Solar Data Systems

ArrayMeter

Installation Manual

Introduction

The Solar Data Systems ArrayMeter is available as Single-Phase 200amp (2s) or 3-Phase 320amp (16s) versions. It is important that knowledgeable technicians install and service these meters.

Important Product Information

DANGER – ELECTRIC SHOCK HAZARD

- All service and installation procedures must be handled by qualified personnel.
- Disconnect the power source from both the breaker to the ArrayMeter and the AC disconnect when servicing this product.

Recommended Installation Toolkit

- Volt Meter
- Ammeter
- Wire Stripper
- Mounting Fasteners

Important Warranty Information

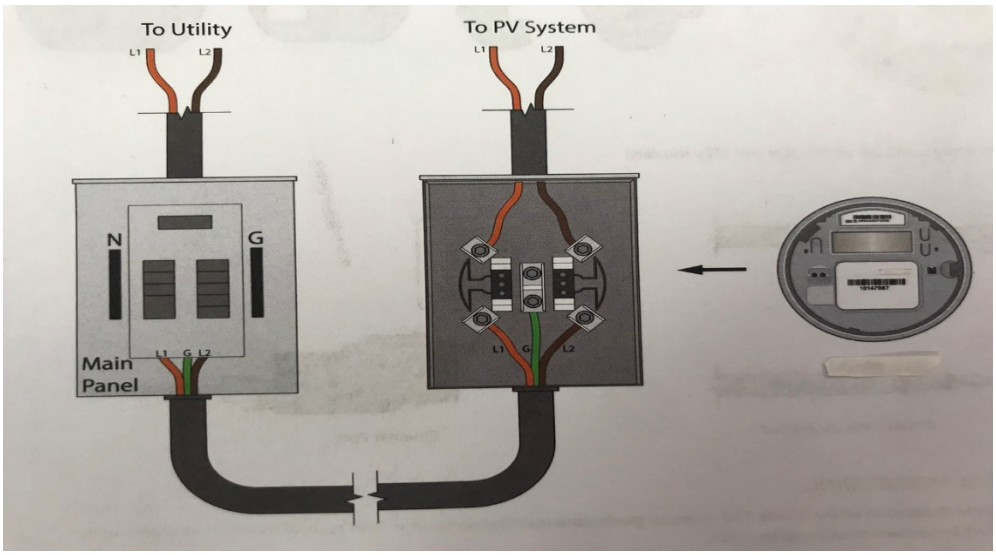
To prevent voiding the warranty, DO NOT:

- Remove or disassemble any part of the meter.
- Break the tamper seal on the meter.
- Install or operate the meter in anyway not specified in this installation manual.

Installing the Meter

The ArrayMeter must be mounted in a meter socket that meets the ANSI standard Form 2s or Form 16s depending on model. The socket must be installed before the ArrayMeter can be installed. The meter form factor must match the form factor of the meter socket.

1. Mount the meter socket between the PV system and the electrical panel.
2. Run the AC lines from the combined inverter output to the top of the meter socket (line side).
3. Wire the bottom of the meter socket (load side) to a dedicated PV breaker on the electrical panel.
4. Ground the meter socket to the ground in the main panel.
5. Attach the meter to the socket, ensuring there are no gaps between the base and the meter socket. The meter should be flush against the meter socket.



Verifying Installation

Verify Reception of Power

To check for power reception, observe the LCD. If the LCD unit enables with all the characters present, the meter Is being powered correctly. Should the LCD not light up, check the dedicated breaker and the voltage at the meter socket. As Shown in Figure 4, the LCD will display all of the displayable items up.

Figure 4

Meter Energy Delivery Mode Check

To ensure the meter is connected correctly, check the bottom right section of the LCD for an arrow as well as the energy recording mode displayed in the upper right corner. Check the intended meter measurement mode and compare to the arrow direction.

- If the arrow points to the right, it indicates the delivery of power, as shown in Figure 5.
- If the arrow points to the left, it indicates the reception of power to the grid.

Figure 5

Power Reading Check

To check the correct display of power, energy, and current readings, connect a known load to the meter. Switching between the different types of readings, the read values will match the known load values. By programming the meter to display power and amperage readings, the meter can be tested against the known values, as shown in Figure 6.

Figure 6

Modem Check

Visible LED s indicate the modem's operation:

Green – Blinking Heartbeat one second on/off, Meter is OK

Solid Blue – connected to cellular network

Red/Orange – Error trying to Connect to cellular network