

Third-Party Devices Supported by SolarEdge - Application Note

Revision History

Version 1.1, August 2024: Updated Janitza® UMG96-PA-MID+ Power Analyzer.

Overview

This Application Note lists all third-party devices that are supported by SolarEdge inverters or Control and Communication Gateways (CCG).

Meters

SolarEdge provides Modbus support, designed for monitoring production, consumption, import, and export and other functionalities. Additionally, SolarEdge supports the connection of certain external one and three-phase revenue meters. These meters enable SolarEdge devices to read the energy data, which is then transmitted to the SolarEdge Monitoring platform.

For further information refer to [Metering and Sensors](#) on the SolarEdge website.

The following meters are supported:

Meter Model	MID approved	Supported Functionality	Minimum. Required SolarEdge Device CPU Firmware Version	Comments
Inepro® PRO75D MODBUS	Yes	Production/Consumption monitoring	2.348	
Inepro® PRO1250D MODBUS	Yes	Production/Consumption monitoring	2.348	
Inepro® 0254 PRO1-Mod with version 1.18 and above	Yes	Production/ Consumption /Import /Export monitoring Export Limitation	3.1808	
Inepro® 0268 PRO1-Mod	No	Production/consumption / Import/Export monitoring Export Limitation		

Meter Model	MID approved	Supported Functionality	Minimum. Required SolarEdge Device CPU Firmware Version	Comments
Inepro® 0.257 PRO380 with version 1.18 and above	Yes	Production/consumption / Import/Export monitoring Export Limitation	3.1808	
Inepro® 0271 PRO380-Mod	No	Production/consumption / Import/Export monitoring Export Limitation		
Janitza® UMG104 Power Analyzer	No	Production/Consumption /Import /Export monitoring Export Limitation	For CCG from 3.2228 For Inverters from 4.12.xxx	
Janitza® UMG604 Power Analyzer	No	Production/Consumption /Import /Export monitoring Export Limitation	For CCG from 3.2228 For Inverters from 4.12.xxx	To use Janitza 604 in Delta (and specifically in Aron Circuit) topology the following configuration need to be done in the Meter: In Register 110 we need to change the value from 0x0 to 0x1
S0 meter (with 250 to 10000 pulses per kWh)	No	Import	2.xxxx	

Meter Model	MID approved	Supported Functionality	Minimum. Required SolarEdge Device CPU Firmware Version	Comments
Schneider iEM3255	Yes	Production/Consumption /Import /Export monitoring	4.19 or later	Not supported in Delta topology
Janitza® UMG96-PA-MID+ Power Analyzer	No	Production/Consumption /Import /Export monitoring Export Limitation	For CCG from 3.2228 For Inverters from 4.12.xxx	When using this meter for zero-export applications, reaction time and measured exported power might be inaccurate.

*Meters in the table are not tested or certified for G100 issue 2 amendment 2

Connect and configure meters

For detailed information on connecting and configuring meters to SolarEdge products, refer to the [Energy Meter with Modbus Installation Guide](#). For MV connection refer to [Energy Metering at a Medium Voltage Connection Point using a Voltage Transformer Application Note](#).

Environmental sensors

SolarEdge offers environmental sensors that can be used to monitor a site's irradiance, temperature, and wind velocity, enabling the calculation of the site's performance ratio. Additionally, SolarEdge supports the connection of other sensors. These sensors connect to the SolarEdge CCG.

SolarEdge has specifically tested and approved the sensors detailed in the following table, manufactured by 'Ingenieurbüro Mencke & Tegtmeyer GmbH'. However, any sensor that meets the analog sensor input specifications of the CCG can be used. Refer to the [CCG Datasheet](#) for full specifications.

The following sensors are supported:

Sensor Type	Model	Measurement Range	Electrical Output
Module Temperature	Tm-I-4090	-40...+90 °C	4..20 mA
	Tm-V-4090	-40...+90 °C	0..10 V
Ambient Temperature	Ta-I-4090	-40...+90 °C	4..20 mA
	Ta-V-4090	-40...+90 °C	0..10 V
Wind direction	4.3129.00.141	0...360°	4....20mA
	4.3129.00.167	0...360°	0-2VDC
Wind Velocity	4.3519.00.167	0...50m/s	0-2VDC
Silicon Irradiance Sensor	Si-I-420TC	0...1500W/m ²	4....20mA
	Si-V-10TC	0...1500W/m ²	0-10VDC
Pyranometers	SMP11-A	0...1600W/m ²	4....20mA
	SMP11-V	-200...2000W/m ²	0-1VDC