

SigenStor Home Install with Checkwatt CM10 Guide

Three-phase System

A1

Release date: 2023-12-08

For Aprilice Installers



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Overview

Introduction

This document mainly introduces the product introduction, networking, system operation and maintenance of the devices in the SigenStor Home Three-phase system.

Readers

This document is suitable for product users and professionals

Sign Definition

The following signs may be used in the document to indicate security precautions or key information. Before installation and operation, familiarize yourself with signs and their definitions.

Signs	Definition
 Danger	Danger. Failure to comply may result in death or serious personal injury.
 Warning	Danger. Failure to comply may result in serious personal injury or property damage.
 Caution	Caution. Failure to comply may result in property damage.
Tips	Important or key information, and supplementary operation tips.

Chapter 1 Safety Precautions

Basic Information

Before installing, operating, and maintaining the equipment, familiarize yourself with this document.

The "Danger ", "Warning", "Caution" items described in this manual are only supplementary to all precautions.

The Company shall not be liable for equipment damage or property loss caused by the following reasons:

- Failure to obtain approval from the national, regional power authority.
- The installation environment does not meet international, national, or regional standards.
- Failure to observe local laws, regulations and norms when operating and maintaining equipment.
- The installation area does not meet the requirements of the equipment.
- Failure to follow the instructions and precautions in this document.
- Failure to follow the warning labels on equipment or tools.
- Negligent, improper operation or intentional damage.
- Battery capacity loss or irreversible damage caused by your failure to charge the device in time.
- Damage caused by your or a third party's replacement of our equipment (such as mixing our battery pack with other batteries, using our battery pack with other brands of inverters or converters, etc.).
- The equipment is damaged by your or the third-party company to use the accessories supplied with the package and purchase and use the accessories of the same specifications for installation.
- Equipment damage caused by improper operations such as disassembling, replacing, or modifying the software code without authorization.
- Equipment damage caused by force majeure (such as war, earthquake, fire,

storm, lightning, flood, debris flow, etc.).

- Damage caused by the failure of the natural environment or external power parameters to meet the standard requirements of the equipment during actual operation (for example, the actual operating temperature of the equipment is too high or too low).
- The equipment was stolen.
- The equipment is damaged after the warranty period.

Safety Requirements

Danger

- An overheated battery pack may cause fire or explosion. Do not expose the device to high temperature or heat sources (such as fire, or heaters) around the equipment for a long time.
- Do not clean or soak the equipment with water, alcohol, or oil to avoid power leakage or battery pack leakage.
- Do not tipover or cause impact to the equipment. In case of an accident, please stop using the equipment immediately and contact your installer, The equipment shall be inspected and evaluated by professional personnel before continuing to use.

Warning

- Do not touch the heat sink when the equipment is operating.
- When the equipment is operating, do not cover the decorative cover plate and keep the heat dissipation channel of 300–600 mm to avoid fire at high temperature.

 **Caution**

- Do not use the equipment if it has any defects. If the equipment appears abnormal (for example, battery pack leakage or appearance distortion), contact your installer.
- Carbon dioxide fire extinguishers and ABC dry powder fire extinguishers are recommended at home.
- If the equipment cannot be charged, please contact your installer in time.

Do not use the equipment in the following situations:

