

CMM-15/CMM-13 Process Calibrator MultiMeters™

**Precision DC, mA, Voltage, Calibrators
combined with True RMS MultiMeter**

Calibrator Features:

- Simultaneous source/simulate and measure on large dual display
- Precision 0.03% accurate voltage and current calibration source
- Constant current output for loads up to 500Ω (Optional 1000Ω adaptor)
- Bipolar current ($\pm 25\text{mA}$) and voltage ($\pm 1.5\text{V}$, $\pm 15\text{V}$) outputs
- Simultaneously source excitation voltage and measure mA output of 2-wire transmitters
- Wide range Frequency (square wave) source with adjustable amplitude, pulse width, and duty cycle (CMM-15-R)
- Programmable for 16 continuous or timed step outputs, or 999 step ramp
- Windows compatible software generates basic Calibration Report for unit under test and enables graphing and datalogging

DMM Features:

- Measure DCmA, ACmA, DCV, ACV, AC+DC, Temperature, Frequency, Duty Cycle, Pulse Width, Resistance, Continuity, and Diode
- ACV and DCV to 600V (CMM-13-R)
- $1\mu\text{V}$ or $1\mu\text{A}$ resolution and 0.03% basic DCV accuracy (400mV-40V)
- 1ms Peak Hold for glitch capture (CMM-15), plus Data Hold, Auto Hold. Relative and dynamic recording

Common Features:

- True RMS measurement for non-linear voltage and current loads
- Built-in isolated RS-232 interface for data acquisition and documentation with data acquisition software
- Large 4,000/40,000 count backlit LCD displays primary, secondary, source/measure ranges and functions selected
- Separate input/output banana jacks with fused protection
- Auto power off with disable function
- Complete with input/output test leads, Type K temperature probe, 9V battery, external battery pack, protective holster, pouch case, software diskette and cable

CMM-15-RProcess Calibrator MultiMeter™
 CMM-15-R-NIST..Process Calibrator MultiMeter™ w/NIST Certificate
 CMM-13-RProcess Calibrator MultiMeter™
 CMM-13-R-NIST..Process Calibrator MultiMeter™ w/NIST Certificate
 423240Optional 1000Ω High Impedance Adaptor
 149116Optional 117VAC Adaptor 12vdc Source
 149230Optional 220VAC Adaptor 12vdc Source

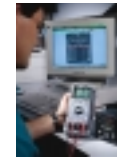


**CMM-13-R with High Voltage
Measure Function**



**CMM-15 with Frequency
Calibration Function**

**RS-232
Data
Collection**



**3
Year
Warranty**
CE

Specifications

Source (Output)	Ranges	Max Res.	Accuracy (% output + digits)	
DC Voltage	± 1.5	100 μV	$\pm(0.03\% + 0.3\text{mV})$	
	$\pm 15\text{V}$	1mV	$\pm(0.03\% + 3\text{mV})$	
DC Current	$\pm 25\text{mA}$	1 μA	$\pm(0.03\% + 5\mu\text{A})$	
	(Max load 500 Ω , 1000 Ω with optional adaptor)			
Square Wave (CMM-15)	28 Frequencies	0.01Hz	$\pm(0.005\% + 0.01\text{Hz})$	
	(0.5, 1, 2, 5, 10, 15, 20, 25, 30, 40, 50, 60, 75, 80, 100, 120, 150, 200, 240, 300, 400, 480, 600, 800, 1200, 1600, 2400, 4800 Hz)			
	Duty Cycle	0.39% to 99.60%	0.390625%	$\pm(0.01\% + 0.02\%)$
	Pulse Width	1/frequency	Range/256	$\pm(0.01\% + 0.3\text{ms})$
Amplitude	5V, $\pm 5\text{V}$, 12V, $\pm 12\text{V}$	0.1V	$\pm(2\% + 0.2\text{V})$	
Measure (Input)	Ranges	Max Res.	Accuracy (% rdg + digits)	
DC Voltage	40mV	1 μV	$\pm(0.08\% + 5\text{d})$	
	400mV, 4V, 40V	10 μV	$\pm(0.03\% + 3\text{d})$	
	300V	10mV	$\pm(0.06\% + 3\text{d})$	
	600V	10mV	$\pm(0.06\% + 3\text{d})(\text{CMM-13})$	
AC Voltage (45-20kHz)	40,400mV, 4,40,300V	1 μV	$\pm(0.7\% + 5\text{d})$ @50/60Hz(CMM-15)	
	40mV-600V	1 μV	$\pm(0.7\% + 5\text{d})$ @50/60Hz(CMM-13)	
DC Current	40mA, 400mA	1 μA	$\pm(0.2\% + 3\text{d})$	
	40mA, 400mA	1 μA	$\pm(1\% + 5\text{d})$	
AC + DC Voltage	40,400mV, 4,40,300V	1 μV	$\pm(0.8\% + 10\text{d})$ @50/60Hz	
	40mA, 400mA	1 μA	$\pm(1.2\% + 10\text{d})$	
AC + DC Current	40,400mV, 4,40,300V	1 μV	$\pm(2\% + 43\text{d})$	
	40mA, 400mA	1 μA	$\pm(2\% + 43\text{d})$	
1ms Peak Hold (Glitch capture)	40,400mV, 4,40,300V	1 μV	$\pm(2\% + 43\text{d})$	
	40mA, 400mA	1 μA	$\pm(2\% + 43\text{d})$	
Resistance	400,4k,40k,400k,4M Ω	0.01 Ω	$\pm(0.2\% + 3\text{d})$	
	40M Ω	1k Ω	$\pm(1\% + 5\text{d})$	
Temperature (Type K)	-40°F to 1832°F	0.1°F	$\pm(0.3\% + 6^\circ\text{F})$	
	-40°C to 1000°C	0.1°C	$\pm(0.3\% + 3^\circ\text{C})$	
Frequency	100Hz, 1, 10, 100, 200kHz	0.001Hz	$\pm(0.2\% + 1\text{d})$	
Duty Cycle	0.01-99.9%		$\pm(0.3\% \text{ per kHz} + 0.3\%)$ FS	
Pulse Width	0.1-1999.9ms		$\pm(0.2\% + 3\text{d})$	
Diode Check	1.65mA @ $< 3.3\text{V}$			
Continuity	Beeper $< 10\Omega$ on 400 Ω range			
Dimensions/Weight:	1.45x3.54x7.56" (37x90x192mm) / 32oz (940g)			