz ÷ 10MHz	0.001Hz ÷ 1MHz	0.001Hz ÷ 1MHz	0.001Hz ÷ 1MHz	0.001Hz ÷ 1MHz
Basic accuracy:	±(1.2%reading+3digits)	±(0.09%reading+5digits)	±(1.0%reading+2digits)	±(0.1%reading+1digit)	±(0.1%reading+2digits)
CAPACITANCE					
Measuring range:	0.01nF ÷ 40mF	0.01nF ÷ 6mF	0.01nF ÷ 6mF	0.01nF ÷ 1000µF	-
Basic accuracy:	±(3.0%reading+5digits)	±(1.2%reading+8digits)	±(2.5%reading+10digits)	±(3.5%reading+4digits)	-
Duty Cycle					
Measuring range:	0.5% ÷ 99.9%	0.1% ÷ 99.9%	20% ÷ 80%	0.1% ÷ 99.9%	0.1% ÷ 99.9%
Basic accuracy:	±(1.2%reading+2digits)	±(1.2%reading+2digits)	±(1.0%reading+5digits)	±(1.2%reading+2digits)	±(1.2%reading+2digits)
TEMPERATURE WITH K-TYPE PROBE					
Measuring range:	-20°C ÷ 760°C	-40°C ÷ 1350°C	-40°C ÷ 760°C	-45°C ÷ 750°C	-
Basic accuracy:	±(3.0%reading + 5°C)	±(1.0%reading + 3°C)	±(2.0%reading + 3°C)	±(3.5%reading + 5°C)	-

→ **TRMS** **CAT IV 600V** **LoZ** **1500 VDC**
* Only for HT65

ORDER CODE **HR00JUPI**

JUPITER

ORDER CODE **HR00ONEP**

NEPTUNE

Professional instruments for electric safety verifications according to standard IEC/EN61010-1 and advanced multimeter functions



The new models **JUPITER** and **NEPTUNE** are **innovative** instruments that, further to being used as powerful multimeters for **TRMS** measurements, allow carrying out electric safety tests: **RCD, Ra, Loop (JUPITER), Insulation and continuity (NEPTUNE)**, according to standard **IEC/EN61010-1**. They belong to **CAT IV 600V**, with **autorange** function available in all models, as well as the **backlit display**. The design is extremely modern and attractive but, at the same time, ergonomic, to offer the best possible ease of use.



SEE PRODUCT DATA SHEET JUPITER



SEE PRODUCT DATA SHEET NEPTUNE

ORDER CODE **HR00OMER**

MERCURY

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 currents** 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 provided micro SD card, 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.



SEE PRODUCT DATA SHEET MERCURY

Functions

MULTIMETER SECTION

	JUPITER	NEPTUNE
DC / AC, AC+DC TRMS voltage	●	●
DC / AC / AC+DC TRMS voltage with low impedance (LoZ)	●	●
DC / AC / AC+DC TRMS current with optional standard clamp transducer	●	●
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	●	●
ELECTRIC VERIFICATION SECTION		
Overall earth resistance L-PE without RCD tripping	●	
Loop impedance L-L, L-N and calculation of assumed short-circuit current with resolution 0.1Ω	●	
Measurement of tripping time on Standard RCDs type A, AC and F (30mA,100mA, 300mA)	●	
Measurement of tripping current on Standard RCDs type A/F, AC (30mA)	●	
Phase sequence with 1 terminal	●	●
Insulation with test voltage 50,100, 250, 500, 1000V and calculation of PI / DAR		●
Continuity of protective conductors with 200mA		●

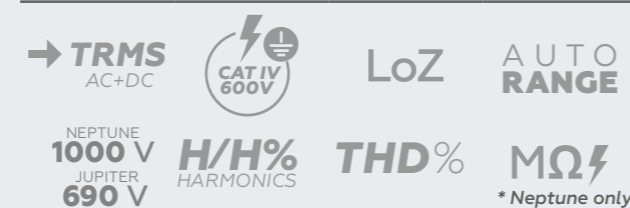
Provided accessories

C2065	3-wire cable Red, Black and Green with Schuko plug (JUPITER)
4324-2	Pair of banana leads red/black with 2/4mm tip
YABAT0001HTO	Alkaline battery type AAA IEC LR03 1.5V, 4 pieces
YABRS0002HTO	Carrying bag
YAMUM0066HTO	User manual on CD-ROM
YAMUM0065HTO	Quick user guide
	ISO calibration report

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES



Functions

- DC voltage
- AC and AC+DC TRMS voltage
- DC current
- AC and AC+DC TRMS current
- AC and AC+DC TRMS current by means of standard clamp transducers
- AC TRMS current by means of flexible clamp transducer F3000U
- "Voltsense" for the detection of AC voltage without contact
- Resistance and Continuity test
- Diode, Capacitance, Frequency
- 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

Characteristics

Power supply:	1x7.4V rechargeable Li-ION battery, 1200mAh
Safety:	IEC/EN61010-1
Overvoltage category:	CAT IV 600V, CAT III 1000V
Insulation:	double insulation
Pollution level:	2
Mechanical protection index:	IP65
Max operating altitude:	2000m
Size (LxWxH):	190x75x55mm
Weight (batteries included):	approx 555g

Provided accessories

F3000U	Flexible clamp with full scale 30/300/3000A AC
4324-2	Pair of banana leads red/black with 2/4mm tip
BATMCY	Spare battery Li-ION 7.4V 1500mAh
A0MCY	Multiplug power supply for MERCURY with re-charging base
	Micro SD card 8GB,10x
B0MCY	Carrying bag
	Alkaline battery type AAA IEC LR03, 2 pieces (for F3000U)
	K-type wire probe + adapter
	User Manual
	ISO calibration report

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES



ORDER CODE **HR000005**

IRONMETER

TRMS multimeter with built-in LED torch



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 a height of 3 m**) 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.



SEE
PRODUCT
DATA SHEET
IRONMETER

ORDER CODE **HR000011**

FLASHMETER

TRMS multimeters with total Autorange



FLASHMETER, according to the quantity present at the input, **automatically switches** between voltage and resistance measurement.

The new **FLASHMETERPRO**, in addition to the standard model, is capable of measuring the **AC/DC voltage** with **open clamp jaws** up to a maximum of **100A**.



SEE
PRODUCT
DATA SHEET
FLASHMETER



SEE
PRODUCT
DATA SHEET
FLASHMETERPRO

Main features

- Power supply:** 2x1.5V batteries type AAA IEC LR03
- Safety:** IEC/EN61010-1
- Overvoltage category:** CAT III 600V
- Insulation:** double insulation
- Pollution level:** 2
- Max operating altitude:** 2000m
- Display:** 4 LCD, 4000 counts, decimal sign and point
- Protection fuses:** Yes
- Size (LxWxH):** 120x65x45mm
- Weight (batteries included):** 200g

Provided accessories

- 4324-2 Pair of test leads with 2/4mm tip
- Batteries
- Carrying bag
- User Manual

Optional accessories



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OPTIONAL ACCESSORIES

Functions

- › TRMS measurements
- › AC/DC voltage
- › AC/DC current
- › Resistance/Continuity Test
- › Detection of AC voltage without contact
- › Frequency
- › Capacity, Diode test
- › Duty cycle
- › In-built LED illuminator
- › Autorange
- › Backlight
- › Auto Power Off

→ TRMS



Main features

- Power supply:** 2x1.5V batteries type AAA IEC LR03
- Safety:** IEC/EN61010-1
- Overvoltage category:** CAT IV 600V (Voltage), CAT III 600V (Current)
- Insulation:** double insulation
- Pollution level:** 2
- Max operating altitude:** 2000m
- Display:** 4 LCD, 4000 counts, decimal sign and point
- Size (LxWxH):** 140x75x40mm
- Weight (with batteries):** 220g

Provided accessories

- 4324-2 Pair of test leads with 2/4mm tip
- Batteries
- Carrying bag
- User Manual
- ISO calibration report (FLASHMETERPRO)
- Clamp transducer F100 (FLASHMETERPRO)

Optional accessories



SCAN THE QR CODE
TO DISCOVER ALL
OPTIONAL ACCESSORIES

Functions

	FLASHMETER	FLASHMETER PRO
TRMS measurements	●	●
Automatic selection of measurements	●	●
AC/DC voltage	●	●
AC/DC current	-	● (with clamp F100)
Resistance/Continuity test	●	●
Detection of AC voltage without contact	●	●
In-built LED illuminator	●	●
Auto HOLD function	●	●
ZERO function	●	●
Autorange	●	●
Backlight	●	●
Auto Power OFF	●	●

→ TRMS



ORDER CODE **HR000039**

HT39

TRMS multimeter 4000 counts 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.

SEE PRODUCT DATA SHEET HT39

ORDER CODE **HR000401**

HT401

Professional Multimeter for AC+DC TRMS measurement



Professional digital multimeter in **TRMS** with **6000 counts display** which mainly carries out **AC/DC voltage** and **AC/DC current** measurements. 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**.

SEE PRODUCT DATA SHEET HT401

Functions

- › DC/AC TRMS voltage
- › DC/AC TRMS current
- › Resistance and Continuity test
- › Frequency, Diode and Capacitance test
- › Data HOLD, MAX/MIN, Relative measurement
- › RS-232 Interface
- › Automatic/Manual Range
- › Backlight, Bargraph
- › Auto Power OFF

Main features

- Power supply:** 1x9V battery type 6F22
- Safety:** IEC/EN61010-1
- Overvoltage category:** CAT IV 600V, CAT III 1000V
- Insulation:** double insulation
- Pollution level:** 2
- Max operating altitude:** 2000m
- Display:** 4 LCD, 4000 counts, decimal sign and point
- Protection fuses:** Yes
- Size (LxWxH):** 164 x 82 x 44 mm
- Weight (batteries included):** 400g

Provided accessories

- Pair of test leads
- Batteries
- Protective case with support
- User Manual

Optional accessories

SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES

→ TRMS



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
- › Capacitance
- › Temperature with K-type probe
- › Data HOLD, MAX/MIN/PEAK
- › Relative measurement
- › Automatic/Manual Range
- › Backlight, Bargraph
- › Auto Power OFF

Characteristics

- Display:** LCD, 4 digits, 6000 counts
- Power supply:** 1x9V alkaline battery type 6F22
- Battery life:** 150 hours
- Auto Power OFF:** after 20 minutes' idling
- Safety:** IEC/EN61010-1
- Overvoltage category:** CAT III 1000V, CAT IV 600V
- Insulation:** Double insulation
- Pollution level:** 2
- Max height:** 2000m
- Size (LxWxH):** 190x94x48mm
- Weight (batteries included):** 460g

Provided accessories

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

Optional accessories

SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES

→ TRMS



ORDER CODE **HR000701**

HT701

Professional Multimeter
with insulation measurement up to 1000V



Professional **TRMS** multimeter with **10.000 measuring spots** and measurement of **insulation resistance** with **selectable test voltage** among the values **50, 100, 250, 500, 1000VDC**. HT701 is capable of saving measured results 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.

SEE
PRODUCT
DATA SHEET
HT701

Functions

- > DC/AC TRMS voltage
- > DC/AC TRMS current
- > Insulation with test voltage up to 1000VDC
- > Resistance and Continuity test
- > Frequency
- > Diode test
- > Capacitance
- > 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

Characteristics

Display: LCD, 10000 counts
Power supply: 4x1.5V alkaline batteries type AA LR6
Auto Power OFF: after 20 minutes' idling
Safety: IEC/EN61010-1, IEC/EN61557-1-2
Overvoltage category: CAT III 1000V, CAT IV 600V
Insulation: double insulation
Pollution level: 2
Max height: 2000m
Size (LxWxH): 207x95x52mm
Weight (batteries included): 630g

Provided accessories

4413-2	Pair of test leads
YAAMK0001HTO	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

Optional accessories

SCAN THE QR CODE
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OPTIONAL ACCESSORIES

→ TRMS



MΩ





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DIGITAL
MULTIMETERS

DIGITAL MULTIMETERS



MAIN MEASUREMENTS

	HT211	HT21	HT25N	HT22D
TRMS	●			●
Voltage measuring range	600V	600V	600V	600V
Voltage	AC/DC	AC/DC	AC/DC	AC/DC
AC voltage on VFD (downstream inverters)				●
Current measuring range	10A with leads		10A with leads	10A with leads
Current	AC/DC		DC	AC/DC
Frequency	●	●		●
Resistance	●	●	●	●
Continuity with buzzer	●	●	●	●
Capacitance	●	●		●
Diode test	●	●	●	●
Duty Cycle (%)	●	●		●
Temperature with K-type probe	●			
AC voltage with low impedance (LoZ)				
AC voltage with 1 terminal				
Phase sequence				
Test lamps with internal gas				
Built-in LED torch				

ADDITIONAL CHARACTERISTICS

	HT211	HT21	HT25N	HT22D
Overvoltage category:	CAT III 600V	CAT III 600V	CAT III 600V	CAT III 600V
Measuring spots	4000	4000	2000	4000
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	2x 1.5V AAA
Size in mm (L x W x H)	138x68x37	138x68x37	150x70x48	150x75x45
Weight in grams	235	210	255	205
Safety	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1
ORDER CODE code	HR000211	HR000021	HR00025N	HR00022D

MAIN MEASUREMENTS

	HT14D	HT12	HT10	HT8	HT6
Voltage measuring range	500V	600V	1000V	690V	690V
Voltage	AC/DC	AC/DC	AC/DC	AC/DC	AC/DC
Current measuring range	200mA with leads	60A with transducer			
Current	DC	AC/DC			
Frequency		●			
Resistance	●	●	●		
Continuity with buzzer		●	●	●	●
Capacitance					
Diode test	●			●	●
Duty Cycle (%)					
Temperature with K-type probe					
AC voltage with low impedance (LoZ)			●		
AC voltage with 1 terminal			●	●	●
Phase sequence			●	●	●
Test lamps with internal gas					
Built-in LED torch			●	●	●

ADDITIONAL CHARACTERISTICS

	HT14D	HT12	HT10	HT8	HT6
Overvoltage category:	CAT III 300V CAT II 600V	CAT III 300V CAT II 600V	CAT III 1000V CAT II 600V	CAT IV 600V CAT III 690V	CAT IV 600V CAT III 690V
Measuring spots	2000	3400	1999	6900	LED indications
Backlight			●		
Bargraph		●			
Autorange		●	●		
Auto power off		●	●	●	●
Data HOLD function	●	●	●	●	●
MIN/MAX function					
PEAK function					
Relative measurement					
Power supply	1x 12V MS21/MN21	2x 1.5V AAA	2x 1.5V AAA	2x 1.5V AA	2x 1.5V AA
Size in mm (L x W x H)	105x50x25	128x87x24	270x70x30	255x60x35	255x60x35
Weight in grams	100	210	290	170	170
Safety	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1
ORDER CODE code	HR00014D	HR000012	HR00010P	HR000008	HR000006

ORDER CODE **HR000211**

HT211

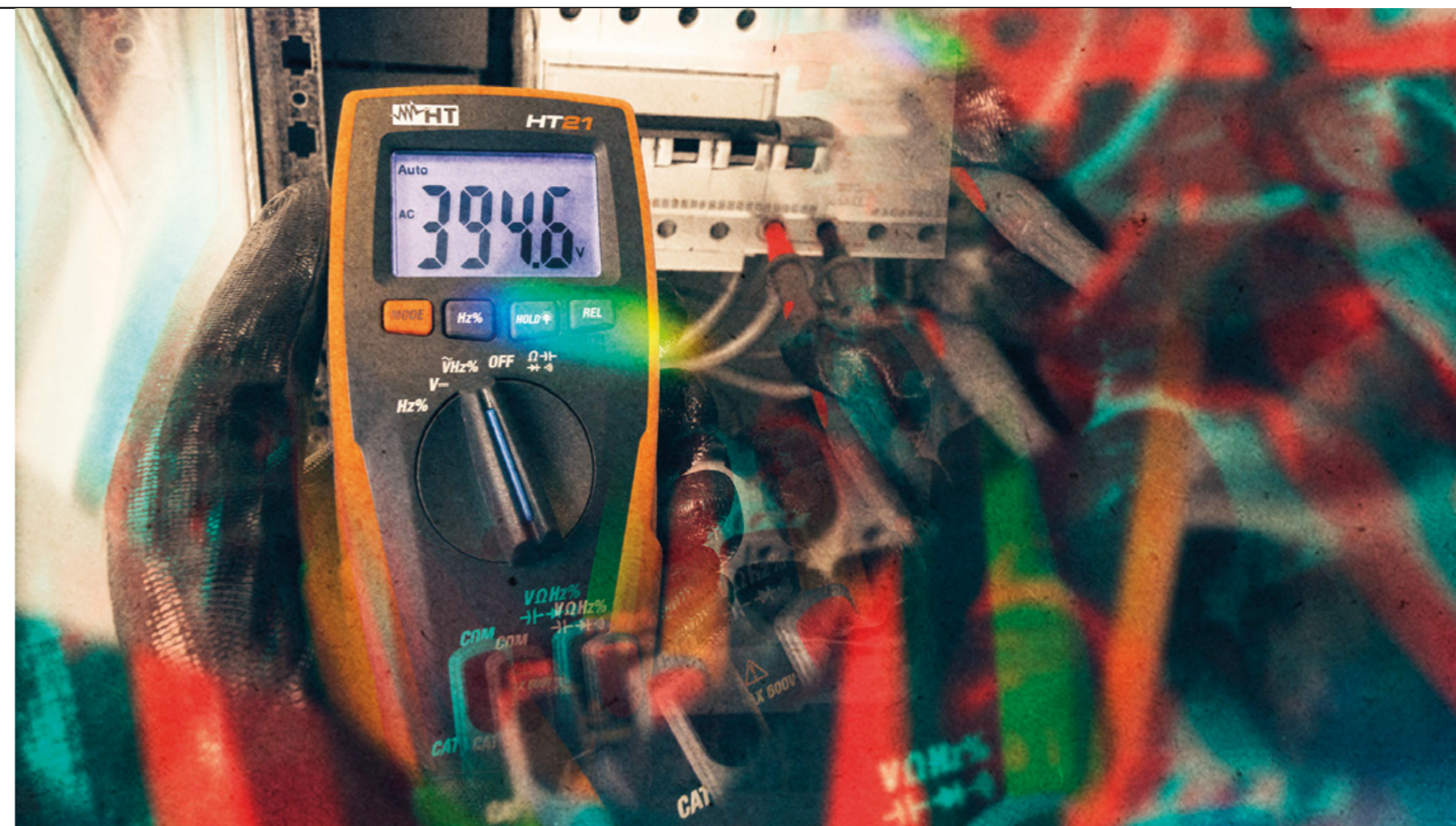
ORDER CODE **HR000021**

HT21

ORDER CODE **HR00025N**

HT25N

Compact digital multimeters in CAT III



Functions

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

Characteristics

- Display:** LCD 3½ digits, 2000 dots (HT25N)
4-digit LCD display, 4000 dots, decimal sign and point (HT21)
3¾-digit LCD display, 4000 dots plus decimal sign and point (HT211).
- Power supply:** 1x9V batteries type IEC 6F22 (HT21, HT25N)
2x1.5V batteries type AAA IEC LR03 (HT211)
- Auto Power OFF:** after 15 minutes' idling (HT211)
after 30 minutes' idling (HT21)
- Safety:** IEC/EN 61010-1
- Overvoltage category:** CAT III 600V
- Pollution level:** 2
- Insulation:** double insulation
- Size (LxWxH):** 145x70x60mm
- Weight (batteries included):** 210g (HT21, HT211), 255g (HT25N)

Provided accessories

- 4324-2** Pair of test leads with 2/4mm tip
- TK101** K-type wire probe (HT21)
- T10** Adapter for K-type probes
- Carrying bag (HT21, HT211)
- Batteries and user manual

Optional accessories

SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES



SEE PRODUCT DATA SHEET OF HT211



SEE PRODUCT DATA SHEET OF HT21



SEE PRODUCT DATA SHEET OF HT25N

Models HT21, HT211 and HT25N are compact digital multimeters capable of carrying out mainly measurements of **AC/DC voltage** up to **600V** and **AC/DC Current** up to **10A** (HT211) with complementary functions of **Resistance, Continuity test, Diode test** and **9V** and **1.5V alkaline battery test**. 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 backlight display 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. HT211 also offers the possibility of measuring **temperature with the provided K-type probe**, but also with the optional TK1xx probes.

ORDER CODE **HR000012**

HT12

Pocket digital multimeter with in-built AC/DC 60A clamp meter



Model HT12 is a **super compact** digital multimeter capable of carrying out measurements of **Voltage up to 600V, AC/DC current up to 60A** with **in-built clamp sensor** and complementary functions of **Resistance, Continuity test and Frequency**. This device has been designed in compliance with **safety standard IEC/EN61010-1** with double protective insulation in **CAT III 300V, CAT II 600V**. Further functions are **Data HOLD** to freeze data on the display and the **Auto Power OFF** function after 10 minutes' idling, in order to preserve the internal battery. The device is housed in a **protective case** which is also used to rewind the test leads.



ORDER CODE **HR00014D**

HT14D

Pocket digital tester



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 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.



Functions

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

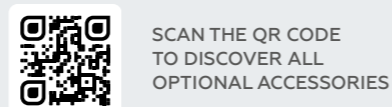
Characteristics

Display:	LCD, 3½digits, 3400 counts
Power supply:	2x1.5V battery type AAA LR03
Auto Power OFF:	after 10 minutes' idling
Safety:	IEC/EN 61010-1
Overvoltage category:	CAT III 300V, CAT II 600V
Pollution level:	2
Insulation:	double insulation
Size (LxWxH):	128x87x24mm
Weight (batteries included):	210g

Provided accessories

- Anti-shock protection shell
- Integrated measuring leads and clamp meter
- Batteries and user manual

Optional accessories



Functions

- › DC/AC voltage
- › DC current
- › Resistance and Continuity test
- › Diode test
- › 9V battery test
- › Data HOLD

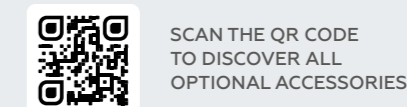
Characteristics

Display:	LCD, 3½digits, 2000 counts
Power supply:	1x 12V batteries type MS21/MN21
Safety:	IEC/EN61010-1
Insulation:	double insulation
Pollution level:	2
Size (LxWxH):	105x50x25mm
Weight (batteries included):	100g

Provided accessories

- KIT4000A** Measuring leads with 2mm tip
- Batteries and user manual

Optional accessories



ORDER CODE **HR00022D**

HT22D

TRMS digital multimeter with VFD function



The HT22D model is a TRMS digital multimeter for measurements of DC/AC TRMS Voltage up to 600V, DC/AC TRMS Current up to 10A, Resistance, Continuity Test, Frequency, Duty Cycle, Capacity, and Diode Test in accordance with the IEC/EN61010-1 safety standard with measurement category CAT III 600V. The instrument has an innovative **VFD (Variable Frequency Driver)** function for precise measurements of AC voltage **even downstream of variable frequency regulators (Inverters)**. There is also the Data HOLD function, a large backlit display and an Auto Power OFF function for automatic shutdown in case of inactivity.



ORDER CODE **HR000010**

HT10

2-pole multifunction tester with in-built LED torch



ORDER CODE **HR000006**

HT6

Devices HT6, HT8 and HT10 are designed to carry out the basic measurements of a digital tester in a practical, quick and functional way thanks to their narrow and long structure, which allows carrying out measurements in any operating conditions. **HT8** and **HT10** carry out measurements of **AC/DC voltage, Continuity tests with buzzer, Diode tests** and **Phase sequence tests** with LED indications and **display reading**. **HT6** carries out measurements of **AC/DC voltage, Continuity tests with buzzer, Diode tests** and **Phase sequence** with LED indication. These devices are provided with a white LED torch for use in poorly lit environments and complies with the **safety requirements** of standards **IEC/EN61243-3, IEC/EN61243-3 (HT10) IEC/EN61010-1** and **IEC/61010-2-030** in **CAT IV 600V, CAT III 690V (HT6, HT8)** and **CAT IV 600V, CAT III 1000V (HT10)**.



Functions

- › TRMS
- › AC/DC Voltage
- › AC/DC Current
- › VFD function on TRMS AC
- › Resistance
- › Continuity with buzzer
- › Frequency
- › Duty cycle %
- › Capacity
- › Diode Test
- › HOLD Data
- › Backlight
- › Automatic/manual range
- › Auto power off

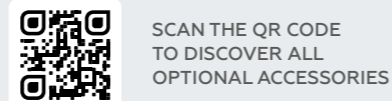
Specifications

Display:	4 digit LCD, 4000 pixels
Power supply:	2x1.5 V batteries type AAA LR03
Auto Power OFF:	after 15 minutes of non-use
Safety:	IEC/EN 61010-1
Overvoltage category:	CAT III 600V
Level of pollution:	2
Insulation:	double insulation
Dimensions (LxWxH):	150x75x45mm
Weight (with batteries):	205g

Supplied accessories

BOEC95	
4324-2	Professional red/black 2/4mm 90° tips
	Batteries and user manual

Optional accessories



Functions

	HT8	HT6	HT10
DC/AC voltage	●	●	●
AC voltage with 1 terminal	●	●	●
AC voltage with low impedance (LoZ)			●
Phase sequence	●	●	●
Continuity test with buzzer	●	●	●
Resistance measurement			●
Diode test	●	●	
Display LCD	●		●
LED indications and sound notifications	●	●	●
Integrated torch	●	●	●

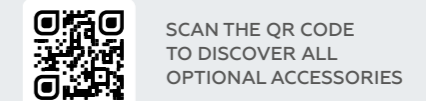
Characteristics

Display:	LCD, 4 digits, 6900 counts (HT8) LCD, 31/2 digits, 1999 counts (HT10)
Power supply:	2x1.5V battery type AAA LR03
Safety:	IEC/EN61010-1, IEC/EN61010-2-030 (HT8), IEC/EN61243-3:2010 IEC/EN61243-3:2014 (HT10)
Overvoltage category:	CAT IV 600V - CAT III 690V (HT6,HT8) CAT IV 600V - CAT III 1000V (HT10)
Pollution level:	2
Insulation:	double insulation
Size (LxWxH):	255x60x35mm (HT6,HT8) 270x70x30mm (HT10)
Weight (batteries included):	170g (HT6,HT8) 290g (HT10)

Provided accessories

	Protection cap for lead, 2 pieces
	Adapter 4mm for lead, 2 pieces
PR9	Mobile lead (HT6,HT8)
	Carrying bag for (HT10)
	Batteries and user manual

Optional accessories



CAT III 690V



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CLAMP METERS



MAIN MEASUREMENTS	AC									
	TRMS	●	●	●	●	●	●	●	●	●
Current measuring range:	1000A	600A	600A	400A	600A	3000A	200A	300A	400A	400A
Current	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC/DC
Leakage current										
Voltage measuring range	1000V	1000V	1000V	600V	600V		1000V		600V	600V
Voltage	AC/DC	AC/DC	AC/DC	AC/DC	AC/DC		AC/DC		AC/DC	AC/DC
Frequency		●		●					●	●
Resistance and continuity test with buzzer	●	●	●	●	●		●		●	●
Capacitance		●		●					●	●
Diode test		●	●	●	●		●		●	●
Duty Cycle (%)		●		●					●	●
Temperature with K-type probe		●		●						●
Phase sequence and phase concordance										
Automatic detection of internal functions							●			
AC/DC current with external clamp transducers										
AC voltage with low impedance (LoZ)										
Mains analysis										
AC/DC voltage, current measurement/recording										
Meas./Rec. of AC and DC power										
Meas./Rec. of AC and DC energy										
Meas./Rec. of Cosphi, PF										
Meas./Rec. of U/I harmonics + THD%										
Inrush current measurement (INRUSH)										

ADDITIONAL CHARACTERISTICS	AC									
	CAT IV 600V CAT III 1000V	CAT IV 600V CAT III 1000V	CAT IV 600V CAT III 1000V	CAT III 600V	CAT III 600V	CAT IV 600V CAT III 1000V	CAT IV 600V CAT III 1000V	CAT III 300V	CAT III 600V	CAT III 600V
Overvoltage category:	CAT IV 600V CAT III 1000V	CAT IV 600V CAT III 1000V	CAT IV 600V CAT III 1000V	CAT III 600V	CAT III 600V	CAT IV 600V CAT III 1000V	CAT IV 600V CAT III 1000V	CAT III 300V	CAT III 600V	CAT III 600V
Maximum diameter for clamp	45mm	30mm	30mm	30mm	30mm	110mm	16mm	20mm	30mm	30mm
Display counts	6000	6000	2000	4000	2000	3000	10000	4000	2000	6000
Backlight	●	●	●		●	●	●	●	●	●
Bargraph	●	●								
Autorange	●	●	●	●	●	●	●	●	●	●
Auto power off	●	●	●	●	●	●	●	●	●	●
Detection of AC voltage without contact	●	●	●	●	●	●	●	●	●	●
Data HOLD function	●	●	●	●	●	●	●	●	●	●
MIN/MAX function	●	●	● MAX		● MAX				●	●
AVG function (AVERAGE)										
PEAK function	●	●								
Relative measurement (ZERO)		●		●						●
Low-pass filter for harmonic reduction										
Thermal camera										
Colour display										
VFD function										
Recording of electric parameters over time										
Memory for data saving										
PC / Smartphone or Tablet interface										
Power supply	1x 9V 6F22	1x 9V 6F22	1x 9V 6F22	2x 1.5V AAA	1x 9V 6F22	2x 1.5V AAA	2x 1.5V AAA	2x 1.5V AAA	3x 1.5V AAA	3x 1.5V AAA
Size in mm (L x W x H)	252x88x44	215x74x43	215x74x43	200x66x37	197x70x40	280x120x25	193x54x31	160x55x30	220x81x42	220x81x42
Weight in grams (batteries included)	402	285	285	205	180	170	280	140	320	320
Reference standard for 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/ EN61010-1	IEC/ EN61010-1
ORDER CODE	HP009019	HP009014	HP009012	HP004011	HP004010	HP030000	HP000100	HP007004	HP003010	HP003013

MAIN MEASUREMENTS	AC/DC						POWER AND HARMONICS				LEAKAGE		
	TRMS	●	●	●	●	●	●	●	●	●	●	●	●
Current measuring range:	1000A	1000A	1000A	600A	400A	400A	1000A	1000A	400A	400A	100µA ÷ 10A DC 100µA ÷ 20A AC	1µA ÷ 60A	
Current	AC/DC	AC/DC	AC/DC	AC/DC	AC/DC	AC/DC	AC+DC	AC+DC	AC	AC	AC/DC	AC	
Leakage current											AC/DC	AC	
Voltage measuring range	1000V AC 1500V DC	1000V AC 1500V DC	1000V	1000V	600V		1000V AC 1500V DC						
Voltage	AC+DC	AC+DC	AC/DC	AC/DC	AC/DC		AC+DC	AC+DC	AC/DC	AC/DC	AC/DC	AC/DC	
Frequency	●	●	●	●	●		●	●	●	●			
Resistance and continuity test with buzzer	●	●	●	●	●		●	●	●	●	●		
Capacitance													
Diode test	●	●	●	●	●								
Duty Cycle (%)	●	●	●	●	●								
Temperature with K-type probe													
Phase sequence and phase concordance							●	●	●	●			
Automatic detection of internal functions													
AC/DC current with external clamp transducers	● AC+DC	● AC+DC											
AC voltage with low impedance (LoZ)	●	●											
Mains analysis													
AC/DC voltage, current measurement/recording							●	●*	●*	●*			● HTLeakage APP
Meas./Rec. of AC and DC power							●	●*	●*	●*			
Meas./Rec. of AC and DC energy							●	●*	●*	●*			
Meas./Rec. of Cosphi, PF							●	●*	●*	●*			
Meas./Rec. of U/I harmonics + THD%							●	●*	●*	●*			
Inrush current measurement (INRUSH)	●	●					● Dynamic INRUSH	● Dynamic INRUSH					

ADDITIONAL CHARACTERISTICS	AC/DC						POWER AND HARMONICS				LEAKAGE	
	CAT IV 600V CAT III 1000V	CAT IV 600V CAT III 1000V	CAT IV 600V CAT III 1000V	CAT IV 600V CAT III 1000V	CAT III 600V	CAT III 300V	CAT IV 600V CAT III 1000V	CAT IV 600V CAT III 1000V	CAT III 600V	CAT III 600V	CAT IV 300V	CAT III 600V
Overvoltage category:	CAT IV 600V CAT III 1000V	CAT IV 600V CAT III 1000V	CAT IV 600V CAT III 1000V	CAT IV 600V CAT III 1000V	CAT III 600V	CAT III 300V	CAT IV 600V CAT III 1000V	CAT IV 600V CAT III 1000V	CAT III 600V	CAT III 600V	CAT IV 300V	CAT III 600V
Maximum diameter for clamp	40mm	40mm	45mm	30mm	30mm	20mm	45mm	45mm	30mm	30mm	23mm	40mm
Display counts	6000	6000	6000	6000	4000	4000	9999	9999	10000	10000	5000	6000
Backlight	●	●	●	●		●	●	●	●	●	●	●
Bargraph	●	●	●	●					●	●		
Autorange	●	●	●	●	●	●	●	●	●	●	●	●
Auto power off	●	●	●	●	●	●	●	●	●	●	●	●
Detection of AC voltage without contact	●	●	●	●	●	●	●	●	●	●	●	●
Data HOLD function	●	●	●	●	●	●	●	●	●	●	●	●
MIN/MAX function	●	●	●	●	●	●	●	●	●	●	●	●
AVG function (AVERAGE)									●	●		
PEAK function	●	●	●	●			●	●	●	●		
Relative measurement (ZERO)							●	●			●	
Low-pass filter for harmonic reduction												●
Thermal camera												
Colour display												
VFD function												
Recording of electric parameters over time							●					
Memory for data saving								●				
PC / Smartphone or Tablet interface							● Bluetooth	● Bluetooth		● WiFi		● Bluetooth
Power supply	Li-ION battery	Li-ION battery	1x 9V 6F22	1x 9V 6F22	2x 1.5V AAA	2x 1.5V AAA	2x 1.5V AAA	2x 1.5V AAA	2x 1.5V AAA	2x 1.5V AAA	2x 1.5V AAA	2x 1.5V AAA
Size in mm (L x W x H)	280x100x50	280x100x50	252x88x44	215x74x43	200x66x37	160x55x30	252x88x44	252x88x44	205x64x39	205x64x39	206x76x34	230x100x24
Weight in grams (batteries included)	505	505	442	285	205	140	420	420	280	280	262	500
Reference standard for 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/ EN61010-1	IEC/ EN61010-1	IEC/ EN61010-1	EN61010-1 EN61557-13-16
ORDER CODE	HP09025T	HP009025	HP009021	HP009015	HP004013	HP007005	HP009023	HP009020	HP004022	HP004020	HP000079	HP00077C

ORDER CODE **HP003010**

HT3010

ORDER CODE **HP003013**

HT3013

TRMS 400A clamp meters with AC voltage detector without contact



The professional clamp meters HT3010 and HT3013 perform **TRMS** measurements of **AC current up to 400A (HT3010), AC/DC current up to 400A (HT3013), AC/DC voltage up to 600V, Frequency tests, Resistance tests, Continuity tests, Diode tests, Capacitance tests (HT3013),** and measurements of **Temperature with K-type probe (HT3013) and Duty Cycle (HT3013).** Each instrument **complies** with **standard IEC/EN61010-1 in CAT III 600V** and is provided with display backlight and auto power off function in order to spare the charge of the internal batteries.



