

# SDM102



## SDM102(103) OPERATING INSTRUCTIONS

### FEATURES

- Easy to read 3 1/2 digit LCD display
- Low battery indication
- Audible continuity buzzer
- Auto ranging
- Data hold
- Compact pocket size
- Pocket size carrying case
- Attached test leads
- Diode test function
- Overrange indication
- Logic Level indication(SDM103 only)

## SPECIFICATIONS

### Ranges:

AC VOLTS: 0-2, 20, 200, 500V  
 DC VOLTS: 0-200mV, 2, 20, 200, 500V  
 OHM: 0-200, 2K, 20K, 200K, 2M, 20M  
 DIODE CONTINUITY  
 LOGIC : SDM103 ONLY

### Accuracy:

AC VOLTS:  $\pm 2.5\%$  of reading,  $\pm 8$  digits  
 (50-400Hz)  
 DC VOLTS: 0-200mV,  $\pm 2\%$  of reading,  $\pm 4$  digits  
 2V,  $\pm 0.7\%$  of reading,  $\pm 4$  digits  
 20, 200, 500V,  $\pm 1.3\%$  of reading,  
 $\pm 4$  digits

OHM: 0-200 ohm,  $\pm 2\%$  of reading,  $\pm 4$  digits  
 20M,  $\pm 10\%$  of reading,  $\pm 8$  digits

Logic : TTL and CMOS Logic Level  
 Measurements.

### General:

Display: 3 1/2 digit LCD, 0.591" high numerals,  
 maximum reading "1999" with decimal  
 points for all ranges  
 Operating Temperature: 32° to 122°F/0° to 50°C  
 Operating Humidity: 80% max R.H.  
 Power Supply: 1.5V button battery  
 Dimensions: 1 1/2"(w) x 7"(h) x 5/8"(d)  
 Includes: Carrying case, battery, test leads  
 attached to meter and instructions.  
 Logic probe(SDM/103 ONLY)

### MEASURING PROCEDURE

#### Continuity Buzzer

Caution: Turn the test circuit power off and discharge all capacitors before attempting in-circuit resistance measurements.

1. Set the FUNCTION AND RANGE switch to the  $\Omega$  position.
2. Touch the ends of the test leads together. An audible tone will be heard. This indicates continuity.
3. Connect test leads across circuit to be tested.

#### AC Voltage Measuring

Warning: To avoid the risk of electrical shock, instrument damage and/or equipment damage, input voltages must not exceed 500 volts Peak AC. Do not attempt to take any unknown voltage measurements.

1. Set the rotary switch to ACV.
2. Connect test lead probes into circuit under test.

#### DC Voltage Measuring

Warning: To avoid the risk of electrical shock, instrument damage and/or equipment damage, input voltages must not exceed 500 volts DC. Do not attempt to take any unknown voltage measurements.

1. Set the rotary switch to DCV.
2. Connect test lead probes into circuit under test.

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NOTE : For TTL,  $V_{cc} = 5$  VOLTS  
For CMOS,  $V_{cc} = 3$  to 18VOLTS.  
 $V_{cc}$  MUST NOT EXCEED 19VOLTS.  
or damage to the instrument  
may result.

4. observe the red and the green LEDs on the SDM103, and use the following table to determine the status of the point under test:

INPUT STATUS	RED LED	GREEN LED
Floating	flashing	off
Logic Low	off	off
Logic High	on	off
Logic Pulses	any status	on

#### Data Hold

1. Depress the data hold switch to freeze the reading on the LCD display for all functions.

#### BATTERY REPLACEMENT

Warning: Before attempting to replace the battery, first disconnect the test leads from the circuit under test.

1. Remove battery cover.
2. Replace button battery observing correct polarity.
3. Replace battery cover.

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#### Resistance Measurement

Caution: Turn test circuit power off and discharge all capacitors before attempting in-circuit resistance measurements.

1. Set the rotary switch to OHM.
2. Connect test leads to circuit under test or across unknown resistor.

#### Diode Measurement

1. Set the rotary switch to  $\rightarrow$  and connect the test leads across the diode under measurement.  
(Note: The banded end of the diode is the "-" side in the forward condition.)
2. The meter displays the forward voltage drop in millivolts.

#### TTL and CMOS Logic Level Measurements.

1. Set the rotary switch to Logic
2. Plug the Logic Leads into the LOGIC Connector at the rear of the SDM103
3. Connect the black clip from the Logic leads to the  $V_{ss}$ (Negative)  
Red Clip from the Logic leads to the  $V_{cc}$  (positive) terminal of the Logic Circuit under test.

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ACCESSORIES	STOCK NO.
Alligator clips.....	AAC
Button battery 1.5V.....	AB13
Carrying case.....	AC16
Logic Probe.....	ALP

#### RETURNING FOR REPAIR

Before returning your instrument for repair, please make a quick check to insure the failure is not due to the following:

1. Low or dead battery

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