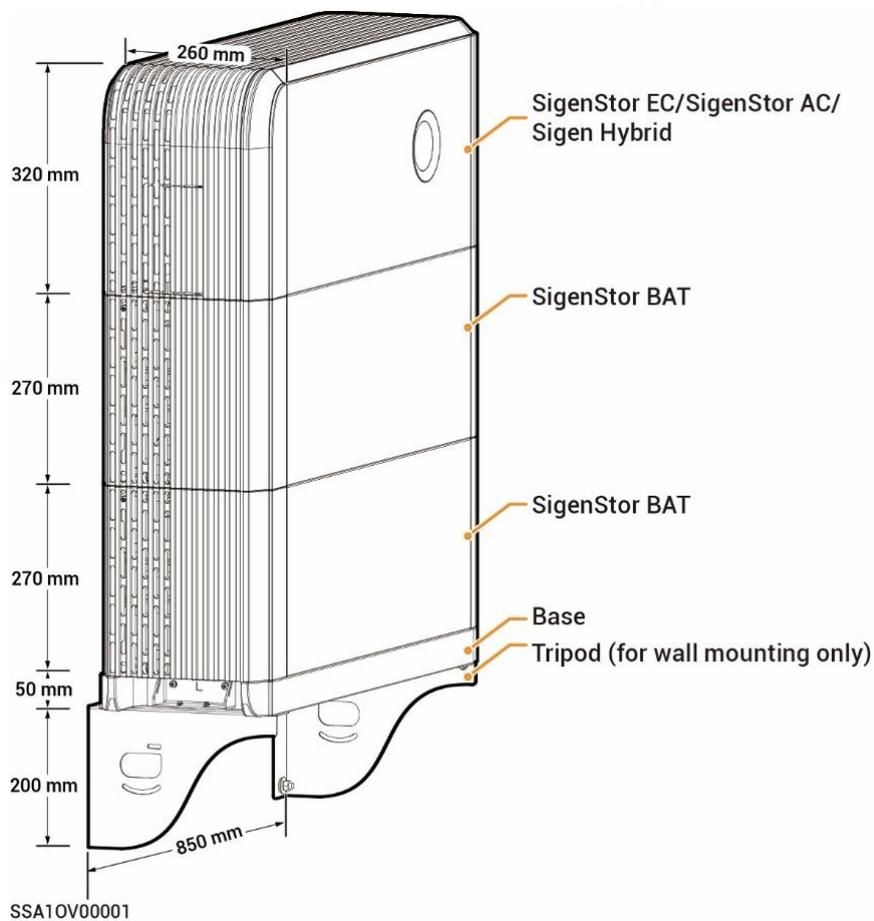
- When connected to public infrastructure systems.
- When connected to emergency medical equipment.
- When connected to elevators and other control devices.
- Any other critical systems.

Chapter 2 Introduction to energy storage system

2.1 Appearance Introduction

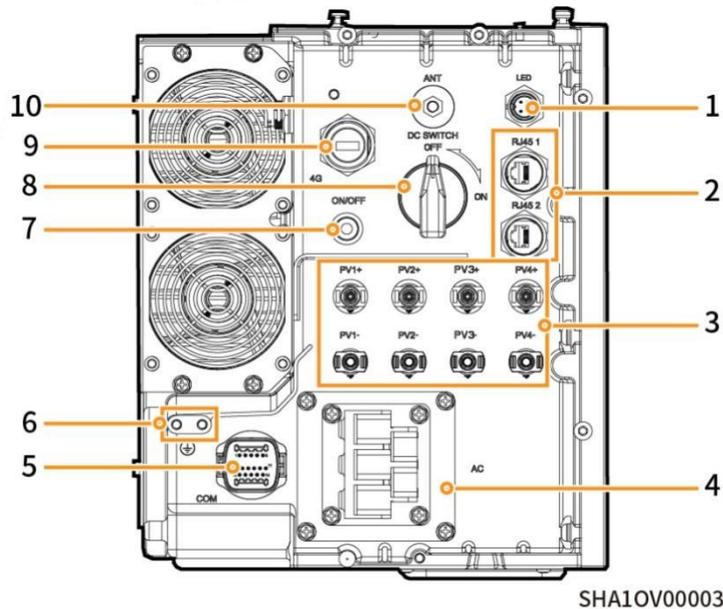
2.1.1 Appearance and Dimensions

Inverter and Battery Pack



2.1.2 Port Introduction

SigenStor EC/ SigenStor AC/Sigen Hybrid Left View



S/N	Name	Marking
1	Decorative cover light strip connector	LED
2	Network interface	RJ45 1/ RJ45 2
3	DC input interface	PV1+/PV2+/ PV3+/PV4+/ PV1-/PV2- /PV3-/PV4-
4	AC output interface	AC
5	Communication interface	COM
6	Ground screw	-
7	Switch button	ON/OFF
8	DC switch	DC SWITCH
9	Sigen CommMod interface	4G
10	Antenna interface	ANT

