

#61-076, 61-079, 61-080



Vol-Con[®] Voltage/Continuity Tester Instruction Sheet

Usage Instructions

- **Testing for Continuity – no switching required**

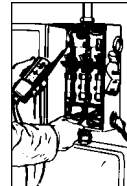
Place tester across terminals (live or dead) of components or circuit to be tested. The continuity LED (same as " + DC" LED) will come "On" when resistance between prods is 500K ohms or less. Full brightness of the continuity LED occurs when the resistance between prods is 300K ohms or less. Reversing prods will verify continuity versus low volt DC.

- **Locating Blown Fuses (single phase, three phase and DC)**

Turn Power Off. Place tester across the suspected fuse to perform continuity check. If continuity LED comes "On," the fuse is good. If the continuity LED does not come "On," the fuse is defective.

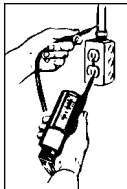
For locating a blown fuse with the power on, place tester across the "source" side of one fuse and the load side of an adjoining fuse. If no voltage is indicated, the fuse next to the load side prod is blown. If voltage is indicated, the fuse next to the load side prod is OK. Repeat the same test with the prods on the opposite side of the same two fuses to check the other fuse.

On a three phase circuit, repeat the same test as above. An indication of no voltage or lower than normal line voltage indicates the blown fuse.



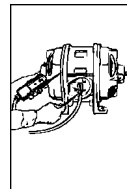
- **Finding Grounded Side of Line (neutral)**

Touch one test prod to the ground and the other test prod to each of the line terminals until one is found that does not give a voltage indication, that one is the grounded side of line and the continuity LED should be "On."



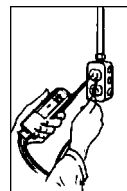
- **Testing for "Grounded" Side of Motor or Appliance**

With power to motor or appliance "Off," touch one test prod to the frame and the other prod to each of the terminal connections. The terminal which turns the continuity LED "On" is the grounded side. With power to motor or appliance "On," place tester across the frame and to each of the terminal connections. The terminal which does not give a voltage indication, but does give a continuity indication, is the grounded side.



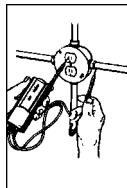
- **Testing for 25 to 60 Cycle Frequency**

Place tester between each side of AC line. A low frequency hum and slow vibrations indicate 25 cycle current. 60 cycle current is indicated by a higher frequency hum and more rapid vibrations.



- **Checking Continuity of Cords, Motors, Appliances, etc.**

Remove power source and place tester across circuit to be tested. Continuity LED will come "On" if resistance is less than 500K ohms.



- **Locating Excessive Leakage to Ground**

Place tester across the neutral terminal and the ground, only the continuity light should come "On," indicating neutral and ground are connected. If the " - DC" light also comes "On," there is a 5VAC or greater between neutral and ground indicating a high resistance leakage to ground. High resistance leakage is qualified since a low resistance (high current) leak to ground would open a circuit breaker or blow a fuse.

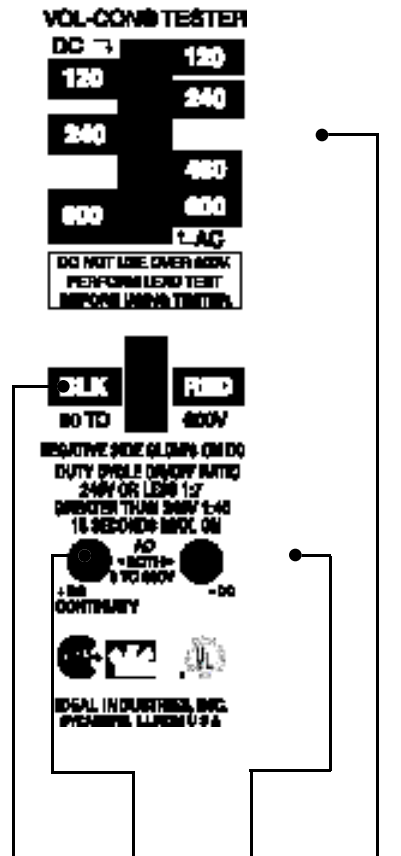
Cautions

- To avoid the risk of electrical shock, disconnect test leads before removing the battery pack. **Do not** operate unit with the battery pack removed.
- Do not use on over 600 volts. This instrument is for intermittent service only. The duty cycle on:off ratio is 1:7 for 240 volts or less, and 1:40 for 240 volts or greater. Fifteen seconds is the maximum "On" time.
- All indications are relative. For determining the nominal line voltage only.
- Do not use unit with battery packs removed. Unit may be used for "checking for voltage" without batteries; however, the battery packs must be in place for safe operation.
- Always remove right angle plug on lead set prior to removing battery packs.

Note: If LED on the left does not come "On" when it should, check the battery pack on the left. If LED on the right does not come "On" when it should, check the battery pack on the right. Pack may not be fully seated, batteries may not be oriented correctly or batteries are bad.

Assembly Instructions

- Remove lead set plug. Remove the two battery packs adjacent to the lead set, plug opening. Use screwdriver as a lever, inserting tip in slot at edge of cap and under the battery pack head. A light force will pop the pack loose for easy hand removal.
- Insert four 1-1/2 volt watch/calculator batteries (two per each pack), putting negative terminal down as indicated on the side of the battery pack. Use Union Carbide Corp. Type A76VP, Eveready No. 357 or IDEAL No. 61-201.
- Orient the battery packs and snap into tester. Be sure the packs are fully seated.
- Press right angle plug on lead set into the bottom of the tester. (Place plug on a bench or solid object and push tester into plug.) This is a tight fit to keep moisture away from pins and to prevent accidental plug release. Be sure the plug is fully seated.
- Retract "safety shield" on prod tips and lock by rotating. Place one prod into the "probing position" by putting the handle into the prod storage well. Bring the two exposed tips into contact with each other; the continuity LED (LED to the left) should now be "On." This assures batteries on the left side are good and your "lead set" is in good working condition. Always perform this test before using tester.
- Test a known live AC circuit such as 120 volts. Both LEDs should be "On"; the neon should have "fired" if voltage is over 80 and the solenoid coil indicator should be activated. Tester is now operational.



	Neon Bulb	Left LED	Right LED	Scale
Continuity	Off	On	Off	No movement.
Open Circuit No Voltage	Off	Off	Off	No movement.
6-65 AC	Off	On	On	No movement.
6-90 DC	Off	On if black prod is on negative, off if it is on positive.	On if red prod is on negative, off if prod is reversed.	No movement.
65-110 AC	On	On	On	Little or no movement.
90-110 DC	On	On if black prod is on negative, off if it is on positive.	On if red prod is on negative off if prod is reversed.	Little or no movement.
110-600 AC	On	On	On	Scale indicates relative magnitude.
110-600 DC	On	On if black prod is on negative, off if it is on positive.	On if red prod is on negative, off if prod is reversed.	Scale indicates relative voltage.

