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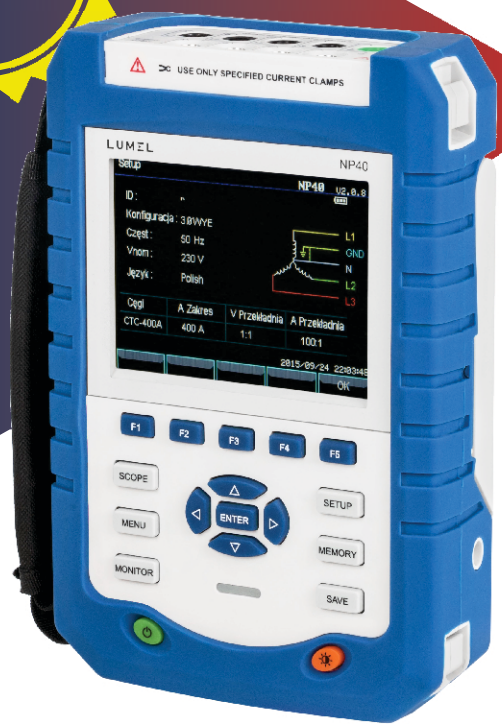
NEW OFFER



PORTABLE MULTIMETERS & METERS

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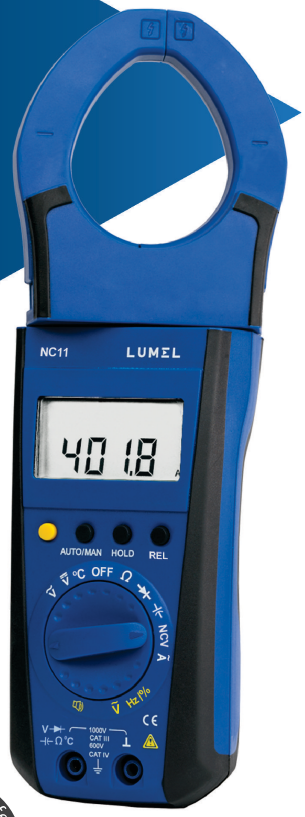

NC11

1000 A /400 AC 3 ¾ DIGITS DIGITAL CLAMP METER

Electrical Safety 1000 V CAT III

Electrical Safety 600 V CAT IV

Application

NC11 measures important electrical parameters like AC Current, AC Voltage, and DC Voltage. It also features Capacitance, Ohm & Continuity, frequency, and Duty cycle and temperature measurement.

Product Features

Unique Design

NC11 is a highly innovative design for features those increases **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 fatigues 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.

Large Jaw Opening

For NC11 1000 A AC Jaw opening of 51mm for standard wire diameter of 50mm and for NC11 400 A AC Jaw opening of 41mm for standard wire diameter of 40mm for 400A

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

It is possible to conduct measurement using the clamp meter during night time in darkness with the help of Backlit.

Temperature measurement

Temperature from 0 to 1300 °C using K type thermocouple 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 15 minutes.

Relative Measurement

By pressing REL key, the zero correction is made and relative value is measured. All functions can measure Relative value except Hz/Duty.

Hold Function

By pressing HOLD key reading on the display can be latched. Simultaneously HOLD is displayed on display.

Hz / Duty

The instrument can measure frequency (Hz) and Duty cycle (%) of AC voltage by pressing yellow key in VAC function.

NULL ZERO Correction for Resistance

For Low ohm measurement, the lead resistance can be compensated by pressing REL key.

Non contact voltage (NCV) detection

Presence of AC voltage >75 V AC 50/60 Hz can be detected by keeping jaws near voltage carrying conductor.
It is indicated by beep sound.

