

TOOLS UNLIMITED

PRESENTS

A PREMIUM HAND TOOL LINE

EQUIVELANT TO

PROTO SK ARMSTRONG

But WITHOUT THE HIGH PRICE

URREA

PROFESSIONAL TOOLS

URREA

DIAGNOSTIC EQUIPMENT

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URREA diagnostic equipment incorporates state-of-the-art technology to offer you a line of measurement, monitoring, and diagnostic instruments with an excellent combination of measurement precision, response time, and versatility.

The URREA Diagnostics line is divided into 4 product categories:

- Digital multimeters
- Digital automotive multimeters
- Digital clamp meters
- Accessories

Digital multimeters perform standard electrical tests on AC and DC circuits, including frequency, frequency cycles, and wave amplitude, as well as digital voltage, amperage, and resistance readings on any system, component, or conductor. They are better and easier to read, handle, and adjust than analog multimeters; they are designed for use in maintaining and servicing air conditioners, heating and cooling systems, electrical devices, appliances, computer equipment, electric motors, electric and electronic items, and equipment in general.

Digital automotive multimeters can be used as very efficient tools for diagnosing most of the complicated problems involving today's sophisticated automotive electronic systems. These instruments' solid construction makes them suitable for use on all makes, models, and types of automobiles and in heavy-use environments like automotive shops. View direct readings of RPM cycles, AC and DC voltage, resistance, frequency, pulse width, dwell, and minimum-maximum recording without any unnecessary operations.

Digital clamp meters are designed to extend the current measurement capacity of current meters for AC, DC, and high-voltage circuits, and for outputs or current leakage from transformers, capacitors, rectifiers, transmission lines, substation conductors, etc., in situations where a conventional device cannot be used. They measure current, resistance, amperage, voltage, conductivity, power factor, AC frequency, and more, without interrupting the circuit's connections or power. Their strength and toughness make them sturdy enough for the demands of electrical energy generation and transmission.

Accessories such as test cables, communication software, temperature probes, etc. add to the usefulness of these measurement instruments. Depending on their use, accessories can be worn out, lost, damaged, or require replacement. Some instruments are even more versatile with optional accessories.

URREA Diagnostics tools:

- Offer a generous product line with 15 diagnostic devices.
 - Useful for any type of electrical or electronic circuit, industrial and automotive systems, electronic devices, electric motors, etc.
 - Test tips and caymans.
- The diagnostic line includes more than 5 different accessories, offered individually.
- They combine the advantages of speed, efficiency, performance, precision, and ease of use.
- They are manufactured using top-quality components, with covers and housings made of compact plastic, which is very light and strong. All URREA Diagnostics equipment is tested in certified laboratories and must pass the strictest quality tests to guarantee the best combination of speed, ease of use, and precision.
- Test tips, caymans, and connectors are fully insulated to prevent erroneous readings and processes, and also to protect them from excessive voltage.
- Compliant with American and European domestic and international standards.
- Country of origin stamped permanently and indelibly on each tool, reinforcing their high-quality image.



The information presented in this chapter is organized as follows:

- Quick reference tables.
- Detailed product specifications.
- Safety recommendations

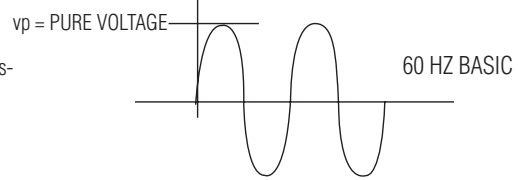
DIFFERENCE BETWEEN RMS AND TRUE RMS SHOWN IN SENOID GRAPHS

RMS: The capacity to detect and measure alternating current.

Important measurement feature on diagnostic equipment.

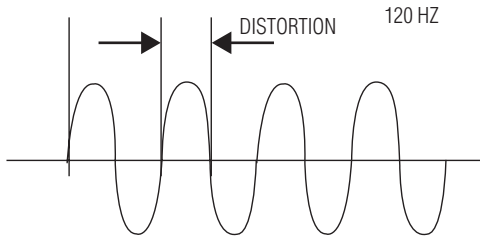


PURE SENOID CURVE GRAPH

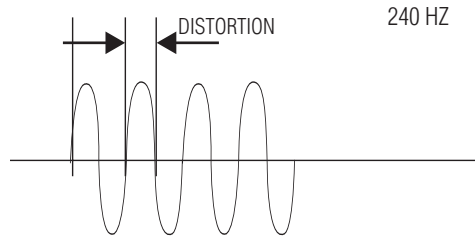


This type of measurement does not detect distortions generated by voltage differences in an electrical network.

SENOID CURVE GRAPH
1st Harmonic



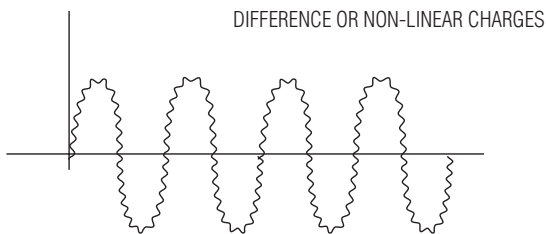
SENOID CURVE GRAPH
2nd Harmonic



TRUE RMS:

The capacity to detect and measure voltages composed of harmonics (distortions in the size of the senoid curve). They do this by measuring the sum of the distortions in the alternating senoid line caused by non-linear charges (inductive and/or capacitive) connected to an electrical network.

TRUE SENOID CURVE GRAPH



RMS= ROOT MEAN SQUARE
(MEAN SQUARE ROOT CHARGE)

DIAGNOSTIC EQUIPMENT LINE

DIGITAL MULTIMETERS

- Digital multimeters are tools designed and manufactured for measuring voltages, amperage, impedance, and other readings.



UDXX y UD1XX

DIGITAL AUTOMOTIVE MULTIMETERS

- Specifically for viewing readings directly during operating cycles.

UD8X



DIGITAL CLAMP METERS

- Take precise readings for current, starting current, voltage, etc.

UD3XX



DIAGNOSTIC EQUIPMENT ACCESSORIES

- Items that store information and protect your equipment

UDXXXX



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DIGITAL MULTIMETERS

PRODUCT CODES	UD12	UD18	UD77	UD83	UD85	UD87	UD112	UD179
Counts	2000	4000	2000	3260	4000	5000	4000	4000
Automatic and Manual Range		•		•	•	•	•	•
Backlit Display					•	•	•	•
Special Features								
Analog Bar		•		•	•	•		
Frequency Measurement		•			•	•	•	•
Relative Mode					•	•	•	•
Continuity Alarm	•	•	•	•	•	•	•	•
Data Capture					•	•		
Maximum and Minimum Capture					•	•		•
Fuse-Protected 10-A Range			•	•	•	•	•	•
Capacitance		•			•	•	•	•
True RMS (Volts CA)					•	•		•
Diode Test		•	•	•	•	•	•	•
Temperature					•	•		•
Functions								
Volts CD								
Maximum DC Voltage	600V	750V	1000V	1000V	1000V	1000V	1000V	1000V
Basic Accuracy %	1.5	0.9	0.5	0.5	0.3	0.1	0.5	0.5
Maximum Resolution, μ V	100	100	100	100	100	10	10	100
Volts AC								
Maximum AC Voltage	600V	750V	750V	750V	750V	1000V	1000V	1000V
Basic Accuracy %	1.5	1.9	0.8	0.75	0.75	0.5	0.75	0.75
Maximum Resolution, μ A	100	100	1000	1000	1000	100	100	100
Capacitance		0.01 nF a 9,999 μ F			0.01 nF to 100 μ F	0.001nF to 5mF		0.01 nF to 100 μ F
Temperature					-40°C a 1370°C	-50°C a 1300°C		-40°C a 1300°C
Bandwidth, Hz	200	200	450	450	5K	50K	400	20K
Amperage AC and DC								
Maximum Resolution μ A			0.1	0.1	0.1	0.1	0.1	0.1
Maximum Amperage			10	10	10	10	10	10
Resistance Ω								
Maximum Resolution m Ω	100	100	100	100	100	10	10	100
Maximum Resistance M Ω	20	20	32	32	40	50	40	40

quality starts with U



URREA Professional Tools received the ISO 9000 certification in November 1998 and updated to ISO 9001: 2000 certification in February 2004. This certification represents our constant commitment to maintain our operating and product manufacturing standards.



