



Innovative Electronics for a changing World

AC ENERGY MONITOR



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System description:

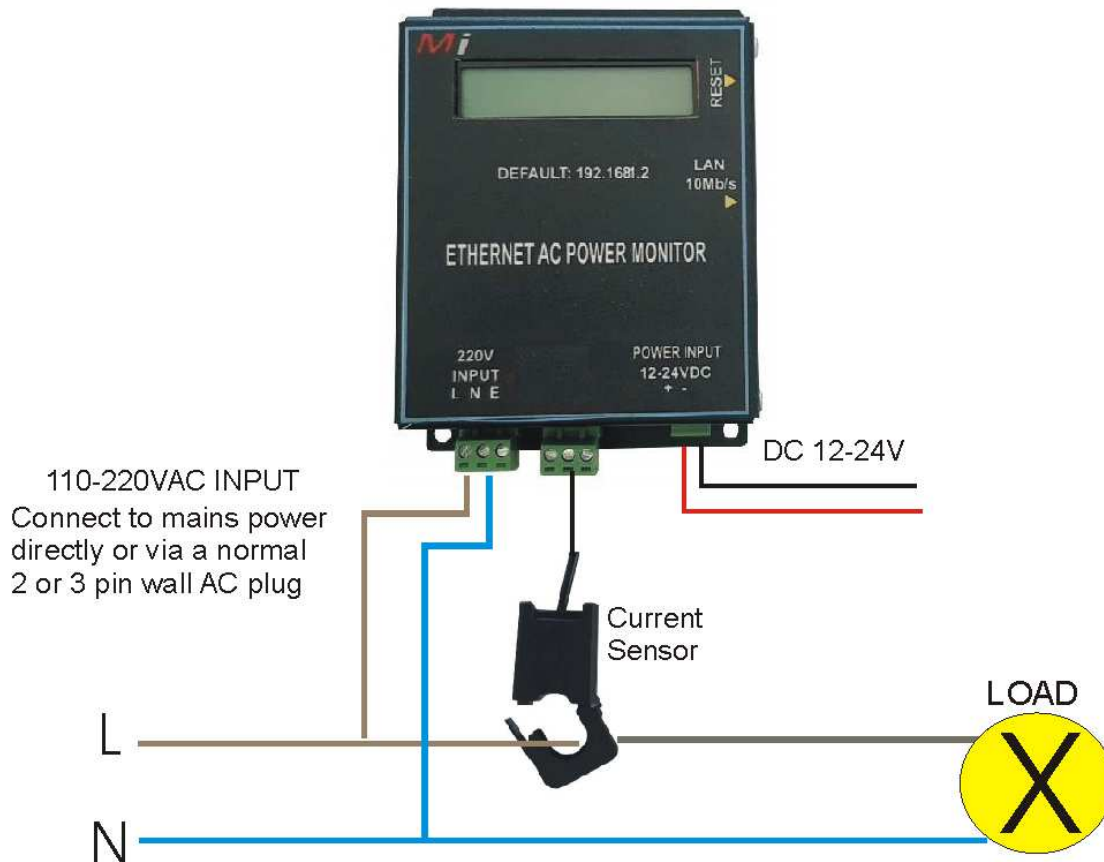
The Mi **Ethernet AC Energy monitor** monitors the voltage of a single phase 110VAC or 220VAC power supply and the current consumption on the power line by means of a non-invasive (non contact) clip on current sensor.

The system is powered by 12V or 24V DC normally via battery back up to be able to still report to the monitoring software about power outages.

The DC (Battery) supply voltage, AC voltage, current and wattage readings is available via SNMP over Ethernet and in the embedded web pages

Compatible with Mi SNMP monitor or any other SNMP monitoring software.

1. System connections:



The AC Energy monitor needs to be connected to a 12V to 24V DC power supply to operate (usually battery power) the unit will then still be able to report power outages over Ethernet

The AC input voltage can be wired directly to the AC input voltage terminal from the source power.

For safety of connections the installer can use a normal wall AC plug to connect the AC voltage to the unit.



ONLY LIVE from the AC power source should travel through the current sensor , ****NOTE** the current sensor arrow indicates the current flow direction.

