



QUICK PICK GUIDE



HT INSTRUMENTS FOR TESTS AND MEASUREMENTS IN DOMESTIC AND INDUSTRIAL APPLICATIONS

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With the latest-generation HT devices and the HTanalysis App it is possible to interface with tablets and smartphones. The HTanalysis App allows transferring, displaying and analysing data on your mobile device. Professional report generation is eased with inclusion of images, videos, text and voice notes. Sharing is simplified, with the HTCloud database sharing worldwide or within the same office is free and easy.

WITH
**GSC60, MacroTestG3, G2, G1
and CombiG2**

- Generate reports complete with photos, videos, text and voice notes.
- Archive reports in the HTCloud database.

WITH
SOLAR I-Ve, I-V 500w and I-V400w

- Display and analyze the I-V curves downloaded from the instrument, attach photos, videos, text and voice notes.

WITH
**GSC60, PQA820, PQA819
and HT9022***

- Display voltage, current, power, harmonics, THD%, cosphi and frequency.
- Observe in real time all waveforms, vector diagrams and harmonics.
- Archive readings in the HTCloud database.

*Only compatible with Android



HTCLOUD

Share everything.
When, how and where you like.

Install the HTanalysis App to access the HTCloud database to archive and share measured and recorded data with colleagues and partners from all around the world.



Safety first and always

Further to carrying out their function, devices for electric measurement must focus on the **operator's safety** as a basic requirement. At HT labs, we take safety into account in all our design decisions.

HT laboratories adhere to the most stringent safety and production quality regulations.

IEC/EN 61010-1 consists of precise rules for electric devices used for measurements in low voltage (<1000VAC, <1500VDC). There are four **Measurement Categories** (also called **Overvoltage Categories**), which define the protection level against voltage spikes of each device according to the proximity to the power source. Devices in the highest category require robust internal protection as they can operate nearest to the power source. A short description is outlined below:

MEASUREMENT CATEGORY



TYPE OF MEASUREMENT
Measurements carried out on circuits not directly connected to the distribution mains

APPLICATION
Household devices, measurements on circuits not derived from mains



TYPE OF MEASUREMENT
Measurements carried out on circuits directly connected to the low-voltage installation

APPLICATION
Household devices, mobile devices and similar



TYPE OF MEASUREMENT
Measurements carried out on installations inside buildings

APPLICATION
Distribution panels, wirings, switches, sockets in fixed installations, electric motors, industrial devices



TYPE OF MEASUREMENT
Measurements carried out on a source of a low-voltage installation

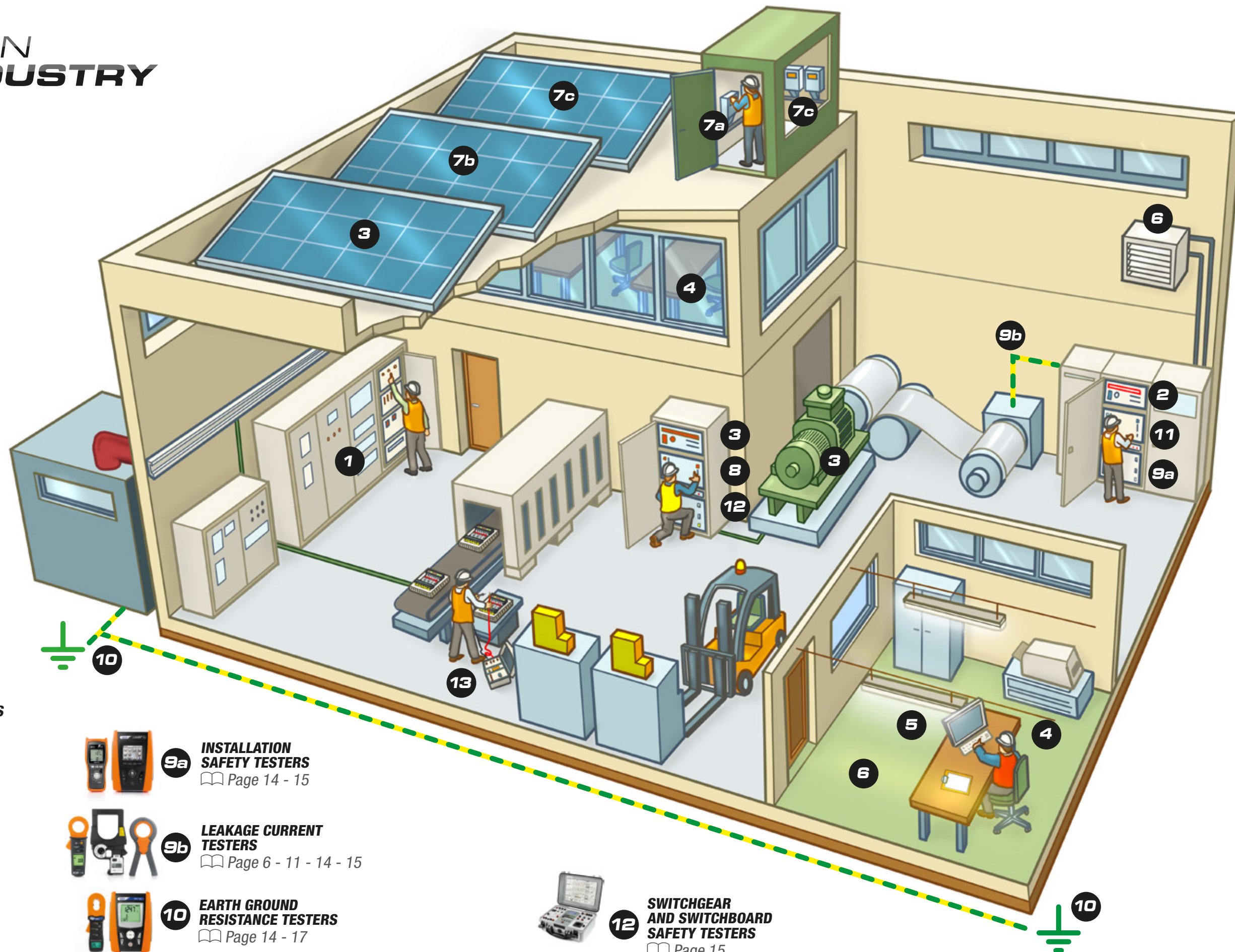
APPLICATION
Electricity meters, measurements on primary overcurrent protection devices, ripple control units.

Why use TRMS devices?

In a modern home, business or industrial installation, we often experience **“non-linear loads”** (e.g. computer networks, variable speed devices, switching suppliers, etc). These loads contribute to **deforming the power source from the traditional sinusoidal waveform** typical of “linear” loads (consisting in resistors, inductances and capacitances). Non-TRMS measuring devices (multimeters and clamp meters) for alternating voltage and current display the **“average-value”** thus missing voltage and current irregularities caused by non-linear loads.

To measure installations that contain non-linear loads, we must capture higher order **harmonic components** that cause the **distortion**. Using TRMS (True Root Mean Square) devices provide visibility into the power source beyond the 50 or 60 Hz fundamental to the bandwidth of the instrument.

Therefore, given the presence of non-linear devices in our homes, work and factories the use of **TRMS measuring device** is in order to obtain reliable reading values of the measured quantities.



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PROFESSIONAL TRMS MULTIMETERS

Scan the QR code to discover our whole line of accessories.