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DIGITAL AUTOMOTIVE MULTIMETERS

PRODUCT CODES	UD84	UD86	UD88
	567	568	569
Counts	4000	4000	4000
Automatic and Manual Range	•	•	•
Backlit Screen			•
Special Features			
Analog Bar	•	•	•
Frequency Measurement	•	•	•
Continuity Alarm	•	•	•
Data Capture	•	•	•
Maximum and Minimum Capture			•
Fuse-Protected 10-A Range	•	•	•
Capacitance			•
True RMS (Volts AC)		•	•
Temperature	•	•	•
RS-232C Communication			•
Automotive Functions			
Duty Cycle Range, %	0 - 99.9	0 - 99.9	0 - 99.9
Pulse Width, mS	0.002 - 1999.9	0.002 - 1999.9	0.002 - 1999.9
Direct Dwell Reading	0 - 356.4	0 - 356.4	0 - 356.4
RPM Measurement using Inductive Collector	•	•	•
RPM measurement using test tips		•	•
Adjustable Trigger for Stable RPM Readings	4 steps		7 steps
IP RPMs (times)	30 - 9000	30 - 9000	30 - 9000
IG RPMs (cylinders)		60 - 12000	60 - 12000
Functions			
Volts DC			
Maximum DC Voltage	600V	750V	750V
Basic Accuracy %	0.5	0.3	0.3
Maximum Resolution, μ V	100	100	100
Volts AC			
Maximum AC Voltage	600V	750V	1000V
Basic Accuracy, %	0.75	1	0.75
Maximum Resolution, μ A	1000	1000	1000
Capacitance			0.001 μ F to 999 μ F
Temperature	-40°C to 1370°C	-40°C to 1370°C	-40°C to 1370°C
Band Width, Hz	50K	400	50K
Amperage, AC and DC			
Maximum Resolution, μ A	0.1	0.1	0.1
Maximum Amperage	10	10	10
Resistance, Ω			
Maximum Resolution, m Ω	100	100	100
Maximum Resistance, M Ω	40	40	40

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DIGITAL CLAMP METERS

PRODUCT CODES	UD333	UD334	UD337	UD370
Counts	2000	4000	4000	4000
Automatic and Manual Range	•	•	•	•
True RMS		•	•	•
Special Features				
Analog Bar			•	•
Frequency Measurement	•	•	•	
Continuity Alarm	•	•	•	
Data Capture		•		
Maximum and Minimum Capture			•	•
Diode Test		•		
Power-On-Self-Test			•	
Real Power(KW)				•
Apparent Power (KVA)				•
Reactive Power (KVAR)				•
Power Factor (cos θ)				•
Energy Integrator				•
Functions				
Volts DC				
Maximum DC Voltage		600 V	750 V	
Basic Accuracy %		0.5	1	
Maximum Resolution, V		0.1	0.01	
Volts AC				
Maximum AC Voltage	600 V	600 V	750 V	750 V
Basic Accuracy %	0.5	1	1	1
Maximum Resolution, V	0.1	0.1	0.01	0.1
Band Width, Hz	400	1000	1000	1000
Amperage AC & DC				
Amps DC				
Maximum Amperage, DC		1000 A	700 A	
Basic Accuracy, %		1.5	2	
Maximum Resolution, A		0.1	0.01	
Amps AC				
Maximum Amperage AC	600 A	1000 A	700 A	750 A
Basic Accuracy, %	1.5	2	2	1.5
Maximum Resolution, A	0.1	0.1	0.01	0.1
Band Width, Hz	400	1000	1000	450
Resistance Ω				
Maximum Resolution m Ω	100	100	100	
Maximum Resistance M Ω	200	400	4K	

COMPACT MULTIMETERS

This type of multimeter is used to take quick, precise readings on electronic devices, electric motors, cooling equipment, and systems with electric and electronic circuits, testing volts, ohms, and amps. Their size makes them very practical and easy to carry.

UD12

COMPACT BASIC DIGITAL MULTIMETER

CODE	VOLTAGE		RESISTANCE	DIMENSIONS (with holster)		(with holster)	
	Volts DC	Volts AC	OHMS máx.	RESOLUTION	mm	grs	lbs
UD12	600	600	200Ω	100 mΩ	54x80x154	380	0.83



SPECIAL FEATURES:

- Continuity alarm.
- Low level battery indicator.
- Manual selection range for Voltages AC / DC.
- Certificate CE.

FUNCTION	RANGE	RESOLUTION	PRECISION
	20V	10mV	
VOLTAGE DC	200V	100mV	±1.5%
	600V	1V	
VOLTAGE AC	200V	100mV	±1.5%
(45Hz a 450Hz)	600V	1V	
RESISTANCE	200Ω	0.1Ω	±1.5%
CONTINUITY	Open circuit test voltage: 3V Threshold: Aprox. < 50		

GENERAL SPECIFICATIONS:

• LCD display:	3 1/2 digits 2000 counts with automatic polarity indication.
• Reading time:	2-3 readings per second.
• Input impedance:	10MΩ.
• Storage temperature:	-10°C a 50°C (14°F to 122°F).
• Operation temperature:	0°C a 40°C (32°F to 104°F).
• Altitude:	2000m (6562 feet).
• Relative humidity:	0% a 80% (0°C to 35°C).
	0% A 70% (35°C to 45°C).
• Battery type:	9V NEDA 1604 or IEC 6LR61.
• Life battery:	200 hrs typical (Alcaline).
• Size:	Without holster: 36x70x140mm With holster: 54x80x154mm
• Weight:	Without holster: 220gr With holster: 380gr
• Accessories:	Test lead set, 9V battery, Protective holster and instruction sheet.



- ABS protective case for hard use.
- Case with a floor base.



quality starts with U

URREA tools are designed and manufactured to meet or exceed the most demanding industry standards, such as the SAE, (Society of Automotive Engineers), ASME/ANSI (American Society of Mechanical Engineers/American National Standards Institute), ISO (International Standardization Organization), GSA USA Federal (General Services Administration USA Federal Government), and NOM (Norma Oficial Mexicana - Official Mexican Standard).



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UD18 COMPACT DIGITAL MULTIMETER

CODE	VOLTAGE		RESISTANCE		DIMENSIONS (with holster)		 (with holster)	
	Volts DC	Volts AC	OHMS máx.	RESOLUTION	mm	grs	lbs	
UD18	750	750	20MΩ	100 mΩ	54x80x154	425	0.93	



SPECIAL FEATURES:

- Analog bar.
- Frequency measurement.
- Capacitance.
- Diode test.
- Low level battery indicator.
- Manual selection range for voltages AC / DC.
- Certificate CE.
- Automatic and manual selection for ranges.
- Data retention.
- Bip tone for continuity.
- Automatic polarity.

FUNCTION	RANGE	RESOLUTION	PRECISION
VOLTAGE DC	400mV	0.1mV	
	4V	0.001V	
	40V	0.01V	±0.9%
VOLTAGE AC (50Hz a 450Hz)	400V	0.1V	
	750V	1V	
	4V	0.001V	±1.9%
RESISTANCE	400Ω	0.1Ω	
	4KΩ	0.001KΩ	
	40KΩ	0.01Ω	±0.9%
CAPACITANCE	400KΩ	0.1KΩ	
	4MΩ	0.001MΩ	
	20MΩ	0.01MΩ	
FREQUENCY	1μF	0.001μF	
	10μF	0.01μF	
	100μF	0.1μF	±1.5%
DIODE TEST	1000μF	1μF	
	10 000μF	1μF	
	20KHz	1Hz	±1.7%
CONTINUITY LOGIC PROBE	200KHz	10Hz	
	Overload protection:	600V DC/AC MAX.	
	Open circuit test voltage:	<3.5V DC	
LOGIC PROBE	Full scale voltage:	1V DC	
	Short circuit current:	< 1.5mA	
	"Aprox. <100Ω IN THE RANGE 400Ω"		

GENERAL SPECIFICATIONS:

• LCD display:	3 3/4 digits 4000 counts with automatic polarity indication.
• Analog display:	41 segment analog bar.
• Reading time:	Digital: updates 5 times per second. Analog: updates 10 times per second.
• Storage temperature:	-20°C to 60°C (-4°F to 140°F)
• Operation temperature:	0°C to 40°C (32°F to 104°F)
• Altitude:	2000m (6562 feet)
• Relative humidity	0% to 80% (0°C to 35°C)
• Battery type:	9V NEDA 1604 or IEC 6LR61
• Life battery:	200 hrs typical (Alcaline).
• Size:	Without holster: 36x70x140mm With holster: 54x80x154mm
• Weight:	Without holster: 220gr With holster: 380gr
• Accessories:	Test lead set, 9V battery, Protective holster and instruction sheet.



