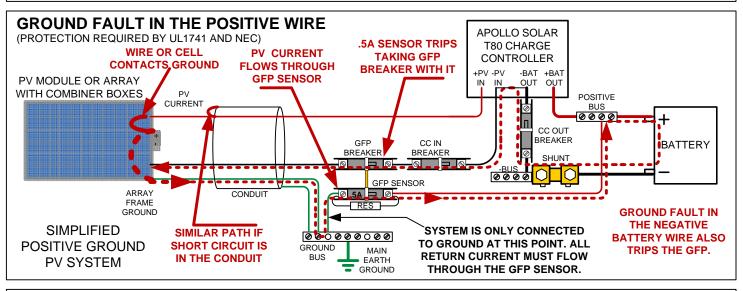
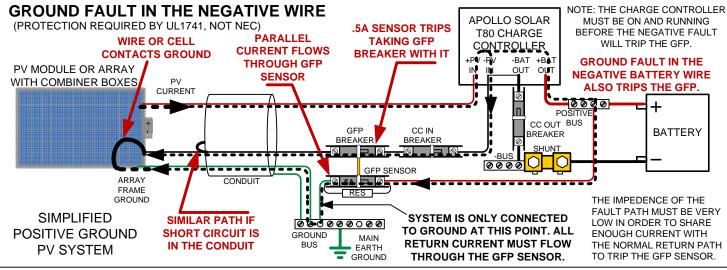
GROUND FAULT PROTECTION – POSITIVE GROUND SYSTEMS – HOW IT WORKS NORMAL OPERATING CONDITION APOLLO SOLAR T80 CHARGE CONTROLLER +PV -PV -BAT +BAT PV MODULE OR ARRAY IN OUT OUT WITH COMBINER BOXES CURRENT **POSITIVE** BUS 0000 П CC OUT BREAKER CC IN BATTERY BREAKER BREAKER **-** 0 0000 GFP SENSOR ARRAY CONDUIT **–** Ø FRAME SIMPLIFIED SYSTEM IS ONLY CONNECTED 000000000 POSITIVE GROUND TO GROUND AT THIS POINT. ALL GROUND MAIN PV SYSTEM RETURN CURRENT MUST FLOW BUS EARTH GROUND

THROUGH THE GFP SENSOR.





NEC 690.5 states that the Ground Fault Protection device must:

- 1) Detect a ground fault
- 2) Interrupt the fault current
- 3) Indicate that there was a ground fault
- 4) Open the ungrounded PV conductors

The drawing shows that each of the NEC requirements are satisfied with this GFP device. PV voltage.

The GFP may be tested by forcing a short to ground wire near the PV array. It is wise to use a current limiting resistor to create the short to limit damage to the wires. Be careful of high



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