MAIN MEASUREMENTS	PROFESSIONAL TRMS MULTIMETERS							PROFESSIONAL TRMS MULTIMETERS							
	HT64	HT63	HT62	HT61	HT60	JUPITER		MERCURY	FLASHMETER	IRONMETER	HT39	HT37	HT701	HT401	HT712
TRMS	•	•	•	•	•	•		•	•	•	•	•	•	•	•
AC/DC voltage	• AC+DC	•	•	•	•	• AC+DC		• AC+DC	•	•	•	•	•	• AC+DC	•
AC/DC voltage with low impedance (LoZ)	•	•	•	•	•	•		-	-	-	-	-	-	• AC	-
AC/DC current with external transducer	•	•	-	-	-	• Inrush		• AC+DC	-	-	-	-	-	-	-
AC/DC current with leads	• AC+DC	• AC+DC	•	•	-	-		•	-	•	•	•	•	• AC+DC	-
4-20mA% reading	•	•	-	-	-	-		-	-	-	-	-	-	-	-
Frequency	•	•	•	•	•	•		•	-	•	•	•	•	•	•
Resistance	•	•	•	•	•	•		•	•	•	•	•	•	•	•
Continuity with buzzer	•	•	•	•	•	•		•	•	•	•	•	•	•	•
Capacitance	•	•	•	-	•	-		•	-	•	•	•	•	•	-
Diode test	•	•	•	•	•	-		•	-	•	•	•	•	•	-
Duty Cycle (%)	•	•	•	•	•	-		•	-	•	•	•	-	-	-
Temperature with K-type probe	•	•	•	-	•	-		•	-	-	-	-	•	•	-
Insulation measurement (50,100,250,500,1000VDC)	-	-	-	-	-	-		-	-	-	-	-	•	-	-
Phase sequence and concordance	-	-	-	-	-	•		-	-	-	-	-	-	-	•
Built-in LED torch	-	-	-	-	-	-		•		•	-	-	-	-	-
Test on A and AC general RCDs	-	-	-	-	-	•		-	-	-	-	-	-	-	-
L-L,L-N,L-PE, RA loop impedance	-	-	-	-	-	•		-	-	-	-	-	-	-	-
Voltage/Current harmonics + THD%	-	-	-	-	-	•		-	-	-	-	-	-	-	-
ADDITIONAL CHARACTERISTICS															
Measurement category	CAT IV 600V	CAT IV 600V	CAT IV 600V	CAT IV 600V	CAT IV 600V	CAT IV 600V CAT III 690V		CAT IV 600V CAT III 1000V	CAT IV 600V	CAT III 600V	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 IV 600V
Measuring counts	6000	60.000	6000	6000	4000	9999		6000	4000	4000	4000	4000	10000	6000	4000
Backlight	•	•	•	•	•	•		•	•	•	•	-	•	•	-
IR sensor resolution	-	-	-	-	-	-		• 80 x 80 pxl	-	-	-	-	-	-	-
Bluetooth	-	-	-	-	-	-		• with APP HTMercury	-	-	-	-	-	-	-
Bargraph	•	•	•	•	-	•		•	-	-	•	•	•	•	-
Autorange	•	•	•	•	•	•		•	-	•	•	•	•	•	•
Auto power off	•	•	•	•	•	•		•	•	•	•	•	•	•	•
Detection of AC voltage without contact	-	-	-	-	-	-		•	•	-	-	-	-	•	-
Data HOLD function	•	•	•	•	•	•		•	•	•	•	•	•	•	•
MIN/MAX/AVG functions	•	• MIN/MAX	• MIN/MAX	• MIN/MAX	-	• MIN/MAX		• MIN/MAX	-	• MIN/MAX	• MIN/MAX	• MIN/MAX	•	• MIN/MAX	-
PEAK function	• (1ms)	• (1ms)	-	-	-	• (1ms)		•	-	-	•	•	-	•	-
Automatic recognition of AC/DC	-	-	-	-	-	•		-	•	-	-	-	-	-	•
Automatic recognition of internal functions	-	-	-	-	-	-		-	•	-	-	-	-	-	-
Relative measurement	•	•	•	•	•	-		•	-	-	•	•	•	-	-
Data logger and graph	•	-	-	-	-	-		•	-	-	• (through SW)	-	-	-	-
Memory for data saving	•	-	-	-	-	-		• (micro SD card)	-	-	-	-	•	-	-
Power supply	1x7.4V rechargeable Li-ION battery	4x 1.5V AAA	1x 9V 6F22	1x 9V 6F22	1x 9V 6F22	4x 1.5V AAA		1x7.4V rechargeable Li-ION battery	2x 1.5V AAA	2x 1.5V AAA	1x 9V 6F22	1x 9V 6F22	4x 1.5V AA	1x 9V 6F22	2x 1.5V AAA
Size in mm (L x W x H)	175x85x55	175x85x55	175x85x55	175x85x55	175x85x55	175x85x55		190x75x55	135x75x40	120x85x45	164x82x44	164x82x44	207x95x52	190x94x48	250x51x30
Weight in grams	400	400	400	400	400	420		555	220	200	400	400	630	460	150
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	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1
Order code	HR000010	HR000001	HR000002	HR000003	HR000004	HR00JUPI		HR000MER	HR000011	HR000005	HR000039	HR000037	HR000701	HR000401	HR000712

DIGITAL MULTIMETERS

Scan the **QR code** to discover our whole line of accessories.





MAIN MEASUREMENTS	DIGITAL MULTIMETERS						DIGITAL MULTIMETERS					
TRMS	•	-	•	-	-		-	-	-	-	-	-
AC/DC voltage	•	•	•	•	•		•	•	•	•	•	•
AC/DC current	•	•	•	-	-		• DC	• DC	•	-	-	-
Frequency	•	-	•	•	•		-	-	•	-	-	-
Resistance	•	•	•	•	•		•	•	•	-	-	-
Continuity with buzzer	•	•	•	•	•		•	-	•	•	•	•
Capacitance	•	-	•	•	•		-	-	-	-	-	-
Diode test	•	•	•	•	•		•	•	-	•	•	•
Duty Cycle (%)	•	-	•	•	•		-	-	-	-	-	-
Temperature with K-type probe	-	-	•	•	-		-	-	-	-	-	-
Phase sequence and phase concordance	-	-	-	-	-		-	-	-	•	•	•
Built-in LED torch	-	-	-	-	-		-	-	-	•	•	•

ADDITIONAL CHARACTERISTICS

Measurement category	CAT III 600V	CAT III 600V	CAT III 600V	CAT III 600V	CAT III 600V		CAT III 600V	CAT III 300V CAT II 600V	CAT III 300V CAT II 600V	CAT IV 600V CAT III 690V	CAT IV 600V CAT III 690V	CAT IV 600V CAT III 690V
Measuring counts	4000	2000	4000	4000	4000		2000	2000	3400	6900	6900	LED indications
Backlight	•	•	•	•	•		•	-	-	-	-	-
Bargraph	-	-	-	-	-		-	-	•	-	-	-
Autorange	•	•	•	•	•		-	-	•	-	-	-
Auto power off	•	•	•	•	•		-	-	•	•	•	•
Data HOLD function	•	•	•	•	•		•	•	•	•	•	•
MIN/MAX function	•	-	•	-	-		-	-	-	-	-	-
PEAK function	-	-	-	-	-		-	-	-	-	-	-
Relative measurement	-	-	-	•	•		-	-	-	-	-	-
Power supply	2x 1.5V AAA	2x 1.5V AAA	2x 1.5V AAA	1x 9V 6F22	1x 9V 6F22		1x 9V 6F22	1x 12V MS21/MN21	2x 1.5V AAA	2x 1.5V AA	2x 1.5V AA	2x 1.5V AA
Size in mm (L x W x H)	138x68x37	138x68x37	138x68x37	138x68x37	138x68x37		150x70x48	105x50x25	128x87x24	255x60x35	255x60x35	255x60x35
Weight in grams	235	210	235	210	210		255	100	210	170	170	170
Safety	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1		IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1
Order code	HR000232	HR000231	HR000211	HR000210	HR000021		HR00025N	HR00014D	HR000012	HR000009	HR000008	HR000006

CLAMP METERS

Scan the QR code to discover our whole line of accessories.



MAIN MEASUREMENTS	AC										AC/DC				HARMONICS AND/OR POWER				LEAKAGE		
	•	•	-	-	-	-	•	•	•		•	•	-	•	•	•	•	•	•	•	•
TRMS																					
Current measuring range	1000A	600A	600A	400A	400A	600A	3000A	200A	300A		1000A	600A	400A	400A	1000A	1000A	400A	400A	10A (DC) 20A (AC)	3000A	100A
AC/DC current	• AC	• AC	• AC	• AC	• AC	• AC	• AC	• AC	• AC		•	•	•	•	• AC+DC	• AC+DC	• AC	• AC	•	• AC	• AC
AC/DC voltage	•	•	•	•	•	•	-	•	-		•	•	•	-	•	•	•	•	•	-	-
Leakage current	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	• 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 recognition of internal functions	-	-	-	-	-	-	-	•	-		-	-	-	-	-	-	-	-	-	-	-

MAINS ANALYSIS																					
AC/DC voltage, current measurement/recording	-	-	-	-	-	-	-	-	-		-	-	-	-	•	•*	•*	•*	-	-	-
AC/DC power measurement/recording	-	-	-	-	-	-	-	-	-		-	-	-	-	•	•*	•*	•*	-	-	-
AC/DC energy measurement/recording	-	-	-	-	-	-	-	-	-		-	-	-	-	•	•*	•*	•*	-	-	-
Cosphi, PF measurement/recording	-	-	-	-	-	-	-	-	-		-	-	-	-	•	•*	•*	•*	-	-	-
UI + THD% harmonics measurement/recording	-	-	-	-	-	-	-	-	-		-	-	-	-	•	•*	•*	-	-	-	-
Inrush current measurement (INRUSH)	-	-	-	-	-	-	-	-	-		-	-	-	•	•	• Dynamic INRUSH	-	-	-	-	-