- ABS protective case for hard use.
- Case with a floor base.

GENERAL PURPOSE MULTIMETERS

UD77

GENERAL PURPOSE DIGITAL MULTIMETER MANUAL RANGE

CODE	VOLTAGE		AMPERAGE		RESISTANCE OHMS máx.	DIMENSIONS (with holster) mm	DIMENSIONS (with holster) grs lbs	
	Volts DC	Volts AC	Amperes DC	Amperes AC			grs	lbs
UD77	1000	750	10A	10A	20M Ω	54x80x154	655	1.44



SPECIAL FEATURES:

- Continuity alarm.
- Fuse protected range 10A.
- Diode test.
- Low level battery indicator.
- Manual range selection.
- Certificate CE.
- Data retention.
- Large LCD display (68.5x32.7mm)
- Logic probe.
- Capacitance.
- Frequency.

FUNCTION	RANGE	RESOLUTION	PRECISION
VOLTAGE DC	200mV	100 μ V	
	2V	1mV	
	20V	10mV	$\pm 0.5\%$
	200V	0.1V	
VOLTAGE AC (45Hz a 450Hz)	1000V	1V	
	200mV	100 μ V	
	2V	1mV	$\pm 0.8\%$
	20V	10mV	
AMPERAGE	200V	0.1V	
	750V	1V	$\pm 1.2\%$
	200_A	0.1 μ A	
	2mA	1 μ A	
AMPERAGE AC (45Hz to 450Hz)	20mA	10 μ A	$\pm 0.8\%$
	200mA	100 μ A	
	2A	1mA	
	10A	10mA	$\pm 2.0\%$
RESISTANCE	200 μ A	0.1 μ A	
	2mA	1 μ A	
	20mA	10 μ A	$\pm 0.8\%$
	200mA	100 μ A	
DIODE TEST	2A	1mA	
	10A	10mA	$\pm 3.0\%$
	200 Ω	0.1 Ω	
	2K Ω	1 Ω	
CONTINUITY	20K Ω	10 Ω	$\pm 0.5\%$
	200K Ω	0.1K Ω	
	2M Ω	1K Ω	
	20M Ω	10K Ω	$\pm 3.0\%$
"Open circuit test voltage: <3V"			
Short circuit current: 1.5 mA"			
"Open circuit test voltage: <1.2V"			
Threshold: Aprox. <150 Ω "			

GENERAL SPECIFICATIONS:

• LCD display:	3 1/2 digits 2000 counts with automatic polarity indication.
• Readings timing:	Updates 3 times per second.
• Storage temperature:	-20°C to 60°C (-4°F to 140°F)
• Operation temperature:	0°C to 45°C (32°F to 113°F)
• Altitude:	2000m (6562 feet)
• Relative humidity:	0% to 80% (0°C to 35°C) 0% to 70% (35°C to 45°C)
• Battery type:	9V NEDA 1604 or IEC 6LR61
• Life battery:	350 hrs typical (Alcaline).
• Size:	Without holster: 40x85x190mm With holster: 54x103x208mm
• Weight:	Without holster: 380gr With holster: 655gr
• Accesories:	Test lead set, 9V battery, Protective holster and instruction sheet.



- ABS protective case for hard use.
- Case with a floor base.

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UD83

GENERAL PURPOSE DIGITAL MULTIMETER AUTORANGE

CODE	VOLTAGE		AMPERAGE		RESISTANCE OHMS máx.	DIMENSIONS (with holster) mm	DIMENSIONS (with holster) grs lbs	
	Volts DC	Volts AC	Amperes DC	Amperes AC			grs	lbs
UD83	1000	750	10A	10A	32.6MΩ	54x103x208	655	1.44



SPECIAL FEATURES:

- Analog bar.
- Continuity alarm.
- Diode test.
- Fuse protected range 10A.
- Low level battery indicator.
- Automatic and manual selection for range.
- Certificate CE.
- Data retention.
- Large LCD display (68.5x32.7mm)
- Continuity beeper.
- Automatic polarity.

FUNCTION	RANGE	RESOLUTION	PRECISION
VOLTAGE DC	326mV	100µV	±0.5%
	3.26V	1mV	
	32.6V	10mV	±0.75%
	326V	0.1V	
VOLTAGE AC (45Hz a 450Hz)	1000V	1V	±1.0%
	3.26V	1mV	
	32.6V	10mV	±0.75%
	326V	0.1V	
AMPERAGE	326µA	0.1µA	±0.5%
	3260µA	1µA	
	32.6mA	10µA	±1.0%
	326mA	0.1mA	
AMPERAGE AC (45Hz to 450Hz)	326µA	0.1µA	±1.5%
	3260µA	1µA	
	32.6mA	10µA	±0.75%
	326mA	0.1mA	
RESISTANCE	326Ω	0.1Ω	±0.5%
	3.26KΩ	1Ω	
	32.6KΩ	0.1KΩ	±1.0%
	3.26MΩ	1KΩ	
DIODE TEST	*Open circuit test voltage: <5V Current test: 2.5mA*		
CONTINUITY	*Open circuit test voltage: <1.2V Threshold: APROX. <20Ω*		

GENERAL SPECIFICATIONS:

• LCD display:	3 1/2 digits 3260 counts with automatic polarity indication.
• Analog display:	34 segment analog bar.
• Reading time:	Digital: updates 3 timer per second, Analog: updates 10 timer per second
• Storage temperature:	-20°C to 60°C (-4°F to 140°F)
• Operation temperature:	0°C to 45°C (32°F to 113°F)
• Altitude:	2000m (6562 feet)
• Relative humidity	0% to 80% (0°C to 35°C)
• Battery type:	0% to 70% (35°C to 45°C)
	2 x 1.5V, AAM or R6
• Life battery:	200 hrs typical (Alcaline).
• Size:	Without holster: 40x85x190mm With holster: 54x103x208mm
• Weight:	Without holster: 380gr With holster: 655gr
• Accessories:	Test lead set, 9V battery, Protective holster and instruction sheet.



- ABS protective case for hard use.
- Case with a floor base.

UD85

TRUE RMS GENERAL PURPOSE DIGITAL MULTIMETER AUTORANGE

CODE	VOLTAGE		AMPERAGE		RESISTANCE	DIMENSIONS	DIMENSIONS	
						(with holster)	(with holster)	
	Volts DC	Volts AC	Amperes DC	Amperes AC	OHMS máx.	mm	grs	lbs
UD85	1000	750	10A	10A	40MΩ	40 x 85 x 190	380	0.83



SPECIAL FEATURES:

- Automatic and manual selection for range.
- Retroilluminated display.
- Analog bar.
- Frequency.
- Relative mode.
- Continuity alarm.
- Maximum and minimum capture.
- Data capture.
- Fuse protected range 10A.
- Capacitance.
- True RMS.
- Diode test.
- Temperature.
- Standby mode indicator.
- Programmable comparators, GO-NO-GO, and percentages.
- Low level battery indicator.
- Data retention.
- Large LCD display (68.5x32.7mm)
- RS-232C Interfase.
- Certificate CE.
- Continuity beeper.
- Automatic polarity.
- THD-R (Total Harmonic Distortion)
- Safety shutter to prevent incorrect connections to current terminals.