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 and continuity testing

For testing diode and transistors, diode measurementfunction is available. Continuity test generates beep sound if resistance is less than 75 ohm

Protection from dust and water

IP20 for terminals as per IEC60529

Applicable International Safety standards

600 V CAT III/1000V CAT II as per International Safety standard IEC 61010-1- 2010

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

NC11 - 1000 A /400 AC 3 ¾ DIGITS DIGITAL CLAMP METER

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Specifications

Meas. Function	Measuring Range	Resolution	Input Impedance V(AC) / V(DC)	Intrinsic error of digital display at reference conditions ± (...% of rdg + ...digits)	Overload capacity[1] Overload value	Overload duration
V ⎓	400.0mV	100µV	>20GΩ	0.75+2	1050V(DC)	Continuous
	4.000V	1mV	11MΩ	0.5+2		
	40.00V	10mV	10MΩ			
	400.0V	100mV	10MΩ			
	1000V	1V	10MΩ			
V ∼	400.0mV	100mV	11MΩ	1.5+5	1050V(AC) rms	Continuous
	4.000V	1mV	11MΩ	1+5		
	40.00V	10mV	10MΩ			
	400.0V	100mV	10MΩ			
	1000V	1V	10MΩ	1+10		
A ∼ Clamp meter 400A	40.00A	10mA		1.5 % of range +5 digits	480 A	Continuous
	400.0A	100mA				
A ∼ Clamp meter 1000A	400.0A	100mA		1.5 % of range +5 digits	1100A	Continuous
	1000A	1A				
			Open-circuit voltage			
Ω	400.0Ω	100mΩ	approx 0.45V	0.8+5	500V DC/AC rms	10 min
	4.000kΩ	1Ω		0.8+2		
	40.00kΩ	10Ω				
	400.0kΩ	100Ω				
	4.000MΩ	1kΩ		1+5		
	40.00MΩ	10kΩ		2+5		
◀))	400.0 Ω	100mΩ		Acoustic signal for 0...<75Ω (approx)		
⊣▶⊢	1.000V	1mV	approx 1V	2+10		
F	5.000nF	1pF		3+40[2]	500V DC/AC rms	10 min
	50.00nF	10pF		2+10[2]		
	500.0nF	100pF		0.5+3		
	5.000µF	1nF		1+2		
	50.00µF	10nF		1.5+2		
	200.0µF	100nF		5+10[4]		
			f_{min}			
Hz[3]	10.000Hz	0.001Hz	10Hz	0.2+2	≤1kHz : 1000V ≤10kHz : 400V ≤500kHz : 40V except 400mV	Continuous
	100.00Hz	0.01Hz	10Hz			
	1.0000kHz	0.1Hz	10Hz			
	10.000kHz	1Hz	10Hz			
	100.00kHz	10Hz	10Hz			
	500.0kHz	100Hz	10Hz			
%	2.0...98.0%	0.1%	---	10Hz...1kHz : ±5D 1kHz...10kHz : ±5D/kHz		
			Sensor			
°C	0...+1300 °C	1 °C	K-type NiCr-Ni	2+3 [5]	500V DC/AC rms	10 min

1) At 0° …. + 40 °C
2) With zero adjustment, using REL key.
3) Indication of frequency measurement expanded to 9999 Digits.
4) Time required for measurement approximately 60 secs
5) Without sensor

Reference conditions for Accuracy

Reference temperature	23°C ± 2K
Relative Humidity	45%...55% RH
Waveform of measured quantity	Sinusoidal
Input frequency	50 or 60 Hz ±2%
Battery Voltage	3 V ± 0.1 V

Influence Quantities and Variations

Influence Variable	Influence Range	Meas. Magnitude/ Measuring Range	Influence Effect
Temperature	0 °C ... +21 °C and +25 °C ... +50 °C	V ⎓	0.1 x intrinsic error/K
		V ∼	
		A ∼	
		Ω	
		F	
		Hz	
		Duty(%)	
		°C	

Influence of frequency on	Influence Range (max. resolution)	Frequency	Intrinsic Error at Ref. ±(... % of rdg. +... D)
V_{AC}	4V, 40V, 400V	20 Hz ... < 50 Hz > 60Hz... 1kHz	2 + 3
	400 mV,1000V	20 Hz ... < 50 Hz > 60 Hz ... 500 Hz	2 + 3

Influence Variable	Influence Range	Meas. Magnitude/ Measuring Range	Influence Effect
Relative Humidity	55 ... 75%	V ≃ A ∼ Ω F Hz (%) °C	1x intrinsic error

