

Power Meter Monitor

**Business and Mission-**

**Critical Solutions Provider** 

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**PMM06 Integration with Visuino** 







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### **1. INTRODUCTION**

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This Document is a fully descriptive guideline for integrating PMM06 series with Visuino. Providing the operator with the needed information in terms of instructions and screen layout allowing for easy use.

### 1.1 Description

PMM PLC Systems are built to be Arduino compatible programming environment, where PMM's PLCs Range is not just compatible with Arduino IDE, but with lots of other Arduino-compatible programming software such as Visuino.

Visuino is a **graphical integrated programming environment** which helps user program Microcontrollers and Microprocessors with the help of easy to use visual interface. It is paid software but you can download a free version which is enough at a beginner level

## **1.2 List of Compatible Devices**

- PMM0612
- PMM0620
- PMM0625
- PMM0626
- PMM0627
- PMM0628
- PMM0630
- PMM0631
- PMM0632
- PMM0635
- PMM0636
- PMM0638
- PMM0639

## 2. INTEGRATION GUIDELINES

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## 2.1 Visuino Installation Guidelines

- 1. <u>Click Here</u> to get to the installation page.
- 2. Once the main page is opened, click on "click here to download".

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3. Click on "open file" to proceed to installation.

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DOWNLOAD Our lat	est version!	to download 8.0.0.83		

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4. Visuino setup process will start, click on "Next" to continue the setup to the completion as shown in the figures below.





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5. Now everything is setup and the user can start with the device.

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## 3. PMM0625 INTEGRATION with Visuino TUTORIAL

This section is full descriptive of the instructions related to connecting PMM0625 to visuino. PMM0625-T is a reliable digital output module with 8 (80VDC) transistor isolated channels. The module sends digital signals from the CPU to the field actuators controlling their status between on/off. Each output can be individually switched on or off and can handle up to 5A. In addition, the opto-coupled architecture makes each output channel rather rugged, capable of isolating the CPU from transient voltage "spikes" and other electrical phenomena capable of causing damage. PMM0625-T is widely used in signal interface switching of PLC, single chip or other industrial control board.



Moreover, PMM0625-T operates under three operational modes:

- **Modular operation mode**: the module is connected to a PLC by RS485 and implement specific function assigned by the PLC.
- **Fail Safe mode**: the module should be pre-programmed in case of lost connection with the PLC to carry on its function effectively.
- **Stand-alone**: the module can be programmed to work as PLC and control the field devices.

### 3.1 PIN ASSIGNMENTS

**TOP VIEW** 





**BOTTOM VIEW** 



- 8. Digital output 08
- 9. VCC
- 10. COM1
- 11. VCC
- 12. COM 2

## 3.2 HARDWARE CONNECTIONS

#### **Connecting Power**

PMM0625-T has two power supply options 10-60 VDC (10-48 VAC), the user has to connect the positive power line (+) to pin no.5 in the top view and the negative line (-) to pin no.6 as illustrated in the pin's assignments.

**Note:** the power is protected against overvoltage and reverse polarity in case of wrong connection.

#### **Connecting Serial Device**

The unit's serial port is located on the top panel. If you are connecting an RS485 multidrop network with multiple devices, note the following:

- All devices that are connected to a single serial port must use the same protocol (i.e., either Modbus RTU or Modbus ASCII).
- Connect the D+ with pin no.1 and D- with pin no.2 and Earth with pin no.7 or 8 as illustrated in the pin's assignments to complete the connection successfully.
- Turn on the dip switch to have 120  $\Omega$  termination resistor between the D+ and D- lines. Refer hardware configuration section.

#### **Connecting to a Host or the Network**

There is a 10/100 Ethernet port at the module's top panel. This port is used to connect the module with a host or Ethernet network.

#### **Connecting Digital Input**

Connect the signal line with one of the eight digital output pins on the bottom view (01-08) and the common line for digital outputs from (1-4) with pin no.10 and the common line for digital outputs from (5-8) with pin No. 12.





There are 12x LED indicators at the front panel. 2x LED are for communication indication through RS485 and 8x LED for indicating the outputs status.

LED No.	Indication
Rx, Tx	Indicating the communication through RS485 port OFF: No Data is being transmitted or received through the port Flickering Green: Data is being transmitted or received through the port
Ox-08	Indicating the status of Output x OFF: Output x is off Steady-Green: Output x is on



#### **Connecting the USB**

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Connect the USB to the device through the USB port in the front panel (Micro-USB type), and connect the other side with personal computer (PC). Once the USB is connected correctly between the device and PC, the user can start the integration as explained in the Integration Guidelines:

- Visuito Visuita Acduire Programming 10.0.3
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- 1. To select our board, click on "select board".

2. Choose the Arduino zero board

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> ·· 🎬 AVR V ·· 🎆 Cortex M0			
MKR WiFi 1010			
Cortex M3	ОК	X Ca	ancel

3. Search for you desired function





4. Drag and drop the selected function to the left of the desired pin and connect it by clicking on the out pin and dragging the wire to the other side

**Note:** the example aims to define Pin No.5 as an input and monitor its status between ON/OFF when a power is connected to it, as shown in the figure below



 Press on the function to adjust values to desiring Note: here we adjusted the frequency



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6. From the bottom of the screen reselect the board and the port then press on the compile button.



7. Now your program should be running.



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