ADDITIONAL CHARACTERISTICS																					
Measurement 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 III 600V	CAT IV 600V CAT III 1000V	CAT IV 600V CAT III 1000V	CAT III 300V		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 II 600V CAT III 300V	CAT III 300V
Maximum cable diameter	45mm	30mm	30mm	30mm	30mm	30mm	110mm	16mm	20mm		45mm	30mm	30mm	20mm	45mm	45mm	30mm	30mm	23mm	108mm	40mm
Measuring counts	6000	6000	2000	2000	4000	2000	3000	10000	4000		6000	6000	4000	4000	9999	9999	10000	10000	5000	3200	6000
Backlight	•	•	•	-	-	•	•	•	•		•	•	-	•	•	•	•	•	•	-	•
Bargraph	•	•	-	-	-	-	-	-	-		•	•	-	-	-	-	•	•	-	-	•
Autorange	•	•	•	•	•	•	•	•	•		•	•	-	•	•	•	•	•	•	-	•
Auto power off	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•
Contactless AC voltage detection	•	•	•	-	•	•	-	•	•		•	•	•	•	•	•	-	-	-	-	-
Data HOLD function	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•
MIN/MAX function	•	•	• MAX	-	-	• MAX	-	-	-		•	•	-	-	•	•	•	•	•	-	-
AVG function (AVERAGE)	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	•	•	-	-	-
PEAK function	•	•	-	-	-	-	-	-	-		•	•	-	-	•	•	•	•	-	-	•
Relative measurement (ZERO)	-	•	-	-	•	-	-	-	-		•	•	•	-	-	-	-	-	•	-	-
Low-pass filter for harmonic reduction	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	• 150Hz	• 100Hz
Analogue output	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	•
Electrical parameter logging	-	-	-	-	-	-	-	-	-		-	-	-	-	•	•	-	-	-	-	-
Memory for data saving	-	-	-	-	-	-	-	-	-		-	-	-	-	•	•	-	-	-	-	-
PC / Smartphone or Tablet interface	-	-	-	-	-	-	-	-	-		-	-	-	-	• Bluetooth	-	-	-	-	-	-
Power supply	1x 9V 6F22	1x 9V 6F22	1x 9V 6F22	2x 1.5V AAA	2x 1.5V AAA	1x 9V 6F22	2x 1.5V AAA	2x 1.5V AAA	2x 1.5V AAA		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	2x 1.5V AAA
Size in mm (L x W x H)	252x88x44	215x74x43	215x74x43	205x64x39	200x66x37	197x70x40	280x120x25	193x54x31	160x55x30		252x88x44	215x74x43	200x66x37	160x55x30	252x88x44	252x88x44	205x64x39	205x64x39	206x76x34	341x194x52	200x70x40
Weight in grams (batteries included)	402	285	285	280	205	180	170	280g	140		442	285	205	140	420	420	280	280	262	1900	265
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	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	HP004012	HP004011	HP004010	HP030000	HP000100	HP007004		HP009021	HP009015	HP004013	HP007005	HP009022	HP009020	HP004022	HP004020	HP000079	HP000078	HP00077N

* Real-time measurement only.

POWER QUALITY ANALYZERS

Scan the QR code to discover our whole line of accessories.



	POWER QUALITY ANALYZERS					
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	•	•	•	•	•	•
Voltage unbalance (NEG%, ZERO%)	•	•	•	•	-	-
Active, reactive, apparent power/energy and DC power	•	•	•	•	•	•
Voltage and current harmonics up to the 49 th with calculation of THD%	•	•	•	•	• Only THD	• 25 th
Voltage anomalies (dips, peaks) with a resolution of 10ms (@ 50Hz)	•	•	•	•	-	-
Voltage spikes with a resolution of 5µs (200kHz)	•	-	-	-	-	-
Electric motor starting current (INRUSH)	•	•	-	-	-	•
Voltage flickers (Pst, Plt)	•	•	-	-	-	-
Full analysis EN50160	•	•	-	-	-	-
Phase sequence	•	•	•	•	•	•
Neutral-Ground Voltage	•	•	•	-	-	•
Neutral current	•	•	•	•	-	•

MEMORY AND RECORDING						
Max number of simultaneously selectable parameters	251	251	251	383	44	60
Recording with selectable integration period	1s-60m	1s-60m	1s-60m	5s-60m	5s-60m	1s-15min
Indicative memory duration (in days @ Pl=10min @ max number of parameters)	90 days	90 days	90 days	30 days	153 days	2 days
Indication of recording duration	•	•	•	•*	•*	•
Internal memory capacity	15MB	15MB	15MB	8MB	8MB	2MB
External compact flash card	•	•	•	-	-	-
Default and custom recordings	•	•	•	-	-	-
Snapshot saving	•	•	•	•*	•*	•*

REAL-TIME DISPLAY						
Summary table of main electric parameters	•	•	•	•*	•*	•*
Voltage/current waveforms	•	•	•	•*	•*	•*
Tables or histograms of Harmonics and THD%	•	•	•	•*	•*	•*
Voltage/current vector diagram	•	•	•	•*	•*	•*

ADDITIONAL CHARACTERISTICS						
Measurement category	CAT IV 600V	CAT IV 600V	CAT IV 600V	CAT IV 300V	CAT IV 300V	CAT IV 600V
Measurement by means of external CT and VT	•	•	•	•	•	-
Touchscreen colour display	•	•	•	-	-	-
Power supply and rechargeable battery recharging	•	•	•	• Auto power supplied	• Auto power supplied	-
Auto power off	•	•	•	•	•	•
USB port for data download onto Pen Drive	•	•	•	• Only PC	• Only PC	-
Provided PC interface with software for Windows	• USB	• USB	• USB	• Wi-Fi / USB	• Wi-Fi / USB	• Bluetooth
Context help active on each screen	•	•	•	-	-	•
Protection password	•	•	•	-	-	-
Size (LxWxH) (mm)	235x165x75	235x165x75	235x165x75	235x165x75	235x165x75	252x88x44
Weight in kg (batteries included)	1	1	1	0,7	0,7	0,5
Reference standard for mains quality	EN50160	EN50160	-	-	-	-
Reference standard for safety	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1
Order code	HV000824	HV000823	HV000078	HV000820	HV000819	HP009022

DATA LOGGERS

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	DATA LOGGERS			
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	-	-
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 @ Pl=5min)	455	455 / 1820*	455	455 / 1820*
Internal memory capacity	1MB	1MB	1MB	1MB

ADDITIONAL CHARACTERISTICS				
Protection rating	IP65	IP65	IP65	IP65
Measurement 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

* According to battery duration.

ORDER CODE HA000407



ANALYSIS TAB2 8" Quad Core Wi-Fi 4G hd IPS tablet



HT introduces the new tablet with pre-installed HTanalysis App.

- With ANALYSIS TAB2:
- Time to insight is reduced
 - Sharing is simplified
 - The user works more safely, protected from any danger of direct contact
 - Through HTCLOUD you will be able to share all measures with your colleagues and/or download them from the PC without physically connecting the device to the PC

Technical features:
CPU: MTK8735 Quad Core 1.3Ghz Cortex-A53
GPU: Mali-T720
RAM: 2GB DDR3
Cell network: 4G
Internal memory: 16 GB
External memory: MicroSD Slot
Display: 8" LCD 800×1280 IPS
Capacitive touch screen
OS: Android 5.1 Lollipop
Photo camera: 2MP (Front), 5MP (Back)



- COMPATIBLE WITH
- MacroTestG3, G2, G1
 - CombiG2
 - PQA820, PQA819
 - HT9022
 - GSC60

ELECTRICAL
INSTALLATION
SAFETY TESTERS

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line of accessories.





