



# CLAMP METERS



## Power clamps

### Who?

- › Technicians and maintenance operators in the industry sector
- › Power Quality Professionals
- › Energy managers
- › Maintenance operator in the photovoltaic field

### Where?

- › Transformer cabinets
- › Electric switchboards
- › Electric motors
- › Measurements near inverters
- › Photovoltaic installations

### Why?

They carry out the main function of mobile equipment and, in this case, offer the possibility of quickly displaying quantities such as **Power, Cosphi, Harmonics, Inrush Currents (INRUSH)** which are functions generally carried out by proper power analyzers.



## AC/DC clamps

### Who?

- › Installers and electricians of industrial and domestic electric systems
- › Maintenance operators in the electric sector in general, and in the photovoltaic field

### Where?

- › Domestic and industrial electric systems
- › Electric panels
- › Electric motors
- › Photovoltaic installations

### Why?

Ordinary and preventive maintenance of distribution (also photovoltaic) systems is mainly based on ammetric absorption; in industrial systems it is good practice to use **TRMS** equipment.



## Leakage clamps

### Who?

- › Installers and maintenance operators in the domestic and industrial sector
- › Safety verification authorities of domestic and industrial electric systems

### Where?

- › Electric panels
- › Electric motors
- › Earthing systems

### Why?

A correct mapping of all leakage currents to earth can only be carried out with clamps like HT77N, capable of detecting currents as small as  $\mu\text{A}$ , and HT78 which, due to the exceptional size of its jaws, is suitable for tests on very big loads.



**MAIN MEASUREMENTS**

**TRMS**

	AC								AC/DC				HARMONICS AND/OR POWER			LEAKAGE		
Current measuring range	1000A	600A	600A	400A	600A	3000A	200A	300A	1000A	600A	400A	400A	1000A	400A	400A	10A (DC) 20A (AC)	3000A	100A
AC/DC current	• AC	• AC	• AC	• AC	• AC	• AC	• AC	• AC	•	•	•	•	• 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	-	-	-	-	-	-	-	-	-	-	-	-	•*	•*	•*	-	-	-
U/I + 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 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 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	110mm	16mm	20mm		45mm	30mm	30mm	20mm	45mm	30mm	30mm	23mm	108mm	40mm
Measuring counts	6000	6000	2000	4000	2000	3000	10000	4000		6000	6000	4000	4000	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	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-
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		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)	252x88x44	215x74x43	215x74x43	200x66x37	197x70x40	280x120x25	193x54x31	160x55x30		252x88x44	215x74x43	200x66x37	160x55x30	252x88x44	205x64x39	205x64x39	206x76x34	341x194x52	200x70x40
Weight in grams (batteries included)	402	285	285	205	180	170	280	140		442	285	205	140	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
<b>Order code</b>	<b>HP009019</b>	<b>HP009014</b>	<b>HP009012</b>	<b>HP004011</b>	<b>HP004010</b>	<b>HP030000</b>	<b>HP000100</b>	<b>HP007004</b>		<b>HP009021</b>	<b>HP009015</b>	<b>HP004013</b>	<b>HP007005</b>	<b>HP009020</b>	<b>HP004022</b>	<b>HP004020</b>	<b>HP000079</b>	<b>HP000078</b>	<b>HP00077N</b>



ORDER CODE **HP009019**

# HT9019

PROFESSIONAL CLAMP METERS  
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** to reach **CAT IV 600V** according to standard **IEC/EN61010-1**. The clamp is provided with a wide display with **6000 measuring spots, 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.



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 measuring spots** and an auto power off function to preserve its battery.

