

HT4013

AC/DC clamp meter up to 400A



Clamp meter **HT4013** is designed for AC and DC current measurement up to 400A in compliance with CAT III 600V according to IEC/EN61010-1 standards. The clamp is provided with a built-in sensor to detect **AC/DC voltage** without contact with red LED signal. This model permits also to carry out resistance measurement, continuity test, frequency, capacity, diode test, duty cycle and **temperature with K probe**. Auto power off function permits to save internal battery life.

Function

- AC/DC current up to 400A
- DC/AC voltage up to 600V
- “Voltsense” feature for AC voltage detection
- Resistance
- Continuity test with buzzer
- Frequency with test leads
- Capacitance
- Diode test
- Duty Cycle
- Temperature with type K probe
- Autorange
- Data HOLD
- Relative measurement
- Auto Power OFF

OPTIONAL Accessory

- **TK107** : Type K probe for air/gas temperature
- **TK108** : Type K probe for semi-solid substances temperature
- **TK109** : Type K probe for liquid temperature
- **TK110** : Type K probe for surface temperature
- **TK111** : Type K probe for surface temp. with 90 degree tip

STANDARD Accessory

- Couple of test leads
- **TK101** : Type K bead probe
- Carrying bag
- Batteries
- User manual



1. ELECTRICAL SPECIFICATIONS

Accuracy is calculated as [% rdg + (number of dgt * resolution)] referred to 18°C ÷ 28°C <75%RH

AC Voltage (Autorange)

Range	Resolution	Accuracy	Input impedance	Bandwidth	Overload protection
4.000V	0.001V	$\pm(1.5\%rdg + 5dgt)$	10M Ω	50 ÷ 400Hz	600VDC/ACrms
40.00V	0.01V				
400.0V	0.1V				
600V	1V	$\pm(2.0\%rdg + 5dgt)$			

Integrated sensor for AC voltage detection: LED turn on for phase-earth voltage > 100V, 50/60Hz

DC Voltage (Autorange)

Range	Resolution	Accuracy	Input impedance	Overload protection
400.0mV	0.1mV	$\pm(0.8\%rdg + 2dgt)$	10M Ω	600VDC/ACrms
4.000V	0.001V	$\pm(1.5\%rdg + 2dgt)$		
40.00V	0.01V			
400.0V	0.1V			
600.0V		$\pm(2.0\%rdg + 2dgt)$		

AC Current

Range	Resolution	Accuracy	Bandwith	Overload protection
40.00A	0.01A	$\pm(2.5\%rdg + 8dgt)$	50 ÷ 60Hz	400Arms
400.0A	0.1A	$\pm(2.8\%rdg + 8dgt)$		

DC Current

Range	Resolution	Accuracy	Overload protection
40.00A	0.01A	$\pm(2.5\%rdg + 5dgt)$	400Arms
400.0A	0.1A	$\pm(2.8\%rdg + 5dgt)$	

Resistance and Continuity test (Autorange)

Range	Resolution	Accuracy	Buzzer	Overload protection
400.0 Ω	0.1 Ω	$\pm(1.0\%rdg + 4dgt)$	$\leq 30\Omega$	600VDC/ACrms
4.000k Ω	0.001k Ω	$\pm(1.5\%rdg + 2dgt)$		
40.00k Ω	0.01k Ω			
400.0k Ω	0.1k Ω			
4.000M Ω	0.001M Ω	$\pm(2.5\%rdg + 3dgt)$		
40.00M Ω	0.01M Ω	$\pm(3.5\%rdg + 5dgt)$		

Test current of continuity test: < 0.5mA

Capacitance (Autorange)

Range	Resolution	Accuracy	Overload protection
40.00nF	0.01nF	$\pm(4.0\%rdg + 20dgt)$	600VDC/ACrms
400.0nF	0.1nF	$\pm(3.0\%rdg + 5dgt)$	
4.000 μ F	0.001 μ F		
40.00 μ F	0.01 μ F		
100.0 μ F	0.1 μ F	$\pm(4.0\%rdg + 10dgt)$	

**Diode test**

Feature	Test current	Open voltage
	0.3mA typical	1.5VDC

Frequency with test leads (Autorange)

Range	Resolution	Accuracy	Sensitivity	Overload protection
10.00Hz ÷ 49.99Hz	0.01Hz	±(1.5%rdg + 2dgt)	>15Vrms	600VDC/ACrms
50.0Hz ÷ 499.9Hz	0.1Hz			
0.500kHz ÷ 4.999kHz	0.001kHz			
5.00kHz ÷ 10.0kHz	0.01kHz			

Duty Cycle (Autorange)

Range	Resolution	Accuracy
0.5% ÷ 99.0%	0.1%	±(1.2%rdg + 2dgt)

Temperature with type K probe (Autorange)

Range	Resolution	Accuracy (*)	Overload protection
-20.0 ÷ 399.0°C	0.1°C	±(3.0%rdg + 5°C)	600VDC/ACrms
400 ÷ 760°C	1°C		
-4.0 ÷ 750.0°F	0.1°F	±(3.0%rdg + 9°F)	
752 ÷ 1400°F	1°F		

(*) Accuracy of type K probe not considered



2. GENERAL SPECIFICATIONS

Mechanical characteristics

Size (L x W x H):	200 x 66 x 37mm
Weight (including battery):	205g
Max conductor size:	30mm

Supply

Battery type:	2x1.5V batteries type AAA LR03
Low battery indication:	“+ III” is displayed
Auto Power OFF:	after 30 minutes of idleness (not disabled)

Display

Characteristics:	4 LCD (max 4000 counts), decimal point, unit symbol indication
Sample rate:	2 times/sec
Conversion mode:	mean value

Climatic conditions

Reference temperature:	18°C ÷ 28°C
Operating temperature:	5 ÷ 40 °C
Operating humidity:	<80%RH
Storage temperature:	-20 ÷ 60 °C
Storage humidity:	<80%RH

Reference guidelines

Safety:	IEC/EN61010-1
EMC:	IEC/EN61326-1
Insulation:	double insulation
Pollution level:	2
For inside use, max height:	2000m
Measurement category:	CAT III 600V to ground

This product conforms to the prescriptions of the European directive on low voltage 2006/95/EEC and to EMC directive 2004/108/EEC