



METRA BLANSKO

VALUE IS INSIDE

Metra ACDC Clamp 300, 1000

Digital clamp meter



Application

Metra Clamp 1000A /300A measures important electrical parameters like AC Current, AC Voltage, DC Voltage. It also features Capacitance, Ohm & Continuity, frequency, Duty cycle and temperature measurement.



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Product Features

Unique Design

Metra clamp 1000A / 300A is a highly innovative design for features that increase safety and comfort of user.

- Rotating clamp jaws facilitate the measurement at physically awkward positions, vertical bus bars, conductors placed at positions difficult to access.
- Clamp jaws can be opened or closed with the trigger placed at bottom side away from the jaws. This allows the user to place his/her hand at safer distance from live conductor. This greatly reduces exposure of human beings to electrical shocks
- Location and design of trigger eliminates fatigue caused by single finger operation. It allows spreading the force required to open the jaws over more than one finger to ensure comfortable operation.
- Comfortable operation of push buttons and function selector switch, in adverse field conditions.

white LED backlit to work in poorly light area.

Large Jaw Opening

Metra Clamp 1000A: Jaw opening of 51mm for standard wire diameter of 50mm

Metra Clamp 300A : Jaw opening of 41mm for standard wire diameter of 40mm

Narrow Body

Narrow housing for firm grip and easy to carry.

High Accuracy for low current measurement

The clamp meter can measure accurately at not only the High currents but also Low current ranges.

User selectable Backlit: (Optional)

It is possible to conduct measurement using the clamp meter during night time in darkness with the help of Backlit. The back lit can be switched ON or OFF by pressing a single key.

Temperature measurement

Temperatures from -200 to 800 °C using Pt 100 and Pt 1000 sensors.

AUTO POWER OFF

In order to save the power of the Batteries, the clamp meter will automatically shut OFF if it detects no activity for 10 minutes.

Analog Scale

Analog scale that updates at the rate 20 times/sec to observe fluctuations in input.

CONTINUOUS ON MODE

In this mode, AUTO POWER OFF is disabled.

DATA Hold Function

By pressing DATA HOLD button, reading on the display can be latched for Hands free operation.

MIN, MAX Function

By pressing MIN/MAX button, the clamp meter will start recording latest Minimum and Maximum readings

NULL ZERO Correction for Resistance

For Low ohm measurement, the lead resistance can be compensated by pressing the shift key (Yellow Key)

NULL ZERO Correction for Capacitance

Null zero connection for capacitance. For nF range, stray capacitance can be compensated by shift key (Yellow Key)

AUTO and MANUAL ranging modes

In AUTO ranging mode the instrument automatically selects the range with best resolution depending on the applied input. In MANUAL ranging mode range is user selectable using MAN key.

Diode Measurement

For testing diode and transistors, diode measurement function is available.

Double molded Cover for soft touch and firm grip of the Instrument



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Measuring function	Measuring range	Resolution	Input impedance	Intrinsic error of digital display ± (...% of rdg + ...digit) at reference condition	Over load capacity ¹⁾	
					Over load value	Overload duration
V dc	30.00 mV	10 µV	>10 GΩ // <40pF	0.5 + 3 ²⁾	1000 V DC AC eff / rms Sine wave	Continuously
	300.0 mV	100 µV	>10 GΩ // <40pF	0.5 + 3		
	3.000 V	1 mV	11 MΩ // <40pF	0.25 + 1		
	30.00 V	10 mV	10 MΩ // <40pF	0.25 + 1		
	300.0 V	100 mV	10 MΩ // <40pF	0.25 + 1		
1000 V	1 V	10 MΩ // <40pF	0.35 + 1			
V ~	3.000 V	1 mV	11 MΩ // <40pF	0.75 + 2		
	30.00 V	10 mV	10 MΩ // <40pF	(10...300 Digit)		
	300.0 V	100 mV	10 MΩ // <40pF	0.75 + 1		
	1000 V	1V	10 MΩ // <40pF	> 300 Digit		
Ω	No load voltage				1000 V DC AC eff / rms Sine wave	10 min
	30.00 Ω	10 mΩ	Max. 3.2 V	0.5 + 3 ²⁾		
	300.0 Ω	100 mΩ	Max. 3.2 V	0.5 + 3		
	3.000 KΩ	1Ω	Max. 1.25 V	0.4 + 1		
	30.00 KΩ	10 Ω	Max. 1.25 V	0.4 + 1		
	300.0 KΩ	100 Ω	Max. 1.25 V	0.4 + 1		
	3.000 MΩ	1 KΩ	Max. 1.25 V	0.6 + 1		
30.00 MΩ	10 KΩ	Max. 1.25 V	2.0 + 1			
→	2.000 V	1 mV	Max. 3.2 V	0.25 + 1	1100* A / 360A	Continuously
A ~	300.0 A	0.01 A	-----	1.5 % of range + 5 Digits		
	1000A*	0.1 A	-----	1.5 % of range + 5 Digits		

