

## CM5095

### 3 3/4 Digits Auto Range TRMS Multimeter with 32 segment bar graph and Frequency Measurement

#### Features:

- 3 3/4 Digits LCD display
- Backlight
- Auto AC/DC selection
- DC voltage 320mV to 600V
- Trms AC voltage 3.2V to 600V
- DC current 320 $\mu$ A to 10A
- Trms AC current 320 $\mu$ A to 10A
- Resistance 320 $\Omega$  to 30M $\Omega$
- Frequency up to 30kHz
- Diode test
- Continuity test
- Data hold
- Low battery warning display
- All ranges 600volt overload protection
- Wrong terminal inserting warning beeper
- Double injection case design
- Conform to IEC1010/EN61010  
CAT III 600V, CE-EMC & LVD



#### General Specifications

Display	: 3 3/4 digits LCD with max. reading of 3200 and 32 segment bar graph.
Polarity	: Automatic, (-) negative polarity indication.
Zero adjustment	: Automatic.
Over range indication	: Only the MSD "OL" is displayed.
Power	: 2 x standard 1.5volt AAA batteries.
Dimension	: 93 (W) x 194 (H) x 39.4 (D) mm.
Weight	: Approx. 400 g (including battery).

Due to our policy of continual product development we reserve the right to amend the specifications of all mentioned products without notice.

## Electrical Specification

Accuracies are  $\pm$ (% of reading + number of least significant digits) at 23°C±5°C, less than 75%RH

### DC voltage measurement

Range	Resolution	Accuracy	Input impedance	Protection against overload
320mV	0.1mV	$\pm(0.8\% \text{Read.} + 2\text{dgt})$	2M $\Omega$	600V <sub>rms</sub> ≤10s
3.2V	0.001V	$\pm(1.2\% \text{Read.} + 2\text{dgt})$		
32V	0.01V			
320V	0.1V			
600V	1V			

### TRUE RMS AC voltage measurement

Range (*)	Resolution	Accuracy (**)	Input impedance	Protection against overload
3.2V	0.001V	$\pm(1.2\% \text{Read.} + 5\text{dgt})$	2M $\Omega$	600V <sub>rms</sub> ≤10s
32V	0.01V			
320V	0.1V			
600V	1V			

(\*) The instrument doesn't perform the measurement if detect DC components.

(\*\*) Frequency range: 50Hz~400Hz

### DC current measurement

Range	Resolution	Accuracy	Voltage drop	Protection against overload
320 $\mu$ A	0.1 $\mu$ A	$\pm(1.5\% \text{Read.} + 2\text{dgt})$	200mV	Fuse 400mA/600V Rapid
3.2mA	1 $\mu$ A	$\pm(2.5\% \text{Read.} + 2\text{dgt})$	163mV	
32mA	0.01mA			
320mA	0.1mA			
10A	0.01A			Fuse 10A/600V Rapid

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**TRUE RMS AC current measurement**


Range	Resolution	Accuracy	Voltage drop	Overload Protection
320 $\mu$ A	0.1 $\mu$ A	$\pm(1.5\% \text{Read.} + 5\text{dgt})$	163mV	Fuse 400mA/600V Rapid
3200 $\mu$ A	1 $\mu$ A			
32mA	0.01mA			
320mA	0.1mA	$\pm(2.5\% \text{Read.} + 5\text{dgt})$	163mV	Fuse 10A/600V Rapid
10A	0.01A			

Frequency Range: 50Hz – 400Hz

**Resistance measurement**

Range	Resolution	Accuracy	Max open circuit voltage	Protection against overload
320 $\Omega$	0.1 $\Omega$	$\pm(1.2\% \text{Read} + 5\text{dgt})$	$\leq 1.5\text{V}$	600Vrms $\leq 10\text{s}$
3.2k $\Omega$	0.001k $\Omega$			
32k $\Omega$	0.01k $\Omega$			
320k $\Omega$	0.1k $\Omega$			
3.2M $\Omega$	0.001M $\Omega$	$\pm(3.5\% \text{Read} + 5\text{dgt})$	$\leq 1.5\text{V}$	600Vrms $\leq 10\text{s}$
30M $\Omega$	0.01M $\Omega$			

**Diode test**

Range	Test voltage	Test current	Max open circuit voltage	Protection against overload
	0 – 3.2V	Approx. 1mA	3.0V	600Vrms $\leq 10\text{s}$

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**Continuity test**

Range	Test Range	Test current	Max open circuit voltage	Protection against overload
·))	Buzzer sounds when resistance value $\leq 20\Omega$	Approx. 1mA	$\leq 1.0V$	600Vrms $\leq 10s$

**Frequency measurement**

Range	Resolution	Accuracy	Protection against overload
30kHz	1Hz	$\pm(1.0\% \text{Read.} + 5\text{dgt})$ Vpp>10V	600Vrms $\leq 10s$

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