The sensor should be installed (clipped) over the **Live power** wire with the arrow pointing in the direction of the load equipment on the power line

The current sensor can measure a max of 15 AMP – if more than 15Amp current flows the sensor will not be destroyed but it will saturate the reading at 15Amp

2. Home Page / Battery supply voltage is displayed

AC Energy monitor SNMP

Home Page

Status

Network Configuration

SNMP Configuration

AC Energy monitor

Stack Version: v5.36

Build Date: Mar 26 2021 serial # Mi-00001

Module Heartbeat

Battery Voltage: 14.4V

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3. Status page / Indicates the battery supply voltage , AC voltage , Current and wattage

AC Energy monitor SNMP

Home Page

Status

Network Configuration

SNMP Configuration

STATUS

Battery Input Volts:.

14.4V

AC voltage:.

000V

Amps:.

00.0A

Wattage:.

0

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4. Network page / IP address can be configured here



AC Energy monitor SNMP

[Home Page](#)
[Status](#)
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Network Configuration

This page allows the configuration of network settings.

CAUTION: Incorrect settings may cause the system to lose network connectivity.

Enter the new settings for the board below:

MAC Address:	<input type="text" value="00:19:F6:00:27:46"/>
Host Name:	<input type="text" value="AC ENERGY"/>
Password: [max 9]	<input type="text" value="admin"/>
IP Address:	<input type="text" value="192.168.1.2"/>
Gateway:	<input type="text" value="192.168.1.1"/>
Subnet Mask:	<input type="text" value="255.255.255.0"/>
<input type="button" value="Save Config / Reboot"/>	

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SNMP config page:



AC Energy monitor SNMP

[Home Page](#)
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SNMP Community Configuration

Read/Write Community String configuration for SNMPv2c Agent.

Configure multiple community names if you want the SNMP agent to respond to the NMS/SNMP manager with different read and write community names. If less than three communities are needed, leave extra fields blank to disable them.

Read Comm1 :	<input type="text" value="public"/>
Read Comm2 :	<input type="text" value="read"/>
Read Comm3 :	<input type="text"/>
Write Comm1:	<input type="text" value="private"/>
Write Comm2:	<input type="text" value="write"/>
Write Comm3:	<input type="text" value="public"/>
<input type="button" value="Save Config"/>	

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SNMP community names can be configured here – leave unaltered for Mi SNMP monitor