Influence Variable	Interference Magnitude	Measuring Range	Attenuation
Common mode Interference Voltage	1000 V DC/AC 50 Hz sine	all V DC	> 100 dB
	1000 V DC	all V AC	> 100 dB
	1000 V AC 50 Hz sine	400 mV / 4 V AC	> 55 dB
		40 V AC	> 55 dB
		400 V AC	> 43 dB
		1000 V AC	> 23 dB
Series-Mode Interference Voltage	max.1000 V AC 50/60 Hz sine	V DC	> 43 dB
	max.1000 V DC	V AC	> 55 dB

Battery voltage influence:
(Without display) - all ranges except capacitance:±8 Digits
- For capacitance±60 D at battery voltage 2.6V

NC11 - 1000 A /400 AC 3 ¾ DIGITS DIGITAL CLAMP METER

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Environmental

Operating temperature	-10 to +50°C
Storage temperature	-25 to +70°C
Relative humidity	45...75% non condensing
Terminal Protection	IP 52 for Housing and IP20 for terminals

Battery

Battery Voltage	1.5 x 2 V AAA size batteries
Battery type	zinc-carbon cell **OR** alkaline manganese cell per IEC 6LR 03
Battery Life	with zinc-carbon cell: approx. 200 hrs with alkaline manganese cell: approx 400 hrs

Mechanical configuration

Dimensions	90mm (W) x 270mm (L) x 70mm (H)
Weight	0.6 Kg

Display

Display/Char. Height	7 segment digits / 13 mm
Number of Places	3 3/4 place ≙ 3999 steps
Overflow Display	" OL "
Polarity Display	"–" sign is displayed when plus pole is at "⊥"
Measuring Rate	3 measurements/s

Applicable Standards

EMC	IEC 61326: Class B
Immunity	IEC 61000-4-2 8 KV atmosphere discharge, 4 KV contact discharge IEC 61000-4-3 : 3 V/m
Safety	IEC 61010-1-2010
IP for water & dust	IEC60529
Pollution degree	2
Installation category	600V CATIII / 1000V CATII
High Voltage Test	4.4 kV AC, 50Hz for 1 minute between housing and input.

ORDERING CODE

Clamp meter NC11 -	X	XX	X	X
Maximal range of current measurement a.c.:				
400 A	1			
1000 A	2			
Version:				
standard		00		
Language:				
Polish			P	
English			E	
Acceptance tests:				
with an extra quality inspection certificate				1
with test certificate				2

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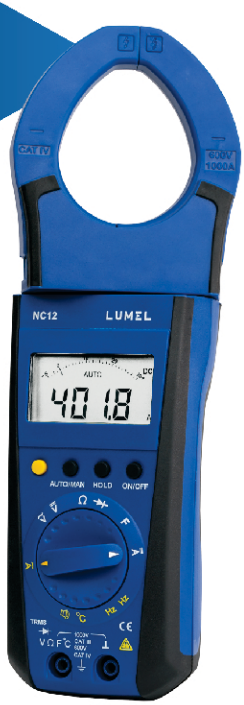

NC12

AC/DC CLAMP-ON METER 1000 A/ 300 A

Unique Design

NC12 is a highly innovative design for features those increases **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 fatigues 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.

Application

NC12 measures important electrical parameters like AC Current, DC Current, AC Voltage, and DC Voltage. It also features Capacitance, Ohm & Continuity, frequency, and Duty cycle and temperature measurement.

Large Jaw Opening

For NC12 1000A AC-DC Jaw opening of 51mm for standard wire diameter of 50mm and for NC12 300A AC-DC Jaw opening of 41mm for standard wire diameter of 40mm for 300A

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.

CONTINOUS 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.

