



Application Note PVACM 10-01
October 20, 2010

Subject: PVAC Module Connections. Ensuring continuity of PVAC Module connections to the Home Run cable.

Under some circumstances, insulation displacement pins in the PVAC Module connector may not fully penetrate the Home Run cable. This is not hazardous, but may prevent power output from that Module.

A simple means of confirming contact by PVAC Module pins to the Home Run cable conductors on a Module-by-Module basis (as each one is installed) is described below.

Tools Required:

- ◆ Capacitance meter capable of measuring 1 μ F to 100 μ F. Extreme accuracy is not required. Basic capacitance meters are available from various internet retailers for \$15 and up.
- ◆ Tools for cutting and stripping the Home Run cable insulation.

Procedure:

Note: Do NOT connect the Home Run cable to AC Power at any time prior to or during this procedure. PVAC Modules may be mounted and exposed to the sun, but will not generate any AC output as long as no utility is present.

- 1) Remove 2-3" of the Home Run cable outer jacket at the end you'll connect to the breaker panel. This length is not critical, but should be sufficient to allow easy access to each of the three internal conductors.
- 2) Spread the three Home Run conductors and remove approximately 1" insulation from each, exposing the wires.
- 3) Attach the first PVAC Module to the Home Run cable as instructed in the PVAC Module Installation Manual.
- 4) With the capacitance meter, verify the following measurements (per PVAC Module):

Line to Ground (black to green)	0.65 μ F
Line to Neutral (black to white)	2.40 μ F
Neutral to Ground (white to green)	0.70 μ F

Note: Values can vary \pm 20% due to capacitor tolerances.
- 5) With each PVAC Module added to the circuit, the above values should increase incrementally. Two PVAC Modules will give 2x the readings of one Module, three Modules will give 3x, and so forth.

If, when adding a PVAC Module to the circuit, you do not see an incremental increase in all three values, remove that particular PVAC Module's connector from the Home Run cable, realign the connector insulation displacement pins with the conductors in the cable, and carefully reassemble the connector. Ensure the tip of each connector pin is centered over the top center of its respective conductor in the Home Run cable. Repeat Step 4.

When finished, remove the capacitance meter from the Home Run cable and continue with your installation.

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