



**ohmic instruments co.**

508 August Street, Easton, Maryland 21601  
(410) 820-5111 (800) 626-7713 Fax (410) 822-9633  
www.ohmicinstruments.com  
e-mail: ohmic@ohmicinstruments.com



**INDUSTRIAL & ENVIRONMENTAL SENSORS, INSTRUMENTS & CONTROLS SINCE 1969**

**ANALOG SAFETY INSPECTOR - SI-100N  
TEST ELECTRICAL EQUIPMENT TO AAMI, UL & NFPA CODES**

- **ANALOG METER**
- **CURRENT LEAKAGE: 0-100 or 0-1000  $\mu$ A**
- **GROUNDING RESISTANCE: 0-0.5 or 0-5  $\Omega$**
- **DIFFERENTIAL VOLTAGE RANGE: 0-100 mV or 0-1 VOLT**
- **NORMAL/REVERSE POLARITY TEST SWITCH**
- **OPEN NEUTRAL SWITCH**
- **POOR INSULATION INDICATOR**
- **TEST RECEPTACLES FOR LEAKAGE & GROUNDING**
- **MEETS AAMI, NFPA-99, & UL-544 STANDARDS**
- **15 AMP BREAKER PROTECTION**



**INSURE ELECTRICAL EQUIPMENT MEETS ACCEPTABLE CODES**

OHMIC Instruments' SI-100N is a portable electrical test set widely used in the medical and electrical industry to insure that instruments, apparatus and electrical power supplies meet safety codes. SI-100Ns quickly test the leakage current and grounding continuity of 120 Volt AC line operated equipment to the latest AAMI, UL-544 and NFPA-99 standards for "non-patient connected electrical apparatus". A 15 Amp circuit breaker protects the line test circuit against overloads.

Leakage currents to 1000 $\mu$ A with 5.0 $\mu$ A resolution and grounding resistance to 5 $\Omega$  with 0.2 $\Omega$  resolution are displayed on a highly visible analog meter readout. The equipment under test is simply plugged into one of two front panel test receptacles which are used for either the grounding resistance/poor insulation or current leakage test. The current leakage can be conducted in either normal or reverse polarity using a heavy-duty toggle switch. An open neutral switch is a standard feature. A dual function test probe with a four foot coiled cable

allows the user to make external leakage, differential voltage and resistance test on electrical equipment that cannot be plugged into the front panel.

The current leakage test is performed with the AAMI standard test load. It provides a -3dB response from DC to 1KHz and -20dB per decade >1 KHz and a -40 dB attenuation above 100kHz. The unit is also equipped with a built in 100 $\mu$ A reference current source and a 0.25 $\Omega$  resistance standard to verify operation and calibration of the unit.

Model SI-100N is assembled in a sturdy metal case, equipped with a carrying handle and probe storage holder for portability. A durable storage case is included.

SI-100Ns provide the standard electrical safety testing required for maintenance and biomedical departments in health care facilities. Each unit is supplied with a certificate of calibration and backed by OHMIC's engineers.

**WARRANTY:** All products manufactured by OHMIC Co. are warranted to be free of defects in material and workmanship for one year after delivery. Any equipment found to be defective within this period will be repaired or replaced free of charge.

## SPECIFICATIONS

### LEAKAGE CURRENT TEST

RANGES	0 to 100 $\mu$ A (X1), DC or RMS 0 to 1000 $\mu$ A (X10), DC or RMS
ACCURACY	$\pm$ 5% of Full Scale
INPUT IMPEDANCE	1000 Ohms $\pm$ 2%

### GROUNDING RESISTANCE TEST

RANGES	0 to 0.5 $\Omega$ (X1); 0 to 5 $\Omega$ (X10)
ACCURACY	$\pm$ 5% of Full Scale
TEST CURRENT	20 mA
CALIBRATION TEST	0.25 $\Omega$ , $\pm$ 3%, Panel Test Jack with Ohms Adjust
CIRCUIT PROTECTION	1/16 A, 250V Fast Acting

### POOR INSULATION TEST

INDICATOR	Red LED
POOR INSULATION LEVEL	Below 1M $\Omega$ , Ground to HOT/NEUTRAL
TEST VOLTAGE	100 Vdc, $\pm$ 5%
TEST CURRENT	250 $\mu$ A Max

### DIFFERENTIAL VOLTAGE TEST

RANGE	0 to 100 mV (X1), DC or RMS 0 to 1 V (X10), DC or RMS
LOAD RESISTANCE	1 K $\Omega$

### ELECTRICAL and MECHANICAL

TEST RECEPTACLES	Heavy Duty NEMA Duplex, Hospital Grade
LOAD CURRENT	10 Amps Max
OVERLOAD PROTECTION	15 Amp, 2 Pole Circuit Breaker
DISPLAY	Custom Analog Meter
TEST SWITCHES	Normal/Reverse Polarity & Resistance Toggle Switch, Momentary Open Neutral and Open Ground Switches, X10 Display Push-button, 100 $\mu$ A Calibration Test
EXTERNAL TEST PROBE	Removable Hand-held 4 Ft Coil Cord Ohms Push-button
STANDBY POWER	120V, 60Hz, 5 Watts
POWER CORD	6 Ft 14/3 Type S/J
CASE DIMENSIONS	8" x 8" x 4", Equipped with a High-Impact Plastic Carrying Case

**ENGINEERING SUPPORT:** OHMIC Instruments Co. designs and manufactures a full line of environmental and bio-medical sensors, instruments and controls. Many of our products are custom designed to meet specific requirements. Our engineers will be pleased to discuss your application.



**ohmic instruments co.**

508 August Street, Easton, Maryland 21601  
(410) 820-5111 (800) 626-7713 Fax (410) 822-9633  
www.ohmicinstruments.com  
e-mail: ohmic@ohmicinstruments.com

