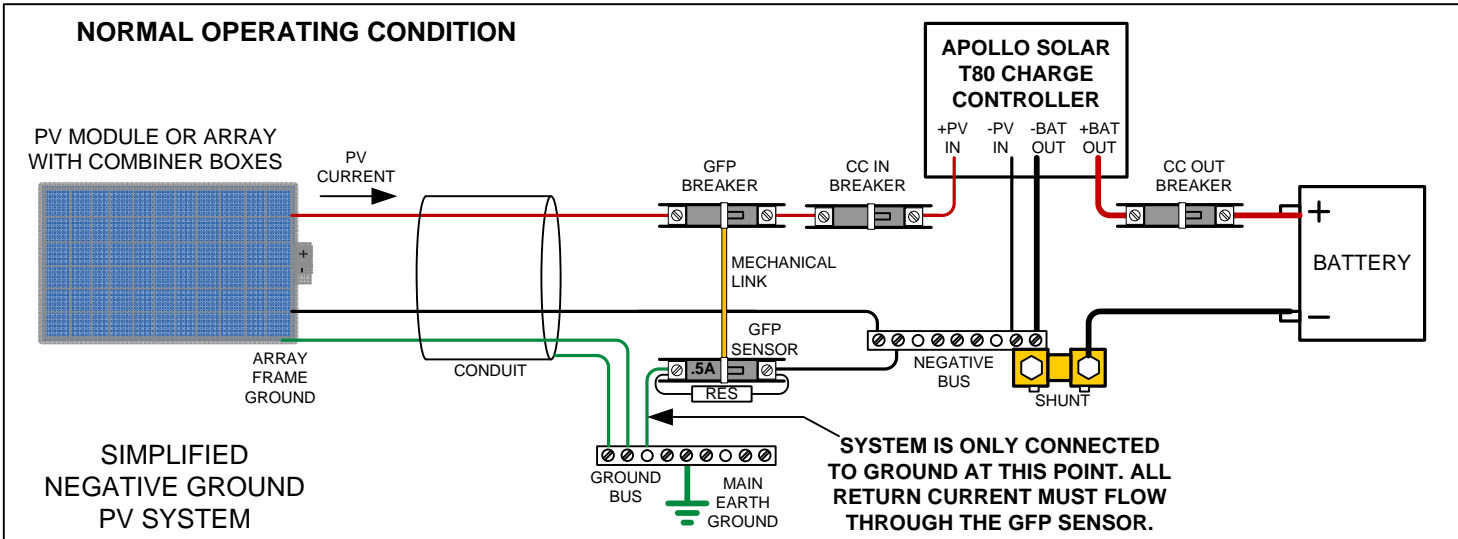
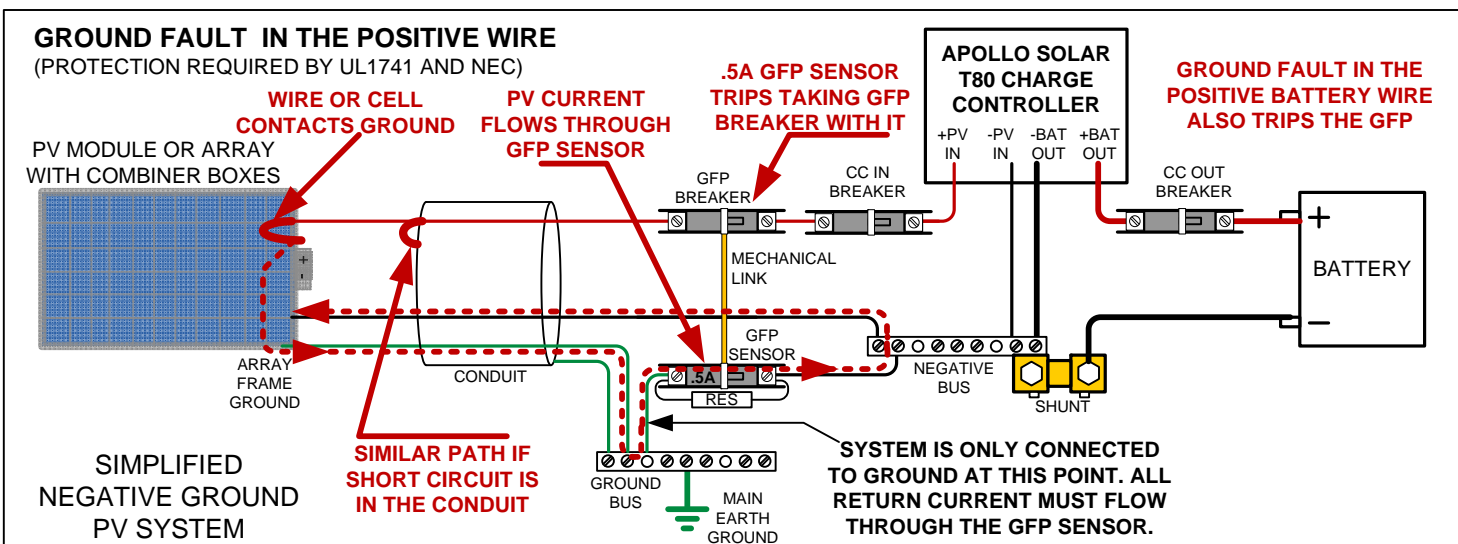