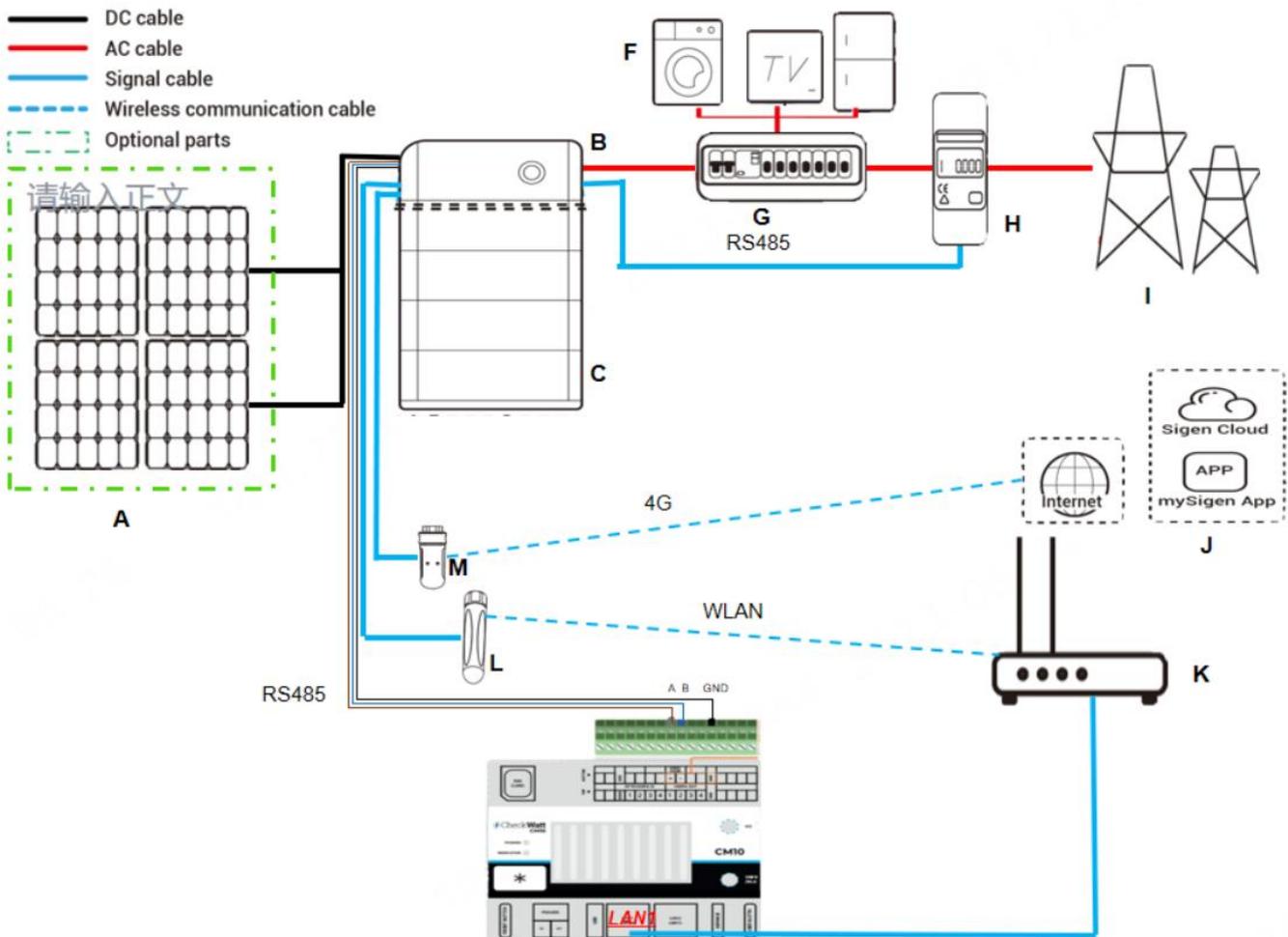
Chapter 3 Equipment Installation and Wiring

Only company authorized personnel should install and connect the equipment. For details, see **SigenStor Home Installation Guide - Three-phase System A1**.

Below is the networking figure for Modbus RTU mode with Checkwatt CM10 device using RS485.

