



OSI *Ohio Semitronics, Inc.*

The **LEADER** in power measurement

ISO 9001 : 2008 CERTIFIED

USER'S MANUAL FOR PDM MONITOR VI



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INTRODUCTION

The OSI PDM Monitor is a useful tool to read and record PDM data. It also serves as an example of more advanced VIs that can be created using the OSI LabVIEW PDM driver VIs.


INSTALLATION

Run setup.exe to begin installation of the monitor. Follow the prompts in the dialogs that appear.

QUICK START

1. In the C:\OSI_PDM directory (or wherever you installed the monitor software), run the file OSI_PDM.exe. The PDM Monitor panel should appear. The following page has a screenshot of the application.
2. Set the correct COM port and address for the PDM. If the address for the PDM is unknown, use 0000 and make sure only one PDM is connected.
3. Press the Run button to begin collecting data.
4. Click each measurement label and select the correct measurement name for each slot to match your unit. The PDM's LED display columns 1-3 are shown left to right in the top half. The 4th PDM display column is the left column of the bottom half. The top nine slots are the "Data" group returned by the serial port command "Read Data" or "RD," and the bottom nine slots correspond to the "Read Register" or "RR" command. The rest are the measurements only available through the serial port. Measurement slots that are not enabled on your unit will appear grey.
5. Adjust the minimum and maximum values for each measurement by double-clicking each and typing a new number and pressing enter. Negative numbers for minimums are allowed and should be used in some cases, such as VARs.
6. To record data to a file, use the Start button below the graph while in the Run mode. The data is saved when the Stop button is pressed. The data is in a time-stamped file in the Data subdirectory of the monitor's directory.
7. The scroll bar and graph buttons can be used to look through the graph data.
8. The color, style, width, and point style can be set for each measurement on the graph by clicking on the entry in the legend. Double-click on the maximum and minimum values of the y-axis and enter new limits as needed. The maximum value of the x-axis can be set to change the width of the time window.

PDM MONITOR SCREENSHOT



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Min/Max slide bar range can be adjusted by double-clicking and editing value.

Channel	Value	Scale
1 WH Sys.	240.000	240.000
2 PF	1.00000	1.00000
3 Watts Sys.	0.000000	0.000000
4 VL1-N	1.00000	1.00000
5 Sys. VARs	0.000000	0.000000
6 VL3-N	1.40000	1.40000
7 I1	0.000000	0.000000
8 I2	0.000000	0.000000
9 I3	0.000000	0.000000
10 VL1-L2	0.000000	0.000000
11 VL2-L3	0.000000	0.000000
12 VL3-L1	0.000000	0.000000
13 WL1-N	0.000000	0.000000
14 WL2-N	0.000000	0.000000
15 WL3-N	0.000000	0.000000
16 VA Sys.	0.000000	0.000000
17 Sys. VARs	0.000000	0.000000
18 WH Sys.	0.000000	0.000000

Port# Address Version

RUN

EXIT (save changes)

EXIT (don't save)

About

Communications Error

Freeze Data (press to enable)

Manual Configuration - Freeze

Manual Configuration - Standard

Clear Wait Hours

Change Address

Change color or style by pressing down on line next to channel name

WH Sys. PF Watts Sys. VL1-N Sys. VARs VL3-N I1 I2 I3 VL1-L2 VL2-L3 VL3-L1 WL1-N WL2-N WL3-N VA Sys. Sys. VARs WH Sys.

Rec Rate (s) **Start** **Recording** **Stop**

BUTTONS

Exit (save changes)

Use this button to exit the monitor and save changes. A dialog confirms you want to save settings. The settings saved are:

- Measurement labels
- Minimum and maximum values of measurements
- COM Port
- PDM Address
- Graph line styles, widths, colors, and point types
- Record rate

Exit (don't save)

Exit without saving.

Communications Indicator

The indicator will be either green or red to show if the proper COM port and PDM address is selected. Also, the PDM must be connected and powered on.

Freeze Data

Pressing this button freezes the data in the monitor application and on the PDM LED panel. This is equivalent to the serial port "FD" command and will not toggle the menu button LED.

Manual Configuration – Freeze

This button configures the Menu button on the PDM panel to act as a freeze/unfreeze toggle for the PDM LED display. This has no effect on the monitor application; this simply changes the function of the PDM's menu button when it is pressed. This button is equivalent to the serial port "CF" command.

Manual Configuration – Standard

Configures the Menu button on the PDM panel to act as a toggle between extended averaging or normal mode. This has no effect on the monitor application; this simply changes the function of the PDM's menu button when it is pressed. This button is equivalent to the serial port "CA" command.

Clear Watt Hours

Clear the watt hour reading in the PDM (if applicable).

Change Address

Enter a new address to the right of this button and press the button to change the address of the PDM. The new address is automatically loaded into the PDM address slot. To change a PDM from an unknown address, have address 0000 selected for the PDM address and set a new address.