Protection from dust and water

IP20 for terminals as per EN 60529

Applicable International Safety standards

600 V CAT IV/1000V CAT III as per International Safety standard EN 61010-1

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

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 (10….300 Digit) 0.75 + 1 > 300 Digit		
	30.00 V	10 mV	10 MΩ // <40pF			
	300.0 V	100 mV	10 MΩ // <40pF			
	1000 V	1V	10 MΩ // <40pF			
Ω			**No load voltage**			
	30.00 Ω	10 mΩ	Max. 3.2 V	0.5 + 3 [2]	1000 V DC AC eff / RMS Sine wave	10 min
	300.0 Ω	100 mΩ	Max. 3.2 V	0.5 + 3		
	3.000 k Ω	1Ω	Max. 1.25 V	0.4 + 1		
	30.00 k Ω	10 Ω	Max. 1.25 V	0.4 + 1		
	300.0 k Ω	100 Ω	Max. 1.25 V	0.4 + 1		
	3.000 MΩ	1 k Ω	Max. 1.25 V	0.6 + 1		
	30.00 MΩ	10 k Ω	Max. 1.25 V	2.0 + 1		
⊣▶⊢	2.000 V	1 mV	Max. 3.2 V	0.25 + 1		
NC12 1000A~/ Adc	2 to 300.0 A	0.1 A	-----	1.5 % of range + 5 Digits	1100 A	Continuously
	1000 A	1 A	-----			
NC12 300A~/Adc	0.2 to 30.0A	0.01A	-----			
	300.0A	0.1 A	-----			

Measuring Function	Measuring range		Resolution	Discharge resistance	U_0 max.	Intrinsic error of digital display ± (…% of rdg + …digit) at reference condition	Over load capacity [1]	
							Over load value	Over load 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		
				f min V dc	**f min V ~**			
Hz	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 k Hz		1 Hz	1 Hz	45 Hz			
	30.00 k Hz		10 Hz	10 Hz	45 Hz			
	100.0 k Hz		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]		
	Pt 1000	-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 0º …. + 40 ºC

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

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

Environmental

Operating temperature	-10 to +55°C
Storage temperature	-20 to +70°C
Relative humidity	0... 90% non condensing
Terminal Protection	IP50 for Housing and IP20 for terminals

Battery

Battery Voltage	9 V DC
Battery type	Manganese Dioxide Cell as per IEC6F22 , alkaline manganese cell as per IEC 6LR 61
Battery Life	Minimum 220 hours on V DC, A DC, 80 hours on V AC, A AC

Display

Number of digits	3 ¾ digits.
Maximum count	3100 counts.
Over range indication	"OL" is displayed.
Polarity indication	"—" sign is displayed for DC functions, if positive pole is at"⊥".

Influence Quantities and Variations

Influence Quantity	Range of Influence	Measured Quantity/ Measuring Range		Variation [1] ± (….% of rdg. + ….digits)
Temperature	0 ºC +21 ºC and +25 ºC…+40ºC	30/300 mV dc		1.0 + 3
		3...300 V dc		0.15 + 1
		1000 V dc		0.2 + 1
		V ~		0.4 + 2
		30 Ω [2]		0.15 + 2
		300 Ω		0.25 + 2
		3 kΩ – 3 MΩ		0.15 + 1
		30 MΩ		1.0 + 1
		30 nF [2] – 3 µF		0.5 + 2
		30 µF		2.0 + 2
		Hz		0.5 + 1
		%		± 5 digits
		-200…+200 ºC		0.5 K + 2
		+200…+850ºC		0.5 + 2
		NC121000A AC-DC	30 A ~/ A DC	0.2 X Specified accuracy
			300 A ~/ A DC	0.1 X Specified accuracy
		NC12300A AC-DC	300 A ~/ A DC	0.2 X Specified accuracy
			1000 A ~/ A DC	0.1 X Specified accuracy
Frequency of the measured quantity	> 65 Hz...400 Hz	3…300 V ~		2.0 + 3
	>400 Hz…1 KHz			
	>65 Hz … 1 KHz	1000 V ~		3.0 + 3
	15Hz …<45 Hz	A ~		1.0 % of range + 1
	>66 Hz… 400 Hz			

