GivEnergy®
Commercial

Metering setup manual

1 Version history

1		First release	02/01/2025

2 Acronyms

CAIO – GivEnergy Commercial All in One. A 69kWh battery cabinet with built in 30kW inverter.

EMS – Energy management system. The controller of all components, this unit has all devices connected to it and allows the system to be programmed in the desired way.

CT Clamp – A Current transformer (clamp) is used to measure the current of a cable / bus-bar. These have a primary and secondary rating, primary is the current (A) of the supply cable being measured and secondary is the output current (A) to the meter.

3 Meter information

We currently use an Eastron SDM630 V2 meter alongside our systems paired with an appropriate sized CT clamps.

The meter box contains a full instruction manual for your reference but in this guide you will find some key notes to ensure a smooth installation process.

Every system will require at least one meter to monitor the grid import/export of site.

Every system then has an option of up to two additional meters to monitor on-site generation. Generation information is used to calculate the load of site which shows on the EMS and online portal.

The meters are DIN rail mounted and should be installed in an enclosure (not provided).

V/A ESC	Selects the Voltage and Current display screens. In Set-up Mode, this is the "Left" or "Back" button.
MD/ PF/HZ	Select the Frequency and Power factor display screens. In Set-up Mode, this is the "Up" button.
P	Select the Power display screens. In Set-up Mode, this is the "Down" button.
E	Select the Energy display screens. In Set-up mode, this is the "Enter" or "Right" button.

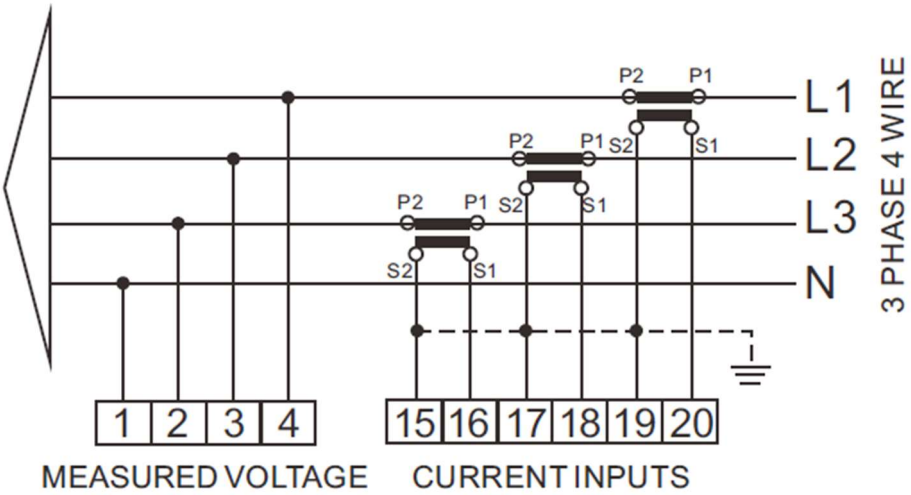
Meter button identification

4 Installation instructions

4.1 Voltage reference

The meter requires 3 phase voltage reference and auxiliary power supplies.

The voltage reference must be from the same grid connection point as the PCS is connected too. It is critical that correct phase rotation is checked, the meter **must** have the same phase rotation as the PCS.



The voltage reference supply must be protected with a fuse/MCB with a rating a maximum 20A.

4.2 Auxiliary power supply

The meter then also requires an auxiliary power supply, this can be achieved simply by linking L1(4) to LA(5) and N(1) to NA(6).

4.3 Current

Due to the range of CT clamps and Rogoski coils available it is not possible to provide instruction for each individually, please refer to the instructions provided with the CT clamps.

It is critical that the CT clamps are connected correctly paying particular attention to direction and phase rotation.

It is critical that a check is performed to ensure that the CT clamp is reading accurately before powering up the system.

5. Commissioning

Setting up the meter is simple and completed in 2 steps.

To access meter settings press and hold the enter button, use the arrows to switch between and adjust the password to access the menu, then press enter.

The default meter password is '**1000**'

5.1 Meter ID

Settings > SET Addr

- Meter 1 - **ID1** - Grid import/export meter
- Meter 2 – **ID2** - Generation meter 1
- Meter 3 – **ID3** - Generation meter 2

5.1 CT ratio

Please note that because the Eastron SDM630 V2 meter is MID compliant the CT information can only be changed once. If further changes are required this can only be achieved by a full factory reset of the meter.

5.1.1 CT Current

Set the CT current, this is the secondary current of the clamp, usually 5A

Settings > SEt Ct2

5.1.2 CT Ratio

Set the CT ratio, this uses the primary current of the clamp, divided by the secondary.

5.1.3 Examples

1. 400/5 CT clamp
    a. CT Current = **5**
    b. CT Ratio = **80** (400/5)
2. 1000/5 CT clamp
    a. CT Current = **5**
    b. CT Ratio = **200**

6 Index

1 Version history 2
2 Acronyms 3
3 Meter information 4
4 Installation instructions 5
4.1 Voltage reference 5
4.2 Auxiliary power supply 5
4.3 Current 6
5. Commissioning 7
5.1 Meter ID 7
5.1 CT ratio 7
5.1.1 CT Current 7
5.1.2 CT Ratio 7
5.1.3 Examples 7