# **AMPROBE®**



**Data Sheet** 

# PM55A Digital Multimeter

The compact precision DMM with AutoTect™ and VolTect™

The ultimate shirt-pocket sized meter. Only 3/8" thick and less than 3 oz in weight with full functionality offering ac and dc voltage to 600 V, AC and DC current to 2000  $\mu$ A, resistance to 6 Megohm, capacitance to 2000  $\mu$ F, frequency to 30 kHz, diode test and continuity w/beeper. It also offers VolTect, TM a built-in, non-contact voltage detector for AC voltages.

Another key feature is AutoTect,™ which automatically selects between AC voltage, DC voltage or resistance measurement based on the test point to which the leads are

connected. Fully autoranging, this meter offers nine different measurement functions plus features that are usually found in much more expensive and larger meters. The digital display is oversized with large digits and unit icons in the display. 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 this small offers such performance and high safety ratings. Includes a silicone protective holster, deluxe carrying case, attached test leads, battery and manual.

# 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)

- AutoTect<sup>TM</sup> feature directs the meter to know if it is measuring AC volts, DC volts or resistance with no user interface
- The AutoTect<sup>™</sup> feature has lower input impedance which zeros out ghost voltages
- Measures AC/DC current, capacitance, frequency, continuity with beeper plus includes Voltect,<sup>™</sup> a built-in, non-contact voltage detector
- Large oversize digital display
- Protective silicon holster included, attached test leads, battery, deluxe carry case and manual
- One-year, no-hassle warranty













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**Data Sheet** 

#### **General Specifications**

Display and update rate	3-5/6 digits 6000 counts; Updates 5 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 $\sim$ 60 °C, $<$ 80 % R.H. (with battery removed)			
Temperature coefficient	Nominal 0.15 x (specified accuracy)/ °C @ (0 °C $\sim$ 18 °C or 28 °C $\sim$ 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)	6 mA for voltage functions on Auto-V W position & 2 mA for other functions			
Automatic Power Off				
(APO) timing	Idle for 3 minutes			
APO consumption (typical)	2.2 μΑ			
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	AutoTect™ (Automatic V & Ω selection) and VolTect™ (Electric Field Detection)			
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			

#### **Specifications**

Function	Range	Accuracy
RF field @ 3 V/m Specif	fied accuracy + 45 d (capacitance not specified)	
DC Voltage	ned decardey 1 45 a (capacitance not specifica)	
	6.000 V	± (0.5 %+3 dgt)
	60.00 V	± (1.0 %+5 dgt)
	600 V (AutoTect™ Lo-Z)	2.0 %
	600 V (Hi-Z only)	1.5 % + 5 dgt
NMRR > 30 dB @ 50	Hz/60 Hz	
CMRR > 100 dB @ D	C, 50 Hz/60 Hz; Rs=1 kΩ	
Input impedance Au	ıtoTect™ Lo-Z V DC: 833 kΩ (4.2 kW when display	ying AUTO), 90 pF nom.
V DC AutoTect™ thr	reshold >	+1.2 V DC or < -0.6 V DC nominal (Hi-Z V DC only)
AC Voltage (50 Hz - 6	0 Hz)	
	6.000 V, 60.00 V, 600 V	± (1.5 %+5 dgt)
CMRR > 60 dB @ DC	to 60 Hz, Rs=1 kW	
Input impedance Au	ıtoTect™ Lo-Z V AC: 160 kΩ, 160 pF nominal	
Hi-Z ACV 5 MW, 90 <sub>I</sub>	pF nominal	
ACV AutoTect™ thre	eshold > 1.5 V ac (50 Hz/60 Hz) nominal	



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**Data Sheet** 

### **Specifications**

Function	Range		Accuracy		
Capacitance					
capacitance	100.0 nF, 1000 nF, 10	).0 μ <b>F</b> ,			
	100.0 µF, 2000 µF <sup>13</sup> ± (3.5 %+6 dgt) <sup>2</sup>				
<sup>1</sup> Accuracy below 50 nF is	not specified 4Specified wit	h battery voltage above 2.			
	acitor or better Accuracy de		-		
	arge values voltage of appro		, ,		
Resistance	<u> </u>				
Range Accuracy					
· · · · · · · · · · · · · · · · · · ·	600.0 Ω		± (2.0%+6 dgt) <sup>2</sup>		
	6.000 kΩ		± (1.2%+6 dgt) <sup>2</sup>		
	60.00 kΩ, 600.0 kΩ		± (1.0%+4 dgt)		
	6.000 MΩ		± (2.0%+4 dgt)		
Open circuit voltage 0.4 V [	OC typical		-		
¹AutoTect™ is for 6.000 k					
	accuracy while reading is be	low 20 % of range			
Frequency		•			
	10.00 Hz - 30.00 kHz	1, 2	± (0.5 %+4 dgt) < 2 0 V Sine-rms		
	10.00 Hz - 999.9 Hz		± (0.5 %+4 dgt) < 600 V Sine-rms		
¹Sensitivity (Sine-rms): Hz	in Auto-V (position:> 3 V				
<sup>2</sup> Line-level Hz in V position	on: @6.000 V AC range: > 3 \	/; @60.00 V AC range: > 6 \	/; @600.0 V AC range: > 60 V		
DC µA Current					
	Range	Accuracy	Burden voltage		
	400.0 μA	± (1.5 %+3 dgt)	6 mV/μA		
	2000 μΑ	± (1.2 %+3 dgt)	6 mV/μA		
AC μA Current					
	Range	Accuracy	Burden voltage		
	400.0 μA	± (2.0 %+3 dgt)	6 mV/μA		
	2000 μΑ	± (1.5 %+3 dgt)	6 mV/μA		
VolTect™					
Typical voltage Bar graph	n indication				
15 V to 55 V	-				
30 V to 85 V					
55 V to 145 V					
85 V to 190 V					
above 120 V					
Indication Bar graph seg	ments & audible beep tones	proportional to field stren	ngth		
Detection frequency 50/6	50 Hz				
Detection antenna Top le	eft corner of the meter				
Audible Continuity Teste	r (600 Ω range)				
Open circuit voltage 0.4	V DC typical				
Audible threshold 50 $\Omega$ t	ο 300 Ω				
Diode Test					
Diode test current 0.48 n	nA				
Open circuit voltage < 1.	5 V DC				



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**Data Sheet** 

#### **Included Accessories**

H-PMA protective holster, VC3A zippered carrying case, battery installed and user's manual.

#### **Amprobe® Test Tools**

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