Power Meter Monitor

Business and Mission-

Critical Solutions Provide

Zero Export Controller

Data Sheet

Model: PMM1104
Document: Data Sheet
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DECLARATION OF CONFORMITY

This restriction is subject to protect the operational process of the system in the business environment, which will produce, use, and transmit radiofrequency energy. Harmful interference to radio communication could result if instructions to the correct installation and usage were not applied. The interference prevention cannot be guaranteed even with proper installation according to the manual. If the device causes a bad effect on the radio / TV signal. The user could preclude that by turning the device on/off.
When this device produces some harmful interference, the user can use the following measure to solve the interference problem:
1-Setting the receiving antenna's direction or location to increase the distance between this device and receiver.
2-Plug in the device's power connector into different circuits of the power outlet with the receiver.
3-If any technical support is needed, the dealer or experienced radio/TV technical personnel must be informed.

TECHNICAL SUPPORT AND SERVICE

Visit Pmm-usa.us to browse FAQs and get further details.
User should collect the following information before submitting technical support and service requests:
- Product name, model and serial number.
- Installed software (operating system, OS version, installed applications and so on).
- Full description of the problem
-Detailed information about every error.

SAFETY INSTRUCTIONS

- Only trained and qualified personnel can install, operate, or maintain the device.
- Before starting the installation, all safety precautions must be read and warning labels affixed to the device must be observed. Doing so protects the device from damage and ensures your safety.
- Safety precautions provided in this document may not cover all safety aspects, note to always remain mindful of safety.
- PMM is not liable for any consequence that results from violation of regulations pertaining to safe operations or safety codes pertaining to design, production, and equipment usage.
- DO NOT use liquids or decontamination spray to clean the device surface and assure that it is totally disconnected while cleaning.
- Take all measures to prevent device drop before or during installation.
- Prior to connecting the device to power source, ensure the source and device voltage and power are 100% matched.
- Keep the cables in a suitable covered place.
- If the device is not used for a long time, shut off the power to avoid the damages by transient overvoltage.
- DO NOT allow any liquid flow into the device; to avoid fire or short circuit.
- The recommended storage temperature range should NOT be less than 30°C OR higher than 85°C.

Warning:
- Read the power source and device inlet carefully.
- Handle device with both hands.
- Clean and maintain the device using recommended, safe and suitable methods.

Caution:
If any unauthorized changes of settings or repairs are done without PMM approval; then user's rights of controlling this device will be canceled.

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KEY FEATURES

- Integrated smart meter, logger and controller
- Preventing grid power feed-in
- Improve the zero export and self-consumption functions
- Real-time power control of up to 120 inverters at a time
- Universal Solution for all Inverter Brands
- Works flawlessly with a variety of PV setups and inverter brands
- Built-in web server enables monitoring and controlling

DESCRIPTION

PMM1104 is the ideal solution to rising utility rules for export control in residential and medium-sized commercial PV systems.

The export is achieved by restricting the quantity of solar energy fed into the grid by altering the set point of the system's inverters. As the integrated power analyzer calculates the total power at the connection point and compares it to the controller's programmable set point. The controller continually increases or decreases power on inverters while reading active power from the Net meter. PMM1104 raises power when the active power is above the maximum set point, and decreases power when the active power is below a particular set point.

PMM1104 zero export controller can be used in single- or three-phase systems and can be compatible with up to 12 different inverter manufacturers types. PMM1104 is a single device that combines a power analyzer, data logger, and controller. A new generation of single component solutions. The zero export at any moment prevents the solar system from connecting to the grid.

PMM1104 can be contained within multiple hardware chassis such as PMM0102 which has the ability to control up to 120 inverters in the same time, PMM0610 Stand-Alone which has the ability to control up to 60 inverters with an internal meter that excludes the need for an external one, and PMM0610 that controls up to 30 inverters with the need for an external meter.

Furthermore, the real-time control feature which can be used with web interface, provides a graphic representation of the historical and current grid and solar power use. The controller stores the data for further analysis on a USB. The self-consumption can be increased by applying intelligent switching of loads with user-adoptable thresholds.