## 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

## Technical Specifications

- DC voltage (Autorange)**
- Measuring range: 3mV ÷ 1000V
  - Resolution: 0.01mV ÷ 1V
  - Basic accuracy: ±(1.0%reading + 3digits)
  - Protection against overcharge: 1000VDC/ACrms
- AC TRMS voltage (Autorange)**
- Measuring range: 0.03V ÷ 1000V
  - Frequency band: 50Hz ÷ 400Hz
  - Resolution: 0.001V ÷ 1V
  - Basic accuracy: ±(1.0%reading + 4digits)
  - Protection against overcharge: 1000VDC/ACrms
- AC TRMS current**
- Measuring range: 0.3A ÷ 1000A
  - Frequency band: 50Hz ÷ 400Hz
  - Resolution: 0.01A ÷ 1A
  - Basic accuracy: ±(2.8%reading + 8digits)
  - Protection against overcharge: 1000Arms
- Resistance and Continuity test**
- Measuring range: 3Ω ÷ 60MΩ
  - Resolution: 0.1Ω ÷ 0.01MΩ
  - Basic accuracy: ±(1.0%reading + 5digits)
  - Continuity buzzer: <50Ω

## Included accessories

YAAMK0000HT0	Pair of test leads
YABRS0000NNO	Soft carrying bag
	Batteries and user manual

## Main features

Display:	LCD, 4 digits, 6000 dots
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
Measurement category:	CAT IV 600V - CAT III 1000V
Insulation:	double insulation
Pollution level:	2
Size (LxWxH):	252x88x44mm
Weight (batteries included):	420g

## Functions

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

## Main features

Display:	LCD, 4 digits, 6000 dots
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
Measurement category:	CAT IV 600V – CAT III 1000V
Size (LxWxH):	210x75x45mm
Weight (batteries included):	400g

## Included accessories

YAAMK0000HT0	Pair of test leads
T10	Adapter for K-type wire probe
TK101	K-type wire probe
	Battery, User manual and Soft carrying bag

## Technical Specifications

- DC voltage**
- Measuring range: 3mV ÷ 1000V
  - Resolution: 0.1V ÷ 1V
  - Basic accuracy: ±(1.0%reading + 3digits)
  - Protection: 1000VDC/AC
- AC voltage**
- Measuring range: 0.03V ÷ 1000V
  - Frequency band: 50 ÷ 400Hz
  - Resolution: 0.01V ÷ 1V
  - Basic accuracy: ±(1.0%reading + 10digits)
  - Protection: 600Vrms
- AC current**
- Measuring range: 0.3A ÷ 600A
  - Frequency band: 50 ÷ 400Hz
  - Resolution: 0.1A ÷ 1A
  - Basic accuracy: ±(2.8%reading + 8digits)
  - Protection: 600Arms
- Resistance and Continuity test**
- Measuring range: 3Ω ÷ 60kΩ
  - Resolution: 0.1Ω ÷ 0.01kΩ
  - Basic accuracy: ±(1.0%reading + 5digits)
  - Continuity test: <60Ω
- Capacity**
- Measuring range: 0.2nF ÷ 4mF
  - Resolution: 0.01μF ÷ 1μF
  - Basic accuracy: ±(2.5%reading + 5digits)
- Temperature with K-type probe**
- Measuring range: -20°C ÷ 760°C
  - Resolution: 0.1°C
  - Basic accuracy: ±(2.0%reading + 3°C)
- Frequency with test leads and clamp jaws**
- Measuring range: 0.5Hz ÷ 60kHz
  - Resolution: 0.01Hz ÷ 0.01kHz
  - Basic accuracy: ±(1.0%reading + 5digits)
  - Protection: 600A/600V



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 **backlight display** with **6000 measuring spots** and an auto power off function to preserve its battery.



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 tests, Frequency, Capacity, Diode test, Duty Cycle and Temperature with K-type probe**, among others. The clamp is also provided with the auto power off function to preserve its own battery.

