

Product DATASHEET

Process Calibrator MultiMeter™

Precision DC, mA, Voltage, Frequency Calibrator 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 1200Ω
- Bipolar current ($\pm 25\text{mA}$) and voltage ($\pm 1.5\text{V}$, $\pm 15\text{V}$) outputs
- Simultaneously source 15V excitation voltage and measure mA output of 2-wire transmitters
- % of scale readout for 4 to 20mA or 0 to 20mA
- Wide range Frequency (square wave) source with adjustable amplitude, pulse width, and duty cycle
- Programmable 16 continuous or timed step outputs, or 999 step ramp
- Optional communications software allows you to remotely operate the CMM-17 from your PC and document readings



Optional PC software



DMM Features:

- Measure DCmA, ACmA, DCV, ACV, AC+DC, Temperature, Frequency, Duty Cycle, Pulse Width, Resistance, Continuity, and Diode
- 1μV or 1μA resolution and 0.03% basic DCV accuracy (400mV-40V)
- 1ms Peak Hold for glitch capture, plus Data Hold, Auto Hold, relative and dynamic recording
- True RMS measurement for non-linear voltage and current loads

Common Features:

- Built-in bi-directional RS-232 interface
- Built-in NiMH rechargeable battery
- Large 50,000 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 kit with input/output test leads, Type K temperature probe, 8 NiMH rechargeable batteries, 100V-250V AC adaptor/recharger, and carrying case



Ordering Information:

- CMM-17**Process Calibrator MultiMeter™
CMM-17-NIST Process Calibrator MultiMeter™ with NIST certificate
CMM-17-SPC Software and RS-232 cable

Specifications:				
Source (Output)	Ranges	Max Res.	Accuracy (% output + digits)	
DC Voltage	± 1.5	100μV		
	$\pm 15\text{V}$	1mV	$\pm(0.03\% + 3)$	
DC Current	$\pm 25\text{mA}$	1μA	$\pm(0.03\% + 5)$	
	(Max load 1200Ω)			
Square Wave	28 Frequencies	0.01Hz	$\pm(0.005\% + 1)$	
	(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	50mV	1μV	$\pm(0.05\% + 50\text{d})$	
	500mV, 5V, 50V	10μV	$\pm(0.03\% + 5\text{d})$	
	250V	10mV		
AC Voltage (45-20kHz)	50, 500mV, 5, 50, 250V	1μV	$\pm(1.5\% + 20\text{d})$ @50/60Hz	
DC Current	50mA, 500mA	1μA	$\pm(0.3\% + 5\text{d})$	
AC Current (45Hz-2kHz)	50mA, 500mA	1μA	$\pm(0.6\% + 20\text{d})$	
AC + DC Voltage	50, 500mV, 5, 50, 250V	1μV	$\pm(0.8\% + 25\text{d})$ @50/60Hz	
AC + DC Current	50mA, 500mA	1μA	$\pm(1.2\% + 10\text{d})$	
1ms Peak Hold (Glitch capture)	50, 500mV, 5, 50, 250V	1μV	$\pm(2\% + 400\text{d})$	
Resistance	50mA, 500mA	1μA		
	500, 5k, 50k, 500k, 5MΩ	0.01Ω	$\pm(0.15\% + 5\text{d})$	
Temperature (Type K)	50MΩ	1kΩ	$\pm(1\% + 8\text{d})$	
	-40°F to 2502°F	1/0.1°F	$\pm(0.3\% + 6°F)$	
	-40°C to 1372°C	1/0.1°C	$\pm(0.3\% + 3°C)$	
Frequency	100Hz, 1, 10, 100, 200kHz	0.001Hz	$\pm(0.02\% + 3\text{d})$	
Duty Cycle	0.1-99.9%		$\pm(0.3\%$ per kHz $+ 0.3\%)$ FS	
Pulse Width	0.1-1999.9mS		$\pm(0.2\% + 3\text{d})$	
Diode Check / Continuity	0.45mA @ <4.8V / Beeper <10Ω on 400Ω range			
Dimensions/Weight:	2.1x3.54x7.56" (54x90x192mm) / 3.75lbs (1.71kg)			

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