

CM5093

3 3/4 Digits Auto Range Multimeter with Capacitance, Frequency and Temperature Measurement

Features:

- 3 3/4 Digits LCD Display
- Max. reading 3999
- Auto power off
- DC voltage 400mV up to 600V
- AC voltage 400mV up to 600V
- DC current 400 μ A up to 10A (fused)
- AC current 400 μ A up to 10A (fused)
- Resistance 400 Ω up to 30M Ω
- Capacitance 50nF up to 100 μ F
- Frequency 5Hz up to 100kHz
- Duty cycle 20% to 80%
- Temperature measurement ($^{\circ}$ C or $^{\circ}$ F – factory set)
- Data hold
- Low battery warning display
- Diode test
- Continuity test
- All ranges 600volt overload protection
- Wrong terminal inserting warning beeper
- German technology double moulded casing
- Power single 9V NEDA 1604
- Conform to IEC1010/EN61010
CAT III 600V, CE-EMC & LVD



General Specifications

Display	: 3 3/4 digits LCD with max. reading of 3999.
Polarity	: Automatic, (-) negative polarity indication.
Zero adjustment	: Automatic.
Over range indication	: Only the MSD “OL” is displayed.
Power	: Single, standard 9 volt battery NEDA 1604, JIS 006P, IEC6F22.
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 \pm 5°C, less than 75%RH

DC Voltage Measurement

Range	Resolution	Accuracy	Input impedance	Overload protection
400mV	0.1mV	\pm (1.0% Read. + 2dgt)	10M Ω	600VDC/AC rms
4V	0.001V	\pm (0.8% Read. + 3dgt)		
40V	0.01V			
400V	0.1V			
600V	1V			

AC Voltage Measurement

Range	Resolution	Accuracy	Input impedance	Overload protection
400mV(*)	0.1mV	\pm (2.0% Read. + 5dgt)	10M Ω	600VDC/AC rms
4V	0.001V	\pm (1.2% Read. + 3dgt)		
40V	0.01V			
400V	0.1V			
600V	1V			

(*)ACmV only available in manual-range

Frequency Range: 40-400Hz

DC Current Measurement

Range	Resolution	Accuracy	Voltage drop	Overload protection
400uA	0.1uA	\pm (1.0% Read. + 5dgt)	400mV	Fuse 500mA/600V
4000uA	1uA			
40mA	0.01mA			
400mA	0.1mA			
4A	0.001A	\pm (1.2% Read. + 5dgt)	400mV	Fuse 10A/600V
10A	0.01A	\pm (1.5% Read. + 5dgt)	200mV	Fuse 10A/600V

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



AC Current Measurement

Range	Resolution	Accuracy	Voltage drop	Overload protection
400uA	0.1uA	±(1.2% Read. + 5dgt)	400mV	Fuse 500mA/600V
4000uA	1uA			
40mA	0.01mA			
400mA	0.1mA			
4A	0.001A	±(1.5% Read. + 5dgt)	400mV	Fuse 10A/600V
10A	0.01A	±(2.0% Read. + 5dgt)	200mV	Fuse 10A/600V

Frequency Range: 40-400Hz

Resistance Measurement

Range	Resolution	Accuracy	Max. open circuit voltage	Overload protection
400Ω	0.1 Ω	±(1.0% Read. + 2dgt)	<700mV	600VDC/ACrms<30 sec
4 kΩ	0.001 kΩ			
40 kΩ	0.01 kΩ			
400 kΩ	0.1 kΩ			
4 MΩ	0.001 MΩ			
30 MΩ	0.01 MΩ	±(2.0% Read. + 5dgt)		

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



Temperature Measurement (°C or °F)

Instrument Range	Resolution	Accuracy	Overload protection
-40°C -400°C	1°C	±(0.75 % Read. + 3dgt)	Fuse 500mA/600V
400°C -1000°C		±(2.0% Read. + 5dgt)	
-40°F -500°F	1°F	±(1.0 % Read. + 3dgt)	
501°F -1000°F		±(5.0 % Read. + 3dgt)	
1001°F -1832°F		±(6.0 % Read. + 3dgt)	

Diode Test

Range	Forward voltage drop	Test current	Max open circuit voltage	Overload protection
▶	0 – 1.000V	Approx. 0.6mA	1.5V	600V DC/ACrms<30sec

Continuity Test

Range	Sound level	Test current	Max open circuit voltage	Overload protection
·))	Approx ≤ 50Ω resistance value	Approx. 1mA	Approx.0.5 V	600VDC/ACrms<30sec

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

Capacitance Test

Range	Resolution	Accuracy	Overload protection
50.00nF	0.01nF	±(3.0% Read. + 5dgt)	600VDC/ACrms<30sec
500.0nF	0.1nF		
5.000uF	0.001uF		
50.00uF	0.01uF		
100uF	0.1uF(15sec)	±(3.5% Read. + 5dgt)	

Frequency Test

Range	Resolution	Accuracy	Overload protection
5Hz	0.001Hz	±(1.5% Read. + 5dgt) Vpp = 600mV	600VDC/ACrms <30sec
50Hz	0.01Hz		
500Hz	0.1Hz		
5kHz	1Hz		
50kHz	10Hz		
100kHz	100Hz		

Duty Cycle Measurement

Range	Resolution	Accuracy	Overload Protection
20 – 80%	0.1%	±(3.5% Read. + 5dgt)	250V DC/AC rms <30 sec.

CALTEK INDUSTRIAL (HONG KONG) LIMITED
www.caltek.com.hk
Hong Kong Office

 Address: Flat E, 12/F, Effort Industrial Building, 2-8 Kung Yip Street, Kwai Chung, N.T., Hong Kong
 Email: caltek@caltek.com.hk Tel: (852) 2401-1222 Fax: (852) 2420-3472

Singapore Office

 Level 15, Suite 27, Prudential Tower, 30 Cecil Street, Singapore 049712
 Email: caltek_sg@caltek.com.hk Tel: (65) 6232-2903 Fax: (65) 6232-2888

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