

# DMOM-100 Series 2™ DC Micro-ohmmeter



**Vanguard Instruments Company**

[www.vanguard-instruments.com](http://www.vanguard-instruments.com)

# Accurately

- Inexpensive
- Reliable
- Lightweight
- Easy to Use

2.5-inch Wide Thermal Printer

Built-in Circuit Breaker

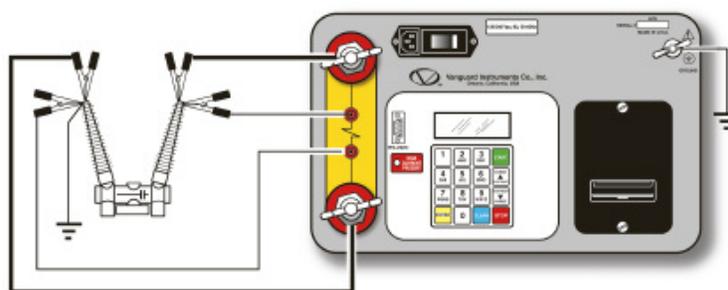
Back-lit LCD Display  
(20 characters by 4 lines)

High Current Presence Indicator

RS-232C Interface

Sensing Lead Connector

Current Lead Connector



## FEATURES

- Automatic control of current rise and fall times
- Digital resistance reading from 1 micro-ohm to 300 milli-ohms
- Stores 6,000 readings
- 2.5-inch wide built-in thermal printer
- Weighs less than 21 lbs (9.5 Kg)

## Ordering Information

DMOM-100 Series 2 True DC Micro-ohmmeter

DMOM-100 with 30-ft Test Cables	Part No: DMOM-100 S2
DMOM-100 Shipping Case	Part No: DMOM-100 S2 Case
DMOM-100 15-foot Test Cable	Part No: DMOM-100 S2 Cable-15ft
DMOM-100 30-foot Test Cable	Part No: DMOM-100 S2 Cable-30ft
C-Clamp Set (2 clamps)	Part No: DMOM-100 S2 C-Clamps-30ft
2.5-inch Thermal Paper	Part No: Paper - TP3
Handspike Set (2 probes)	Part No: Handspike



# DMOM-100 Series 2

The DMOM-100 S2 is Vanguard's third-generation, microprocessor-based, true-DC micro-ohmmeter. It is designed for testing EHV circuit-breaker contact resistances, bushing contact joints, or for any low-resistance measuring application. The DMOM-100 S2 can accurately measure resistances ranging from 1 micro-ohm to 300 milli-ohms. It can output a test current from 10 Amperes to 100 Amperes.

The DMOM-100 S2 applies a true-DC current from 10A to 100A to the resistance load to be tested. Any test current setting can be selected by using the unit's alpha-numeric keypad. The DMOM-100 S2 controls the test current's rise and fall rates by using a switching DC power supply and a current regulator circuit. An Auto Test Mode is also available and can be initiated simply by applying the sensor cables' leads across the two points of interest. This feature is very convenient when measuring a sequence of several resistance values in a breaker contact.

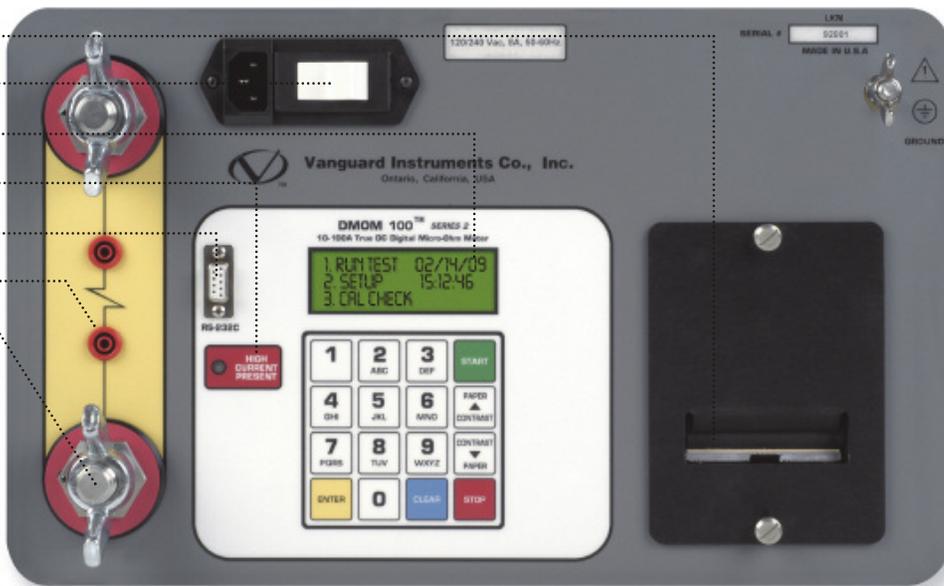
The DMOM-100 S2 features a back-lit LCD screen (20 characters by 4 lines) that is viewable in both bright sunlight and low-light levels. The built-in 2.5-inch wide thermal printer can print test reports. A rugged, alpha-numeric, membrane keypad is used to control the unit.

