

4-3/4 DIGITS 40,000 COUNTS WITH ANALOGUE BARGRAPH

GENERAL SPECIFICATIONS

This meter measures AC/DC Voltage, AC/DC Current, Resistance, Capacitance, Frequency (electrical & electronic), Duty Cycle, Diode Test, and Continuity. Temp by K-type probe and infra red sensor. It features a waterproof, rugged design for heavy duty use. Proper use and care of this meter will provide many years of reliable service.

Enclosure	Double molded, waterproof
Shock (Drop Test)	6.5 feet (2 meters)
PEAK	Captures peaks >1ms
Input Impedance	>10MΩ VDC & >3MΩ VAC
AC Response	True rms
AC True RMS:	The term stands for "Root-Mean-Square," which represents the method of calculation of the voltage or current value. Average responding multimeters are calibrated to read correctly only on sine waves and they will read inaccurately on non-sine wave or distorted signals. True rms meters read accurately on either type of signal.
ACV Bandwidth	50Hz to 1000Hz
Crest Factor	<3 at full scale up to 500V, decreasing linearly to <1.5 at 1000V
Display	4-3/4 Digits 40,000 count backlit liquid crystal with 41 segment analogue bargraph
Overrange indication	"OL" is displayed
Auto Power Off	15 minutes (approximately) with disable feature
Polarity	Automatic (no indication for positive); Minus (-) sign for negative
Measurement Rate	2 times per second, nominal
Low Battery Indication	"E" is displayed if battery voltage drops below operating voltage
Battery	One 9 volt (NEDA 1604) battery
Fuses	mA, μA ranges; 0.5A/1000V ceramic fast blow A range; 10A/1000V ceramic fast blow
Operating Temperature	41°F to 104°F (5°C to 40°C)
Storage Temperature	-40°F to 140°F (-20°C to 60°C)
Operating Humidity	Max 80% up to 87°F (31°C) decreasing linearly to 50% at 104°F (40°C)
Storage Humidity	<80%
Operating Altitude	7000ft. (2000meters) maximum.
Weight	0.753lb (342g) (includes holster).
Size	7.36" x 3.2" x 2.0" (187 x 81 x 50mm) (includes holster)
Data Hold	To freeze the display data
Max/Min	To record Max/Min Data
Peak Hold	To freeze the peak values
Relative measurement facility	

SAFETY: This meter is intended for origin of installation use and protected, against the users, by double insulation per EN61010-1 and IEC61010-1 2nd Edition (2001) to Category IV 600V and Category III 1000V; Pollution Degree 2. The meter also meets UL 61010-1, 2nd Edition (2004), CAN/CSA C22.2 No. 61010-1 2nd Edition (2004), and UL 61010B-2-031, 1st Edition (2003)



SALIENT FEATURES

- Overload protection up to 1200V DC / AC RMS in the AC/DC Voltage range.
- Overload protection up to 20A DC/AC RMS by fast blow fuse in the AC/DC Current range.
- Overload protection up to 1000V DC / AC RMS in the capacitance, Frequency, Temperature, Resistance, Continuity and Diode Test Range.
- The instrument has overload protection up to 20A DC/AC RMS in the Voltage Range and 1000V DC/AC RMS in the Current Range.
- Surge Protection of 8 kV peak IEC 61010
- 'O' Ring Seal body.
- The instrument has IP-67 Protection making the body water proof even if dipped in 1m. deep water for 30 mins.
- Double molded injection body with rubber lining to provide insulation against electrical shocks and anti-slip grip.
- Confirms to EN61010-1, CAT IV 600V, CAT III 1000V.
- Two Years' Warranty against any manufacturing defects

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TECHNICAL SPECIFICATIONS

- (% reading) - This is the accuracy of the measurement circuit.
- (+ digits) - This is the accuracy of the analog to digital converter.
- Accuracy is stated at 65°F to 83°F (18°C to 28°C) and < 75% RH.

