

# HT9012 - HT9014

## PROFESSIONAL AMPEROMETRIC CLAMPS AC 600A IN CAT IV

The professional amperometric clamps HT9012 and HT9014 have been designed for measuring AC current up to 600A for reaching respectively CAT IV 600V and CAT III 1000V in compliance with standard IEC/EN61010-1. The clamps are provided with a wide display and with an auto power off function in order to preserve the internal battery. Model HT9014, in TRMS and provided with a 6000-dot display allows carrying out tests with an optimal resolution, taking advantage of a wide measuring range.

FUNCTIONS	HT9012	HT9014
Measurements in TRMS		•
DC/AC voltage	•	•
AC Current	•	•
Resistance / continuity test	•	•
Frequency		•
"Voltsense" sensor	•	•
Diode test	•	•
Temperature with K-type probe		•
Capacitance		•
Duty Cycle		•
Autorange		•
Data HOLD	•	•
MAX/MIN (MAX only)		•
Peak current (<10ms)		•
Relative measurement		•
Bargraph		•
Backlight	•	•
AutoPowerOff	•	•

GENERAL SPECIFICATIONS	
Display:	LCD, 3 ½ digits, 2000 dots (HT9012) LCD, 4 digits, 6000 dots (HT9014)
Conversion type:	average value (HT9012) TRMS (HT9014)
Power supply:	1x9V battery type IEC F22
AutoPowerOff:	after 15 min of idleness
Clamp inner diameter:	30mm
Safety:	IEC/EN61010-1
Measurement category:	CAT IV 600V - CAT III 1000V
Insulation:	double insulation
Pollution degree:	2
Dimensions (LxWxH):	210x75x45mm
Weight (batteries included):	400g

TECHNICAL SPECIFICATIONS	HT9012	HT9014
<b>DC Voltage</b>		
Measurement range:	0.1mV ÷ 1000V	0.01mV ÷ 1000V
Basic accuracy:	±(1.0%rdg + 3dgt)	±(1.0%rdg + 3dgt)
<b>AC Voltage</b>		
Measurement range:	0.1mV ÷ 1000V	1mV ÷ 1000V
Bandwidth:	50 ÷ 60Hz	50 ÷ 400Hz
Basic accuracy:	±(1.0%rdg + 4dgt)	±(1.0%rdg + 10dgt)
<b>AC Current</b>		
Measurement range:	1mA ÷ 600A	0.01A ÷ 600A
Bandwidth:	50 ÷ 60Hz	50 ÷ 60Hz
Basic accuracy:	±(2.5%rdg + 4dgt)	±(2.8%rdg + 8dgt)
<b>Resistance and continuity test</b>		
Measurement range:	0.1Ω ÷ 20.00MΩ	0.1Ω ÷ 60.00MΩ
Basic accuracy:	±(1.0%rdg + 5dgt)	±(1.0%rdg + 5dgt)
Continuity buzzer:	<100Ω	<60Ω
<b>Capacitance</b>		
Measurement range:		0.01nF ÷ 4000μF
Basic accuracy:		±(2.5%rdg + 5dgt)
<b>Temperature with K-type probe</b>		
Measurement range:		-20°C ÷ 760°C; -4°F ÷ 1400°F
Basic accuracy:		±(2.0%rdg + 3°C); ±(2.0%rdg + 6°F)
<b>Frequency with clamp and probes</b>		
Measurement range:		0.01Hz ÷ 60.00kHz
Basic accuracy:		±(1.0%rdg + 5dgt)



**HT9014**  
HP009014

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HP009012

ACCESSORIES	
<b>Standard</b>	
Pair of probes	
K-type wire probe + adapter (HT9014)	
Battery	
Transport bag	
User manual	
<b>Optional</b>	
K-type thermocouples (HT9014 only)	



# HT9014

Rel. 1.02 of 12/07/10

AC TRMS professional clamp meter up to 600A

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## 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	±(1.0%rdg + 3dgt)	10MΩ	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	±(1.0%rdg + 10dgt) (50 ÷ 60Hz)	10MΩ	50 ÷ 400Hz	1000VDC/ACrms
60.00V	0.01V				
600.0V	0.1V	±(3.5%rdg + 5dgt) (61 ÷ 400Hz)			
1000V	1V				

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

### Resistance and Continuity test (Autorange)

Range	Resolution	Accuracy	Buzzer	Overload protection
600.0Ω	0.1Ω	±(1.0%rdg + 5dgt)	≤ 60Ω	600VDC/ACrms
6.000kΩ	0.001kΩ			
60.00kΩ	0.01kΩ			
600.0kΩ	0.1kΩ			
6.000MΩ	0.001MΩ			
60.00MΩ	0.01MΩ	±(2.0%rdg + 10dgt)		

Test current of continuity test: &lt; 0.35mA

### AC TRMS Current

Range	Resolution	Accuracy	Bandwidth	Overload protection
60.00A	0.01A	±(2.8%rdg + 12dgt)	50 ÷ 60Hz	600Arms
600.0A	0.1A	±(2.8%rdg + 8dgt)		
60.00A	0.01A	±(4.5%rdg + 10dgt)	61 ÷ 400Hz	
600.0A	0.1A	±(5.0%rdg + 10dgt)		

PEAK features: response time &lt;10ms

### Capacitance (Autorange)

Range	Resolution	Accuracy	Overload protection
40.00nF	0.01nF	±(3.5%rdg + 40dgt)	600VACrms
400.0nF	0.1nF	±(2.5%rdg + 5dgt)	
4.000μF	0.001μF		
40.00μF	0.01μF		
400.0μF	0.1μF		
4000μF	1μF	±(5.0%rdg + 5dgt)	



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# HT9014

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AC TRMS professional clamp meter up to 600A

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## 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	±(1.0%rdg + 5dgt)	> 15Vrms	600VDC/ACrms
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	±(1.0%rdg + 5dgt)	>10Arms (60A) >50Arms (600A)	600AACrms
999.9Hz	0.1Hz			
9.999kHz	0.001kHz			

## Duty Cycle (Autorange)

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

## Temperature with type K probe (Autorange)

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

(\*) Accuracy of type K probe not considered



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## 2. GENERAL SPECIFICATIONS

### Mechanical characteristics

Size:	215(L) x 74(La) x 43(H)mm
Weight (including battery):	285g
Max conductor size:	30mm

### 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 ground

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