The DMOM-100 S2 can store up to 63 records (of 96 readings) in Flash EEPROM. Test reports can be recalled and printed on the built-in thermal printer, or they can be transferred to a PC via the unit's built-in RS-232C interface port. The RS-232C port can also be used for diagnostic testing. A Windows® XP/Vista-based software application is also provided with each unit and can be used to transfer test records to a PC. Test records can also be reviewed, printed or exported in text or Microsoft® Excel format via the software application.

The DMOM-100 S2 is furnished with two 30-foot test cables. Fifteen-foot test cables are also available as an option. Both cables are terminated with quick disconnect clips. Heavy-duty, welding-type, C-clamps are available as an optional accessory. These can be used to connect the test cable leads to a wide variety of bushing sizes, bus-bars and other conductors requiring low-resistance test contacts.

# True DC Micro-ohmmeter

# Measure *Resistance from 1 micro-ohm to 300 milli-ohms*



Thermal Printer Output

TEST RESULTS	
REC NUMBER 7	
DATE: 02-09-03	TIME: 11:35:02
COMPANY:	
STATION:	
CIRCUIT:	
REF:	
MODEL:	
S-N:	
TESTING OPERATOR:	
ACTIVE TEST:	181.99 MILLI-OHMS
TEMPERATURE:	
ACTIVE TEST:	171.01 MILLI-OHMS
TEMPERATURE:	
PASSIVE TEST:	175.38 MILLI-OHMS
TEMPERATURE:	

## **SPECIFICATIONS**

<b>TYPE</b>	Portable micro-ohmmeter
<b>PHYSICAL SPECIFICATIONS</b>	16.8"W x 12.6"H x 12.0"D (42.7 cm x 32.0 cm x 30.5 cm); Weight: less than 21 lbs (9.5 kg)
<b>INPUT POWER</b>	100 – 240 Vac, 50/60 Hz
<b>RESISTANCE READING RANGE</b>	1 micro-ohm – 300 milli-ohms (1 micro-ohm resolution); Accuracy: $\pm 1\%$ reading, $\pm 1$ count
<b>TEST CURRENT RANGE</b>	Thermally-protected DC power supply, 10 Amperes – 100 Amperes, selectable in 1A steps
<b>TEST DURATION</b>	5 seconds – 120 seconds, selectable
<b>DISPLAY</b>	Back-lit LCD Screen (20 characters by 4 lines); viewable in bright sunlight and low-light levels
<b>PRINTER</b>	Built-in 2.5-inch wide thermal printer
<b>KEYPAD</b>	Rugged membrane keypad (10 alpha-numeric keys, 6 function keys)
<b>INTERNAL TEST RECORD STORAGE</b>	Stores 63 records (of 96 readings)
<b>COMPUTER INTERFACE</b>	One RS-232C port (19,200 Baud)
<b>PC SOFTWARE</b>	Windows® XP/Vista-based software is included with purchase price
<b>SAFETY</b>	Designed to meet IEC61010 (1995), UL61010A-1, CSA-C22.2 standards
<b>ENVIRONMENT</b>	Operating: $-10^{\circ}\text{C}$ to $50^{\circ}\text{C}$ ( $15^{\circ}\text{F}$ to $+122^{\circ}\text{F}$ ); Storage: $-30^{\circ}\text{C}$ to $70^{\circ}\text{C}$ ( $-22^{\circ}\text{F}$ to $+158^{\circ}\text{F}$ )
<b>HUMIDITY</b>	90% RH @ $40^{\circ}\text{C}$ ( $104^{\circ}\text{F}$ ) non-condensing
<b>ALTITUDE</b>	2,000m (6,562 ft) to full safety specifications
<b>CABLES</b>	30-foot (#1AWG) test cables, ground cable, power cord
<b>OPTIONS</b>	Transportation case, 15-foot test cables, C-clamps, Handspike
<b>WARRANTY</b>	One year on parts and labor

Note: The above specifications are valid at nominal voltage and ambient temperature of  $+25^{\circ}\text{C}$  ( $+77^{\circ}\text{F}$ ). Specifications are subject to change without notice.

**Vanguard Instruments Company**  
*Reliability Through Instrumentation*

RVFeb10

### **Vanguard Instruments Company, Inc.**

Vanguard Instruments Co., (VIC), was founded in 1991. Currently, our 28,000 square-foot facility houses Administration, Design & Engineering, and Manufacturing operations. From its inception, VIC's vision was, and is to develop and manufacture innovative test equipment for use in testing substation EHV circuit breakers and other electrical apparatus.

The first VIC product was a computerized circuit-breaker analyzer, which was a resounding success. It became the forerunner of an entire series of circuit-breaker test equipment. Since its beginning, VIC's product line has expanded to include microcomputer-based, precision micro-ohmmeters, single and three-phase transformer winding turns-ratio testers, winding-resistance meters, transformer tap-changing controllers, megaohm resistance meters, and a variety of other electrical utility maintenance support products.

VIC's performance-oriented products are well suited for the utility industry. They are rugged, reliable, accurate, user friendly, and most are computer controlled. Computer control, with innovative programming, provides many automated testing functions. VIC's instruments eliminate tedious and time-consuming operations, while providing fast, complex, test-result calculations. Errors are reduced and the need to memorize long sequences of procedural steps is eliminated. Every VIC instrument is competitively priced and is covered by a liberal warranty.

**Vanguard products are available from:**



**Vanguard Instruments Company, Inc.**

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