## Functions

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

## Main features

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

## Technical Specifications

### DC voltage

- Measuring range: 1mV ÷ 1000V
- Resolution: 0.1mV ÷ 1V
- Basic accuracy: ±(1%reading + 3digits)
- Protection: 1000V DC/AC

### AC voltage

- Measuring range: 1mV ÷ 1000V
- Frequency band: 50 ÷ 60Hz
- Resolution: 0.1mV ÷ 1V
- Basic accuracy: ±(1%reading + 4digits)
- Protection: 1000V DC/AC

### AC current

- Measuring range: 0.01A ÷ 600A
- Frequency band: 50 ÷ 60Hz
- Resolution: 1mA ÷ 1A
- Basic accuracy: ±(2.5%reading + 4digits)
- Protection: 600Arms

### Resistance and Continuity test

- Measuring range: 1Ω ÷ 20MΩ
- Resolution: 0.1Ω ÷ 0.01MΩ
- Basic accuracy: ±(1.0%reading + 5digits)
- Continuity buzzer: <100Ω

## Included accessories

YAAMK0000HT0	Pair of test leads
	Battery
	User manual and Soft carrying bag

## Functions

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

## Main features

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

## Included accessories

KIT4000A	Pair of leads with 2mm tip
T10	Adapter for K-type wire probe
TK101	K-type wire probe
	Battery, User manual and Soft carrying bag

## Technical Specifications

### DC voltage (Autorange)

- Measuring range: 400mV ÷ 600V
- Resolution: 0.1mV ÷ 0.1V
- Basic accuracy: ±(0.8%reading + 2digits)
- Protection against overcharge: 600VDC/ACrms

### AC voltage (Autorange)

- Measuring range: 4V ÷ 600V
- Frequency band: 50Hz ÷ 400Hz
- Resolution: 0,001V ÷ 1V
- Basic accuracy: ±(1.8%reading + 8digits)
- Protection against overcharge: 600VDC/ACrms

### AC current

- Measuring range: 0.2A ÷ 400A
- Resolution: 0.01A ÷ 1A
- Frequency range: 50Hz ÷ 60Hz
- Basic accuracy: ±(2.5%reading + 8digits)
- Protection against overcharge: 400Arms

### Resistance and Continuity test

- Measuring range: 2Ω ÷ 40MΩ
- Resolution: 0.1Ω ÷ 0.01MΩ
- Basic accuracy: ±(1.0%reading + 5digits)
- Protection against overcharge: 600VDC/ACrms
- Continuity buzzer: <60Ω

### Capacity

- Measuring range: 0.2nF ÷ 400µF
- Resolution: 0.01nF ÷ 0.1µF
- Basic accuracy: ±(3.0%reading + 5digits)
- Protection against overcharge: 600VDC/ACrms

### Frequency and Duty Cycle

- Measuring range: 10Hz ÷ 10kHz
- Resolution: 0.01Hz ÷ 0.01kHz
- Basic accuracy: ±(1.5%reading + 2digits)
- Protection against overcharge: 600VDC/ACrms
- Duty Cycle: Measuring range 0.5% ÷ 99%;

### Temperature with K-type probe

- Measuring range: -20°C ÷ 760°C
- Resolution: 0.1°C ÷ 1°C
- Basic accuracy: ±(3%reading + 5°C)



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.



ORDER CODE **HP030000**

# F3000

CLAMP METER WITH FLEXIBLE CLAMP 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 measuring spots**, **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.

## 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

## Technical Specifications

### DC voltage

- Measuring range: 1mV ÷ 600V
- Resolution: 0.1mV ÷ 1V
- Basic accuracy: ±(0.8%reading + 2 digits)
- Protection against overcharge: 600Vrms

### AC voltage

- Measuring range: 1mV ÷ 600V
- Resolution: 0.1mV ÷ 1V
- Frequency band: 50Hz ÷ 60Hz
- Basic accuracy: ±(1.5%reading + 3.5mV)
- Protection against overcharge: 600Vrms

### AC current

- Measuring range: 0.01A ÷ 600A
- Resolution: 1mA ÷ 0.1A
- Frequency band: 50Hz ÷ 60Hz
- Basic accuracy: ±(2.5%reading + 4digits)
- Protection against overcharge: 600Arms

### Resistance and continuity test with buzzer

- Measuring range: 1Ω ÷ 20MΩ
- Resolution: 0.1Ω ÷ 0.01MΩ
- Basic accuracy: ±(1.0%reading + 4digits)
- Continuity buzzer: <150Ω

