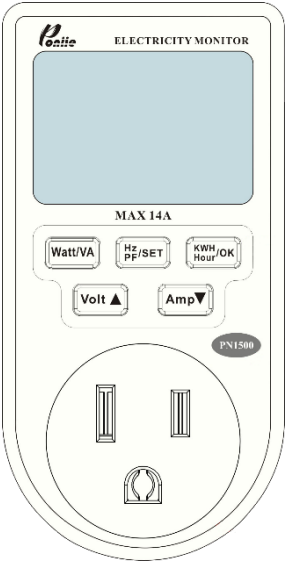
User Manual



Model No: **PN1500**

Thank you for purchasing the **Electricity Usage Monitor** by Poniie. Please read this manual carefully before using this product.

Overview

The device can measure **Watts** (active power), **VA** (apparent power), **Current** (true RMS), **Voltage** (true RMS), **Electricity Consumption** (EC with hold over circuit memory), **Cumulative Time** (CT with hold over circuit memory), **Frequency** and **Power Factor** (as Watts/Vrms*Arms).

How to calculate your dollar cost of energy consumption over a period?

Plug the PN1500 device into the outlet, then plug the electric appliance which you want to test into the Power Monitor. Reset the EC & CT data, then it will start measuring the kilowatts used over a measured period of time.

For instance, you get a total use of **Electricity Consumption (kWh)** over 24 hours for an appliance and you can just multiply it by your **Cost per kWh** the utility charges you on your bill, then you will know the daily cost to operate. Similar way to assess your electrical expenses by the Day, Week, Month or Year.

Note: Some utilities charge two or more rates depending on consumption, time of day or season. Use the rate that more closely reflects your actual use patterns,

⚠Warning

To avoid electric shock or personal injury, read the "Safety Information" carefully before using the Monitor.

Safety Information

1. Before using this product, check the shell for cracks or shortage of plastic parts, pay attention to the insulation around the connector. Do not use if damaged.

2. **DO NOT** overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.

3. **DO NOT** use for long periods near the maximum rated current (in most cases, the true RMS current will be around 14A) to avoid any unnecessary damage or accident.

4. **DO NOT** use or store in high temperature, damp, inflammable and explosive places. The performance of the instrument may be degraded by dampness.

5. **DO NOT** allow children to operate this device, keep children away from the monitor.

NOTE: The monitor work with standard AC power, an inferior quality power supplies (with large harmonic distortion) such as unqualified inverter may cause damage or shorten device's lifespan.

LCD display

1. There are five functional buttons on the product "**Watt/VA**", "**Hz-PF/SET**", "**KWH-Hour/OK**", "**Amp▼**" & "**Volt▲**".
2. LCD display is shown as above.

Operating instructions

1. Device startup/shutdown

Plug the monitor directly into the power socket and connect to AC power to start the device; disconnect the power supply to shut down.

2. Backlight Setting

Figure 1

Under the current "A" display ("**Amp▼**"), press & hold "**SET**" for 2 seconds to enter backlight setting interface. It will display "LEd" after entering the

interface (as shown in Figure 1), **press** "**SET**" **again** and the "ON or OFF" is displaying. At this time, you can select to "ON or OFF" by pressing "▼" or "▲" key, after selection, press the "OK" key to exit setting. "OFF" means that the backlight will turn OFF automatically when the device is not operated by the keys within 10 seconds; ON" means the backlight is always on (default factory setting).

3. Measurement display

① Measuring mode

Under measuring mode one can quickly check electricity parameters. The unit will start to accumulate KWH and powered duration time (hour) after power is applied.