FUNCTION	RANGE	RESOLUTION	PRECISION
VOLTAGE DC	400mV	0.1mV	
	4V	1V	± 0.3%
	40V	10V	
	400V	0.1V	
VOLTAGE AC (45Hz to 450Hz)	1000V	1V	± 0.75%
	4V	1mV	± 6%
	40V	10mV	
	400V	0.1V	
AMPERAGE DC	750V	1V	± 0.75%
	400μA	0.1μA	
	4000μA	1μA	
	40mA	0.01mA	± 0.5%
AMPERAGE AC (45Hz to 450Hz)	400mA	0.1mA	
	4A	0.001A	
	10A	0.01A	± 1.0%
	400μA	0.1μA	
RESISTANCE	4000μA	1μA	
	40mA	0.01mA	± 1.0%
	400mA	0.1mA	
	4A	0.001A	
CAPACITANCE	10A	0.01A	± 1.5%
	400Ω	0.1Ω	
	4KΩ	1Ω	
	40KΩ	10Ω	± 0.5%
FREQUENCY	400KΩ	0.1KΩ	
	4MΩ	1KΩ	
	40MΩ	10KΩ	± 1.2%
	1μF	0.001μF	
TEMPERATURE	10μF	0.01μF	± 1.7%
	100μF	0.1μF	
	1000μF	1μF	± 2.5%
	200Hz	0.01Hz	± 0.2%
DIODE TEST	2KHz	0.1Hz	
	20KHz	1Hz	
	200KHz	10Hz	± 0.05%
	>200KHz	100Hz	
CONTINUITY	" -40 °C to -10 °C "	" 0.1 °C "	" ± 3.0 °C "
	" -10 °C to 20 °C "	" 0.1 °C "	" (± 3.0 °F) "
	" (14 °F to 68 °F) "	" (0.1 °F) "	
	" 20 °C to 400 °C "	" 0.1 °C "	" ± 1.0 °C "
THD-R measurement	" (68 °F to 752 °F) "	" (0.1 °F) "	" (± 1.0 °F) "
	" 400 °C to 1370 °C "	" 1 °C "	" ± 3.0 °C "
	" (752 °F to 2498 °F) "	" (1 °F) "	" (± 3.0 °F) "
	"Open circuit test voltage: 3V Test current: 2.5mA"		
GENERAL SPECIFICATIONS:	THD-R measurement (total harmonic distortion)	"Voltage ± 2% Current ± 2%"	
		50/60 Hz ± 0.1 Hz"	

GENERAL SPECIFICATIONS:

- LCD display: 4 1/2 digits 4000 counts with automatic polarity indication.
- Analog display: 41 segment analog bar.
- Reading time: Digital: updates 4 times per second, Analog: updates 4 times per second
- Storage temperature: -20°C to 60°C (-4°F to 140°F)
- Operation temperature: 0°C to 45°C (32°F to 113°F)
- Altitude: 2000m (6562 feet)
- Relative humidity: 0% to 80% (0°C to 35°C)
0% to 70% (35°C to 45°C)
- Battery type: 9V NEDA 1604 or IEC 6LR61
- Life battery: Using with light: 150 hrs. Using without light: 200 hrs. typical (Alcaline)
- Size: Without holster: 40x85x190mm
With holster: 54x103x208mm
- Weight: Without holster: 380gr
With holster: 655gr
- Accessories: Test lead set, 9V battery,
Protective holster and instruction sheet.
Termocouple adaptor



- ABS protective case for hard use.
- Case with a floor base.



14

NEW GENERATION MULTIMETERS

UD112

NEW GENERATION DIGITAL MULTIMETER

CODE	VOLTAGE		AMPERAGE		RESISTANCE	DIMENSIONS (with holster)	DIMENSIONS (with holster)	
	Volts DC	Volts AC	Amperes DC	Amperes AC	OHMS máx.	mm	grs	lbs
UD112	1000	1000	10A	10A	40MΩ	40.5x92x172	386	0.85



SPECIAL FEATURES:

- Automatic and manual selection for range.
- Retroilluminated display.
- Frequency.
- Relative mode.
- Continuity alarm.
- Fuse protected range 10A.
- Capacitance.
- Diode test.
- Activity cycle.
- Low level battery indicator.
- Data retention.
- Large LCD display (68.5x32.7mm)
- Certificate CE
- Continuity beeper.
- Automatic polarity.
- Molded cover.

FUNCTION	RANGE	RESOLUTION	PRECISION
VOLTAGE DC	400mV	100µV	
	4V	1mV	± 0.5%
	40V	10mV	
VOLTAGE AC (40Hz to 400Hz)	400V	100mV	
	1000V	1V	± 0.75%
	400mV	100µV	
AMPERAGE DC	1000V	1V	± 1.0%
	400µA	0.1µA	
	4000µA	1µA	± 1.0%
AMPERAGE AC (40Hz to 400Hz)	40mA	10µA	
	400mA	100µA	± 1.0%
	4A	1mA	± 1.5%
RESISTANCE	10A	10mA	
	400µA	0.1µA	
	4000µA	1µA	± 1.0%
CAPACITANCE	40mA	10µA	
	400mA	100µA	± 1.0%
	4A	1mA	± 1.5%
FREQUENCY	10A	10mA	
	400Ω	0.1Ω	
	4KΩ	1Ω	± 1.0%
DIODE TEST	40KΩ	10Ω	
	400KΩ	100Ω	± 1.5%
	4MΩ	1KΩ	
CONTINUITY	40nF	10pF	
	400nF	100pF	± 2.5%
	4µF	1nF	
FREQUENCY	40µF	10nF	
	100µF	100nF	± 2.0%
	5Hz	0.001Hz	
DIODE TEST	50Hz	0.01Hz	
	500Hz	0.1Hz	± 0.05%
	5KHz	1Hz	
CONTINUITY	500KHz	10Hz	
	5MHz	1KHz	
	10MHz	10KHz	
DIODE TEST	4V		2.0%
	"Open circuit test voltage: <1.5V Current test: 0.25mA"		
	"Open circuit test voltage: <1.3V Threshold: APROX. >10Ω <60Ω"		

GENERAL SPECIFICATIONS:

• LCD display:	4 digits 4000 counts with automatic polarity indication.
• Reading time:	5 times per second.
• Storage temperature:	-20°C to 60°C (-4°F to 140°F)
• Operation temperature:	0°C to 45°C (32°F to 113°F)
• Altitude:	2000m (6562 feet)
• Relative humidity:	0% to 80% (0°C to 35°C) 0% to 70% (35°C to 45°C)
• Battery type:	9V NEDA 1604 or IEC 6LR61
• Life battery:	Without light: 750 hours. typical (Alcaline)
• Size:	40.5 x 92 x 172mm
• Weight:	386gr
• Accessories:	Test lead set, 9V battery, Protective holster and instruction sheet.



- ABS protective case for hard use.
- Case with a floor base.



UD179

NEW GENERATION DIGITAL MULTIMETER TRUE RMS

CODE	VOLTAGE		AMPERAGE		RESISTANCE	DIMENSIONS (with holster)	DIMENSIONS (with holster)	
	Volts DC	Volts AC	Amperes DC	Amperes AC			mm	grs
UD179	1000	1000	10A	10A	40MΩ	40.5x92x172	386	0.85



SPECIAL FEATURES:

- True RMS.
- Temperature.
- Automatic and manual selection for range.
- Retroilluminated display.
- Frequency.
- Relative mode.
- Continuity alarm.
- Fuse protected range 10A.
- Capacitance.
- Diode test.
- Activity cycle.
- Low level battery indicator.
- Data retention.
- Large LCD display (68.5x32.7mm)
- Certificate CE.
- Continuity beeper.
- Automatic polarity.
- Molded cover.