GSC60



MACROTEST G3



MACROTEST G2



MACROTEST G1



COMBI G2



COMBI 420/421

WIRE MAPPING



M75



M74

NEW



JUPITER



FULLTEST3

ELECTRIC SAFETY MEASUREMENTS	ELECTRICAL INSTALLATION SAFETY TESTERS					ELECTRICAL INSTALLATION SAFETY TESTERS					
TRMS	•	•	•	•		•	•	•	•	•	•
Insulation with voltage 50, 100, 250, 500, 1000VDC	•	•	•	-		•	•	• 250V, 500V	• 250V, 500V	-	•
Continuity of protective conductors with 200mA / 10A	• 200mA	• 200mA	• 200mA	• 200mA		• 200mA	• 200mA	• 200mA	• 200mA	-	•
Tripping time of RCDs type B, A, AC Standard, Selective and Delayed up to 1A	•	•	-	-		•	• Only A, AC standard and selective	• A = 30mA AC = 300mA Only standard	• A = 30mA AC = 300mA Only standard	• Only A, AC standard up to 300mA	•
Tripping current of type A, AC Standard up to 650mA	•	•	-	-		•	•	• A = 30mA AC = 30mA Only standard	• A = 30mA AC = 30mA Only standard	• Only A, AC standard 30mA	•
Tripping time and current of earth leakage relays type B, A, AC Standard, Selective and Delayed up to 10A	•***	•***	-	-		•***	-	-	-	-	-
Non-trip earth resistance	•***	•	-	-		•	•	•	•	•	•
Earth resistance by voltammetric method	•	•	•	•		•	-	-	-	-	-
Earth resistance by stakeless testing method	•**	•**	•**	•**		•**	-	-	-	-	-
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	•	•	-	-		•	•	•	•	•	-
Wire mapping of LAN cables with RJ45 plug	-	-	-	-		-	-	•	-	-	-
Phase sequence	•	•	-	-		•	•	•	•	•	-
Leakage current with optional clamp meter	•	•	-	-		•	•	•	•	-	-
Dielectric strength with test voltage up to 5100V AC	-	-	-	-		-	-	-	-	-	•
Measurement of discharge time of internal capacitances	-	-	-	-		-	-	-	-	-	•
MAINS ANALYSIS											
Measurement of Voltage, Current, Active, Reactive, Apparent Power	• (3) with Recording	• (1)	• (1)	-		• (1)	• (1)	-	-	-	• (1)
Measurement of Cosphi, Power Factor	• (3) with Recording	• (1)	• (1)	-		• (1)	• (1)	-	-	-	• (1)
U/I harmonics up to the 49 th +THD% + Voltage anomalies	• (3) with Recording	• 25 th no Anomalies	• 25 th no Anomalies	-		• 25 th	• 49 th	-	-	• 25 th no Anomalies	-
ADDITIONAL CHARACTERISTICS											
Measurement category	CAT IV 300V	CAT IV 300V	CAT IV 300V	CAT IV 300V		CAT III 240V	CAT III 240V	CAT III 550V	CAT III 550V	CAT IV 600V CAT III 690V	CAT III 300V CAT II 300V
DC/AC TRMS voltage and current, Frequency, Resistance, Continuity with buzzer	-	-	-	-		-	-	•	•	•	-
AUTOMATIC test (Ra, RCD, Insulation)	-	•	-	-		•	•	•	•	-	-
Measurement of environmental parameters (°C, °F, %RH, Lux)	• with Recording	•	-	-		•	•	-	-	-	-
Test with remote lead PR400	•	•	•	•		•	•	-	-	-	-
Help on line on the display	•	•	•	•		•	•	-	-	-	-
Internal memory	•	•	•	•		•	•	-	-	-	•
Optical/USB serial port for PC connection	•	•	•	•		•	•	-	-	-	• USB
Built-in WiFi connection and compatibility with HTANALYSIS App	•	•	•	•		•	-	-	-	-	-
Size (LxWxH) (mm)	222x162x57	222x162x57	222x162x57	222x162x57		222x162x57	222x162x57	240x100x45	240x100x45	175x85x55	400x300x170
Weight (batteries included)	1.2 kg	1.2 kg	1.2 kg	1.2 kg		1.2 kg	1.2 kg	450g	450g	420g	15kg
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	HV000060	HV005036	HV005038	HV005037		HV0000G2	HV000420 HV004210	HV000075	HV000074	HR00JUPI	HV000003

* With optional accessory IMP57 ** With optional accessory clamp T2100 *** With optional accessory RCDX10 (1) Balanced single-phase or three-phase system

ACCESSORY
FOR LOOP IMPEDANCE
MEASUREMENT
WITH HIGH RESOLUTION

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line of accessories.



COD. METEL HAIMP001

IMP57

ACCESSORY FOR LOOP IMPEDANCE MEASUREMENT WITH HIGH RESOLUTION AND PROSPECTIVE SHORT-CIRCUIT CURRENT UP TO 400kA

IMP57 is an optional to measure **Loop/ Line fault loop impedance** and calculating the **prospective short-circuit current**. IMP57 can be used together with the **GSC, SIRIUS, Combi** and **Macrotest Gx** series as well as **Fulltest3** and **Speed418**. The high test current (**approx. 200A**) allows carrying out measurements **with high resolution (0.1mΩ)**, therefore obtaining accurate results **even near MV/LV transformer cabinets** (TN systems). IMP57 is able to make superior measurements to standard instruments in order to guarantee reliable measurements of prospective short-circuit currents according to the project's specification. The 4-terminal measuring technique enhances the accuracy by nulling the effect of the provided cables and **eliminates the need for preliminary calibrations**. IMP57 is provided in a sturdy protective case to protect from weather and shock.

IMP57 COMBINATIONS FOR USE



MACROTESTG3
› Page 14



GSC60
› Page 14



COMBIG2 / COMBI42x
› Page 14/15



SPEED418
› Page 18



FULLTEST3
› Page 20

EARTH RESISTANCE
AND STEP/CONTACT
VOLTAGE
MEASURING DEVICES

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MAIN MEASUREMENTS	EARTH RESISTANCE			STEP/CONTACT VOLTAGE
	•	•	•	•
TRMS				
Measuring range	50KΩ	50KΩ	1KΩ	200Ω
Insulation with voltage 50, 100, 250, 500, 1000VDC	-	-	-	-
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 without any cable interruption	-	-	•	-
Measurement of leakage current on earth systems	-	-	• Only for T2000	-
Measurement of step/contact voltage	-	-	-	•

ADDITIONAL CHARACTERISTICS	CAT III 240V	CAT III 240V	CAT III 150V	CAT IV 50V
Measurement category				
Detection of disturbance currents on measurement	•	•	-	•
LCD display	•	•	•	•
Backlight	•	-	•	•
AutoPowerOFF	•	•	•	•
Help on line on the display	•	-	-	•
Internal memory	•	-	•	•
Optical/USB serial port for PC connection	•	-	-	• RS-232/USB
USB port for device data download	-	-	• Only for T2100*	-
Size (LxWxH) (mm)	225x165x75	240x100x45	293x90x66	230x115x103
Weight in kg (batteries included)	1,0	0,6	1,3	30,8
Reference standard for safety	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1
Order code	HV000416	HV000071	HP002000 (T2000) HP002100 (T2100)	HN002055

* Compatible with Macrotest G1, G2 and G3

RCD AND LOOP
VERIFICATION
DEVICES

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line of accessories.



NEW



JUPITER



SPEED418



M73

MAIN MEASUREMENTS	LOOP/RCD		
TRMS	•	•	•
Measuring range of verifiable RCD rated currents	30,100,300mA	10,30,100,300,500,650,1000mA	30,30x5,100,300mA
Tripping time of type A, AC General and Selective RCDs	• Only general	• Up to 1A	• A = 30mA AC = 300mA Only general
Ramp test for tipping current of RCDs type A, AC Standard	• Only 30mA only Standard	• Up to 650mA	• A = 30mA AC = 30mA Only general
Overall earth resistance with no residual current protection tripping	•	•	•
Loop/Line impedance, Phase-Phase, Phase-Neutral, Phase-PE	•	•	-
Loop/Line impedance Phase-Phase Phase-Neutral, Phase-PE with high resolution (0.1mΩ)	-	•*	-
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

Measurement category	CAT IV 600V CAT III 690V	CAT III 265V	CAT III 550V
AUTOMATIC Test	-	•	-
Test with remote lead	-	•	-
Help on line on the display	-	•	-
Internal memory	-	•	-
Optical/USB serial port for PC connection	-	•	-
Size (LxWxH) (mm)	175x85x55	222x162x57	240x100x45
Weight (batteries included)	420g	1kg	450g
Reference standard for safety	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1
Order code	HR00JUPI	HV000418	HV000073