② Voltage

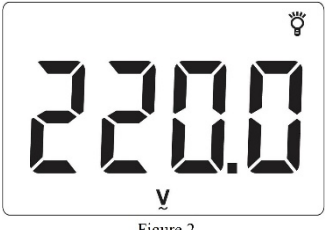


Figure 2

Press "**Volt▲**" Key for true RMS Voltage (Volts) display (as shown in Figure 2). The measuring display range is 100.0-140.0V

③ Current

Figure 3

Press “**Amp▼**” Key for true RMS output current (Amps) display (as shown in Figure 3). The measuring display range is 0.00-15.00A

④ Watts and VA

Figure 4

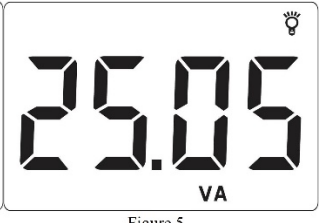


Figure 5

The “**Watt/VA**” Key is a toggle function key. Press the Watt/VA key once to display Watt meter (as shown in Figure 4), then press key to display VA meter (as shown in Figure 5). The LCD will display Watts (Watt=VA*PF) as the active power (from 0.00-2400W), where VA is the apparent power. (VA=Vrms*Arms)

⑤ Frequency and Power Factor

Figure 6

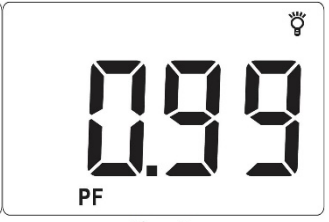


Figure 7

The "**Hz-PF/SET**" is a toggle function key. Press the HZ/PF key once to display the frequency (Hz, as shown in Figure 6), then press key to display the Power Factor (PF, as shown in Figure 7). Hz is the Frequency of output Voltage, where PF is the Power Factor (PF=Watts/Vrms Arms).

⑥ Electricity Consumption & Cumulative Time

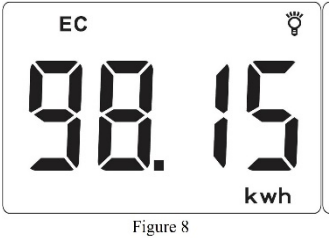


Figure 8

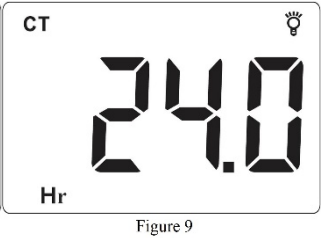


Figure 9

The "**KWH-Hour/OK**" is a toggle function key. Press the KWH/Hour key once to show the cumulative Electricity Consumption (EC, as shown in Figure 8) since power was applied to the unit. Then press key to display the Cumulative Time (CT, as shown in Figure 9) since power was applied to the unit. The measuring display range is 0.00-9,999kWh and 0.0-9,999 hours

respectively. The measured cumulative value will be automatically stored, and will not lost even under long time power outage, which is great for circuits that loose power.

How to clear EC and CT data?

Respectively switch to EC and CT monitoring interface. Press & hold "**SET**" for 2s, the cumulative electricity consumption value and time will flicker. Press "OK" to reset.

⑦ Overload Indication Setting

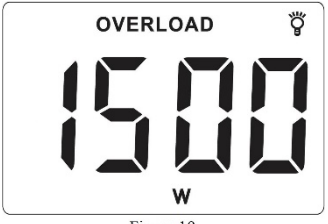


Figure 10

Press the "**Watt/VA**" key once, on the watt display interface, press & hold "**SET**" for 2 seconds, it will display the overload setting value (as shown in Figure 10). Press "**SET**" again, the thousand-digit on LCD will flicker, press "▼" or "▲" to adjust value and press "**SET**" after completing thousand-digit adjustment to set hundred-digit, and so on. Press "**OK**" in the end to exit the setting mode.

Note: The default factory value is 1500W, you can set your own limit if needed. When the power of the electrical appliance exceeds the setting, the

backlight will flicker to indicate overload, please turn off the power and remove appliance immediately.

General Specifications

Applicable power supply	100-140V 50/60Hz
Maximum rated current	14A
Maximum power	1540W (@110V)
Measurable range	0.20W＞
Maximum electricity consumption(EC)	9,999 kWh
Maximum cumulative time(CT)	9,999 hours
Power factor	0.01-1.00
Backlight function	10s Auto off (ON/OFF can be set)
Accuracy standard	Class 1.0
Resolution	0.01W, 0.01A, 0.1V
Power dissipation	<1.00W
Working temperature	0~45℃
Storage temperature	-20~60℃
Product dimension	95*47*40 mm
Net Weight	85g
Warranty	1 Year

Package Content

- 1 x PN1500 Electricity Usage Monitor
- 1 x User Manual