PV GROUND FAULT PROTECTION – HOW IT WORKS

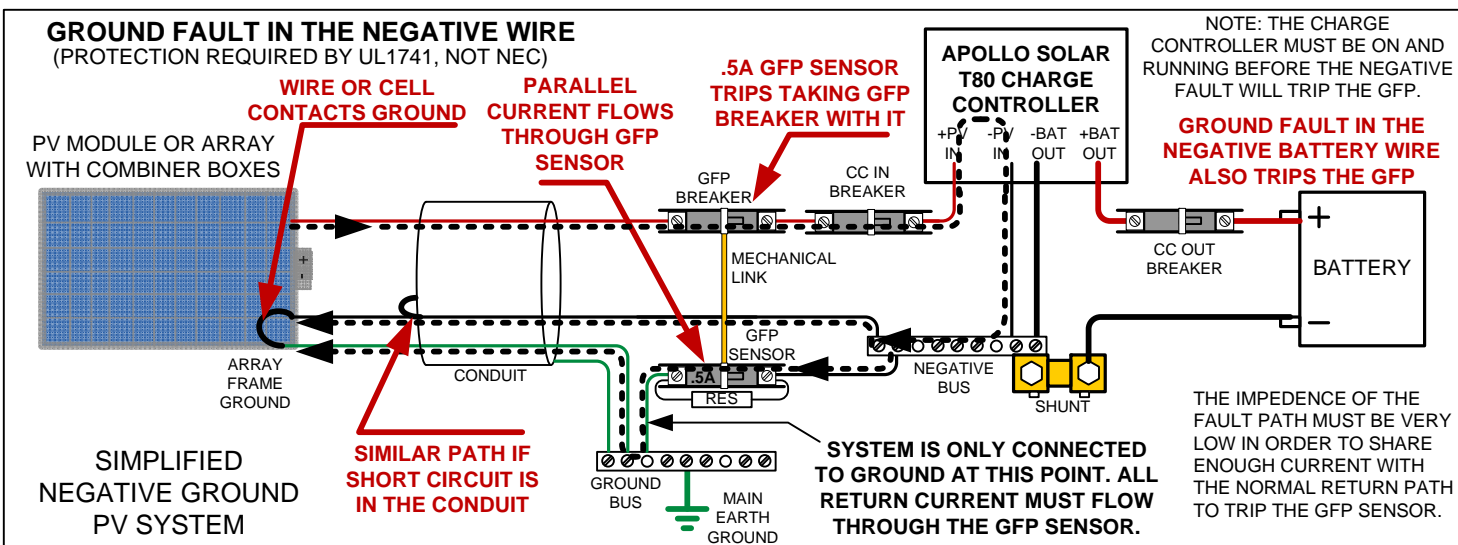
NORMAL OPERATING CONDITION



GROUND FAULT IN THE POSITIVE WIRE (PROTECTION REQUIRED BY UL1741 AND NEC)



GROUND FAULT IN THE NEGATIVE WIRE (PROTECTION REQUIRED BY UL1741, NOT NEC)



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.

The system may be tested by forcing a short to the 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 PV voltage.



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HOW IT WORKS

GROUND FAULT PROTECTION

9-JULY-10

J. PFEIFER