Application Note – Replacing the Built-in RGM Meter in SolarEdge Inverters for PCS Busbar Current Management – North America

(P/N: FLD-MTR-3PC05-PIE-CT / FLD-MTR-3PC05-PIE-C)

Version History

- Version 1.2, January 2024

Introduction

This application note provides guidelines for replacement of the built-in RGM meter in SolarEdge Inverters in North America. To support the PCS busbar current management function, the components specified in the Kit Contents section must be installed.

Kit Contents

The replacement meter kit (FLD-MTR-3PC05-PIE-CT / FLD-MTR-3PC05-PIE-C) contains the following items:

- Replacement energy meter. P/N: SE-RGMTR-1D-240C-C
- Two current transformers (CTs). P/N: SECT-SPL-225A-T-20.
  Supplied in kit FLD-MTR-3PC05-PIE-CT only – can be purchased separately.
- This application note

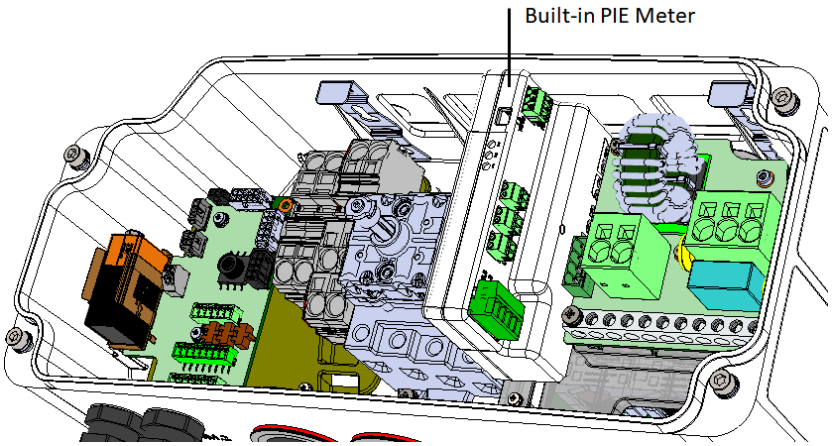
Additional Required Equipment

The following additional equipment is required in order to perform the meter replacement:

- 4 mm hex key
- Flathead screwdriver

Replacing the Meter

This section contains guidelines for replacing the original built-in meter with the newer model. The location of the meter in the inverter's DC Safety Switch is shown in the figure below.



→ **To replace the built-in meter:**

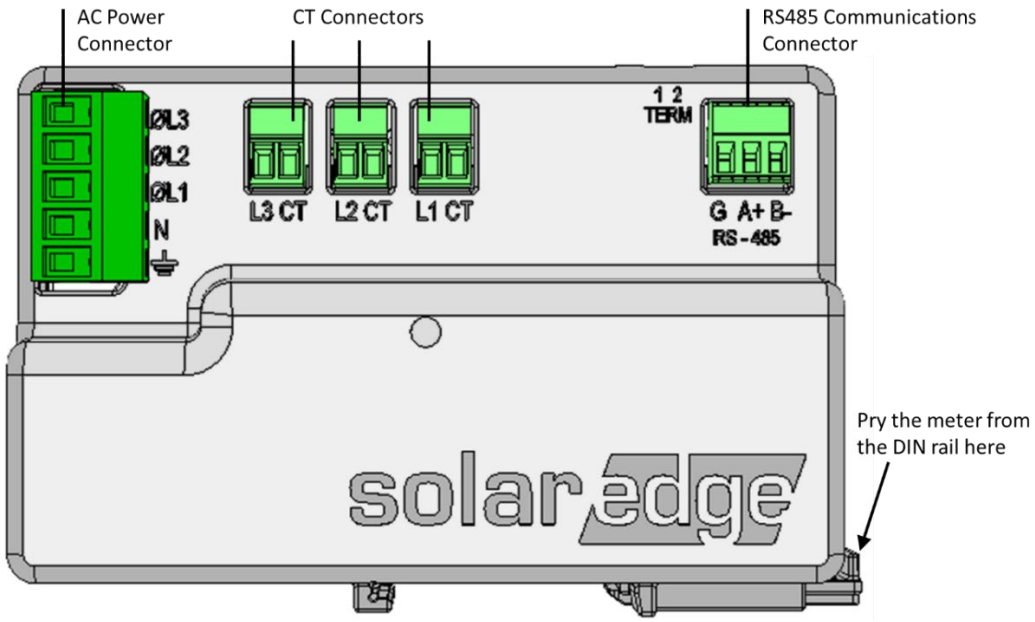
1. Switch the inverter ON/OFF/P switch to OFF.
2. Turn the switch on the cover of the DC Safety Switch to OFF.

3. Disconnect the main circuit breaker in the electrical service panel.

   WARNING

   Wait five minutes for the capacitors to discharge before proceeding with the next step.

4. Using the hex key, unscrew the screws in the DC Safety Switch, and remove the cover.
5. Unplug and remove the terminal blocks from the AC power connector, CT connectors, and the RS485 communications connector, as shown in the figure below:



6. Using the flathead screwdriver, gently pry the installed meter from the DIN rail bracket in the DC Safety Switch, and keep it handy for reference in the next step.
7. Set the MODBUS address DIP switches and the RS485 termination DIP switches in the replacement meter identically to those in the original meter.
8. Insert the replacement meter into the bracket in the DC Safety Switch.
9. Plug in the terminal blocks that you removed from the connectors in step 10.
10. The SECT-SPL-225A-T-20 current transformers (CTs) with their original cable must be installed. If a different CT is installed, or if the cables were modified, remove the existing CTs and cables and install the SECT-SPL-225A-T-20 CTs. **Do not modify the cables!**
11. Replace the DC Safety Switch cover and screw in the screws using the hex key.
12. Turn on the main circuit breaker in the electrical service panel.
13. Using SetApp, navigate to the **Site Communication** page and select **Multi Device >> Meter 1**.
14. On the **Interface** page that appears, select **Add Modbus Device**.
15. Set the external CT value to 225A.
16. Select **Power Control >> Limit Control >> Busbar Current Management**. Toggle **Active** to ON and set the main circuit breaker rating and the bus-bar rating accordingly.