

Power Meter Monitor

Business and Mission-

Critical Solutions Provider

INDUSTRIAL MODBUS DATA LOGGER



6



Model: PMM0203 Document: User Manual Document version: 1.0 Date: August 2022



www.Pmm-usa.us

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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 <u>Pmm-usa.us</u> 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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This Document is a fully descriptive operational manual for PMM's Industrial Modbus Data Logger. Providing the operator with the needed information in terms of instruction and screen layout of the monitors, allowing for easy use.

PMM0203 data logger has Multiple Modbus channels let you interface with many different Modbus registers; the user has to specify the device address and register address numbers for each channel. Use the setup screen to configure what data to log, the data logging interval, the scale factor for each Modbus register, and save the entire configuration screen to an external file for later use. Data is logged in real time so to minimize chances of data loss due to external problems. File names include the date and time the file was created along with optional user specified text. New log files are automatically created when the maximum file size is exceeded, allowing the program to gather data for an almost unlimited amount of time without stopping the program.

PMM0203 data logger has an onscreen data trending graph displays real-time data as it is read from the Modbus slave devices. Zoom into data on the graph using one of the 3 window zoom features. Pan the graph to view the data as it changes. Specify the minimum and maximum axis values and Y Axis titles via the graph options button. Set the graph to automatically pan with time so that the latest data is always visible. Preform all of these functions while the graph updates with the latest data.

PMM0203 can be contained within multiple hardware chassis such as PMM0102, PMM0103, PMM0105, PMM0107, PMM0108 and PMM0109 in this document PMM0103 and PMM0105 are mentioned as illustration example. The CPUs are designed with a wide range of highly configurable communication ports needed in the field. All hardware chassis are rugged, powerful, reliable, fanless and cover a wide range of power supply options that offer a high level of performance and low level of power consumption. The system is especially designed to meet all power substation requirements. Furthermore, it covers all field standards of power, reliability, easy configuration and long-lasting life.

1.1 KEY FEATURES

- Multiple Modbus channels
- Easy to use setup screen
- Automatic data logging
- Data readouts
- On screen data trending graph

2. SPECIFICATIONS

2.2 Hardware CPU Chassis Specification

The Data logger Software can be installed on deferent PMM CPU's like: PMM0102,PMM0103,PMM0105,PMM0107,PMM0108,PMM0109.

You can visit our website <u>https://www.pmm-usa.us/Industrial-Computer.php</u> to choose your hardware based on your needs.

Below some examples for reference.





CPUAll winner H3 processor, Quad-core
64-bit high-performance Cortex A53Intel® Atom™ x5-Z8350 CPUDRAM512 MB4GB DD3RAMStorage8GB eMMC16GB eMMCRTC CHIP (OPTIONAL)DS3231CR2032Pre-installed OSLinuxWindows 10 lite

Computer Interface

computer interiace		
Ethernet	2x 10/100 Base ports	1x 10/100/1000Base-T RJ45
Fiber	N/A	1x 1000Base-X SFP
USB	1x USB3.0 Type A 1x Micro USB	1x USB3.0 Type A
	IX MICLO OSB	
Wi-Fi	2.4/5 GHz	MediaTek RT5572 2.5/5GHz/2x2 with
		external antennas
Serial	1x RS485	1x RS485
Optional Interface	 3x customizable communication slots: PMM RS485 Module PMM RS232 Module PMM RS422 Module 	 8 pins connector on edge with following options (max 2 options can be chosen) RS232 RS485 RS422 CAN bus Analog Input Analog Output Digital Input Digital Output
SD Slot	1x MicroSD	1x MicroSD card socket for user supplied card up to 256GB



3. MECHANICAL INSTALLATION

3.1 CONNECTIONS

3.1.1 **POWER**

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PMM0103 and 0107 have customized power supply options including: 10-56 VDC, 8-40 VAC, 36-72 VDC, 25-50 VAC, 85-285 VAC / 100-300 VDC based on these options:

• Connect the power line to the CPU terminal block (POWER) as shown in the figure below.

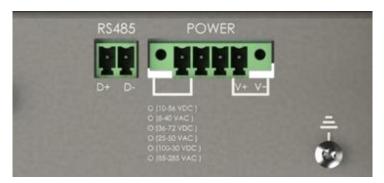


Figure 3 Power Connection

3.1.2. NETWORK

- PMM0103 has 2x 10/100 ethernet port supports up to twenty clients.
- PMM0107 has 1x 10/100 ethernet port.