Influence Quantity	Range of Influence		Measured Quantity/ Measuring Range	Variation [1] ± (….% of rdg. + ….digits)
Wave form of the measured quantity [3]	Crest factor CF	1....3	V ~ [4] A ~ [4]	± 1 % of rdg
		1....5		± 3 % of rdg
Battery Voltage	[5] …< 7.9 V > 8.1 V …10.0 V		V DC	2 Digit
			V~	4 Digit
			AAC/ADC	8 Digit
			30Ω / 300 Ω/°C	4 Digit
			3 kΩ – 30MΩ	3 Digit
			nF, µF	10 Digit
			Hz	10 Digit
			%	10 Digit
Relative humidity	75% 3 Days Meter off		V~,VDC A~, ADC Ω F Hz % °C	1 x intrinsic error
HOLD	-		--	± 1 digits
MIN/MAX	-		V AC/DC , A ~ , A DC	± 2 digits

1) With temperature: Error data apply per 10 K change in temperature.
For Aac/Adc error data apply per K change in 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	Electro magnetic compatibility
Emission	EN 61000-6-4
Immunity	EN 61000-6-2
	8 kV atmosphere discharge, 4 kV contact discharge EN 61000-4-3 : 3 V/m

Safety

	EN 61010-1-2010
IP for water & dust	EN 60529
Pollution degree	2
Installation category	IV
High Voltage Test	6.7 kV AC, 50Hz for 1 minute between housing and input. 3.7 kV AC, 50Hz for 1 minute between housing with jaws and input.

Weight

0.6 kg

Warranty

1 year

ORDERING CODE

Clamp meter NC12 -	X	XX	X	X
Maximal range of current measurement a.c./d.c.:				
300 A	1			
1000 A	2			
Version:				
standard		00		
custom-made*		XX		
Language:				
Polish			P	
English			E	
other*			X	
Acceptance tests:				
with an extra quality inspection certificate				1
with test certificate				2
acc. to custromer's request				X

* after agreeing with the manufacturer

ITEMS AVAILABLE FROM OUR STOCK:

NC12 - 100E1
version: 300A

NC12 - 200E1
version: 1000A

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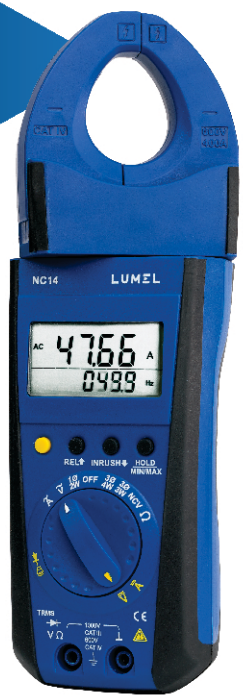
NEW



Electrical Safety 1000 V CAT III

Electrical Safety 600 V CAT IV

NC14

AC/DC POWER CLAMP-ON METER 1000 A/ 400A

- AC & DC voltage measurement up to 1000 V.
- AC & DC current measurement in the range of 1000 A / 400 A.
- Inrush/peak value measurement
- Active, reactive and apparent power measurement.
- Power measurement in KM.
- Energy consumption measurement in kWh.
- Measurement up to 49th harmonics.
- Phase angle measurement.
- THD measurement.
- DF measurement.
- Crest factor /CF/ measurement.
- Power factor /PF/ measurement.
- Low pass filter (LPF) mode.

Application

NC14 1000A/400A measures, calculate and displays important electrical parameters of single phase or three phase power system. It also features Resistance, continuity, diode and non contact voltage detection.

Unique Design

NC141000A/400A is a highly innovative design for features those increases **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 fatigues 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.

Large Jaw Opening

Jaw opening of 51mm and 41 mm for standard wire diameter of 50mm and 40mm for 1000A and 400A respectively.

Inrush Current Measurement

Clamp meter will be triggered by inrush current >5A. Inrush current for 100 msec is measured.

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

Backlit

It is possible to conduct measurement using the clamp meter during poor light condition with the help of bright white light Backlit.

Non Contact Voltage Detection

The clamp meter can detect the presence of AC Voltage between 100 to 1000 V 50hz/60Hz without any electrical connection and give acoustic signal as an indication.

