

# Quick Reference Card

## PVA-1000S & SolSensor™



For use with v3 PVA PC software

- Current Range: 0 to 20 A dc
- Voltage Range: 0 to 1000 V dc
- Operating Temp: -10 to 65C



**WARNING Risk of electrical shock.** To be used only by qualified personnel. Use Personal Protective Equipment. Isolate PV circuit to be tested from inverter and other PV circuits.

**Caution** Replace PVA connector saver jumpers after 100 connections.

**Caution** Do not touch white 'eye' of irradiance sensor. Cover when not in use. Clean only with distilled water and clean, soft cloth. Soap or cleaning fluids can cause permanent damage and degrade irradiance measurement accuracy.

**Note** Installing PVA software requires web connection to load drivers.

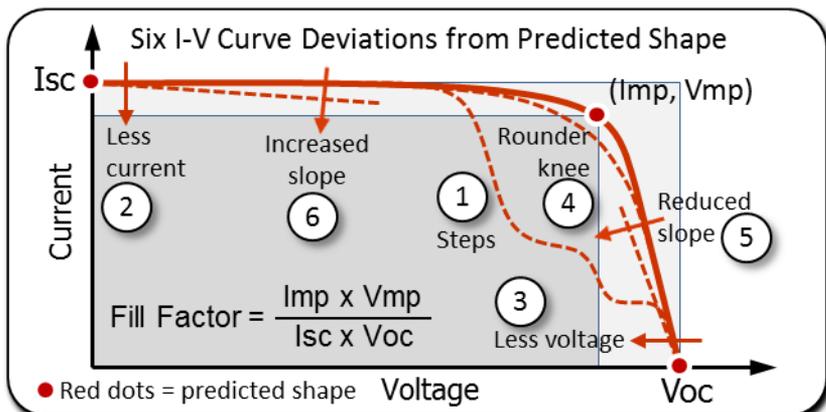
**Battery Run Time:** I-V Unit: 12 hr continuous use, 1000 sweeps.

SolSensor: 16hr typical use. With heavy use, charge both 6hrs nightly.

I-V Unit LED 	I-V Unit State	Pushbutton
Off	Off	Press to turn on
Blinking	Searching for network	Wait 10-20 seconds
On	Network exists, sweep enabled.	Press to turn off
Winks once	I-V sweep starting	
To reset IV-Unit, hold pushbutton down for 8 seconds and release		

**Measurement Example** (testing PV strings at a fused combiner box):

1. Insert wireless USB adaptor in PC USB slot & start PVA software.
2. Select your **Project** from the **File** menu, or create a new one. *Break large systems into multiple Projects so the software runs faster.*
3. Mount SolSensor to module frame, blue ears contacting. Turn it on.  
**Pro tip:** Mount SolSensor on horizontal top frame for best irradiance accuracy early and late in day, and for best wireless range.
4. Open DC disconnect to isolate combiner box from rest of system
5. Lift all fuses to de-energize buss bars
6. Connect PVA test leads to buss bars
7. Turn on the I-V Unit. Wait for network to link (green **Ready** indication).
8. Insert the fuse for the string to be measured
9. Press **Measure Now** to take an I-V trace. When trace and tree appear, highlight the string number and click **Assign and Save**. To display the data and model points but not save the trace, click **Assign Only**.
10. Export your system data (**File>Export Traces for Entire System...**).
11. Analyze and report your data using the Solmetric Data Analysis Tool.



## Troubleshooting PVA & SolSensor Operation:

**Segmented or incomplete I-V trace** Just take a fresh trace. Condition can occur on first measurement after I-V Unit is turned on, and also when previous measurement was taken on a PV source having significantly different current or voltage levels.

**“No I-V Unit” message, or no sensor data displayed** Equipment may be out of wireless range, or have turned itself off after extended inactivity. Click the network icon, lower left of screen, to check wireless routing and signal strength. Improve line of sight, raise instruments above metal surfaces, or move equipment closer together.

**Wireless connection briefly drops out** May occur for typically 10-30 seconds as the Zigbee mesh network reconfigures to improve the links.

**“Disabled” message** Click the status indicator for more information. Clear the underlying condition, (over-voltage, -current, -temp) and reset I-V Unit.

**Isc is much higher or lower than predicted** Check that SolSensor is mounted in the plane of the array.

**Software updates** Current PVA PC software is available online at [www.solmetric.com/downloads-pva.html](http://www.solmetric.com/downloads-pva.html)

### Solmetric Technical Support

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