Bierer METERS
Safety is number one.

Digital Voltage Detector 0-999kV

Operating Instructions

VD1000™

MADE IN USA

CONTENTS

Limitation of Warranty and Liability

Bierer & Associates Inc. warrants this product to be free from defects in workmanship and material, under normal use and service conditions for a period of one year from date of shipment.

Due to continuous product improvement and development, Bierer & Associates Inc. reserves the right to modify product designs and specifications without notice.

It is impossible to eliminate all risks associated with the use of high voltage electrical devices including this device. Risks of serious injury or death are inherent in working around energized electrical systems. Such risks include but are not limited to variations of electrical systems and equipment, manner of use or applications, weather and environmental conditions, operator mentality, and other unknown factors that are beyond the control of Bierer & Associates Inc.

Bierer & Associates Inc. do not express or imply to be an insurer of these risks, and by purchasing or using this product you **AGREE TO ACCEPT THESE RISKS.** IN NO EVENT SHALL Bierer & Associates Inc. BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

SAFETY MESSAGE DEFINITIONS per ANSI Z535

These instructions contain important safety messages to alert the user to potentially hazardous situations, how to avoid the hazard, and the consequences of failure to follow the instruction.

The safety alert symbol  identifies a safety message. The signal word following the symbol indicates:

 **DANGER** A hazardous situation which, if not avoided, **will** result in death or serious injury and equipment damage.

 **WARNING** A hazardous situation which, if not avoided, **could** result in death or serious injury and equipment damage.

 **CAUTION** A hazardous situation which, if not avoided, **could** result in minor or moderate injury and equipment damage.

NOTICE Important safety message relating to equipment damage only.

PRODUCT SAFETY INFORMATION

⚠ WARNING

1. Meter assembly, interconnect cable assembly, and live line tool adapters shall be considered **non-insulating**. Do not let live line tool fittings come in contact with energized or grounded conductors. **The live line tool adapters, fittings, and handles supplied with meters shall not be used on any other devices.**
2. Use appropriate length live line tools for voltage being worked and maintain minimum approach distances as outlined in OSHA 1910.269, Table R-6.
3. All Phasing Meters and Voltage Detectors manufactured during and after 2007 will have a limit mark engraved on the high voltage probe(s) 2.5 inches from the tip to indicate to the user the physical limit that should not be exceeded when approaching and contacting an electrical conductor or other electrical test points. Zero Ohm insulated adapters (81280IE) should be used if limit mark will be exceeded.
4. This equipment should be used only by qualified employees, trained in and familiar with the safety-related work practices, safety rules and other safety requirements associated with the use of this type of equipment.
5. These instructions are not intended as a substitute for adequate training, nor do they cover all details or situations which could be encountered when operating this type of equipment.
6. Before operating this equipment, read, understand and follow all instructions contained in this manual. Keep instructions with equipment.

INSPECTION & MAINTENANCE BEFORE USE

⚠ WARNING

1. Prior to using any high voltage test equipment a careful inspection should be made to ensure the unit is free from any contaminants such as dirt, grease, etc. and that there are no apparent physical damages.
2. High voltage probe assemblies shall be wiped clean prior to each use with a silicone impregnated cloth and kept clean and free of contaminants. This will prevent tracking on the outside of the probe and meter error.
3. Always confirm internal battery voltage before and after each use.
4. Unit shall be tested before and after each use on a known voltage source. Failure to do so could result in false negative indications

DESIGN and FUNCTION

⚠ WARNING

Limit Mark -see “Product Safety Information”, item 3, page 4.

The VD1000 is a direct contact, capacitive type voltage detector for use on voltages from 0 to 99.9kV on distributions circuits and 999kV on Transmission conductors. The 0V is for identifying de-energized lines. For voltage readings, meter works at or above 1kV.

NOTE: Meter indicates **Line-to-Ground** values. Not calibrated to read Phase-to-Phase.

Each unit has a five position switch for the following functions:

OFF Use this position for Storage and Transit
URD Direct Contact, Underground Primary (01.0 - 99.9)
OH Direct Contact, Overhead Lines (01.0 – 99.9)
OHT Direct Contact, Substation & Transmission Lines (001 – 999)
TEST Displays battery voltage, i.e. 9.0 = 9vdc battery voltage

NOTICE This unit incorporates a battery test when turned to the test position displaying the battery voltage. A reading less than 07.0 indicates low battery. Replaceable 9V battery is located behind the live line tool attachment threaded into the meter housing.

⚠ WARNING

As with all voltage detectors, readings can be affected by a variety of field conditions. For example, if the live line tool attachment is close to another phase, ground or voltage source, the readings may be high. If the live line tool attachment is close to the same phase, readings may be low.