4.1 login

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- Type the username "admin" and the password "admin".
- Click on "Login" to login into the system.
- *MOTE*: the username must be lowercase because the web server is case sensitive.

ISRAR	ISRAR ENGINEERING ,LLC
Username	
Password	Login

Figure 4 Login

Once the user has logged in successfully the default main web page "General Information" will be displayed as shown in the figure below.

	tallati 😂 😂 General Informations 🍰 Users Access			
=	Ceneral Informations			
	Company Name Company Taul Company Prome			
	Company Address	Jordan		
	Software licenses		PMM0103	PMM0107
	license	PMM All Converters	Industrial Computers - Arm Based Computers	Industrial Computers - 86 Based Computerss
	license Version	1.0	COMPACT ARM BASED EMBEDDED INDUSTRIAL COMPUTERS	X86 BASED EMBEDDED INDUSTRIAL COMPUTER
			PMM0108 is a rugged powerful reliable fanless Linux based embedded Industrial computer, powered by Alwinner HS CPU, which offers high-performance processing with a high degree of functional integration.	PAMA0107 is a rugged powerful reliable fanless industrial embedded computer, powered by Intel ⁹ Atom ¹⁹ x5-28350 CPU, which offers a high veci of performance and love level of power consumption.
¢;				©2014-2022 Israr Engineering LLC. All rights reserved. 声

Figure 5 General Information



4.2 Set General Information and Web Page Theme

The "general information" that is displayed at the main page must be set originally by the user. As well as, the user can redesign his own theme style to make the web page more comfortable. **Inserting general information instructions:**

• Click on "the user's icon" in the right top of the page.

III 🖠	AR General Informations 🕹 Users Access				
= 0	General Informations				My Account
	Company Materies	ttt +962789708508			Adming@isra.com Byp.Out My Profile Change Password Restart Application N Rebot Device
	Software licenses:		PMM0103		
	license :	PMM All Converters	Industrial Computers - Arm Based Computers	Industrial	
	license Version:	1.0	COMPACT ARM BASED EMBEDDED INDUSTRIAL COMPUTERS PMMM0108 is a rugged pavorful reliable fanless tinux based enhedded industrial computer, powered by Albutoner HS (PU), which offers high performance processing with a high degree of functional integration.	X86 BASED PMM0107 is a r embedded comput which offers a h	
¢.					
20				©2014-	

Figure 6 My Account

• Click on "My Profile" then the web page at which the user can modify the information manually will be displayed as shown below.

	*	😂 General Informations 🛛 🍰 Us	ers Access						
≡	🚨 My Profile								
	Setting	\$							B
				User		Company		Project	
				Туре	superadmin	Name	pmm-usa.us	Name	Petra
				Name	admin@israr.com	Phone	+962789705508	Phone	+962789705508
				Email	admin@israr.com	Email	****	Email	desade
				Phone	+962789705508	Address	Jordan	Address	Jordan
				Startup	Asset Management(Default 🗸 🗸			Location	https://www.google.com/mi
	Themes Setting	S	v	Main Header		Page Header		Content	3 8 + 1
	Menu Position	Top & Left(Default)	•	Background		Background		Background	
	Logo Type	Icon(Default)	~	Text	×	Text	· ·	Text	· · · · · · · · · · · · · · · · · · ·
	Logo Color	white	~			Border			
	Font	Calibri	•						
				Widjets		Buttons		Inputs	
				Background	×	Background	×	Background	
				Sub Background	· · · ·	Text	· · ·	Text	· · ·
¢ °				Text		Radius	Орх 👻	Border	· · ·
20				Border	· · ·			©2 Radius	014-2022 Israr Engineering LLC. All rights reserved. Орк У

Figure 7 My Profile

- Type the user's name, Email, and phone.
- Select the startup page which will be displayed once the user has logged in to the server.
- Solution NOTE: The default startup page is "Assets Management".
- Type the company's name, phone, Email, and address.
- Type the project's name, phone, Email, address, and location.
- After completing inserting all the user's, company's and project's information accurately click on "Save"
- If the information is saved "Updated successfully" will be displayed at the head of the page.
- NOTE: if the information is updated successfully the user will be able to view the general information at the startup page.

