



## DT-9959

### MultiMeter / Datalogger with Wireless PC Interface

**CAT IV, Datalogging and Wireless features, True RMS Multimeter data logs up to 9,999 readings with wireless USB Interface capability to transmit readings to your PC in real time.**

The CEM DT-9959 T-RMS multimeter / data logger not only takes precise readings but also records the readings for future reference. The 50,000 Counts, backlit LCD Triple display, provides most accurate readings up to the last digit and provides more information as compared to a normal DMM. The AC Voltage / Current Bandwidth of 100kHz makes it very useful to measure Voltage and Current at high frequencies. The IP-67 makes it waterproof and dust proof and makes it feasible for engineers to work in any environment.

The 1000V AC/DC Protection on all ranges makes the instrument completely "fool proof". It conforms to EN61010-1 CAT IV 600V / CAT-III 1000V.

## FEATURES

- 50,000 Counts Backlit LCD triple display with analogue bargraph
- AC and AC+DC, T-RMS measurement for any kind of waveforms.
- 100kHz bandwidth for Voltage / Current
- Records 9,999 data at site.
- Real time datalogging or Bluetooth Data Transmission
- Diode open circuit voltage of 2.8V DC
- Double molded construction for waterproof (IP67) protection
- CAT IV-600V safety rating for industrial applications.
- TUV & GS approved
- 8kV Surge Protection as per IEC 61010
- 1000V input protection on all functions
- Dual sensitivity frequency functions
- Backlit triple LCD display includes two sub-displays for simultaneous indication of frequency with voltage and memory data/location information
- Auto power off with disable feature
- Peak Hold / Data Hold functions.
- Min/Max Recording function
- AC TRMS, DC, AC+ DC Voltage / Current Measurements
- Resistance, Capacitance, Frequency, Duty Cycle, Temperature, 4-20mA Process measurements
- Peak: Captures peaks > 1mS
- Shock / Drop proof 6.5 ft (2m)
- Diode Test, Audible Continuity Test
- Over-range, Low Battery Indication
- 9V Battery Operated
- Fuse Protection
- Operating Temperature: 5 to 40°C (41°F to 104°F)
- Storage Temperature: -20 to 60°C (-4°F to 140°F)
- Operating Humidity: Max 80% up to 31°C decreasing linearly to 50% at 40°C
- Storage Humidity < 80% RH
- Operating Altitude 7000 ft
- Size: 187 x 81 x 50 mm / Weight: 350g.
- Safety: IEC 61010-1, CAT IV 600V, CAT III 600V, CE

## SPECIFICATIONS

Function	Range	Resolution	Accuracy			
			45 to 1kHz	1 to 10kHz	10 to 100kHz	100 to 150kHz
AC Current	500uA	0.01uA	± (0.6 % ± 30 Digits)	± (1 % ± 30 Digits)	± (4 % ± 40 Digits)	Not Spec'd
	5000uA	0.1uA				
	50mA	0.001mA				
	500mA	0.01mA	± (1.2 % ± 30 Digits)			
	10A	0.001A	± (1 % ± 30 Digits)	± (1.5 % ± 30 Digits)		

Function	Range	Resolution	Accuracy
DC Current	500uA	0.01uA	± (0.1 % ± 20 Digits)
	5000uA	0.1uA	± (0.1 % ± 5 Digits)
	50mA	0.001mA	± (0.1 % ± 20 Digits)
	500mA	0.01mA	± (0.2 % ± 5 Digits)
	10A	0.001A	± (0.3 % ± 10 Digits)
	20A: 30 Sec max with reduced accuracy		

Function	Range	Resolution	Accuracy			
			45 to 1kHz	1 to 10kHz	10 to 100kHz	100 to 150kHz
AC + DC Current	500uA	0.01uA	± (1 % ± 50 Digits)	± (2 % ± 50 Digits)	± (5 % ± 50 Digits)	Not Spec'd
	5000uA	0.1uA				
	50mA	0.001mA				
	500mA	0.01mA				
	10A	0.001A				
	20A: 30 Sec max with reduced accuracy					

Function	Range	Resolution	Accuracy
DC Voltage	50mV	0.001mV	± (0.05 % ± 20 Digits)
	500mV	0.01mV	± (0.025 % ± 3 Digits)
	5V	0.0001V	
	50V	0.001V	
	500V	0.01V	± (0.03 % ± 3 Digits)
	1000V	0.1V	