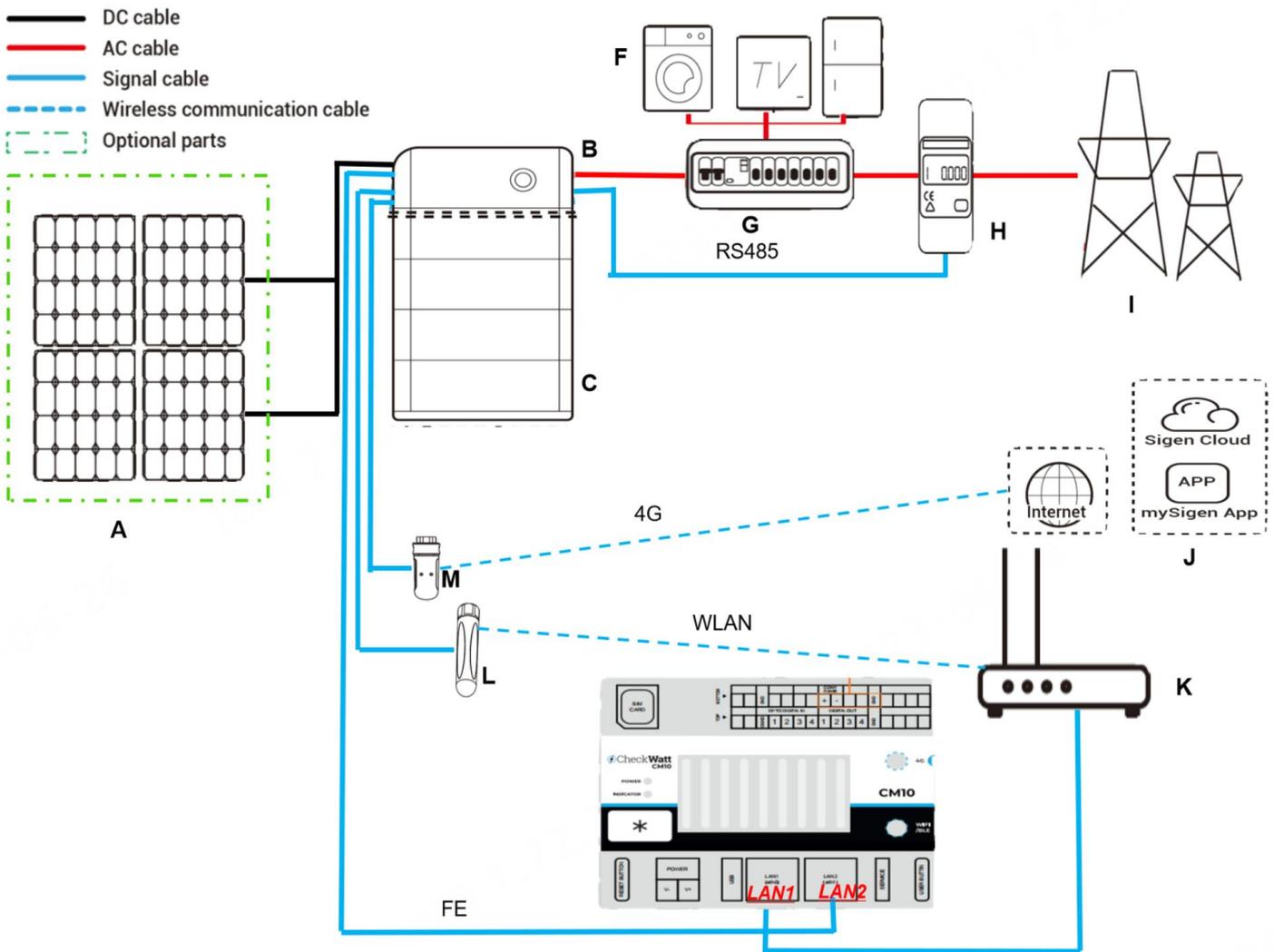
The RS485 cable from SigenStor, has three wires, among which RS485A1 should be connected to the + port of the Checkwatt device, RS485B1 should be connected to the - port of the Checkwatt device and the PE line should be connected to the GND port.