* With optional accessory IMP57

INSULATION
AND CONTINUITY
MEASURING
DEVICES

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HT7052



HT7051



HT701



EQUITEST
5071



ISO410



M72



M70

MAIN MEASUREMENTS	INSULATION/CONTINUITY						
TRMS	-	-	•	-	-	•	-
DC test voltage measuring range	500V ÷ 10kV	100V ÷ 5kV	50,100,250, 500,1000V	-	50, 100, 250, 500, 1000V	250 / 500V	250, 500, 1000V
Insulation resistance measuring range	120kΩ ÷ 10TΩ	0.01MΩ ÷ 9.99TΩ	2MΩ ÷ 22GΩ	-	0.01MΩ ÷ 1999MΩ	0.00MΩ ÷ 999MΩ	0.001MΩ ÷ 4000MΩ
Dielectric strength in DC	•	-	-	-	-	-	-
Continuity of protective conductors with 200mA	-	-	-	•	•	•	•
Continuity 10A	-	-	-	•	-	-	-
ADDITIONAL FUNCTIONS							
Test with programmable ramp	• steps of 25VDC	• steps of 25VDC	-	-	-	-	-
Programmable test timer	• 1s ÷ 30min	• 5s ÷ 100min	-	-	• 10s ÷ 16,6min	-	• 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	•	•	•	-	•	•	•
Measurement of DC/AC voltage up to 600V	•	•	• 1000V	-	-	•	•
Measurement of resistance and continuity with buzzer	-	-	-	-	-	•	•
Measurement of phase sequence	-	-	-	-	-	•	-

ADDITIONAL CHARACTERISTICS

Measurement category	CAT IV 600V	CAT IV 600V	CAT IV 600V CAT III 1000V	CAT III 600V	CAT III 265V	CAT III 550V	CAT III 550V
Backlight	•	•	•	•	•	-	•
Autocalibration of measuring leads	-	-	-	•	•	•	•
Guard terminal	•	•	-	-	-	-	-
Measurements with remote terminal	-	-	•	-	•	-	-
Internal memory	•	•	•	•	•	-	-
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	6x 1.2V NiMH LR20	Rechargeable NiMH	4 x1.5V tipo AA	6x 1.5V tipo AA	6x 1.5V tipo AA	4x 1.5V AA	4x 1.5V AA
Size in mm (LxWxH)	360 x 330 x 160	360 x 310 x 195	207 x 95 x 52	225 x 165 x 105	222 x 162 x 57	240 x 100 x 45	240 x 100 x 45
Weight (batteries included)	5.5kg	3.5kg	630g	1.7kg	1kg	450g	450g
Safety	IEC/EN61010-1 IEC/EN61557-2	IEC/EN61010-1 IEC/EN61557-1-2	IEC/EN61010-1 IEC/EN61557-1-2	IEC/EN61010-1 IEC/EN61557-1-3-4-7	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1
Order code	HV007052	HV007051	HR000701	HV005071	HV000410	HV000072	HV000070

SWITCHBOARDS AND MACHINE SAFETY TESTERS

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line of accessories.



ORDER CODE HV000003

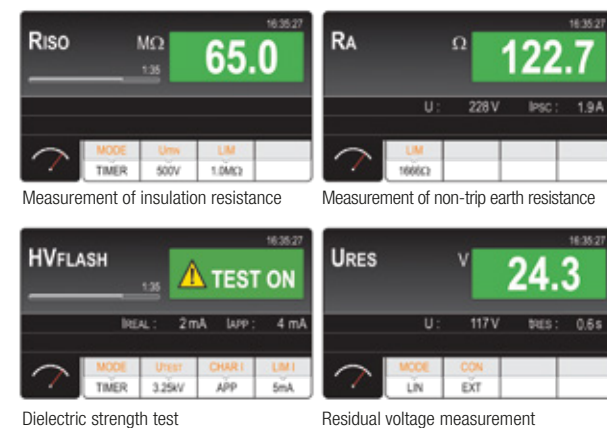
FULLTEST3

MULTIFUNCTION DEVICE FOR SAFETY TESTS
ON SWITCHBOARDS AND MACHINES ACCORDING
TO IEC/EN60204-1:2006 AND IEC/EN61439-1

FULLTEST3 is a cutting-edge device that carries out **all measurements required** by the new laws **IEC/EN60204-1:2006** and **IEC/EN61439-1** on **electric switchboards and machines**. Additionally it measures continuity of protective conductors, insulation and dielectric strength (with **test voltage up to 5100V**). FULLTEST3 is capable of carrying out tests on RCDs type A, AC and B, General, Selective and Delayed, measurements of Line/Loop impedance also with high resolution 0.1mΩ (with optional accessory IMP57), measurement of non-trip earth resistance, measurement of leakage current through the on-board outlet or by clamp transducer, and verification of residual voltage on capacitances and phase sequence. FULLTEST3 can also carry out tests on breaking capacity, protection tripping, I2t tests relevant to MCBs in curve B, C, D, K and fuses type gG and aM. FULLTEST3 has a **touch-screen colour display** and **3 USB ports for connection to PC, memory sticks, printers and bar code readers**.



FULLTEST at work



VERIFICATION PHOTOVOLTAIC FIELD

PERFECTION FOR THE SUN

New HT solutions for performance optimization and troubleshooting.

Thanks to the decrease in the cost of components and the remarkable increase of performance, installing photovoltaic systems has become increasingly common. In photovoltaic systems, problems connected to safety and to the system's performance must be checked, and maintenance of strings and single panels must be carried out.



Troubleshooting

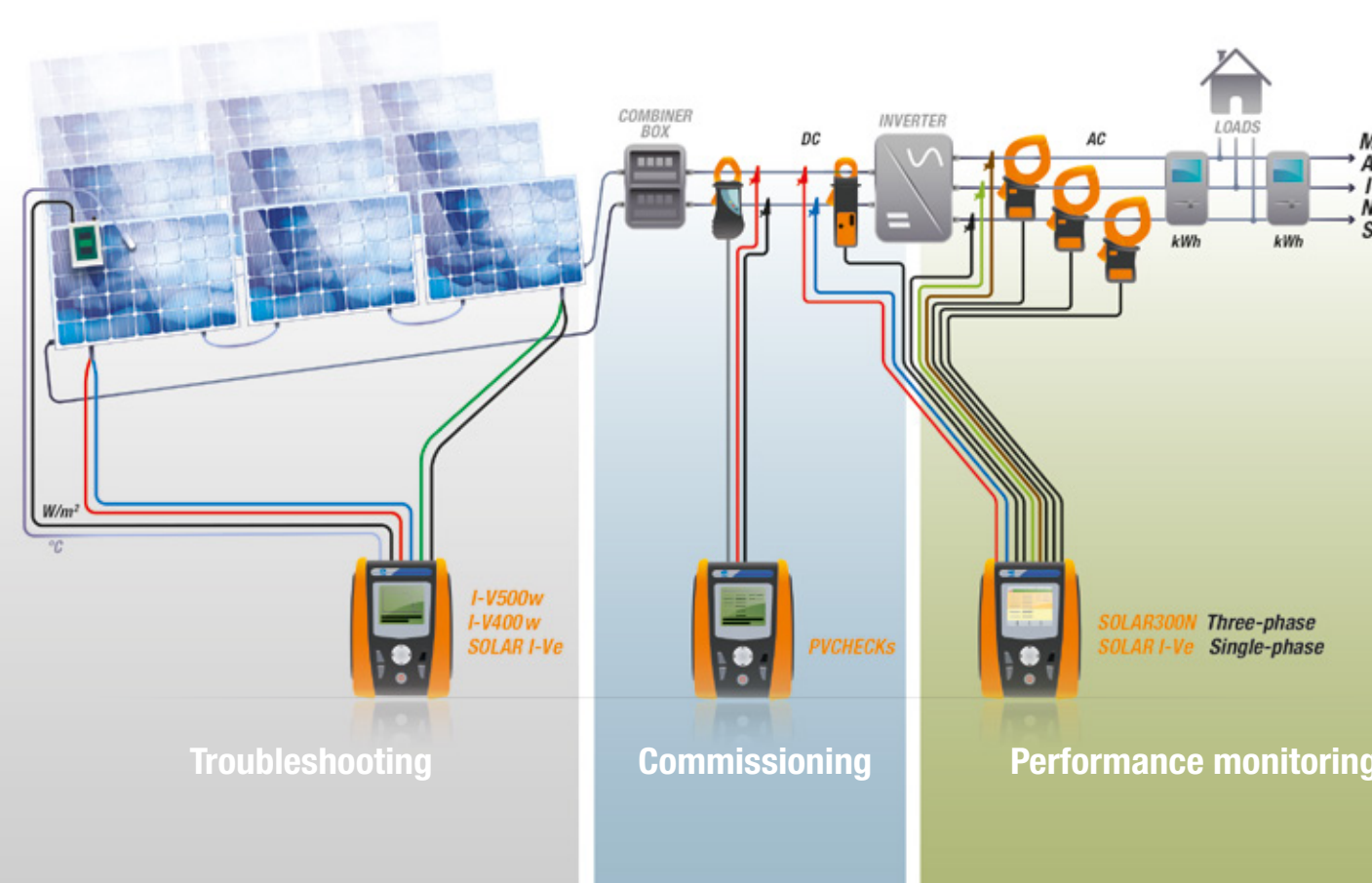
- Often, during the operation of a system, **some modules may impact the performance** of the whole system. When system efficiency is lower than expected, it is necessary **to detect the defective modules** so that they can be replaced. This can be achieved **by measuring the I-V curve** with devices such as **SOLAR I-Ve, I-V500w and I-V400w**.