If there is any doubt about the meter reading under any circumstances, the line or equipment shall be considered energized and appropriate safety precautions taken, i.e., confirm visual open gaps, tag outs, hold orders and sources of induced voltage.

Voltage Detection in the "URD" Position

⚠WARNING

Unit shall be tested before and after each use on a known voltage source. Failure to do so could result in false negative indications.

1. Test Voltage detector for proper operation by turning selector switch to the **"TEST"** position. Meter should display 88.8 then the current battery voltage and hold it as long as it is held in the test position.

2. Thread appropriate adapter, bushing or elbow into meter probe.

3. Attach voltage detector to appropriate length live line tool for voltage being tested.

4. Turn the selector switch to the **"URD"** position.

5. Make direct contact with URD equipment under test. If equipment is energized, meter should read approximate Line-to-Ground voltage (01.0kV – 99.9kV).

6. If URD equipment is de-energized, meter should read zero volts.

7. Re-test voltage detector by turning the selector switch to "Off" and back to "TEST".

Readings should take into account proximity to other phases and grounded surfaces and be consistent with previous experience on the same voltage and circuit configuration with this voltage detector. If there is any doubt about the meter reading in the **"URD"** position, the line or equipment shall be considered energized and appropriate safety precautions taken.

Voltage Detection in the "OH" Position

⚠ WARNING

Unit shall be tested before and after each use on a known voltage source. Failure to do so could result in false negative indications.

1. Test Voltage detector for proper operation by turning selector switch to the **"TEST"** position. Meter should display 88.8 then the current battery voltage and hold it as long as it is held in the test position.

2. Turn the selector switch to the **"OH"** position.

3. Attach voltage detector to appropriate length live line tool for voltage being tested.

4. Make direct contact with line or equipment under test. If equipment is energized, meter should read approximate Line-to-Ground voltage (01.0kV – 99.9kV).

5. If no voltage is present, meter should read zero volts. Readings other than zero volts may indicate the presence of induced voltage.

6. Re-test voltage detector by turning the selector switch to "Off" and back to "TEST".

⚠ WARNING

Unit shall be tested before and after each use on a known voltage source. Failure to do so could result in false negative indications.

Readings should take into account proximity to other phases and grounded surfaces and be consistent with previous experience on the same voltage and circuit configuration with this voltage detector. If there is any doubt about the meter reading in the **"OH"** position, the line or equipment shall be considered energized and appropriate safety precautions taken.

Voltage Detection in the "OHT" Position

⚠ WARNING

Unit shall be tested before and after each use on a known voltage source. Failure to do so could result in false negative indications.

1. Test Voltage detector for proper operation by turning selector switch to the **"TEST"** position. Meter should display 88.8 then the current battery voltage and hold it as long as it is held in the test position.

2. Turn the selector switch to the **"OHT"** position.

3. Attach voltage detector to appropriate length live line tool for voltage being tested.

4. Make direct contact with line or equipment under test. If equipment is energized, meter should read approximate Line-to-Ground voltage (001kV – 999kV)

5. If line or equipment is de-energized, meter should read zero volts. Readings other than zero volts may indicate the presence of induced voltage.

6. Re-test voltage detector by turning the selector switch to "Off" and back to "TEST".

Readings should take into account proximity to other phases and grounded surfaces and be consistent with previous experience on the same voltage and circuit configuration with this voltage detector. If there is any doubt about the meter reading in the **"OHT"** position, the line or equipment shall be considered energized and appropriate safety precautions taken.

Testing Unit On Known Voltage

⚠ WARNING

Unit shall be tested before and after each use on a known voltage source. Failure to do so could result in false negative indications.

1. Test Voltage detector for proper operation by turning selector switch to the **"TEST"** position. Meter should display 88.8 then the current battery voltage and hold it as long as it is held in the test position.

2. Turn the selector switch to any position.

3. Attach voltage detector to appropriate length live line tool for voltage being tested.

4. Make direct contact with the known voltage source.

5. The meter should display a voltage appropriate for the device being used for the known voltage. See operating instructions for the voltage source for normal voltage readings.

6. Re-test voltage detector by turning the selector switch to "Off" and back to "Test".

Notes

PARTS & ACCESSORIES

PART NO.	DESCRIPTION
3402	Quick Change to Grip All Adapter
3403	Quick Change to Universal Adapter
8128EALB	15 – 25kV Elbow Adapter
8128TBALB	15 - 25kV Bushing Adapter
81280LHM	Hook Adapter
81280LPM	Straight Probe Adapter
81280B1	6V Battery for Power Supply
PA25B	20” Storage Box with Foam
PA25T	3kV Power Supply
PAH6TB	26" Storage Box for Handles
PD50B	26" Storage Box with Foam

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Thank You!