Web page theme settings:

- 1) Apply existed theme instructions:
- Select the desired theme from the theme name list.
- Click on "Refresh" to apply the theme.
- 2) Adjust existed theme instructions:
- Edit the chosen theme as wanted.
- Click on "Save".
- If the theme is saved "Updated Successfully" will be displayed at the head of the page.
- **NOTE:** the default theme is not editable.
- 3) Create new theme instructions:
- To add a new theme, click on "Add".
- Name the theme as wanted.
- Select the theme style.
- Click on "Save".
- If the theme is saved "Updated Successfully" will be displayed at the head of the page.
- Select the added theme from the theme name list.
- Click on "Refresh" to apply the theme.

4.3 Change password

The user can change the password in order to enhance the security after the first login or any other time as necessary.

Change password instructions:

- Type the current password.
- Type the new password.
- Retype the new password for confirmation.
- Click on "Change password".
- If the new password is saved "Updated Successfully" will be displayed at the head of the page.

admin@israr. admin@israr.com	com
Current password	Ø
New password	Ø
Re-type new password	Ø
Change Password	

Figure 8 Change Password

To restart the application

• Click on "Restart Application".

To reboot the device:

- Click on "Reboot Device".
- The reboot process may take a while.

	My Account	×
	admin@israr.com admin@israr.com Sign Out	
1	L My Profile	
	Change Password	
	2 Restart Application	
alaana a	U Reboot Device	
Ann		

Figure 9 My Account Options

In order to set the data logger settings configuration:

- Login to the data logger.
- Click on the left screen at the startup page.
- Click on MB-Data Logger as shown in the figure below.
- The overview page will be displayed.

		rmations
Asset Manage	ment	
SCADA	Diling System	
i ERP-CRM	С овм	
Servers		
IEC 60870	#Wess DLMS HR	
What DLMS RT	agivent DLMS Server	
NIN Meter-API	MB Data Lopper	
Weather Log	PPC	
🔍 🚽 Zero Export	Mars DNP3	

Figure 10 Asset Management

4.4 Overview

Overview displays the status of the device and connected devices. Overview consists of three sections:

- 1) Run Time Console: displays the device status, alarms and operational modes.
- 2) system Information: displays system's performance measures as it illustrates the usage and free percentage of:
- CPU.



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- CPU.
- RAM.
- Disk.
- 3) System Summary which displays:
- The software version.
- Last Time Started.
- Servers' status which displays the status of Signal-R server and its address, RTU Modbus Slave and TCP Modbus slave, the number of connected TCP clients, number of connections and number of tags.
- Web API status, address, and number of calls.
- Alarms & Events.

Overview				
E RunTime Console			• • •	System Summary
Connected.				Software Version: 1.0.00 Last Time Started: 8/38/2022 12:57:66 PM Servers Status
_				Signal-R Server: Connected Signal-R Address: http://127.0.0.15050 RTU Modbus Slave: Stopped TCP Connected Clients: 0 Number of Connections: 5 Number of Tags: 49
Custom Informations			La.	Web API
System Informations CPU	CPU	RAM	DISK	Web API Status: Connected Web API Calls: 961 Web API Address: http://127.0.0.1:5005 System Alarms & Events
2.9 GHZ 05.0%	29 C (13.0%)	7.500 GB 775%	283.000 GB 74.5%	System Total Errors: 7 Ack

Figure 11 Overview

4.5 Monitoring:

The user is able to monitor the status of connections and tags from this page.

• To the auto refresh of the status check the box "Auto Refresh" **Connections Monitor:**

• Displays the connections, their status whether **Good**, **Error**, **Idle**, the time and whether the connection is enabled or disabled.

Status	Description			
Good	The connection status is good and			
	has no problem			
Error	There is an error with the connection			
	that the user must fix			
Idle	The connection is neither connected			
	nor has a problem to fix			

Connection	Status	Time	Enabled
Good	Error	Idle	

Figure 12 Connections Monitor

Tags Monitor:

• Displays the connection name, the tag name slave ID, address, raw value; which is the initial input value without any processing and the value which is the value after processing whether scaling or ordering.

