



Power Meter Monitor

**Business and Mission-**

**Critical Solutions Provider**

## RS485/RS422/RS232 Repeater

# Data Sheet



**Model:** PMM0504

**Document:** Data Sheet

**Document version:** 1.1

**Date:** November 2020



## COPYRIGHT NOTICE

The information in this document is subject to change without prior notice to improve reliability, design, and function and does not represent a commitment on the part of the manufacturer.

In no event will the manufacturer be liable for direct, indirect, special, incidental, or consequential damage arising out of the use or inability to use the product or documentation, even if advised of the possibility of such damages.

This document contains proprietary information protected by copyright. All rights are reserved. No part of this manual may be reproduced by any mechanical, electronic, or other means in any form without prior written permission of the manufacturer.

## TRADEMARKS

All registered trademarks and product names mentioned herein are used for identification purposes only and may be trademarks and/or registered trademarks of their respective owners.

AMI is a trademark of American Megatrends Inc.

Intel & Atom are trademarks of Intel Corporation

IBM, PC/AT, PS/2&VGA are trademarks of International Business Machines Corporation  
Microsoft Windows is a trademark of Microsoft Corp. RTL is the trademark of Realtek Semiconductor Co., Ltd.

## 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](http://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 overruling this device will be canceled.



# CONTENTS

# PAGE

KEY FEATURES .....	4
TARGET APPLICATION .....	4
DESCRIPTION .....	4
TECHNICAL SPECIFICATIONS.....	5
ENCLOSURE ASSEMBLY INFORMATION.....	6
ENCLOSURE DIMENSIONS .....	7
ORDERING INFORMATION .....	8

## KEY FEATURES

- 2x RS232-RS485/422 Repeater
- EIA/TIA RS-232C Standard and RS-485 Standard
- 4x LED indicators to monitor network activity
- Meets all power substation requirements
- Isolated power supply
- DB9 connector in RS232 side
- Terminal block in RS485/RS422 side
- 600W Power surge protection
- ESD protection
- Bidirectional data transfer
- Safe and easy to use and operate
- Operating temperature: -40 to 80°C
- Self- adjusting Baud rate of 300 to 115.2 Kbps
- 120  $\Omega$  terminal resistor

## TARGET APPLICATION

PMM0504 can perform efficiently and effectively in the PV, substation and industrial applications as:

- Bidirectional RS232-RS485/422 converter
- RS232 Repeater
- RS485 Repeater

## DESCRIPTION

PMM0504 is an isolated RS232-485/422 converter, RS485 repeater and RS232 repeater. It has the ability to convert serial data communication types and the 120 Ohm terminal resistor helps in noise reduction as well as impedance matching. The device contains two circuits as a result it also functions as a repeater extending data transfer distances while protecting the device from ground loops, noise problems, transient surges, remote lighting and spikes. Another added feature that comes with the use of two circuits is that now you can connect a larger amount of devices as well as use two networks instead of one.

PMM0504 industrial grade media converter can function under harsh environmental conditions of any site. It is especially designed to meet all power substations and PV plants requirements. Furthermore, it covers all field standards of power, reliability, easy configuration and long-lasting life.

This device can be ordered with multiple power supply ratings to select from.

## TECHNICAL SPECIFICATIONS

### Interfaces

Serial Communication Ports	2x RS232 DB9 Connector 2x RS485 2x RS422
----------------------------	--