## Included accessories

KIT4000A	Pair of test leads
	Soft carrying bag, battery and user manual

## Functions

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

## Main features

Display:	LCD, 4 digits, 3000 dots
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
Measurement category:	CAT IV 600V - CAT III 1000V
Insulation:	double insulation
Pollution level:	2
Size (LxWxH):	280x120x25mm
Weight (batteries included):	170g

## Technical Specifications

### AC TRMS current

- Measuring range: 0.1A ÷ 3000A
- Resolution: 0.01 ÷ 1A
- Frequency range: 45Hz ÷ 500Hz
- Basic accuracy: ±(3%reading + 5digits)

## Included accessories

Batteries
Soft carrying bag
User Manual

## Main features

Display:	LCD, 3½ digits, 2000 dots
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
Measurement category:	CAT III 600V
Insulation:	double insulation
Pollution level:	2
Max height:	2000mm
Size (LxWxH):	197x70x40mm
Weight (batteries included):	180g

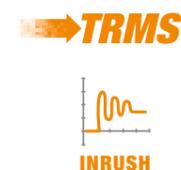


ORDER CODE **HP000100**

# HT100

FORK CLAMP METER  
AC 200A TRMS

Professional clamp meter HT100 is provided with automatic recognition of functions. The measurement of **AC current up to 200A and AC/DC voltage up to 1000V in TRMS** reaches **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 measuring spots**, "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.



ORDER CODE **HP007004 | HP007005**

# HT7004

# HT7005

POCKET CLAMP METERS  
FOR TRMS AC CURRENT UP TO 400A  
WITH MEASUREMENT OF INRUSH CURRENT

Clamp meter **HT7005** can measure **DC** and **AC TRMS** current up to **400A** in Autorange, in compliance with standard IEC/EN61010-1, **CAT III 300V**, **further to measuring the inrush current of electric motors** with a response time of **100ms**. Model **HT 7004** 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.



## 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

## Main features

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

## Technical Specifications

- DC voltage (Autorange)**
- Measuring range: 2.2V ÷ 1000V
  - Resolution: 0.1V
  - Basic accuracy: ±(0.3%reading + 2digits)
  - Protection against overcharge: 1000VDC/ACrms
- AC TRMS voltage (Autorange)**
- Measuring range: 1.3V ÷ 1000V
  - Frequency band: 50Hz ÷ 500Hz
  - Resolution: 0.1V
  - Basic accuracy: ±(0.9%reading + 3digits)
  - Protection against overcharge: 1000VDC/ACrms
- AC TRMS current (Autorange)**
- Measuring range: 1.5A ÷ 200A
  - Resolution: 0.1A
  - Frequency range: 50Hz ÷ 60Hz
  - Basic accuracy: ±(3%reading + 5digits)
  - Protection against overcharge: 200Arms
- Resistance and Continuity test**
- Measuring range: 0Ω ÷ 9999Ω
  - Resolution: 1Ω
  - Basic accuracy: ±(0.9%reading + 2digits)
  - Protection against overcharge: 1000VDC/ACrms
  - Continuity buzzer: <25Ω
- Diode test**
- Measuring range: 0.4V ÷ 0.8V
  - Resolution: 0.1V
  - Basic accuracy: ±(1%reading + 3digits)
  - Protection against overcharge: 1000VDC/ACrms

## Included accessories

<b>4413-2</b>	Pair of test leads
	Batteries and user manual

## Functions

	<b>HT7004</b>	<b>HT7005</b>
AC TRMS current	300A •	400A •
DC current	-	400A •
Inrush current (INRUSH)	-	•
AC voltage detection without contact	•	•
Autorange	•	•
Data HOLD	•	•
ZERO function (zeroing)	-	•
Backlight	•	•
Auto Power OFF	•	•

## Main features

<b>Power supply:</b>	2x1.5V batteries type AAA LR03
<b>Safety:</b>	IEC/EN61010-1
<b>Measurement category:</b>	CAT III 300V
<b>Insulation:</b>	double insulation
<b>Pollution level:</b>	2
<b>Max operating altitude:</b>	2000m
<b>Display:</b>	3¾ LCD, 4000 dots, decimal sign and point
<b>Max cable diameter:</b>	20mm
<b>Size (LxWxH):</b>	155x60x25mm
<b>Weight (batteries included):</b>	140g

## Included accessories

	Soft carrying bag
	Batteries
	User Manual



CAT III 1000V



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 spots 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, Capacity and Temperature with K-type probe.



