



## R1M-B HAND-HELD VOLTMETER / MEGOHMMETER

- 1 TO 200 Meg Ohms
- 500 Volts Test Voltage
- Simple One Range Operation
- Measures AC/DC Voltage to 600 V
- LED on When Voltage is Present
- Rugged to Mil Specifications
- Single Push Button For Test
- 9 Volt Battery Operation



### DESCRIPTION

The PPM Model R1M-B Hand-Held 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. All units are tested in an environmental chamber at 71 degrees Centigrade and 95.5% relative humidity.

### 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

#### MEASUREMENT RANGES

1 to 200 Megohms, for resistance  
0 to 600 V RMS AC or DC, for voltage

#### TEST VOLTAGE FOR RESISTANCE

500 VDC 10%.

#### ACCURACY

Voltage readings within 5%  
Resistance readings within 3%, 1 count

#### CONTROLS AND DISPLAY

Single “TEST” switch (mode selection automatic)  
3 ½-digit liquid crystal display with 0.5" digits  
LCD “LO BAT” legend to indicate low battery

#### POWER AND PHYSICAL

Standard alkaline 9 v battery  
3.5" W x 7.0" H x 1.5" D  
Weight is 10 ounces, including battery

#### ACCESSORIES

Protective carrying pouch  
Two 40 inch test leads with probes and insulated, detachable alligator clips  
Operation and Maintenance manual

#### CALIBRATION INTERVAL

12 months  
End-of-interval confidence factor: 72%