Connection Name	Tag Name	Slave ID	Address	Raw Value	Value

Figure 13 Tags Monitor

4.6 Reports

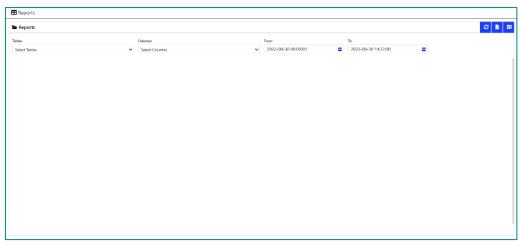


Figure 14 Reports

This page enables the user to export the data logged in the data base into an easy-to-read format for operators.

- Choose from the "Tables" drop list the desired timer to export the data from.
- Choose from the "Columns" drop list desired tags to export the data from.
- Choose the desired from to date from the calendar.
- Click on "Refresh" to start uploading the data.
- Click on "Export to PDF" to save the data as PDF.

NOTE: In case of requesting a large amount of data >3000 record, there are two options available:

• Either the data will be downloaded by default in separated .CSV file with the current date instead of being displayed on the screen.

- Or by using direct WebAPI link as follow : <u>http://(Your Device IP Adress):5005/pmmapi/command?commandString=command,sqlselectinjson</u>, <u>query statement</u>
- Where the query statement:

Select TagsName from TimerName where "Timestamp" ≥ "From Date" and "Timestamp" < "To Date"

TagsName: you can insert tags name separated by comma and each value between two back quotations (') .. e. g: 'Tag01','Tag02',..etc

TimerName:' you can insert Timers name separated by comma and each value between two back quotations (') .. e.g.: 'Timer01','Timer02',..etc

From Date & To Date : should be in Unix format (YYYY-MM-DD HH:mm:SS) and between two single quotations (`) e.g: `2010-08-20 23:00:00`

🖉 NOTE:

- The WebAPI command shouldn't exceed 255 characters in total.
- Keep some delay between Commands to not overload device CPU.

4.7 Basic Settings

Basic Settings	• •	General Servers Co	nfigration 🕒	Network Settings			
Server Name	PMM04020103	Server Auto Start:		Name	Ethernet1	Name	Ethernet2
Server Location	Amman	Web API Auto Start:		IP Assignment	DHCP v	IP Assignment	Manual
Time Zone	~	Enable Datalogging:		IP Address	192.168.1.62	IP Address	192.168.2.114
Local Date	■ 21 / 9 / 26	Enable Scripts		Netmask	255.255.255.0	Netmask	255.255.255.0
Local Time	0 7 : 32 : 22	API Port:		Gateway	192.168.1.1	Gateway	192.168.2.0/24
Set time to	Auto 👻	Reading Cycle:	(>=500 ms)	DNS Server 1	0.0.0.0	DNS Server 1	8.8.8.8
NTP/IP Address		Keep Record For	One Month 👻	DNS Server 2	0.0.0.0	DNS Server 2	4.4.8.8
			Start Rebuild	Status	Connected	Status	ETHERNET2 NOTFOUND
			Start Nebuild	Status	Connected	Status	ETHERNEL2 NOTFOUND
Serial Settings Part 1 Name		Post 2 Name					
Port 1 Name	COM1	Port 2 Name	COM2	Port 3 Name	COM3	Port 4 Name	COM4
Port 1 Name Baud Rate	COM1 75 •	Baud Rate	COM2	Port 3 Name Baud Rote		Port 4 Name Baud Rate	COM4
Port I Name Baud Rote Parity	COM1		COM2	Port 3 Name Boud Rate Parity	COM3	Port 4 Narree Baud Rate Pasity	COM4
Port 1 Name Baud Rate	COM1 75 •	Baud Rate	COM2	Port 3 Name Baud Rote	COM3 75 ¥	Port 4 Name Baud Rate	COM4 75 ~
Port 1 Name Baud Rote Parity	COM1 75 ~ None ~	Baud Rate Parity	COM2 75 • None •	Port 3 Name Boud Rate Parity	CDM3 75 V None V	Port 4 Narree Baud Rate Pasity	CDM4 75 None
Port 1 Name Baud Rate Parity Data Bits	COM1 75 • None • 7 •	Boud Rate Perity Data Bits	COM2 75 • None • 7 •	Purt 3 Name Easd Rote Porty Data Ris.	CDM3 75 ~ None ~ 7 ~	Port 4 Name Boud Rate Party Data Bits	COM4 75 • • • • • • • • • • • • • • • • • • •

Figure 15 Basic Settings

4.7.1 Basic Settings

Basic settings display the server's name, location, time zone, local date and time, set time to and NTP/ IP address.