Please also refer to the wiring detail figure on page 14.



Below is the networking figure for Modbus TCP mode with Checkwatt CM10 device using FE cable.

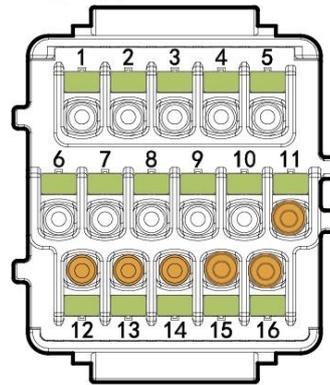
The FE cable connecting the SigenStor should be plug in the checkwatt CM10 LAN2. And the LAN1 of Checkwatt CM10 should be plug in to the router.



S/N	Equipment/component	Model/version	Function specification
A	PV module	-	-
B	SigenStor EC	SigenStor EC 5.0/6.0/8.0/10.0/12.0/15.0/17.0/20.0/25.0 TP	Inverter; it can be used in photovoltaic energy storage scenarios and needs to be used together with PV modules and SigenStor BAT.
	SigenStor AC	SigenStor AC 5.0/6.0/8.0/10.0/12.0/15.0/17.0/20.0/25.0 TP	Inverter; it can be used in pure storage scenarios and needs to be used with SigenStor BAT.
	Sigen Hybrid	Sigen Hybrid 5.0/6.0/8.0/10.0/12.0/15.0/17.0/20.0/25.0 TP	Inverter; it can be used in conjunction with PV modules for pure PV applications or in combination with PV modules and SigenStor BAT for photovoltaic storage systems after the purchase and activation of a license.
C	SigenStor BAT	SigenStor BAT 5.0/8.0	Battery pack; it can store electric energy.
D	Diesel generator	-	As a backup energy source for long-term off-grid applications, it can work in tandem with the Gateway to provide a smooth transition between PV, storage and diesel generation.
E	Gateway	Sigen Gateway HomeMax TP	It's applicable for PV storage and pure storage applications to facilitate data acquisition and monitoring, off-grid backup power switching, diesel generator control, energy management; it must be used with SigenStor BAT and inverter. Gateway is a must-have for backup networking; for partial backup power and zero-power grid connection control networking, the Gateway and power sensor must be arranged.
F	Electric equipment	-	In the backup networking, F1 is the electric equipment for backup; F2 is non-backup the electric equipment.
G	Distribution panel	-	<p>In the backup networking, G1 is the backup Distribution panel; G2 is the non-backup Distribution panel.</p> <p>The rated voltage of the AC switch connected to each inverter should be ≥ 380 V a.c, and the rated current is recommended:</p> <p>SigenStor EC/SigenStor AC/Sigen Hybrid (5.0–8.0) TP: The rated current is 20 A</p> <p>SigenStor EC/SigenStor AC/Sigen Hybrid (10.0–15.0) TP: The rated current is 32 A</p> <p>SigenStor EC/SigenStor AC/Sigen Hybrid (17.0–20.0) TP: The rated current is 40 A</p> <p>SigenStor EC/SigenStor AC/Sigen Hybrid 25.0 TP: The rated current is 50 A</p>