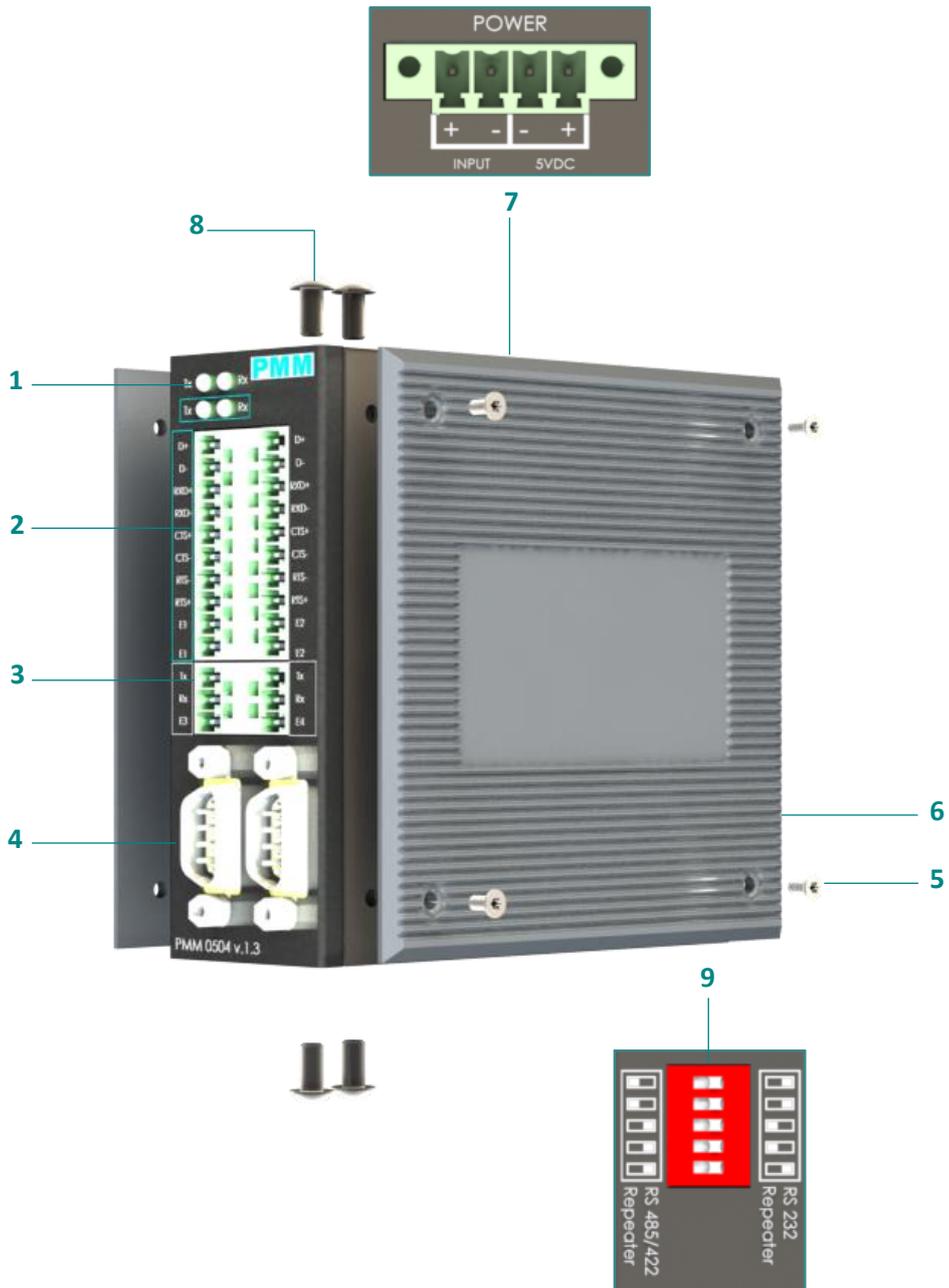
### Power Parameters

Power Supply Options	85-265 VAC / 100-300 VDC 10-48 VAC / 10-60 VDC Direct inputs 5 VDC / 3 A
Power Connector	Phoenix Contact 4 pins 3.5mm

### Physical Characteristics

Housing	Metal
Dimensions	4.05*4.05*1.45 inch (103*103*1.45 mm)
Mounting Options	Standard 35mm DIN Rail Direct Panel Mounting Front Panel Mounting 19" rack 1U

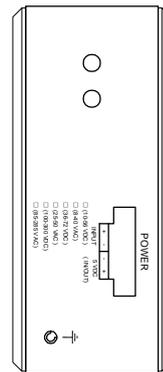
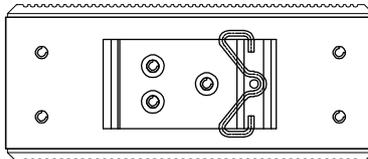
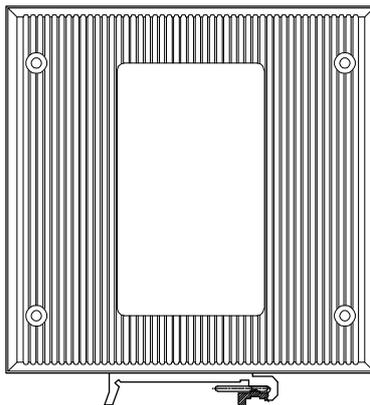
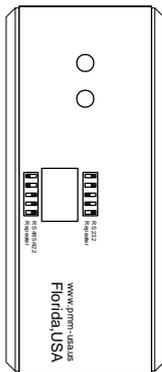
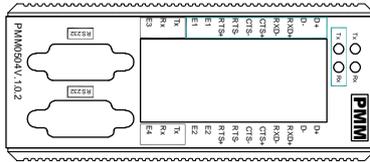
# ENCLOSURE ASSEMBLY INFORMATION



ITEM	DESCRIPTION
1	4x LED indicators
2	RS485/RS422 Port
3	Half RS232 port
4	RS232 Serial Communication Port

5	Screw
6	Heat Sink
7	Power Supply Adapter
8	Screws
9	Serial Communication Port Type Selector Switch

# ENCLOSURE DIMENSIONS



## ORDERING INFORMATION

Order Configuration table			
PMM0504	- x	- 09xx	- 09xx
<b>Power supply</b>			
85-265 VAC / 100-300 VDC	-1		
10-48 VAC / 10-60 VDC	-2		
Direct inputs 5 VDC / 3 A	-3		
<b>COM Port 1</b>			
RS232/RS42/RS485		-0912i	
<b>COM Port 2 (Same as COM Port 1 options)</b>			-09xx

### Accessories

DIN Mount (1 kit included)	DIN Rail Mounting Bracket
Wall Mounting Kit (1 kit included)	2x Wall Mounting Bracket
Panel Mounting Kit (Optional)	2x Panel Mounting Bracket
Rack Mounting Kit (Optional)	Rack Mounting Bracket

## CONTACT INFORMATION:

For direct inquiries or any customized orders, contact us on [sales@Pmm-usa.us](mailto:sales@Pmm-usa.us)