SEE PRODUCT DATA SHEET HT3010



SEE PRODUCT DATA SHEET HT3013

Functions

	HT3010	HT3013
TRMS measurements	●	●
DC/AC voltage	●	●
AC current	●	●
DC current		●
Frequency with test leads and clamp jaws	●	●
Duty cycle (%)		●
Resistance / Continuity test	●	●
Diode test	●	●
Capacitance		●
Temperature with K-type probe		●
Data HOLD	●	●
MAX/MIN	●	●
Relative measurement (ZERO)		●
Autorange	●	●
Backlight	●	●
Auto Power OFF	●	●

Provided accessories

KIT4000A	Pair of test leads
TK101	K-type wire probe (HT3013)
T10	Adapter for K-type probe (HT3013)
	Carrying bag
	Batteries
	User Manual

Characteristics

Display:	LCD 4 digits, 6000 counts (HT3013) LCD 3 1/2 digits, 2000 counts (HT3010)
Conversion type:	TRMS
Power supply:	3x1.5V batteries type AAA LR03
Auto Power OFF:	after 15 minutes' idling
Safety:	IEC/EN 61010-1
Overvoltage category:	CAT III 600V
Pollution level:	2
Insulation:	double insulation
Max height:	2000m
Clamp jaw internal diameter:	30mm
Weight (batteries included):	320g
Size (LxWxH):	220x81x42mm
Weight (batteries included):	approx 280g

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES

→ **TRMS**



ORDER CODE **HP000ECL**

ECLIPSE

AC/DC TRMS 1000A CAT IV clamp meter with infrared temperature measurement and measurement of DC voltage up to 1500V



ECLIPSE has been designed to measure **AC/DC current up to 1000A, DC voltage up to 1500V** and AC voltage up to 1000V in **TRMS** reaching **CAT IV 600V** and **CAT III 1000V** in compliance with **safety standard IEC/EN61010-1**. The clamp is provided with a display with **6000 measuring counts** with **backlight** and **bargraph** to allow for a simple reading even in poorly lit environments. ECLIPSE also measures **Resistance, Frequency, Capacitance** and **Temperature with K-type probe** and infrared temperature with built-in IR Camera. The Bluetooth connection allows for the transfer of the saved snapshots by means of the dedicated App HTMercury.



SEE
PRODUCT
DATA SHEET
ECLIPSE

ORDER CODE **HP009025**

HT9025

AC/DC TRMS 1000A CAT IV clamp meter with measurement of DC voltage up to 1500V



HT9025 has been designed to measure **AC/DC current up to 1000A, DC voltage up to 1500V** and AC voltage up to 1000V in **TRMS** reaching **CAT IV 600V** and **CAT III 1000V** in compliance with safety standard **IEC/EN61010-1**. The clamp is provided with a display with **6000 measuring counts** with **backlight** and **bargraph** to allow for a simple reading even in poorly lit environments. HT9025 also measures **Resistance, Frequency, Capacitance** and **Temperature with K-type probe**. The Bluetooth connection allows for the transfer of the saved snapshots by means of the dedicated App HTMercury.



SEE
PRODUCT
DATA SHEET
HT9025

Functions

- › TRMS measurements
- › DC voltage up to 1500V
- › AC voltage up to 1000V
- › AC+DC voltage
- › AC voltage with low impedance (LoZ)
- › DC/AC current up to 1000A
- › Inrush current (INRUSH)
- › DC/AC current with external clamp transducers
- › Resistance and Continuity test
- › "Voltsense" for AC voltage detection
- › Frequency with clamp jaws and leads
- › Capacitance / Duty cycle / Diode test
- › Temperature with K-type probe
- › Built-in infrared thermal camera (80x80pxl)
- › Autorange / Data HOLD / MAX/MIN / PEAK (<1ms)
- › Relative measurements
- › DataLogger function
- › Backlight and Bargraph
- › Auto Power OFF

Characteristics

Display:	colour TFT 6000 dots
Conversion type:	TRMS
Power supply:	1x7.4V rechargeable Li-ION battery, after 15÷60 minutes' idling
Auto Power OFF:	
Clamp jaw internal diameter:	40mm
Internal memory:	max 128 snapshots/16 recordings
Bluetooth connection	BLE 4.0
Safety:	IEC/EN61010-1
Overvoltage category:	CAT IV 600V - CAT III 1000V
Insulation:	double insulation
Pollution level:	2
Size (LxWxH):	280x100x50mm
Weight (batteries included):	505g

Provided accessories

4324-2	Pair of leads with 2/4mm tip
T10	Adapter for K-type wire probe
TK101	K-type wire probe
BAT64	Li-ION rechargeable battery, 2 pieces
A0EC95	Battery charger power supply + recharging base
B0EC95	Carrying bag
	User manual, ISO calibration report

Optional accessories



SCAN THE QR CODE
TO DISCOVER ALL
OPTIONAL ACCESSORIES

→ TRMS



Functions

- › TRMS measurements
- › DC voltage up to 1500V
- › AC voltage up to 1000V
- › AC/DC voltage
- › AC voltage with low impedance (LoZ)
- › DC/AC current up to 1000A
- › Inrush current (INRUSH)
- › DC/AC current with external clamp transducers
- › Resistance and Continuity test
- › "Voltsense" for AC voltage detection
- › Frequency with clamp jaws and leads
- › Capacitance / Duty cycle / Diode test
- › Temperature with K-type probe
- › Autorange / Data HOLD / MAX/MIN / PEAK (<1ms)
- › Relative measurements
- › DataLogger function
- › Backlight and Bargraph
- › Auto Power OFF

Characteristics

Display:	colour TFT 6000 dots
Conversion type:	TRMS
Power supply:	1x7.4V rechargeable Li-ION battery, after 15÷60 minutes' idling
Auto Power OFF:	
Clamp jaw internal diameter:	40mm
Internal memory:	max 128 snapshots/16 recordings
Bluetooth connection	BLE 4.0
Safety:	IEC/EN61010-1
Overvoltage category:	CAT IV 600V - CAT III 1000V
Insulation:	double insulation
Pollution level:	2
Size (LxWxH):	280x100x50mm
Weight (batteries included):	505g

Provided accessories

4324-2	Pair of leads with 2/4mm tip
T10	Adapter for K-type wire probe
TK101	K-type wire probe
BAT64	Rechargeable Li-ION battery
A0EC95	Battery charger power supply + recharging base
B0EC95	Carrying bag
	User manual, ISO calibration report

Optional accessories



SCAN THE QR CODE
TO DISCOVER ALL
OPTIONAL ACCESSORIES

→ TRMS



ORDER CODE **HP09025T**

HT9025T

AC/DC TRMS 1000A current clamp with integrated thermal imager 120 x 120 pxl



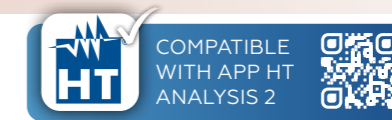
HT9025T combines the features of a **professional current clamp** with those of a **120 x 120pxl thermal imager**. It is designed for the **measurement of AC/DC Current up to 1000A, DC Voltage up to 1500V and AC Voltage up to 1000V in TRMS** in reaching **CAT IV 600V and CAT III 1000V** in accordance with the **IEC/EN61010-1** safety standard. The clamp is equipped with a **6000 measurement point display** with **backlight** and **bargraph** such as to take simple readings even in poorly lit environments. HT9025T also performs **Resistance, Frequency, Capacitance and Temperature measurements with K probe and infra-red temperature with integrated thermal imager**. The Bluetooth connection enables the transfer of snapshots saved using the **dedicated HTMercury APP**. The instrument has an innovative **VFD (Variable Frequency Driver)** function for precise measurements of AC voltage **even downstream of variable frequency regulators (Inverters)**.

SEE THE PRODUCT DATASHEET HT9025T

ORDER CODE **HP009023**

HT9023

Professional clamp meter for measuring power/harmonics with WIFI connection



HT9023 has been designed to measure **AC current, DC AC+DC up to 1000A in TRMS** reaching **CAT IV 600V and CAT III 1000V** in compliance with **safety standard IEC/EN61010-1**. The clamp also measures **DC voltage up to 1500V, AC, AC+DC voltage up to 1000V, Active, Reactive, Apparent Power, Power factor, Energy, voltage/current harmonic analysis up to the 25th with THD% calculation** in balanced single-phase and three-phase systems. It is also possible to carry out the phase sequence test with 1 terminal. The instrument also detects the events linked to motor starting currents (Dynamic INRUSH) and allows recording each measured electric parameter over time, with the possibility of transferring data via WiFi to Android/iOS devices through the App HTAnalysis 2. The clamp is provided with a wide graphic dot-matrix screen (128x128pxl) with backlight, in order to allow reading data even in poorly lit environments, and it is provided with an auto power off function to preserve its internal battery.

SEE THE PRODUCT DATA SHEET HT9023

Functions

- › TRMS
- › Current measurement range 1000A
- › AC, DC, AC+DC Current
- › AC, DC, AC+DC Voltage
- › Thermal imaging camera with resolution 120x120pxl
- › Leakage current with optional current clamp
- › Frequency
- › Resistance and continuity test
- › Capacity
- › Diode Test
- › Duty cycle %
- › Temperature with K type probe
- › Inrush current measurement (INRUSH)
- › Backlight
- › Bargraph
- › Autorange
- › Auto power off
- › AC voltage detection contactless
- › Data HOLD Function
- › MIN/MAX/PEAK Function
- › Relative Measurement
- › Datalogger and graphics
- › AC, DC, AC+DC current with clamp transducers
- › AC, DC, AC+DC Voltage with low impedance (LoZ)
- › VFD function on AC voltage TRMS

Characteristics

- Display:** TFT colour 6000 points
- Conversion Type:** TRMS
- Power supply:** 1x74V Li-ION rechargeable battery
- Auto Power OFF:** after 15÷60 minutes of non-use
- Toroid internal diameter:** 40mm
- Internal memory:** max 128 snapshots/16 adjustments
- Bluetooth Connection:** BLE 4.0
- Safety:** IEC/EN61010-1
- Measurement category:** CAT IV 600V - CAT III 1000V - CAT II 1500VDC
- Insulation:** double insulation
- Level of pollution:** 2
- Dimensions (LxWxH):** 280x100x50mm
- Weight (batteries included):** 505 g

Provided accessories

4324-2	Pair of tips with 2/4mm tip
T10	K-wire probe adapter
TK101	K type wire probe
BAT64	Rechargeable battery Li-ION (2 pieces)
A0EC95	Battery charger + charging base
B0EC95	Transport bag
	User manual, ISO calibration report

Optional accessories

SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES



Functions

- › DC, AC + DC TRMS current up to 1000A
- › DC voltage up to 1500V
- › AC, AC+DC TRMS voltage up to 1000V
- › Resistance and Continuity test
- › "VoltSense" for AC voltage detection
- › Frequency with clamp jaws and leads
- › Phase sequence / Phase concordance with 1 terminal
- › Measurement/recording of DC power and energy
- › Measurement/recording of active, reactive, apparent power in single-phase systems
- › Measurement/Recording of active, reactive power in single-phase systems
- › Measurement/Recording of power factor in single-phase systems
- › Measurement/Recording of voltage/current harmonics up to the 25th and calculation of THD%
- › Motor starting current detection (Dynamic INRUSH)
- › Data logger function with programmable PI
- › Autorange
- › Data HOLD
- › MAX/MIN/AVG
- › PEAK (1ms), ZERO
- › Backlight
- › WiFi for connection to PC and Android/iOS devices
- › Auto Power OFF

Characteristics

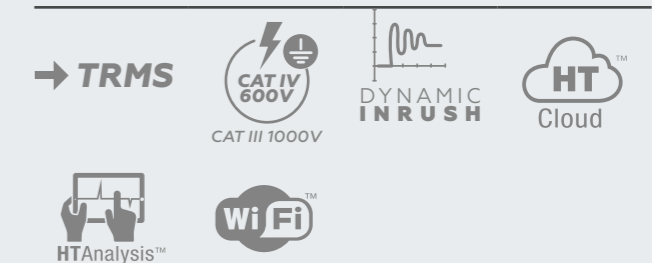
- Display:** dotmatrix 128x128pxl with backlight
- Conversion type:** TRMS
- Power supply:** 2x1.5V batteries type AAA LR03
- Duration:** > 40ore
- Internal memory:** 2MBytes (approx. 5g @IP=1min)
- PC interface:** WiFi
- Clamp jaw internal diameter:** 45mm
- Safety:** IEC/EN61010-1
- Overvoltage category:** CAT IV 600V - CAT III 1000V
- Insulation:** double insulation
- Pollution level:** 2
- Size (LxWxH):** 252x88x44mm
- Weight (batteries included):** 420g

Provided accessories

YAAMK0000HTO	Pair of test leads
YAAMK0001HTO	Pair of alligator clips
YABRS0000NNO	Carrying bag
	Batteries
	ISO calibration report
	Quick user guide

Optional accessories

SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES



ORDER CODE **HP009021**

HT9021

AC/DC TRMS CAT IV 600V clamp meter with temperature measurement



HT9021 has been designed to measure **AC/DC current up to 1000A in TRMS**, reaching **CAT IV 600V** and **CAT III 1000V** in compliance with **safety standard IEC/EN61010-1**. The clamp is provided with a display with **6000 measuring counts** with **backlight** and **bargraph** to allow for a simple reading even in poorly lit environments. HT9021 also carries out **measurements of voltage up to 1000V, Resistance, Frequency, Capacitance** and **Temperature with K-type probe**.



SEE PRODUCT DATA SHEET HT9021

ORDER CODE **HP009020**

HT9020

Professional clamp meter with power/harmonic measurement



The power clamp meter HT9020 has been designed for measuring DC, AC+DC TRMS current up to 1000A to obtain CAT IV 600V in compliance with standard IEC/EN61010-1. It also measures **Active, Reactive, Apparent Power, Energy, voltage/current harmonic analysis up to the 25th with THD%** in balanced single-phase or three-phase systems. They also allow testing phase sequence and concordance with the 1-terminal measuring method. It is also possible to detect and record the events linked to **motor starting (INRUSH) currents**. The clamp is provided with a wide graphic dot-matrix screen (128x128pxl) with backlight, in order to allow reading data even in poorly lit environments, and it is also provided with an auto power off function to preserve its internal battery.



SEE PRODUCT DATA SHEET HT9020

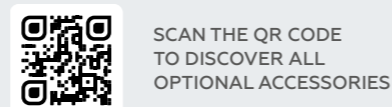
Functions

- › TRMS measurements
- › AC/DC voltage: (1000V)
- › AC/DC current: (1000A)
- › Resistance and Continuity test
- › "Voltsense" for AC voltage detection
- › Frequency with clamp jaws and leads
- › Capacitance, Duty cycle, Diode test
- › Temperature with K-type probe
- › Autorange, Data HOLD
- › MAX/MIN, PEAK (<10ms)
- › Relative measurements
- › Backlight, Bargraph
- › Auto Power OFF

Provided accessories

4324-2	Pair of leads with 2/4mm tip
T10	Adapter for K-type wire probe
TK101	K-type wire probe
YA-BRS0000NNO	Carrying bag
	Batteries and user manual

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES

Characteristics

Display:	LCD, 4 digits, 6000 counts
Conversion type:	TRMS
Power supply:	1x9V battery type IEC6F22
Auto Power OFF:	after 15 minutes' idling
Max diameter of clamp:	45mm
Safety:	IEC/EN61010-1
Overvoltage category:	CAT IV 600V - CAT III 1000V
Insulation:	double insulation
Pollution level:	2
Size (LxWxH):	252x88x42mm
Weight (batteries included):	420g



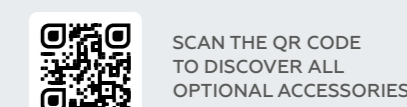
Functions

- › DC, AC + DC TRMS current up to 1000A
- › DC, AC + DC TRMS voltage up to 1000V
- › Frequency with leads and with clamp jaws
- › Phase sequence / Phase conformity
- › Resistance and Continuity test
- › Measurement of DC power and energy
- › Measurement of active, reactive and apparent power on single-phase systems
- › Measurement of active, reactive power in single-phase systems
- › Measurement of power factor in single-phase systems
- › Measurement of voltage/current harmonics up to the 25th and THD% calculation
- › Motor starting (INRUSH) current detection
- › Autorange
- › Backlight
- › Auto Power OFF
- › Data HOLD, MAX/MIN/CREST

Provided accessories

YAAMK0000HTO	Pair of test leads
YAAMK0001HTO	Pair of alligator clips
YABRS0000NNO	Carrying bag
	Batteries
	ISO calibration report
	Quick user guide

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES

Characteristics

Display:	dotmatrix 128x128pxl with backlight
Power supply:	2x1.5V batteries type AAA
Duration:	> 150ore
Safety:	IEC/EN61010-1
Insulation:	Double insulation
Pollution level:	2
Overvoltage category:	CAT IV 600V to earth, max 1000V between inputs
Max diameter of cable:	45mm
Size (LxWxH):	252x88x44mm
Weight (batteries included):	0.42kg



ORDER CODE **HP009019**

HT9019

Professional clamp meter
AC 1000A TRMS, CAT IV 600V



Professional clamp meter HT9019 has been designed to measure **AC current up to 1000A** and **AC/DC voltage up to 1000V** in **TRMS** reaching **CAT IV 600V** according to standard **IEC/EN61010-1**. The clamp is provided with a wide display with **6000 measuring counts**, **backlight** and analogue **bargraph** to allow for a simple reading even in poorly lit environments. Clamp HT9019 is also provided with the auto power off function to preserve its own battery.



SEE
PRODUCT
DATA SHEET
HT9019

ORDER CODE **HP009015**

HT9015

AC/DC TRMS 600A CAT IV clamp meter with
temperature measurement



HT9015 has been designed to measure **AC/DC current up to 600A** and **AC/DC voltage up to 1000V** in **TRMS** reaching **CAT III 1000V** in compliance with **safety standard IEC/EN61010-1**. The clamp is provided with a display with **6000 counts** with **backlight** and **bargraph** to allow for a simple reading even in poorly lit environments. HT9015 also measures **Resistance**, **Frequency**, **Capacitance** and **Temperature with K-type probe**.



SEE
PRODUCT
DATA SHEET
HT9015

Functions

- › TRMS measurements
- › AC current up to 1000A
- › AC/DC voltage up to 1000V
- › Resistance and Continuity test
- › "Voltsense" for AC voltage detection
- › Autorange
- › Data HOLD
- › MAX/MIN
- › PEAK CURRENT (<10ms)
- › Bargraph
- › Backlight
- › AutoPowerOFF

Characteristics

Display:	LCD, 4 digits, 6000 counts
Conversion type:	TRMS
Power supply:	1x9V batteries type IEC 6F22
Auto Power OFF:	after 15 minutes' idling
Clamp jaw internal diameter:	45mm
Safety:	IEC/EN61010-1
Overvoltage category:	CAT IV 600V - CAT III 1000V
Insulation:	double insulation
Pollution level:	2
Size (LxWxH):	252x88x44mm
Weight (batteries included):	420g

Provided accessories

4324-2	Pair of leads with 2/4mm tip
YA-BRS0000NNO	Carrying bag
	Batteries and user manual

Optional accessories



SCAN THE QR CODE
TO DISCOVER ALL
OPTIONAL ACCESSORIES

→ TRMS



Functions

- › TRMS measurements
- › AC/DC voltage: (1000V)
- › AC/DC current: (600A)
- › Resistance and Continuity test
- › "Voltsense" for AC voltage detection
- › Frequency with clamp jaws and leads
- › Capacitance
- › Duty cycle
- › Diode test
- › Temperature with K-type probe
- › Autorange
- › Data HOLD
- › MAX/MIN
- › PEAK (<10ms)
- › Relative measurements
- › Backlight and Bargraph
- › Auto Power OFF

Characteristics

Display:	LCD, 4 digits, 6000 counts
Conversion type:	TRMS
Power supply:	1x9V battery type IEC6F22
Auto Power OFF:	after 15 minutes' idling
Clamp jaw internal diameter:	30mm
Safety:	IEC/EN61010-1
Overvoltage category:	CAT IV 600V - CAT III 1000V
Insulation:	double insulation
Pollution level:	2
Size (LxWxH):	210x75x45mm
Weight (batteries included):	400g

Provided accessories

4324-2	Pair of leads with 2/4mm tip
T10	Adapter for K-type wire probe
TK101	K-type wire probe
	Battery, User manual and Carrying bag

Optional accessories



SCAN THE QR CODE
TO DISCOVER ALL
OPTIONAL ACCESSORIES

→ TRMS



ORDER CODE **HP009014**

HT9014

Professional clamp meter
AC 600A TRMS, CAT IV 600V



Professional clamp meter HT9014 has been designed to measure **AC current up to 600A and AC/DC voltage up to 1000V TRMS** to reach **CAT IV 600V** and **CAT III 1000V** in compliance with standard **IEC/EN61010-1**. The clamp is provided with a wide **backlight display with 6000 counts** and an auto power off function to preserve its battery.



SEE
PRODUCT
DATA SHEET
HT9014

ORDER CODE **HP009012**

HT9012

Professional clamp meter
AC 600A, CAT IV 600V



Professional clamp meter HT9012 has been designed to measure **AC current up to 600A and AC/DC voltage up to 1000V** to reach **CAT IV 600V** and **CAT III 1000V** in compliance with standard **IEC/EN61010-1**. The clamp is provided with a wide **backlit display with 2000 counts** and an auto power off function to preserve its battery.



SEE
PRODUCT
DATA SHEET
HT9012

Functions

- › Measurements in TRMS, DC/AC voltage, AC current
- › Resistance/Continuity test, Frequency
- › "Voltsense" sensor
- › Diode test, Temperature with K-type probe
- › Capacitance, Duty Cycle
- › Autorange, Data HOLD, MAX/MIN
- › PEAK CURRENT (<10ms)
- › Relative measurement, Bargraph, Backlight, AutoPowerOFF

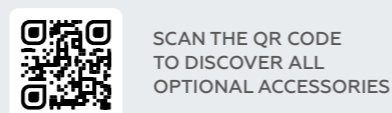
Characteristics

Display:	LCD, 4 digits, 6000 counts
Conversion type:	TRMS
Power supply:	1x9V battery type IEC 622
Auto Power OFF:	after 30 minutes' idling
Clamp jaw internal diameter:	30mm
Safety:	IEC/EN61010-1
Overvoltage category:	CAT IV 600V - CAT III 1000V
Size (LxWxH):	210x75x45mm
Weight (batteries included):	400g

Provided accessories

4324-2	Pair of leads with 2/4mm tip
T10	Adapter for K-type wire probe
TK101	K-type wire probe
	Battery, User manual and Carrying bag

Optional accessories



SCAN THE QR CODE
TO DISCOVER ALL
OPTIONAL ACCESSORIES

→ TRMS



Functions

- › DC/AC voltage
- › AC current
- › Resistance/Continuity test
- › "Voltsense" sensor
- › Diode test
- › Data HOLD
- › MAX function
- › Backlight
- › AutoPowerOFF

Characteristics

Display:	LCD, 3½digits, 2000 counts
Conversion type:	average value
Power supply:	1x9V battery type IEC 622
AutoPowerOFF:	after 30 minutes' idling
Clamp jaw internal diameter:	30mm
Safety:	IEC/EN61010-1
Measurement category:	CAT IV 600V CAT III 1000V
Size (LxWxH):	210x75x45mm
Weight (batteries included):	400g

Provided accessories

4324-2	Pair of leads with 2/4mm tip
	Battery
	User manual and Carrying bag

Optional accessories



SCAN THE QR CODE
TO DISCOVER ALL
OPTIONAL ACCESSORIES



CAT III 1000V

ORDER CODE **HP004013**

HT4013

Clamp meter AC/DC 400A



Clamp meter HT4013 has been designed to measure **AC/DC current up to 400A** and **AC/DC voltage up to 600V** to reach **CAT III 600V** in compliance with standard **IEC/EN61010-1**. The clamp is provided with an internal sensor to detect AC voltage also without contact, through a red LED turning on. This model also carries out measurements of **Resistance, Continuity Test, Frequency, Capacitance, Diode test, Duty Cycle** and **Temperature with K-type probe**. The clamp is also provided with the auto power off function to preserve its own battery.



SEE PRODUCT DATA SHEET HT4013

ORDER CODE **HP004022**

HT4022

Clamp meter AC TRMS 400A with power/harmonic measurement



Professional clamp meters HT4020 and HT4022 carry out measurements in **TRMS** of **AC current up to 400A**, **AC/DC voltage up to 600V**, **Frequency, Resistance, Continuity test, Active, Reactive, Apparent Power, Cosφ, Energy** for **balanced single-phase and/or three-phase systems**, further to the detection of phase sequence by **1-terminal method**. Model **HT4022** also carries out the absolute/percentage measurement of **harmonic components of voltage and current** with calculation of **THD%**. Each instrument **complies** with standard **IEC/EN61010-1** in **CAT III 600V** and is the ideal solution for troubleshooting typical problems in **industrial environments** such as **non-linear loads, frequency-controlled motors**.



SEE PRODUCT DATA SHEET HT4022



SEE PRODUCT DATA SHEET HT4020

Functions

- › AC/DC current up to 400A
- › DC/AC voltage up to 600V
- › "Voltsense" for AC voltage detection
- › Resistance and continuity test with buzzer
- › Frequency with leads, Capacitance, Diode test
- › Duty Cycle (%)
- › Temperature with K-type probe
- › Autorange, Data HOLD, MAX/MIN/Relative measurement

Characteristics

Display:	LCD, 4 digits, 4000 counts
Conversion type:	RMS
Power supply:	2x1.5V alkaline batteries type AAA LR03
Auto Power OFF:	after 30 minutes' idling
Max diameter of clamp:	30mm
Safety:	IEC/EN61010-1
Measurement category:	CAT III 600V
Insulation:	double insulation
Pollution level:	2
Size (LxWxH):	200x66x37mm
Weight (batteries included):	205g

Provided accessories

4324-2	Pair of leads with 2/4mm tip
T10	Adapter for K-type wire probe
TK101	K-type wire probe
	Battery, User manual and Carrying bag

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES



Functions

	HT4022	HT4020
DC/AC TRMS voltage	●	●
AC TRMS current	●	●
Resistance and Continuity test	●	●
Frequency with test leads and clamp jaws	●	●
Active, Reactive, Apparent power	●	●
Active, Reactive, Apparent energy	●	●
Power factor and Cosφ	●	●
Harmonics V/ I up to the 25th and THD%	●	
Phase sequence with 1 terminal	●	●
Autorange	●	●
Data HOLD	●	●
MAX/MIN/AVG/PEAK	●	●
Backlight	●	●
AutoPowerOFF	●	●

Provided accessories

4413-2	Pair of test leads
YAAMK0001HTO	Pair of alligator clips
B80	Carrying bag
	Rubber cap for test lead
	ISO calibration report
	Batteries and user manual

Characteristics

Display:	LCD, 4 digits, 10000 counts
Conversion type:	TRMS, 64 samples in 20ms
Power supply:	2x1.5V batteries type AAA LR03
Auto Power OFF:	after 5 minutes' idling
Safety:	IEC/EN 61010-1
Overvoltage category:	CAT III 600V
Pollution level:	2
Insulation:	double insulation
Max height:	200mm
Clamp jaw internal diameter:	30mm
Size (LxWxH):	205x64x39mm
Weight (batteries included):	approx 280g

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES

→ TRMS



ORDER CODE **HP004011****HT4011**

Clamp meter AC 400A



Clamp meter HT4011 has been designed to measure **AC current up to 400A** and **AC/DC voltage up to 600V** to reach **CAT III 600V** in compliance with standard **IEC/EN61010-1**. The clamp is provided with an internal sensor to detect AC voltage also without contact, through a red LED turning on. HT4011 also carries out measurements of **Resistance, Continuity Test, Frequency, Capacitance, Diode test, Duty Cycle** and **Temperature with K-type probe**. The clamp is also provided with the auto power off function to preserve its own battery.



SEE
PRODUCT
DATA SHEET
HT4011

ORDER CODE **HP004010****HT4010**

Clamp meter AC 600A



Clamp meter HT4010 can carry out measurements of **AC current up to 600A** and **AC/DC voltage, Resistance, Continuity** and **Diode test**. The device is provided with an internal sensor capable of detecting, through a LED turning on and a buzzer sounding, the presence of AC voltage in a spot without contact. This device complies with standard **IEC/EN61010-1** in **CAT III 600V** and it is the ideal solution for measurements to be carried out both in domestic and in industrial environments.



SEE
PRODUCT
DATA SHEET
HT4010

Functions

- › AC current up to 400A
- › DC/AC voltage up to 600V
- › "Voltsense" for AC voltage detection
- › Resistance and continuity test with buzzer
- › Frequency with leads, Capacitance, Diode test
- › Duty Cycle (%)
- › Temperature with K-type probe
- › Autorange, Data HOLD, MAX/MIN/Relative measurement

Characteristics

Display:	LCD, 4 digits, 4000 counts
Conversion type:	average value
Power supply:	2x1.5V batteries type AAA LR03
Auto Power OFF:	after 30 minutes' idling
Max diameter of clamp:	30mm
Safety:	IEC/EN61010-1
Overvoltage category:	CAT III 600V
Insulation:	double insulation
Pollution level:	2
Size (LxWxH):	200x66x37mm
Weight (batteries included):	205g

Provided accessories

4324-2	Pair of leads with 2/4mm tip
T10	Adapter for K-type wire probe
TK101	K-type wire probe
	Battery, User manual and Carrying bag

Optional accessories



SCAN THE QR CODE
TO DISCOVER ALL
OPTIONAL ACCESSORIES



Functions

- › AC current up to 600A
- › AC/DC voltage up to 600V
- › Detection of AC voltage without contact
- › Resistance / Continuity test
- › Diode test
- › Data HOLD
- › MAX
- › Backlight
- › Auto Power OFF

Characteristics

Display:	LCD, 3½ digits, 2000 counts
Conversion type:	average value
Power supply:	1x9V battery type 6F22
Auto Power OFF:	after 15 minutes' idling
Clamp jaw internal diameter:	30mm
Safety:	IEC/EN 61010-1
Overvoltage category:	CAT III 600V
Insulation:	double insulation
Pollution level:	2
Max height:	2000m
Size (LxWxH):	197x70x40mm
Weight (batteries included):	180g

Provided accessories

4324-2	Pair of leads with 2/4mm tip
	Carrying bag, battery and user manual

Optional accessories



SCAN THE QR CODE
TO DISCOVER ALL
OPTIONAL ACCESSORIES



ORDER CODE **HP030000**

F3000

Clamp meter with flexible jaws AC 3000A



Professional clamp meter F3000 has been designed to measure **AC current up to 3000A** in **TRMS** in **total autorange** to reach **CAT IV 600V, CAT III 1000V** according to standard **IEC/EN61010-1**. The clamp is provided with innovative **flexible jaws** capable of reaching a **maximum diameter of 110mm** and allowing for an easy reading in any condition. The clamp is provided with a wide display with **3000 counts, Data HOLD** function and **backlight** to allow for a simple reading even in poorly lit environments. The clamp is also provided with the auto power off function to preserve its own battery.



SEE PRODUCT DATA SHEET F3000

ORDER CODE **HP000100**

HT100

Fork clamp meter AC 200A



Professional clamp meter HT100 is provided with automatic recognition of functions, for measuring **AC current up to 200A** and **AC/DC voltage up to 1000V** in **TRMS** to reach **CAT IV 600V** and **CAT III 1000V** in compliance with standard **IEC/EN61010-1**. The clamp is provided with **"open" jaws**, with a wide **display with 9999 counts, "Voltsense"** phase detector function, **Data HOLD** and **backlight** to allow for a simple reading even in poorly lit environments. HT100 also carries out measurements of **Resistance, Continuity test** and **Diode test**. The clamp is also provided with the auto power off function to preserve its own battery.



SEE PRODUCT DATA SHEET HT100

Functions

- › TRMS measurements
- › AC TRMS current up to 3000A
- › Flexible jaws with big diameter
- › Autorange
- › Data HOLD
- › MAX/MIN
- › Backlight
- › Auto Power OFF

Characteristics

Display:	LCD, 4 digits, 3000 counts
Conversion type:	TRMS
Power supply:	2x1.5V alkaline batteries type AAA LR03
Auto Power OFF:	after 20 minutes' idling
Max diameter of clamp:	110mm
Safety:	IEC/EN61010-1
Overvoltage category:	CAT IV 600V - CAT III 1000V
Insulation:	double insulation
Pollution level:	2
Size (LxWxH):	280x120x25mm
Weight (batteries included):	170g

Provided accessories

- Batteries
- Carrying bag
- User Manual

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES



Functions

- › TRMS measurements
- › AC TRMS current up to 200A
- › DC/AC TRMS voltage up to 1000V
- › "Voltsense" for AC voltage detection
- › Resistance
- › Continuity test with buzzer
- › Diode test
- › Autorange
- › Autorecognition function
- › Data HOLD
- › Backlight
- › Auto Power OFF

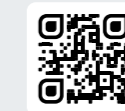
Characteristics

Display:	LCD, 4 digits, 10000 counts, backlit
Conversion type:	TRMS
Power supply:	2x1.5V alkaline batteries type AAA LR03
Auto Power OFF:	after 20 minutes' idling
Max diameter of clamp:	16mm
Safety:	IEC/EN61010-1
Overvoltage category:	CAT IV 600V, CAT III 600V
Insulation:	double insulation
Pollution level:	2
Size (LxWxH):	193x54x31mm
Weight (batteries included):	280g

Provided accessories

- 4413-2 Pair of test leads
- Batteries and user manual

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES



ORDER CODE **HP007004**
HT7004

ORDER CODE **HP007005**
HT7005

Pocket clamp meters for AC TRMS current up to 400A with measurement of inrush currents.



Clamp meter **HT7005** can measure **DC** and **AC TRMS** current up to **400A** in Autorange, in compliance with IEC/EN61010-1, CAT III 300V **further to measuring the inrush current of electric motors** with a response time of **100ms**. Model **HT7004** can measure **only AC TRMS current** up to **300A**. Both devices are provided with Data HOLD function and Auto Power Off function, in order to preserve the internal battery when not in use. Thanks to its **extremely small size**, these models are very practical and they are the ideal solution for simple measurements in the most common domestic and industrial environments.



SEE PRODUCT DATA SHEET HT7004



SEE PRODUCT DATA SHEET HT7005

ORDER CODE **HP000079**
HT79

ORDER CODE **HP00077C**
HT77C

Clamp meters for measuring leakage current



Models HT77C and HT79 are clamp meters designed for an **accurate measurement of very low values of AC and DC currents** (DC only for HT79) and, therefore, they are mainly employed in detecting and defining **leakage currents** in **domestic and industrial electric systems**, which typically cause the RCDs' tripping. HT77C, in particular, complies with standards IEC/EN61557-13 and IEC/EN61557-16, which provide for a measurement protected against external disturbances. It is also provided with a **built-in low-pass filter to eliminate harmonic components**. Model **HT79** also allows measuring **AC/DC voltage** and performing resistance/continuity tests. HT77C is also provided with Bluetooth connection for managing a datalogger function in combination with the APP HTLeakage.