Measuring function	Measuring range	Resolution	Discharge resistance	U0 max.	Intrinsic error of digital display ± (...% of rdg + ...digit) at reference condition	Over load capacity ¹⁾		
						Over load value	Overload duration	
F	30.00 nF	10 pF	250 KΩ	2.5 V	1.0 + 3 ²⁾	1000 V DC AC eff / rms Sine	10 min	
	300.0 nF	100 pF	250 KΩ	2.5 V	1.0 + 3			
	3.000 µF	1 nF	25 KΩ	2.5 V	1.0 + 3			
	30.00 µF	10 nF	25 KΩ	2.5 V	3.0 + 3			
Hz			f min V dc	f min V ~				
	300.0 Hz	0.1 Hz	1 Hz	45 Hz	0.5 + 1 ³⁾	≤ 3 kHz 1000 v 30 kHz; 300 V 100 kHz 30 V	Continuously	
	3.000 KHz	1 Hz	1 Hz	45 Hz				
	30.00 KHz	10 Hz	10 Hz	45 Hz				
100.0 KHz	100 Hz	100 Hz	100 Hz					
%	2.0...98.0%	0.1 %	2 Hz	—	2 Hz... 1kHz ± 5 Digit ⁴⁾ 1 kHz ... 10 kHz; ± 5 Digit / kHz ⁴⁾			
°C	Pt 100	-200.0... +200.0 °C	0.1 °C	—	—	2 Kelvin + 5 Digit ⁵⁾	1000 V DC AC eff / rms Sine	10 min
		+200.0...+850.0 °C	0.1 °C			1.0 + 5 ⁵⁾		
	Pt1000	-100.0... +200.0 °C	0.1 °C	—	—	2 Kelvin + 2 Digit ⁵⁾		
		+200.0...+850.0 °C	0.1 °C			1.0 + 2 ⁵⁾		

1) At 0° + 40 °C

2) With zero adjustment, without zero adjustment + 35 digits

3) Range :

3 V ac/dc: Ue = 1.5 V eff/rms ... 100 V eff/rms

30 V ac/dc: Ue = 15 V eff/rms ... 300 V eff/rms

300 V ac/dc: Ue = 150 V eff/rms ... 1000 V eff/rms

4) On the range 3 V dc, square – wave signal positive on one side 5 ... 15 V, f = const, not 163.84 Hz or integral multiple.

5) Without sensor

*applicable for 1000A



Reference conditions for Accuracy

Reference Temperature	23°C ± 2°
Relative Humidity	45%...55% RH
Waveform of measured quantity	Sinusoidal
Input frequency	50 or 60 Hz ±2%
Battery Voltage	8 V ± 0.1 V

Response time

Influence quantity	Range of influence	Measured quantity/ measuring range	Attenuation
Common mode interference voltage	Noise quantity max. 1000 V dc	VDC	> 120 dB
	Noise quantity max. 1000 V ~ 50 Hz, 60 Hz sinusoidal	3 V~ 30 V~ 300 V~	> 70 dB
		1000 V~	> 60 dB
Normal mode interference voltage	Noise quantity V ~ Value of the measuring range at a time Max. 1000V~ ,50Hz, 60Hz Sinusoidal	VDC	> 50 dB
	Noise quantity max. 1000 V dc	V~	> 110 dB

Environmental conditions

Operating temperature	-10 to +50°C
Storage temperature	-20 to +70°C
Relative humidity	0...90% non condensing
Terminal protection	IP 50 for instrument and IP 20 for terminals
Altitude	Up to 2000 m

Battery


Battery voltage	9 V DC
Battery type	Manganese Dioxide, alkaline manganese
Battery life	Minimum 220 hours on Vdc, Adc, 80 hours on Vac, Aac.

Influence quantities and variations

Influence quantity	Range of influence	Measured quantity/ measuring range	Variation1 ± (... % of rdg. + digits)
Temperature	0 °C +21 °C and +25 °C...+40°C	30/300 mV DC	1 + 3
		3...300 V DC	0,15 + 1
		1000 V DC	0,2 + 1
		V ~	0,4 + 1
		30 Ω ²	0,15 + 2
		300 Ω	0,25 + 2
		30 KΩ – 3 MΩ	0,15 + 2
		30 MΩ	1 + 1
		30 nF ² – 3 uF	0,5 + 2
		30 uF	2 + 2
		Hz	0,5 + 1
		-200...+200 °C	0,5 + 2
		+200...+850 °C	0,5 + 2
		A~	0,75 % of range + 1

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Frequency of the measured quantity	15 Hz...< 30 Hz	3...300 V~	–
	30Hz...<45 Hz		–
	>65 Hz...400 Hz		2 + 3
	> 400Hz... 1 KHz		2 + 3
	> 1 kHz...20 kHz		–
	15 Hz... <30 KHz		1000 V~
	30 Hz... < 45 Hz	A~	–
	>65 Hz...1 kHz		3 + 3
	15 Hz...<30 Hz		–
Waveform of the measured quantity2	Crest Factor CF	1 ... 3	V~ ⁴ , A~ ⁴
		1 ... 5	
	>66 Hz... 66 Hz	2 % of range + 1	
Battery voltage	 ...< 7,9 V > 8 V ...10 V	VDC	2 Digit
		V~	4 Digit
		A~	6 Digit
		30 Ω/ 300 Ω	4 Digit
		3 kΩ – 30 MΩ	3 Digit
		nF, μF	1 Digit
		Hz	1 Digit
		%	1 Digit
Relative humidity	75% 3 Days Meter off	V~,VDC	1 x intrinsic error
		A~	
		Ω	
		F	
		Hz	
		°C	
		%	
HOLD	–	–	± 1 digit
MIN/MAX	–	VAC/DC, A~	± 2 digit


1) With temperature: Error data apply per 10 K change temperature.

With frequency: Error data apply to a display from 300 digits onwards.

2) With zero adjustment.

3) With unknown waveform (crest factor CF > 2), measure with manual range selection

4) With the exception of sinusoidal waveform.

5) After the " " symbol is displayed

Applicable Standards

EMC Immunity	ČSN EN 61326-1 ed.2
Immunity	ČSN EN 61010-1 ed.2
Safety	ČSN EN 61010-1 ed.2
IP for water & dust	ČSN EN 60529 – IP 50
Pollution degree	2
Installation category	CAT IV

Weight 0.6 Kg

Warranty 1 years

Sales & service:

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