Three Phase Power Measurement

Clamp meter can measure power in 3 phase 3 wire or 3 phase 4 wire (Symmetric as well as Asymmetric) network without any manual calculation like other clamp meters.

Dual Display

User friendly dual display shows the simultaneous parameters of measuring input quantity.

LPF Mode

LPF mode is available for voltage and current for true measurement of VFD Application

TRMS Measurement

In order to calculate true value of distorted waveform due to presence of high crest factor or harmonics, TRMS measurements is done for AC voltage and current

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.

Continuous ON Mode

In this mode, AUTO POWER OFF is disabled.

Low Battery Indication

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

NC14 - AC/DC POWER CLAMP-ON METER 1000 A/ 400

JECOTEC AG

Reference conditions for Accuracy

Reference temperature	23°C ± 2°C
Relative Humidity	45%...55% RH
Input frequency	50 or 60 Hz
Power Factor	0.5L....1....0.5C
Battery Voltage	8 V ± 0.1 V

Protection from dust and water

IP20 for terminals as per EN 60529

Applicable International Safety standards

600 V CAT IV/1000V CAT III as per International Safety standard EN 61010-1

Measuring function	Measuring range	Resolution	Intrinsic error of digital display at reference condition		Over load capacity	
					Over load value	Overload duration
V DC	999.9 V	0.1 V	±(0.5% of rdg + 5 dgt)		1000 V DC/AC eff/rms Sine wave	Continuously
V ~	999.9 V	0.1 V	±(0.75% of rdg+5 dgt)			
V ACDC	999.9 V	0.1 V	±(1.25% of rdg+10dgt)			
LPF V~	999.9 V	0.1 V	50.....60 Hz	±(0.75% of rdg + 5dgt)		
			61...400Hz	±(5.0% of rdg + 5dgt)		
POWER CLAMP 1000A ADC-AAC	999.9A	0.1 A	±(1.5% of rdg+5 dgt)[1]		1100 A AC/DC for power clamp 1000A 440 A AC/DC for power clamp 400A	Continuously
POWER CLAMP 400A ADC - AAC	99.99 A	0.01 A	display value <1000 add 10 dgt	±(1.5% of rdg+0.2A)[1]		
	400 A	0.1 A		±(1.5% of rdg+5 dgt)[1]		
POWER CLAMP 1000A A ACDC	999.9A	0.1 A	±(3% of rdg+10 dgt)[1]			
POWER CLAMP 400A A ACDC	99.99 A	0.01 A	display value <1000 add 10 dgt	±(3% of rdg+0.4A) [1]		
	400 A	0.1 A		±(3% of rdg+10 dgt)[1]		
POWER CLAMP LPF 1000A A AC	999.9A	0.1 A	50....60 Hz 61...400Hz	±(1.5% of rdg + 5dgt) ±(5.0% of rdg + 5dgt)		
POWER CLAMP LPF 400A A AC	99.99 A	0.01 A	50....60 Hz 61...400Hz	±(1.5% of rdg + 0.3A) ±(5.0% of rdg + 5dgt)		
	400 A	0.1 A	50....60 Hz 61...400Hz	±(1.5% of rdg + 5dgt) ±(5.0% of rdg + 5dgt)		
Active Power[2]	9.999 kW	1 W	±(2% of rdg+5 dgt) [1]		1000 V DC/AC 1100 A AC/DC for Power Clamp 1000A 440 A AC/DC for Power Clamp 400A	Continuously
	99.99 kW	10 W				
	999.9 kW	100 W				
	9999 kW	1 kW				
Reactive Power [2]	9.999 kVAr	1 VAr				
	99.99 kVAr	10 VAr				
	999.9 kVAr	100 VAr				
	9999 kVAr	1 kVAr				
Apparent Power [2]	9.999 kVA	1 VA				
	99.99 kVA	10 VA				
	999.9 kVA	100 VA				
	9999 kVA	1 kVA				
Horse Power [2]	9.999 hp	0.001 hp				
	99.99 hp	0.01 hp				
	999.9 hp	0.1 hp				
	9999 hp	1 hp				
kWh [2]	9.999 kWh	0.001 kWh	±(3% of rdg+5 dgt)			
	99.99 kWh	0.01kWh				
	999.9 kWh	0.1 kWh				
	9999 kWh	1 kWh				