SEE PRODUCT DATA SHEET HT79



SEE PRODUCT DATA SHEET HT77C

Functions

	HT7004	HT7005
AC TRMS current	●	●
DC current		●
Inrush current (INRUSH)		●
AC voltage detection without contact	●	●
Autorange	●	●
Data HOLD	●	●
ZERO function (zeroing)	-	●
Backlight	●	●
Auto Power OFF	●	●

Characteristics

Power supply:	2x1.5V batteries type AAA LR03
Safety:	IEC/EN61010-1
Overvoltage category:	CAT III 300V
Insulation:	double insulation
Pollution level:	2
Max operating altitude:	2000m
Display:	3 1/4 LCD, 4000 dots, decimal sign and point
Max cable diameter	20mm
Size (LxWxH):	155x60x25mm
Weight (batteries included):	140g

Provided accessories

- Soft transport bag
- Batteries
- User Manual

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES



Functions

	HT77C	HT79
TRMS measurements	●	●
DC/AC voltage		●
DC current		●
AC current	●	●
Resistance / Continuity test		●
Low-pass filter	●	
Data HOLD	●	●
Auto HOLD	●	
Peak HOLD	●	
Relative measurement (ZERO)		●
Autorange	●	●
Backlight	●	●
MAX/MIN		●
Auto Power OFF	●	●

Characteristics

Display:	LCD 4 digits, 6000 counts (HT77C) LCD 4 digits, 5000 counts (HT79)
Conversion type	TRMS
Power supply:	2x1.5V batteries type AAA LR03 (HT79) 2x1.5V batteries type AA LR06 (HT77C)
Safety:	IEC/EN 61010-1
Overvoltage category:	CAT III 600V (HT77C) CAT IV 300V (HT79)
Insulation:	double insulation
Pollution level:	2
Max operating altitude:	2000m
Max cable diameter:	40mm (HT77C) 23mm (HT79)
Auto Power OFF:	after 20 minutes' idling (HT77C) after 30 minutes' idling (HT79)
Size (LxWxH):	230x30x24mm (HT77C) 206x76x34mm (HT79)
Weight (batteries included):	500g (HT77C) 262g (HT79)

Provided accessories

- Pair of test leads (HT79)
- Soft transport bag
- Batteries and user manual

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES





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PQA819 **pag. 72**



HT9023 **pag. 75**



**MAINS
ANALYZERS**

MAINS QUALITY ANALYZERS



VEGA74



PQA820



PQA819



HT9023

MAIN MEASUREMENTS

	MAINS QUALITY ANALYSIS			
AC/DC voltage in single-phase/three-phase systems	●	●	●	● Single-phase
AC/DC current in single-phase/three-phase systems	●	●	●	● Single-phase
Cosphi, Power Factor	●	●	●	● Single-phase
Voltage unbalance (NEG%, ZERO%)	●	●		
Active, reactive, apparent power/energy and DC power	●	●	●	●
Voltage and current harmonics up to the 49th with calculation of THD%	●	●	● Only THD	● 25 ^a
Voltage anomalies (dips, peaks) with a resolution of 20ms (@ 50Hz)	●	●		
Electric motor starting current (INRUSH)	●			● minimum duration of the event 320ms
Phase sequence	●	●	●	●
Neutral current	●	●		●
Recording of temperature and humidity	●**			
Recording of illuminance values LUX	●***			
Recording of leakage current	****			

MEMORY AND RECORDING

Max number of simultaneously recorded parameters	600	383	44	60
Recording with selectable integration period	2s-30min	5s-60min	5s-60min	1s-15min
Indicative memory duration (in days @ PI=10min @ max number of parameters)	28 days	30 days	153 days	50 days
Internal memory capacity	8MB	8MB	8MB	2MB
Saving instant sampled values	●	●*	●*	●*

REAL-TIME DISPLAY

Summary table of main parameters	●	●*	●*	●*
Voltage/current waveforms	●	●*	●*	●*
Tables or histograms of Harmonics and THD%	●	●*	●*	●*
Voltage/current vector diagram	●	●*	●*	●*

ADDITIONAL CHARACTERISTICS

Overvoltage category:	CAT IV 300V	CAT IV 300V	CAT IV 300V	CAT IV 600V CAT III 1000V
Touchscreen colour display	●			
Power supply and rechargeable battery recharging	●	● Auto power supplied	● Auto power supplied	
Auto power off	●	●	●	●
Provided PC interface with software for Windows	WiFi/USB	WiFi/USB	WiFi/USB	WiFi
Context help active on each screen	●			
Size (LxWxH) (mm)	235x165x75	245x210x110	245x210x110	252x88x44
Weight in kg (batteries included)	1	1.5	1.5	0.5
Reference standard for mains quality	IEC/EN61000-4-30 Class B	IEC/EN61000-4-30 Class B	IEC/EN61000-4-30 Class B	IEC/EN61000-4-30 Class B
Reference standard for safety	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1
ORDER CODE	HV000740	HV000820	HV000819	HP009023

(*) By using software TOPVIEW
 (**) with optional probe HT53L/05
 (***) with optional probe HT52/05
 (****) by means of optional clamp transducer HT96U

VEGA74

Three-phase mains analyzer

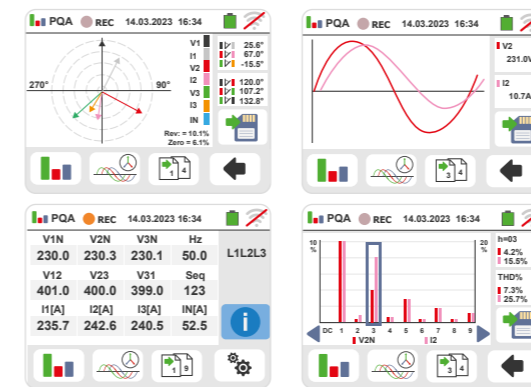


VEGA74 is a single-phase/three-phase mains analyzer capable of acquiring and recording simultaneously 600 electric parameters. The use of VEGA74 is simple and intuitive, thanks to the interface with colour touchscreen display with icon structure. VEGA74 is ideal for troubleshooting problems deriving from a poor mains quality, voltage anomalies, harmonics and high energy consumption which can become much more harmful and complex phenomena to keep under control if neglected for too long. Measurements carried out can be transferred to a PC with USB or WiFi connection via the dedicated management software in order to analyze the data and create print reports.

SEE PRODUCT DATA SHEET VEGA74

Batteries always charged.

The new **VEGA74** is so compact that we had to develop a brand new technology for its power supply and charging system. You just need to connect VEGA74 to power supply and the batteries will charge. If you have no time for recharge, just replace them with common AA batteries and resume working immediately.



Functions Mains analysis

- › 9 types of electric systems available
- › DC/AC TRMS voltage in single-/three-phase systems up to 600V
- › DC/AC TRMS current in single-/three-phase systems up to 3000A
- › Active, Reactive and Apparent Power/Energy
- › Cosphi and Power Factor
- › Voltage, Current, DC Power
- › Measurement of neutral current
- › Voltage dips and peaks on 20ms @50hz
- › Voltage unbalance (NEG%, ZERO%)
- › Voltage/current waveforms
- › Histograms of voltage/current harmonics and THD%
- › Voltage/current vector diagram
- › Periodical recording with selectable between 2s and 30min
- › Max number of simultaneously selectable quantities 600
- › Voltage/current harmonic analysis up to the 49th
- › Calculation and recording of voltage/current THD%
- › Indication of recording duration
- › Recording of leakage current

Recording of environmental parameters

- › Recording of temperature and humidity
- › Recording of illuminance values LUX

Provided accessories

HTFLEX33E	Flex clamp 3000A, diameter 174mm, 4 pieces
KIT799	Set of 4 cables e 4 alligator clips
PT400	Touch-screen pen
VA500	Rigid transport case for device and accessories
YABAT0003000	1.2V NiMH AA rechargeable battery, 6 pieces
A0061	100/440Vac 50/60Hz - 15 Vdc power supply
C2006	Optical/USB cable
	Quick user guide
	ISO calibration report

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES

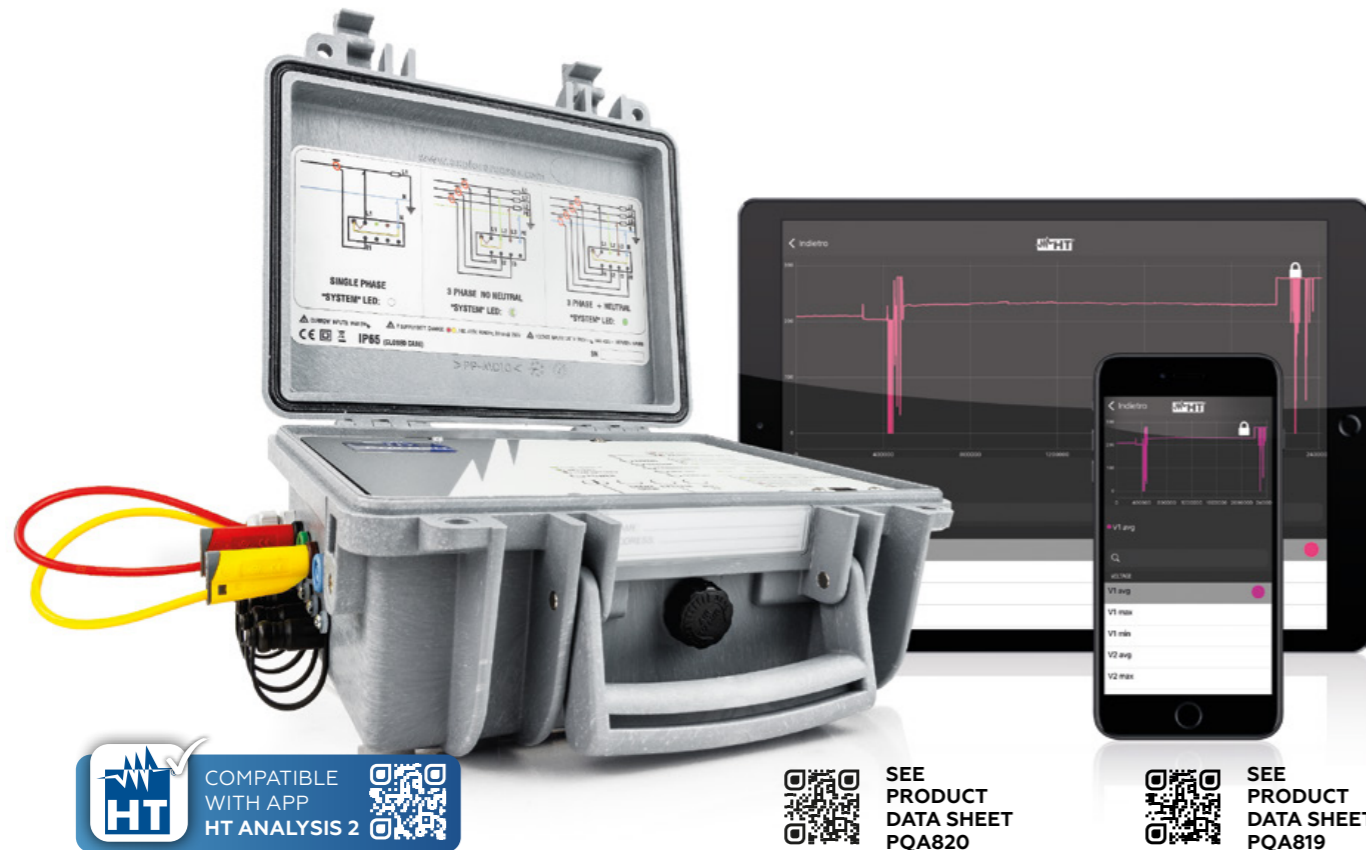
ORDER CODE HV000820

PQA820

ORDER CODE HV000819

PQA819

Three-phase and single-phase mains analyzers



PQA820 e PQA819 are the **innovative** proposal by HT to **easily analyze** all involved components on a **three-phase** or **single-phase** electric system.

When designing them, HT has taken particular care of three aspects: **setting**, the operating or storage environment and data transfer.

- PQA820 and PQA819 **do not need to be set**. They simply need to be connected, started and they respectively record 383 and 44 quantities simultaneously.

- They are provided with a comfortable **IP65** case, which allows working **in any kind of environment**.

- When recording has finished, **thanks to the Wi-Fi connection**, the devices are capable of transferring all data onto a **tablet, smartphone or PC**.

Further to the Wi-Fi connection, PQA devices are provided with USB connection for transferring data via cable to the PC through **the provided TopView software**.

They do not need any batteries since they are **auto power-supplied** from the mains they are analyzing.

The **internal battery is automatically recharged** by the input voltage and will provide the necessary energy to **go on recording in case power supply is interrupted**.

To make the most of the technology used by PQA820 and PQA819, we recommend using the **HtAnalysis 2 App** (available for **free download** on AppStore and Google Play) on a tablet or smart phone.

Here are some of the functions of HtAnalysis:

- Display of measured data on high-definition screen.
- Possibility of "scrolling" through a determined waveform and immediately detecting its critical "moments": it will be sufficient to "touch" a certain spot of the screen in which the measured signal is proposed to immediately obtain all the necessary information to understand what happened in that spot and in that particular moment!

PQA820 and PQA819 respectively record 383 and 44 quantities which can be **recalled and dragged onto the screen** to be **compared between each other**; for example, if you are displaying the trend of voltages and **you want to check for the possible presence of harmonic distortion**, it will be sufficient to scroll through the list of recorded measures and **drag the one relevant to harmonics to the screen**.

The same can be done for all other quantities: **power, cosphi, current, energy**, etc.

Everything can then be shared on **HT Cloud**, the web database created by HT to **archive** recordings and **share them** quickly with anyone around the world.

Functions

- AC TRMS voltage in single-phase/three-phase systems
- AC TRMS current in single-phase/three-phase systems
- Active, Reactive and Apparent Power/Energy
- Cosphi and Power Factor
- Voltage, Current, DC Power
- Neutral current (PQA820 only)
- Voltage dips and peaks current with resolution 10ms (PQA820 only)
- Voltage unbalance (NEG%, ZERO%) (PQA820 only)
- Measurements using external TA and TV
- Voltage/current waveforms
- Histograms of voltage/current harmonics and THD%
- Voltage/current vector diagram
- Periodical recording with selectable PI
- Maximum number of simultaneously recorded quantities
PQA820: 383 PQA819: 44
- Voltage and current harmonic analysis up to the 49th
- Calculation and recording of voltage/current THD%
- Indication of recording duration

Characteristics

Power supply:	rechargeable Li-ION battery
External power supply:	100 ÷ 415V, 50/60Hz
Recording duration	> 30 days (@ PI = 10min) (PQA820) > 230 days (@ PI = 15min) (PQA819)
Recording period:	5, 10, 30s, 1, 2, 5, 10, 15, 60min
PC interface:	USB 2.0 and Wi-Fi
Safety:	IEC/EN61010-1, double insulation
Mechanical protection:	IP65 (closed case)
Overvoltage category:	CAT IV 300V, max 415V between inputs
Reference standards:	EN50160
Operating temperature:	0 ÷ 40°C
Operating humidity:	<80%RH
Storage temperature:	-10 ÷ 60°C
Storage humidity:	<80%RH
Size:	235x165x75mm
Weight (battery included):	approx 0.7kg

Provided accessories

KITMPPACW	Set of 4 measuring cables
KITMPPACC	Set of 4 alligator clips
606-IECN	Adapters with magnetic terminal (4x)
HTFLEX33L	Flex 1000A AC clamp, 174mm (4x)
C2007	USB cable
BORSA2051	Carrying bag for accessories
	Quick user guide
	ISO calibration report

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES



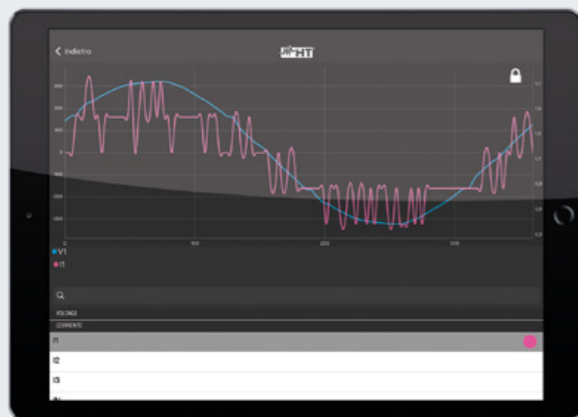
GSC60

PQA820

PQA819

HT9023

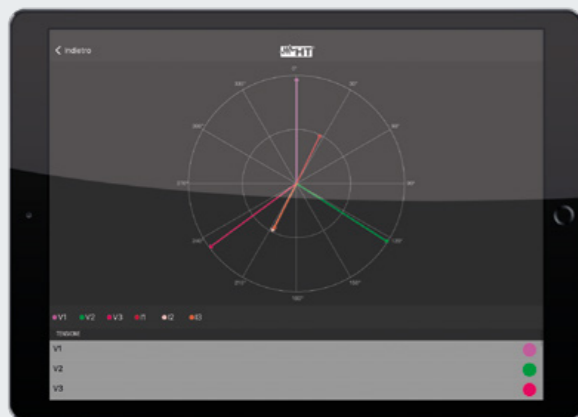
With HTANALYSIS™



Voltage and current waveforms.



Current and voltage harmonics.



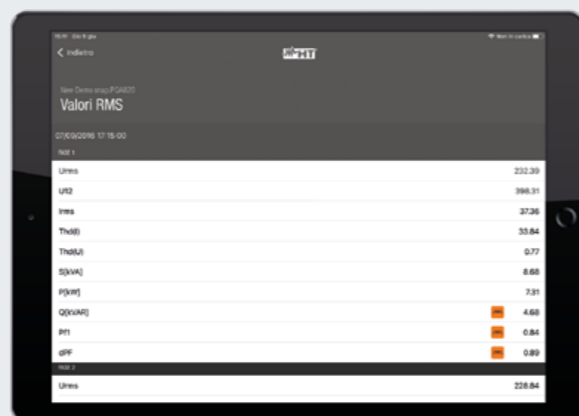
Voltage and current vector diagram.



Zoom on a voltage and current drop.



Jump function
1. Click on the arrow next to the desired value.



Jump function
2. It switches to harmonic values in real-time.

ORDER CODE **HP009023**

HT9023

Professional clamp meter for measuring power/harmonics with WIFI connection



SEE PRODUCT DATA SHEET HT9023

HT9023 has been designed to measure **AC current, DC AC+DC up to 1000A in TRMS** reaching **CAT IV 600V** and **CAT III 1000V** in compliance with **safety standard IEC/EN61010-1**. The clamp also measures **DC voltage up to 1500V, AC, AC+DC voltage up to 1000V, Active, Reactive, Apparent Power, Power factor, Energy, voltage/current harmonic analysis up to the 25th with THD% calculation** in balanced single-phase and three-phase systems. It is also possible to carry out the phase sequence test with 1 terminal. The instrument also detects the events linked to motor starting currents (Dynamic INRUSH) and allows recording each measured electric parameter over time, with the possibility of transferring data via WiFi to Android/iOS devices through the HTAnalysis 2 App or onto PC through the TOPVIEW software. The clamp is provided with a wide graphic dot-matrix screen (128x128pxl) with backlight, in order to allow reading data even in poorly lit environments, and it is provided with an auto power off function to preserve its internal battery.

Functions

- › DC, AC + DC TRMS current up to 1000A
- › DC voltage up to 1500V
- › AC, AC+DC TRMS voltage up to 1000V
- › Resistance and Continuity test
- › "Voltsense" for AC voltage detection
- › Frequency with clamp jaws and leads
- › Phase sequence / Phase concordance with 1 terminal
- › Measurement/recording of DC power and energy
- › Measurement/recording of active, reactive, apparent power in single-phase systems
- › Measurement/Recording of active, reactive power in single-phase systems
- › Measurement/Recording of power factor in single-phase systems
- › Measurement/Recording of voltage/current harmonics up to the 25th and calculation of THD%
- › Motor starting current detection (Dynamic INRUSH)
- › Data logger function with programmable PI
- › Autorange
- › Data HOLD
- › MAX/MIN/AVG
- › PEAK (1ms), ZERO
- › Backlight
- › WiFi for connection to PC and Android/iOS devices
- › Auto Power OFF

Characteristics

Display: dotmatrix 128x128pxl with backlight
Conversion type: TRMS
Power supply: 2x1.5V batteries type AAA LRO3
Duration: > 40ore
Internal memory: 2MBytes (approx. 5g @IP=1min)
PC interface: WiFi
Clamp jaw internal diameter: 45mm
Safety: IEC/EN61010-1
Overvoltage category: CAT IV 600V - CAT III 1000V
Insulation: double insulation
Pollution level: 2
Size (LxWxH): 252x88x44mm
Weight (batteries included): 420g

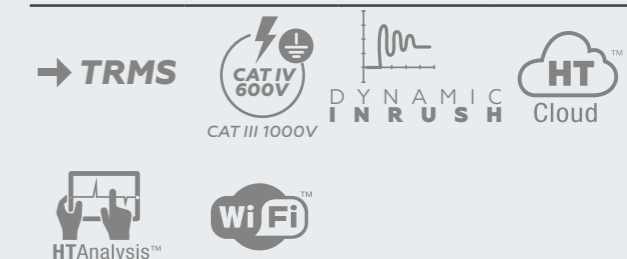
Provided accessories

YAAMK0000HTO	Pair of test leads
YAAMK0001HTO	Pair of alligator clips
YABRS0000NNO	Carrying bag
	Batteries
	ISO calibration report
	Quick user guide

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES





XL421
XL422

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XL423
XL424

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DATALOGGER



DATALOGGER



MAIN MEASUREMENTS	DATA LOGGERS			
	XL421	XL422	XL423	XL424
TRMS	●	●	●	●
AC voltage in single-phase/three-phase systems			● Single-phase	● Single-phase / three-phase
AC current in single-phase/three-phase systems	● Single-phase	● Single-phase / three-phase		
MEMORY AND RECORDING				
Max number of simultaneously selectable parameters	1	3	1	3
Recording with selectable integration period	1s, 6s, 30s, 1min, 5min	1s, 6s, 30s, 1min, 5min	1s, 6s, 30s, 1min, 5min	1s, 6s, 30s, 1min, 5min
Indicative memory duration (single-/three-phase in days @ PI=5min)	455	455 / 1820*	455	455 / 1820*
Internal memory capacity	1MB	1MB	1MB	1MB
ADDITIONAL CHARACTERISTICS				
Protection rating	IP65	IP65	IP65	IP65
Overvoltage category:	CAT IV 600V CAT III 1000V	CAT IV 600V CAT III 1000V	CAT IV 600V CAT III 1000V	CAT IV 600V CAT III 1000V
Power supply	2x batteries AA	2x batteries AA	2x batteries AA	2x batteries AA
Provided PC interface with software for Windows	●	●	●	●
Size (LxWxH) (mm)	120x80x43	120x80x43	120x80x43	120x80x43
Weight (batteries included):	500g	500g	500g	500g
Reference standard for safety	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1
ORDER CODE	HV000421	HV000422	HV000423	HV000424

ORDER CODE HV000421

XL421

ORDER CODE HV000422

XL422

TRMS single-phase and three-phase current data logger



SEE PRODUCT DATA SHEET XL421



SEE PRODUCT DATA SHEET XL422

XL421 and XL422 are **Data Loggers** capable of measuring and recording the true root mean square (TRMS) values of Current up to **2500A AC** in, according to the model, **single-phase or three-phase** electric systems for different applications (evaluation of load currents, rated powers of transformers, etc.). The devices have a comfortable mobile structure with built-in flex clamp jaws which allow surrounding also a big-sized cable or bar. Thanks to an advanced memory management algorithm it is possible to monitor a system even for a long time. The devices start recording with a **sampling period** which can be **selected** through software among 1, 6, 30 and 60 seconds and, when memory is almost full, the previously recorded values are "re-sampled" according to the subsequent value of the sampling period, thus freeing part of the memory; the devices then go on recording new values, using the new measuring interval. In this way, it is possible to keep the device recording up to **approximately 1 year according to the model**. Each recording is kept stored in the internal memory and can be **downloaded and managed by PC** always through a dedicated software. A special adhesive strap is also provided with the devices, which makes it possible to place them in any place in the installation where measuring is needed. The high protection rating (**IP65**) makes these devices fully reliable also under extreme operating conditions.

ORDER CODE HV000423

XL423

ORDER CODE HV000424

XL424

TRMS single-phase and three-phase voltage data logger



SEE PRODUCT DATA SHEET XL423



SEE PRODUCT DATA SHEET XL424

XL423 and XL424 are **Data Loggers** capable of measuring and recording the true root mean square (TRMS) value of Voltage up to 600V AC in, according to the model, in **single-phase or three-phase** electric systems, for different applications (evaluation of mains voltage, load unbalance, etc.). The devices have a comfortable mobile structure with built-in flex clamp jaws which allow surrounding also a big-sized cable or bar. Thanks to an advanced memory management algorithm it is possible to monitor a system even for a long time. The devices start recording with a **sampling period** which can be **selected** through software among 1, 6, 30 and 60 seconds and, when memory is almost full, the previously recorded values are "re-sampled" according to the subsequent value of the sampling period, thus freeing part of the memory; the devices then go on recording new values, using the new measuring interval. In this way, it is possible to keep the device recording up to **approximately 1 year according to the model**. Each recording is kept stored in the internal memory and can be **downloaded and managed by PC** always through a dedicated software. A special adhesive strap is also provided with the devices, which makes it possible to place them in any place in the installation where measuring is needed. The high protection rating (**IP65**) makes these devices fully reliable also under extreme operating conditions.

Functions

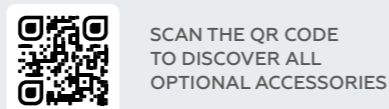
- › TRMS single-phase current measurement (XL421)
- › TRMS three-phase current measurement (XL422)
- › Measuring range: 1 ÷ 2500A AC
- › Accuracy: ±(1.0%reading+1 digit)
- › Resolution: 1A
- › Operating frequency: 50±6Hz, 60±6Hz
- › Bandwidth: 3200Hz
- › Sampling frequency: 64 spots in 20ms
- › Integration Period: 1s, 6s, 30s, 60s, 5min
- › Memory capacity: 1Mbyte
- › Serial interface: RS-232
- › Integration period.....Duration in days:

1s	5 (XL421)	1.5 (XL422)
6s	34 (XL421)	8 (XL422)
30s	170 (XL421)	42 (XL422)
60s	364* (XL421)	91 (XL422)
5min	1820* (XL421)	455* (XL422)
- › Front panel indication: LED diodes
- › Power supply: 2x1.5V batteries type AA LR6
- › Battery life: >6months (with loaded batteries)
- › Safety: IEC/EN 61010-1
- › Overvoltage category: CAT IV 600V (to earth)
- › Insulation: Double insulation
- › Pollution level: 2
- › Mechanical protection index: IP65
- › Max height: 2000m
- › Max diameter of flexible clamps: 174mm
- › Size (LxWxH): mm 120x80x43
- › Weight (batteries included): approx. 0.5kg
- *according to battery duration

Provided accessories

VELCRO	Adhesive strap 50x70mm
C2004	Serial cable
BORSA 2000	Carrying bag (XL421)
BORSA75	Carrying bag (XL422)
	Batteries
	User Manual

Optional accessories



Functions

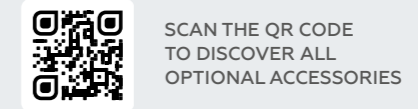
- › TRMS single-phase voltage measurement (XL423)
- › AC TRMS three-phase voltage measurement (XL424)
- › Measuring range: 0 ÷ 600VAC
- › Accuracy: ±(1.0%reading+1 digit)
- › Resolution: 0.1V
- › Operating frequency: 50±6Hz, 60±6Hz
- › Bandwidth: 3200Hz
- › Sampling frequency: 64 spots in 20ms
- › Integration Period: 1s, 6s, 30s, 60s, 5min
- › Memory capacity: 1Mbyte
- › Serial interface: RS-232
- › Integration period.....Duration in days:

1s	5 (XL423)	1.5 (XL424)
6s	34 (XL423)	8 (XL424)
30s	170 (XL423)	42 (XL424)
60s	364* (XL423)	91 (XL424)
5min	1820* (XL423)	455* (XL424)
- › Front panel indications: LED diodes
- › Power supply: 2x1.5V batteries type AA LR6
- › Battery life: >6months (with loaded batteries)
- › Safety: IEC/EN 61010-1
- › Overvoltage category: CAT IV 600V (to earth)
- › Insulation: Double insulation
- › Pollution level: 2
- › Mechanical protection index: IP65
- › Max height: 2000m
- › Size (LxWxH): mm 120x80x43
- › Weight (batteries included): approx. 0.5kg
- *according to battery duration

Provided accessories

KITXL424C	Set of 4 alligator clips
VELCRO	Adhesive strap 50x70mm
C2004	Serial cable
BORSA2000	Carrying bag
	Batteries and user manual

Optional accessories





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MacroTestG3 pag. **88**



COMBI519 EASYTEST pag. **90**



FULLTEST3 pag. **92**



M75 M75L pag. **94**



HT52/05 HT53L/05 pag. **95**



EQUITEST pag. **96**



IMP57 pag. **97**



MULTIFUNCTIONAL TESTERS

MULTIFUNCTIONAL TESTERS



ELECTRIC SAFETY MEASUREMENTS

	MACROTEST G3	MACROTEST G2	MACROTEST G1	GSC60
TRMS	●	●	●	●
Insulation with voltage 50, 100, 250, 500, 1000VDC	●	●		●
Continuity of protective conductors with 200mA	●	●	●	●
Continuity of protective conductors with 200mA up to 10A with optional accessory EQUITEST				
Tripping time of RCDs type AC, A, F, B, B+ DD and Standard, Selective and Delayed CCIDs	● A,F, AC= 1A B, B+= 300mA DD= 6mA			● A,F, AC= 1A B, B+= 300mA
Tripping current of RCDs type AC, A, F, B, B+ , DD and Standard, Selective and Selective CCIDs	● A,F, AC= 1A B, B+= 300mA DD= 6mA			● A,F, AC= 1A B, B+= 300mA
Tripping time and current of RCDs with separate clamp jaws type B, B+, A, F, AC Standard, Selective and Delayed up to 10A	● ***			● ***
Overall earth resistance with no residual current protection tripping	●			● ***
Earth resistance by 4 wires earth resistance method	●	●	●	●
Resistance of the single earth rods with clamp	● **	● **	● **	● **
Ground resistivity by 4-wire method	●	●	●	●
Loop/Line impedance, Phase-Phase, Phase-Neutral, Phase-PE	●			●
Loop/Line impedance Phase-Phase, Phase-Neutral, Phase-PE with high resolution (0.1mΩ)	● *			● *
Measurement of percentage voltage drop on the line	●			●
Contact voltage	●			●
Full test on cable mapping of LAN networks with RJ45				
Phase sequence	●			●
Leakage current with optional clamp meter (accessory HT96U)	●			●
Dielectric strength with test voltage up to 5100V AC				
Measurement of discharge time of internal capacitances				
Measurement of Polarization Index (PI) and Dielectric Absorption Ratio (DAR)				
Safety test of electric car recharging stations (EVSE)	Updatable (CAT IV only)			

MAINS ANALYSIS

Measurement of Voltage, Current, Active, Reactive, Apparent Power	● (1)	● (1)		● (3) with Recording
Measurement of Cosphi, Power Factor	● (1)	● (1)		● (3) with Recording
U/I harmonics up to the 49th +THD% + Voltage anomalies	● 25th no anomalies	● 25th no anomalies		● (3) with Recording

ADDITIONAL CHARACTERISTICS

	CAT IV 300V	CAT IV 300V	CAT IV 300V	CAT IV 300V to earth max 600 between inputs
Overvoltage category:	CAT IV 300V	CAT IV 300V	CAT IV 300V	CAT IV 300V to earth max 600 between inputs
DC/AC TRMS voltage and current, Frequency, Resistance, Continuity with buzzer				
Automatic test	● (Ra, RCD, MΩ)			
Measurement of environmental parameters (°C,°F, %RH, Lux)	●			● with Recording
Test with remote lead PR400	●	●	●	●
Help on line on the display	●	●	●	●
Internal memory for measured data saving	●	●	●	●
Optical/USB serial port for PC connection	●	●	●	●
Built-in WiFi connection and compatibility with app HTANALYSIS 2	●	●	●	●
Size (LxWxH) (mm)	222x162x57	222x162x57	222x162x57	222x162x57
Weight (batteries included):	1.2kg	1.2kg	1.2kg	1.2kg
Reference standard for safety	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1
ORDER CODE	HV005036	HV005038	HV005037	HV000060



ELECTRIC VERIFICATIONS MAINS ANALYSES

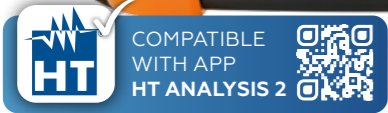
	COMBI G2	COMBI 519	EASYTEST	M75	M75L	JUPITER	NEPTUNE	FULLTEST3
TRMS	●	●	●	●	●	●	●	●
Insulation with voltage 50, 100, 250, 500V	●	●	●	● 250V, 500V	● 250V, 500V		●	●
Continuity of protective conductors with 200mA	●	●	●	●	●			●
Continuity of protective conductors with 200mA up to 10A with optional accessory EQUITEST			●					
Tripping time of RCDs type AC, A, F, AC=1A B, B+= 300mA DD= 6mA	● A,F, AC= 1A B, B+= 300mA DD= 6mA	● A,F, AC=1A B, B+=300mA DD=6mA CCID=5.20mA	● A,F, AC=1A	● A = 30mA AC = 300mA only standard	● A = 30mA AC = 300mA only standard	● only general A,AC,F up to 300mA		● A,F, AC=1A B,B+=300mA
Tripping current of RCDs type AC, A, F, AC=1A B, B+= 300mA DD= 6mA	● A,F, AC= 1A B, B+= 300mA DD= 6mA	● A,F, AC=1A B, B+=300mA DD=6mA CCID=5.20mA	● A,F, AC=1A	● A = 30mA AC = 30mA only standard	● A = 30mA AC = 30mA only standard	● only general A/F,AC 30mA		● A,F,AC =1A B,B+=300mA
Tripping time and current of RCDs with separate clamp jaws type B, B+, A, F, AC Standard, Selective and Delayed up to 10A	● ***							
Overall earth resistance with no residual current protection tripping	●	●	●	●	●	●		●
Earth resistance by 4 wires earth resistance method								
Resistance of the single earth rods with clamp								
Ground resistivity by 4-wire method								
Loop/Line impedance, Phase-Phase, Phase-Neutral, Phase-PE	●	●	●			●		●
Loop/Line impedance Phase-Phase, Phase-Neutral, Phase-PE with high resolution (0.1mΩ)	● *	● *						●
Measurement of percentage voltage drop on the line	●	●	●					
Contact voltage	●	●	●	●	●	●		●
Full test on cable mapping of LAN networks with RJ45				●				
Phase sequence	●	●	●	●	●	●	●	
Leakage current with optional clamp meter (accessory HT96U)	●			●	●	●	●	
Dielectric strength with test voltage up to 5100V AC								●
Measurement of discharge time of internal capacitances								●
Measurement of Polarization Index (PI) and Dielectric Absorption Ratio (DAR)	●	●	●				●	
Safety test of electric car recharging stations (EVSE)	● *****							

	COMBI G2	COMBI 519	EASYTEST	M75	M75L	JUPITER	NEPTUNE	FULLTEST3
Measurement of Voltage, Current, Active, Reactive, Apparent Power	● (1)							
Measurement of Cosphi, Power Factor	● (1)							
U/I harmonics up to the 49th +THD% + Voltage anomalies	● 25th					● 25th no anomalies	● 25th no anomalies	

	CAT IV 300V	CAT III 550V	CAT III 550V	CAT IV 600V CAT III 690V	CAT IV 600V CAT III 1000V	CAT III 300V CAT III 300V
Overvoltage category:	CAT IV 300V	CAT III 550V	CAT III 550V	CAT IV 600V CAT III 690V	CAT IV 600V CAT III 1000V	CAT III 300V CAT III 300V
DC/AC TRMS voltage and current, Frequency, Resistance, Continuity with buzzer		●	●	●	●	
Automatic test	● (Ra, RCD, MΩ)	● (Ra, RCD, MΩ)	● (Ra, RCD, MΩ)	● (Ra, RCD, MΩ)	● (Ra, RCD, MΩ)	Programmable by the user
Measurement of environmental parameters (°C,°F, %RH, Lux)	●					
Test with remote lead PR400	●					
Help on line on the display	●					
Internal memory for measured data saving	●	●	●			●
Optical/USB serial port for PC connection	●	●	●			● USB
Built-in WiFi connection and compatibility with app HTANALYSIS 2	●	●	●			
Size (LxWxH) (mm)	222x162x57	222x162x57	222x162x57	240x100x45	240x100x45	175x85x55
Weight (batteries included):	1.2kg	1.2kg	1.2kg	450g	450g	420g
Reference standard for safety	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1
ORDER CODE	HV0000G2	HV000519	HV000100	HV000075	HV00075L	HR00JUPI
						HR00NEPK
						HV000003

GSC60

A unique instrument for mains analysis and verification of electric safety



GSC60 is the only device which can perform the verification of electric safety according to IEC/EN IEC/EN61010-1 and the analysis of single-phase/three-phase mains and electric consumption. IT has been designed to make the safety of electric systems **visible, understandable** and **assessable** in a **simple** and **quick** way. Thanks to the new **operating system HTOS™ 2.0**, once measurement is complete, the operator receives from the device a message **OK - NOT OK** which communicates whether the part of the tested system is compliant and, therefore, safe. The user interface, totally renewed in HTOS™, allows setting and carrying out measurements in a few simple steps. All recorded data are **saved** and, for each kind of test, it is possible to **create folders and subfolders** and, with the virtual keyboard, **add comments** and **notes**. But, even better, through the FREE APP HTAnalysis 2, **compatible with iOS and Android**, the measurements carried out **can be transferred via Wi-Fi** onto a **smartphone or tablet** and, thanks to this function, it is possible to attach **a picture, a video or a voice note** to every measurement. GSC60 is also a **three-phase mains and electric consumption analyzer** which is unique thanks to the APP HTAnalysis 2.



WATCH THE VIDEO TUTORIAL GSC60



SEE PRODUCT DATA SHEET GSC60

Connected to the whole world.

Thanks to the in-built WiFi connection, exporting data and connecting to App **HTANALYSIS™** is possible in a few simple steps. You can consult your own measurements, upload them onto **HTCloud™** or send them via e-mail. Your team will always be connected with you.