CAT III 1000V



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 IV 600V and CAT III 1000V in compliance with safety standard IEC/EN61010-1. The clamp is provided with a display with 6000 measuring spots with backlight and bargraph to allow for a simple reading even in poorly lit environments. HT9015 also measures Resistance, Frequency, Capacity and Temperature with K-type probe.

## Functions

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

## Main features

Display:	LCD, 4 digits, 6000 dots
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
Measurement category:	CAT IV 600V – CAT III 1000V
Insulation:	double insulation
Pollution level:	2
Size (LxWxH):	252x88x42mm
Weight (batteries included):	420g

## Technical Specifications

### DC voltage (Autorange)

- Measuring range: 3mV ÷ 1000V
- Basic accuracy: ±(1.0%reading + 3digits)

### AC TRMS voltage (Autorange)

- Measuring range: 0.03V ÷ 1000V
- Frequency range: 50Hz ÷ 400Hz
- Basic accuracy: ±(1.0%reading + 4digits)

### DC current

- Measuring range: 0.3A ÷ 1000A
- Basic accuracy: ±(2.0%reading + 8digits)

### AC TRMS current

- Measuring range: 0.3A ÷ 1000A
- Frequency range: 50Hz ÷ 400Hz
- Basic accuracy: ±(2.8%reading + 8digits)

### Resistance and Continuity test

- Measuring range: 3Ω ÷ 60MΩ
- Basic accuracy: ±(1.0%reading + 5 digits)
- Buzzer: <50Ω

### Frequency with clamp jaws and leads

- Measuring range: 0.5Hz ÷ 60kHz
- Basic accuracy: ±(1.0%reading + 5digits)

### Capacity

- Measuring range: 0.2nF ÷ 4mF
- Basic accuracy: ±(2.5%reading + 5digits)

### Temperature with K-type probe

- Measuring range: -20°C ÷ 760°C;
- Basic accuracy: ±(2.0%reading + 3°C)

## Included accessories

YAAMK0000HTO	Pair of test leads
T10	Adapter for K-type wire probe
TK101	K-type wire probe
YABRS0000NNO	Soft carrying bag
	Batteries and user manual

## Functions

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

## Main features

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

## Technical Specifications

### DC voltage (Autorange)

- Measuring range: 3mV ÷ 1000V
- Basic accuracy: ±(1.0%reading + 3digits)

### AC TRMS voltage (Autorange)

- Measuring range: 0.03V ÷ 1000V
- Frequency range: 50Hz ÷ 400Hz
- Basic accuracy: ±(1.0%reading + 4digits)

### DC current

- Measuring range: 0.3A ÷ 600A
- Basic accuracy: ±(2.0%reading + 8digits)

### AC TRMS current

- Measuring range: 0.3A ÷ 600A
- Frequency range: 50Hz ÷ 400Hz
- Basic accuracy: ±(2.8%reading + 8digits)

### Resistance and Continuity test

- Measuring range: 3Ω ÷ 60MΩ
- Basic accuracy: ±(1.0%reading + 5 digits)
- Buzzer: <50Ω

### Frequency with clamp jaws and leads

- Measuring range: 0.5Hz ÷ 60kHz
- Basic accuracy: ±(1.0%reading + 5digits)

### Capacity

- Measuring range: 0.2nF ÷ 4mF
- Basic accuracy: ±(2.5%reading + 5digits)

### Temperature with K-type probe

- Measuring range: -20°C ÷ 760°C; -4°F ÷ 1400°F
- Basic accuracy: ±(2.0%reading + 6°F)

## Included accessories

YAAMK0000HTO	Pair of test leads
T10	Adapter for K-type wire probe
TK101	K-type wire probe
	Battery, User manual and Soft carrying bag



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 tests, Frequency, Capacity, Diode test, Duty Cycle and Temperature with K-type probe**, among others. The clamp is also provided with the auto power off function to preserve its own battery.



