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## Secondary Injection Testing **AC-PRO Retrofit** Using a standard relay test set

**The AC-PRO can be secondary injection tested using a standard relay test set**

**Items required:**

- ?? A relay test set with a current source output with a range of 0 to 12 amps. Ideally the test set should have a shut-off timer and a true RMS ammeter. If the test set does not have a true RMS ammeter, than a separate true RMS ammeter must be used in-line with the test leads.
- ?? 24Vac power source. (URC Part Number **T-390 \$25.00**)
- ?? Signal ground isolation current transformer with 1:1 ratio.  
(URC Part Number **CT-10473 \$200.00**)

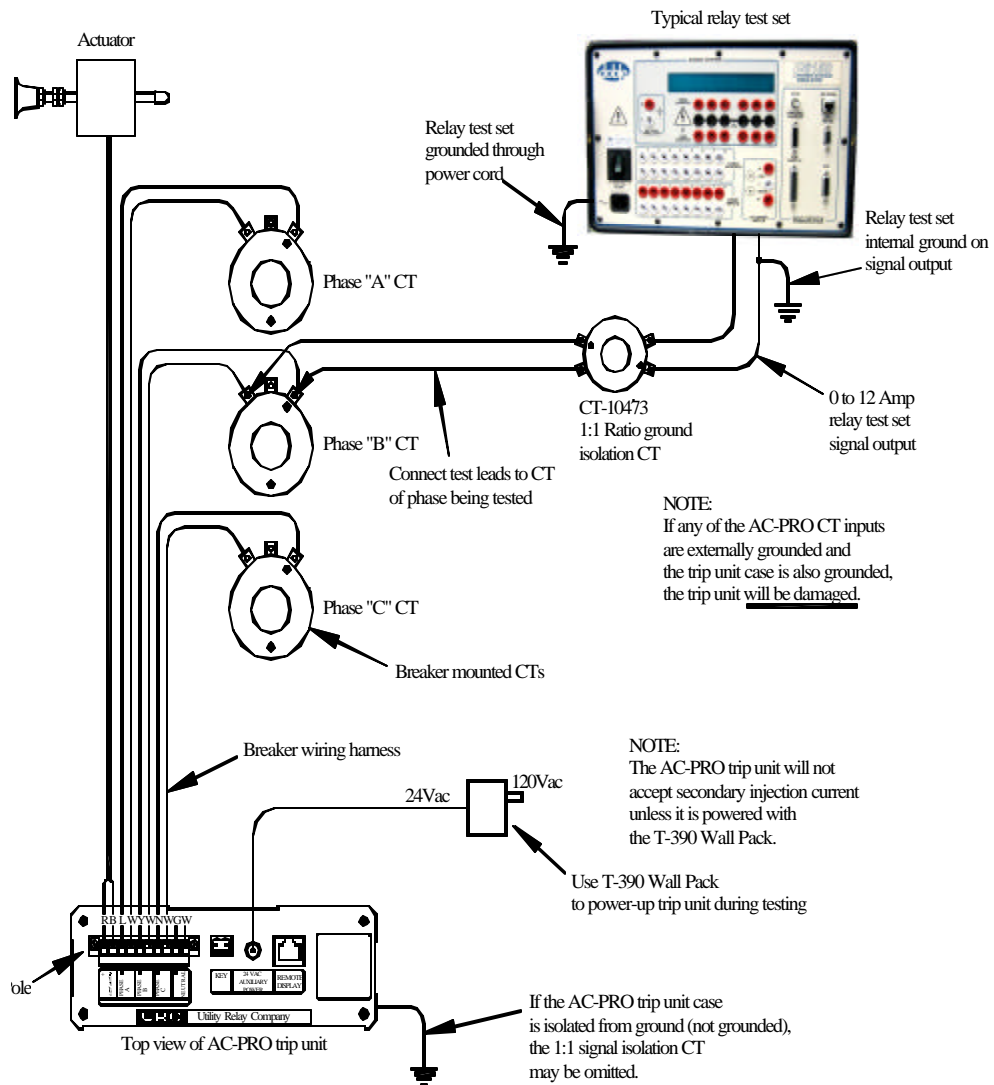
**NOTE:** Externally grounding any of the AC-PRO CT inputs will damage the internal circuits in the trip unit. The signal output of some relay test sets have one lead grounded and therefore require the 1:1 ratio signal ground isolation CT. If care is taken to isolate the AC-PRO trip unit case from ground the ground isolation CT may be omitted.

**To set up a secondary injection test of an AC-PRO, perform the following:**

1. Apply 24Vac to the AC-PRO using the auxiliary power input (**PN: T-390**) to the connector on the top of the trip unit.
2. Connect the output leads from the relay test set to the primary terminals of the 1:1 ratio signal ground isolation CT (**PN: CT-10473**).
3. Connect the secondary terminals of the ground isolation CT to the phase "A" CT terminals on the breaker (or directly to the phase "A" CT input on the AC-PRO trip unit). It is not necessary to disconnect the breaker mounted CT.
4. Use one of the breaker poles to interrupt the test current on a breaker trip or use it to stop the relay test set and timer.
5. If GF is turned ON, temporarily program it to OFF to test the phase protection functions.
6. Proceed with secondary injection testing of phase "A".
7. When finished with phase "A", do the same for phases "B" and "C".
8. To test GF, program it to ON and use any one of the phase CT inputs or the neutral CT input.
9. When finished, remember to program the AC-PRO to the "as found" settings and to clear the last trip data.

**NOTE:** On the AC-PRO 1 amp trip unit:            1.00 amp = 100% CT rating.  
          On the AC-PRO 1/2 amp trip unit:        0.50 amp = 100% CT rating

**Utility Relay Company specialists are available for field support by calling: 888-289-2864**



## AC-PRO Secondary Injection Testing with a Standard Relay TestSet