



Data Sheet

PM51A Digital Multimeter

The ultimate shirt-pocket DMM with frequency & capacitance

This shirt-pocket-sized meter is only 3/8" thick and weighs less than 3 oz. With full functionality offering AC and DC voltage to 600 V, resistance to 40 Megohm, capacitance to 3000 μ F, frequency to 1 MHz, continuity w/beeper, and diode test.

Fully autoranging, this meter offers seven different measurement

functions with 27 full ranges of measurement. The digital display is oversized with large digits and annunciators. In spite of its size, this meter is fully safety rated to CAT III 300 V, CAT II 600 V and is UL approved. No other meter offers this small size with such performance and high safety ratings.



No hassle warranty

No waiting.

*No shipping
charges.*



Our commitment to high-quality products and customer service is demonstrated by our industry exclusive "No Hassle" warranty. In the unlikely event that an Amprobe Test Tool requires warranty service, any of our local dealers are authorized to replace it, on the spot.

(note: \$500 MSLP limit)

- Measures AC and DC voltage, resistance, continuity with beeper, capacitance and frequency
- Fully autoranging with 7 measurement functions and 27 ranges
- Large oversize digital display with measurement results and the unit icon
- Data Hold freezes measurement value on the display
- One-year, no-hassle warranty



PM51A Digital Multimeter

Data Sheet

General Specifications

Display and update rate	3-3/4 digits 4000 counts; Updates 3 per second nominal
Operating temperature	0 °C - 40 °C
Relative humidity	Max. 80 % R.H. up to 31 °C, decreasing linearly to 50 % R.H. at 40 °C
Altitude	Operating below 2000 m
Storage temperature	-20 °C ~ 60 °C, < 80 % R.H. (with battery removed)
Temperature coefficient	Nominal 0.15 x (specified accuracy)/ °C @ (0 °C ~ 18 °C or 28 °C ~ 40 °C), or otherwise specified
Sensing	Average sensing
Overload protection	600 V dc and V ac rms
Low battery	Below approx. 2.4 V
Power supply	3 V standard button battery x 1 (IEC-CR2032; ANSI-NEDA-5004LC)
Power consumption (typical)	2 mA
Automatic Power Off (APO) timing	Idle for 30 minutes
APO consumption (typical)	2.2 µA
Dimension	L 113 mm x W 53 mm x H 10.2 mm (4.4 x 2.1 x 0.4 in)
Weight Approx.	78 gm (3 oz)
Special features	Data Hold, and 30 ms MAX Hold
Agency approvals	CE, cULus
Safety	Meets IEC61010-1, UL61010B-1, CAN/CSA-C22.2 No. 1010.1-92, CAT II 600 V and CAT III 300 V, Pollution Degree 2, Class 2
E.M.C.	Meets EN61326



PM51A Digital Multimeter

Data Sheet

Specifications

Function	Range	Accuracy
DC Voltage		
	400.0 mV	± (1.0 %+2 dgt)
	4.000 V, 40.00 V, 400.0 V	± (2.0 %+2 dgt)
	600 V	± (2.5 %+4 dgt)
NMRR	> 50 dB @ 50 Hz/60 Hz	
CMRR	> 120 dB @ dc, 50 Hz/60 Hz; Rs=1 kW	
Input impedance	10 MΩ, 30 pF nominal; (1000 MW for 400.0 mV range)	
AC Voltage		
50 Hz - 60 Hz	4.000 V, 40.00 V, 400.0 V	± (2.0 %+5 dgt)
60 Hz - 500 Hz	4.000 V, 40.00 V, 400.0 V	± (3.0 %+5 dgt)
50 Hz - 500 Hz	600 V	± (3.5 %+5 dgt)
Input impedance	10 MΩ, 30 pF nominal	
CMRR	> 60 dB @ dc to 60 Hz, Rs=1 kΩ	
Capacitance		
	500.0 nF, 5.000 μF, 50.00 μF, 500.0 μF, 3000 μF ^{1 3}	± (3.5 %+6 dgt ⁴)
¹ Additional 50.00 nF range accuracy is not specified		
² Accuracies with film capacitor or better		
³ Updates > 1 minute on large values		
⁴ Specified with battery voltage above 2.8 V (half full battery). Accuracy decreases gradually to 12% at low battery warning voltage of approx 2.4 V.		
Resistance		
	400.0 Ω	± (1.5 %+6 dgt)
	4.000 KΩ, 40.00 KΩ, 400.0 KΩ	± (1.0 %+4 dgt)
	4.000 MΩ	± (1.5 %+4 dgt)
	40.00 MΩ	± (2.5 %+4 dgt)
Open circuit voltage	0.4 V DC typical	
Frequency		
	400 Hz, 4 kHz, 40 kHz, 400 kHz, 1 MHz ¹	± (0.5 %+4 dgt)
¹ Specified at input voltage < 20 V ac rms input signal: Sine-wave, or square-wave with duty cycle > 40 % & < 70 %		
Sensitivity (V-peak)		
	5 Hz - 100 kHz	> 1.3 Vp
	100 kHz - 500 kHz	> 2.2 Vp
	500 kHz - 1 MHz	> 4.2 Vp
Diode Tester		
Test current (typical)	0.25 mA	
Open circuit voltage	1.6 V dc	
Audible Continuity Tester		
Open circuit voltage	0.4 V dc typical	
Audible threshold	65 Ω ±55 Ω	

PM51A Digital Multimeter

Data Sheet



Included Accessories
battery (installed) and users manual.

Optional Accessories
H-PMA Protective holster
VC3A Zippered carrying case

Amprobe® Test Tools
website: www.Amprobe.com
email: info@amprobe.com
Everett, WA 98203
tel: 877-AMPROBE

Amprobe® Test Tools Europe
In den Engematten 14
79286 Glottertal, Germany
Tel.: +49 (0) 7684 8009 - 0

©2007 Amprobe Test Tools. All rights reserved.
9/2007 2277152 D-US-N Rev B