Server Name	PMM04020103
Server Location	Amman
Time Zone	
Local Date	■ 21 / 9 / 26
Local Time	0 7 : 32 : 22
Set time to	Auto
NTP/IP Address	

Figure 16 Basic Settings



• The user can change the time zone based on the server location.

4.7.2 General Server Configuration

Server Auto Start:		
Web API Auto Start:		
Enable Datalogging:		
Enable Scripts		
API Port:		
Reading Cycle:		(>=500 ms)
Keep Record For	One Month	v
	Start	Rebuild

Figure 17 General Server Configuration

• To enable the server auto start, check the box "server auto start" this means that the data will be automatically saved to the data base.

NOTE: if the user wants to control the process manually; click on "Start" to start connecting with the server and saving the data in the data base and click on "Stop" to stop the process.

- To enable Web API Auto Start, check the box "Web API Auto Start".
- To enable datalogging, check the box "enable datalogging".
- To enable scripts, check the box "enable scripts".
- Type the API port.
- Type the reading cycle (reading cycle \geq 500ms).
- Select from the drop list the time period which is desired to keep the record for.

Parameter	Value
	One month
	Three months
Keep Record For:	Six months
	One year
	Forever

Rebuild: click on "Rebuild" when a new logging timer is defined or a new tag to add them in the data base and start logging data into them.

4.7.3 Network Settings

PMM0103 has 2x TCP ports, it is required to insert the settings for each port manually by the user.



Name	Ethernet1	Name	Ethernet2
IP Assignment	DHCP ~	IP Assignment	Manual 🗸
IP Address	192.168.1.62	IP Address	192.168.2.114
Netmask	255.255.255.0	Netmask	255.255.255.0
Gateway	192.168.1.1	Gateway	192.168.2.0/24
DNS Server 1	0.0.0	DNS Server 1	8.8.8
DNS Server 2	0.0.0.0	DNS Server 2	4.4.8.8
Status	Connected	Status	ETHERNET2 NOTFOUND

Figure 18 Network Settings

- Insert the IP Address, Netmask, Gateway for each port.
- After the user completes inserting the settings for the ports, click on "Save".
- If the settings are saved "Updated Successfully" will be displayed at the head of the page.
- NOTE: once the user has set the ports settings the status of each port will be updated.
 Network Settings:

Parameter	Value	Notes
Name	Ethernet 1, Ethernet 2, Ethernet 3, Ethernet 4	
IP Address	Default IP Address is 192.168.1.240 (or other 32-bit number)	The IP (Internet Protocol) address identifies the server on the TCP/IP network.
Netmask	255.255.255.0 (or other 32-bit number)	Netmask identifies the server as belonging to a Class A, B, or C network.
Gateway	192.168.1.1, 192.168.2.1, 192.168.3.1, 192.168.4.1	
Status	Connected/ disconnected	Displays the connection status

4.7.4 Serial Settings

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Serial Settings		
Port 1 Name	COM1	
Baud Rate	75	÷
Parity	None	v
Data Bits	7	v
Stop Bits	1	v
Flow Control	None	Ŷ
Interface	RS-232	¥
Timeout	1000	(ms)
Status		





There are four serial ports the user must set the required parameters for each port.

- Select the Baud Rate ranges from 75 to 128000 bps, Parity, Data Bits, Stop Bits, Mode (RTU or ASCII) from the drop list for each port
- Type the timeout in (ms).
- Click on "Save"

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- If the settings are saved "Updated Successfully" will be displayed at the head of the page
- NOTE: selecting the mode is adjustable only if the user has chosen Modbus gateway mode.
 Serial settings:

Parameter	Value	Notes
Port Name	COM1, COM2, COM3, COM4	
Baud Rate	75, 110, 134, 150, 300, 600, 1200, The serial port baud rate 1800, 2100, 4800, 7200, 9600, server must match the set 14400, 19200, 38400, 57600, rate of the connected dev 115200, 128000 bps server must match the set	
Parity	None, Odd, Even, Mark, Space	This setting must match the data format of the connected device
Data Bits	7,8	This setting must match the data format of the connected device
Stop Bits	1, 1.5, 2	This setting must match the data format of the connected device
Flow control	None, RTS/CTS, RTS Toggle	
Interface	RS-232, RS-422, RS-485 2 wires, RS- 485 4 wires	
Timeout	Any inserted value in ms	 Timeout field is used to configure how long the gateway will wait for a response from a Modbus ASCII or RTU slave. ✓ NOTE: This field is set independently for each serial port ✓ NOTE: the timeout is set in ms

4.8 Modbus Settings

This page enables the user to add logger timers and control the settings of connections and tags.