FUNCTION	RANGE	RESOLUTION	PRECISION
	400mV	100µV	
	4V	1mV	± 0.5%
VOLTAGE DC	40V	10mV	
	400V	100mV	
	1000V	1V	± 0.75%
	400mV	100µV	± 2.0%
VOLTAGE AC	4V	1mV	
(40Hz to 400Hz)	40V	10mV	± 0.75%
RMS-Real	400V	100mV	
	1000V	1V	± 1.0%
	400µA	0.1µA	
	400µA	1µA	± 1.0%
AMPERAGE DC	40mA	10µA	
	400mA	100µA	
	4A	1mA	± 1.5%
	10A	10mA	
	400µA	0.1µA	
	400µA	1µA	
AMPERAGE AC	40mA	10µA	± 1.0%
(40Hz to 400Hz)	400mA	100µA	
RMS-Real	4A	1mA	
	10A	10mA	± 1.5%
	400Ω	0.1Ω	
	4KΩ	1Ω	
RESISTANCE	40KΩ	10Ω	± 1.0%
	400KΩ	100Ω	
	4MΩ	1KΩ	
	40MΩ	10KΩ	± 1.5%
	40nF	10pF	
	400nF	100pF	
CAPACITANCE	4µF	1nF	± 2.5%
	40µF	10nF	
	100µF	100nF	
	5Hz	0.001Hz	
	50Hz	0.01Hz	
	500Hz	0.1Hz	
FREQUENCY	5KHz	1Hz	± 0.05%
	50KHz	10Hz	
	500KHz	100Hz	
	5MHz	1KHz	
	10MHz	10KHz	
	-40 °C to -10 °C	1 °C	3% ± 5 °C
	(-40 °F to 14 °F)	(1 °F)	(3% ± 5 °F)
TEMPERATURE	-10 °C to 400 °C	1 °C	1% ± 3 °C
	(14 °F to 752 °F)	(1 °F)	(1% ± 3 °F)
	400 °C to 1300 °C	1 °C	3% of reading
	(752 °F to 2372 °F)	(1 °F)	
DIODE TEST	"Open circuit test voltage: 3V Short circuit current: 2.5mA"		
CONTINUITY	"Open circuit test voltage: 1.2V Threshold: APROX. <100Ω"		
THD-R measurement (total harmonic distortion)	"Voltage ± 2% 50/60 Hz ± 0.1 Hz Current ± 2%"		

GENERAL SPECIFICATIONS:

• LCD display:	4 digits 4000 counts with automatic polarity indication.
• Reading time:	5 per second
• Storage temperature:	-20°C to 60°C (-4°F to 140°F)
• Operation temperature:	0°C to 45°C (32°F to 113°F)
• Altitude:	2000m (6562 feet)
• Relative humidity:	0% to 80% (0°C to 35°C) 0% to 70% (35°C to 45°C)
• Battery type:	9V NEDA 1604 or IEC 6LR61
• Life battery:	Without light:750 hrs. typical (Alcaline).
• Size:	40.5 x 92 x 172mm
• Weight:	386gr
• Accessories:	Test lead set, 9V battery, Protective holster, instruction sheet and thermocouple type K.



- ABS protective case for hard use.
- Case with a floor base.



14

UD87

DIGITAL MULTIMETER TRUE RMS COMMUNICATION RS-232C

CODE	VOLTAGE		AMPERAGE		RESISTANCE	DIMENSIONS (with holster)	DIMENSIONS (with holster)	
	Volts DC	Volts AC	Amperes DC	Amperes AC			mm	grs
UD87	1000	750	10A	10A	40MΩ	40 x 85 x 190	380	0.83



SPECIAL FEATURES:

- Automatic and manual selection for range.
- Backlight display.
- Analog bar.
- Frequency.
- Relative mode.
- Continuity alarm.
- Maximum and minimum capture.
- Data capture.
- Fuse protected range 10A.
- Capacitance.
- True RMS.
- Diode test.
- Temperature.
- Standby mode indicator.
- Low level battery indicator.
- Data retention.
- Large LCD display (68.5x32.7mm)
- RS-232C Interface.
- Certificate CE.
- Continuity beeper.
- Automatic polarity.
- Push buttons for special functions and features.
- On screen menu selection push buttons.

FUNCTION	RANGE	RESOLUTION	PRECISION
VOLTAGE DC	50mV	10µV	
	500mV	100µV	
	5V	1mV	± 0.1%
VOLTAGE AC (40Hz to 50KHz)	50V	10mV	
	500V	100mV	
	1000V	1V	
	500mV	100µV	
	50V	10mV	± 5% a ± 1.2%
RMS-Real	500V	100mV	
	1000V	1V	± 0.8%
AMPERAGE DC	500_A	100nA	
	5mA	1µA	
	50mA	10µA	± 0.5%
AMPERAGE AC (40Hz to 10KHz)	500mA	100µA	
	5A	1mA	
	10A	10mA	
	500µA	100nA	
	5mA	1µA	± 5% a ± 1.0%
RMS-Real	50mA	10µA	
	500mA	100µA	
RESISTANCE	5A	1mA	
	10A	10mA	± 0.8%
	50Ω	0.01Ω	± 0.5%
	500Ω	0.1Ω	
	5KΩ	1Ω	± 0.3%
CAPACITANCY	50KΩ	10Ω	
	500KΩ	100Ω	
	5MΩ	1KΩ	± 0.5%
	50MΩ	10KΩ	± 1.0%
	5nF	1pF	
FRECUENCY	50nF	10pF	± 1.0%
	500nF	100pF	
	5µF	1nF	± 2.0%
	50µF	10nF	± 3.0%
	500µF	100nF	
TEMPERATURE	5000µF	1µF	± 3.5%
	50Hz	0.001Hz	
	500Hz	0.01Hz	
	5KHz	0.1Hz	± 0.01%
	50KHz	1Hz	
DIODE TEST	500KHz	10Hz	
	5MHz	100Hz	
CONTINUITY	(-50 °C to 1300 °C)	*0.1 °C	*± 3.0 °C
	(-58 °F to 2372 °F)*	(0.1 °F)*	(± 5.4 °F) *†
*Open circuit test voltage: 3V			
Short circuit current: 1mA"			
*Open circuit test voltage: <1.3V			
Threshold: APROX. >10Ω < 70Ω"			

GENERAL SPECIFICATIONS:

- | | |
|--------------------------|--|
| • LCD display: | 3 4/5 digits 5000 counts with automatic polarity indication. |
| • Analog display: | 25 segment analog bar. |
| • Reading time: | Digital: updates 4 times per second, Analog: updates 40 times per second |
| • Storage temperature: | -20°C to 60°C (-4°F to 140°F) |
| • Operation temperature: | 0°C to 50°C (32°F to 122°F) |
| • Altitude: | 2000m (6562 feet) |
| • Relative humidity: | 0% to 80% (0°C to 35°C) |
| | 0% to 70% (35°C to 45°C) |
| • Battery type: | 9V NEDA 1604 or IEC 6LR61 |
| • Life battery: | Without backlight: 200 hrs. typical (Alcaline). |
| • Size: | Without holster: 208x103x54mm |
| • Weight: | With holster: 655gr |
| • Accessories: | Test lead set, 9V battery, software diskettes for UD87 windows version , cable interfase RS232C, protective holster, instruction sheet, thermocouple type k. |



- ABS protective case for hard use.
- Case with a floor base.



CODE UD87

Digital multimeter

Designed for locating flaws and diagnosing electrical and electronic systems.



COMPACT AUTOMOTIVE MULTIMETERS

UD84

COMPACT AUTOMOTIVE MULTIMETERS

CODE	VOLTAGE		AMPERAGE		RESISTANCE	DIMENSIONS (with holster)	DIMENSIONS (with holster)	
	Volts DC	Volts AC	Amperes DC	Amperes AC			mm	grs
UD84	600	600	10A	10A	40MΩ	168 x 85 x 50	466	1.02



SPECIAL FEATURES:

- Range of activity cycle (duty cycle).
- Pulse width.
- Dwell
- RPM measurement.
- Automatic and manual selection for range.
- Frequency.
- Continuity alarm.
- Fuse protected range 10A.
- Temperature.
- Low level battery indicator.
- Data retention.
- LCD display (52x22mm)
- Certificate CE.
- Continuity beeper.
- Automatic polarity.

