

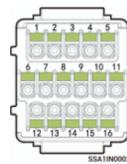
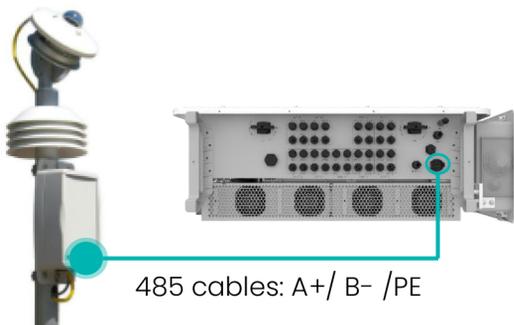
Application Note – How to add EMI devices to mySigen APP

1 Background

Environmental monitors are precision instruments used to measure and collect meteorological, solar, and environmental parameters such as total irradiance, ambient temperature, module temperature, wind speed, and wind direction. They are widely deployed in solar energy systems to provide real-time, reliable data for performance assessment, resource forecasting. This application note outlines the procedure for integrating EMI devices with mySigen APP, enabling real-time monitoring and data visualization.

2 System Requirements

- **mySigen APP Version:** The mySigen APP must be at version 3.4 or later (version 3.4 and all higher versions are supported).
- **RS485 Port Connection:** The external environmental monitoring device must be physically connected to the RS485-1 port of Sigenenergy inverter.
- **Device Compatibility:** The environmental monitoring device must be one of the supported models listed(See Page 4-Appendix) and must support the Modbus RTU protocol.



Function description	Pin Definition	Pin Number
(Reserved) Supports a maximum signal voltage of 12 V and a signal current of 1 A. Connected to third party intelligent electric equipment, such as switch control and heat pump.	DO1-COM Dry contact 1-Common	1
	DO1-NO Dry contact 1-Normal Open	2
(Reserved)	DO2-COM Dry contact 2-Common	3
	DO2-NO Dry contact 2-Normal Open	4
	DO2-NC Dry contact 2-Normal Close	11
For power scheduling, such as DRM and Ripple control Receiver (RCR).	D11 Digital input 1	5
	D12 Digital input 2	6
	D13 Digital input 3	7
	D14 Digital input 4	8
	GND Signal GND	10
Used to connect the rapid shutdown DI interface as the signal cable port for the NS protection device, Emergency power off button (EPO).	D15 Digital input 5	9
RS485-2, Used to access the mid-voltage power source.	RS485B2 RS485 signal 2_B-	13
	RS485A2 RS485 signal 2_A+	14
RS485-1, Custom port. Used to connect Meteorological Station, a third-party EMS controller and so on.	PE PE signal shielding ground	12
	RS485A1 RS485 signal 1_A+	15
	RS485B1 RS485 signal 1_B-	16

3 Adding EMI to mySigen APP

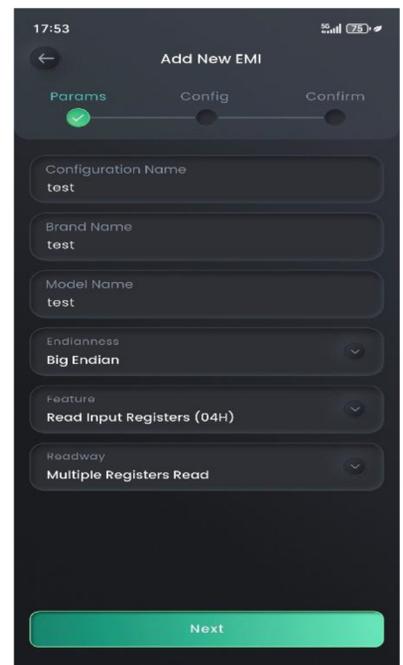
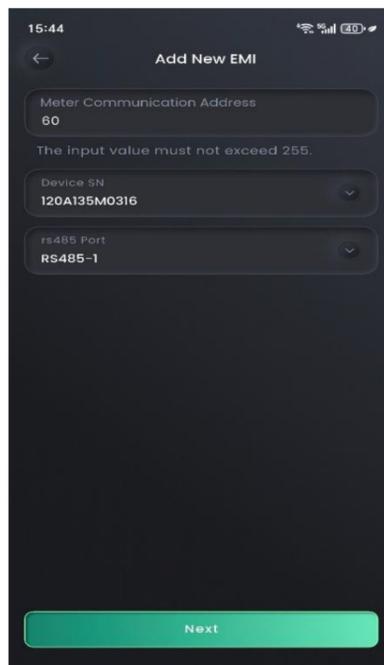
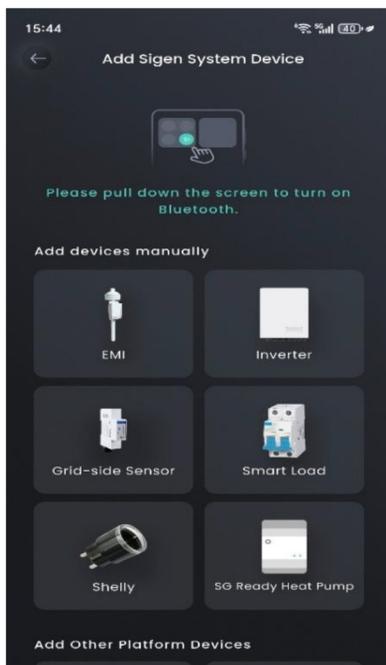
Note: Please obtain the official Modbus RTU Protocol Specification from the device manufacturer, including register maps, baud rate, and slave ID settings.