A Quick Settings						
E Logging Timer	+ 🛱 日	🖴 Tags - 🔂 🕒 🛱 🕂	Settings			Ð
Timer	ahmadOnly 👻	Tag Name	Basic Settings		Scaling	
	Enabled Zero Based			Enabled		Enable Scaling
Interval	5000 (***)		Slave ID			Scale to float
Delay	5000 (***)		Туре	Bool 🗸	Upper Limit	
	444		Bit Number		Lower Limit	
			Address		Scale X1	
Connections	+ 🗇 🔒		Order	ABCD ¥	Scale X2	
Connections			Swap Order	1 v	Scale Y1	
Name	SerialCon1 🗸		ModBus Type	F01 : Read Colls 🗸	Scale Y2	
	✓ Enabled		Logging Settings			Vout = Vin [(Y2-Y1) / (X2-X1)]
Type	Modbus RTU 👻		Log Timer 1	NDN ¥		
IP Address	0.0.0.0		Log Timer 2	NDN ¥		
Port	0		Log Timer 3	NON ~		
Com Port						
	COM1 ~					
Timeout	1000 (ms)					
D	1					





Q

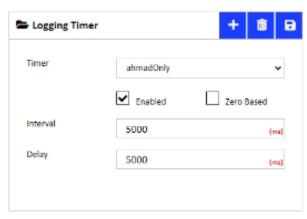


Figure 21 Logging Timer

- Click on the add icon "+".
- Type the desired name in "Timer" field.
- Check "Enabled" to enable the timer to save the values in the data base.
- Type the desired interval needed between the readings in (ms).
- Type the desired delay time needed between the readings in (ms).
- Click on "Save".
- Click on "Delete" to delete any not needed timer.

NOTE: after following the previous instructions make sure to click on "**Rebuild** in the general server configurations" to add the timer in the data base and start logging into it.

4.7.2. Connections Settings

Connections		+ 🗰 🖯
Name	SerialCon1	~
	✓ Enabled	
Туре	Modbus RTU	v
IP Address	0.0.0.0	
Port	0	
Com Port	COM1	Ť
Timeout	1000	(ms)
ID	1	

Figure 22 Connections Settings

- Click on the add icon "+".
- Type the desired name for the connection.
- Check "Enabled" to enable the connection data logging.
- Choose the type of the connection from the drop list.

Parameter	Value		
Connection Type	Modbus TCP		
	Modbus UDP		
	Modbus RTU		
	Modbus TCP Slave		
	Modbus RTU Slave		

- Set the IP address.
- Set the port number.
- Choose the com port from the drop list.
- Type the timeout for the connection in (ms).
- Type the slave ID.
- Click on "Save".
- **NOTE:** after following the previous instructions make sure to click on "Rebuild in the general server configurations" to add the connection in the data base and start logging into it.
- To delete a not needed connection click on "delete".

4.7.3. Tags Settings

asic Settings			Scaling	
	Enabled			Enable Scaling
Slave ID				Scale to float
Гуре	Bool	~	Upper Limit	
3it Number			Lower Limit	
Address			Scale X1	
)rder	ABCD	~	Scale X2	
wap Order	1	~	Scale Y1	
fodBus Type	FD1 : Read Colls	*	Scale Y2	
				Vout = Vin [(Y2-Y1) / (X2-X1)]
gging Settings				
g Timer 1	NDN	*		
g Timer 2	NON	~		
g Timer 3	NON	~		

Figure 23 Tags Settings

4.7.3.1. Basic Settings

- Check "Enabled" to enable the connection data logging.
- Type the slave ID.
- Choose the data type from the drop list.

Parameter	Value		
Туре	Bool		
	Bitfield 16		
	Bitfield 32		
	Int16		
	Ulnt16		
	Int32		
	Ulnt32		
	Float32		



- Type the "Bit Number".
- Type the "Address".
- Choose the tags "Order".