ORDER CODE **HP009020**

# HT9020

PROFESSIONAL CLAMP METERS WITH POWER/HARMONIC AND INRUSH MEASUREMENT

HT9020 have 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 and Apparent Power, Energy, voltage/current harmonic analysis up to the 25<sup>th</sup> with THD% calculation** in single-phase or balanced three-phase systems. It allows testing phase sequence and concordance with the 1-terminal measuring method. It is also possible to detect the events linked to **motor starting (INRUSH) currents**. HT9020 is provided with a wide graphic dot-matrix screen (128x128pxl) with backlight, in order to allow reading data even in poorly lit environments. Auto power off function preserves internal battery.



## Functions

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

## Main features

Display:	LCD, 4 digits, 4000 dots
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

## Included accessories

KIT4000A	Pair of leads with 2mm tip
T10	Adapter for K-type wire probe
TK101	K-type wire probe
	Battery, User manual and Soft carrying bag



## Technical Specifications

### DC voltage (Autorange)

- Measuring range: 2mV ÷ 600V
- Resolution: 0.1mV ÷ 1V
- Basic accuracy: ±(0.8%reading + 2digits)
- Protection against overcharge: 600VDC/ACrms

### AC voltage (Autorange)

- Measuring range: 0.02V ÷ 600V
- Frequency band: 50Hz ÷ 400Hz
- Resolution: 0,001V ÷ 1V
- Basic accuracy: ±(1.5%reading + 5digits)
- Protection against overcharge: 600VDC/ACrms

### AC/DC current

- Measuring range: 0.2A ÷ 400A
- Resolution: 0.01A ÷ 1A
- Frequency range: 50Hz ÷ 60Hz
- Basic accuracy: ±(2.5%reading + 5digits)
- Protection against overcharge: 400Arms

### Resistance and Continuity test

- Measuring range: 2Ω ÷ 40MΩ
- Resolution: 0.1Ω ÷ 0.01MΩ
- Basic accuracy: ±(1.0%reading + 4digits)
- Protection against overcharge: 600VDC/ACrms
- Continuity buzzer: <30Ω

### Capacity

- Measuring range: 0.2nF ÷ 100µF
- Resolution: 0.01nF ÷ 0.1µF
- Basic accuracy: ±(3.0%reading + 5digits)
- Protection against overcharge: 600VDC/ACrms

### Frequency and Duty Cycle

- Measuring range: 10Hz ÷ 10kHz
- Resolution: 0.01Hz ÷ 0.01kHz
- Basic accuracy: ±(1.5%reading + 2digits)
- Protection against overcharge: 600VDC/ACrms
- Duty Cycle: Measuring range 0.5% ÷ 99%;

### Temperature with K-type probe

- Measuring range: -20°C ÷ 760°C
- Resolution: 0.1°C ÷ 1°C
- Basic accuracy: ±(3%reading + 5°C)

## Functions

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

## Main features

Display:	dot-matrix 128x128pxl with backlight
Power supply:	2x1.5V batteries type AAA
Duration:	> 50 hours
Safety:	IEC/EN61010-1
Insulation:	Double insulation
Pollution level:	2
Measurement category:	CAT IV 600V to earth, max 1000V between inputs
Max diameter of cable:	45mm
Size (LxWxH):	252x88x44mm
Weight (batteries included):	0.42kg

## Included accessories

YAAMK0000HTO	Pair of test leads
YAAMK0001HTO	Pair of alligator clips
YABRS0000NNO	Soft carrying bag
	Batteries
	User manual on CD-ROM
	ISO9000 calibration certificate
	Quick user guide



ORDER CODE **HP004022** | **HP004020**

# HT4022 HT4020

AC TRMS 400A CLAMP METERS  
WITH POWER/HARMONICS 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 voltage and current harmonic components with calculation of THD%. Each device complies with IEC/EN61010-1 in CAT III 600V and is the ideal solution or troubleshooting typical problems in industrial environments such as non-linear loads, frequency-controlled motors.