Commissioning

- When operating a photovoltaic system, it is necessary to **certify its safety according to IEC62446**. The best device to carry out these verifications is **PVCHECKs**.

Performance monitoring

- Performance recording** is required to make **maintenance programs efficient**. By monitoring system performance it is possible to **certify a production loss** quickly and efficiently. **SOLAR300N, SOLAR I-Ve** and **MPP300** are the ideal solution for recording over time the production of a system and the performance check of an inverter.



DEVICES FOR
PHOTOVOLTAIC
FIELDS

Scan the **QR code** to discover our whole line of accessories.



MAINTENANCE AND EFFICIENCY OF THE PHOTOVOLTAIC SYSTEM	TROUBLESHOOTING, PERFORMANCE AND COMMISSIONING					
Measurement of I-V curve on PV modules and strings	•	•	•	-	-	-
Automatic measurement with AutoSequence™* mode	•	•	•	-	-	-
Quick IVCK test for measuring Voc and Isc on PV modules and strings	•	•	•	-	•	-
Single-phase/three-phase photovoltaic systems' testing	-	-	• 1MPPT (3MPPT with MPP300)	• 1MPPT (3MPPT with MPP300)	-	•
Continuity of protective conductors with 200mA	-	-	-	-	•	-
PV strings/field insulation with no service interruption with test voltage 250, 500, 1000V DC	-	-	-	-	•	-
DC side efficiency of the photovoltaic field	-	-	-	•	•	-
Use of remote unit SOLAR-02 with USB \ RF connection	• RF	• RF	• RF	• USB	• RF	• RF • USB
Measurement of irradiation with reference cell	•	•	•	•	•	-
Temperature measurement of cell and environment	•	•	•	•	•	-

MAINS ANALYSIS

AC/DC voltage in single-phase/three-phase systems	-	-	-	•	• DC	•
AC/DC current in single-phase/three-phase systems	-	-	-	•	• DC	•
Cosphi, Power Factor	-	-	-	•	-	-
Voltage unbalance (NEG%, ZERO%)	-	-	-	•	-	-
Active P, Reactive Q, Apparent S Power/Energy	-	-	• Only active P	•	• Only active P	-
Voltage and current harmonics up to the 49 th with calculation of THD%	-	-	-	•	-	-
Voltage anomalies (dips, peaks) with a resolution of 10ms (@ 50Hz)	-	-	-	•	-	-
Voltage spikes with a resolution of 5µs (200kHz)	-	-	-	•	-	-
Electric motor starting current (INRUSH)	-	-	-	•	-	-
Voltage flickers (Pst, Plt)	-	-	-	•	-	-
Full analysis EN50160	-	-	-	•	-	-
Phase sequence	-	-	-	•	-	-
Neutral-Ground Voltage	-	-	-	•	-	-
Neutral current	-	-	-	•	-	-

MEMORY AND RECORDING

Max number of simultaneously selectable parameters	-	-	9	251	5	-
Recording with selectable integration period	-	-	5s-60m	1s-60m	5s-60m	1s-60m
Indicative memory duration (in days @ PI=10min @ max number of parameters)	-	-	8	90	-	8



>>> *FOLLOWS*

	TROUBLESHOOTING, PERFORMANCE AND COMMISSIONING					
Internal memory extension with Compact Flash card	-	-	-	•	-	-
Default and custom recordings	-	-	-	•	-	-

REAL-TIME DISPLAY

Summary table of main electric parameters	•	•	•	•	•	-
Voltage/current waveforms	-	-	-	•	-	-
Tables or histograms of Harmonics and THD%	-	-	-	•	-	-
Voltage/current vector diagram	-	-	-	•	-	-

ADDITIONAL CHARACTERISTICS

Measuring range of curve I-V / Isc-Voc	1500V / 15A**	1000V / 15A	1500V / 15A**	-	1000V / 15A Isc-Voc only	-
Measuring range for photovoltaic testing	-	-	1000VDC / 265VAC	1000VAC-DC 3000A	-	1000VDC / 600VAC 3000AC / 1000ADC
Measurement category	CAT III 300V	CAT III 300V	CAT III 300V	CAT IV 600V	CAT III 300V	CAT IV 300V
Touchscreen colour display	-	-	-	•	-	-
Backlit LCD display	•	•	•	-	•	-
Internal memory capacity	200 curves I-V	200 curves I-V	200 curves I-V 8 days@ PI=10 min	15MB 90 days@ PI 10min	999 Locations	2MB 8 days@ PI=10 min
USB port for data download onto Pen Drive	-	-	-	•	-	-
Provided PC interface with software for Windows	•	•	•	•	•	-
Built-in WiFi communication interface	•	•	•	-	-	-
Custom management of internal PV module database	•	•	•	-	•	-
Power supply with rechargeable battery and battery charger	-	-	-	•	-	•
Auto power off	•	•	•	•	•	•
Indication of recording duration for photovoltaic testing			•	•	-	-
Reference standard for mains quality	-	-	-	EN50160	-	-
Help on line on the display	•	•	•	•	•	-
Size (LxWxH) (mm)	235x165x75	235x165x75	235x165x75	235x165x75	235x165x75	300x265x214
Weight in kg (batteries included)	1,2	1,2	1,2	1	1,2	2,3
Reference standard for safety	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1
Order code	HV00500W	HV00400W	HV0001VW	HV00300N	HV00PVCS	HVMPP300

* Optional set of leads KIT KELVIN necessary.

** Only I-V500w and SOLAR I-Ve (max current @1500V=10A, max current @1000V=15A).

PROCESS
CALIBRATORS

Scan the **QR code** to discover our whole line of accessories.



HT8051



HT8100

CALIBRATION MEASUREMENTS		
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		
Measurement category	CAT IV 600V	CAT IV 600V
Measuring counts	-	50.000
Backlight	•	•
Autorange	-	•
Auto power off	•	•
Data HOLD function	-	•
MIN/MAX function	-	•
AVG function	-	•
Relative measurement	-	•
Internal memory	-	•
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	HV008100

INFRARED
THERMAL CAMERAS

Simply
advanced.



Capacitive touch screen extra-bright



Interchangeable optics
Optional equipment



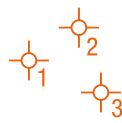
Laser pointer



Optical thermal camera in visible range



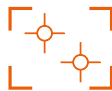
Integrated Flash LED



Up to 3 independent pointers



Preset selection properties of materials



Multi-areas with independent pointers

50 hz

Fluid image also on moving targets

384x288
160x120
80x80
32x31
pixel

High resolution for sharp images



P.i.P. fusion
Overlapping visual + thermo-graphic image



PC USB 2.0 connection
HDMI video output
Data saving on MicroSD card

HDMI™
Micro™
USB™
UNIVERSAL SERIAL BUS



THT45
Use with the THTview*** App for iOS™ and Android™ systems



Temperature range
-20 → +400 °C



Automatic adjustment of SPAN

0,06 °C

Higher thermal sensitivity



Rechargeable batteries and battery chargers



Recording of IR videos



Voice notes



Text notes

Industrial, electrical or construction. Excellent in any sector.

The new THT range makes use of a highly **innovative technology** to deliver **performance at affordable prices**. The use of IR technology today applies to many sectors, from industry to construction, from systems to installation. Thanks to the **innovative icon display**, the wide **capacitive touch screen display** and the very high **infrared resolution** with 384x288 pixels and 160x120 pixels (80x80 pixels for THT45), identifying those problems which are not visible to the naked eye becomes simpler and more intuitive. The new THT thermal cameras are provided with Flash Led*, Laser pointer*, photo-camera for visual images and PiP* and optional interchangeable optics**. With the provided 4GB memory card, with which you will be able to take hundreds of pictures, it will be possible to prepare **reports complete with images, audio and text comments**. With the new THT thermal cameras, **thermographic analysis** will be **simple and quick**.

