



This meter measures AC/DC Voltage, AC/DC Current, Resistance, Capacitance, Frequency (electrical & electronic), Duty Cycle, Diode Test, and Continuity plus Thermocouple Temperature. It can store and recall data. It features a waterproof, rugged design for heavy duty use.



DT-9929

TRUE RMS INDUSTRIAL MULTIMETER Safety Instructions

Input Protection Limits	
Function	Maximum Input
V DC or V AC	1000VDC/AC rms
mA AC/DC	500mA 1000V fast acting fuse
A AC/DC	10A 1000V fast acting fuse (20A for 30 seconds max every 15 minutes)
Frequency, Resistance, Capacitance, Duty Cycle, Diode Test, Continuity	1000VDC/AC rms
Temperature	1000VDC/AC rms
Surge Protection: 8kV peak per IEC 61010	



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Electrical Specifications

Function	Range	Resolution	Accuracy
DC Voltage	400mV	0.01mV	±(0.06% reading + 4digits)
	4V	0.0001V	
	40V	0.001V	
	400V	0.01V	
	1000V	0.1V	±(0.1% reading + 5digits)
AC Voltage (AC+DC)			50 to 1000Hz
	400mV	0.01mV	±(1.0% reading + 40digits)
	4V	0.0001V	±(1.0% reading + 30 digits)
	40V	0.001V	
	400V	0.01V	
	1000V	0.1V	
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 (AC+DC)			50 to 1000Hz
	400µA	0.01µA	±(1.5% reading + 30digits)
	4000µA	0.1µA	
	40mA	0.001mA	
	400mA	0.01mA	
	10A	0.001A	
	(20A: 30 sec max with reduced accuracy)		
All AC current ranges are specified from 5% of range to 100% of range			



NOTE : Accuracy is stated at 65°F to 83°F (18°C to 28°C) and less than 75% RH.

AC switch according to the calibration of sine wave. It generally increase $\pm(2\% \text{ reading} + 2\% \text{ full scale})$ if non sine wave in the wave crest less than 3.0.



Electrical Specifications

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	
	40MΩ	0.001MΩ	±(2.0% reading + 10 digits)
Capacitance	40nF	0.001nF	±(3.5% reading + 40 digits)
	400nF	0.01nF	
	4μF	0.0001μF	±(3.5% reading + 10 digits)
	40μF	0.001μF	
	400μF	0.01μF	
	4000μF	0.1μF	±(5% reading + 10 digits)
	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
Frequency (electrical)	Sensitivity: 0.8V rms min. @ 20% to 80% duty cycle and <100kHz; 5Vrms min @ 20% to 80% duty cycle and > 100kHz.		
	40.00Hz-10KHz	0.01Hz - 0.001KHz	±(0.5% reading)
	Sensitivity: 1Vrms		
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)	-50 to 1200°C	0.1°C	±(1.0% reading + 2.5°C)
	-58 to 2192°F	0.1°F	±(1.0% reading +4.5°F) (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 :

- (% reading) – This is the accuracy of the measurement circuit.
- (+ digits) – This is the accuracy of the analog to digital converter.



General Specifications

Store capacitance	2000
Memory Record and Recall Function	Alarm function when data crosses high and low set values
Enclosure	Double molded, waterproof
Shock (Drop Test)	6.5 feet (2 meters)
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
PEAK	Captures peaks >1ms
Temperature Sensor	Requires type K thermocouple
Input Impedance	>10MΩ VDC & >9MΩ VAC True rms
AC Response	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.
AC True RMS	
ACV Bandwidth	50Hz to 1000Hz
Crest Factor	≤3 at full scale up to 500V, decreasing linearly to ≤1.5 at 1000V
Display	40,000 count backlit liquid crystal with 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	"  " 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	-4°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)
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)

RANGE

Meter can be switched from Auto-ranging to Manual-Ranging mode and vice versa.

MAX/MIN

Records Max and Min Values of measured data.

RELATIVE MODE

Allows to make measurements relative to a stored reference value.

HOLD

Freezes the reading in the display.

PEAK HOLD

Captures the peak AC or DC voltage or current.

Accessories

Carrying Case, Testing Leads, Temperature Probe, Battery, Instruction manual and Test Certificate