Batteries always charged.

The new **GSC60** is so compact that we had to develop a brand new technology for its power supply and charging system. You just need to connect GSC60 to power supply and the batteries will charge. If you have no time for recharge, just replace them with common AA batteries and resume working immediately.

HTOS™ checks the power.

From the Home page, access measurement through the **touch-screen display**, quickly set the measuring parameters and press key GO. Here it is: **HTOS™**, conceived and developed to always be of help. With the results **OK** and **NOT OK** and the **Help OnLine**, it will immediately become your best partner without wasting your time.



Example of display of V-I harmonics



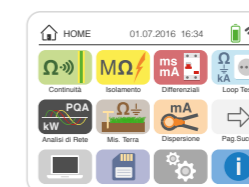
Example of display Real-time phasors



Example of display of V-I Waveforms



Example of display Recording made (evident voltage interruptions)



Functions of Electric safety

- › Insulation with test voltage 50, 100, 250, 500, 1000VDC
- › Continuity of protective conductors with 200mA
- › Earth resistance by Voltamperometric method
- › Resistance of the earth rods with clamp
- › Ground resistivity by 4-wire method
- › Overall earth resistance with no residual current protection tripping
- › Line/Loop, Phase-Phase, Phase-Neutral, Phase-PE impedance
- › Line/Loop, Phase-Phase, Phase-Neutral, Phase-PE impedance with high resolution (0.1 mΩ) with optional accessory IMP57
- › Assumed short-circuit current
- › Contact voltage
- › Tripping time of Standard, Selective and Delayed RCDs
- › Test current type A/F, AC max 1A and type B/B+ max 300mA.
- Test on RCDs with separate clamp jaws up to 10A
- › RCD tripping current (Ramp test)
- › Phase sequence
- › Measurement of percentage voltage drop on the lines
- › Test with remote switch probe PR400
- › Leakage current (with optional clamp HT96U)
- › Help on line on the display
- › Internal memory for measured data saving
- › Optical/USB serial port for PC connection
- › Built-in WiFi communication interface

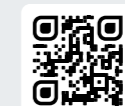
Functions of Mains analysis

- › 9 types of electric systems available
- › TRMS voltage in single-/three-phase systems up to 600V
- › AC TRMS current in single-/three-phase systems up to 3000A
- › Active, Reactive and Apparent Power/Energy
- › Cosphi and Power Factor
- › Voltage, Current, DC Power
- › Measurement of neutral current
- › Voltage dips and peaks on 20ms @50hz
- › Voltage unbalance (NEG%, ZERO%)
- › Measurements using external TA and TV
- › Voltage/current waveforms
- › Histograms of voltage/current harmonics and THD%
- › Voltage/current vector diagram
- › Periodical recording with selectable PI
- › Max number of simultaneously selectable quantities 632
- › Voltage/current harmonic analysis up to the 49th
- › Calculation and recording of voltage/current THD%
- › Indication of recording duration

Provided accessories

HTFLEX33E	Flex clamp 3000A, diameter 174mm, 4 pieces
C2033X	Cable with 3-terminal Shuko plug
UNIVERSALKITG3	Set of 4 cables, 4 alligator clips, 3 leads
KITERRNE	Bag with 4 cables + 4 metal probes
PR400	Remote lead for test activation
PT400	Touch-screen pen
VA500	Rigid transport case for device and accessories
YABAT0003000	1.2V NiMH AA rechargeable battery, 6 pieces
A0060	100/230Vac 50/60Hz - 15 Vdc power supply
SP-0500	Set for slinging the instrument over one's shoulder
C2006	Optical/USB C2006 cable
RCDX10	Accessory for industrial RCDs up to 10A
	Quick user guide
	ISO calibration report

Optional accessories

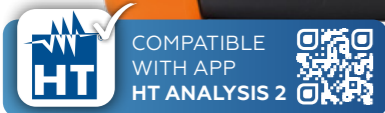


SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES

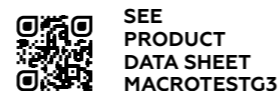


MACROTESTG3

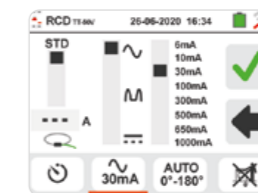
Advanced multifunction instrument for checking the safety of domestic and industrial electric systems (IEC/EN61557-1).



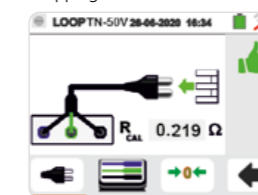
- ▶ **All verifications on electric safety** provided for by standards IEC/EN IEC/EN61557-1.
- ▶ **Advanced Loop** Verification of magnetothermal protections, fuses and cable sizes.
- ▶ **Earth resistance** by **Voltamperometric method** with 2 or 3 spots in TT, TN and IT systems, measurement of **overall earth resistance** and with **clamp meter T2100** (optional). **Ground resistivity**.
- ▶ **Measurement of electric parameters in in single-phase installations** (V, A, W, VAR, VA, PF)
- ▶ **Test of RCDs** type A/F, AC, B/B+ up to 1A and type DD, also with separate clamp jaws with test current up to 10A (with optional accessory RCDX10).
- ▶ Measurement of **insulation resistance**.
- ▶ Measurement in AUTOMATIC sequence of Overall earth resistance, RCD test, Insulation.
- ▶ Measurement of **continuity** of protective conductors.
- ▶ Verification of **phase sequence (SEQ)** and **leakage currents**.
- ▶ **Measurement of environmental parameters** with external feelers.



MacrotestG3 is a revolutionary device. Its TFT colour **touch-screen** display allows using this device in a completely new manner. **MacrotestG3 makes available on its display all possible variables to obtain a perfect measurement;** your task will only be to **"touch"** what you really want to measure: simply leave the rest to Macrotest G3's micro-processor! The device complies with **all requirements as regards the safety of electric systems: test of RCDs type A, AC also up to 1000 mA and type B; insulation, continuity, earth resistance tests** (this also with the aid of optional clamp T2100). With the appropriate programming guided by the touch-screen system, this device can test the **interruption power, tripping currents, I2t relevant to magneto-thermal switches (MCB) with curves B, C, D, K and fuses type gG and aM!** The device can be used with external feelers for measuring environmental parameters such as air temperature/humidity, illuminance (Lux) further to measuring leakage currents, cosphi, power and harmonics, Loop/Line impedance and calculating the assumed short-circuit current with high resolution (0.1mOhm) in TN systems with use of optional accessory IMP57. **Cutting-edge management of measurement** with indication, at the end of each safety test, of **compliance or non-compliance with requirements** with simple symbols **OK** or **NOT OK**.



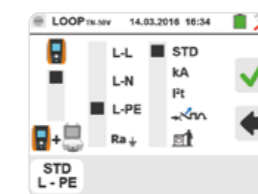
Selection of RCD type and tripping current.



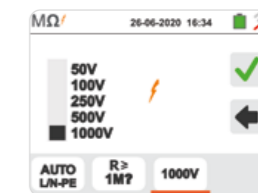
ZeroLoop: compensation of the resistance of the test cables used for Loop impedance measurement.



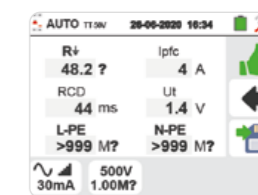
Power measurement.



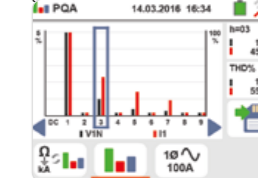
Advanced Loop.



Selection of test voltage and minimum limit value on MΩ measurement.



Autosequence: automatic sequence of measurements of Overall earth resistance, RCD test and Insulation L-PE, N-PE measurement.



Power measurement: harmonics



Advanced Loop: negative result of interruption power test.

Functions

- ▶ **AUTO test** (overall earth resistance test, RCD tests, insulation tests) on the outlets to be tested
- ▶ **Insulation** with test voltage 50, 100, 250, 500, 1000VDC
- ▶ **Continuity** of protective conductors with 200mA
- ▶ **Earth resistance** by Voltamperometric method
- ▶ **Resistance of the earth rods** with clamp
- ▶ **Ground resistivity** by 4-wire method
- ▶ **Overall earth resistance** with no residual current protection tripping
- ▶ **Line/Loop, Phase-Phase, Phase-Neutral, Phase-PE impedance**
- ▶ **Line/Loop impedance, Phase-Phase, Phase-Neutral, Phase-PE with high resolution (0.1 mΩ)**
- ▶ **ZEROLOOP** function for a compensation of the resistance of the test cables used for Loop measurement.
- ▶ **Assumed short-circuit current**
- ▶ **Contact voltage**
- ▶ **Tripping time** of General, Selective and Delayed RCDs
- ▶ **Test current** type A/F, AC max 1A and type B/B+ max 300mA.
- ▶ **Test on RCDs** with separate clamp jaws up to 10A
- ▶ **RCD tripping current** (Ramp test)
- ▶ **Measurement in AUTOMATIC** sequence of Overall earth resistance, RCD test, Insulation (AUTOTEST)
- ▶ **Phase sequence**
- ▶ **Measurement of percentage voltage drop** on the lines
- ▶ **Measurement with use of remote switch probe** (with optional accessory PR400)
- ▶ **Leakage current** (with optional clamp HT96U)
- ▶ **Measurement of electric parameters** (V, I, W, VAR, VA, Wh, cosphi)
- ▶ **Harmonic analysis** V, I and THD%
- ▶ **Help on line** on the display
- ▶ **Internal memory** for measured data saving
- ▶ **Optical/USB serial port** for PC connection
- ▶ **Built-in WiFi** communication interface

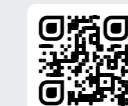
Characteristics

- Power supply:** 6x1.2V rechargeable batteries type AA NiMH or 6x1.5 type AA alkaline
- Battery life:** > 550 test (alkaline)
- Display:** Resistive touch screen, colour LCD, resolution 320x240 pxl
- Memory:** 999 locations, 3 levels of markers
- PC interface:** optical/USB and WiFi
- Safety:** IEC/EN61010-1, double insulation
- Operating humidity:** <80%RH
- Operating temperature:** 0 ÷ 40°C
- Storage humidity:** <80%RH
- Storage temperature:** -10 ÷ 60°C
- Overvoltage category:** CAT IV 300V, max 415V between inputs
- Pollution level:** 2
- Reference Standards:** IEC/EN61557-1-2-3-4-5-6
- Size (LxWxH):** 225 x 165 x 75 mm
- Weight (batteries included):** 1.2kg

Provided accessories

C2033X	Cable with 3-terminal Shuko plug
UNIVERSALKITG3	Set of 4 cables, 4 alligator clips, 3 leads
KITTERRNE	Bag with 4 cables + 4 metal probes
PR400	Remote lead for test activation
PT400	Touch-screen pen
VA507	Rigid transport case
YABAT0003000	1.2V NiMH AA rechargeable battery, 6 pieces
YABAT0004001	Battery charger for 6 batteries type AA/AAA
C2006	Optical/USB cable
ZEROLOOP	Accessory for zeroing the cable in Loop measurement
	Quick user guide
	ISO calibration report

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES



ORDER CODE **HV000519**

COMBI519

ORDER CODE **HV000100**

EASYTEST

Multifunction instruments for safety verification of electric systems



SEE PRODUCT DATA SHEET COMBI519



SEE PRODUCT DATA SHEET EASYTEST

Three instruments resulting from the latest HT production and intended for **Electrical Safety Verification** in compliance with standard **IEC 60364**, made with **latest-generation** electronic components and therefore capable of guaranteeing these products a very long life. This also ensures the possibility of intervention by HT technicians to make changes and take measures in the future, aimed at constantly improving the quality of measurements and checks.

All tests for the verification of electric systems in compliance with IEC 60364 and so **Overall Earth Resistance measurements, tests on A/F, AC, DD and CCID RCDs (EASYTEST only A/F and AC RCDs - SUPERCOMBIs and COMBI519 also B and B+ RCDs)** up to a **rated current of 1A, Insulation up to 1000V, Continuity, short circuit currents, verification of test sequence and verification of magnetothermal protections and fuses.**

Common element to all HT instruments:

- ▶ The **AUTO function**: by selecting this function and only setting the value of RCD current, the instruments connected to a power outlet carry out tests of overall earth resistance, tests on RCDs and insulation tests.
- ▶ Results with the indication of compliance or non-compliance with the standards with simple symbols **OK** or **NOT OK**.

Great versatility and a wide range of uses for the flagship instrument of this series, the **COMBI521**, capable of carrying out a guided sequence of **verification tests on an EVSE station**, thanks to the **optional EV-TEST100 adapter**, and connecting to the **App HT Analysis 2** via the **in-built WiFi connection**, to perform measurements of **electrical parameters in single-phase installations (V, A, W, VAR, VA, PF)** and **measurements of environmental parameters** via external probes (HT52/05 and HT53L/05).

Functions

	COMBI519	EASYTEST
Insulation resistance	● 50, 100, 250, 500, 1000 VDC	● 50, 100, 250, 500, 1000 VDC
Measurement of Polarization Index (PI) and Dielectric Absorption Ratio (DAR)	●	●
Continuity of protective conductors with 200mA	●	●
Continuity of protective conductors with 10A	● ***	● ***
Tripping time and current of RCDs in auto/ramp/manual mode	A/F, AC, B/B+, DD, Standard, Selective CCIDs	A/F, AC, DD, Standard, Selective CCIDs
Rated current RCDs (mA)	6, 10, 30, 100, 300, 500, 650, 1000	6, 10, 30, 100, 300, 500, 650, 1000
Measurement of line impedance and assumed short-circuit current	●	●
Verification of magnetothermal protections and fuses	●	●
Measurement of overall earth resistance through the socket-outlet	●	●
Voltage drop	●	●
Phase sequence	●	●
Automatic tests in a sequence	● (Ra, RCD, MOhm)	● (Ra, RCD, MOhm)
Polarity tests	●	●
Multimeter function	●	●
Measurement of environmental parameters through optional feelers		
Automatic sequence of tests on EVSE stations		
Leakage currents		
Real-time measurement of electrical mains parameters in single-phase systems		
Backlit display	●	●
Memory	● (999 saved)	● (999 saved)
PC connection	● (optical/USB)	● (optical/USB)
WiFi connection		

* with optional clamp HT96U ** with optional accessory EV-TEST100 *** with optional accessory EQUITEST

Common characteristics

- Power supply:** 6x1.5V alkaline batteries type AA IEC LR06 or 6 x1.2V rechargeable NiMH batteries type AA
- Battery life:** > 500 test (alkaline)
- Display:** COG black/white graphic LCD, 320x240pxl
- Memory:** 999 locations, 3 levels of markers
- PC interface:** optical/USB and WiFi
- Safety:** IEC/EN61010-1, IEC/EN61010-2-030, IEC/EN61010-2-033 IEC/EN61010-2-034, IEC/EN61557-1, double insulation
- Operating humidity:** <80%RH
- Operating temperature:** 0°C ÷ 40°C
- Storage humidity:** <80%RH
- Storage temperature:** -10°C ÷ 60°C
- Overvoltage category:** CAT IV 300V, max 415V between inputs
- Pollution level:** 2
- Standard standards:** IEC/EN61557-1-2-3-4-5-6 IEC/EN61010-1
- Size (LxWxH):** 225 x 165 x 75 mm
- Weight (batteries included):** 1.2kg

Provided accessories

UNIVERSALKITCOMBI	Set of 3 cables + 3 alligator clips + 3 leads
C2033X	3-terminal cable with Schuko plug
BORSA75	Soft carrying bag
C2006	Cable for PC connection
SP-0500	Shoulder strap kit with pre-perforated sheaths
	ISO calibration report
	Quick user guide

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES



ORDER CODE **HV000003**

FULLTEST3

Multifunction device for safety tests on electric boards and machines in compliance with IEC/EN60204-1 and IEC/EN61439-1



- › **Verification of dielectric strength** with test voltage up to 5100V in compliance with the prescriptions of new standard IEC/EN61439-1
- › **Verification of protection against indirect contact** in compliance with standard **IEC/EN60204-1**
- › **Continuity of protective conductors** (test current 200mA ÷ 25A)
- › Verification of **RCD tripping** (RCD AC, A/F, B/B+) up to 1A
- › Measurement of **Overall Earth Resistance**
- › Verification of coordination of **magneto-thermal protections** (MCB curves B, C, D, K) and fuses (gG, aM)
- › **Insulation resistance** with test voltage up to 1000V
- › Verification of **residual voltage** on capacitive elements
- › Measurement of **leakage current** in the outlet and through clamp (HT96U, optional)
- › **Functional test** through outlet (power, current)
- › **Phase sequence**
- › **Tests in an automatic sequence:** possibility to program a sequence of tests with automatic start up to a maximum of 8.



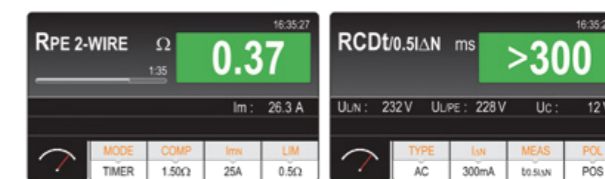
WATCH THE VIDEO TUTORIAL FULLTEST3



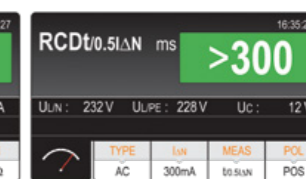
SEE PRODUCT DATA SHEET FULLTEST3

HT offers a cutting-edge device to carry out all measurements required by the new laws as regards tests to be performed on electric boards and machines **IEC/EN60204-1** and **IEC/EN61439-1**.

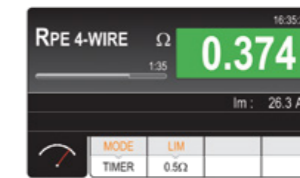
Further to measurements of **protective conductors' continuity, insulation and dielectric strength, FULLTEST3** is capable of carrying out **tests on RCDs type A, AC and B, Standard, Selective and Delayed, measurements of Line/Loop impedance** also with high resolution **0.1mΩ** (with optional accessory IMP57), **measurement of overall earth resistance with no RCD tripping and leakage current with clamp transducer**. It can also carry out test on **interruption power, protection tripping, I2t tests relevant to magneto-thermal switches in curve B, C, D, K and fuses type gG and aM**. The instrument is also provided with a **"touch-screen"** colour display and **3 USB ports** for **connection to PC, USB pen drive, USB printers** and possible **bar code readers**.



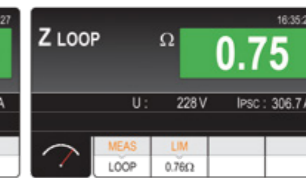
2-wire continuity test.



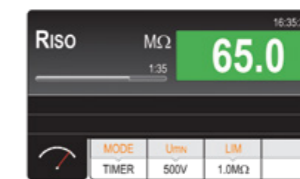
Test on RCDs.



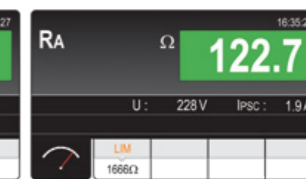
4-wire continuity test.



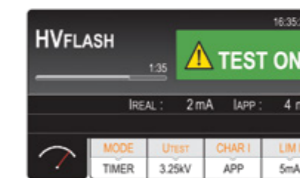
Measurement of Loop impedance.



Measurement of insulation resistance.



Measurement of overall earth resistance.



Dielectric strength test.



Residual voltage measurement.

Functions

- › Continuity of protective circuit with 200mA
- › Continuity of protective circuit with I>10A, V<12V
- › Continuity of protective circuit with I>25A, V<12V
- › Insulation with test voltages 100, 250, 500, 1000VDC
- › Dielectric strength with voltage programmable from 250V to 5100VAC
- › Discharge time/residual voltage on plugs and internal circuits
- › Absorbed/leaked current and power at plug of machines
- › Tripping time and current of RCDs type A/F, AC, B/B+ Standard and Selective up to 1000mA
- › Contact voltage
- › Line/Loop impedance and Ipsc calculation
- › Line/Loop impedance with high resolution (with optional accessory IMP57)
- › Overall earth resistance without RCD tripping
- › Leakage current (with optional accessory HT96U)
- › Phase sequence
- › Timer and limit thresholds selectable through programmable ramps

Characteristics

- Power supply:** 207V ÷ 253V / 50-60Hz
- Protection:** with fuses, at input
- Display:** LCD colour "touch-screen" display
- Memory:** internal, 999 locations
- PC interface:** USB (PC, pen drive, printers, etc.) and Bluetooth™
- Mechanical protection:** IP40
- Pollution level:** 2
- Safety:** IEC/EN61010-1 EN50191
- Considered standards:** IEC/EN61557-1-2-3-4-13-14 IEC/EN60204-1 IEC/EN61439-1 IEC/EN60335-1 EN50106
- Overvoltage category:** CAT III 300V (safety test) CAT III 300V (functional test)
- Size (LxWxH):** 400x300x170mm
- Weight:** 15kg

Provided accessories

	Integrated power supply cable
2317-IECIV-200-R	Test cable 2.5mm ² , 2m, red, 2 pieces
2310-IECIV-200-B	Test cable 0.75mm ² , 2m, blue
2310-IECIV-200-V	Test cable 0.75mm ² , 2m, green
2310-IECIV-200-N	Test cable 0.75mm ² , 2m, black, 2 pieces
C2033X	Cable with 3-terminal Shuko plug
FT3HVPRB1	1 cable banana-alligator + 1 cable banana-lead 2mt HV
404-IECN	Measuring lead CAT III, 3 pieces
5004-IECN	Alligator clip, 4 pieces
C2007	USB cable
FT3BRSN	Carrying bag for accessories.
	ISO calibration report
	Quick user guide

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES



ORDER CODE **HV000075**

M75

ORDER CODE **HV00075L**

M75L

Safety verification instruments in compliance with standard IEC/EN IEC/EN 61010-1 with TRMS multimeter and LAN RJ-45 network cable mapping (M75 only).



SEE PRODUCT DATA SHEET M75



SEE PRODUCT DATA SHEET M75L

M75 is the mobile device par excellence! HT suggests operators who mainly work on domestic installations to **ALWAYS** have M75 at hand. Here's the reason why: it is very easy to use, very small in size and it **fully automatically** carries out all necessary tests to establish COMPLIANCE (and hence ensure SAFETY) of a domestic electric system.

ALWAYS using it before starting working on an already existing system the operator does not know well, and **ALWAYS using it at the end of the job**, will guarantee the necessary safety to both operators and users of the electric systems!

Thanks to its **small size**, this instrument offers many operating opportunities. M75 is used for testing the safety of electric systems, so for **measuring overall earth resistance, testing RCDs type A and AC, insulation and continuity**.

In order to make it versatile and fully functional for any kind of end user, the instrument has been provided with the innovative **AUTO** function: by selecting this function and only setting the value of RCD current, M75, connected to a power outlet, carries out **tests of overall earth resistance, RCD tests and insulation tests in a sequence**. At the end of the tests, the instrument shows all results with the indication of compliance or non-compliance with the standards with simple symbols **OK** or **NOT OK**.

This innovative product also offers the following functions: **TRMS multimeter** for AC/DC voltage, AC/DC current (with external clamp), **Resistance measurement**, **Test on LAN network cables**, **Test of phase sequence with a single lead**.

ORDER CODE **HN005205**

HT52/05

Feeler for measuring air temperature/humidity



Accessory HT52/05 accessory is a probe transducer that allows the measurement of air temperature and humidity in combination with analyzers/recording instruments or precision multimeters capable of accepting input signals with a minimum resolution of 1mV. The probe has a selector for selecting temperature measurements in °C/°F and relative humidity. The measurement is carried out and transformed into an electric signal proportional to the physical value measured. Model HT52/05 is supplied with a dedicated HT type output connector that can be used with measuring instruments such as GSC60 or COMBI521 or MACROTESTG3.



SEE PRODUCT DATA SHEET HT52/05

ORDER CODE **HN053L05**

HT53L/05

Probe for measuring illuminance (Lux) of white sources and LEDs



Accessory HT53L/05 is a probe transducer that allows the measurement of the illuminance of standard white and colour sources (LEDs) up to 20.000 Lux, in combination with analyzers/recording instruments or precision multimeters capable of accepting input signals with a minimum resolution of 1mV. The probe has a practical selector for turning it on and selecting the various ranges. Measurement is carried out and transformed into an electric signal proportional to the physical value measured. Model HT53L/05 is supplied with a dedicated HT type output connector that can be used with measuring instruments such as GSC60 or COMBI521 or MACROTESTG3.



SEE PRODUCT DATA SHEET HT53L/05

Functions

- › Continuity of protective conductors with 200mA
- › Insulation with 250,500VDC
- › Tripping time on Standard RCDs type AC (up to 300mA) and type to (300mA)
- › Tripping current on Standard RCDs type AC and A (30mA)
- › Overall earth resistance with no residual current protection tripping
- › AUTO function (overall earth resistance test, RCD tests, insulation tests) on the outlet to be tested
- › Phase sequence with 1 and 2 terminals
- › Full test on cable mapping of LAN networks with RJ45 (M75 only)
- › DC/AC TRMS voltage
- › DC/AC TRMS current
- › Resistance and Continuity test
- › Data HOLD, MAX/MIN/AVG
- › Measurement of voltage and current PEAK
- › Measurement of leakage currents (with optional clamp HT96U)
- › Safety: IEC/EN61010-1
- › Overvoltage category: CATIII 550V
- › Power supply: batteries type AA 4x1.5V
- › Size (LxWxH): 240x100x45 mm
- › Weight (batteries included): approx. 450g

Provided accessories

KIT0075	Set of 2 cables with leads + 2 alligator clips
C2075	2-terminal cable with Schuko plug
HT4003	Standard 400A/1V clamp
CH1	Remote unit LAN#1 (M75 only)
CH2	Remote unit LAN #2 (M75 only)
YAAMS0000000	(3x) patch cable LAN RJ45 (M75 only)
BORSA75	Carrying bag
	Quick user guide

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES

Characteristics

- AIR TEMPERATURE**
- › Measuring range: -20°C÷60°C, 4°F÷140°F
 - › Accuracy: ±0.7°C, ±1.4°F
 - › Type of sensor: capacitive
- RELATIVE HUMIDITY**
- › Measuring range: 0%÷100%RH
 - › Accuracy: ±3%reading at 25°C
 - › Type of sensor: capacitive

Characteristics

- › Sensor type: silicon photodiode
- › Ranges: 20Lux / 2kLux / 20kLux
- › Resolution: 0.01Lux (20Lux), 1Lux (2kLux, 20kLux)
- › Response time: <100ms
- › Output signal: 1mVDC/0.01Lux (20Lux), 1mVDC/1Lux (20Lux), 1mVDC/10Lux (20kLux)
- › Accuracy: ±(5%reading+5mV), Class AA referred to white source with colour temp. 2856K

→ TRMS



ORDER CODE **HV000EQT**

EQUITEST

Accessory for measuring Continuity up to 10A



EQUITEST is designed to carry out the continuity measurement of protective and equipotential conductors with **test current >10A AC** in combination with verification instruments (MASTER unit) EASYTEST, COMBI519, COMBI521, MACROTESTG3 and GSC60 of the HT family. This accessory uses the **measuring method with 4 terminals** which allows the self-compensation of the resistance of the test cables and therefore their extension without the need to perform any preliminary calibration.

ORDER CODE **HAIMP001**

IMP57

Accessory for measuring Loop impedance with high resolution and assumed short-circuit current up to 400kA



IMP57 is an optional accessory to measure **Loop/Line fault loop impedance** and **calculating the assumed short-circuit current**.

IMP57 can be used together with the devices of series **GSC, SIRIUS, Combi** and **Macrotest Gx** further to **ZG47, Fulltest3** and **Speed418**. The high generated test current (**approx. 200A**) allows carrying out measurements with **high resolution (0.1mΩ)** and, therefore, obtaining correct and precise results, **even near MT/BT transformer cabinets (TN systems)** and, in general, carrying out measurements in which the devices' basic resolution is not sufficient to guarantee correct measurements of assumed short-circuit currents according to the project's theoretical data. L'IMP57 is provided with a comfortable and resistant case structure, it has no display and can be interfaced through serial RS232 to Master devices in order to read the results. 4-terminal measurement allows not considering the effect of the provided cables' resistance and, hence, **no preliminary calibrations are necessary**.

Characteristics

Type of measurement:	Continuity of protective and equipotential conductors
Measurement resolution:	0.001Ω
Test current:	>10A AC (max resistance of measuring cables 0.7Ω)
Open-circuit voltage:	4< V _o < 24V AC
Measuring time:	4 terminals
Overtemperature:	after at least 20 consecutive tests
Safety Standards:	in compliance with standards IEC/EN61439-1, IEC/EN60204-1, IEC/EN62305-3
Overtoltage category:	CAT III 300V to earth and between inputs
Power supply:	mains 230V/240V ±10%, 50/60Hz or 110V ±10%, 50/60Hz
Power consumption:	max 70W (@230V, 300mA) (@110V, 600mA)
Protection fuse:	Time-Leg 250V/1A (5x20mm)
Indications of internal states:	two-colour LED
Size: (L x W x H):	210 x 115 x 60 mm
Weight (with in-built cable):	1Kg

Provided accessories

C7051	Power supply cable 230V with plug Schuko-Europlug
C7000	Pair of measuring cables, 3m with in-built alligator clips
C2050	Connection cable to HT master instruments
	ISO calibration report
BORSA75	Carrying bag
	User Manual

Optional accessories

1066-IECN	connector for extension cables with 4mm banana connector, black
1066-IECR	connector for extension cables with 4mm 4mm banana connector, red
C7000/05	pair of measuring cables, 5m with in-built alligator clips
C7000/10	pair of measuring cables, 10m with in-built alligator clips
KITKELVIN	pair of 2 cables with 4 banana connectors and in-built leads

Characteristics

Type of measurement:	Loop impedance P-N, P-P, P-PE and calculation of short-circuit current
Measurement resolution:	0.1mΩ (Zloop); 400kA (Ipsc)
Test current:	approx. 200A
Frequency range:	50Hz ± 5%
Size (LxWxH):	340x300x150mm
Weight:	4.1kg

Compatible instruments:

MACROTESTG3
MACROEVTEST
COMBIG2
GSC60
COMBI519
COMBI521
FULLTEST3

Provided accessories

C7000	Couple of cables, 3m, with alligator clips
C2001	Serial optical / RS-232 cable
B80	Carrying bag for accessories
	ISO9000 calibration certificate
	User manual on CD-ROM
	CD-ROM with Firmware update

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES



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COMBI521EV



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EV-TEST100



SAFETY TEST OF ELECTRIC
VEHICLES RECHARGING
STATIONS



SAFETY TEST OF ELECTRIC VEHICLES RECHARGING STATIONS



MAIN MEASUREMENTS	COMBI521EV	MACROEVTEST
Compatibility with EV-TEST100 for verifications on electric vehicles recharging stations	●	●
WiFi and compatibility with App HT Analysis	●	●
Internal memory and PC connection through Software TOPVIEW	●	●
Insulation with voltage 50, 100, 250, 500, 1000VDC	●	●
Continuity of protective conductors with 200mA	●	●
Continuity of protective conductors with 10A	● *	
Tripping time of RCDs type B/B+, A/F, AC, DD Standard, Selective and Delayed	● A/F, AC up to 1A, B/B+ up to 300mA, DD=6mA, no delayed	● A/F, AC up to 1A, B/B+ up to 300mA, DD=6mA
Tripping current of RCDs type A/F, AC B/B+, DD, Standard	● A/F, AC =1A, B/B+=300mA, DD=6mA	● A/F, AC =1A, B/B+=300mA, DD=6mA
Tripping time and current of RCDs with separate clamp jaws type B/B+, A/F, AC Standard, Selective and Delayed up to 10A		● ****
Overall earth resistance with no residual current protection tripping	●	●
Earth resistance by Voltamperometric method		●
Resistance of the single earth rods with clamp		● **
Ground resistivity by 4-wire method		●
Loop/Line impedance, Phase-Phase, Phase-Neutral, Phase-PE	●	●
Loop/Line impedance, Phase-Phase, Phase-Neutral, Phase-PE with high resolution (0.1mΩ)	● ***	● ***
Measurement of percentage voltage drop on the line	●	●
Contact voltage	●	●
Phase sequence	●	●
Leakage current with optional clamp meter	●	●
Measurement of Voltage, Current, Active, Reactive, Apparent Power	● (real time) (1)	● (real time) (1)
Measurement of Cosphi, Power Factor	● (real time) (1)	● (real time) (1)
Measurement of environmental parameters (Lux/Temp) through optional feelers	● (real time)	● (real time)
U/I harmonics up to the 49th+THD% + Voltage anomalies (dips, peaks)	● 49th no anomalies (real time) (1)	● 49th no anomalies (real time) (1)
ORDER CODE	HV0521EV	HV5036EV

* with optional accessory EQUITEST
 *** with optional accessory IMP57

** with optional accessory T2100
 **** with optional accessory RCDX10

(1) = Single-phase

ORDER CODE **HV0521EV****COMBI521EV**

Tool for the safety verification of electric vehicles charging stations, of domestic and industrial systems, and single-phase system analysis

**EV-TEST 100**

Accessory for the safety verification of electric car charging stations

COMBI521EV is the new instrument for the **verification** and **check of recharging stations** of electric cars (**EVSE**) in compliance with standards IEC/EN 61851-1 and IEC/EN60364-7-722, and for **safety tests** in **domestic and industrial environments** according to IEC/EN 61010-1. COMBI521 is **connected** through the provided C100EV cable to **EV-TEST100**, which is connected, through an in-built cable provided with type2 plug, to a recharging station. EV-TEST100 can **simulate** the presence of an **electric car being recharged** and, at the same time, communicate with COMBI521. To correctly perform all tests, all you need to do is following the **guided procedure** created by HT. Before each test, COMBI521EV indicates how the cables must precisely be connected and, at the end of measurement, further to the detected values, it provides **evaluations** of the **tests' outcomes**, if compatible or not for the recharging station's safety, indicated by a green or red thumb symbol.