Function	Range	Resolution	Accuracy	
DC Voltage	400mV	0.01mV	±(0.06% reading + 2 digits)	
	4V	0.0001V		
	40V	0.001V		
	400V	0.01V		
	1000V	0.1V	±(0.1% reading + 5 digits)	
AC Voltage	50 to 1000Hz		±(1.0% reading + 5 digits)	
	400mV	0.1mV		
	4V	0.001V	±(1.0% reading + 3 digits)	
	40V	0.01V		
	400V	0.1V		
	1000V	1V		
	All AC voltage ranges are specified from 5% of range to 100% of range			
	DC Current	400µA	0.01µA	±(1.0% reading + 3 digits)
4000µA		0.1µA		
40mA		0.001mA		
400mA		0.01mA		
10A		0.001A		
(20A: 30 sec max with reduced accuracy)				
AC Current	50 to 1000Hz		±(1.5% reading + 3 digits)	
	400µA	0.1µA		
	4000µA	1µA		
	40mA	0.01mA		
	400mA	0.1mA		
	10A	0.01A		
	(20A: 30 sec max with reduced accuracy)			
	All AC voltage ranges are specified from 5% of range to 100% of range			
	Diode Test	Test current of 0.9mA maximum, open circuit voltage 2.8V DC typical		
	Continuity Check	Audible signal will sound if the resistance is less than 35Ω (approx.), test current <0.35mA		
Temperature Sensor	Requires type K thermocouple for measurement of temperature as a contact type thermometer and requires infra red temperature adaptor TS-03 to measure temperature as a non contact type infra red thermometer.			

Function	Range	Resolution	Accuracy
Resistance	400Ω	0.01Ω	±(0.3% reading + 9 digits)
	4kΩ	0.0001kΩ	±(0.3% reading + 4 digits)
	40kΩ	0.001kΩ	
	400kΩ	0.01kΩ	
	4MΩ	0.001MΩ	±(2.0% reading + 10 digits)
40MΩ	0.001MΩ		
Capacitance	40nF	0.001nF	±(3.5% reading + 40 digits)
	400nF	0.01nF	±(3.5% reading + 10 digits)
	4µF	0.0001µF	
	40µF	0.001µF	
	400µF	0.01µF	±(5% reading + 10 digits)
	4000µF	0.1µF	
40mF	0.001mF		
Frequency (electronic)	40Hz	0.001Hz	±(0.1% reading + 1 digits)
	400Hz	0.01Hz	
	4kHz	0.0001kHz	
	40kHz	0.001kHz	
	400kHz	0.01kHz	
	4MHz	0.0001MHz	
	40MHz	0.001MHz	
	100MHz	0.01MHz	Not specified
Sensitivity: 0.8V rms min. @ 20% to 80% duty cycle & <100kHz; 5Vrms min @ 20% to 80% duty cycle & > 100kHz.			
Frequency (electrical)	40.00-400Hz	0.01Hz	±(0.5% reading)
	Sensitivity: 15Vrms		
Duty Cycle	0.1 to 99.90%	0.01%	±(1.2% reading + 2 digits)
	Pulse width: 100µs - 100ms, Frequency: 5Hz to 150kHz		
Temp (type-K)	-58 to 1832°F	1°F	±(1.0% reading + 4.5°F)
	-20 to 1000°C	1°C	±(1.0% reading + 2.5°C) (probe accuracy not included)
4-20mA%	-25 to 125%	0.01%	±50 digits
	0mA=-25%, 4mA=0%, 20mA=100%, 24mA=125%		

Note: Accuracy specifications consist of two elements:

OPTIONAL ACCESSORIES:

- Infra-red non contact temperature adaptor to measure temperature from -30°C to 550°C with fixed emissivity of 0.95 and distance to sighting ratio of 8:1. Model TS-03
- Clamp on Current Adaptor to measure current up to 1000A. Model CA-1000D
- Clamp on Current Adaptor to measure upto 200A AC. Model CA-01

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