

## Megohmmeter

- 1 to 200 MΩ
- 500 V Test Voltage
- Simple One Range Operation
- Measures AC Voltage to 600 V
- LED on when Voltage is Present
- Rugged to MIL Specifications
- Single Push Button for Test
- 9 V Battery Operation

The Model R1M-B Handheld Voltmeter/Megohmmeter complies with MIL-T-28800, Type III, Class 3, Style E for rugged operational environments and shipboard applications. These units perform under the extremes of heat, cold, humidity, shock, vibration, and operator abuse.

The R1M-B is designed to measure insulation resistance in “live” circuits, which may have voltage present. The R1M-B may be connected to 600 V RMS AC or DC without damage, and its mode of operation is automatic. It has no fuse to replace. The R1M-B will operate after a drop from a height of four feet to a concrete floor.

### Operation

The R1M-B Voltmeter/Megohmmeter is activated by pressing the “TEST” switch. When the R1M-B is first turned on, its input is automatically selected as a voltage input, reading any voltage present on the test leads, and displaying that voltage on a liquid crystal display. At the same time, the “VOLTS” LED lights.



If the voltage sensed on the test leads exceeds approximately 1 V, the R1M-B will not take any additional readings. However if there is no voltage (or less than approximately 1 V) on the test leads, the instrument will automatically switch to the megohmmeter mode, whereupon the internal 500 V supply is connected to the test leads and the measured resistance is displayed.

As long as the “TEST” switch is depressed, the R1M-B will continue to take readings. Releasing the switch will automatically turn off the unit, to maximize battery life and minimize the risk of the operator being shocked by the 500 V across the test probes during resistance measurements. (Note that the test current is limited to approximately 1 mA, but this can still produce a shock.)



## Specifications

|                                      |   |
|--------------------------------------|---|
| <b>Measurement Ranges</b>            | 1 to 200 MΩ, for resistance<br>3 to 600 VAC RMS, for voltage  |
| <b>Test Voltage for Resistance</b>   | 500 VDC 10%   |
| <b>Accuracy* &amp; Calibration</b>   | Voltage readings within 5% of reading ± 1 count<br>Resistance readings within 3% of reading ± 1 count<br>Suggested Calibraton Interval: 12 months<br>End-of-interval confidence factor: 72% |
| <b>Recommended Calibration Cycle</b> | 1 year  |
| <b>Controls and Display</b>          | Single "TEST" switch (mode selection automatic)<br>3 ½ digit liquid crystal display with 0.5" digits<br>LCD "LO BAT" legend to indicate low battery   |
| <b>Environmental</b>                 |   |
| <b>Operating Temperature</b>         | 0 °C to 50 °C, 75 % RH, Non-condensing  |
| <b>Storage Temperature</b>           | -40 °C to 71 °C, 0-100 % RH, Non-condensing   |
| <b>Power and Physical</b>            |   |
| <b>Power</b>                         | Standard alkaline 9 V battery   |
| <b>Size</b>                          | 3.5" W x 7.0" H x 1.2" D  |
| <b>Weight</b>                        | 0.6 lb (including battery)  |
| <b>Included Accessories</b>          | Protective carrying pouch<br>Two 40 inch test leads with probes and insulated, detachable alligator clips<br>Operation and Maintenance manual   |

| Ordering Information | Model | Part Number          |
|----------------------|-------|----------------------|
| Megohmmeter          | R1M-B | NSN 6625-01-353-7077 |

\*Accuracy based on recommended calibration cycle.

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