SEE
PRODUCT
DATA SHEET
COMBI521EV

Tests in automatic sequence on EVSE

- › Test of output voltage value from the column
- › Continuity test of the recharging station's protection conductor
- › Insulation test of recharging station
- › Verification in a sequence of the statuses of the recharging station:
 - Vehicle not present (status A)
 - Vehicle present but not charging (status B)
 - Verification of mechanical interlock of the plug (status B)
 - Vehicle present and charging (status C)
 - Simulation of a fault on the protection conductor (Fault PE)
 - Simulation of the fault on the CP signal (Fault E).
- › Measurement of overall earth resistance
- › Verification of the RCDs' tripping (test of RCDs type A, B and DD 6mA)
- › Result OK and NOT OK on any single verification and on the overall outcome of the automatic sequence

Functions of COMBI521

- › **AUTOMATIC test (Ra, RCD, Insulation) in sequence**
- › **Continuity of protective conductors with 200mA**
- › **Continuity of protective conductors with 10A with optional accessory EQUITEST**
- › **Insulation test up to 1000V**
- › **Polarity tests**
- › **RCD tests type A/F, AC, B/B+, DD Standard and Selective**
- › **Measurement of line impedance and assumed short-circuit current**
- › **Verification of magnetothermal protections and fuses**
- › **Multimeter function for measuring: Frequency, VL-N, VL-PE, VN-PE**
- › **Phase sequence**
- › **Voltage drop**
- › **Leakage current (with optional clamp HT96U)**
- › **Mains analysis**
- › **Measurement of environmental parameters**
- › **Internal memory and PC connection**
- › **Wi-Fi connection to Android and iOS smartphones and tablets**

Characteristics of COMBI521

Power supply:	6x1.5V alkaline batteries type AA IEC LR06 or 6 x1.2V rechargeable NiMH batteries type AA
Battery life:	> 500 test (alkaline)
Display:	COG black/white graphic LCD, 320x240pxl
Memory:	999 locations, 3 levels of markers
PC interface:	optical/USB and WiFi
Safety:	IEC/EN61010-1, IEC/EN61010-2-030, IEC/EN61010-2-033 IEC/EN61010-2-034, IEC/EN61557-1, double insulation
Operating humidity:	<80%RH
Operating temperature:	0°C ÷ 40°C
Storage humidity:	<80%RH
Storage temperature:	-10°C ÷ 60°C
Overvoltage category:	CAT IV 300V, max 415V between inputs
Pollution level:	2
Reference Standards:	IEC/EN61557-1-2-3-4-5-6 IEC/EN61010-1
Size (LxWxH):	225 x 165 x 75 mm
Weight (batteries included):	1.2kg

Characteristics of EV-TEST 100

Voltage:	L1-L2-L3-N-PE: Max 415V 50/60Hz, CAT III 300V
External load:	L-N-PE: 240V 50/60Hz, CAT III 300V, max 10A-
CP signal:	Communication protocol PWM 12V
Input voltage:	Max 415V- phase-phase, CAT III 300V, 50Hz/60Hz ±5%
Recharging station:	Cases A, B, C - Charging mode 2 and 3 - Connector IEC62196-2 Type 2 (7 poles, three-phase)
External load output protection:	Fuse FF 10A/250V, 5x20mm
CE directive:	Low voltage directive LVD 2014/35/EU and Directive EMC 2014/30/EU
Safety:	IEC EN 61010-1
Operating temperature interval:	0°C ÷ 40°C
Operating relative humidity interval:	<80%RH
Pollution level:	2
Measurement category:	CAT III 300V, Double insulation
Maximum operating height:	2000m



Provided accessories

EV-TEST100	Adapter for verification of EVSE stations
C2033X	Cable with 3-terminal Shuko plug
UNIVERSALKITCOMBI	Set of 3 cables, 3 alligator clips, 3 leads
ZEROLOOP	Accessory for zeroing the cable in Loop measurement
C2006	Cable for PC connection
C100EV	Connection cable to the verification instrument
BORSA2051	Carrying bag
SP-5100	Set of straps for slinging the instrument over one's shoulder ISO calibration report

Optional accessories



SCAN THE QR CODE
TO DISCOVER ALL
OPTIONAL ACCESSORIES

ORDER CODE **HV5036EV**

MACROEVTEST

Tool for the safety verification of electric vehicles charging stations, of domestic and industrial systems, and single-phase system analysis



EV-TEST 100

Accessory for the safety verification of electric car charging stations

MACROEVTEST, the instrument for **verification** and **checks on recharging stations** for electric cars (**EVSE**) in compliance with standards IEC/EN 61851-1 and IEC/EN60364-7-722, and for **safety tests in private** and **industrial environments** IEC/EN 61010-1. MACROEVTEST is **connected** through the provided C100EV cable **to EV-TEST100**, which is connected, through an in-built cable provided with type2 plug, to a recharging station. EV-TEST100 can **simulate** the presence of a **car being recharged** and, at the same time, dialogues with MACROEVTEST thanks to the new display with touch screen system. To correctly perform all tests, all you need to do is following the **GUIDED PROCEDURE** created by HT. Before each test, MACROEVTEST indicates how the cables must precisely be connected and, at the end of measurement, further to the detected values, it provides **evaluations** of the **tests' outcomes**, if compatible or not for the recharging station's safety, indicated by a green or red thumb symbol.



WATCH THE VIDEO TUTORIAL MACROEVTEST



SEE PRODUCT DATA SHEET MACROEVTEST

Tests in automatic sequence on EVSE

- › Test of output voltage value from the station
- › Continuity test of the recharging station's protection conductor
- › Insulation test of recharging station
- › Verification in a sequence of the statuses of the recharging station:
 - Vehicle not present (status A)
 - Vehicle present but not charging (status B)
 - Verification of mechanical interlock of the plug (status B)
 - Vehicle present and charging (status C)
 - Simulation of a fault on the protection conductor (Fault PE)
 - Simulation of the fault on the CP signal (Fault E).
- › Measurement of overall earth resistance
- › Verification of the RCDs' tripping (test of RCDs type A, B and B 6ma)
- › Result OK and NOT OK on any single verification and on the overall outcome of the automatic sequence

Functions MACROEVTEST

- › **AUTO test** (overall earth resistance test, RCD tests, insulation tests) on the outlets to be tested
- › **Insulation with test voltage 50, 100, 250, 500, 1000VDC**
- › **Continuity of protective conductors with 200mA**
- › **Continuity of protective conductors with 10A with optional accessory EQUITEST**
- › **Earth resistance by voltammetric method**
- › **Resistance of the earth rods with clamp**
- › **Ground resistivity by 4-wire method**
- › **Overall earth resistance with no residual current protection tripping**
- › **Line/Loop, Phase-Phase, Phase-Neutral, Phase-PE impedance**
- › **Line/Loop, Phase-Phase, Phase-Neutral, Phase-PE impedance with high resolution (0.1 mΩ) with optional accessory IMP57**
- › **Assumed short-circuit current**
- › **Tripping time of Standard, Selective and Delayed RCDs**
- › **Test current type A, AC, F max 1A and type DD 6mA**
- › **Test on RCDs with separate clamp jaws up to 10A**
- › **RCD tripping current (Ramp test)**
- › **Phase sequence**
- › **Measurement of percentage voltage drop on the lines**
- › **Measurement with use of remote switch probe (with optional accessory PR400)**
- › **Leakage current (with optional clamp HT96U)**
- › **Measurement of electric parameters (V, I, W, VAR, VA, Wh, cosphi)**
- › **Harmonic analysis V, I and THD%**
- › **Help on line on the display**
- › **Internal memory for measured data saving**
- › **Optical/USB serial port for PC connection**
- › **Built-in WiFi communication interface**

Characteristics of MACROEVTEST

Power supply:	6x1.2V rechargeable batteries type AA NiMH or 6x1.5 type AA alkaline
Battery life:	> 550 test (alkaline)
Display:	Resistive touch screen, colour LCD, resolution 320x240 pxl
Memory:	999 locations, 3 levels of markers
PC interface:	optical/USB and WiFi
Safety:	IEC/EN61010-1, double insulation
Operating humidity:	<80%RH
Operating temperature:	0°C ÷ 40°C
Storage humidity:	<80%RH
Storage temperature:	-10°C ÷ 60°C
Overvoltage category:	CAT IV 300V, max 415V between inputs
Pollution level:	2
Reference standards:	IEC/EN61557-1-2-3-4-5-6-7 IEC/EN61010-1
Size (LxWxH):	225 x 165 x 75 mm
Weight (batteries included):	1.2kg

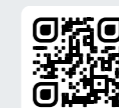
Characteristics of EV-TEST 100

Voltage:	L1-L2-L3-N-PE: Max 415V 50/60Hz, CAT III 300V
External load:	L-N-PE: 240V 50/60Hz, CAT III 300V, max 10A-
CP signal:	Communication protocol PWM 12V
Input voltage:	Max 415V- phase-phase, CAT III 300V, 50Hz/60Hz ±5%,
Recharging station:	Cases A, B, C - Charging mode 2 and 3 - Connector IEC62196-2 Type 2 (7 poles, three-phase)
External load output protection:	Fuse FF 10A/250V, 5x20mm
CE directive:	Low voltage directive LVD 2014/35/EU and Directive EMC 2014/30/EU
Safety:	IEC EN 61010-1
Operating temperature interval:	0°C ÷ 40°C
Operating relative humidity interval:	<80%RH
Pollution level:	2
Measurement category:	CAT III 300V, Double insulation
Maximum operating height:	2000m

Provided accessories

EV-TEST100	Adapter for verification of EVSE stations
C2033X	Cable with 3-terminal Shuko plug
UNIVERSALKITG3	Set of 4 cables, 4 alligator clips, 3 leads
KITERRNE	Bag with 4 cables + 4 metal probes
PR400	Remote lead for test activation
PT400	Touch-screen pen
RCDX10	Accessory for RCD tests with separate clamp jaws
YABAT0003000	1.2V NiMH AA rechargeable battery, 6 pieces
YABAT0004001	Battery charger for 6 batteries type AA/AAA
C2006	Optical/USB cable
ZEROLOOP	Accessory for zeroing the cable in Loop measurement
C100EV	Connection cable to the verification instrument
VA507	Hard carrying case
SP-5100	Set of straps for slinging the instrument over one's shoulder
	Quick user guide
	ISO calibration report

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES

ORDER CODE **HA0EV100**

EV-TEST 100

Adapter for the verification of electric vehicles recharging stations



- › Suitable for recharging stations with recharging mode 2 and 3
- › Simulation of vehicle with Control Pilot (CP status)
- › Simulation of the cable's range with Proximity Pilot (PP status)
- › Simulation of the earthing's fault (fault PE)
- › Simulation of error on Control pilot signal (Fault E)
- › Indication of phase presence via three LEDs
- › Connection terminals for the connection to an external load, in order to verify the correct operation of the recharging station's energy counter
- › Measuring leads L1-L2-L3-N-PE to connect HT verification instruments and carry out safety and functional tests (such as, for example RPE, RCD, ISO)
- › Verification of compliance of recharging stations to standards IEC 61851-1 and IEC 60364-7-722.

Compatible instruments:

MACROEVTEST, COMBI521EVSEE
PRODUCT
DATA SHEET
EV-TEST100

Functions

- › Simulation of the type of cable connected: Not connected, 13A, 20A, 32A, 63A
- › Control pilot (CP): A, B, C, D
- › Simulation of the vehicle status:
 - Status Description
 - A : Vehicle not connected
 - B : Vehicle not connected, not ready for recharge
 - C : Vehicle not connected, ready for recharge, ventilation not requested
 - D : Vehicle not connected, ready for recharge, ventilation requested
- › Simulation of interrupted protective conductor (fault PE)
- › Simulation of short-circuited diode (fault E)
- › Simulation of vehicle with Control Pilot (CP status)
- › Simulation of the cable's range with Proximity Pilot (PP status)
- › Simulation of the earthing's fault (fault PE)
- › Simulation of error on Control pilot signal (Fault E)
- › Indication of phase presence via three LEDs
- › Connection terminals for the connection to an external load, for the verification of the correct operation of the recharging station's energy counter
- › Verification of compliance of recharging stations with standards IEC 61851-1 and IEC 60364-7-722.

Characteristics

Voltage: L1-L2-L3-N-PE: Max 415V 50/60Hz, CAT III 300V
External load: L-N-PE: 240V 50/60Hz, CAT III 300V, max 10A-
CP signal: Communication protocol PWM 12V
Input voltage: Max 415V- phase-phase, CAT III 300V, (50Hz, 60Hz) +/-5%
Recharging station: Cases A, B, C - Charging modes 2 and 3 - Connector IEC 62196-2 Type 2 (7 three-phase poles)
External load output protection: Fuse FF 10A/250V, 5x20mm
CE directive: Low voltage directive LVD 2014/35/EU
Safety: IEC EN 61010-2014/35/EU (LVD) and Directive EMC 2014/30/EU
Operating temperature interval: 0°C ÷ 40°C
Operating relative humidity interval: <80%RH
Pollution level: 2
Overvoltage category: CAT III 300V
 Double insulation
Maximum operating height: 2000m



Provided accessories

VA508	Hard carrying case
C100EV	Connection cable to the verification instrument
User Manual	



Optional accessories

SCAN THE QR CODE
TO DISCOVER ALL
OPTIONAL ACCESSORIES



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T2000
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EARTH RESISTANCE AND
STEP/CONTACT VOLTAGE
MEASURING DEVICES



EARTH RESISTANCE AND STEP/CONTACT VOLTAGE MEASURING DEVICES



M71

T2000 - T2100

HT2055

MAIN MEASUREMENTS	EARTH RESISTANCE		STEP/CONTACT VOLTAGE
	TRMS	●	●
Measuring range	50KΩ	1.2KΩ	200Ω
Earth resistance by 2- and 3-wire method	●		●
Ground resistivity by 4-wire method			●
Compensation of disturbance voltages	●		●
Compensation of test cables	●		●
Direct measurement on earth probes		●	
Measurement of leakage current on earth systems		● T2000 only	
Measurement of step/contact voltage			●
ADDITIONAL CHARACTERISTICS			
Measurement category:	CAT III 240V	CAT IV 300V CAT III 600V	CAT IV 50V
Detection of disturbance currents on measurement	●		●
LCD display	●	●	●
Backlight		●	●
AutoPowerOFF	●	●	●
Help on line on the display			●
Internal memory for measured data saving		●	●
Optical/USB serial port for PC connection			● RS-232/USB
Size (LxWxH) (mm)	240x100x45	293x105x54	230x115x103
Weight in kg (batteries included)	0.6	1.1	30.8
Reference standard for safety	IEC/EN61010-1	IEC/EN61010-1 IEC/EN61557-5	IEC/EN61010-1 EN50522
ORDER CODE	HV000071	HP002000 (T2000) HP002100 (T2100)	HN002055

ORDER CODE **HV000071**

M71

Instrument for measuring earth resistance



M71 has been developed to **measure earth resistance with 2 wires and 3 wires** by **voltamperometric method** in compliance with standard IEC/EN 61010-1.

This device allows carrying out measurements with a **wide measuring range (50kΩ)** and an efficient internal automatic compensation of the disturbance effects found on the installations, and it is provided with an **ergonomic design** with electronic function selector for **quickly carrying out** the tests.

The 2-wire method allows carrying out earth measurement by taking advantage of appropriate external masses as a reference (metal surfaces, tubes, neutral conductor, etc.), which is particularly useful in private environments where, because of logistic problems, it is not possible to use the 3-wire method.



ORDER CODE **HP002000**

T2000

Clamp meters for measuring earth resistance directly on earth rods and measuring leakage current up to 20A AC



ORDER CODE **HP002100**

T2100

T2000 e T2100 are professional clamp meters **specially developed to evaluate resistance of earth rods with no need to disconnect any part of the system.** The inner part of the device is made of 2 jaws, one for current reading and the other for voltage generation. The voltage jaws generate a potential (E) on the loop during resistance (R) measurement. A current (I) is consequently generated on the loop and is measured by the current jaws. Based on the value of parameters E and I, the instrument displays the resistance R value calculated as their ratio. The value measured by the device can be used in case the single rods do not influence each other. T2000 also **measures AC current up to 20A and leakage current with resolution 0.1mA.**

This instrument complies with standard **IEC/EN61010-1** in **CAT III 600V, CAT IV 300V** and it is the ideal solution for measurements to be carried out both in domestic and in industrial environments.



Functions

- › Earth measurement with 2 terminals
- › Earth measurement with 3 terminals
- › Measuring range: 0.01Ω -50kΩ
- › Compensation of disturbance voltages
- › Compensation of test cables

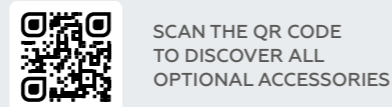
Characteristics

Power supply:	batteries type AA 4x1.5V
Display:	LCD display
Pollution level:	2
Safety:	IEC/EN61010-1
Overvoltage category:	CAT III 240V
Size (LxWxH):	240x100x45mm
Weight (batteries included):	630g

Provided accessories

KIT0071	Set of 3 cables + 3 alligator clips + 2 metal probes
SP-6085	Carrying bag
	Quick user guide
	ISO calibration report

Optional accessories



Functions

- › Direct measurement on earth probes without any cable interruption
- › Measurement of leakage current on earth systems (T2000 only)
- › Setting of alarm thresholds on measurements
- › Storage of measured results
- › Detection of disturbance currents on measurement
- › Data HOLD, Backlight, Auto Power OFF
- › Maximum diameter for clamp 31mm (bars 48x31mm)
- › Serial interface RS-232 for connection to devices of the Macrotest series (T2100 only)

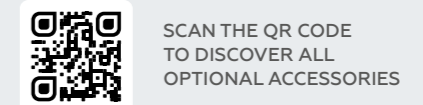
Characteristics

Power supply:	batteries type AA 4x1.5V
Memory:	99 locations
Display:	LCD 4-digit display + decimal point, backlit
Pollution level:	2
Safety:	IEC/EN61010-1, IEC/EN61010-2-032, IEC/EN61557-5
Overvoltage category:	CAT III 600V, CAT IV 300V to earth
Size (LxWxH):	293x105x54mm
Weight (batteries included):	1120g

Provided accessories

	Resistive test loops (1Ω, 5Ω, 10Ω)
	Batteries
	User Manual
	ISO calibration report
C2100	Connection cable Hypertac / Jack 3.5mm RS-232 (T2100 only)
	Hard carrying case

Optional accessories



ORDER CODE **HN002055**

HT2055

Step/contact voltage meter up to 50A



HT2055 consists of a power unit and a voltmetric unit necessary for carrying out step and contact voltage measurements in typical MV industrial electrical installations (TN systems, transformer cabins) with a rated test current of up to 50A (**the real value of the test current generated by the instrument is determined by the resistance of the earth circuit being tested**). The two units, synchronized in time and current are capable of providing the correct value of step and contact voltages consistently with the real current values measured by the power unit, **automatically** taking into consideration the disturbance effects **on mains frequency** found on the measured circuit thanks to the use of an in-built DSP filter. **In this case, step/contact voltage measurement can be carried out by one single operator.** The instrument also measures earth resistance and ground resistivity by the classical voltamperometric method. These measurements can be saved in the internal memory of the Volt-amperometric unit and downloaded onto the PC through the provided dedicated software.

SEE
PRODUCT
DATA SHEET
HT2055



Voltmetric unit



Carrying bag for remote unit and accessories

Cable 10mm² with winder and alligator clip, 50m

Red measuring cable, 50m

Black measuring cable, 3m, with industrial plugs, 2 pieces

Characteristics

Power unit

- › Power supply: 110/230V AC, 50/60Hz
- › Output power: 900VA
- › Output current: max 55A
- › Test frequency: 55Hz
- › Voltage measurement: 0.1÷999V
- › Resolution: 0.1÷1V
- › Basic accuracy: ±2%reading
- › Display: LCD 240x128 dots + backlight
- › Memory: 2000 locations
- › Communication interface: RS-232
- › Overvoltage category: CAT III 300V
- › Protection: fuse T 6.3A/250V
- › Pollution level: 2
- › Mechanical protection: IP40 (closed case)
- › Size (LxWxH): 335x335x160mm
- › Weight: 28kg

Voltmetric unit

- › Voltage measurement: 0.1÷999V
- › Resolution: 0.1÷1V
- › Resistance measurement: 0,001÷99.99Ω
- › Resolution: 0.01Ω
- › Basic accuracy: ±2%reading
- › Input impedance: Selectable 1kΩ/1MΩ
- › Display: LCD 240x128 dots + backlight
- › Memory: 2000 locations
- › Communication interface: RS-232/USB
- › Power supply: 6x1.2V rechargeable batteries type AA
- › Pollution level: 2
- › Mechanical protection: IP40
- › Size (LxWxH): 230x115x103mm
- › Weight: 1.3kg

Provided accessories

	Power supply cable of power unit
PC55SND	Set of 2 metal plates (200x100mm)
	Current metal probe
	Voltage metal probe
PC55REL	Cable 10mm ² with winder and alligator clip, 50m
	Cable 10mm ² with alligator clip, 10m
PC55MBK	Black measuring cable, 3m, with industrial plugs, 2 pcs.
PC55GRE	Green measuring cable, 10m
PC55BLK	Black measuring cable, 1.5m
PC55RED	Red measuring cable, 50m
PC55MRE	Red connection cable with alligator clip, 1m
5004-IECN	Alligator clip, 4 pieces
	Cable RS-232
C2007	USB cable
	Soft transport bag, 2 pieces
	Strap for slinging the device over one's shoulder
	6 x 1.2V rechargeable batteries NiMH type AA
	External power supply
TERAVIEW	Windows software on CD-ROM
	User manual and ISO calibration report

PC55MBK Black measuring cable, 3m, with industrial plugs, 2 pcs.
For further information on optional accessories, please contact HT.

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES





JUPITER

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M73

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RCD AND LOOP
TESTERS



RCD AND LOOP TESTERS



JUPITER



M73

MAIN MEASUREMENTS	LOOP/RCD	
	JUPITER	M73
TRMS	●	●
Measuring range of verifiable RCD rated currents	30,100,300mA	30,30x5,100,300mA
Tripping time of RCDs type A, AC, F Standard and Selective	● only Standard	● A = 30mA AC = 300mA only standard
Ramp test for tripping current of RCDs type A, AC Standard	● only 30mA	● A = 30mA AC = 30mA
Overall earth resistance with no residual current protection tripping	●	●
Loop/Line impedance, Phase-Phase, Phase-Neutral, Phase-PE	●	
Contact voltage	●	●
Leakage current with optional clamp	●	●
ADDITIONAL FUNCTIONS		
DC/AC TRMS voltage and current	● AC+DC, LoZ function	●
Phase sequence	●	●
Frequency	●	●
Resistance	●	●
Continuity with buzzer	●	●
Data HOLD, MAX/MIN/AVG	● MAX/MIN	●
Measurement of voltage and current PEAK	●	●
Measurement of Voltage/Current harmonics + THD%	●	
ADDITIONAL CHARACTERISTICS		
Overvoltage category:	CAT IV 600V CAT III 690V	CAT III 550V
Size (LxWxH) (mm)	175x85x55	240x100x45
Weight (batteries included):	420g	450g
Reference standard for safety	IEC/EN61010-1	IEC/EN61010-1
ORDER CODE	HR00JUPI	HV000073

ORDER CODE **HR00JUPI**

JUPITER

Professional instrument for electric safety verifications according to standard IEC/EN 61010-1 and advanced multimeter functions



JUPITER is an innovative instrument which, further to being used as a **powerful multimeter** for TRMS measurements, allows performing **electric safety tests (RCD, Ra, Loop)** according to **standard IEC/EN 61010-1**.

The instrument belongs to CAT IV at 600V, with **autorange** function available on all models and possibility of backlit display. The design is extremely modern and attractive but, at the same time, **ergonomic, to offer the best possible ease of use**.



SEE PRODUCT DATA SHEET JUPITER

ORDER CODE **HV000073**

M73

Multifunction instrument for measurements of overall earth resistance and tests on RCDs



M73 has been developed for operators who mainly work on domestic installations.

M73 is very easy to use, it is **very small size** and it carries out all necessary tests to establish COMPLIANCE (and hence ensure SAFETY) of a domestic electric system.

By always using it before starting working on an already existing system (which the operator therefore does not know well) and at the end of the job, this device will guarantee the necessary safety to both operators and users of the electric systems! Thanks to its small size, this device offers **many operating opportunities**

M73 is also used to test the safety of electric system; it is therefore capable of measuring **Overall earth resistance**, carrying out **tests on RCDs type A and AC and measuring Insulation and Continuity**.

At the end of the tests, the instrument shows all results with the indication of compliance or non-compliance with the standards with **simple symbols OK or NOT OK**.



SEE PRODUCT DATA SHEET M73

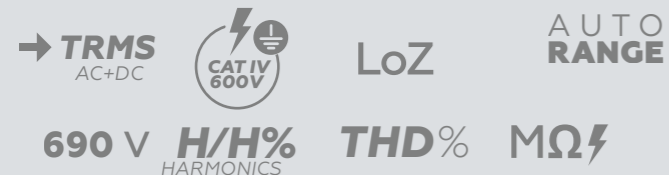
Functions and characteristics

Multimeter section

- › DC / AC, AC+DC TRMS voltage
- › DC / AC / AC+DC TRMS voltage with low impedance (LoZ)
- › DC / AC / AC+DC TRMS current with standard clamp transducer
- › AC TRMS current up to 3000A with flexible clamp transducer F3000U
- › Automatic recognition of AC and DC quantities
- › Resistance and continuity test with buzzer
- › Current and voltage frequency
- › MAX/MIN/PEAK/HOLD functions
- › 9999 measuring spots
- › Auto-Power-Off function
- › Bargraph function

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 Standard RCDs type A, AC, F (30mA, 100mA, 300mA)
 - › Measurement of tripping current on Standard RCDs type A and AC (30mA)
 - › Phase sequence with 1 terminal
- ### Section Mains analysis
- › Inrush current (Dynamic INRUSH - DIRC)
 - › Current/voltage harmonics up to the 25th and THD% calculation



Provided accessories

C2065	3-wire cable Red, Black and Green with Schuko plug
4324-2	Pair of banana leads red/black with 2/4mm tip
YABAT0001HT0	Alkaline battery type AAA IEC LR03 1.5V, 4 pieces
YABRS0002HT0	Carrying bag
YAMUM0065HT0	Quick user guide
	ISO calibration report

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES

The accessories provided may vary according to the country. *Adapter NOCANBA necessary

Functions and characteristics

- › Tripping time of Standard RCDs type A, AC with currents 30,30x5,100,300mA
- › Tripping current of Standard RCDs type A, AC with current 30mA
- › Overall earth resistance without RCD tripping
- › Assumed short-circuit current
- › Phase sequence
- › DC/AC TRMS voltage
- › DC/AC TRMS current
- › Resistance and Continuity test
- › Data HOLD, MAX/MIN/AVG
- › Measurement of voltage and current PEAK
- › Measurement of leakage currents (with optional clamp HT96U)
- › Safety: IEC/EN61010-1
- › Overvoltage category: CAT III 550V
- › Power supply with batteries type AA: 4x1.5V
- › Size (LxWxH): 240x100x45mm
- › Weight (batteries included): 450g

Provided accessories

KIT0075	Set of 2 cables with leads + 2 alligator clips
C2075	2-wire cable with Schuko plug
BORSA2000	Carrying bag
	ISO calibration report
	Quick user guide

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES





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NEPTUNE

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M72

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INSULATION
AND CONTINUITY
MEASURING DEVICES

INSULATION AND CONTINUITY MEASURING DEVICES



HT7051



NEPTUNE



M72



M70



MAIN MEASUREMENTS	INSULATION/CONTINUITY			
	TRMS		●	●
DC test voltage measuring range	100V ÷ 5kV	50,100,250, 500,1000V	250 / 500V	250, 500, 1000V
Insulation resistance measuring range	0.01MΩ ÷ 9.99TΩ	0.1kΩ ÷ 1999MΩ	0.01MΩ ÷ 999MΩ	0.001MΩ ÷ 4000MΩ
Dielectric strength in DC				
Continuity of protective conductors with 200mA		●	●	●
ADDITIONAL FUNCTIONS				
Test with programmable ramp	● steps of 25VDC			
Programmable test timer	● 5s ÷ 100min	● 15s ÷ 10min		● 2s ÷ 1min
Setting of measurement limit value	●	●		
Measurement of polarization index P.I.	●	●		
Measurement of dielectric absorption ratio D.A.R.	●	●		
Measurement of dielectric discharge ratio D.D.				
Measurement of discharge capacity	●			
Automatic discharge of target	●	●	●	●
DC/AC voltage measurement	● 600V	● 1000V	● 600V	● 600V
Measurement of resistance and continuity with buzzer		●	●	●
Measurement of phase sequence		●	●	
ADDITIONAL CHARACTERISTICS				
Measurement category:	CAT IV 600V	CAT IV 600V	CAT III 550V	CAT III 550V
Backlight	●	●		●
Autocalibration of measuring leads		●	●	●
Guard terminal	●			
Internal memory for saving results	●			
Recalling on the display the saved results	●			
RS232/optical/USB interface for transferring data onto the PC	●			
Power supply with rechargeable battery from mains	●			
AutoPowerOFF	●	●	●	●
Power supply	Rechargeable NiMH	4x 1.5V AAA	4x 1.5V AA	4x 1.5V AA
Size in mm (LxWxH)	360 x 310 x 195	175 x 85x 55	240 x 100 x 45	240 x 100 x 45
Weight (batteries included):	3.5kg	4.20kg	450g	450g
Safety	IEC/EN61010-1 IEC/EN61557-1-2	IEC/EN61010-1 IEC/EN61557-1-2	IEC/EN61010-1	IEC/EN61010-1
ORDER CODE	HV007051	HRO00NEP	HV000072	HV000070

ORDER CODE **HV007051**

HT7051

Professional insulation meter with programmable test voltage up to 5kV



HT7051 has been developed to measure **insulation resistance** with test voltage **programmable up to 5kVDC** and measuring range up to **10TΩ** which makes it very useful in any industrial application (tests on electric machines, power transformers, electric cables, electric boards, generic devices, etc.) within Low Voltage. The device allows carrying out tests in **FIX** (with fixed test voltage), **ADJUST** (with programmable test voltage) and **RAMP mode (with programmable test voltage and application time with selection of 3 available ramp types)** which define a kind of operation suitable for any situation. Measurement of parameters such as **Polarization Index (PI)** and **Dielectric Absorption Ratio (DAR)** are duration tests which allow defining the quality of an insulating material. HT7051 is supplied with a **rechargeable NiMH battery** with in-built battery charger, which allows for a remarkable duration when carrying out measurements, it is provided with **internal memory** for saving measurements and it is also possible to connect it to the PC to download the measured results. The whole structure has been inserted into a comfortable and resistant transport case, solid and safe for "on-site" use.



SEE PRODUCT DATA SHEET HT7051

ORDER CODE **HV000NEP**

NEPTUNE

Professional instrument for electric safety verifications according to standard IEC/EN 61010-1 and advanced multimeter functions



NEPTUNE is an innovative instrument which, further to being used as a powerful multimeter for **TRMS** measurements, allows performing electric safety tests (Insulation and continuity) according to standard IEC/EN 61010-1. It belongs to CAT IV at 600V, with autorange function and backlit display. The design is extremely modern and attractive but, at the same time, ergonomic, to offer the best possible ease of use.



SEE PRODUCT DATA SHEET NEPTUNE

Functions and characteristics

- › Insulation with test voltage from 100V to 5kVDC
- › Measuring range up to 10TΩ
- › Measurement with fixed test voltages
- › 3 test ramps, programmable in time and voltage
- › SMOOTH function for steady measurement results
- › Measurement of dielectric discharge current
- › Measurement of polarization index (P.I.)
- › Measurement of dielectric absorption ratio (D.A.R.)
- › Measurement of discharge capacity
- › DC/AC TRMS voltage up to 600V
- › Rechargeable internal NiMH battery
- › GUARD terminal
- › Automatic discharge of target
- › Display: Custom LCD with backlight and bargraph
- › External supply: mains 220-240V, 50/60Hz, 20VA
- › Internal supply: rechargeable internal NiMH battery
- › Protection fuse: T 200mA H 250V
- › Battery life: >1000 tests (@ 5kV on 5MΩ)
- › AutoPowerOFF: after 5 minutes' idling
- › Internal memory: 700 locations
- › Serial interface: RS-232 optically insulated
- › Safety: IEC/EN61010-1, IEC/EN61557-1
- › Insulation: double insulation
- › Pollution level: 2
- › Mechanical protection: IP53 (closed case)
- › Overvoltage category: CAT IV 600 (to earth),
- › Size (LxWxH) and weight: 360x310x195 mm, approx. 3.5kg

Provided accessories

KIT14000	Set of 3 cables with alligator clips + 2 cables with leads
C7051	Power supply cable Europlug-Schuko with no earthing
BORSA2000	Transport bag for accessories
C232NG1	Cable RS-232
	ISO calibration report
	User Manual

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES



Functions and characteristics

- Multimeter section**
- › DC / AC, AC+DC TRMS voltage
 - › Input of low-impedance voltage (LoZ)
 - › DC / AC / AC+DC TRMS current with optional standard clamp transducer
 - › AC TRMS current up to 3000A with flexible clamp transducer F3000U
 - › Automatic recognition of AC and DC quantities
 - › Resistance and continuity test with buzzer
 - › Current and voltage frequency
 - › MAX/MIN/PEAK/HOLD functions
 - › 9999 measuring spots
 - › Auto-Power-Off function
 - › Bargraph function
- Electric verification section**
- › Measuring range 8: 0.1kΩ 2GΩ
 - › Phase sequence with 1 terminal
 - › Insulation with test voltage 50,100,250,500,1000VDC and calculation of parameters PI and DAR
 - › Continuity of protective conductors with 200mA
- Section Mains analysis**
- › Inrush current (Dynamic INRUSH - DIRC)
 - › Current/voltage harmonics up to the 25th and THD% calculation

Provided accessories

4324-2	Pair of banana leads red/black with 2/4mm tip
	Pair of Red/Black alligator clips
YABAT0001HTO	Alkaline battery type AAA IEC LR03 1.5V, 4 pieces
YABRS0002HTO	Carrying bag
YAMUM0065HTO	Quick user guide
	ISO calibration report

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES



ORDER CODE HV000072

M72

Combined instrument for insulation and continuity measurement of protective conductors, and multimeter functions



M72 is mainly dedicated to measuring **Insulation resistance** and **Continuity of protective and equipotential conductors with 200mA** in electric installations, typically domestic. Further to these measurements, M72 has many **additional functions** such as **measurement of phase sequence with 1 terminal**, measurement of **leakage currents** with optional clamp transducer and a powerful **multimeter** function for measuring **voltage and current** in true root mean square value (**TRMS**).



SEE
PRODUCT
DATA SHEET
M72

ORDER CODE HV000070

M70

Combined instrument for insulation and continuity measurement of protective and equipotential conductors



M70 is a mobile device dedicated to measuring **Insulation resistance with test voltage up to 1000VDC** and **Continuity of protective and equipotential conductors with a current of 200mA** in domestic and industrial electric installations. Thanks to the **LOCK function**, insulation measurement can be carried out in a **continuous manner over time**, thus testing the insulation of the target with a **duration test**. It carries out measurement with a timer, **programmable from 2 to 60s**.



SEE
PRODUCT
DATA SHEET
M70

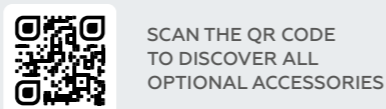
Functions and characteristics

- › Continuity of protective conductors with 200mA
- › Insulation with 250, 500VDC
- › Insulation measuring range 0.01MΩ-2GΩ
- › Automatic discharge of target
- › Autocalibration of measuring leads
- › Phase sequence
- › DC/AC TRMS voltage
- › DC/AC TRMS current
- › Resistance and Continuity test
- › Data HOLD, MAX/MIN/AVG
- › Measurement of voltage and current PEAK
- › Measurement of leakage currents (with optional clamp HT96U)
- › Safety: IEC/EN61010-1
- › Overvoltage category: CAT III 550V
- › Power supply: 4 x 1.5V batt. type AA
- › Size (LxWxH): 240x100x45 mm
- › Weight (batteries included): 450g

Provided accessories

KIT0075	Set of 2 cables with leads + 2 alligator clips
BORSA2000	Carrying bag
	ISO calibration report
	Quick user guide

Optional accessories



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TO DISCOVER ALL
OPTIONAL ACCESSORIES



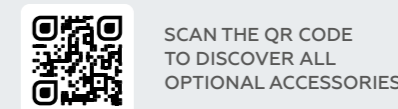
Functions and characteristics

- › Insulation with test voltage 250, 500, 1000VDC
- › Measuring range up to 4GΩ
- › Automatic discharge of target
- › LOCK function for measurements in a continuous mode
- › Insulation with timer programmable from 2 to 60s
- › Continuity of protective conductors with 200mA
- › Autocalibration of measuring leads
- › AC/DC voltage up to 600V
- › Resistance and continuity test with buzzer
- › Wide display with backlight
- › AutoPowerOFF
- › Display with backlight: LCD, 4 digits, 10000 count
- › Power supply: 4x1.5V batteries type AA
- › AutoPowerOFF: after 15 minutes' idling
- › Safety: IEC/EN61010-1
- › Overvoltage category: CAT III 550V
- › Size (LxWxH): 240x100x45 mm
- › Weight (batteries included): 450g

Provided accessories

KIT0070	Set of 2 cables + 2 alligator clips + 1 lead
BORSA2000	Carrying bag
	Batteries
	CE declaration of conformity
	User Manual

Optional accessories



SCAN THE QR CODE
TO DISCOVER ALL
OPTIONAL ACCESSORIES





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HT5000

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HT2234N

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BURIED CABLE
LOCALIZER AND
REVOLUTION COUNTER

BURIED CABLE LOCALIZER AND REVOLUTION COUNTER



HT-5000



HT2236



HT36

	CABLE LOCALIZER	REVOLUTION COUNTER	ITEM DETECTOR
Localization of buried metal parts	●	-	● (max depth 30mm)
Inductive pairing with 33kHz signal via antenna	●	-	-
Direct 33kHz pairing with external accessories	●	-	-
Selectable transmission power	●	-	-
Intermittent or continuous signal	●	-	●
Passive search mode without transmitter	●	-	-
Automatic depth measurement	●	-	-
Manual or automatic setting of sensitivity	●	-	-
Headset socket for noisy environments	●	-	-
Localization of wood beams and metal items	-	-	● (minimum dim. 30mmx30mm)
Localization of buried cables with AC voltage	●	-	● (max depth 50mm)
Bar graph of the search signal	●	-	●
Measurement of speed of rotating parts in RPMs (rev/min) with and without contact	-	●	-
Events counter	-	●	-
Laser pointer	-	●	-
MAX / MIN / HOLD	-	●	-
AutoPowerOFF	-	●	●
ORDER CODE code	HN500000	HA002236	HR000036

ORDER CODE **HR000036**

HT36

Portable item detector



HT36 is capable of detecting the presence of wood beams and conductive items, metal items and cables with AC voltage hidden inside walls and roofs, and other common materials. The instrument gives out a sound and shows a signal on the display after identifying the border of the item, in order to easily detect its central position.