Technical Specification

Measuring function	Measuring range	Resolution	Intrinsic error of digital display at reference condition	Over load capacity	
				Over load value	Overload duration
Ahr	999.9 Ahr	0.1 Ahr	±(3% of rdg+5 dgt)	1000 V DC/AC 1100 A AC/DC for Power Clamp 1000A 440 A AC/DC for Power Clamp 400A	Continuously
Phase angle[2]	0.0°…360.0°	0.1°	±3°		
Pow er Factor[2]	-1…0…1	0.001			
Harmonics (RMS & %)[3]	1…13	0.1V 0.1A 0.1%	±(3% of rdg+10 dgt)		
	14…49		±(5% of rdg+20 dgt)		
THD[3]	0…99.9%	0.1%	±(3% of rdg+20 dgt)		
DF[3]	0…99.9%	0.1%	±(3% of rdg+20 dgt)		
Crest Factor[3]	1.0…2.9	0.1	±(2% of rdg+3 dgt)		
	3.0…5.0	0.1	±(3% of rdg+5 dgt)		
POWER CLAMP 1000A Peak	1400 A / 1400V	1 A	±(3% of rdg+3 dgt)		
POWER CLAMP 400A Peak	100 A	0.1 A	±(3% of rdg+10 dgt)		
	560 A/ 1000 V	1 A / 1 V	±(3% of rdg+3 dgt)		
POWER CLAMP 1000A INRUSH[4]	999.9A	0.1 A	±(3% of rdg+5 dgt)		
POWER CLAMP 400A INRUSH[4]	99.99 A	0.01 A	±(3% of rdg+0.3A)		
	400 A	0.1 A	±(3% of rdg+5 dgt)		
Resistance	9999 Ohm	1 Ohm	±(0.5% of rdg+5 dgt)	1000 V DC/AC eff/rms Sine wave	10 Secs
Continuity	Below 40 Ohm	1 Ohm	±(0.5% of rdg+5 dgt)		
Diode	0…2.2V	0.001 V	±(0.5% of rdg+5 dgt)		

Note:- Accuracy claimed for Power and Current when conductor is positioned at the center of the jaw.

1) For DC A make auto zero correction by long pressing the **HOLD** key

For Power Clamp 1000A

2) Accuracy Defined for V ≧ 10V and I ≧ 5A
Add 10 digit to accuracy when power is
< 5.000 kW/kVAr/kVA or <6.700 hp
3) Accuracy Defined for V ≧ 10V and I ≧ 10A
4) Accuracy Defined for I ≧ 10A

For Power Clamp 400A

2) Accuracy Defined for V ≧ 10V and I ≧ 4A
Add 10 digit to accuracy when power is
< 5.000 kW/kVAr/kVA or <6.700 hp
3) Accuracy Defined for V ≧ 10V and I ≧ 10A
4) Accuracy Defined for I ≧ 5A

For Power Clamp 1000A

- In 1P2W mode maximum power meter can measure is, 1000 kVA / 1000 kVAr / 1000 kW / 1341 hp
- In 3P4W mode maximum power meter can measure is,3000 kVA / 3000 kVAr / 3000 kW / 4023 hp
- In 3P3W mode maximum power meter can measure is,1732 kVA / 1732 kVAr / 1732 kW / 2322 hp

For Power Clamp 400A

- In 1P2W mode maximum power meter can measure is, 400 kVA / 400 kVAr / 400 kW / 536 hp
- In 3P4W mode maximum power meter can measure is,1200 kVA / 1200 kVAr / 1200 kW / 1608 hp
- In 3P3W mode maximum power meter can measure is,693 kVA / 693 kVAr / 693 kW / 928 hp

AC current measurement in both 1000A and 400A model starts from 0.5A in AC Amp mode and from 1A in LPF mode