Sigen Default Communication Settings:

- Baud Rate: 9600
- Parity: None
- Stop Bits: 1

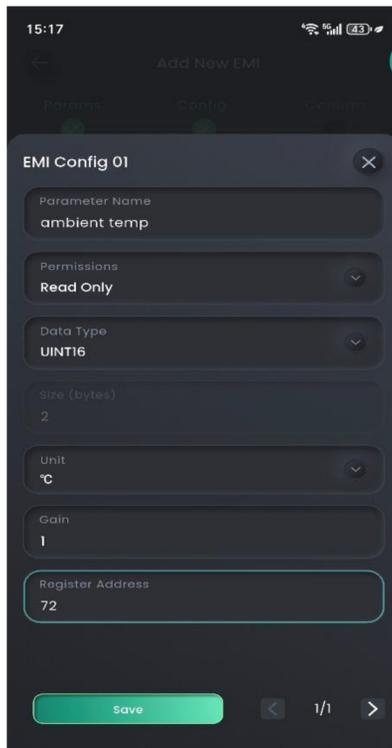
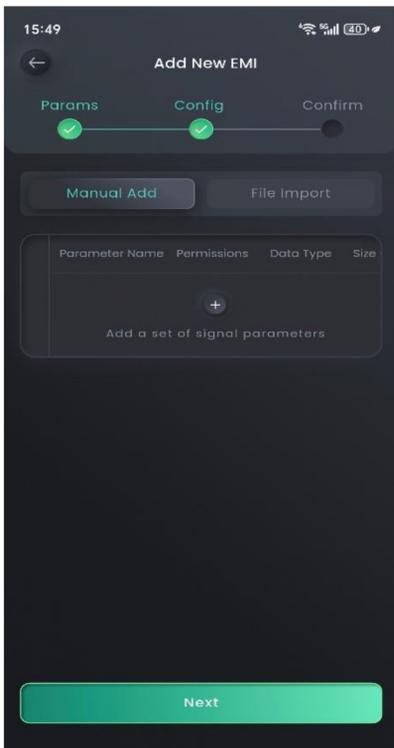
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Step 1: Add a new EMI and input basic information of site	
Parameter	Description
Meter Communication Address	Set this parameter to Modbus Device ID based on the protocol adopted by the vendor.
Device SN	Select the relevant device SN for the connected inverter.
RS485 Port	Select RS485-1 port
Configuration Name	Create a config and name it
Brand Name	Set EMI brand name
Model Name	Set EMI model name
Endianness	Set Big endian or Little endian based on the protocol adopted by the vendor.
Feature	Set this parameter to Read Holding Register 03H or Read Input Register 04H based on the protocol adopted by the vendor.
Read Way	Data points can be read in multiple or single mode. For 16/32 bit value types, we recommend using single mode



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Step 2: Add monitoring data points	
Parameter	Description
Manual Add	Set monitoring data points manually
File import	Download data address template and upload by group
Parameter Name	Set Parameter name according to protocol specifications by vendor
Permissions	Set read only
Data Type	Set integer, floating-point, or other data types according to the protocol adopted by the vendor.
Unit	Set measuring unit
Gain	Set the 'Gain' to scale the value up or down by a factor.
Register Address	Set the register address for reading according to the vendor's protocol.



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Appendix : Supported EMI list

Vendor	Model	Status
SEVEN	3S-IS-5	Supported
SEVEN Sensor	3S-IS-5	Supported
SEVEN	3S-IS-5	Supported

Note: More models are under testing. Please contact Sigen engineers if device is not in the table above.