FUNCTION	RANGE	RESOLUTION	PRECISION	RANGE (mS)	RESOLUTION (mS)
FREQUENCY	199.99	0.01 Hz		1999.9	0.1
(0.5 Hz to 2KHz)			± 0.5%		
time pulse (0.1S)	1999.9	0.1 Hz		5.00	0.01
RPM	30-9000	1 RPM	±2 RPM		
% DUTY	0-99.9% (30RPM to 1999 RPM,				
CYCLE	Pulse length > 0.1s)				
DWELL	0.0-356.4° (30RPM to 1999 RPM,				
	Pulse length > 0.1s)				
PULSE	0.002-1999.9mS (30RPM to 1999				
WIDTH	RPM, Pulse length > 0.1s)				
	400mV	0.1mV			
	4V	1mV			
VOLTAGE DC	40V	10mV	± 0.5%		
	400V	0.1V			
	600V	1V			
AMPERAGE DC	4A	1mA	± 1.2%		
	10A	10mA			
	400Ω	0.1Ω			
	4KΩ	1Ω	± 0.75%		
RESISTANCE	40KΩ	10Ω			
	400KΩ	0.1kΩ			
	4MΩ	1KΩ			
	40MΩ	10KΩ	± 1.5%		
	-40 °C to 20 °C	0.1 °C	± 3 °C		
	(-40 °F to 68 °F)	(0.1 °F)	(± 5.4 °F)		
TEMPERATURE	20 °C to 400 °C	0.1 °C	1% ± 2 °C		
	(68 °F to 752 °F)	(0.1 °F)	(1% ± 3.6 °F)		
	400 °C to 1300 °C	0.1 °C	±3% of reading		
	(752 °F to 2372 °F)	(0.1 °F)			
CONTINUITY	Open circuit test voltage: <1.2V				
	Threshold: APPROX. <100Ω				



GENERAL SPECIFICATIONS:

• LCD display:	3 4/5 digits 4000 counts with automatic polarity indication.
• Analog display:	2 bars of 41 segment each.
• Reading time:	DIGITAL: updates 1 time per second in: RPM, frequency, duty cycle, Dwell, pulse width; 3 times per second in the others functions. ANALOG: updates 3 times per second.
• Storage temperature:	-20°C to 60°C (-4°F to 140°F)
• Operation temperature:	0°C to 45°C (32°F to 113°F)
• Altitude:	2000m (6562 feet)
• Relative humidity	0% to 80% (0°C to 35°C) 0% to 70% (35°C to 45°C)
• Battery type:	9V NEDA 1604 or IEC 6LR61
• Life battery:	200 hrs. typical (Alcaline).
• Size:	With holster: 168x85x50mm Without holster: 155x76x40.5mm
• Weight:	With holster: 466gr Without holster: 269gr
• Accessories:	Test lead set, 9V battery, Protective holster and instruction sheet. Termocouple type K and inductive RPM collector.



- ABS protective case for hard use.
- Case with a floor base.

14

UD86

GENERAL PURPOSE AUTOMOTIVE MULTIMETER

CODE	VOLTAGE		AMPERAGE		RESISTANCE	DIMENSIONS (with holster)	DIMENSIONS (with holster)	
	Volts DC	Volts AC	Amperes DC	Amperes AC			mm	grs
UD86	750	750	10A	10A	40MΩ	47 x 10 x 203	610	1.34



SPECIAL FEATURES:

- Range of activity cycle (duty cycle).
- Pulse width.
- Dwell.
- RPM measure.
- Automatic or manual selection for range.
- Maximum and minimum capture.
- Frequency.
- Continuity alarm.
- Fuse protected range 10A.
- Analog bar.
- Temperature.
- Low level battery indicator.
- True RMS.
- Data retention.
- LCD display (62x26mm)
- Diode test.
- Certificate CE.
- Continuity beeper.
- Automatic polarity.

FUNCTION	RANGE	RESOLUTION	PRECISION
FREQUENCY (0.5 Hz to 200KHz)	199.99Hz	0.01 Hz	
	1999.99Hz	0.1 Hz	± 0.5%
	19.99KHz	0.001 KHz	
RPM IP	30-9000	1 RPM	±2 RPM
RPM IG	60-12000		
% ACTIVITY CYCLE	0-99.9% (30RPM to 19999 RPM, Pulse length > 2_S)		
DWELL	0-356.4° (30RPM to 1999 RPM, Pulse length > 2_S)		
PULSE WIDTH	0.002-1999.9mS (30RPM to 19999 RPM, Pulse length > 2_S)		
VOLTAGE DC	400mV	100_V	
	4V	1mV	
	40V	10mV	± 0.3%
VOLTAGE AC (45Hz a 1KHz)	400V	100mV	
	750V	1V	± 0.75%
	4V	1mV	± 2.5%
AMPERAGE DC	400µA	0.1µA	
	4000µA	1µA	± 0.75%
	40mA	0.01mA	
AMPERAGE AC (45Hz a 1KHz)	400mA	0.1mA	
	4A	0.001A	± 1.0%
	10A	0.01A	
RESISTANCE	400µA	0.1µA	
	4000µA	1µA	± 1.0%
	40mA	0.01mA	
TEMPERATURE	400mA	0.1mA	
	4A	1mA	± 1.5%
	10A	0.01A	
DIODE TEST	400Ω	0.1Ω	
	4KΩ	1Ω	
	40KΩ	10Ω	± 0.5%
CONTINUITY	400KΩ	0.1KΩ	
	4MΩ	1KΩ	
	40MΩ	10KΩ	± 1.0%
TEST	-40 °C to 1370 °C	1 °C	± 3 °C
	(-40 °F to 2498 °F)	(1 °F)	(± 5.4 °F)
DIODE: Open circuit test voltage: <1.5V Short circuit current: 1mA CONTINUITY: Open circuit test voltage: <1.2V Threshold: APPROX. <100Ω			

GENERAL SPECIFICATIONS:

• LCD display:	3 3/4 digits 4000 counts with automatic polarity indication.
• Analog display:	2 bars of 41 segment each.
• Reading time:	DIGITAL: updates 1 time per second in: RPM, frequency, duty cycle, Dwell, pulse width; 3 times per second in the others functions. ANALOG: updates 20 times per second.
• Storage temperature:	-20°C to 60°C (-4°F to 140°F)
• Operation temperature:	0°C to 40°C (32°F to 104°F)
• Altitude:	2000m (6562 feet)
• Relative humidity:	0% to 80% (0°C to 35°C) 0% to 70% (35°C to 45°C)
• Battery type:	9V NEDA 1604 or IEC 6LR61
• Life battery:	200 hrs. typical (Alcaline).
• Size:	With holster: 47x10x203mm Without holster: 32x86x187mm
• Weight:	With holster: 610gr Without holster: 399gr
• Accessories:	Test lead set, 9V battery, Protective holster and instruction sheet. Termocouple type K and inductive RPM collector.



- ABS protective case for hard use.
- Case with a floor base.

UD88

PROFESSIONAL AUTOMOTIVE MULTIMETER

CODE	VOLTAGE		AMPERAGE		RESISTANCE	DIMENSIONS (with holster)	Scales	
	Volts DC	Volts AC	Amperes DC	Amperes AC			(with holster)	(with holster)
UD88	1000	750	10A	10A	40M Ω	54x103x208	655	1.44



SPECIAL FEATURES:

- Range of activity cycle (duty cycle).
- Pulse width.
- Dwell
- RPM measurement.
- Automatic and manual selection for range.
- Maximum and minimum capture.
- Data capture.
- Frequency.
- Analog bar.
- Retroilluminated display.
- Continuity alarm.
- Fuse protected range 10A.
- Capacitance.
- True RMS.
- Temperature.
- Low level battery indicator.
- RS-232C Interface.
- Data retention.
- Large LCD display (67x32mm)
- Relative mode.
- Diode test.
- Certificate CE.
- Continuity beeper.
- Automatic polarity.
- Plastic box.