SEE PRODUCT DATA SHEET HT36

Functions

- > Detection of presence of hidden wood beams
- > Detection of presence of hidden metal and conductive items
- > Detection of presence of hidden cables with AC voltage
- > Buzzer and analog bargraph
- > AutoPowerOFF

Characteristics

Size of conductive items:	min 30x30mm
Depth of conductive items:	max 18mm
Diameter of metal items:	max 25mm
Depth of metal items:	max 30mm
Cables with AC voltage:	90V ÷ 250V / 50-60Hz
Depth of cables with AC voltage:	max 50mm
AutoPowerOFF:	after 30s
Power supply:	1x9V battery type IEC6F22
Size (LxWxH):	155x72x28 mm
Weight (batteries included):	approx 203g



Provided accessories

Battery

User Manual



Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES

ORDER CODE **HN500000**

HT-5000

Professional localizer of buried cables and metal tubes



HT-5000 is a **Transmitter** and a **Receiver** which make use of the principle of **propagation of the electromagnetic field** on an object crossed by a signal, duly generated with different types of pairings. It is mainly used to **localize metal tubes** or **buried cables**.



SEE
PRODUCT
DATA SHEET
HT-5000

ORDER CODE **HA002236**

HT2236

Mobile digital revolution counter with in-built laser pointer



HT2236 is a digital revolution counter for measuring the speed of rotating mechanical parts (discs, drive shafts, etc...) both with and without contact, making use of a light beam transmitted and reflected by the target.



SEE
PRODUCT
DATA SHEET
HT2236

Functions

- › Inductive pairing with 33kHz signal via antenna
- › Direct 33kHz pairing with external accessories
- › Selectable transmission power
- › Intermittent or continuous signal
- › Passive search mode without transmitter
- › Automatic depth measurement
- › Manual or automatic setting of sensitivity
- › Headset socket for noisy environments

Characteristics

Transmitter TX5000	
Transmission power:	0.1W / 0.5W
Signal frequency:	33kHz
Mechanical protection:	IP56 (dust and water)
Power supply:	6x1.5V batteries type IEC LR20
Size (LxWxH):	260 x 140 x 255 mm
Weight (batteries included):	1.7 kg
Receiver RX5000	
Frequency range:	15kHz ÷ 23kHz, 50/60Hz (electric mains)
Depth range:	0.3m ÷ 7m
Mechanical protection:	IP56 (dust and water)
Power supply:	10x1.5V batteries type AA IEC LR6
Size (LxWxH):	600 x 252 x 99 mm
Weight (batteries included):	2.5 kg

Provided accessories

- Transmitter TX5000 and receiver RX5000
- Set of measuring cables with alligator clips
- Metal probe
- Batteries for transmitter and receiver, carrying bag and user manual

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES

Functions

- › Measurement of speed of rotating parts in:
 - RPM (rev/min) with and without contact
 - REV Revolution counter with and without contact
 - HZ Revolution frequency with and without contact (rev/s)
 - M/M Meters per minute with contact
 - I/M Inches per minute with contact
 - F/M Feet per minute with contact
 - Y/M Yards per minute with contact
 - M Measurement of length in meters
 - FT Measurement of length in feet
 - Yd Measurement of length in Yards
- › Saving of 40 values
- › HOLD function
- › MIN, MAX, AVG measurement
- › Display backlight
- › Laser pointer Class 2

Characteristics

Meas. range of speed without contact:	2 ÷ 200000 rev/min
Meas. range of speed with contact:	2 ÷ 20000 rev/min
Resolution:	0,001 ÷ 1rev/min
Accuracy:	±0.05% reading or ±1rev/min
Measuring range of revolution counter:	0 ÷ 200000
Response time:	0.5s (>60 rev/min)
Distance from target:	50 ÷ 2500mm
Display:	LCD, 5 digits
AutoPowerOFF:	after 30min
Power supply:	1x9V alkaline battery type IEC 6F22
Size (LxWxH):	160x60x42 mm
Weight (batteries included):	approx 160g

Provided accessories

- Mechanical adapter for protection ring
- Rotating rubber protection ring
- Rubber terminals in different shapes
- Reflecting band
- Carrying bag
- Battery
- User Manual

Optional accessories

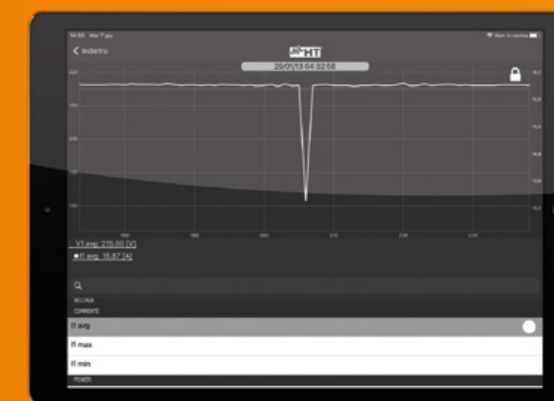


SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES

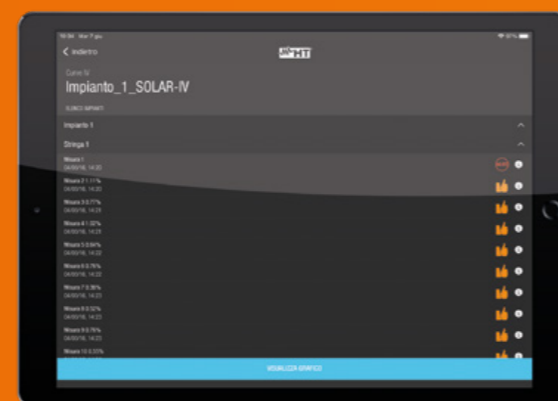
HTANALYSIS™ 2

Download HTANALYSIS™ and share your measurements with your colleagues at any time and anywhere in the world via HTCLOUD™, the personal space that HT has created for you. By uploading the measurements to HTCLOUD™ you will immediately find them on the TOPVIEW software, directly on your PC. You will discover how network analysis, I-v curve measurement and electrical safety verification have never been so simple and immediate.

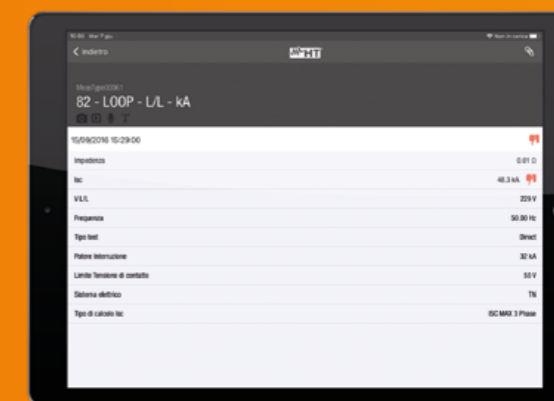
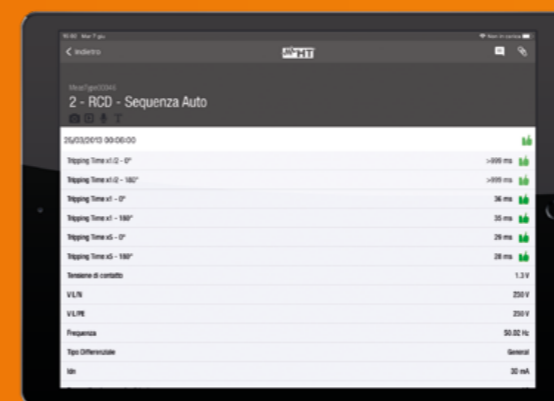
Mains analysis



I-V curve and much more



Electric safety





I-V600

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I-V500W
I-V400W
SOLAR I-VE

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PV-ISOTEST

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PVCHECKS-
PRO

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PVCHECKs

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INSTRUMENTS
FOR PHOTOVOLTAIC
INSTALLATIONS

INSTRUMENTS FOR THE PHOTOVOLTAIC SECTOR



I-V600



I-V500W



I-V400W



PV-ISOTEST



SOLAR I-VE



PVCHECKs-PRO



PV-CHECKs

PHOTOVOLTAIC SYSTEM MAINTENANCE AND EFFICIENCY

	MAINTENANCE			MAINTENANCE AND EFFICIENCY			
Measurement of the I-V curve on single-sided PV modules and strings	●	●	●		●		
Measurement of the I-V curve on single-sided and double-sided modules	●						
Automatic measurement with Autostart mode (**)		●	●		●		
Rapid IVCK test for Voc and Isc measurement on PV modules and strings	●	●	●			● (Single-sided and Double-sided)	●
Testing of single-phase, single-string PV systems (1 MPPT)					●		
I-V / Isc-Voc curve measurement range	1500V/40A	1500V/15A (*)	1000V/15A		1500V/15A (*)	1500V / 40A solo Isc-Voc	1500V / 40A solo Isc-Voc
PV testing measurement range					1000VDC / 265VAC		
Continuity of protection conductors with 200mA				●		●	●
Insulation of PV modules/strings/fields with test voltages 250, 500, 1000V DC				●		●	●
DC side efficiency of photovoltaic field					●		●
GFL function for troubleshooting on strings				●		●	
Use of SOLAR-02 remote unit with RF (Radio Frequency) connection		●	●		●		●
Use of SOLAR03 remote unit with Bluetooth connection	●					●	
Irradiance measurement with reference solar cell	●	●	●		●	●	●
Measurement of cell and ambient temperature	● (***)	●	●		●	● (***)	●

ADDITIONAL SPECIFICATIONS

Measurement category	CAT III 1500V DC	CAT II 1000V DC CAT III 300V AC	CAT II 1000V DC CAT III 300V AC
Backlit LCD display		●	●
TFT colour touch-screen display	● (Display rotation)		
Internal memory capacity	9999 measurements	250 I-V curves 999 IVCK tests	250 I-V curves 999 IVCK tests
PC interface	USB-C and WiFi	Optics/USB and Wi-Fi	Optics/USB and Wi-Fi
PV modules internal database	Approximately 63,000	Max 30 modules	Max 30 modules
Auto power off	●	●	●
Online help on display	●	●	●
Internal power supply	8x1.5V AA 8x1.2VAA NiMH	6x1.5V AA 6x1.2V AA NiMH	6x1.5V AA 6x1.2V AA NiMH
External power supply	Battery charger power supply unit		
Dimensions (LxWxH) (mm)	336x300x132	235x165x75	235x165x75
Weight in kg (batteries included)	5.5kg	1.2kg	1.2kg
Safety reference standards	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1
I-V curve reference standards	IEC/EN60891 IEC/EN60904	IEC/EN60891 IEC/EN60904	IEC/EN60891 IEC/EN60904
IVCK test reference standards	IEC/EN62446	IEC/EN62446	IEC/EN62446
MΩ, RPE reference standards			
ORDER CODE	HV0IV600	HV00500W	HV00400W

	CAT III 1500V DC CAT III 1000V AC	CAT II 1000V DC CAT III 300V AC	CAT III 1500V DC CAT III 1000V AC	CAT II 1000V DC CAT III 300V AC
	●	●	●	●
	999 measurements	250 I-V curves 99 tests	999 measurements	999 measurements
	Optics/USB	Optics/USB and Wi-Fi	Optics/USB and Wi-Fi	Optics/USB
		Max 30 modules	Max 64 modules	Max 30 modules
	●	●	●	●
	●	●	●	●
	6x1.5V AA 6x1.2V AA NiMH	6x1.5V AA 6x1.2V AA NiMH	6x1.5V AA 6x1.2V AA NiMH	6x1.5V AA 6x1.2V AA NiMH
	235x165x75	235x165x75	235x165x75	235x165x75
	1.2kg	1.2kg	1.2kg	1.2kg
	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1
		IEC/EN60891 IEC/EN60904-5		
		IEC/EN62446	IEC/EN62446	IEC/EN62446
	IEC/EN61557-2-4		IEC/EN61557-2-4	IEC/EN61557-2-4
	HV0PVISO	HV000IVE	HV00PVPR	HV00PVCS

(*) Max current 10A(@1500V), 15A (@1000V)
 (**) With optional accessory KITKELVIN
 (***) With remote unit SOLAR03

ORDER CODE **HV0IV600**

I-V600

Advanced instrument for measurement of the I-V Curve up to 1500V/40A



SEE THE
PRODUCT
DATASHEET
I-V600

I-V600 enables the field detection of the **I-V Curve** and of the main characteristic parameters of both a **single module** and **strings of modules** for PV installations **up to a maximum of 1500V and 40A**. For measurement of the I-V Curve, I-V600 manages an internal database of the modules which can be updated at any time by the user and the comparison between the data detected and the nominal ones means being immediately able **to determine whether the string or module respects the efficiency parameters** declared by the manufacturer. Detection of the I-V Curve can also be achieved by decentralising the irradiation and temperature measurements **using the SOLAR03 remote unit** using the **Bluetooth connection** with the Master unit. Also for I-V600, the display of Curve IV on the display at the end of the test is a very clear indication of whether or not it conforms to the specifications declared by the panel manufacturer.

Functions

- › Detection of the I-V curve on single-sided and double-sided PV modules and strings 1500V/40A
- › No-load voltage Voc on PV modules and strings 1500V
- › Short circuit current Isc on PV modules and strings 40A
- › IVCK rapid test for Voc and Isc measurement on 1500V/40A PV modules and strings
- › Use of SOLAR03 remote unit with Bluetooth connection
- › Direct frontal irradiation measurement with reference solar cell with SOLAR03 remote unit
- › Albedo measurement (back radiation) with two reference solar cells with SOLAR03 remote unit
- › Cell and ambient temperature measurement with SOLAR03 remote unit
- › Powered by alkaline or rechargeable AA batteries
- › Mains power supply unit/battery charger
- › Power supply from photovoltaic panels via measurement inputs

Supplied accessories

KIT2PRO15	Set of 2 jack-jack cables 3m + 2 crocodile clips (red and black)
KITPVMC4150	Set of 2 adapters with PV4 compatible connector and 4mm male jack, 3m (red and black)
SP-2003	Shoulder strap
CF832	32GB memory card
A0061	Battery charger power supply unit 100-440VAC/15VDC, 50/60Hz
C2010	Connection cable USB A-USB C 1.5mt
SOLAR03	Remote unit with 1 temperature input and 3 irradiation inputs (for HT305)
HT305	Photovoltaic cell to measure solar radiation (with fixing bracket)
PT305	Temperature probe PT1000
M304	Mechanical inclinometer
SP-2002	Strap with magnetic attachment for SOLAR03
YAMUM0084HTO	SOLAR03 user manual
YABAT0003000	Rechargeable battery NiMH, 1.2V, AA (10 pc)
BACKPACK	Temperature probe PT1000 ISO9000 calibration report Quick start guide

Optional accessories



SCAN THE QR CODE
TO DISCOVER ALL
OPTIONAL ACCESSORIES

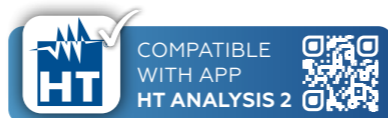


ORDER CODE **HV00500W**
I-V500w

ORDER CODE **HV00400W**
I-V400w

ORDER CODE **HV000IVE**
SOLAR I-Ve

I-V Curve Tracers for maintenance and troubleshooting of photovoltaic systems



SEE PRODUCT DATA SHEET I-V500W

SEE PRODUCT DATA SHEET I-V400W

SEE PRODUCT DATA SHEET SOLAR I-Ve

- › Measurement of the I-V curve of one or more modules or of one whole string up to 1500V/15A**
- › Measurement of open-circuit voltage and short-circuit current Voc/Isc up to 1500V/15A**
- › Database of 30.000 selectable photovoltaic modules
- › Automatic measurement of more strings in AutoSequence™ mode
- › Compatible with the App HTAnalysis™ via WiFi

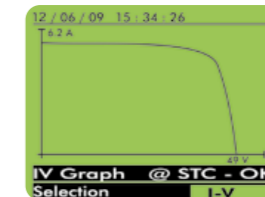
I-V400w allows **field detection of Curve I-V** and of the main characteristic parameters both of a single module and of strings of modules for PV installations up to a maximum of 1000V and 15A.

For measuring the I-V curve, I-V400w manages an **internal database of the modules, which can be updated at any time by the user**, and a comparison between the measured data with the rated values allows immediately evaluating whether the string or the module fulfills the efficiency parameters declared by the manufacturer.

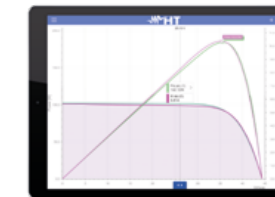
The I-V curve can be measured also by decentralizing measurements of irradiation and temperature by using the optional remote unit SOLAR02, using the radio frequency connection (RF) to the master unit.

Also for V400w, **the data shown on the display at the end of the test of the I-V curve** provide a clear indication about compliance with the specifications declared by the panel manufacturer.

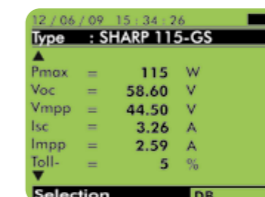
* Optional set of leads KIT KELVIN necessary.
** Only I-V500w and SOLAR I-Ve (max current @1500V=10A, max current @1000V=15A).



Result of Curve I-V: OK



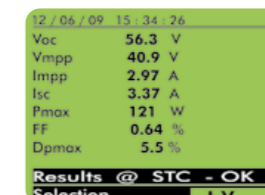
I-V curve and power curve



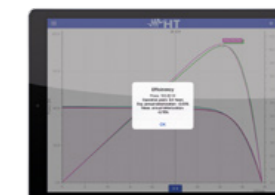
Manual insertion of a module



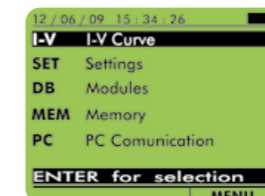
List with measured results.



Detail of the single results of Curve I-V: OK



Comparison between foreseen cell deterioration and measured value.



General Menu

Functions

	I-V400W	I-V500W	SOLAR I-VE
MAINTENANCE OF PHOTOVOLTAIC SYSTEM			
Measurement of PV module/string output voltage	1000V	1500V	1500V
Measurement of PV module/string output current	15A	15A**	15A
Resolution (spots) of I-V curve in Standard or Capacitive mode	128	128	128
Measurement of Voc-Isc-Pmax-Vmpp-Imp-FF Factor	●	●	●
Measurement of cell temperature through external feeler	●	●	●
Measurement of Irradiation [W/m²] through reference cell	●	●	●
Measurement of DC and rated power at module/string output	●	●	●
Detection of I-V curve through remote unit SOLAR-02	●	●	●
Measurement of resistance of series Rs of panels	● Max/Min	● Max/Min	● Max/Min
Direct comparison with reference conditions (STC - 1000W/m², 25°C)	●	●	●
Test result OK / NO	●	●	●
Internal database for managing up to 30 PV modules (30.000 modules by software)	●	●	●

	I-V400W	I-V500W	SOLAR I-VE
Internal memory for data saving	●	●	●
Recalling measured data on the display	●	●	●
Optical/USB interface for data transfer onto the PC	●	●	●
Built-in WiFi communication interface	●	●	●
Help on line on the display	●	●	●
EFFICIENCY MEASUREMENTS OF THE PHOTOVOLTAIC SYSTEM			
DC/AC TRMS single-phase voltage			●
DC/AC TRMS single-phase current			●
Single-phase DC power / AC active power			●
Solar irradiation [W/m²] with reference cell HT304N			●
Panel and environmental temperature through probes			●
Remote unit SOLAR02 with RF connection			●
Display of environmental data in real time			●
Use of compensation relationships Cells/Environment on Pdc			●
Parameter recording of a PV system with 5s to 60min programmable IP.			●

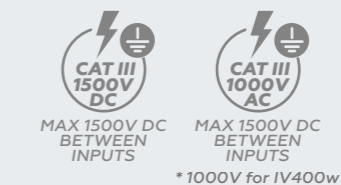
Provided accessories

SOLAR02	Remote RF unit for Irradiation and Temperature (SOLAR I-Ve)
KITGSC4	Set of 4 banana cables 4mm + 4 alligator clips
KITPVMC3	Set of 2 adapters with compatible connectors MC3
KITPVMC4	Set of 2 adapters with compatible connectors MC4
HT4005K	Standard 200AC/1V clamp, diameter 40mm (SOLAR I-Ve)
HT4004	Standard DC 10-100A/1V clamp, diameter 32mm (SOLAR I-Ve)
HT304N	Reference cell for irradiation measurement
PT300N	PT1000 feeler for cell/environmental temperature (SOLAR I-Ve)
M304	Mechanical inclinometer
C2006	Optical/USB cable
SP-5100	Sheaths to use the instrument with free hands (SOLAR I-Ve and I-V500w)
VA500	Transport case
	ISO calibration report
	Quick user guide

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES



ORDER CODE **HVOPVISO**

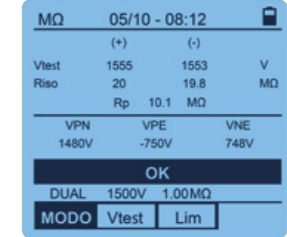
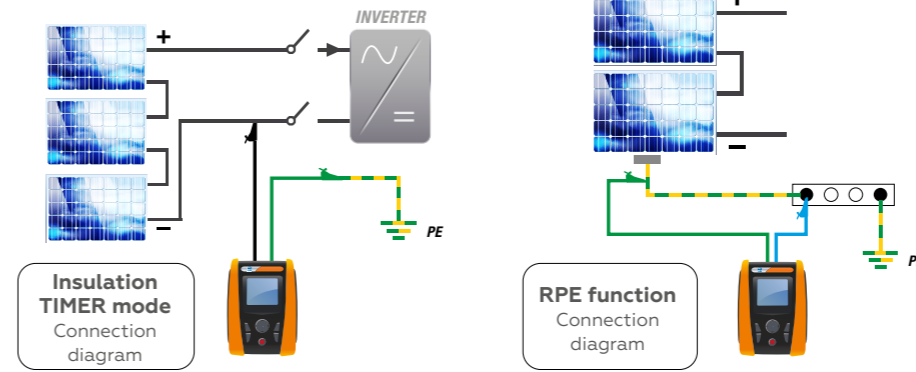
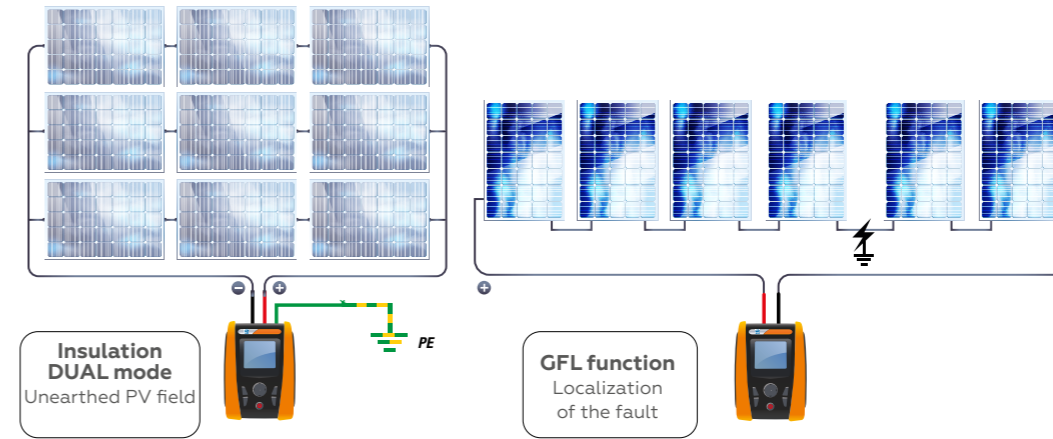
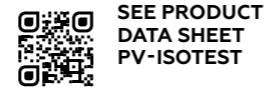
PV-ISOTEST

Multifunction instrument for electrical safety testing and troubleshooting of photovoltaic systems up to 1500V DC

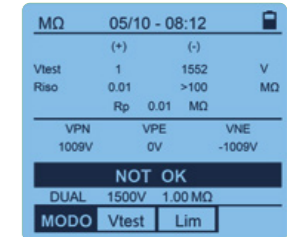


PV-ISOTEST is a true innovation, since it is capable of measuring the insulation of a module, string or of an entire photovoltaic field **up to 1500V DC** in compliance with standard IEC/EN62446. Thanks to the new **GFL (Ground Found Locator) function**, the instrument provides the precise position of a possible single fault of low insulation **found on a string** of the PV system due, for example, to water or humidity infiltrations.

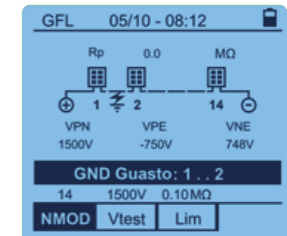
- › Insulation measurement up to 1500VDC
- › Localization of the faulty module on a string through the new GFL function
- › Continuity of protective conductors with 200mA



verification of DUAL insulation direct outcome: OK



verification of DUAL insulation direct outcome: NOT OK



GFL (fault locator) function

Functions

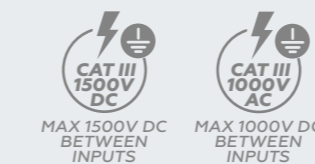
- › Continuity of protective conductors with test current 200mA
- › Insulation measurement with test voltage 250,500,1000,1500VDC
- › Measurement of DC voltage up to 1500V
- › Measurement of AC TRMS voltage up to 1000V
- › Insulation in DUAL and TIMER modes
- › GFL function to localize faults on a string
- › Calculation of parameters PI (Polarization Index) and DAR (Dielectric Absorption Ratio) on measurements
- › Result for every measurement OK/NOT OK
- › Compliance with standards IEC/EN61557-2-4
- › Internal memory and USB output for PC connection
- › Help on line on the display

Characteristics

Display:	LCD, 128x128pxl, with backlight
Power supply:	6x1.5V alkaline batteries type AA LR06 or 6x1.2V rechargeable NiMH batteries type AA
Auto power off:	after 5 minutes' idling
Internal memory:	Max 999 tests
PC interface:	optical/USB
Safety:	IEC/EN61010-1
Safety of accessories:	IEC/EN61010-031
Measurements:	IEC/EN62446-1
Insulation:	Double insulation
Pollution level:	2
Overvoltage category:	CAT III 1500VDC, CAT III 1000VAC Max 1500VDC, 1000VAC between inputs
Size:	235x165x75mm
Weight (batteries included):	1.2kg

Provided accessories

KITGSC4	Set of 4 cables + 4 alligator clips
KITPCMC4	Set of 2 adapters with connectors MC4
C2006	Optical/USB cable
VA507	Carrying bag
SP-5100	Set of shoulder straps
	ISO calibration report
	Quick user guide



Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES

ORDER CODE **HVOOPVPR**

PVCHECKs-PRO

Advanced tool to check electrical safety and for troubleshooting in a photovoltaic system



SEE PRODUCT DATA SHEET PVCHECKs-PRO

The **PVCHECKs-PRO** multifunction tool allows rapid and safe execution of the **electrical safety checks** required for a **PV system** (DC side) and the **functional control of no-load voltage (Voc)** and **short-circuit current (Isc)** of the modules/strings that form parts of the system itself in accordance with the IEC/EN62446 standard. In the verification of electrical safety, PVCHECKs-PRO represents a true innovation as with the **DUAL** function it is able to **perform the insulation measurement of a module**, of a string or of an entire photovoltaic field **without the need to use an external switch** to short the positive and negative terminals. **PVCHECKs-PRO** also allows verification of the functionality of the connections and strings of a photovoltaic field **in accordance with the provisions of IEC/EN62446** by measuring the no-load voltage and the short-circuit current at operating conditions (OPC) and referred to STC (via the irradiance measurement also with the use of the optional accessories SOLAR03 and HT305) providing an immediate outcome relating to the measurement just performed both in absolute terms and by comparison with the strings previously tested.

Functions

- › Continuity of the protection conductors with 200mA test current
- › No-load voltage Voc on PV modules and strings 1500V
- › Short circuit current Isc on PV modules and strings 40A
- › Insulation of strings/PV fields with test voltages 250, 500, 1000, 1500VDC
- › Use of SOLAR03 remote unit with Bluetooth connection
- › Direct frontal irradiation measurement with reference solar cell with SOLAR03 remote unit
- › Cell and ambient temperature measurement with SOLAR03 remote unit
- › P.I. polarisation index measurement
- › Dielectric absorption ratio D.A.R
- › GFL function to locate the position of the fault in the string

Specifications

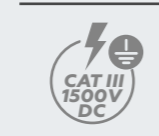
Display:	LCD custom 240x240pxl, with backlight
Power supply:	6x1.5V alkaline batteries type LR6, AA
Auto power off:	after 5 minutes of non-use
Internal memory:	Max 999 test
PC interface:	optics/USB and Wi-Fi
Safety:	IEC/EN61010-1
Accessories safety:	IEC/EN61010-031
Measurements:	IEC/EN62446, IEC/EN61557-2-4
Insulation:	Double insulation
Level of pollution:	2
Overvoltage category:	CAT III 1000VAC, CAT III 1500VDC to ground Max 1000VAC, 1500VDC between inputs
Dimensions:	235x165x75mm
Weight (batteries included):	1.2kg

Supplied accessories

KIT4PRO15	Set of 4 jack cables 4mm + 4 crocodile clips Black/Red/Green/Blue
KITPCMC4150	Set of 2 adapters with PV4 compatible connectors and 4mm male jack, 3m (red and black)
SP-5100	Set of straps for shoulder instrument use
C2006	Optics/USB connection cable
YABAT0003000	Rechargeable battery type AA NiMH, 1.2V (6 pc)
YABAT0004001	External battery charger
YAMUM0083HTO	Quick start guide
VA507	Rigid carrying case
	ISO calibration report
	Complete user manual and management software available online

Optional accessories

SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES



ORDER CODE **HV00PVCS**

PVCHECKs

Multifunction device for commissioning tests on photovoltaic systems



SEE PRODUCT DATA SHEET PVCHECKs

- Automatic test in a sequence of:
 - › **Measurement of insulation** up to 1000VDC
 - › **Open-circuit voltage** and **short-circuit current Voc/Isc**
 - › **Continuity of protective conductors** with 200mA

The multifunction instrument PVCHECKs allows quickly and safely carrying out the electric safety tests provided for a PV system (section in DC) and the functional test of modules/strings the system consists of according to the requirements of Standard CEI 82-25 and relevant reference standards (CEI 64/8 and IEC/EN62446).

When testing safety, PVCHECKs is a real innovation, since it is capable of **measuring insulation of a module, string or of a whole photovoltaic field (IEC/EN62446)** with no need to use an external switch to short-circuit the positive and negative terminals.

PVCHECK also allows **checking the functionality of the connections and of the strings** in a photovoltaic field, according to the provisions of standard IEC/EN62446, by measuring the open-circuit voltage and the short-circuit current at operating conditions (OPC) and referred to STC (via the optional measurement of irradiation, also with the use of optional accessories SOLAR02 and HT304N), providing an **immediate result** as regards the measurement just carried out, both in absolute terms and by comparison with the previously tested strings. Finally, PVCHECKs also allows analyzing the performance of the photovoltaic field (DC) under operating conditions (therefore connected to the inverter) with the use of optional accessories SOLAR02 and HT304N, providing an indication of the generated power and of the performance of the field itself, as required by IEC/EN62446.

Insulation measurement with method "whole photovoltaic field"

Efficiency measurement of the photovoltaic field

Continuity test result with 200mA OK

Continuity test result with 200mA NOT OK

Insulation measurement result at 1000V OK

Automatic test sequence result OK

Functions

Maintenance of photovoltaic system

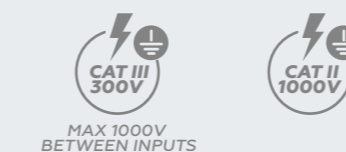
- › Continuity of protective conductors with test current 200mA
- › Insulation measurement with test voltage 250, 500 and 1000VDC
- › Open-circuit voltage measurement up to 1000V DC
- › Short-circuit current measurement up to 15A DC
- › DC voltage - DC current - DC power measurement
- › Measurement of irradiation [W/m²] through reference cell HT304N
- › Environmental and photovoltaic module temperature measurement through PT300N feeler
- › Use of compensation relationships Cells/Environment on Pdc
- › Measurements always compared to the values declared by the module's manufacturer
- › Internal database for managing up to 30 PV modules (30.000 modules by software)
- › Test measurement of string operation
- › Mechanical inclinometer for verifying the correct inclination of sun rays
- › Result for every measurement OK/NOT OK
- › Internal memory and USB output for PC connection
- › Help on line on the display
- › Efficiency measurements of the photovoltaic system
- › Efficiency measurement of the photovoltaic field (DC side)

Characteristics

Display:	LCD, 128x128pxl, with backlight
Power supply:	6x1.5V alkaline batteries type AA LR06
Auto power off:	after 5 minutes' idling
Internal memory:	256kBytes
PC interface:	optical/USB
Safety:	IEC/EN61010-1
Safety of accessories:	IEC/EN61010-031
Measurements:	IEC/EN 62446
Insulation:	Double insulation
Pollution level:	2
Overvoltage category:	CAT III 1000VDC (to earth) Max 1000V between inputs
Size:	235x165x75mm
Weight (batteries included):	1.2kg

Provided accessories

HT4004	Standard 10-100A DC clamp, diameter 30mm
KITGSC4	Set of 4 cables + 4 alligator clips
KITPCMC3	Set of 2 adapters with connectors MC3
KITPCMC4	Set of 2 adapters with connectors MC4
C2006	Optical/USB cable
BORSA2051	Carrying bag
	ISO calibration report
	Quick user guide



Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES



HT8051

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HT8100

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PROCESS
CALIBRATORS



PROCESS CALIBRATORS



HT8051



HT8100

CALIBRATION MEASUREMENTS

PROCESS CALIBRATORS

TRMS	●	●
DC 4-20mA current measurement	●	●
DC 0-10V voltage measurement	●	●
DC 4-20mA current generation	●	●
DC 0-10V voltage generation	●	
Measurement of output current of transducers	●	●
Simulation of an external transducer	●	●
Loop supply with minimum voltage 24V	●	●
Generation of selectable ramp	●	●
Load of 250Ω for testing HART transducers		●

MULTIMETER MEASUREMENTS

AC/DC voltage	● MAX 10VDC	●
AC+DC voltage		●
AC/DC current	● MAX 24mADC	● 1A
AC+DC current		●
Resistance and buzzer continuity		●
Frequency		●
Diode test		●

ADDITIONAL CHARACTERISTICS

Overvoltage category:	CAT IV 600V	CAT IV 600V
Measuring spots		50,000
Backlight	●	●
Autorange		●
Auto power off	●	●
Data HOLD function		●
MIN/MAX function		●
AVG function		●
Relative measurement		●
Memory for data saving		●
Power supply	1x7.4/8.4V 600mAh Li-ION	4x1.5V AA
Size (LxWxH) (mm)	195x92x55	207x95x52
Weight (batteries included):	400g	630g
Safety	IEC/EN61010-1	IEC/EN61010-1
ORDER CODE	HV080510	HV081100

ORDER CODE **HP080510**

HT8051

Professional process calibrator



HT8051 is a professional digital **process calibrator** capable of **generating** and **measuring** signals of **DC voltage** and **current** up to **10V** and **24mA** respectively, with a very simple setting of values thanks to the innovative adjuster. In measuring and generating current, it is also possible to define a **display, also in percentage format**, corresponding to the set values **0% = 4mA, 100% = 20mA**. The generation of voltage and current signals is also possible by using up to **3 selectable ramps**. This model also allows **measuring the current absorbed** by **external transducers** directly supplied by them and **simulating the presence of a transducer** with adjustable current in its whole measuring range. The device has been designed in compliance with **safety standard IEC/EN61010-1** with double protective insulation, and each function can be selected through the appropriate buttons found on the front panel. HT8051 is the ideal solution for typical industrial automation applications and for laboratory activities.



