



## 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 µA, resistance to 6 Megohm, capacitance to 2000 µF, frequency to 30 kHz, diode test and continuity w/beeper. It also offers Voltect™, 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™ feature directs the meter to know if it is measuring AC volts, DC volts or resistance with no user interface
- The AutoTect™ feature has lower input impedance which zeros out ghost voltages
- Measures AC/DC current, capacitance, frequency, continuity with beeper plus includes Voltect™, 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



## PM55A Digital Multimeter

## 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 ~ 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)      | 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 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                 | AutoTect™ (Automatic V & Ω selection) and VoltTect™ (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  |
|---|-------------------------|---|
| <b>RF field @ 3 V/m Specified accuracy + 45 d (capacitance not specified)</b>         |                         |   |
| <b>DC Voltage</b>   |                         |   |
|   | 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                                     |
| <b>NMRR &gt; 30 dB @ 50 Hz/60 Hz</b>  |                         |   |
| <b>CMRR &gt; 100 dB @ DC, 50 Hz/60 Hz; Rs=1 kΩ</b>                                    |                         |   |
| Input impedance AutoTect™ Lo-Z V DC: 833 kΩ (4.2 kW when displaying AUTO), 90 pF nom. |                         |   |
| <b>V DC AutoTect™ threshold &gt;</b>  |                         | +1.2 V DC or < -0.6 V DC nominal (Hi-Z V DC only) |
| <b>AC Voltage (50 Hz - 60 Hz)</b>   |                         |   |
|   | 6.000 V, 60.00 V, 600 V | ± (1.5 % + 5 dgt)                                 |
| <b>CMRR &gt; 60 dB @ DC to 60 Hz, Rs=1 kW</b>   |                         |   |
| Input impedance AutoTect™ Lo-Z V AC: 160 kΩ, 160 pF nominal                           |                         |   |
| Hi-Z ACV 5 MW, 90 pF nominal  |                         |   |
| ACV AutoTect™ threshold > 1.5 V ac (50 Hz/60 Hz) nominal                              |                         |   |

**Specifications**

| Function  | Range  | Accuracy                               |                |
|---|--|--|----------------|
| <b>Capacitance</b>  |  |  |                |
|   | 100.0 nF, 1000 nF, 10.0 $\mu$ F,<br>100.0 $\mu$ F, 2000 $\mu$ F <sup>1 3</sup> | $\pm$ (3.5 % + 6 dgt) <sup>2</sup>     |                |
| <sup>1</sup> Accuracy below 50 nF is not specified <sup>4</sup> Specified with battery voltage above 2.8 V (half full battery). |  |  |                |
| <sup>2</sup> Accuracies with film capacitor or better Accuracy decreases gradually to 12% at low battery warning                |  |  |                |
| <sup>3</sup> Updates > 1 minute on large values voltage of approx. 2.4 V.   |  |  |                |
| <b>Resistance</b>   |  |  |                |
| <b>Range Accuracy</b>   |  |  |                |
|   | 600.0 $\Omega$   | $\pm$ (2.0% + 6 dgt) <sup>2</sup>      |                |
|   | 6.000 k $\Omega$   | $\pm$ (1.2% + 6 dgt) <sup>2</sup>      |                |
|   | 60.00 k $\Omega$ , 600.0 k $\Omega$  | $\pm$ (1.0% + 4 dgt)                   |                |
|   | 6.000 M $\Omega$   | $\pm$ (2.0% + 4 dgt)                   |                |
| <b>Open circuit voltage 0.4 V DC typical</b>  |  |  |                |
| <sup>1</sup> AutoTect™ is for 6.000 k $\Omega$ ~ 6.000 M $\Omega$ ranges  |  |  |                |
| <sup>2</sup> Add 40 dgt to specified accuracy while reading is below 20 % of range  |  |  |                |
| <b>Frequency</b>  |  |  |                |
|   | 10.00 Hz - 30.00 kHz <sup>1, 2</sup>   | $\pm$ (0.5 % + 4 dgt) < 20 V Sine-rms  |                |
|   | 10.00 Hz - 999.9 Hz  | $\pm$ (0.5 % + 4 dgt) < 600 V Sine-rms |                |
| <sup>1</sup> Sensitivity (Sine-rms): Hz in Auto-V ( position: > 3 V   |  |  |                |
| <sup>2</sup> Line-level Hz in V position: @6.000 V AC range: > 3 V; @60.00 V AC range: > 6 V; @600.0 V AC range: > 60 V         |  |  |                |
| <b>DC <math>\mu</math>A Current</b>   |  |  |                |
|   | Range  | Accuracy                               | Burden voltage |
|   | 400.0 $\mu$ A  | $\pm$ (1.5 % + 3 dgt)                  | 6 mV/ $\mu$ A  |
|   | 2000 $\mu$ A   | $\pm$ (1.2 % + 3 dgt)                  | 6 mV/ $\mu$ A  |
| <b>AC <math>\mu</math>A Current</b>   |  |  |                |
|   | Range  | Accuracy                               | Burden voltage |
|   | 400.0 $\mu$ A  | $\pm$ (2.0 % + 3 dgt)                  | 6 mV/ $\mu$ A  |
|   | 2000 $\mu$ A   | $\pm$ (1.5 % + 3 dgt)                  | 6 mV/ $\mu$ A  |
| <b>VolTect™</b>   |  |  |                |
| Typical voltage Bar graph 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 segments & audible beep tones proportional to field strength   |  |  |                |
| <b>Detection frequency 50/60 Hz</b>   |  |  |                |
| Detection antenna Top left corner of the meter  |  |  |                |
| Audible Continuity Tester (600 $\Omega$ range)  |  |  |                |
| Open circuit voltage 0.4 V DC typical   |  |  |                |
| Audible threshold 50 $\Omega$ to 300 $\Omega$   |  |  |                |
| <b>Diode Test</b>   |  |  |                |
| Diode test current 0.48 mA  |  |  |                |
| Open circuit voltage < 1.6 V DC   |  |  |                |



## PM55A Digital Multimeter

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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9/2007 2277165 D-US-N Rev B

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