

QUICK START GUIDE

4000 Series 4-in-1 MULTI-FUNCTION TESTERS

Models: 4320, 4520



SAFETY CHECKLIST

Survey the test station. Make sure it is safe & orderly.

Always keep unqualified/unauthorized personnel away from the test area.

Familiarize yourself with safety protocols in the event of a problem.

Exercise caution and never touch products or connections during a test.

Train operators. Connect the return lead first and never touch clips directly.

You should always know when a test is being performed.



WARNING: THIS GUIDE WAS CREATED FOR OPERATORS HAVING SOME FAMILIARITY WITH ELECTRICAL SAFETY TESTING. AN ELECTRICAL SAFETY TESTER PRODUCES VOLTAGES AND CURRENTS THAT CAN CAUSE HARMFUL OR FATAL ELECTRIC SHOCK. TO PREVENT ACCIDENTAL INJURY OR DEATH, THESE SAFETY PROCEDURES MUST BE STRICTLY OBSERVED WHEN HANDLING AND USING A TEST INSTRUMENT.

Tester Setup



WARNING: LOCATE A SUITABLE TESTING AREA WITH A THREE-PRONG, GROUNDED OUTLET. BE SURE THAT YOUR THREE-PRONG OUTLET HAS BEEN TESTED FOR PROPER WIRING. READ THE SAFETY CHECKLIST OF THIS GUIDE BEFORE STARTING TO TEST.

1. Adjust the line voltage select switch on the rear panel of the instrument to the appropriate input voltage rating, either 115 VAC or 230 VAC. (Model 4320 only).



2. Connect the female end of the supplied NEMA style line power cord into the input power receptacle on the rear panel of the tester. Plug the male end of the cord into a grounded power source.





3. Connect the Interlock Disable key to the Remote Input connector on the rear panel of the instrument. <u>This is required in order to run a test.</u>







4. Turn the power switch ON. Upon power up, you will see the SCI company name, model number, and the current software version briefly appear on the display. After this, you will see the default test parameters.



Configure the instrument system parameters to your preferences. The instrument system parameters are global and will affect all tests that are performed regardless of memory location and memory step.

- **1.** Press the EXIT key to access **2.** Press the SET key to toggle the System Parameters.
 - through parameters.
- **3.** Use the up & down arrow kevs to edit each parameter







4. Press the EXIT key to save the setting and return to the Perform Test screen.



Default System Parameters

PLC Remote	Single Step	Fail Stop
OFF	OFF	ON
		1
Lock	Memory Lock	
OFF	ON	

Selecting a Memory Location

If you wish to have multiple test setups, you will need to begin by choosing a Memory Location for each test. The 4000 Series has 6 memory locations available, each of which contains 6 steps.

• Press the SET key from the Perform Test screen to select a memory location. Use the up or down arrow keys to select memories 1-6.



2. Press the SET key again to select the step. Use the up or down arrow keys to cycle through steps 1-6.



3. Press the EXIT key to store changes and return to the Perform Test screen.



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Edit Test Parameters

1. Press the SET key from the Perform Test screen to confirm the memory location.



2. Press the SET key again to confirm the memory step number. You should start by modifying step 1.



3. Press the SET key a third time until the test types appear.



4. Use the up and down arrow keys to toggle the test types. ACW, DCW, IR or GND.



5. Press the EXIT key to save the setting and return to the Perform Test screen.



Default Test Type Parameters

AC Hipot Mode	DC Hipot	Insulation Resistance	Ground Bond Test
Voltage: 1.24 kV	Voltage: 1.50 kV	Voltage: 500 V	Current: 30 Amps
HI-Limit: 10.00 mA	HI-Limit: 5.00 mA	HI-Limit: 0 MΩ	HI-Limit: 150 m Ω
Lo-Limit: 0.00 mA	Lo-Limit: 0.00 mA	Lo-Limit: 1 MΩ	Lo-Limit: 0 mΩ
Ramp: 0.1 s	Ramp: 0.1 s	Delay: 1.0 s	Dwell: 1.0 s
Dwell: 1.0 s	Dwell: 1.0 s	Connect: Off	Offset: 0 mΩ
Frequency: 60 Hz	Connect: Off		Frequency: 60 Hz
Connect: Off			Connect: Off

Conducting a Test

WARNING: DO NOT TOUCH THE DEVICE UNDER TEST ONCE YOU START THE TEST.

Adapter Box Connections

To increase operator safety, you may elect to use an adapter box for products terminating in either a two-prong or three-prong line cord. **If using an adapter box,** follow these instructions to safely connect a DUT.

- Hook the black lead from the adapter box (P/N 99-10005-01) into the CURRENT terminal located on the front panel.
- 2 Plug the white lead from the adapter box into the H.V. output terminal located on the front panel.
- 3 Hook the black ground return lead (P/N 99-10238-01) into the front panel RETURN terminal. Connect the other end of the lead to the dead metal on the chassis of the DUT. check to ensure a solid connection is made between the DUT and the return clip.
- 4 Plug the line cord of the DUT into the adapter box receptacle.





DUT Connection

If you elect to use test leads, follow these instructions to safely connect a DUT.

- Hook the black return lead (P/N 99-10238-01) into the RETURN terminal located on the front panel. Connect the other end of the return lead to the dead metal on the chassis of the DUT.
- 2 Hook the high current lead (P/N 99-10239-01) into the front panel CURRENT output terminal. You may need to unscrew the terminal slightly to make the connection. Connect the other end to the ground pin of the DUT line cord.
- Plug the high voltage lead (102-055-913) into the H.V. terminal located on the front panel. Connect the clip end of the high voltage lead to the current carrying conductors of the DUT's circuitry.





If your chassis does not have any exposed metal, you can wrap the enclosure of the DUT in foil and then connect the return lead to the foil.

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WARNING: DO NOT TOUCH THE DEVICE UNDER TEST ONCE YOU START THE TEST.

 Connect the Interlock Disable Key (P/N 99-10040-01) to the Signal Input connector on the rear panel of the tester. If you're not utilizing a DUT enclosure (P/N 99-10715-01) or other safety device, <u>the Interlock Disable Key is required in order to run a test.</u>



2. Push the green TEST button on the front panel. The DUT is tested for a duration equal to the Ramp and Dwell settings.



Selecting a Memory Location

View test results by pressing the up and down arrow keys from the Perform Test screen.

- **PASS:** If the DUT passes the test, you will hear a short audible beep and the display will indicate the test results.
- **FAIL:** If a failure occurs, you will hear a long audible alarm and the red flashing indicator will light up. To stop the alarm press the red RESET button.



Pass/Fail Indication Screen

If a failure occurs, a failure code will appear on the screen. Consult your product manual to determine the meaning of your failure code.

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Testers For Electrical Safety Compliance



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