ORDER CODE **HV008100**

HT8100

Professional multimeter/process calibrator



Model HT8100 is a professional device which groups measurements such as **TRMS multimeter** and function of **process calibrator** capable of **generating current signals DC 0-20mA** and **4-20mA**. As a digital multimeter, the device mainly carries out **AC/DC voltage** and **AC/DC current measurements**. In its function as a current generator (values can be displayed also in a percentage format) options 0-20mA and 4-20mA are available, with manual and automatic settings of **thresholds on the output signal**. This instrument also allows measuring the **current absorbed** by external **transducers** directly supplied by it and **simulating the presence of a transducer with adjustable current** in its whole measuring range. HT8100 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. Each function can be selected through the appropriate buttons found on the front panel. This device is the ideal solution for typical industrial automation applications.



Functions

- › Generation of voltage signal with amplitude up to 10VDC
- › Measurement up to 10VDC
- › Generation of current signal with amplitude up to 24mA DC
- › Current measurement up to 24mA DC
- › Generation of voltage and current signals with use of 3 selectable ramps
- › High-sensitivity adjuster
- › Display of current in percentage format (4-20mA)
- › Measurement of output current of transducers (Loop)
- › Simulation of an external transducer
- › Shortcut function keys
- › Power supply with rechargeable Li-ION battery

DC voltage (generated and measured)

- › Measuring range: 0.01mV ÷ 10V
- › Resolution: 0.01mV ÷ 0,001V
- › Basic accuracy: ±(0.02%reading +4digist)
- › Protection: 30VDC

DC current (generated and measured)

- › Measuring range: 0.001mA ÷ 24mA
- › Percentage value: -25% ÷ 125%
- › Resolution: 0,001mA
- › Basic accuracy: ±(0.02%reading +4digist)
- › Protection: 30mADC

Voltage and current output ramps

- › (slow linear ramp): Passage 0% →100% → 0% in 40s
- › (quick linear ramp): Passage 0% →100% → 0% in 15s
- › (step ramp): Passage from 0% →100% → 0% in steps of 25% with ramps of 5s

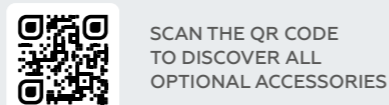
Characteristics

Display:	5 LCD + secondary display,
Power supply:	1x7.4V rechargeable Li-ION battery,
External battery charger:	230VAC/50Hz – 12VDC
Duration:	approx. 8 hours while generating (@ 12mA, 500Ω)
Auto Power OFF:	after 20 minutes (adjustable) of idling
Safety:	IEC/EN61010-1
Insulation:	double insulation
Pollution level:	2
Overvoltage category:	CAT I 30V
Size (LxWxH):	195x92x55mm
Weight (battery included):	400g

Provided accessories

KIT0075	Pair of leads, pair of alligator clips
	Protection shell
	Rechargeable battery, external power supply
	User Manual
	Hard carrying case

Optional accessories



Functions

- › DC/AC TRMS voltage and current
- › AC+DC measurements
- › Automatic recognition of AC/DC signals
- › Resistance, continuity test, diode test
- › Frequency
- › DC current generation up to 20mA DC
- › Percentage display (0-20mA, 4-20mA)
- › Measurement of output current of transducers (Loop)
- › Simulation of an external transducer
- › Input protective fuses
- › Memory for measured data saving
- › MAX/MIN/AVG, Data HOLD
- › Relative measurement
- › Automatic/Manual Range
- › Auto Backlight, Auto Power OFF

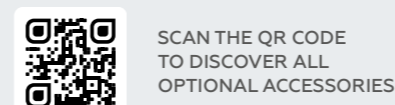
Characteristics

Display:	LCD, 5 digits, 50000 count
Power supply:	4x1.5V alkaline batteries type AA LR6
Battery life:	120 hours
Auto Power OFF:	after 20 minutes' idling
Safety:	IEC/EN61010-1
Overvoltage category:	CAT III 1000V, CAT IV 600V
Insulation:	double insulation
Pollution level:	2
Max height:	2000m
Size (LxWxH):	207x95x52mm
Weight (batteries included):	630g

Provided accessories

YAAMK0000HTO	Pair of test leads
YAAMK0001HTO	Pair of alligator clips
	Belt with magnetic terminal
	Protective case, battery and user manual

Optional accessories





THT120
THT200
THT300
THT400

pag.
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THT500
THT600
THT600L

pag.
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THT500H
THT600H

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THT8
THT80

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INFRARED
THERMAL CAMERAS



INFRARED THERMAL CAMERAS



MAIN FEATURES	COMPACT		ADVANCED				PROFESSIONAL			HIGH TEMPERATURES	
	THT8	THT80	THT120	THT200	THT300	THT400	THT500	THT600	THT600L	THT500H	THT600H
IR Resolution	120x90 pxl	120x90 pxl	120x120 pxl	160x120 pxl	384x288 pxl	640x480 pxl	160x120 pxl	384x288 pxl	384x288 pxl	160x120 pxl	384x288 pxl
Temperature range	-20°C ÷ 400°C	-20°C ÷ 550°C	-20°C ÷ 650°C	-20°C ÷ 650°C	-20°C ÷ 650°C	-20°C ÷ 650°C	-20°C ÷ 650°C	-20°C ÷ 650°C	-20°C ÷ 650°C	-20°C ÷ 1200°C	-20°C ÷ 1200°C
Image frequency	25Hz	50Hz	50Hz	50Hz	50Hz	25Hz	50Hz	50Hz	50Hz	50Hz	50Hz
Thermal sensitivity/NETD	<0.05°C @ 30°C / 50mK	<0.05°C @ 30°C / 50mK	<0.05°C @ 30°C / 50mK	<0.05°C @ 30°C / 50mK	<0.05°C @ 30°C / 50mK	<0.05°C @ 30°C / 50mK	<0.05°C @ 30°C / 50mK	<0.05°C @ 30°C / 50mK	<0.05°C @ 30°C / 50mK	<0.05°C @ 30°C / 50mK	<0.05°C @ 30°C / 50mK
In-built thermal camera	-	2 MP, fixed focus, with LED torch	2 MP, fixed focus	2 MP, fixed focus	2 MP, fixed focus	2 MP, fixed focus	5 MP, fixed focus, with LED torch	5 MP, fixed focus, with LED torch	5 MP, fixed focus, with LED torch	5 MP, fixed focus, with LED torch	5 MP, fixed focus, with LED torch
Picture in Picture function	-	●	●	●	●	●	●	●	●	●	●
AutoFusion function	-	●	●	●	●	●	●	●	●	●	●
Accuracy	±3°C (±5.4°F) or ±3% of reading	±2°C (±3.6°F) or ±2% of reading	±2°C (±3.6°F) or ±2% of reading	±2°C (±3.6°F) or ±2% of reading	±2°C (±3.6°F) or ±2% of reading	±2°C (±3.6°F) or ±2% of reading	±2°C (±3.6°F) or ±2% of reading	±2°C (±3.6°F) or ±2% of reading	±2°C (±3.6°F) or ±2% of reading	±2°C (±3.6°F) or ±2% of reading	±2°C (±3.6°F) or ±2% of reading
Visual range (FOV) / focus length / Lens	50° x 38° / f 1.13 2.3mm	50° x 37° / f 1.13 2.3mm	15.6° x 15.6° / f 1.0 7.5mm	20.7° x 15.6° / f 1.0 7.5mm	41.5° x 31.1° / f 1.0 9mm	31.9°x25.7° / f 1.0 13.5mm	48.7°x38.6° / f 1.0 9.1mm	17° x 12.7° / f 1.0 22mm	9.8° x 7.3° / f 1.0 38mm	17.3° x 13° / f 1.0 9mm	17° x 12.7° / f 1.0 22mm
I FOV	7.29mrad	7.3mrad	2.26mrad	2.26mrad	1.89mrad	1.3mrad	1.89mrad	0.77mrad	0.45mrad	1.89mrad	0.77mrad
Focusing	fixed focus	fixed focus	manual	manual	manual	fixed focus	manual	manual	manual	manual	manual
Digital zoom	-	1–32x continuous	1–32x continuous	1–32x continuous	1–32x continuous	1–32x continuous	1–32x continuous	1–32x continuous	1–32x continuous	1–32x continuous	1–32x continuous
Measuring instruments (in real time)	5 spots, central spot, hot/cold spot, 2 areas, 4 lines	3 spots, central spot, hot/cold spot, 3 areas, vertical and horizontal lines	none, central spot, 3 spots, hot/cold spot, 3 areas, vertical and horizontal lines, screening mode								
Information on measuring areas	max, min, AVG	max, min, AVG	max, min, AVG	max, min, AVG	max, min, AVG	max, min, AVG	max, min, AVG	max, min, AVG	max, min, AVG	max, min, AVG	max, min, AVG
IR video recording	●	●	●	●	●	●	●	●	●	●	●
Correction of measurement	-	emissivity, reflected temperature, environmental temperature, atmospheric humidity, temperature compensation, distance compensation									
Colour palette	iron, rainbow, warm white, warm black, medical, arctic, warm iron, fulgurite	iron, rainbow, warm white, warm black, medical, arctic, warm iron, fulgurite									
Span mode	-	auto, manual, histogram									
Laser pointer	-	-	-	-	-	-	●	●	●	●	●
Distance meter	-	-	-	-	-	-	●	●	●	●	●
Built-in LED light	smartphone torch	●	-	-	-	-	●	●	●	●	●
Internal memory space	smartphone memory	3.4GB	3.4GB	3.4GB	3.4GB	3.4GB	3.4GB	3.4GB	3.4GB	3.4GB	3.4GB
Notes on thermogram	-	text notes	text notes	text notes	text notes	text notes	text notes, voice notes	text notes, voice notes	text notes, voice notes	text notes, voice notes	text notes, voice notes
Communication interface	USB type C	USB type C, Wi-fi, micro SD	USB type C, Wi-fi, micro SD	USB type C, Wi-fi, micro SD	USB type C, Wi-fi, micro SD	USB type C, Wi-fi, micro SD	micro USB, Wi-fi, micro SD, micro HDMI	micro USB, Wi-fi, micro SD, micro HDMI	micro USB, Wi-fi, micro SD, micro HDMI	micro USB, Wi-fi, micro SD, micro HDMI	micro USB, Wi-fi, micro SD, micro HDMI
Display	smartphone display	touch screen	touch screen	touch screen	touch screen	touch screen	touch screen	touch screen	touch screen	touch screen	touch screen
Battery duration	-	3 hours	4 hours	4 hours	4 hours	4 hours	4 hours	4 hours	4 hours	4 hours	4 hours
Size (L x W x H):	50 x 30 x 20 mm	133 x 87 x 24 mm	240 x 101 x 110 mm	240 x 101 x 110 mm	240 x 101 x 110 mm	240 x 101 x 110 mm	272 x 100 x 120 mm	270 x 101 x 168 mm	270 x 101 x 168 mm	270 x 101 x 168 mm	270 x 101 x 168 mm
ORDER CODE	HN000080	HN008000	HN000120	HN000200	HN000300	HN000400	HN000500	HN000600	HN00600L	HN00500H	HN00600L

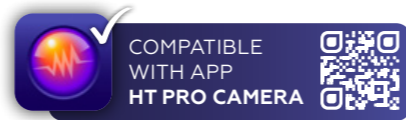
ORDER CODE **HN000120**
THT120

ORDER CODE **HN000200**
THT200

ORDER CODE **HN000300**
THT300

ORDER CODE **HN000400**
THT400

Touch-screen thermal cameras, advanced and professional



Ventilation, hydraulic, electrical, mechanical and air conditioning systems surround us in every environment, therefore making an effective and constant maintenance necessary. The range of thermal cameras THT400, THT300, THT200 and THT100 is perfect for tracking and solving daily problems of different kinds.

- › When working on an HVAC/R system with an appropriate infrared thermal camera, you can quickly find problems, check the system's efficiency or detect a leak. A faster solution of these problems means more safety and less wasted money.

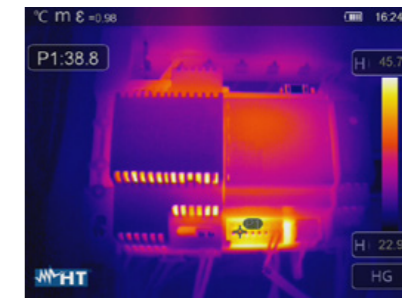
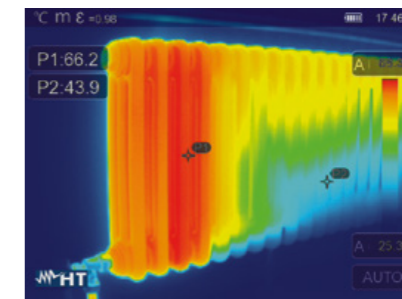
1st photo: thermogram of a radiator acquired with THT300.

- › Incorrect sizing of circuits, cables and protections, loosening of terminals, unbalanced loads and many other problems can lead to tragic events in case of a poor maintenance. With a THT series thermal camera it is easy to find the most common electrical problems in a very short time.

2nd photo: thermogram of a power supply acquired with THT300.

- › Overheating of some parts of mechanical systems can have many causes, such as overloaded pumps, poor lubrication, hot bearings or misalignments. As a result, the temperature of faulty equipment or systems will rapidly rise until it causes irreversible damage.

3rd photo: thermogram of an electric motor acquired with THT300.



i Characteristics and Functions

	THT120	THT200	THT300	THT400
IR Resolution	120x120 pxl	160x120 pxl	384x288 pxl	640x480 pxl
Temperature range	-20C° ÷ 650°C	-20C° ÷ 650°C	-20C° ÷ 650°C	-20C° ÷ 550°C
Image frequency	50Hz	50Hz	50Hz	25Hz
Thermal sensitivity/NETD	<0.05°C @ 30°C / 50mK			
In-built thermal camera	2 MP, fixed focus	2 MP, fixed focus	2 MP, fixed focus	2 MP, fixed focus
Picture in Picture function	●	●	●	●
AutoFusion function	●	●	●	●
Accuracy	±2°C (±3.6°F) or ±2% of reading			
Field of view (FOV) / focus length / Lens	15.6°x15.6° / f1.0 / 7.5mm	20.7°x15.6° / f1.0 / 7.5mm	41.5°x31.1° / f1.0 / 9mm	31.9°Cx25.7°C / f1.0 / 13.5mm
IFOV	2.26mrad	2.26mrad	1.89mrad	1.3mrad
Focusing	manual	manual	manual	fixed focus
Digital zoom	1–32x continuous			
Measuring instruments (in real time)	none, central spot, 3 spots, hot/cold spot, 3 areas, vertical and horizontal lines, screening mode			
Information on measuring areas	max, min, AVG	max, min, AVG	max, min, AVG	max, min, AVG
IR video recording	●	●	●	●
Correction of measurement	emissivity, reflected temperature, environmental temperature, atmospheric humidity, distance compensation			
Colour palette	iron, rainbow, warm white, warm black, medical, arctic, warm iron, fulgurite			
Span mode	auto, manual, histogram			
Internal memory space	3.4GB	3.4GB	3.4GB	3.4GB
Notes on thermogram	text notes	text notes	text notes	text notes
Communication interface	USB type C, Wi-fi, micro SD	USB type C, Wi-fi, micro SD	USB type C, Wi-fi, micro SD	USB type C, Wi-fi, micro SD
Display	touch screen	touch screen	touch screen	touch screen
Battery duration	4 hours	4 hours	4 hours	4 hours
Size (L x W x H):	240 x 101 x 110 mm	240 x 101 x 110 mm	240 x 101 x 110 mm	240 x 101 x 110 mm

📦 Provided accessories

BRS47	Soft carrying bag
THTCASEM	Rigid transport case (THT400)
Multi-plug battery charger	
THTBATM	Li-ion battery
USB cable type C	
Quick guide	
ISO test report	
16GB Micro SD Card	

+ Optional accessories



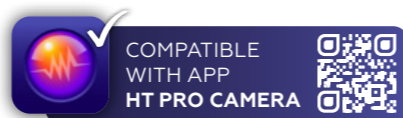
SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES

ORDER CODE **HN000500**
THT500

ORDER CODE **HN000600**
THT600

ORDER CODE **HN00600L**
THT600L

Touch-screen thermal cameras, advanced and professional



When it comes to industrial environments, high-voltage installations, construction and photovoltaic systems, the damage caused by poor maintenance, construction defects or corrosion over time can be serious and very expensive. For this reason, the checks must also be of high quality and professionalism, and this is why our advanced thermal cameras are perfect for these multiple applications.

Due to oxidation, corrosion or fault of an insulator, the resistance of electrical connections in high-voltage systems will increase to the detriment of efficiency. If this happens, overheating, in the worst cases, can even cause the connections to melt. A thermal camera with the right characteristics is essential to carry out preventive maintenance at a long distance from the target.

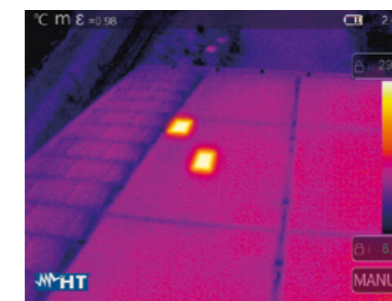
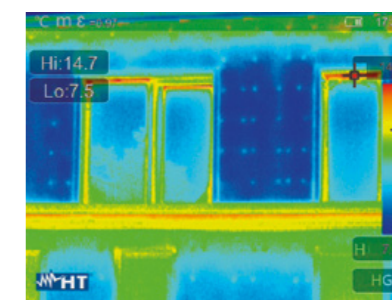
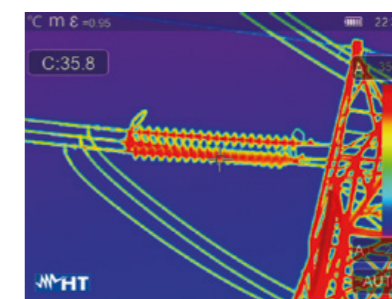
1st photo: thermogram of an insulator acquired with THT600L from a long distance.

Aspects such as air tightness, thermal bridges and windows (primary and secondary nodes) are of fundamental importance in the construction or renovation of a building. Leaks in a building can represent up to 70% of the total energy consumption. Thanks to the most suitable THT thermal camera it is possible to detect even the smallest leakages, thanks to the high thermal sensitivity of 0.05 °C.

2nd photo: thermogram of the insulation of a building acquired with THT600.

A thermographic investigation on a photovoltaic system allows the rapid localization of potential defects, such as hot spots, as well as the detection of possible electrical or mechanical faults.

3rd photo: thermogram of a photovoltaic panel with two Hot Spots acquired with THT600.



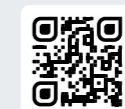
Characteristics and Functions

	THT500	THT600	THT600L
IR Resolution	160x120 pxl	384x288 pxl	384x288 pxl
Temperature range	-20°C ÷ 650°C	-20°C ÷ 650°C	-20°C ÷ 650°C
Image frequency	50Hz	50Hz	50Hz
Thermal sensitivity/NETD	<0.05°C @ 30°C / 50mK		
In-built thermal camera	5 MP, fixed focus, with LED torch	5 MP, fixed focus, with LED torch	5 MP, fixed focus, with LED torch
Picture in Picture function	●	●	●
AutoFusion function	●	●	●
Accuracy	±2°C (±3.6°F) or ±2% of reading		
Field of view (FOV) / focus length / Lens	21° x 21° / f 1.0 / 7.5mm	20.7° x 15.6° / f 1.0 / 7.5mm	41.5° x 31.1° / f 1.0 / 9mm
I FOV	1.89mrad	0.77mrad	0.45mrad
Focusing	manual	manual	manual
Digital zoom	1–32x continuous		
Measuring instruments (in real time)	none, central spot, 3 spots, hot/cold spot, 3 areas, vertical and horizontal lines, screening mode		
Information on measuring areas	max, min, AVG	max, min, AVG	max, min, AVG
IR video recording	●	●	●
Correction of measurement	emissivity, reflected temperature, environmental temperature, atmospheric humidity, distance compensation		
Colour palette	iron, rainbow, warm white, warm black, medical, arctic, warm iron, fulgurite		
Span mode	auto, manual, histogram		
Built-in laser pointer, distance meter and LED light	●	●	●
Internal memory space	3.4GB	3.4GB	3.4GB
Notes on thermogram	text notes	text notes, voice notes	text notes
Communication interface	micro USB, Wi-fi, micro SD, micro HDMI		
Display	touch screen	touch screen	touch screen
Battery duration	4 hours	4 hours	4 hours
Size (L x W x H):	272 x 100 x 120 mm	272 x 100 x 120 mm	272 x 100 x 120 mm

Provided accessories

Hard carrying case	
Multi-plug battery charger	
2x THTBATL	2 Li-ion batteries
Micro USB cable	
HDMI video cable	
Earphones	
Micro SD card 16GB	
THTCBL	Recharging base
Strap	
Quick guide	
ISO test report	

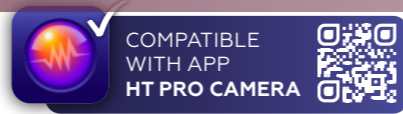
Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES

ORDER CODE **HN00500H**
THT500H

ORDER CODE **HN00600H**
THT600H



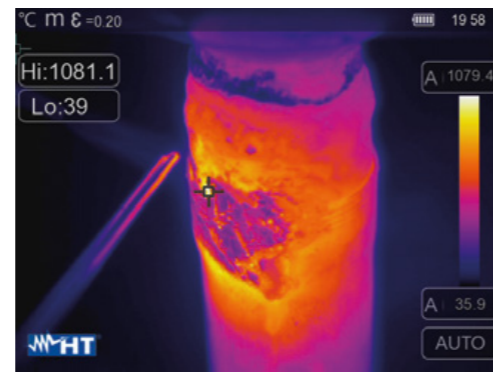
Touch-screen thermal cameras, advanced and professional for high temperatures



When temperatures are high, so are the risks. Thanks to our thermal cameras dedicated to high temperatures, you will no longer have limits in your measurements and, taking advantage of their high definition, you will have total control of the work carried out.

- › In production processes, quality check is most important to have a good result. Production at high temperatures, in particular, requires constant monitoring of workpieces, for example during welding processes, where any micro cracks are invisible to human eyes.
- › Any industrial process that involves the use of materials and fluids at high temperatures must be kept under constant control for the entire duration of the production process. For example, when using molten metals, the temperature and viscosity of the fluid must be optimal at the time of pouring into the mold to ensure a result of the highest quality.

In the photo: thermogram of a welding process of a copper pipe acquired with THT600H.



ORDER CODE **HN008000**
THT8

ORDER CODE **HN000080**
THT80

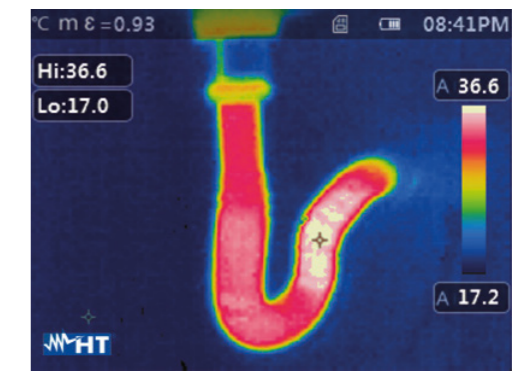
Compact, advanced and professional thermal cameras



Small does not mean mediocre. All HT technology is now pocket-sized, to allow you to take your measurements at any time, from the palm of your hand.

- › Thermography is the best tool for detecting blocked, broken pipes or other plumbing problems. For example, by observing the flow of hot water, it is possible to locate the occlusion.
- › Incorrect sizing of circuits and cables, poor connections, unbalanced loads and many other problems can lead to tragic events in case of poor maintenance. With a THT series thermal camera it is easy to find the most common electrical problems in a very short time.
- › Thermal camera THT8 contains all the HT thermographic technology in its very small size, allowing you to carry out your inspections directly from your smartphone via the dedicated APP **HTSmartCamera**, with uncommon convenience and quality.

In the photo: thermogram of a clogged siphon acquired with THT80.



i Characteristics and Functions

	THT500H	THT600H
IR Resolution	160x120 pxl	384x288 pxl
Temperature range	-20°C ÷ 1200°C	
Image frequency	50Hz	50Hz
Thermal sensitivity	<0.05°C @ 30°C / 50mK	
Accuracy	±2°C (±3.6°F) or ±2% of reading	
Field of view (FOV) / focus length / Lens	17.3° x 13° f 1.0/9.0mm	17° x 12.7° f 1.0/22mm
IFOV	1.89mrad	0.77mrad

- › In-built camera with 5 MP, fixed focus, LED torch
- › Picture in Picture function
- › AutoFusion function
- › Manual focusing
- › 1-32x continuous digital zoom
- › Instruments for measuring (in real time): none, central spot, 3 spots, hot/cold spot, 3 areas, vertical and horizontal lines, screening mode
- › Information on measured areas: max, min AVG
- › IR video recording
- › Correction of measurement: emissivity, reflected temperature, environmental temperature, atmospheric humidity, temperature compensation, distance compensation
- › Colour palette: iron, rainbow, warm white, warm black, medical, arctic, warm iron, fulgurite
- › Span mode: auto, manual, histogram
- › Built-in laser pointer, distance meter, LED light
- › Internal memory space: 3.4GB
- › Notes on thermogram: voice notes, text notes
- › Communication interface: micro USB, Wi-fi, micro SD, micro HDMI
- › Touch-screen display
- › Battery duration: 4 hours
- › Size: 272 x 100 x 120mm

📁 Provided accessories

Hard carrying case	
Multi-plug battery charger	
2x THTBATL	2 Li-ion batteries
Micro USB cable	
HDMI video cable	
Quick guide	
Earphones	
SD CARD 16 GB	
THTCBL	Recharging base
Strap	
ISO test report	

+ Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES

i Characteristics and Functions

	THT8	THT80
IR Resolution	120x90 pxl	120x90 pxl
Temperature range	-20°C ÷ 400°C	-20°C ÷ 550°C
Image frequency	25Hz	50Hz
Thermal sensitivity	<0.05°C @ 30°C / 50mK	
Accuracy	±3°C (±5.4°F) or ±3% of reading	±2°C (±3.6°F) or ±2% of reading
Field of view (FOV) / focus length / Lens	50° x 38° / f 1.13 2.3mm	50° x 37° / f 1.13 2.3mm
IFOV	7.29mrad	7.3mrad
Picture in Picture function	-	●
AutoFusion function	-	●
Digital zoom	-	1-32x continuous
Measuring instruments in real time	5 spots, central spot, hot/cold spot, 2 areas, 4 lines	3 spots, central spot, hot/cold spot, 3 areas, vertical and horizontal lines
Information on measuring areas	Directly on APP HTSmartCamera	max, min, AVG
Span mode	-	auto, manual, histogram
Built-in LED light	smartphone torch	●
Internal memory space	smartphone memory	3.4GB
Notes on thermogram	-	text notes
Communication interface	USB type C	USB type C, Wi-fi, micro SD
Display	smartphone display	touch screen
Battery duration	-	3 hours
Size (L x W x H):	50 x 30 x 20 mm	133 x 87 x 24 mm

📁 Provided accessories

Transport case	
USB cable type C	THT80
Quick guide	THT80
ISO test report	THT80
16GB Micro SD Card	THT80
User manual	THT8

+ Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES

HTB500

Professional borescope with built-in high-resolution photo camera



Model HTB500 is a portable digital borescope which allows carrying out inspections inside parts of objects not physically accessible (typically rotating equipment) and not visible to the naked eye. The instrument uses a waterproof external feeler with 4 LEDs with high brightness and a camera, in order to obtain a high-resolution image on the display.



SEE PRODUCT DATA SHEET HTB500



Functions

- › Real-time display of the item
- › Waterproof flexible external feeler (IP67)
- › Built-in white-light LEDs for operations in poorly lit environments
- › Image rotation (0° - 180°) on the display
- › Li-ION battery rechargeable through USB
- › Analog video output (PAL/NTSC)
- › Electronic image zoom
- › Resolution of the internal photo camera: 640x480pxl
- › Display: 3.5", TFT colour, 320 x 240pxl
- › Automatic focusing: 5cm ÷ 15cm
- › External feeler length: 1m
- › External feeler diameter: 6mm
- › Adjustment of white light brightness: 10 levels
- › Size (L x W x H): 250x100x95mm
- › Weight (without probe): 345g



Provided accessories

- Flexible external clamp L=1m, D=6mm with accessories
- Rechargeable Li-ION battery
- USB cable for battery recharge
- Carrying bag
- User Manual



Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES

320x240
pixel



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HTA106,
HTA105,
HTA103

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DT103S

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DT8806H

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HT3305,
HT3300

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THERMOMETERS
THERMOHYGROMETERS
AND THERMO-ANEMOMETERS





**THERMOMETERS
THERMOHYGROMETERS AND
THERMO-ANEMOMETERS**



MAIN MEASUREMENTS

	HTA103	HTA105	HTA106	HTA107	HT3300	DT8806H	DT103S	HT3305
Distance / infrared spot ratio				8:1	12:1	6:1		20:1
Infrared temperature measuring range				-50 ÷ 200°C -58 ÷ 392°F	-50 ÷ 380°C -58 ÷ 716°F	32 ±42.5°(Body) 0÷60°C (Surface)	0 ÷ 50°C 32 ÷ 122°F	-50°C ÷ 1000°C -58°F ÷ 1832°F
Temperature measuring range with K-type probe	-250 ÷ 1372°C -418 ÷ 2502°F							-50°C ÷ 1370°C -58°F ÷ 2498°F
Temperature measurement with K-type probes	● (*)							● (*)
Measurement of volumetric capacity (m ³ /s) and enthalpy (kW)		●						
Measurement of air relative humidity in %RH		●	●	● (and materials)				
Measurement of wind speed in m/s		● (hot-wire sensor)						
Measurement of air temperature/humidity with in-built sensor		●	●	●				
Temperature measurement of dew point and of wet bulb			●	●				

ADDITIONAL CHARACTERISTICS

Emissivity adjustment of target				0.95 fixed	0.95 fixed	0.95 fixed	0.95 fixed	0.01 ÷ 1.00
Setting of alarm thresholds on measurements				●	●	●	● (preset thresholds)	●
Continuous measurement								
Class 2 integrated laser pointer				●	● (Class 2)			● (Class 2)
Blue LED built-in illuminators for UV function							● LEDs for alarms	
Internal memory for measured data saving				●		●		
Backlight	●	●	●	●	●	●		●
Autorange	●	●	●	●	●	●	●	●
Data HOLD	●	●	●	●	●	●		●
MAX/MIN/AVG	● (MAX/MIN)	● (MAX/MIN)	● (MAX/MIN)	● (MAX/MIN)	● (MAX/MIN)			●
Selection of measuring unit	●	●	●	●	● °C \ °F	●	● °C \ °F	● °C \ °F
Low battery indication	●	●	●	●	●	●	●	●
Auto Power OFF	●	●	●	●	●	●	●	●
Power supply	1x9V 6F22	1x9V 6F22	1x9V 6F22	1x9V 6F22	1x9V 6F22	2x1.5V AA	3x1.5V AA	2x1.5V AAA
Size in mm (LxWxH)	185x60x40	185x60x40	185x60x40	185x60x40	136x75x40	149x77x43	107x75x57	180x105x55
Weight in grams (batteries included)	180	180	180	180	140	195	120	240
ORDER CODE	HN000103	HN000105	HN000106	HN000107	HA003300	DT8806H	DT103S	HA003305

ORDER CODE **HN000107**

HTA107

ORDER CODE **HN000106**

HTA106

ORDER CODE **HN000105**

HTA105

ORDER CODE **HN000103**

HTA103

Multifunction instruments for measuring environmental parameters



SEE PRODUCT DATA SHEET HTA107



SEE PRODUCT DATA SHEET HTA106



SEE PRODUCT DATA SHEET HTA105



SEE PRODUCT DATA SHEET HTA103

The family of instruments HTA10x including models HTA103, HTA105, HTA106 and HTA107 has been designed for measuring **environmental parameters** such as **temperature, humidity and air speed**. Model **HTA103** (thermometer) allows measuring temperature with the use of **JKT thermocouples in the air, with contact** and within **liquids** (with optional probes TK1xx). Model **HTA105** (thermo-anemometer) measures **air speed with an in-built hot-wire telescopic probe**, further to **temperature/humidity and air volumetric flow rate**. Model **HTA106** (thermo-hygrometer) measures **air temperature/humidity with its in-built sensor**. Model **HTA107** (multifunction (thermo-hygrometer) allows measuring **air humidity and with contact** on materials with **internal sensors** and with **provided penetration probe**. This instrument also allows **measuring infrared temperature and calculating the d temperature difference in order to establish condensation conditions on surfaces**. Each model is provided with **display backlight** in order to make readings in poorly lit environments easier.

Functions

	HTA107	HTA106	HTA105	HTA103
IR temperature	●			
Temperature with KJT probes				●
Air temperature/humidity with in-built probe	●	●	●	
Contact humidity	●			
Air speed with hot-wire sensor			●	
Air volumetric flow rate (CMM, CFM)			●	
Dew point temperature	●	●		
Wet bulb temperature		●		
Data HOLD		●	●	●
MAX/MIN	●	●	●	●
Average value			●	
Autorange	●	●	●	●
Backlight	●	●	●	●
Internal memory	●			
Auto Power OFF	●	●	●	●

Characteristics

Display: LCD, 4 digits (double display)
Power supply: 1x9V battery type 6F22
Auto Power OFF: after 15 minutes' idling
Internal memory: Max 20 locations (HTA107)
Max operating altitude: 2000m

Provided accessories

Batteries	
User Manual	
Rigid case	(HTA105, HTA106, HTA107)
BOEC95	Soft carrying bag (HTA103)
TK101	K-type wire probe

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES

ORDER CODE **DT103S**

DT103S

Infrared thermometer for measuring forehead temperature without contact



DT103S is an **automatic infrared thermometer without contact**, with a measuring distance between 5 and 15 cm. It is provided with a convenient **wall mounting system** and a **tripod**, a display for reading measured temperatures and **flashing LEDs** to signal possible high temperatures.

SEE PRODUCT DATA SHEET DT103S

Functions

- › Automatic measurement of forehead temperature without contact
- › Selectable units °C or °F
- › Body, Surface and Counter modes available
- › Alarm LEDs and sounds when measuring
- › Auto power OFF
- › Autorange

Provided accessories

- Batteries
- Power supply with USB cable for mains connection
- Screws for wall mounting
- User Manual

Optional accessories

SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES



ORDER CODE **DT8806H**
DT8806H

Infrared thermometer for measuring forehead temperature without contact



The infrared thermal scanner DT8806H, **certified for medical use**, has been designed to measure a person's **forehead body temperature** in an extremely quick and simple manner.



ORDER CODE **HA003305**
HT3305

ORDER CODE **HA003300**
HT3300

Ultra-compact infrared thermometers



Handy and extremely practical systems for reading infrared temperature with a laser system, providing visual and audio indications every time the measured value changes. Model **HT3305** allows **measuring temperature with a K-type probe**. These models were thought for very quick measurements to detect, with no loss of time, temperature variations.