FUNCTION	RANGE	RESOLUTION	PRECISION
FREQUENCY	199.99Hz	0.01 Hz	$\pm 0.02\%$
	1999.99Hz	0.1 Hz	
	(0.5 Hz to 200KHz)	19.99KHz	0.001 KHz
RPM IP	30-9000	1 RPM	± 2 RPM
	RPM IG	60-12000	
% ACTIVITY	0-99.9%	(30RPM to 19999 RPM,	
CYCLE	Pulse length > 2_S		
DWELL	Pulse length > 2_S		
PULSE LENGHT	0.002-1999.9mS	(30RPM to 19999 RPM,	
	Pulse length > 2_S		
Voltage DC	400mV	100_V	
	4V	1mV	
	40V	10mV	$\pm 0.3\%$
Voltage AC (45Hz to 1KHz)	400V	100mV	
	750V	1V	$\pm 0.75\%$
	4V	1mV	
RMS-Real	40V	10mV	$\pm 2.5\%$
	400V	0.1V	
	750V	1V	
AMPERAGE DC	400 μ A	0.1 μ A	
	4000 μ A	1 μ A	$\pm 0.5\%$
	40mA	0.01mA	
AMPERAGE AC (45Hz to 1KHz)	400mA	0.1mA	
	4A	0.001A	$\pm 1.0\%$
	10A	0.01A	
RESISTANCE	400 Ω	0.1 Ω	
	4K Ω	1 Ω	
	40K Ω	10 Ω	$\pm 0.5\%$
CAPACITANCE	400K Ω	0.1k Ω	
	4M Ω	1K Ω	
	40M Ω	10K Ω	$\pm 1.5\%$
TEMPERATURE	1 μ F	0.001 μ F	
	10 μ F	0.01 μ F	$\pm 1.7\%$
	100 μ F	0.1 μ F	
DIODE	1000 μ F	1 μ F	
	-40 °C to -10 °C		
	(-40 °F to 14 °F)	0.1 °C	± 3 °C
TEST	-10 °C to 20 °C	(0.1 °F)	(± 3 °F)
	(14 °F to 68 °F)		
	20 °C to 400 °C		$\pm 1.0\%$
CONTINUITY	(68 °F to 752 °F)		
	400 °C to 1370 °C	1 °C	$\pm 3.0\%$
	(752 °F to 2498 °F)	(1 °F)	
DWELL	Open circuit test voltage: <3V		
RELATIVE MODE	Current test: <2.5mA		
DATA CAPTURE	Open circuit test voltage: <1.2V		
DATA RETENTION	Threshold: APPROX. <100 Ω		

GENERAL SPECIFICATIONS:

• LCD display:	4 1/2 digits 4000 counts with automatic polarity indication.
• Analog display:	2 bars of 41 segment each.
• Reading time:	DIGITAL: updates 1 time per second in: RPM, frequency, duty cycle, Dwell, pulse width; 4 times per second in the others functions.
	ANALOG: updates 20 times per second.
• Storage temperature:	-20°C to 60°C (-4°F to 140°F)
• Operation temperature:	0°C to 45°C (32°F to 113°F)
• Altitude:	2000m (6562 feet)
• Relative humidity:	0% to 80% (0°C to 35°C)
	0% to 70% (35°C to 45°C)
• Battery type:	9V NEDA 1604 or IEC 6LR61
• Life battery:	With backlight: 150 hrs. Without backlight: 200 hrs. typical (Alcaline)
• Size:	With holster: 54x103x208mm
	Without holster: 40x85x190mm
• Weight:	With holster: 655gr
	Without holster: 380gr
• Accessories:	Test lead set, 9V battery,
	Protective holster and instruction sheet.
	Termocouple type K and inductive RPM collector.



- ABS protective case for hard use.
- Case with a floor base.



Code UD88
Digital multimeter

If you need to take accurate, reliable voltage, amperage, capacitance, frequency, and temperature measurements, then you need our digital multimeters. Use the control knob to select the measurement function and ranges, and then position the test tips or caymans in the measurement area.

14

GENERAL PURPOSE CLAMP METERS

Take precise measurements for current, starting current, voltage, resistance and frequency, sensors, control signals in high-power networks and circuits and check the continuity of transmission elements.

UD333

GENERAL PURPOSE DIGITAL CLAMP METER

CODE	AMPERAGE	VOLTAGE	RESISTANCE	CLAMP APERTURE	DIMENSIONS		
	Amperes AC	Volts AC	OHMS máx.	mm	mm	grs	lbs
UD333	600A	600V	200Ω	32	34 x 85 x 208	380	0.83



SPECIAL FEATURES:

- Centering marks.
- Hand guard.
- Overload indicator.
- Manual range.
- Frequency.
- Continuity alarm.
- Low level battery indicator.
- Data retention.
- LCD display(47x17mm)
- Certificate CE.
- Continuity beeper.
- Automatic polarity.

FUNCTION	RANGE	RESOLUTION	PRECISION
AMPERAGE AC	200A	0.1A	± 1.5%
(45Hz to 400Hz)	600A	1A	
VOLTAGE AC	200V	0.1V	± 2.0%
(45Hz to 400Hz)	600V	1V	± 0.5%
RESISTANCE	200Ω	0.1Ω	± 1.5%
FREQUENCY	2KHz	1Hz	± 1.0%
CONTINUITY	Open circuit test voltage: <1.2V Threshold: APROX. <15Ω		



GENERAL SPECIFICATIONS:

• LCD display:	3 1/2 digits 2000 counts with automatic polarity indication.
• Reading time:	3 times per second.
• Storage temperature:	-20°C to 60°C (-4°F to 140°F)
• Operation temperature:	0°C to 45°C (32°F to 113°F)
• Altitude:	2000m (6562 feet)
• Relative humidity:	0% to 80% (0°C to 35°C) 0% to 70% (35°C to 45°C)
• Battery type:	9V NEDA 1604 or IEC 6LR61
• Life battery:	200 hrs. typical (Alcaline).
• Maximum size of cable:	Diameter 38mm.
• Size:	34 x 85 x 208mm.
• Weight:	380gr
• Accessories:	Test lead set, 9V battery, Protective holster and instruction sheet.



UD334

GENERAL PURPOSE TRUE RMS DIGITAL CLAMP METER

CODE	AMPERAGE		VOLTAGE		RESISTANCE	CLAMP APERTURE	DIMENSIONS		Scales	
	AC	DC	AC	DC			mm	mm	grs	lbs
UD334	1000A	1000A	600V	600V	400Ω	32	34 x 85 x 208	380	0.83	



SPECIAL FEATURES:

- Centering marks.
- Hand guard.
- Overload indicator.
- True RMS.
- Automatic and manual selection for range.
- Frequency.
- Continuity alarm.
- Low level battery indicator.
- Peak hold function to capture the peak value of AC or DC.
- DC amperes zero adjustment dial switch.
- LCD display (47x17mm)
- Certificate CE
- Continuity beeper.
- Automatic polarity.
- Diode test.

FUNCTION	RANGE	RESOLUTION	PRECISION
AMPERAGE AC (45Hz to 1KHz)	400A	0.1A	± 2.0%
RMS-Real	1000A	1A	± 2.5%
AMPERAGE DC	400A	0.1A	± 1.5%
	1000A	1A	
VOLTAGE AC (50Hz to 450Hz)*	400V	0.1V	± 1.0%
	600V	1V	± 1.2%
VOLTAGE DC	400V	0.1V	± 0.8%
	600V	1V	± 0.8%
RESISTANCE	400Ω	0.1Ω	± 1.5%
	4KHz	1Hz	
FREQUENCY	40KHz	10Hz	± 0.5%
	400KHz	100Hz	
	4MHz	1kHz	± 1.0%
DIODE TEST	Open circuit test voltage: <3.0V Current test: <1.0mA		
CONTINUITY	Open circuit test voltage: <1.2V Threshold: APROX. <15Ω		



GENERAL SPECIFICATIONS:

• LCD display:	3 3/4 digits 4000 counts with automatic polarity indication.
• Reading time:	3 times per second.
• Storage temperature:	-20°C to 60°C (-4°F to 140°F)
• Operation temperature:	0°C to 45°C (32°F to 113°F)
• Altitude:	2000m (6562 feet)
• Relative humidity:	0% to 80% (0°C to 35°C) 0% to 70% (35°C to 45°C)
• Battery type:	9V NEDA 1604 or IEC 6LR61
• Life battery:	200 hrs. typical (Alcaline).
• Maximum size of cable:	Diameter 38mm
• Size:	34 x 85 x 208mm
• Weight:	380gr
• Accessories:	Test lead set, 9V battery, Protective holster and instruction sheet.



