The SolarEdge Revenue Grade Energy Meter with Modbus Connection

The SolarEdge Revenue Grade Energy Meter with Modbus Connection (also referred to as "the meter") enables measuring the power and energy of the photovoltaic (PV) system.

The following meter models are available:

SolarEdge Meter Model	Grid Type
SE-RGMTR-3D-208V-A	Delta
SE-RGMTR-3Y-208V-A	Wye
SE-RGMTR-3Y-480V-A	Wye

The meter is used by the inverter for the following applications:

- Production metering
- Consumption monitoring
- Export limitation
- Smart Energy on-grid applications

The meter requires *three Current Transformers* (CTs). The CTs are available from SolarEdge.

The SolarEdge inverter or the Commercial Gateway (CCG) reads the exported/imported power from a meter installed at the grid connection point or reads the consumption from a meter installed at the load consumption point.
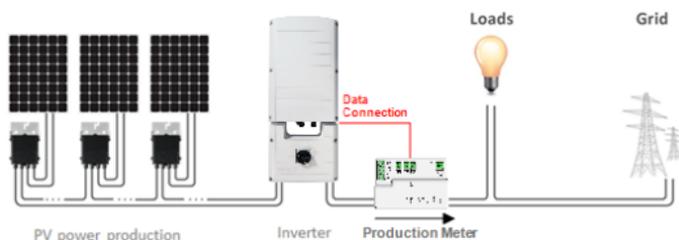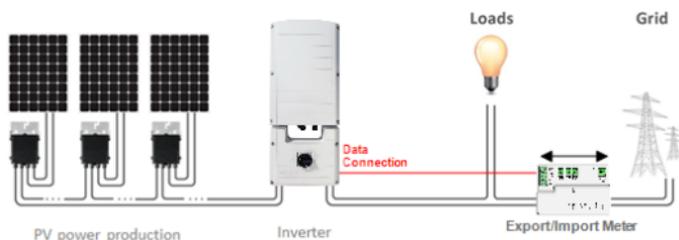
Figure 2: Typical installation with production meter

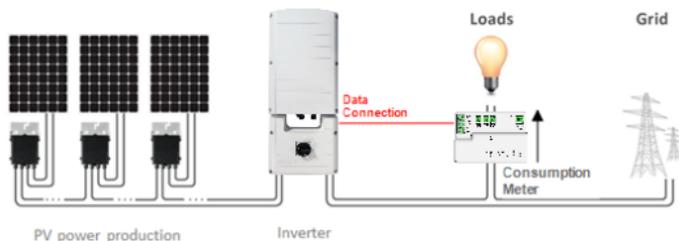Figure 3: Typical installation with export/import meter

Figure 4: Typical installation with consumption meter

Meter Connection Options

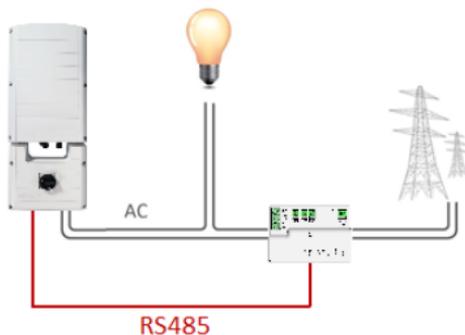In a *single* inverter system, the meter is connected directly to the inverter.

Figure 5: Single-inverter connection

In a *multiple* inverter system, two options are available:

- The meter is connected to an RS485 port of one of the inverters.

  - If the inverter has a second RS485 port, use this port to connect between the inverters.

  - If the inverter has only one RS485 port, use an RS485 Plug-In (available from SolarEdge) or ZigBee communication between the inverters.

- The meter is connected to one of the RS485 ports of a CCG. The CCG's second RS485 port can be used to create an RS485 bus for communication between the inverters. This option is illustrated in *Figure 6*.
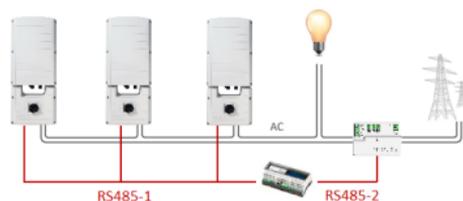
Figure 6: Multi-inverter connection with CCG and meter

Meter Interfaces
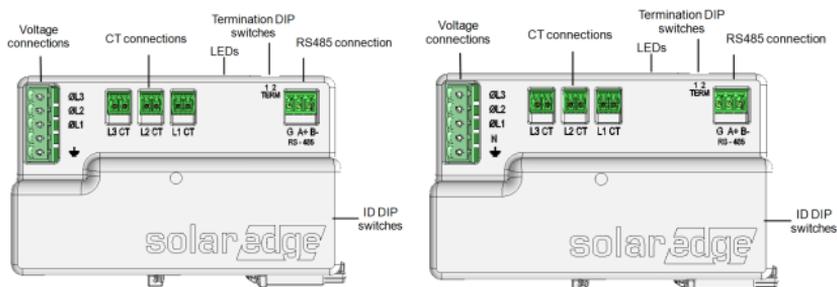
This section describes the SolarEdge meter's interfaces.

Figure 7: Delta (left) and Wye (right) Meter Interfaces

- **Voltage connections**: for connection to the grid
    - Delta: L1, L2, L3, Ground
    - Wye: L1, L2, L3, N, Ground
- **CT connections** (L1 CT, L2 CT, L3 CT): for connection to current transformers
- **RS485**: for connection to the inverter/gateway