**Input Protection:** 1000V DC / AC RMS.

Function	Range	Resolution	Accuracy			
			45 to 1kHz	1 to 10kHz	10 to 100kHz	100 to 150kHz
AC Voltage (AC + DC)	50mV	0.001mV	± (0.5 % ± 30 Digits)	± (1 % ± 30 Digits)	± (4 % ± 40 Digits)	Not Spec'd
	500mV	0.01mV	± (1 % ± 50 Digits)	± (2 % ± 50 Digits)	± (5 % ± 50 Digits)	Not Spec'd
	5V	0.0001V	± (0.5 % ± 30 Digits)	± (1 % ± 30 Digits)	± (4 % ± 40 Digits)	Not Spec'd
	50V	0.001V	± (1 % ± 50 Digits)	± (2 % ± 50 Digits)	± (5 % ± 50 Digits)	Not Spec'd
	500V	0.01V	± (0.8 % ± 30 Digits)	± (1.2 % ± 30 Digits)	Not Spec'd	Not Spec'd
	1000V	0.1V	± (1 % ± 50 Digits)	± (2 % ± 80 Digits)	Not Spec'd	Not Spec'd

**Input Protection:** 1000V AC RMS.

Function	Range	Resolution	Accuracy
Resistance	50Ω	0.001Ω	± (0.2 % ± 20 Digits)
	500Ω	0.01 Ω	± (0.08 % ± 10 Digits)
	5 KΩ	0.0001 KΩ	± (0.08 % ± 3 Digits)
	50 KΩ	0.001 KΩ	
	500 KΩ	0.01 KΩ	
	5 MΩ	0.0001 MΩ	± (0.2 % ± 10 Digits)
	50 MΩ	0.001 MΩ	± (2 % ± 20 Digits)

**Input Protection:** 1000V DC or 1000V AC RMS.

Function	Range	Resolution	Accuracy
Capacitance	5nF	0.001nF	± (1.5 % ± 5 Digits)
	50nF	0.01nF	
	500nF	0.1nF	
	5uF	0.001uF	
	50uF	0.01uF	
	500uF	0.1uF	± (3 % ± 30 Digits)
	5mF	0.001mF	
	50mF	0.01mF	

**Input Protection:** 1000V DC or 1000V AC RMS.

Function	Range	Resolution	Accuracy
Frequency (Electronic)	50Hz	0.001Hz	± (0.02 % ± 3 Digits)
	500Hz	0.01Hz	
	5kHz	0.0001kHz	
	50kHz	0.001kHz	
	500kHz	0.01kHz	
	5MHz	0.0001MHz	
	50MHz	0.001MHz	
	100MHz	0.01MHz	Not Spec'd

**Sensitivity:** 0.8Vrms min. @20% to 80% Duty Cycle and < 100kHz;  
5Vrms min @20% to 80% Duty Cycle and > 100kHz.

Function	Range	Resolution	Accuracy
Frequency (Electrical)	40.00Hz - 10kHz	0.01Hz - 0.001kHz	± (0.1 %)

**Sensitivity:** 0.02V RMS, 20uA RMS.

Function	Range	Resolution	Accuracy
Duty Cycle	0.1 to 99.90%	0.01%	± (1.2 % ± 2 Digits)

**Pulse Width:** 100uS - 100mS, Frequency: 5Hz to 150kHz.

Function	Range	Resolution	Accuracy
Temperature (type-K) (probe accuracy not included)	-50 to 1350°C	0.1°C	± (0.5 % ± 2.5°C)
	-58 to 2462°C	0.1°F	± (0.5 % ± 4.5°F)

**Input Protection:** 1000V DC or 1000V AC RMS.

Function	Range	Resolution	Accuracy (% of reading)
4 - 20mA	-25 to 125%	± 50 Digits	0.01%

0mA = -25%, 4mA=0%, 20mA=100%, 24mA=125%

### INCLUDED ACCESSORIES:

- Carrying Case
- Temperature Probe
- Testing Leads
- Instruction Manual
- Remote receiver with USB Cable
- Software
- Battery
- Test Report