CAT III 600V

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**, **Capacitance**, **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.

宇宏企業股份有限公司
台北：三重區重新路五段 609巷 16號 5樓之7
TEL:02-22782269 FAX:02-22782059
新竹：新竹縣竹北市台元 26 號 4 樓之 10
TEL:03-552-6779 FAX:03-552-6739
http://www.radiotek.com.tw/
E-mail : salesmag1@radiotek.com.tw

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, Capacitance, 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

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

Capacitance
- 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)

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	±(1.5%rdg + 5dgt)	10MΩ	50 ÷ 400Hz	600VDC/ACrms
40.00V	0.01V				
400.0V	0.1V				
600V	1V	±(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	±(0.8%rdg + 2dgt)	10MΩ	600VDC/ACrms
4.000V	0.001V	±(1.5%rdg + 2dgt)		
40.00V	0.01V			
400.0V	0.1V			
600.0V		±(2.0%rdg + 2dgt)		

AC Current

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

DC Current

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

Resistance and Continuity test (Autorange)

Range	Resolution	Accuracy	Buzzer	Overload protection
400.0Ω	0.1Ω	±(1.0%rdg + 4dgt)	≤ 30Ω	600VDC/ACrms
4.000kΩ	0.001kΩ	±(1.5%rdg + 2dgt)		
40.00kΩ	0.01kΩ			
400.0kΩ	0.1kΩ			
4.000MΩ	0.001MΩ	±(2.5%rdg + 3dgt)		
40.00MΩ	0.01MΩ	±(3.5%rdg + 5dgt)		

Test current of continuity test: < 0.5mA

Capacitance (Autorange)

Range	Resolution	Accuracy	Overload protection
40.00nF	0.01nF	±(4.0%rdg + 20dgt)	600VDC/ACrms
400.0nF	0.1nF	±(3.0%rdg + 5dgt)	
4.000µF	0.001µF		
40.00µF	0.01µF		
100.0µF	0.1µF	±(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