5. OID Table

1.3.6.1.4.1.45501.1.3.1.0 – AC voltage

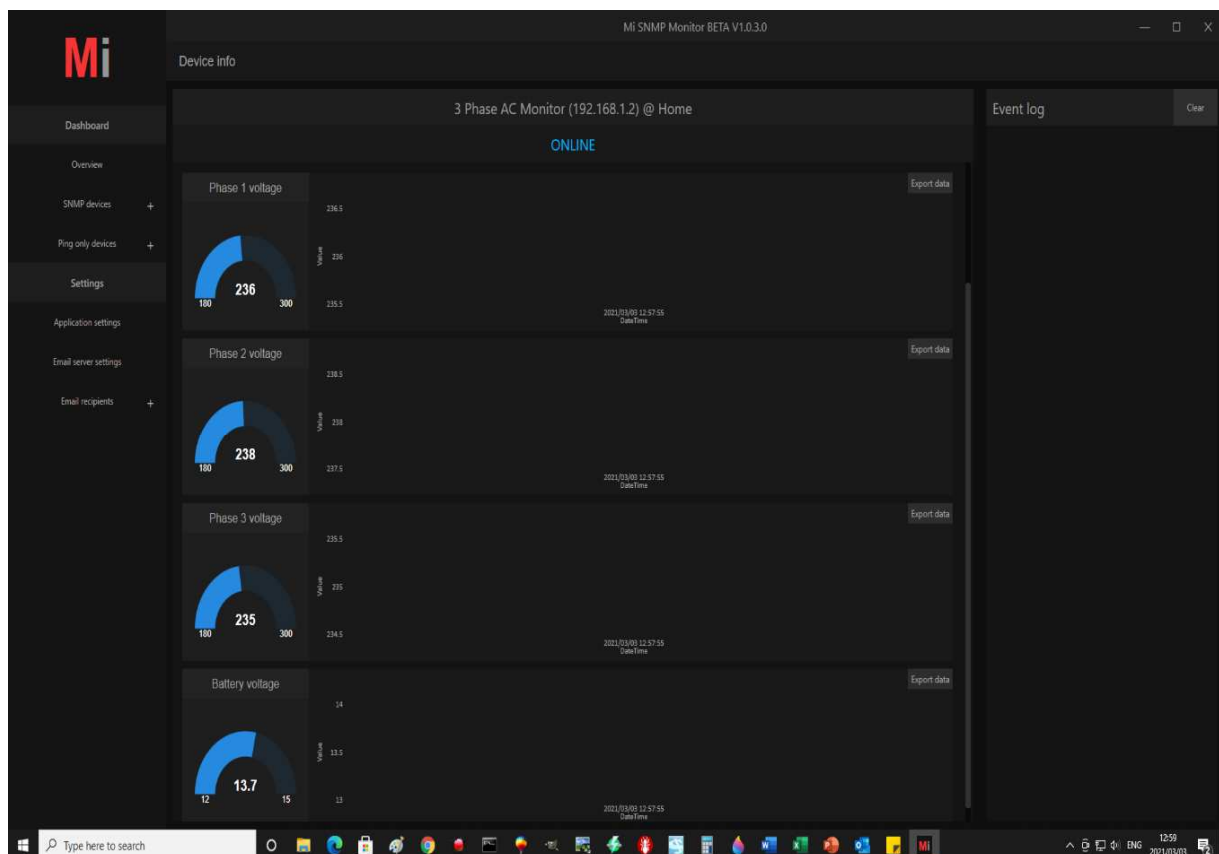
1.3.6.1.4.1.45501.1.3.2.0 – Amps

1.3.6.1.4.1.45501.1.3.3.0 – Wattage

1.3.6.1.4.1.45501.1.3.4.0 – ***Reserved

1.3.6.1.4.1.45501.1.3.5.0 – Battery supply voltage (12-24VDC)

6. SNMP screenshots – Mi SNMP Monitor screenshot



Reasoning screenshot

Name/OID	Value	Type	IP:Port
.1.3.6.1.2.1.1.1.0	AC Energy monitor	OctetString	192.168.1.2...
.1.3.6.1.2.1.1.2.0	.1.3.6.1.4.1.45501	OID	192.168.1.2...
.1.3.6.1.2.1.1.3.0	2 minutes 40 seconds (16037)	TimeTicks	192.168.1.2...
.1.3.6.1.2.1.1.4.0	admin	OctetString	192.168.1.2...
.1.3.6.1.2.1.1.5.0	Micro Instruments	OctetString	192.168.1.2...
.1.3.6.1.2.1.1.6.0	Remote	OctetString	192.168.1.2...
.1.3.6.1.2.1.1.7.0	4	Integer	192.168.1.2...
.1.3.6.1.4.1.45501.1.1.1.0	SNMPv1/2Agent	OctetString	192.168.1.2...
.1.3.6.1.4.1.45501.1.1.2.0	V1	OctetString	192.168.1.2...
.1.3.6.1.4.1.45501.1.1.3.0	June 15	OctetString	192.168.1.2...
.1.3.6.1.4.1.45501.1.2.1.1.1.0	0	Integer	192.168.1.2...
.1.3.6.1.4.1.45501.1.2.1.1.1.1	1	Integer	192.168.1.2...
.1.3.6.1.4.1.45501.1.2.1.1.2.0	0	Integer	192.168.1.2...
.1.3.6.1.4.1.45501.1.2.1.1.2.1	0	Integer	192.168.1.2...
.1.3.6.1.4.1.45501.1.2.1.1.3.0	0.0.0.0	IpAddress	192.168.1.2...
.1.3.6.1.4.1.45501.1.2.1.1.3.1	0.0.0.0	IpAddress	192.168.1.2...
.1.3.6.1.4.1.45501.1.2.1.1.4.0		OctetString	192.168.1.2...
.1.3.6.1.4.1.45501.1.2.1.1.4.1		OctetString	192.168.1.2...
.1.3.6.1.4.1.45501.1.3.1.0	000	OctetString	192.168.1.2...
.1.3.6.1.4.1.45501.1.3.2.0	00.0	OctetString	192.168.1.2...
.1.3.6.1.4.1.45501.1.3.3.0	0	OctetString	192.168.1.2...
.1.3.6.1.4.1.45501.1.3.5.0	14.4	OctetString	192.168.1.2...

7. Physical dimensions

L = 135mm

W = 100mm

H = 38mm

Weight = 0.65Kg