POWER CLAMP METERS

UD337

PROFESSIONAL TRUE RMS DIGITAL CLAMP METER

CODE	AMPERAGE		VOLTAGE		RESISTANCE	CLAMP APERTURE	DIMENSIONS		Scales	
	AC	DC	AC	DC	OHMS máx.	mm	mm	grs	lbs	
UD337	700A	700A	750V	750V	4KΩ	52	43.9 x 97.5 x 245	545	1.20	



SPECIAL FEATURES:

- Centering marks.
- Hand guard.
- Overload indicator.
- True RMS.
- Automatic and manual selection for range.
- Frequency.
- Continuity alarm.
- Low levels battery indicator.
- Data hold.
- LCD display (55x26mm)
- Certificate CE.
- Continuity beeper.
- Automatic polarity.
- Analog bar.
- Maximum and minimum capture.

FUNCTION	RANGE	RESOLUTION	PRECISION
*AMPERAGE AC (20Hz to 1KHz)	40A	0.01A	± 4.0%
	400A	0.1A	
RMS-Real™	700A	1A	± 7.0%
	40A	0.01A	
AMPERAGE DC	400A	0.1A	± 2.0%
	700A	1A	
*VOLTAGE AC (45Hz to 1KHz)	40V	0.01V	± 1.0%
	400V	0.1V	± 2.5%
	600V	0.1V	± 1.0%
RMS-Real™	40V	0.01V	± 1.0%
	400V	0.1V	± 2.5%
VOLTAGE DC	600V	0.1V	± 1.5%
	400Ω	0.1Ω	± 1.0%
RESISTANCE	4KΩ	1Ω	
	FREQUENCY	1KHz	0.1Hz
	10KHz	1Hz	
CONTINUITY	Threshold: APROX. $\lt; 35\Omega$		

GENERAL SPECIFICATIONS:

• LCD display:	3 3/4 digits 4000 counts with automatic polarity indication.
• Analog display:	41 segment analog bar.
• Reading time:	DIGITAL: updates 4 times per second, ANALOG: updates 20 times per second.
• Storage temperature:	-20°C to 60°C (-4°F to 140°F)
• Operation temperature:	-10°C to 55°C (14°F to 131°F)
• Altitude:	2000m (6562 feet)
• Relative humidity:	0% to 80% (0°C to 35°C) 0% to 70% (35°C to 45°C)
• Battery type:	9V NEDA 1604 or IEC 6LR61
• Life battery:	80 hrs. typical (Alcaline).
• Maximum size of cable:	Diameter 38mm
• Size:	34 x 85 x 208mm
• Weight:	545gr
• Accessories:	Test lead set, 9V battery, Protective holster and instruction sheet.



CODE UD337
Professional digital clamp meter

Designed for taking high-voltage measurements from 700 to 1000 volts. Our digital clamp meters make you stronger; open the clamp, insert the conductor, and close the clamp. Then use the control keys to select the features and ranges to be measured.

UD370 TRUE-RMS POWER METER

CODE	AMPERAGE	VOLTAGE	RESISTANCE	CLAMP APERTURE	DIMENSIONS		Scales	
	Amperes AC	Volts AC	OHMS máx.	mm	mm	grs	lbs	
UD370	750A	750V	4K Ω	52	43.9 x 97.5 x 245	545	1.20	



SPECIAL FEATURES:

- True power, apparent power and reactive power.
- Power factor.
- Energy (kWh, kVAh, kvar) integrator for maximum 80 hours.
- Centering marks.
- Hand guard.
- Overload indicator.
- True RMS.
- Automatic and manual selection for range.
- Low level battery indicator.
- Data hold.
- LCD display (55x27mm)
- Certificate CE.
- Automatic polarity.
- Maximum and minimum capture.

FUNCTION	RANGE	RESOLUTION	PRECISION
TRUE POWER MEASURE	400KW 750KW	0.1KW 1KW	$\pm 1.5\%$
APPARENT POWER MEASURE	400KW 750KW	0.1KW 1KW	$\pm 1.5\%$
POWER FACTOR MEASURE (COS θ)	0.3 to 1	0.001	$\pm 2.0\%$
AMPERAGE AC (45Hz to 450Hz)	400A 700A	0.1A 1A	$\pm 1.5\%$
VOLTAGE AC (45Hz to 450Hz)	40V 400V	0.01V 0.1V	$\pm 1.0\%$
RESISTANCE	400 Ω 4K Ω	0.1 Ω 1 Ω	$\pm 1.0\%$
ENERGY INTEGRATOR	40000KWh 75000KWh	0.1KWh 1KWh	$\pm 1.5\%$
REACTIVE POWER INTEGRATOR	40000KWh 75000KWh	0.1KWh 1KWh	$\pm 4.0\%$



GENERAL SPECIFICATIONS:

• LCD display:	4 digits for power y 6 digits for energy.
• Reading time:	4 Updates for time per second.
• Storage temperature:	-20°C to 60°C (-4°F to 140°F)
• Operation temperature:	0°C to 45°C (32°F to 113°F)
• Altitude:	2000m (6562 feet)
• Relative humidity	0% to 80% (0°C to 50°C)
• Battery type:	9V NEDA 1604 or IEC 6LR61
• Life battery:	200 hrs. typical (Alcaline).
• Maximum size of cable:	Diameter 51mm
• Size:	43.9 x 97.5 x 245 mm
• Weight:	545gr
• Accessories:	Test lead set, 9V battery, Protective holster and instruction sheet.

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UD370PA

DESCRIPTION
3-PHASE ADAPTER FOR UD370



Features:

Generates an artificial neutral point when measuring real power, apparent power, or power factor.

UD50RS

DESCRIPTION
RS-232C INTERFACE CABLE (1.5 M)



Features:

Can be connected to a computer through an RS-232C port for receiving and storing information and for programming the diagnostic equipment.

UD71TLAC

DESCRIPTION
SET OF SILICONE CAYMANS AND TEST TIPS



Features:

Maximum jaw opening of 0.313" (8 mm)
Straight inputs with protective cover.

UDSC

DESCRIPTION
VINYL MULTIMETER CASE



Features:

Sturdy padded case with heavy-duty closure.
Keeps the digital multimeter and test tips covered.

UD80PK

DESCRIPTION
TYPE K TEMPERATURE PROBE



Features:

Type K thermocouple
General use, insulated with Teflon.

UD85SW

DESCRIPTION
SOFTWARE ON DISKETTES FOR UD85, WINDOWS VERSION



Features:

For the UD85 multimeter.
For communication between the RS-232C interface and a computer.
Compatible with Windows 95/98 and DOS.

UD88SW

DESCRIPTION
SOFTWARE ON DISKETTES FOR UD88, WINDOWS VERSION



Features:

For the UD88 multimeter.
For communication between the RS-232C interface and a computer.
Compatible with Windows 95/98 and DOS.

URREA

**DIAGNOSTIC EQUIPMENT
SAFETY RECOMMENDATIONS**



Always wear safety glasses.



Keep flames and sparks away from the multimeter.



Read the instructions before using.



Use fuses with the rated capacity specified on the equipment.



Do not remove or bypass the connections on any electrical circuit.



Never operate the equipment on circuits that exceed its capacity.



Always keep fingers behind the tip protectors when measuring.



If any damage is detected on a test tip wire, replace it immediately.

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