PMM1104 supports a large number of different inverter manufacturers such as SMA, KACO, ABB, Fronius, HUAWEI and many more.

HARDWARE CPU CHASSIS SPECIFICATIONS (3 Options)

CPU

Option1: PMM0102

Option2: PMM0610 Stand-alone

Option3: PMM0610

Main Features

Number of inverters	120 Inverter	60 Inverter	30 Inverter
External meter need	Needed	Not needed	Needed

Interface

Ethernet	2x 10/100Base-T RJ45	1x 10/100/1000Base-T RJ45	1x 10/100/1000Base-T RJ45
USB	1x USB2.0 Type A 1x Micro USB	1x USB2.0 type A	1x USB2.0 type A
Wi-Fi	2.4 GHz		
Serial	1x RS485	2x customized Serial ports on ordering: • Isolated RS485 • Isolated RS422 • Isolated RS232	2x customized Serial ports on ordering: • Isolated RS485 • Isolated RS422 • Isolated RS232
Optional Interface	16x pins connector with following options: (max 3 options can be chosen upon order) • RS232 • RS485 • RS422 • CAN bus • Analog Input • Analog Input • Digital Input • Digital Output		
SD Slot	1x MicroSD card socket for user supplied card up to 64GB		

Power Parameters

Power Supply Options	8-40 VAC / 10-56 VDC 25-50 VAC / 36-72 VDC 85-285 VAC / 100-300 VDC	10-48 VAC / 10-60 VDC	10-48 VAC / 10-60 VDC
Power Connector	Phoenix Contact 4 pins 3.5mm	Phoenix Contact 4 pins 3.5mm	Phoenix Contact 4 pins 3.5mm

Physical Characteristics

Housing	Metal	Plastic	Plastic
Dimensions	4 x 4 x 1.75 inch (103 x 103 x 44 mm)	3.91x4.37x0.99 inch (99.4x111.2x22.6 mm)	3.91x4.37x0.99 inch (99.4x111.2x22.6 mm)
Mounting Options	Standard 35mm DIN Rail Direct Panel Mounting Front Panel Mounting 19” rack 1U	DIN Rail	DIN Rail

ORDERING INFORMATION

Order Configuration table				
PMM1104	-x	-09xx	-09xx	-09xx
1. CPU Platform: PMM0102				
Power supply				
10-56 VDC	-1			
8-40 VAC	-2			
36-72 VDC	-3			
25-50 VAC	-4			
85-285 VAC/100-300 VDC	-5			
COM Port 1				
RS485		-0912		
CAN Bus		-0910		
ANALOG INPUTS		-0901		
DIGTAL INPUT		-0920		
GSM/GPRS		-0917		
See the COM Ports table for more options				
COM Port 2 (*Same as **COM Port 1 options*)**			-09xx	
COM Port 3 (*Same as **COM Port 1&2 options*)**				-09xx
COM Port 4 (*Same as **COM Port 1&2&3 options*)**				-09xx

Table1* Com port options

COM Ports Options	
Analog input	PMM0901
Analog output	PMM0902
CANBUS (UART)	PMM0910
CANBUS (UART)	PMM0910i
CANBUS (SPI)	PMM00911
CANBUS (SPI)	PMM0911i
RS485	PMM0912
RS422	PMM0913
RS422	PMM0914
RS232	PMM0915
LTE	PMM0916
Digital input	PMM0920
Digital output	PMM0921

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2. CPU Platform: PMM0610

Stand-alone

Power supply				
10-56 VDC	-1			
COM Port 1				
RS485		-0912		
See the COM Ports table for more options				
COM Port 2 (*Same as **COM Port 1 options*)**			-09xx	

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3. CPU Platform: PMM0610

Power supply				
10-56 VDC	-1			
COM Port 1				
RS485		-0912		
See the COM Ports table for more options				
COM Port 2 (*Same as **COM Port 1 options*)**			-09xx	

CONTACT INFORMATION:

For direct inquiries or any customized orders, contact us on **info@pmm-usa.us**