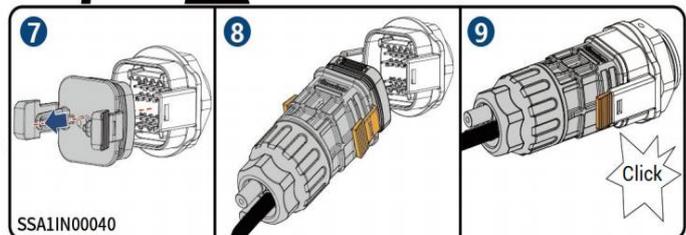
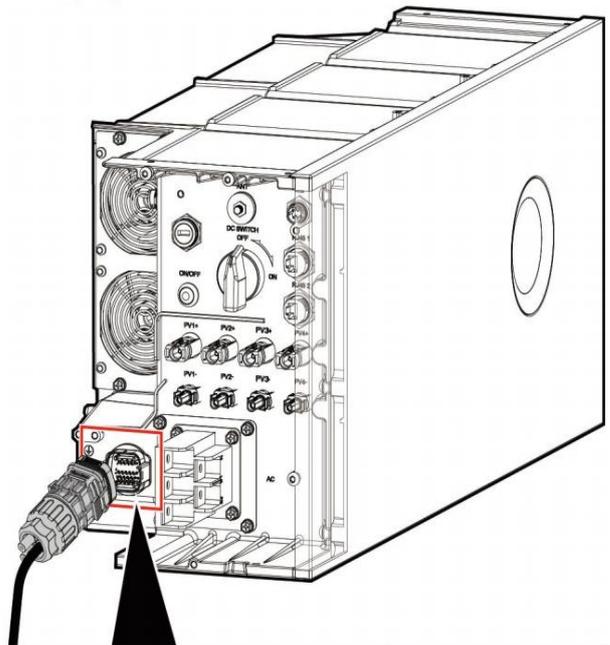
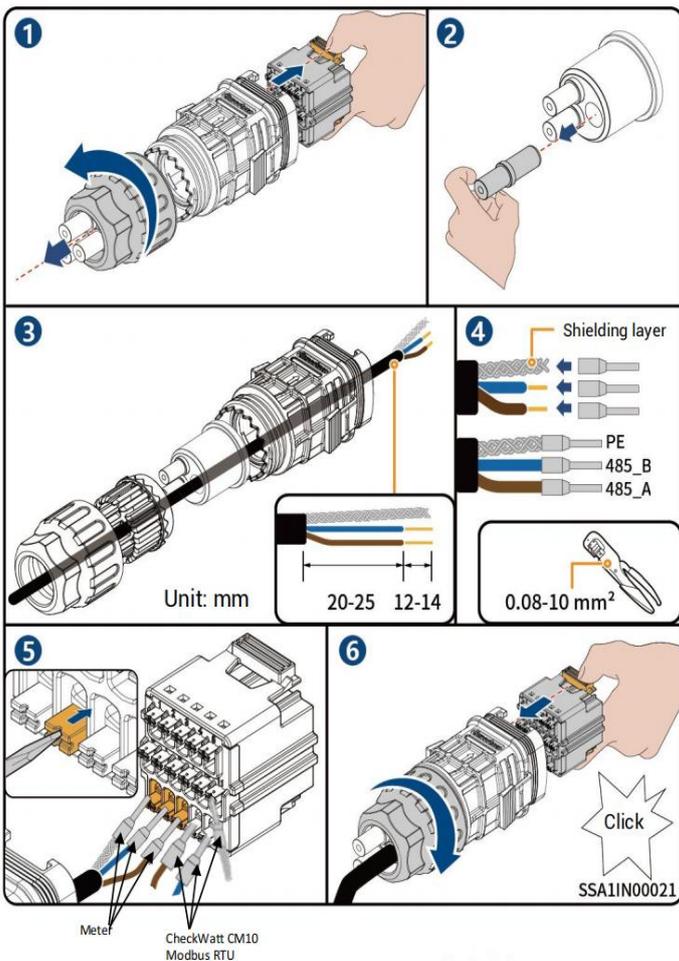
S/N	Equipment/component	Model/version	Function specification
H	Power sensor	Sigen Sensor TP-DH (SDM630MODBUS V2) Sigen Sensor TP-CT120-DH (SDM630MCT 40mA/120A) Sigen Sensor TP-CT300-DH (SDM630MCT 40mA/300A) Sigen Sensor TP-CT600-DH (SDM630MCT V2/600A)	Data acquisition for grid connection points enables zero-power grid connection.
I	Power grid	-	-
J	App	mySigen	Android 6.0 or later iOS 12.0 onwards
K	Router	-	To be used for FE/WLAN communication.
L	Antenna	-	To be used for WLAN communication.
M	Communication module	Sigen CommMod	To be used for 4G communication.