* THT70, THT60 and THT45. ** Only THT60 and THT70. *** The THTview App is available for free download in the Apple Store™ and Google Play™ store.

INFRARED
THERMAL
CAMERAS

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CHARACTERISTICS OF IR IMAGE	THT70	THT60	THT46	THT45	MERCURY	THT32
IR sensor resolution	384 x 288	160 x 120	160 x 120	80 x 80	80 x 80	32 x 31
Temperature range	-20 ÷ 400°C -4 ÷ 752°F	-20 ÷ 400°C -4 ÷ 752°F	-20 ÷ 350°C -4 ÷ 662°F	-20 ÷ 350°C -4 ÷ 662°F	- 20 ÷ 260°C - 4 ÷ 500°F	-20 ÷ 300°C -4 ÷ 572°F
Thermal sensitivity	< 0.06°C @ 30°C	< 0.08°C @ 30°C	< 0.1°C @ 30°C	< 0.1°C @ 30°C	< 0.1°C @ 30°C	< 0.15°C @ 25°C
NETD	< 60mK	< 80mK	< 100mK	< 100mK	< 100mK	< 150mK
Spectrum range	8 ÷ 14µm	8 ÷ 14µm	8 ÷ 14µm	8 ÷ 14µm	8 ÷ 14µm	6.5 ÷ 14µm
IFOV (@1m)	1.14mrad	3.33mrad	2.78mrad	3.78mrad	4.86mrad	21mrad
Type of IR sensor	UFPA	UFPA	UFPA	UFPA	UFPA	UPC
Frequency	50Hz	50Hz	50Hz	50Hz	50Hz	9Hz

CHARACTERISTICS OF IR OPTICS
AND BUILT-IN PHOTO CAMERA

Field of view (FOV)	24.6° X 18.6° (provided optics)	29.8° X 22.6° (provided optics)	25° X 19°	17° X 17°	21° X 21°	38° X 38°
Focus width of standard lens	22mm	7.5mm	9mm	9mm	7,5mm	10mm
Focusing of IR optics	Manual	Manual	Manual	Manual	Fixed	Fixed
Resolution and FOV of visual camera	640 x 480pxl, FOV 62.3°	640 x 480pxl, FOV 62.3°	1.3Mpxl, FOV 59°	1.3Mpxl, FOV 59°	-	320 x 240pxl
Interchangeable optics	•	•	-	-	-	-

FUNCTIONS

Fusion PIP function for combination of thermal and visual images	•	•	•	•	-	• (Blending)
3 cursors: Central, Min, Max.	•	•	•	•	•	•
Advanced analysis: Spots, Lines, Areas on images and Isotherm line function	•	•	-	-	-	-
Correction according to distance, reflected temperature and relative humidity	•	•	• Only reflected temperature	• Only reflected temperature	-	• Only reflected temperature
Colour palettes	• 8 standard + 10 custom	• 8 standard + 10 custom	• 4 standard	• 4 standard	• 4 standard	• 5 standard
Integrated table with emissivity values of common materials	•	•	•	•	-	-
Alarm thresholds on temperature measurement	•	•	-	-	-	•
Readings in °C, °F, °K	•	•	•	•	•	•
Class 2 laser pointer	•	•	•	•	•	-
Integrated white light illuminator	•	•	•	•	•	-
Digital zoom	1x ÷ 20x	1x ÷ 20x	1x ÷ 32x	1x ÷ 32x	-	-
Manual and automatic span	•	•	•	•	Auto only	Auto only
Vertical and horizontal lines	•	•	-	-	-	-



DATA SAVING	THT70	THT60	THT46	THT45	MERCURY	THT32
Standard format of saved images JPEG	•	•	•	•	• (BMP)	• (BMP)
Saving of IR videos and audio comments in MPEG4 format	•	•	•	•	-	-
Voice and text annotation	•	•	-	-	-	-

ADDITIONAL CHARACTERISTICS

Capacitive touch-screen colour display	•	•	-	-	-	-
Power supply with rechargeable battery	•	•	•	•	•	•
USB interface to PC and THTLink software	•	•	•	•	-	• (No software)
PAL/NTSC video output	•	•	• HDMI	• HDMI	-	-
WiFi function for connection to mobile devices	-	-	-	• with APP THTview	-	-
Bluetooth function for connection to mobile devices	-	-	-	-	• with APP HTMercury	-

POWER SUPPLY

Battery type	rechargeable Li-ION 7,4V 2700mAh	rechargeable Li-ION 7,4V 2700mAh	rechargeable Li-ION 3,7V 2000mAh	rechargeable Li-ION 3,7V 2000mAh	rechargeable Li-ION 7,4V 2300mAh	rechargeable Li-ION 3,7V 1400mAh
Recharging system	On thermal camera or external recharging base	On thermal camera or external recharging base	On thermal camera	On thermal camera	External recharging base	On thermal camera
Duration	4.5 hours	4.5 hours	4 hours	4 hours	2 hours	2 hours
External power supply	External power supply 100/240VAC (50/60Hz)/12VDC	External power supply 100/240VAC (50/60Hz)/12VDC	External power supply 100/240VAC (50/60Hz)/5VDC	External power supply 100/240VAC (50/60Hz)/5VDC	External power supply 100/240VAC (50/60Hz)/10VDC	External power supply 100/240VAC (50/60Hz)/5VDC

GENERAL CHARACTERISTICS

Operating temperature	-20°C ÷ 50°C	-20°C ÷ 50°C	-15°C ÷ 50°C	-15°C ÷ 50°C	5°C ÷ 40°C	0°C ÷ 50°C
Operating humidity	10% ÷ 90%HR	10% ÷ 90%HR	10% ÷ 90%HR	10% ÷ 90%HR	<80%RH	10% ÷ 90%HR
Storage temperature	-40°C ÷ 70°C	-40°C ÷ 70°C	-40°C ÷ 70°C	-40°C ÷ 70°C	-20°C ÷ 60°C	-20°C ÷ 60°C
Storage humidity	10% ÷ 90%HR	10% ÷ 90%HR	10% ÷ 90%HR	10% ÷ 90%HR	<80%RH	10% ÷ 90%HR
Ingress protection	IP65 in compliance with IEC529	IP65 in compliance with IEC529	IP50 in compliance with IEC529	IP50 in compliance with IEC529	IP65 in compliance with IEC529	IP42 in compliance with IEC529
Shock	25G, in compliance with IEC60068- 2-29	25G, in compliance with IEC60068- 2-29	25G, in compliance with IEC60068- 2-29	25G, in compliance with IEC60068- 2-29	-	-
Vibrations	2G, in compliance with IEC60068-2-6	2G, in compliance with IEC60068-2-6	2G, in compliance with IEC60068-2-6	2G, in compliance with IEC60068-2-6	-	-
Falling test	2m	2m	2m	2m	-	-
Size (L x W x H)	243x103x160mm	243x103x160mm	224x77x96mm	224x77x96mm	190x75x55mm	205x155x62mm
Weight (battery included)	0.92kg	0.92kg	0.5kg	0.5kg	0.55kg	0.4kg
Order code	HN000070	HN000600	HN000046	HN000045	HR000MER	HN000032

THERMOMETERS
AND THERMO-
ANEMOMETERS

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MAIN MEASUREMENTS	HTA103	HTA105	HTA106	HTA107	HT3320	HT3302	HT3300	HT950N
Distance / infrared spot ratio	-	-	-	8:1	50:1	12:1	12:1	-
Infrared temperature measuring range	-	-	-	-50 ÷ 200°C -58 ÷ 392°F	-50 ÷ 1000°C -58°F ÷ 1832°F	-30 ÷ 500°C -22°F ÷ 932°F	-50 ÷ 380°C -58 ÷ 716°F	-
Temperature measuring range with K-type probe	-250 ÷ 1372°C -418 ÷ 2502°F	-	-	-	-200 ÷ 1370°C -328 ÷ 2498°F	-	-	With probe PT100 0 ÷ 200°C 32 ÷ 392°F
Temperature measurement with K-type probes	•	-	-	-	•	-	-	-
Measurement of volumetric capacity (m3/s) and enthalpy (kW)	-	•	-	-	-	-	-	-
Measurement of air relative humidity in %RH	-	•	•	• (and materials)	•	-	-	-
Measurement of wind speed in m/s	-	• (hot-wire sensor)	-	-	-	-	-	-
4 inputs with PT100 DIN with three wires available	-	-	-	-	-	-	-	•
3 outputs with independent relays 5A/250V	-	-	-	-	-	-	-	•
Integrated photo-camera (640x480pxl)	-	-	-	-	•	-	-	-
Image saving in JPG format	-	-	-	-	•	-	-	-
Video saving in 3GP format	-	-	-	-	•	-	-	-
Measurement of air temperature/humidity with built-in sensor	-	•	•	•	•	-	-	-
Temperature measurement of dew point and of wet bulb	-	-	•	•	•	-	-	-
Datalogger function for temperature measure recording	-	-	-	-	•	-	-	-