## 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	•	•
V/I harmonics up to the 25th and THD%	•	-
Phase sequence with 1 terminal	•	•
Autorange	•	•
Data HOLD	•	•
MAX/MIN/AVG/PEAK	•	•
Backlight	•	•
AutoPowerOFF	•	•

## Main features

<b>Display:</b>	LCD, 4 digits, 10000 dots
<b>Conversion type:</b>	TRMS, 64 samples in 20ms
<b>Power supply:</b>	2x1.5V batteries type AAA LR03
<b>Auto Power OFF:</b>	after 5 minutes' idling
<b>Safety:</b>	IEC/EN 61010-1
<b>Measurement category:</b>	CAT III 600V
<b>Pollution level:</b>	2
<b>Insulation:</b>	double insulation
<b>Max height:</b>	2000m
<b>Clamp jaw internal diameter</b>	30mm
<b>Size (LxWxH):</b>	205x64x39mm
<b>Weight (batteries included):</b>	approx 280g

## Included accessories

4413-2	Pair of test leads
YAAMK0001HT0	Pair of alligator clips
B80	Soft carrying bag
	Rubber cap for test lead
	ISO9000 calibration certificate
	Batteries and user manual

## Technical Specifications

	HT4022	HT4020
<b>DC voltage</b>		
Measuring range:	0.1V ÷ 600V	0.1V ÷ 600V
Resolution:	0.1V	0.1V
Basic accuracy:	±(1.0%read. + 3digits)	±(1.0%read. + 3digits)
Protection:	600Vrms	600Vrms
<b>AC TRMS voltage</b>		
Measuring range:	1.6V ÷ 600V	1.6V ÷ 600V
Resolution:	0.1V	0.1V
Basic accuracy:	±(1.0%read. + 3digits)	±(1.0%read. + 3digits)
Protection:	600Vrms	600Vrms
<b>AC TRMS current</b>		
Measuring range:	0.1A ÷ 400A	0.1A ÷ 400A
Resolution:	0.1A	0.1A
Basic accuracy:	±(1.0%read. + 3digits)	±(1.0%read. + 3digits)
Protection:	600Arms	600Arms
<b>Active, Reactive, Apparent AC power [kW, kVAR, kVA]</b>		
Measuring range:	0.01 ÷ 1000	0.01 ÷ 1000
Resolution:	0.01 ÷ 0.1	0.01 ÷ 0.1
Basic accuracy:	±(3.5%read. + 3digits)	±(3.5%read. + 3digits)
Protection:	600V/600Arms	600V/600Arms

	HT4022	HT4020
<b>Power factor and Cosφ</b>		
Measuring range:	0.20 ÷ 1.00	0.20 ÷ 1.00
Resolution:	0.01	0.01
Basic accuracy:	±3°	±3°
<b>voltage and current harmonics</b>		
Harmonic order:	1 ÷ 25	-
Resolution [V, A]:	0.1	-
Basic accuracy:	±(10%read. + 5digits)	-
<b>Resistance and Continuity test</b>		
Measuring range:	0.1Ω ÷ 2kΩ	0.1Ω ÷ 2kΩ
Resolution:	0.1Ω ÷ 3Ω	0.1Ω ÷ 3Ω
Basic accuracy:	±(1.0%read. + 5digits)	±(1.0%read. + 5digits)
Continuity test	<40Ω	<40Ω
Protection:	600Vrms	600Vrms
<b>Frequency with test leads and clamp jaws</b>		
Measuring range:	40Hz ÷ 400Hz	40Hz ÷ 400Hz
Resolution:	0.1Hz	0.1Hz
Basic accuracy:	±(0.5%read.+ 1digit)	±(0.5%read.+ 1digit)
Protection:	600Vrms/600Arms	600Vrms/600Arms
<b>Phase sequence with 1 terminal</b>		
Measuring range:	50V ÷ 600V	50V ÷ 600V
Frequency range:	40Hz ÷ 69Hz	40Hz ÷ 69Hz
Protection:	600Vrms	600Vrms



