

# HT9021 - HT9015

## AMPEROMETRIC CLAMPS AC/DC 1000A AND 600A TRMS CAT IV

HT9021 and HT9015 have been designed for measuring AC/DC current respectively up to 1000A and up to 600A in TRMS reaching CAT IV 600V in compliance with standard IEC/EN61010-1. The clamps are provided with a wide display with 6000 reading dots, backlighting and analog bargraph to facilitate reading also in poorly lit environments. These models also carry out resistance, frequency, capacitance, temperature with type K probes and duty cycle measurements.

### FUNCTIONS

- Measurements in TRMS
- AC/DC current up to 1000A (HT9021)
- AC/DC current up to 600A (HT9015)
- Resistance and continuity test
- "Voltsense" for detecting AC/DC voltage
- Frequency
- Capacitance
- Temperature with K-type probe
- Diode test
- Duty Cycle
- Autorange
- Data HOLD
- MAX/MIN
- Peak current (<10ms)
- Relative measurement
- Bargraph
- Backlight
- AutoPowerOFF

**HT9021**  
HP009021

**HT9015**  
HP009015



### GENERAL SPECIFICATIONS

Display:	LCD, 4 digits, 6000 dots
Conversion type:	TRMS
Power supply:	1x9V battery type IEC 6F22
AutoPowerOff:	after 15 min of idleness
Clamp inner diameter:	45mm (HT9021) 30mm (HT9015)
Safety:	IEC/EN61010-1
Insulation:	double insulation
Pollution degree:	2
Measurement category:	CAT IV 600V - CAT III 1000V
Dimensions (LxWxH):	252x88x44mm (HT9021) 210x75x45mm (HT9015)
Weight (batteries included):	420g (HT9021) 400g (HT9015)

### TECHNICAL SPECIFICATIONS

<b>DC voltage (Autorange)</b>	
Measuring range:	0.01mV ÷ 1000V
Basic accuracy:	±(1.0%reading + 3digits)
<b>AC TRMS voltage (Autorange)</b>	
Measuring range:	0.001V ÷ 1000V
Bandwidth:	50Hz ÷ 400Hz
Basic accuracy:	±(1.0%reading + 4digits)
<b>DC current</b>	
Measuring range:	0.01A ÷ 1000A (HT9021) 0.01A ÷ 600A (HT9015)
Basic accuracy:	±(2.0%reading + 8digits)
<b>AC TRMS current</b>	
Measuring range:	0.01A ÷ 1000A (HT9021) 0.01A ÷ 600A (HT9015)
Bandwidth:	50Hz ÷ 400Hz
Basic accuracy:	±(2.8%reading + 8digits)
<b>Resistance and continuity test</b>	
Measuring range:	0.1Ω ÷ 60MΩ
Basic accuracy:	±(1.0%reading + 5digits)
Continuity buzzer:	<50Ω
<b>Frequency with clamp and probes</b>	
Measuring range:	0.01Hz ÷ 60kHz
Basic accuracy:	±(1.0%reading + 5digits)
<b>Capacitance</b>	
Measuring range:	0.01nF ÷ 4mF
Basic accuracy:	±(2.5%reading + 5digits)
<b>Temperature with K-type probe</b>	
Measuring range:	-20°C ÷ 760°C; -4°F ÷ 1400°F
Basic accuracy:	±(2.0%reading + 3°C); ±(2.0%reading + 6°F)

### ACCESSORIES

#### Standard

- Pair of probes
- K-type wire probe + adapter
- Battery
- Transport bag
- User manual

#### Optional

- K-type thermocouples



宇宏企業股份有限公司

台北：三重區重新路五段609巷16號6樓之1 新竹：新竹縣竹北市台元26號4樓之10  
TEL:02-22782269 FAX:02-22782059 TEL:03-552-6779 FAX:03-552-6739  
<http://www.fluke-tektronix.tw> <http://www.radiotek.com.tw>



## 1. ELECTRICAL SPECIFICATIONS

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

### DC Voltage (Autorange)

Range	Resolution	Accuracy	Input impedance	Overload protection
600.0mV	0.01mV	$\pm(1.0\%rdg + 3dgt)$	10M $\Omega$	1000VDC/ACrms
6.000V	0.001V			
60.00V	0.01V			
600.0V	0.1V			
1000V	1V			

### AC Voltage TRMS (Autorange)

Range	Resolution	Accuracy	Input impedance	Bandwidth	Overload protection
6.000V	0.001V	$\pm(1.0\%rdg + 4dgt)$ (50 ÷ 60Hz)	10M $\Omega$	50 ÷ 400Hz	1000VDC/ACrms
60.00V	0.01V				
600.0V	0.1V	$\pm(3.5\%rdg + 5dgt)$ (61 ÷ 400Hz)			
1000V	1V				