Functions

- › Accurate measurement of forehead temperature without contact
- › Selectable units °C or °F
- › Selectable Body and Surface mode
- › Acoustic alarm on measurements
- › Saving the last 32 measurements
- › Automatic data saving and Auto power OFF
- › Autorange

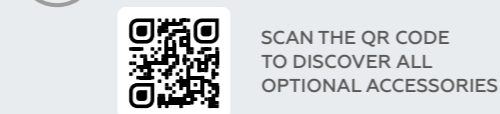
Characteristics

- Auto Power Off**
- Display:** LCD with backlight
- Resolution** 0.1°C (0.1°F)
- Auto Power OFF:** after 5 minutes' idling
- Size (L x W x H):** 149 x 77 x 43mm
- Weight (batteries included):** 195g

Provided accessories

- Batteries
- Fabric bag for transport
- User Manual

Optional accessories



Medical standards

- › **ASTM E1965-1998**
- › **EN 980: Symbols to be used in labeling medical devices**
- › **EN 1041: Information provided by the manufacturer with medical devices**
- › **EN 60601-1: Electric medical devices Part 1: General safety requirements (IEC: 60601-1: 1998)**
- › **EN 60601-1-2: Electric medical devices Part 1-2: General requirements for safety Collateral standard**
- › **Electromagnetic compatibility Requirements and tests (IEC 60601-1-2:2001)**

Functions

	HT3300	HT3305
Infrared temperature measurement	-50°C÷380°C	-50°C÷1000°C
Built-in laser pointer	●	●
Laser pointer area for an immediate localization of distance/spot	●	●
Automatic HOLD function	●	●
Auto Power OFF	●	●
Distance / Spot ratio D:S	12:1	20:1
Temperature measurement with K-type probe	-	●
Adjustment of emissivity	- (>0.95)	●
Measures in °C/°F	●	●
Data HOLD	●	●
MAX, MIN, AVG functions	●	●
Acoustic alarm for values higher than MAX and lower than MIN	●	●
Backlight	●	●
Auto Power OFF	●	●
Ergonomic and ultra-compact design	●	●

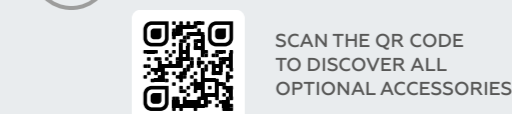
Characteristics

- Laser pointer:** Class 2
- Display:** LCD with backlight
- Power supply:** 1x9V battery type 6F22 (**HT3300**)
2x1.5V batteries type AAA LR03 (**HT3305**)
- Auto Power OFF:** after 10 seconds' idling
- Size (L x W x H):** 136x75x40mm (**HT3300**)
180x105x55mm (**HT3305**)
- Weight (batteries included):** 140g (**HT3300**), 240g (**HT3305**)

Provided accessories

- Batteries
- K-type wire probe (HT3305)
- Carrying bag
- User Manual

Optional accessories





HT157
HT155

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HTA102

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SOUND LEVEL
METERS



SOUND LEVEL METERS



HT157



HT155



HTA102

	SOUND LEVEL METERS CLASS 1		SOUND LEVEL METERS CLASS 2
Noise measuring range	25 ÷ 140dB	25 ÷ 140dB	30 ÷ 130dB
Noise measurement resolution	0.1 ÷ 0.01dB	0.1dB	0.1dB
Frequency range	10kHz ÷ 20kHz	10kHz ÷ 20kHz	31.5kHz ÷ 8kHz
Dynamic range	90dB	90dB	50dB
Measurement of sound pressure level (SPL)	●	●	●
Measurement of equivalent noise levels (Leq)	●	●	
Frequency weighting	A/C/Z	A/C/Z	A/C
Integration over time	Fast/Slow/Impulse	Fast/Slow/Impulse	Fast/Slow
Integration with programmable period	●	●	●
Peak measurements (Peak-, Peak+)	●	●	
Display of MAX/MIN values of SPL	●	●	●
Statistic analysis of noise with "A" weighting	●	●	
SPL analysis in 24H	●	●	
Spectrum analysis with octave-band filter (1/1)	● 19Hz ÷ 16kHz		
Spectrum analysis with 1/3 octave-band filter	●		
Mobile calibrator provided	● Class 1	● Class 1	● Class 2
Manual calibration with trimmer	●	●	●
Precise calibration with internal procedure	●	●	
Pre-polarized "1/2" condenser microphone	●	●	●
AC and DC analogue outputs with 3.5mm jack	● AC only	● AC only	●
Internal memory for data saving	128	128	●
Recalling of results on the display	●	●	
Mini-USB interface for PC connection	●	●	●
Transfer of saved data onto USB Pen Drive	●	●	
Windows software for saved data analysis	●	●	●
Display	LCD 240 x 160	LCD 240 x 160	LCD 4 digits
Display backlight	●	●	●
Power supply	4x 1.5V AA	4x 1.5V AA	1x 9V
Provided external power supply	●	●	●
Reference standards	IEC61672 Class 1 IEC61620 Class 1	IEC61672 Class 1	IEC61672 Class 2
Size (LxWxH) (mm)	285x90x39	285x90x39	255x60x40
Weight in grams (batteries included)	500	500	265
ORDER CODE	HN000157	HN000155	HN000102

ORDER CODE **HN000155**
HT155

ORDER CODE **HN000157**
HT157

Digital integrating sound level meters type 1



HT157 and HT155 are mobile integrating sound level meters Type **(Class 1)** which can be used to **monitor the equivalent level of noise (Leq)**, measure **Peak values**, check **soundproofing levels, acoustic pollution**, etc. It is also indicated for **certification according to the Leg. Decrees** currently in force as regards **environmental noise measurements** and in **working environments**. These devices have a **wide measuring range (from 25 to 140dB)** and multiple functions such as **statistic analysis, 24H analysis, integration of Leq over time**, which are indispensable elements when measuring. These models also allows carrying out **detailed analyses of spectrum components of noise** using in-built **octave-band filters** and **1/3 octave-band filters** (HT157 only) and they are provided with an **internal memory to save data** and with a **USB interface for transferring data to the PC through dedicated software in a Windows environment with possibility of numerical, graphic and statistic display**. Sound level meters are provided with a practical and **resistant case** with a mobile calibrator for preliminary checks before each measurement is carried out.



SEE PRODUCT DATA SHEET HT155



SEE PRODUCT DATA SHEET HT157

ORDER CODE **HN000102**
HTA102

Professional sound level meter type 2 with recording function



HTA102 is a professional digital precision sound level meter, the ideal solution to carry out common inspection checks on **environmental noise, verification of soundproofing levels, acoustic pollution**, etc. This model allows performing real-time measurements of sound pressure level (SPL) with A/C frequency weighting and integration in Fast/Slow time, and the recording of quantities via PC connection through dedicated software. Sound level meter HTA102 comes in a **practical carrying case** with all of the accessories necessary for measurements.



SEE PRODUCT DATA SHEET HTA102

Functions

	HT155	HT157
Sound level meter category	Type 1	Type 1
Noise measuring range	25÷140dB	25÷140dB
Noise measurement resolution	0.0÷10.1dB	0.0÷10.1dB
Dynamic range	> 90dB	> 90dB
Measurement of sound pressure level (SPL)	●	●
Measurement of equivalent noise levels (Leq)	●	●
Frequency weighting	A / C / Z	A / C / Z
Integration over time	F/S/ Impulse	F/S/ Impulse
Peak measurements (Peak-, Peak+)	●	●
Statistic analysis of noise type "A"	●	●
24H analysis of noise	●	●
Octaveband spectrum analysis		●
1/3 octaveband spectrum analysis		●
1/2 condenser microphone	●	●
Analogue AC output	●	●
Internal calibration in Class 1	●	●
Mobile calibrator provided	●	●
Internal memory for data saving	(128 groups)	(128 groups)
Interface with USB Pen Drive	●	●
USB interface for PC connection	●	●

Characteristics

Display: LCD, dot-matrix (240x160pxl) with backlight
External power supply: Adapter 100-240VAC/5VDC
Internal power supply: 4x1.5V alkaline batteries type AA LR6
Reference standards: IEC 61672:2002 type1
 IEC 61260:1995 type1 (HT157)
 IEC 60804:1985 type1
 IEC 60651:1979 type1DLgs 477/91, 195/06
Size: 285x90x3
Weight (batteries included): 500g

Provided accessories

- HT151 Mobile calibrator Class 1
- Power supply 100-240VAC/5VDC with USB output
- Mini-USB/USB cable for PC connection
- USB Pen Drive (TRASCEND JF V30/2GB)
- USB cable for connecting the Pen Drive to the device
- Wind protection 60mm
- Windows software for data transfer
- Transport case
- 4x1.5V alkaline batteries type A LR06
- User manual, ISO calibration report

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES

Functions and characteristics

- › Sound level meter category: Type (Class) 2
- › Measuring range: 30 ÷ 130dB
- › Noise measurement resolution: 0.1dB
- › Dynamic range: 50dB
- › Measurement of sound pressure level (SPL)
- › A and C frequency weighting
- › Integration over time: Fast / Slow
- › Display of MAX / MIN values of SPL
- › Recording of parameters from software
- › 1/2 inch condenser microphone
- › Analogue AC and DC outputs (max 1V)
- › Manual calibration with trimmer
- › Display: LCD, 4 digits
- › Power supply: 1x9V batteries type IEC 6F22
- › Reference standard: IEC 61672 type 2
- › Size (LxWxH): 255x60x40mm
- › Weight (batteries included): 265g

Provided accessories

- Wind protection
- Screwdriver for manual calibration of sound level meter
- Jack for analogue AC/DC outputs
- Rigid transport bag
- Battery for sound level meter
- External power supply 230V AC / 9V DC
- User manual for sound level meter
- 1x9V alkaline battery type IEC 6F22
- User Manual

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES



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PV204

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LIGHT METERS
AND SOLAR
METERS



LIGHT METERS AND SOLAR METERS



HT309



PV204

MAIN MEASUREMENTS

	LIGHT METERS	AND SOLAR METERS
Measuring range	0.01÷400klux 0.01÷40kFc	0.1÷1999W/m ² 0.1÷634BTU/(ft ² *h)
Measurement of illuminance in Lux/Fc	●	
Measurement of LED sources' illuminance	●	
Luminous intensity measurement (Cd)	●	
Solar irradiation measurement W/m ² e BTU/(ft ² *h)		●

ADDITIONAL CHARACTERISTICS

Internal memory for measured data saving	● (Max 99 locations)	
Zeroing	●	●
Manual measuring range		●
Autorange	●	
Data HOLD	●	●
MAX/MIN/AVG	●	● No AVG
Backlight	●	●
Selection of measuring unit	●	W/m ² - BTU/(ft ² *h)
Auto Power OFF	●	●
Reference standard	Class A JIS C 1609:1993, CNS 5519	EMC (2014/30/EU)
Power supply	1x 9V	1x 9V
Size (LxWxH) (mm)	185 x 60 x 40	185 x 60 x 40
Weight (batteries included):	180g	180g
ORDER CODE	HA003090	HA0PV204

ORDER CODE **HA003090**

HT309

Mobile digital light meter



Model **HT309** is a **digital light meter** for measuring illuminance up to **400kLux** through a silicon photodiode sensor. This model also allows measuring **illuminance of LED sources** with **various colours** by setting the **relevant correction factors**, measuring **luminous intensity** (expressed in Candles) and **saving results in the internal memory**.

SEE PRODUCT DATA SHEET HT309

ORDER CODE **HA0PV204**

PV204

Mobile digital solar meter



PV204 is a **digital solar meter** for measurements of **solar irradiation** up to **1999W/m²**, which can be used as an inspection device, typically in **photovoltaic installations**.

SEE PRODUCT DATA SHEET PV204

Functions and characteristics

- › Illuminance measuring range (Lux/Fc): 0.01÷400kLux; 0.01 ÷ 40kFc
- › Luminous intensity measurement (Cd)
- › Measurement of LED sources' illuminance
- › Basic accuracy: ±3%reading
- › Zeroing: Digital
- › Autorange
- › Spectrum response correction
- › Data HOLD, MAX/MIN: also AVG
- › Internal memory
- › Auto Power OFF
- › Reference standard: Class A JIS C 1609:1993 + CNS 5119

Provided accessories

- Carrying bag
- Battery
- User Manual

Optional accessories

SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES

Functions and characteristics

- › Measuring range: 0.1÷1999W/m² 0.1÷634BTU/(ft²*h)
- › Resolution: 0.1/1 W/m² ; 0.1/1 BTU/(ft²*h)
- › Accuracy: ±10W/m² or ±5%reading (higher value) ±3BTU/(ft²*h) or ±5%reading (higher value)
- › Selection of the measuring unit: W/m² and BTU/(ft²*h)
- › Manual change of scale
- › Data HOLD / MAX/MIN
- › ZERO function for zeroing readings
- › Backlight and Auto Power OFF

Provided accessories

- Transport case
- Battery
- User Manual

Optional accessories

SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES



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6050N **pag. 197**



LAN NETWORK
TESTERS



LAN NETWORK TESTERS



QUICKLAN6055



QUICKLAN6050N

MAIN MEASUREMENTS

Cable mapping on LAN networks	●	●
Test on twisted pair cables RJ45 type UTP, STP and FTP	●	●
Test on telephone cables with RJ11 connector		●
Verification on COAX-F cables		●
Errors of open pairs	●	●
Errors of short-circuited pairs	●	●
Errors of exchanged pairs	●	●
Errors of inverted pairs	●	●
Errors of split pairs	●	●
Generic errors (MISWIRE)	●	●
Measurement of cable length		●
Cable length measuring range		1÷255m

ADDITIONAL CHARACTERISTICS

Display indication of error type	●	●
Test indication OK - NOT OK	●	●
Remote unit recognition	●	●
AutoPowerOFF	●	●
Backlight	●	●
Low battery indication	●	●
Power supply	1x 9V	6x 1.5V AAA
Size (LxWxH) (mm)	128 x 67 x 39	156 x 73 x 35
Weight in grams (batteries included)	165	170
ORDER CODE	HV006055	HV006050

ORDER CODE **HV006055**

QUICKLAN6055

Mobile instrument for cable tests in LAN networks



Model **QUICKLAN6055** is capable of **detecting and indicating** on the display the presence of **incorrect connections on LAN network cables (exchanged, split, inverted, open, short-circuited pairs, etc.,** both of type **UTP** (unshielded) and of type **STP** (shielded). This instrument **is provided with more remote units** and is capable of **recognizing further ones** (optional) in order to create an efficient **localization action on different spots within a patch panel**, carrying out tests very quickly **with the aid of a single operator**. QUICKLAN6055 is the ideal solution for **any installer who needs a simple and efficient device** to carry out preliminary checks and verifications on **installations of LAN networks (also of PoE type)** with connectors of type **RJ45**.

SEE
PRODUCT
DATA SHEET
QUICKLAN6055

ORDER CODE **HV006050**

QUICKLAN6050N

Mobile instrument for cable tests in LAN networks and length measurement



Model **QUICKLAN6050N** is capable of **detecting and indicating on the display the presence of incorrect connections on LAN networks (crossed, split, inverted, open, short-circuited pairs, etc.,** both of type **UTP** (unshielded) and **STP** (shielded) with connector **RJ45, RJ11 and Coax F**. The instrument is provided with **more, provided remote units** and is capable of **recognizing further ones (of type RJ45)** in order to create an efficient **localization action on different spots within a patch panel**, carrying out tests very quickly with the aid of a single operator. QUICKLAN6050N also **measures the length of the single pairs of the cable**.

SEE
PRODUCT
DATA SHEET
QUICKLAN6050N

Functions

- › Cable mapping in LAN networks
- › Test on twisted pair cables RJ45 type UTP and STP
- › Errors of open pairs
- › Errors of short-circuited pairs
- › Errors of exchanged pairs
- › Errors of inverted pairs
- › Errors of split pairs
- › Generic errors (MISWIRE)
- › Display indication of error type
- › Indication of test passed/failed
- › Remote unit recognition: 8
- › AutoPowerOFF
- › Low battery indication

Characteristics

Protection against voltage (PoE):	max 24V
Size (LxWxH):	190x65x45mm
Weight (battery excluded):	235g
Size of remote unit (LxWxH):	30x25x27mm
Remote unit weight:	13g
Considered standard:	TIA/EIA 568B

Provided accessories

CH1, CH2	Remote units #1 and #2
YAAMS0000000	Patch cable STP RJ45-RJ45, 20cm, 3 pieces
	Carrying bag
	User Manual
	Battery

Optional accessories

SCAN THE QR CODE
TO DISCOVER ALL
OPTIONAL ACCESSORIES

Functions

- › Test of wiring errors on LAN network cables with RJ45 connector in CAT5 and CAT6
- › Test of wiring errors on telephone network cables with RJ11 connector
- › Test of wiring errors on COAX cables with F connector
- › Detection of wiring errors on UTP (unshielded) and STP (shielded) cables.
- › Detection of up to 4 RJ45 remote units for multiple tests.
- › Measurement of cable length from 10m to 250m
- › Backlight
- › Auto Power OFF

Characteristics

Input connectors	RJ45, RJ11, COAX F
Power supply:	6x1.5V batteries type AAA LR03
Size (LxWxH):	156x73x35mm
Weight (battery included):	170g
Size of rem. unit (LxWxH):	72x20x23mm
Remote unit weight:	25g

Provided accessories

RT-01	Remote unit RJ45 #1 + 2 patch cables RJ45 STP, 20cm
RT-RJX1	Remote unit RJ11/COAX + patch cable RJ11 + patch cable COAXF
	Carrying bag
	Batteries
	User Manual

Optional accessories

SCAN THE QR CODE
TO DISCOVER ALL
OPTIONAL ACCESSORIES



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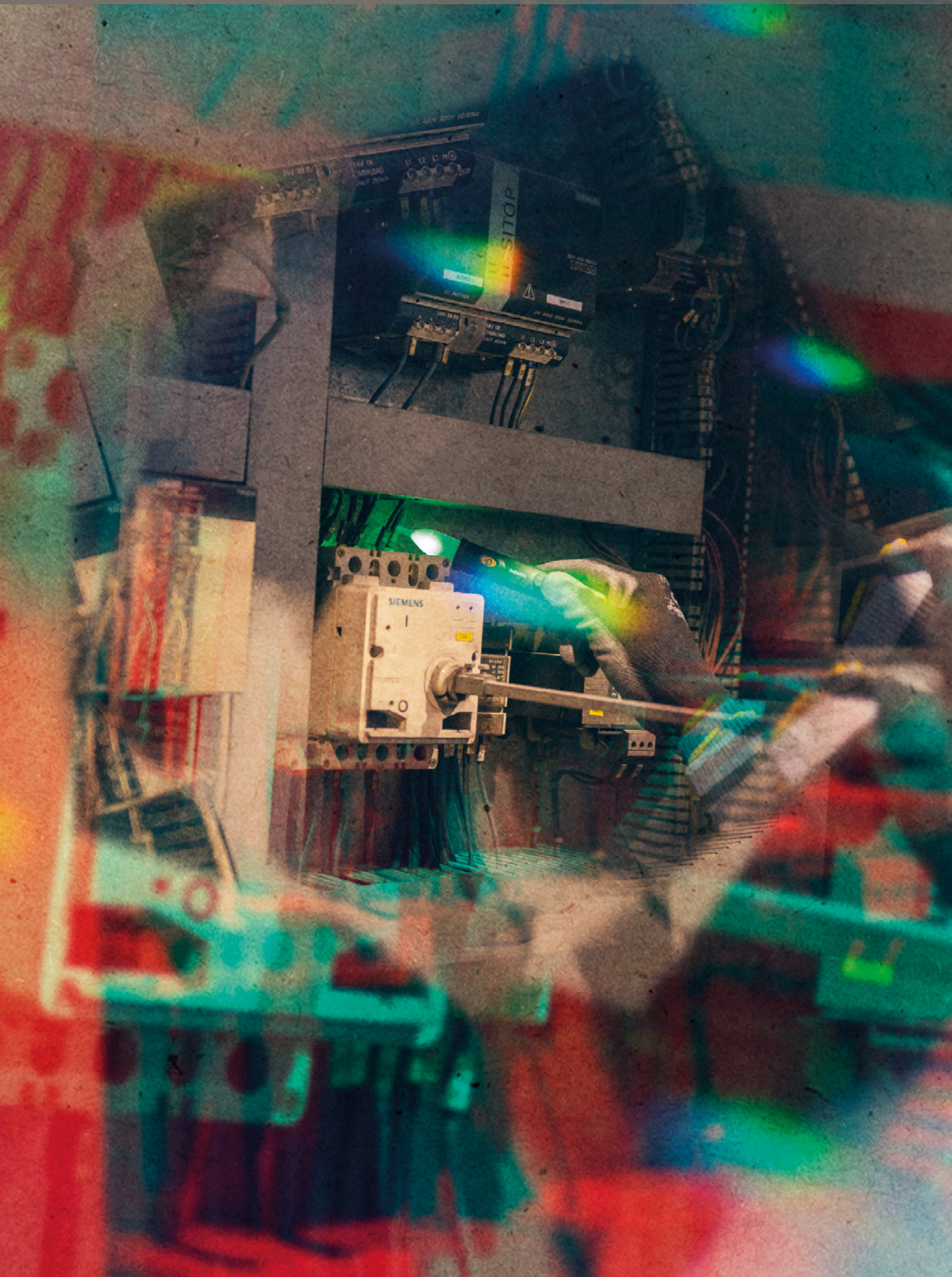
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PHASE DETECTORS,
SWITCH DETECTORS AND
PHASE SEQUENCE INDICATORS



**PHASE DETECTORS,
SWITCH DETECTORS
AND PHASE
SEQUENCE
INDICATORS**



MAIN MEASUREMENTS	LINESPLITTER	HT82	HT70	HT20S	HT38	HT5
Measuring range	0÷240VAC 0÷16A 50÷60Hz	40÷600VAC 15÷400Hz	100÷1000VAC 50÷60Hz	100÷1000VAC 50÷60Hz	200÷250VAC 50Hz	60÷250VAC 50÷60Hz
Localization of protection devices					●	
Detection of AC voltage without contact also on insulating sheaths			●	●		
Indications "R" and "L" on the display to measure phase sequence		●				
Phase sequence and phase concordance without contact also on insulating sheaths			●			
LED and sound indications			●	●	●	●
Network voltage (L-N, L-PE, N-PE)	●					
Absorbed phase current	●					
Absorbed phase current multiplied by 10 (for low-power users)	●					
Leakage current on protection conductor	●					
Leakage current measured in differential mode (L-N)	●					
ADDITIONAL MEASUREMENTS						
Test of neon tube internal gas						●
Test of internal gas of compact fluorescent lamps						●
Test of internal gas of energy-saving lamps						●
Test of internal gas of high and low-pressure sodium-vapor lamps						●
Test of internal gas of halogen lamps						●
Test of internal gas of mercury-vapor lamps						●
Phase detection function with contact for AC voltage 60-250V 50/60Hz						●
Continuity test on non-electronic starters/reactors						●
Diode test						●
ADDITIONAL CHARACTERISTICS						
LCD display		●				
Sound indications with buzzer			●	●	●	●
Practical breast pocket holder			●	●		
Anti-shock protection sheath		●				
Integrated torch				●		●
SCHUKO plug	●				●	
Overvoltage category	CAT III 240V	CAT III 600V	CAT IV 1000V	CAT IV 1000V	CAT III 250V	CAT III 300V
Reference standard for safety	IEC/EN61010-1, IEC/EN61010-02-030	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1
Power supply	240VAC (±10%) 50/60Hz	from mains	2x 1.5V AAA	2x 1.5V AAA	From mains (HT38T) 1X 9V (HT38R)	1X 9V
Size (LxWxH) (mm)	210x60x35mm	130x69x22	160x26x20	160x26x20	95x60x30	255x60x40
Weight in grams	385g	130	48	48	140	170
ORDER CODE	HA000951	HA000156	HR000070	HR000296	HR000038	HA000138

ORDER CODE **HA000951**

LINESPLITTER

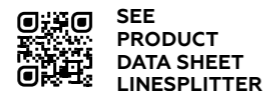
Conductor splitter



LINESPLITTER is an indispensable accessory every time you need to measure the current/power absorption or leakage current of a single-phase load supplied from socket (max 16A). **This accessory separates the active conductors and the protective conductor, thus making the following measuring spots directly accessible to suitable instruments (clamp meters, clamps for measuring leakage currents, wattmetric clamps, mains analyzers):**

- › Mains voltage (L-N, L-PE, N-PE)
- › Absorbed phase current
- › Absorbed phase current multiplied by 10 (for low-power users)
- › Leakage current on protection conductor
- › Leakage current measured in differential mode (L-N)

In particular, the comparison between the readings obtained in the two last measuring spots, also allows evaluating whether the leakage current flows to alternative paths to the protective conductor (e.g.: current leaked in water or in the metal tubes of a boiler, immersion pump, etc.).



SEE
PRODUCT
DATA SHEET
LINESPLITTER

Functions

- › Separation of phase conductor L from conductors N and PE on 2-pole and 3-pole cables
- › Simple AC voltage measurement (L-N, L-PE, N-PE) through clamps/multimeters
- › Simple AC current measurement through external clamps
- › Current loop x1 for a direct measurement of AC current
- › Current loop x10 for a direct measurement of low AC currents
- › Direct measurement of leakage current on PE cable
- › Indirect measurement of leakage current on L and N cables
- › Use for loads with maximum current absorption 16A

Characteristics

Power supply:	240VAC (±10%) 50/60Hz
Connection to mains:	in-built Schuko plug, length 50cm
Connection to user:	in-built Schuko socket
Output current:	max 16A
Safety:	IEC/EN61010-1, IEC/EN61010-02-030
Measurement category:	CAT III 240V
Size (LxWxH):	210x60x35mm
Weight (batteries included):	385g

Provided accessories

User Manual

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES



ORDER CODE **HA000156**

HT82

Phase sequence



HT82 is a mobile device to display the **phase sequence with 3 terminals** in a generic **three-phase system**. The device provides an **"R" indication** in case of **correct phase sequence** or **"L" indication** in case of **incorrect phase sequence**.



KIT82 Kit of 3 cables + 3 alligator clips



SEE PRODUCT DATA SHEET HT82

ORDER CODE **HR000070**

HT70

Pen phase detector with measurement of phase sequence (HT70)



ORDER CODE **HR000296**

HT20s

HT70 is a practical and innovative pen device capable of carrying out, further to the **phase detection function**, and **phase sequence** and **phase concordance test** with **LED indications** and **buzzer**, also on the **insulating sheath of the conductors**. The result of the test is indicated by the **red LED (incorrect phase sequence)** or the **green LED (correct phase sequence)** turning on, by simply moving the sensor first on the L1 and then on the L2 phase. **HT20s** is, instead, the model dedicated **only to the search for live cables**. This instrument too carries out measurements on the insulating sheath of the cables and, therefore, **without direct contact** with live parts.



SEE PRODUCT DATA SHEET HT70



SEE PRODUCT DATA SHEET HT20S

Functions

- › Indications "R" and "L" on the display to measure phase sequence
- › Phase sequence: in compliance with IEC/EN61557-7

Characteristics

Power supply:	from mains 40V ÷ 600V / 15-400Hz
Display:	LCD display
Pollution level:	2
Safety:	IEC/EN61010-1
Phase sequence:	IEC/EN61557-7
Measurement category:	CAT III 600V
Size (LxWxH):	130x69x22mm
Weight (batteries included):	130g

Provided accessories

KIT82	Set of 3 cables + 3 alligator clips
	Bag and user manual

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES



Functions

	HT70	HT20S
Detection of presence of AC voltage	●	●
LED and buzzer indications	●	●
Battery check with LED indications	●	●
Measurement of phase sequence	●	
Pocket clip	●	●

Characteristics

AC reference voltage:	100V ÷ 1000V to earth
Frequency:	50/60Hz
Power supply:	2x1.5V alkaline batteries type AAA NEDA24A LR03
Pollution level:	2
Safety:	IEC/EN61010-1
Measurement category:	CAT IV 1000V
Size (LxWxH):	160x26x20mm
Weight (batteries included):	48g

Provided accessories

Batteries and user manual



Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES



Step1 - Take HT70 and rest it on the assumed phase L1 of the three-phase system (on the conductor or sheath) for at least 5s and wait for the **red LED** to flash and the buzzer to sound.



Step2 - Now rest and keep HT70 on the assumed phase L2 (on the conductor or sheath) for at least another 5s and wait for the **LED** to flash together and the buzzer to sound.



Step3 - If the **green LED** turns on with steady light, phase sequence is **correct**. If, however, the **red LED** flashes, phase sequence is **incorrect**.



ORDER CODE **HR000038**

HT38

Switch detector



HT38 belongs to a category of instruments (not necessarily used for measurements) that make the **job** of all plant engineers **simpler as regards searching for reference switches in electric lines**. The instrument consists of two elements: **HT38T** which, once **inserted into the socket**, generates a signal, and a receiver **HT38R** who recognizes the signal **and indicates the reference switch** with **LED** indication and **buzzer** sounding.



ORDER CODE **HA000138**

HT5

Phase detector with internal gas lamp test



Model HT5 is a practical mobile device for **quickly carrying out tests on the operation of low-pressure, sodium-vapor and high-pressure internal gas lamps**, by simply touching the lamp's surface. Other available characteristics are the **Phase detector, Continuity test and Diode test** function.



Functions

- › Visual LED indication and acoustic indication with variable tone
- › Localization of protection devices
- › Use in live circuits with a voltage up to 250VAC to earth
- › LED indication of low battery charge
- › Auto power off

Characteristics of HT38T

Power supply:	230VAC, 50Hz
Signal output current:	<20mA
External connection:	in-built Schuko Europlug
Operating temperature:	0°C ÷ 40°C (32°F ÷ 104°F)
Operating humidity:	<80%RH
Storage temperature:	0°C ÷ 50°C (32°F ÷ 122°F)
Storage humidity:	<95%RH
Size (L x W x H):	95x60x30mm
Weight:	140g

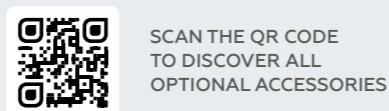
Characteristics of HT38R

Safety:	IEC/EN61010-1
EMC:	IEC/EN61326-1
Insulation:	double insulation
Pollution level:	2
Measurement category:	CAT III 250V
Max operating altitude:	2000m

Provided accessories

Transmitter HT38T
Receiver HT38R
Battery (receiver)
Carrying bag
User Manual

Optional accessories



Functions

- › Operation test of neon and fluorescent tubes
- › Operation test of neon lamps with E27 coupling
- › Operation test of sodium-vapor lamps
- › Operation test of halogen lamps
- › Phase detector function for AC voltage 60-250V 50/60Hz
- › Continuity test with buzzer
- › Diode test
- › LED indications and sound notifications
- › In-built torch

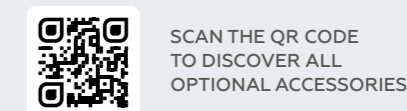
Characteristics

Power supply:	1x9V batteries type IEC 6F22
Safety:	IEC/EN61010-1
Measurement category:	CAT III 300V
Size (LxWxH):	255x60x40mm
Weight (batteries included):	170g

Provided accessories

- Batteries
- User Manual

Optional accessories





iDM70

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DM40

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LASER METERS



LASER METERS



iDM70



DM40

MAIN MEASUREMENTS

	iDM70	DM40
Distance measuring range	0,05 ÷ 70m	0,05 ÷ 40m
Measurement of area and volume	●	●
Measurement of heights by indirect method of the Pythagorean theorem.	●	●
Measurement of tilt and distance	●	
Continuous (dynamic) 2-spot and 3-spot measurements	●	●
Partial operations (additions/subtractions) with internal memory	●	●

ADDITIONAL CHARACTERISTICS

Connection to iOS/Android devices through HTLaserMeter App	●	
Activation of the laser pointer for measurement	●	●
Setting of measuring reference	●	●
Setting of timer for measurements	●	
Selection of measuring unit	m - ft	m - ft
Backlight	●	●
Air bubble level	●	
Hole for tripod insertion	●	
Activation of buzzer upon key pressing	●	
Auto Power OFF	●	●
Power supply	2x 1.5V AA	2x 1.5V AAA
Size (LxWxH) (mm)	135x53x30	110x48x28
Weight (batteries included):	160g	135g
ORDER CODE	HA000700	HA004000

ORDER CODE **HA000700**

iDM70

Laser distance meter with a capacity of 70m, inclinometer and Bluetooth interface for the connection to iOS and Android devices



SEE PRODUCT DATA SHEET iDM70

Model iDM70 is a professional laser meter designed for **measuring distances** between two spots in a simple, quick and efficient manner thanks to the in-built laser pointer and to its **small size** which make it a fully mobile device that can be used in any conditions and for any application (**construction, electric, do-it-yourself sector, etc.**) in which it is necessary to measure a linear length. This device also allows **calculating areas and volumes** and carrying out the **indirect measurement of heights in 2 spots and 3 spots** with the use of the **trigonometric method** and the mathematical principle of the **Pythagorean theorem**. **Measurement of the tilt angle** with respect to the horizontal line, a **timer on measurements** and a **small air bubble level** for a **perfect alignment to the targets** are among the available functions. Management of simple operations with the **internal memory** (sums and subtractions) and the presence of the **backlight function** of the display complete the available functions for the device. The HTLaserMeter App is also available for **free** for **iOS** and **Android** systems and is capable of **connecting in real time** to iDM70 and to carry out **measurements** associated to **pictures** in order to subsequently trace the lines within it.

USE ALL THE POWER OF iDM70

Download free HTLaserMeter APP for iOS and Android devices
Download the free App from App Store and Google play.

ORDER CODE **HA004000**

DM40

Compact laser distance meter with capacity 40m



Model DM40 has been designed for **measuring distances** between two spots in a simple, quick and efficient manner thanks to the in-built laser pointer and to its **small size** which make it a fully mobile device that can be used in any conditions and for any application (**construction, electric, do-it-yourself sector, etc.**) in which it is necessary to measure a linear length. This device also allows **calculating areas and volumes** and carrying out the indirect measurement of heights with the use of the mathematical principle of the **Pythagorean theorem**. Management of simple operations with the **internal memory** (sums and subtractions) and the presence of the backlight function of the display complete the available functions for the device.



SEE PRODUCT DATA SHEET DM40

Functions

- › Direct measurement of distance from 0.05m to 70m
- › Measurement resolution: 0001m
- › Measurement of area and volume
- › Measurement of heights by indirect method of the Pythagorean theorem
- › Measurement of tilt and distance
- › Continuous (dynamic) 2-spot and 3-spot measurements
- › Activation of the laser pointer for measurements
- › Setting of measuring reference
- › Setting of timer for measurements
- › Selection of the measuring unit in "m" or "ft"
- › Partial operations (additions/subtractions) with internal memory
- › Connection to iOS/Android devices through Bluetooth
- › Air bubble level
- › Hole for tripod insertion
- › Backlight
- › Activation of buzzer upon key pressing
- › Auto Power OFF

Characteristics

Power supply:	2x1.5V alkaline batteries type AA LR06
Duration:	max 8000 measurements
Display:	5-digit LCD display with backlight
Memory:	20 locations + external through App
Interface:	Bluetooth™ compatible with iOS - Android
Mechanical protection:	IP54
Laser pointer:	class 2 according to IEC/EN60825-1
Size (LxWxH):	135x53x30mm
Weight (batteries included):	160kg

Provided accessories

Carrying bag, battery and user manual
User manual HT LaserMeter APP

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES

Functions

- › Direct measurement of distance from 0.05m to 40m
- › Measurement resolution: 0001m
- › Measurement of area and volume
- › Measurement of heights by indirect method of the Pythagorean theorem
- › Continuous (dynamic) measurements
- › Activation of the laser pointer for measurements
- › Setting of measuring reference
- › Selection of the measuring unit in "m" or "ft"
- › Partial operations (additions/subtractions) with internal memory
- › Backlight
- › Auto Power OFF

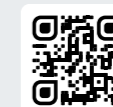
Characteristics

Power supply:	2x1.5V alkaline batteries type AAA LR03
Duration:	max 5000 measurements
Display:	5-digit LCD display with backlight
Memory:	20 locations
Mechanical protection:	IP54
Laser pointer:	class 2 according to IEC/EN60825-1
Size (LxWxH):	110x48x28mm
Weight (batteries included):	135kg

Provided accessories

Carrying bag
Non-slip strap
Batteries
User Manual

Optional accessories



SCAN THE QR CODE TO DISCOVER ALL OPTIONAL ACCESSORIES

ORDER CODE HU000743

F30P



SEE
PRODUCT
DATA SHEET
F30P



- › New design, even more ergonomic
- › Non-slip grip
- › Blade in reinforced steel
- › Universal crimper for crimp terminals between 1 and 6 mm²
- › Case with safety lock



ORDER CODE HU000697

F40



SEE
PRODUCT
DATA SHEET
F40

Professional scissors with integrated crimper function
CABLE CUTTER 70mm² + CRIMPER



- › High-quality scissors with rigid case
- › Blade in reinforced stainless steel
- › Blade width 19mm (0.7")
- › Blade thickness 3.5mm (0.1")
- › Blade for cutting cables up to 70 mm²
- › Crimper function for crimp terminals between 1 and 6 mm², sleeve type
- › Long grip for easy cutting



Blade for cutting cables up to 70 mm²



Crimper function for crimp terminals between 1 and 6 mm², sleeve type

ORDER CODE HU000741

F50



SEE
PRODUCT
DATA SHEET
F50

Professional scissors with cutter for cables up to 50mm²



- › Non-slip grip
- › Blade in reinforced steel
- › Universal crimper for crimp terminals between 1 and 6 mm²
- › Case with safety lock
- › Practical hooking system







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WHERE
WE ARE