ADDITIONAL CHARACTERISTICS

Emissivity adjustment of target	-	-	-	Fixed >0.95	•	•	Fixed >0.95	-
Setting of alarm thresholds on measurements	-	-	-	•	•	•	•	-
Continuous measurement	-	-	-	-	•	-	-	•
Class 2 integrated laser pointer	-	-	-	•	•	• (Class 3R)	• (Class 2)	-
Blue LED built-in illuminators for UV function	-	-	-	-	-	•	-	-
Internal memory	-	-	-	•	•	-	-	-
SD Card slot for measure saving	-	-	-	-	•	-	-	-
PC connection through USB cable	-	-	-	-	•	-	-	-
Backlight	•	•	•	•	•	•	•	-
Autorange	•	•	•	•	•	•	•	•
Data HOLD	•	•	•	•	•	•	•	-
MAX/MIN/AVG	• (MAX/MIN)	• (MAX/MIN)	• (MAX/MIN)	• (MAX/MIN)	•	•	• (MAX/MIN)	• MAX
Selection of measuring unit	•	•	•	•	• °C \ °F	• °C \ °F	• °C \ °F	- °C
DC analogue output	-	-	-	-	-	-	-	-
Automatic compensation of PT100 cable resistance	-	-	-	-	-	-	-	•
Low battery indication	•	•	•	•	•	•	•	-
Auto Power OFF	•	•	•	•	•	•	•	-
Power supply	1x9V 6F22	1x9V 6F22	1x9V 6F22	1x9V 6F22	Rechargeable battery	3x1,5V AA	1x9V 6F22	AC/DC 24 ÷ 240V 50/60Hz
Size in mm (LxWxH)	185x60x40	185x60x40	185x60x40	185x60x40	205x155x62	185x104x54	136x75x40	96x96x110
Weight in grams (batteries included)	180	180	180	180	410	380	140	800
Order code	HN000103	HN000105	HN000106	HN000107	HA000179	HA003302	HA003300	HA000950

SOUND
LEVEL METERS

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	HT157	HT155	HTA102
	CLASS 1		CLASS 2
Device category (Class)	Class 1	Class 1	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

LIGHT METERS
AND SOLAR
METERS

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HT309



HT204

MAIN MEASUREMENTS	LIGHT METERS	SOLAR METERS
Measuring range	0.01÷400klux 0.01÷40kFc	1÷1999W/m² 1÷634 BTU/(ft²*h)
Measurement of illuminance in Lux/Fc	•	-
Measurement of LED sources' illuminance	•	-
Luminous intensity measurement (Cd)	•	-
Solar irradiation measurement W/m² and BTU/(ft²*h)	-	•
ADDITIONAL CHARACTERISTICS		
Internal memory for measured data saving	• (Max 99 locations)	-
Zeroing	•	•
Manual measuring range	-	•
Autorange	•	-
Data HOLD	•	•
MAX/MIN/AVG	•	• No AVG
Selection of measuring unit	•	W/m² - BTU/(ft²*h)
Auto Power OFF	•	-
Reference standard	Class A JIS C 1609:1993, CNS 5519	-
Power supply	1x 9V	1x 9V
Size (LxWxH) (mm)	185 x 60 x 40	130x55x38
Weight (batteries included):	180g	150g
Order code	HA003090	HA000157

DEVICES FOR
LAN NETWORK
VERIFICATION

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QUICKLAN6050



QUICKLAN6055

MAIN MEASUREMENTS		
Wire mapping of LAN cables	•	•
Test on twisted pair cables RJ45 type UTP, STP and FTP	•	•
Test on telephone cables with RJ11 connector	•	-
Verification on COAX cables	•	-
Errors of open pairs	•	•
Errors of shorted pairs	•	•
Errors of reversed pairs	•	•
Errors of crossed 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	6x 1.5V AAA	1x 9V
Size (LxWxH) (mm)	156 x 73 x 35	128 x 67 x 39
Weight in grams (batteries included)	170	165
Order code	HV006050	HV006055

PHASE DETECTORS,
SWITCH DETECTORS
AND PHASE
SEQUENCE
INDICATORS

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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-filled lamps	-	-	-	-	-	•
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	•	-	-	-	•	-
Measurement category	CAT II 240V	CAT III 600V	CAT IV 1000V	CAT IV 1000V	CAT III 250V	CAT II 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

LASER METERS

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line of accessories.



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

LAMPS

ORDER CODE **HA000764**

STYLOLED

- › Worklight - **150 Lumen**
- › Flashlight - **60 Lumen**
- › Rubberized **ABS** body
- › Adjustable strong **magnetic clip**



NEW



ORDER CODE **HA000766**

HEADLED

- › Lighting (1m): 2000Lux (3W LED), 50Lux (COB LED)
- › Easy to use
- › Helmet anti-slip belt
- › Strong magnetic support
- › Special-shaped selector for simple operations even with gloves
- › Rotary selector: OFF, strong light 3W LED, soft light 3W LED, strong white light COB LED, soft white light COB LED, red strobe light COB LED



NEW



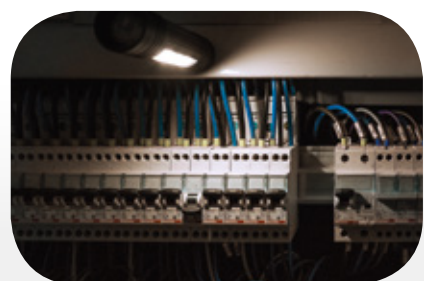
ORDER CODE **HA000759**

MINILITE

- › Low consumption LED light with adjustable beam
- › Diffused side light
- › Flashing emergency light
- › Strong magnet
- › Comfortable pocket hook



NEW



ORDER CODE **HA000760**

XLITE

- › Ultrathin
- › Magnetic support
- › Indestructible
- › Rechargeable battery
- › Battery charger provided
- › Ring for easy hanging
- › Low consumption LED light



NEW



SCISSORS



COD. METEL **HU000743**

F30P

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



Scan the **QR code** to watch the video of **F40** at work!



COD. METEL **HU000697**

F40

PROFESSIONAL SCISSORS WITH INTEGRATED CRIMPER FUNCTION
CABLE CUTTER 70mm² + CRIMPER

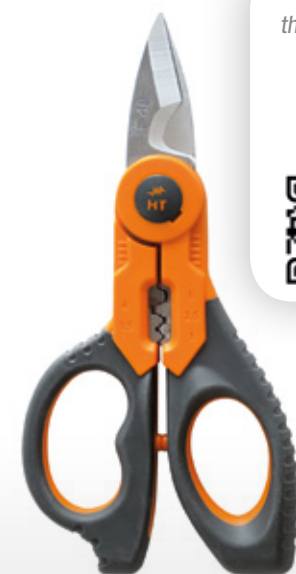
- › High-quality scissors with rigid case
- › Blade in reinforced stainless steel
- › Blade width 19mm (0.7")
- › Blade thickness 3.5mm (0.1")
- › Blade for cutting cables up to 70 mm²
- › Crimper function for crimp terminals between 1 and 6 mm², sleeve type
- › Long grip for easy cutting



Blade for cutting cables up to 70 mm²



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



F50
+
STYLOLED



COD. METEL **HU000746**

F50LED

PROFESSIONAL SCISSOR WITH CABLE CUTTER UP TO 50mm² + STYLOLED TORCH

F50

- › Non-slip grip
- › Reinforced steel blade
- › Universal crimping tool for lug, 1 to 6 mm²
- › Holster with security lock
- › Practical docking system

STYLOLED

- › Work light - 150 Lumens
- › Upper flashlight - 60 Lumen
- › Rubberized ABS body
- › Adjustable magnetic clip





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MERCURY

TRMS THERMAL MULTIMETER

EXTRA TERRESTRIAL SIGHT



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