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

### Resistance and Continuity test (Autorange)

Range	Resolution	Accuracy	Buzzer	Overload protection
600.0 $\Omega$	0.1 $\Omega$	$\pm(1.0\%rdg + 5dgt)$	$\leq 60\Omega$	600VDC/ACrms
6.000k $\Omega$	0.001k $\Omega$			
60.00k $\Omega$	0.01k $\Omega$			
600.0k $\Omega$	0.1k $\Omega$			
6.000M $\Omega$	0.001M $\Omega$	$\pm(2.0\%rdg + 10dgt)$		
60.00M $\Omega$	0.01M $\Omega$			

Test current of continuity test: < 0.35mA

### DC Current

Range	Resolution	Accuracy	Overload protection
60.00A	0.01A	$\pm(2.2\%rdg + 10dgt)$	1000AACrms
600.0A	0.1A	$\pm(2.0\%rdg + 8dgt)$	
1000	1A		

### AC TRMS Current

Range	Resolution	Accuracy	Bandwidth	Overload protection
60.00A	0.01A	$\pm(2.2\%rdg + 12dgt)$	50 ÷ 60Hz	1000Arms
600.0A	0.1A	$\pm(2.2\%rdg + 8dgt)$		
1000	1A			
60.00A	0.01A	$\pm(3.5\%rdg + 12dgt)$	61 ÷ 400Hz	
600.0A	0.1A	$\pm(3.5\%rdg + 8dgt)$		
1000	1A			

PEAK features: response time <10ms ; Accuracy:  $\pm(5\%rdg.+10dgt)$



# HT9021

Rel. 1.01 of 12/07/10

DC/AC TRMS professional clamp meter up to 1000A

Pag 2 of 3

## Capacitance (Autorange)

Range	Resolution	Accuracy	Overload protection
40.00nF	0.01nF	$\pm(3.5\%rdg + 40dgt)$	600VACrms
400.0nF	0.1nF	$\pm(2.5\%rdg + 5dgt)$	
4.000 $\mu$ F	0.001 $\mu$ F		
40.00 $\mu$ F	0.01 $\mu$ F		
400.0 $\mu$ F	0.1 $\mu$ F		
4000 $\mu$ F	1 $\mu$ F	$\pm(5.0\%rdg + 5dgt)$	

## Diode test

Feature	Test current	Open voltage
	0.9mA typical	2.8VDC

## Frequency with test leads (Autorange)

Range	Resolution	Accuracy	Sensitivity	Overload protection
99.99Hz	0.01Hz	$\pm(1.0\%rdg + 5dgt)$	> 15Vrms	600VDC/ACrms 1000AACrms
999.9Hz	0.1Hz			
9.999kHz	0.001kHz			
60.00kHz	0.01kHz			

## Frequency with jaws (Autorange)

Range	Resolution	Accuracy	Sensitivity	Overload protection
99.99Hz	0.01Hz	$\pm(1.0\%rdg + 5dgt)$	$\geq 10A$ (60A) $\geq 50A$ (600A)	600VDC/ACrms 1000AACrms
999.9Hz	0.1Hz			
9.999kHz	0.001kHz			

## Duty Cycle (Autorange)

Range	Resolution	Sensitivity	Accuracy
0.5% ÷ 99.0%	0.1%	> 15Vrms	$\pm(1.2\%rdg + 2dgt)$

Pulse width: 100 $\mu$ s ÷ 100ms ; Pulse frequency: 5.000Hz ÷ 100.0kHz

## Temperature with type K probe (Autorange)

Range	Resolution	Accuracy (*)	Overload protection
-20.0 ÷ 400.0°C	0.1°C	$\pm(2.0\%rdg + 3^\circ C)$	600VDC/ACrms
400 ÷ 760°C	1°C	$\pm(2.0\%rdg + 5^\circ C)$	
-4.0 ÷ 752.0°F	0.1°F	$\pm(2.0\%rdg + 6^\circ F)$	
752 ÷ 1400°F	1°F	$\pm(2.0\%rdg + 9^\circ F)$	

(\*) Accuracy of type K probe not considered



宇宏企業股份有限公司

台北: 三重區重新路五段609巷16號6樓之1  
TEL:02-22782269 FAX:02-22782059  
<http://www.fluke-tektronix.tw>

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>



## 2. GENERAL SPECIFICATIONS

### Mechanical characteristics

Size:	252(L) x 88(La) x 44(H)mm
Weight (including battery):	442g
Max conductor size:	45mm

### Supply

Battery type:	1 battery 9V NEDA 1604 IEC 6F22 JIS 006P.
Low battery indication:	“+ III” is displayed when the battery level is too low.
Battery life:	about 200 hours
AutoPowerOff:	about 15 minutes of idleness

### Display

Characteristics:	4 LCD (max 6000 counts), decimal point, unit symbol indication, bargraph and backlight
Sample rate:	2 times/sec
Conversion mode:	TRMS

### 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 standards

Comply with:	IEC/EN 61010-1
Insulation:	double insulation
Pollution:	Level 2
For inside use, max height:	2000m
Installation category:	CAT IV 600V, CAT III 1000V to the ground

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