Parameter	Value
	ABCD
	BADC
Order	CDAB
	DCBA
	CDBA
	DCAB

- Choose the swap order from the drop list.
- Choose the Modbus type from the drop list which sets the desired function for the tag.

Parameter	Value	
Modbus Type	F01: Read Coils	
	F02: Read Discrete Input	
	F03: Read Holding Registers	
	F04: Read Input Registers	
	F05: Write Single Coil	
	F06: Write Single Register	

4.7.3.2. Logging Settings

- The user can choose up to three log timers for logging the tags in.
- Choose the log timers needed from the drop lists.

4.7.3.3. Scaling

- To enable the scaling function for the logged values, check the box "Enable scaling".
- To scale to float, check the box "Scale to float".
- Set the upper and lower limits.
- **MOTE:** the upper and lower limits values shall only be a number, 0 or NON.
- Set the scaling values: X1, X2, Y1, Y2.

Scaling values conditions:

1) X2 ≠X1 && X2 > X1

2) Y2 ≠Y1 && Y2 > Y1

The scaling equation:

V_{out}=V_{in} ((Y2-Y1) /(X2-X1))

- Click on "Save" to save the tags settings.
- All the tags along with their settings will be displayed in "Tags".



Se Alarms							<i>8</i> +
Prideity		Search					
	~						
Action Alarm	D	Tag Name	Condition	Value	Priority	Message	
No Data Avaliable							
							N 1

Figure 24 Alarms

This page enables the user to define and set the conditions on which an alarm or warning must be issued.

- Click on "Add icon +".
- Specify the desired action that need to be taken based on the alarm.
- Specify the alarm ID.
- Specify the tag that is associated with the alarm.
- Set the condition that makes the alarm issued.
- Set the value of the alarm.
- Set the priority of the alarm.
- Type the message that comes along with the alarm or warning.
- Click on "Refresh" to save the new alarms.

The priority types:

Parameter	Value	
	All	
	Disabled	
	Alarm	
Priority	Warning	
	Message	
	Event	
	General Alarm	

4.9 About

About Page consists of three sections:

- 1) General Information: Displays general information about the data logger server including:
- Model Name.
- Serial Number.
- Software Version.
- Firmware Version.
- Hardware Base.
- Hardware Version.
- **NOTE:** general information is set by the manufacturer and it is not editable.
- 2) Project settings & Firmware:
- Click on "Backup" to create project settings backup.
- Click on "Restore" to restore a previously created project setting.
- **NOTE:** Same instructions are applicable for Firmware as the user can create firmware backup or restore a previously created firmware.

- 3) Alarms & Events Log: The user may adjust the duration of keeping logs, download logs and delete logs. Adjust Keeping Alarms & Events Log Duration Instructions:
- Type the number of days you want to keep the logs for in the specified field and check the box to enable the setting.
- Click on "Save". Download Alarms & Events Log Instructions:
- Choose the required alarms & events log based on the day and date from the drop list.
- Click on "Download".
 Delete Alarms & Events Log Instructions:
- Choose the required alarms & events log based on the day and date from the drop list.
- Click on "Delete".

🍄 About			
Seneral Information	Project Settings & Firmware		🖴 Alarms & Events Log 🔂 🕹 🧃
Model Name	Settings :		Alarms Log:
Sorial No.	Backup	Restore	Select Columns ~
Software Version	FirmWare :		Events Log:
Firmware Version	Backup	Restore	Select Columns V
Hardware Base			Keep Logs For:
Hardware Version			(DVIS,RUMBER)
E Developed By		E Licensed To	
DMM ^{LLC} 633 NorthEx North Miami	NETER MONITOR htt 157th street, julit 1214 1846-filorida 3022,05A WV PMM-USA.US		ISRAR ENGINEERING LLC Zahran Sudiah Complex 81d, 21,541a 583 Amman 111153,01030 WWW.ISRAB.COM
License Status:			P 5
	Hard	ware ID	
	This N	lachine ID	

Figure 25 About

4.10 Sign Out

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After completing settings configuration, the user signs out of the system.

- Click on "Admin".
- Click on "Sign out" then the log in window will be displayed.

_ My Account	×
admin@israr.com admin@israr.com Sign Out	1
💄 My Profile	
Change Password	
2 Restart Application	
U Reboot Device	
1	

Figure 26 Sign Out