RS485 wiring detailed figure



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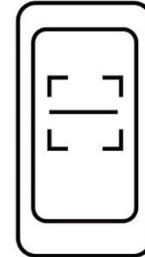
Description	Interface definition	COM terminal of the inverter
COM port used to access the power sensor	PE signal shielding ground	12
	RS485 signal 2_B-	13
	RS485 signal 2_A+	14
Modbus RS485 port	PE signal shielding ground	11
	RS485 signal 1_A+	15
	RS485 signal 1_B-	16



Chapter 4 System Operation

4.1 mySigen App Download

The App can be downloaded in the following two ways. For details, see **mySigen App User Manual**.



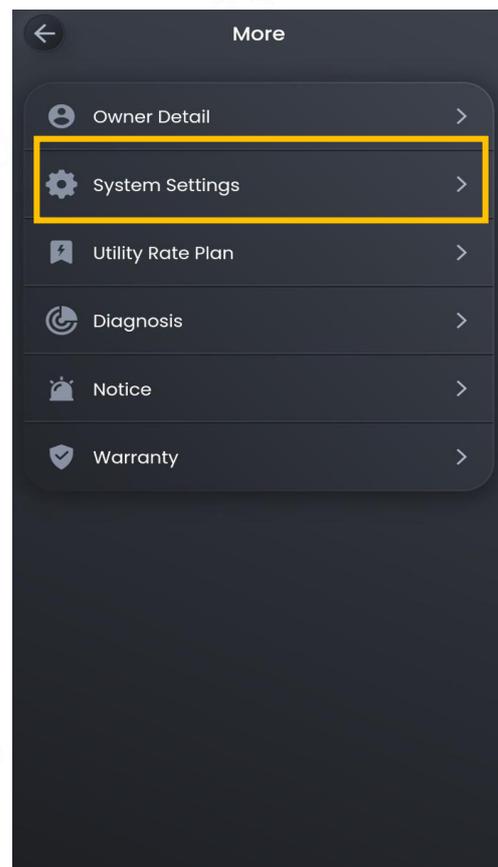
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4.2 mySigen App Setting for Modbus Control

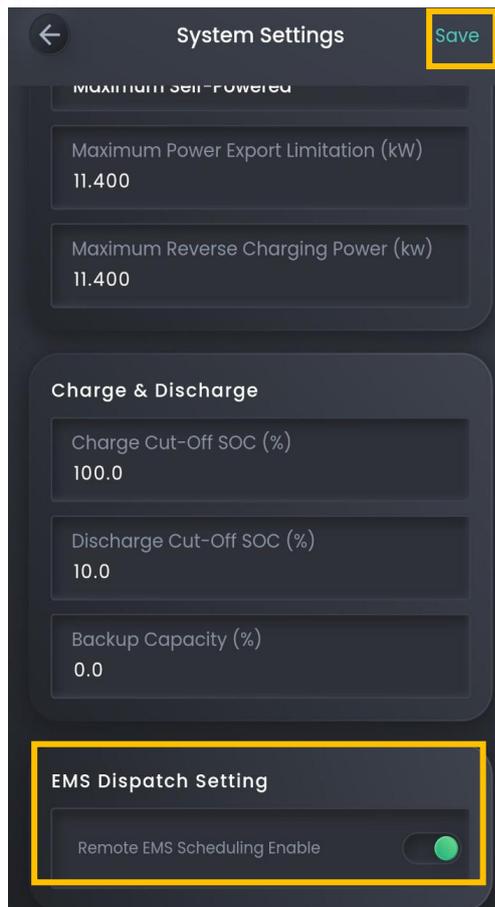
1. Setting System Remote EMS enable:

This step is obligatorily for both Modbus RTU and Modbus TCP.

In **System** panel, click on  behind the station name , and then click on **System Settings**.



In the System Settings panel, turn on the **Remote EMS Scheduling Enable** button. It is enabled, when the button is green, and disabled when the button is gray. Remember to click the **Save** button on the right corner.



2. Setting Modbus TCP server enable:

To enable the Modbus TCP mode, this step must be performed in addition to step 1.

No need for Modbus RTU mode if you only intend to use RTU mode.

Click the **Device** button to switch to Device panel. Click on the **SigenStor Settings** button, and go into the **SigenStor Settings** panel.

Turn on the **Modbus TCP Server Enable** button, and click on the **Save** button on the right.