TRMS

ORDER CODE **HP000079** | **HP000078** | **HP00077N**

# HT79 | HT78 HT77N

CLAMP METERS  
FOR MEASURING LEAKAGE CURRENT

Models HT77N, HT78 and HT79 are clamp meters designed for an **accurate measurement of very low values of AC and DC currents** (only 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. Devices HT77N and HT78 are provided with an **in-built low-pass filter to eliminate harmonic components**. HT78 is provided with an analogue output for the connection to possible external data loggers and, thanks to its big jaws (108mm), it is possible to measure leakage currents even in installations with cables having a big cross-section. Model **HT79** also allows measuring **AC/DC voltage** and resistance/continuity test.



## Functions

	HT77N	HT78	HT79
TRMS measurements	•	•	•
AC/DC voltage	-	-	• (300V)
DC Current	-	-	• (10A)
AC Current	• (100A)	• (3000A)	• (20A)
Resistance and Continuity test	-	-	•
Low-pass filter	• (150Hz)	• (100Hz)	-
Analogue DC output	-	•	-
Data HOLD	•	•	•
Auto HOLD	•	•	-
Peak HOLD	•	•	-
Relative measurements (ZERO)	-	-	•
Autorange	•	-	•
Backlight	•	-	•
Bargraph	•	-	-
Auto Power OFF	•	•	•

## Technical Specifications

	HT77N	HT78	HT79
<b>AC TRMS current</b>			
Measuring range:	0.01mA ÷ 100A	0.1mA ÷ 3000A	0.1mA ÷ 20A
Resolution:	0.001mA ÷ 0.1A	0.1mA ÷ 1A	0.1mA ÷ 0.01A
Basic accuracy:	±(1.0read + 8digit)	±(1.5read + 8digit)	±(1.0read + 5digit)
Protection:	max 120Arms	3000Arms	max 20Arms
<b>DC current</b>			
Measuring range:	-	-	0.1mA ÷ 20A
Resolution:	-	-	0.1mA ÷ 0.01A
Basic accuracy:	-	-	±(1.0read + 10digit)
Protection:	-	-	max 10ADC

## Main features

<b>Display:</b>	LCD 4 digits, 6000 dots ( <b>HT77N</b> ) LCD 4 digits, 3200 dots ( <b>HT78</b> ) LCD 4 digits, 5000 dots ( <b>HT79</b> )
<b>Conversion type:</b>	TRMS
<b>Power supply:</b>	2x1.5V batteries type AAA LR03
<b>Safety:</b>	IEC/EN 61010-1
<b>Measurement category:</b>	CAT III 300V ( <b>HT77N</b> ) CAT II 600V, CAT III 300V ( <b>HT78</b> ) CAT IV 300V ( <b>HT79</b> )
<b>Insulation:</b>	double insulation
<b>Pollution level:</b>	2
<b>Max height:</b>	2000mm
<b>Clamp jaw internal diameter</b>	40mm ( <b>HT77N</b> ), 108mm ( <b>HT78</b> ) 23mm ( <b>HT79</b> )
<b>Auto Power OFF:</b>	after 20 minutes' idling ( <b>HT77N</b> ) after 10 minutes' idling ( <b>HT78</b> )
<b>Size (LxWxH):</b>	202x75x42mm ( <b>HT77N</b> ) 341x194x52mm ( <b>HT78</b> ) 206x76x34mm ( <b>HT79</b> )
<b>Weight (batteries included):</b>	265g ( <b>HT77N</b> ), 1.9kg ( <b>HT78</b> ), 262g ( <b>HT79</b> )

## Included accessories

Pair of test leads ( <b>HT79</b> )
Soft carrying bag
Batteries
Non-slip strap ( <b>HT78</b> )
User Manual