Influence Quantity

Infulence quantity	Range of Infuence	Measured quantity / Measuring Range	Variation
Temperature	0 ºC… 21 ºC and 25 ºC….50 ºC	V AC	0.15 X Intrinsic Error / ºC
		V DC	
		V ACDC	
		A AC	
		A DC	
		A ACDC	
		AC Power	
		DC Power	
		Resistance/ Diode/ Continuity	
Frequecy of the measured quantity	40 Hz… 50 Hz and 60 Hz….400 Hz	V AC	1 X Intrinsic Error
		V ACDC	
		A AC	
		A ACDC	
	45 Hz….65 Hz[2)]	AC Power	
Crest Factor[1)]	1.4…2	V AC A AC	1% + Intrinsic Error
	2…2.5		2.5% + Intrinsic Error
	2.5...5		4% + Intrinsic Error
Supply Voltage	When Low Battery symbol is ON	All Ranges	1 X Intrinsic Error
Relative humidity	75%	All Ranges	1 X Intrinsic Error

1) Except SineWave

CF 2 @ 690V, 690A for Power Clamp Meter 1000 A AC/ DC
CF 3 @ 690V, 186A for Power Clamp Meter 400 A AC/ DC
CF 4 @ 345V, 345A for Power Clamp Meter 1000 A AC/ DC
CF 4 @ 345V, 140A for Power Clamp Meter 400 A AC/ DC
CF 2 @ 690V, 280A for Power Clamp Meter 400 A AC/ DC
CF 5 @ 280V, 280A for Power Clamp Meter 1000 A AC/ DC
CF 3 @ 460V, 460A for Power ClampMeter 1000 A AC/ DC
CF 5 @ 280V, 112A for Power Clamp Meter 400 A AC/ DC

2) Except for 50 or 60 Hz

Environmental

Operating temperature	0 to +55°C
Storage temperature	-20 to +70°C
Temp. Coefficient	0.15 X(Intinsic Error) / °C
Relative humidity	0... 75% non condensing
Terminal Protection for terminals	IP50 for Housing and IP20

Applicable Standards

EMC	Electro magnetic compatibility
Emission	EN 61000-6-4
Immunity	EN 61000-6-4 EN 61000-4-2 :- 8 kV air discharge, 4 kV contact discharge EN 61000-4-3 :- 3 V/m

Safety

EN 61010-1

IP for water & dust acc. to EN 60529	IP 50 for housing IP 20 for terminal	
Pollution degree	2	
Installation category	III 1000V	IV 600V

High Voltage Test

between housing and input.	7.4 kV AC, 50Hz for 1 minute
between housing with jaws and input.	4.26 kV AC, 50Hz for 1 minute

Display

Display	Seven Segment
Character Height	Main Display Character : 11.5 mm Sub Display Character : 7.2 mm
Number of digits	4 digits.
Maximum count	9999 counts For V, I and Power 9999 counts For Resistance
Over range indication	"OL" is displayed
Polarity indication	"—" sign is displayed for negative values.

Battery

Battery Voltage	9 V DC
Battery type	Manganese Dioxide Cell as per IEC6F22 Alkaline manganese cell as per IEC 6LR 61
Consuption	20 mA Avg. (Without Backlight)
Battery Life	48 Hrs Approx.

Scope of delivery

- Clamp Meter
- Probe Set
- Instruction Manual/Warranty card
- Clamp Carrying Case
- Test Certificate
- Battery
- Two crocodile clips

Mechanical Configuration

Dimensions	90 mm (W) x 270 mm (L) x 70 mm (H)
Weight	500gm approx. including battery.

ORDERING CODE

Clamp meter NC14 -	X	XX	X	X
Maximal range of current measurement a.c./d.c.:				
400 A	1			
1000 A	2			
Version:				
standard		00		
custom-made*		XX		
Language:				
Polish			P	
English			E	
other*			X	
Acceptance tests:				
with an extra quality inspection certificate				1
with test certificate				2
acc. to custromer's request				X

ITEMS AVAILABLE FROM OUR STOCK:

NC14 - 100E1
version: 400A

NC14 - 200E1
version: 1000A

* after agreeing with the manufacturer

NC14-19_en

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