

스마트 에너지 측정기

Smart Energy Meter

SEM3000



KORINS

Smart Energy Meter SEM3000

This device measures both household and industrial power usage by installing a current sensor where the totalizer meter is attached to. The device transmits the measured power wirelessly to the receiver located within 30m to provide the estimate of instantaneous power, total power, daily/monthly electricity cost and graphically display the power usage of the previous day. One device may have a maximum of 10 sensors attachments to enable monitoring the data of 10 channels wirelessly. If the software, sold separately, is used in conjunction with a provided USB cable, it can graphically display the data of 1 hour/2 hour/1 day/1 month/1 year periods. Additionally, if the Gateway, provided separately, is used to connect to internet, it enables Cloud service that can monitor 1 day and 1 week graphs from the website remotely for a maximum of 10 channels

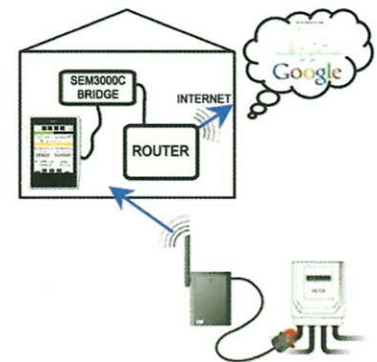
Household electricity cost, on the average, in U.K in December 2012 is € 0.16/kWh; it costs € 48 if 300kWh is consumed per month and € 64 for 400kWh and € 80 for 500kWh. In Germany, the electricity cost is € 0.25/kWh. But it is expected that the electricity cost in the U.K will increase 1.5 to 2 times in a few years.

Therefore, a real-time electric power consumption and the electricity rate monitoring system is necessary in order to save the electricity cost. A totalizer meter that every household has can be used to monitor for a month power usage, however it cannot graphically monitor the power usage for a day or power consumption of each electric home appliances. Therefore, consumers shut off the electricity to each appliances time to time in order to save electricity, however, this method alone cannot make enough power savings.

There are many home appliances manufactured more than 5 years ago that are being used today which consume more than twice the electricity than the recently made. SEM3000 can show us all of those and enable us the electricity bill savings at least 20%.

Additionally, home appliances of today are mostly electronic device that use standby power from 1W to 15W. This contributes € 30 to € 80 in a month to the electricity bill per household. When the SEM3000 is employed, consumers can monitor and find a way to save power utilizing the Gateway, one can check remotely by monitoring displayed graphs. If household power consumption is being managed effectively at the internet website, It also enables to check the power-saving points through the remote monitoring of graphs per sensors per day in real-time.

World best Product

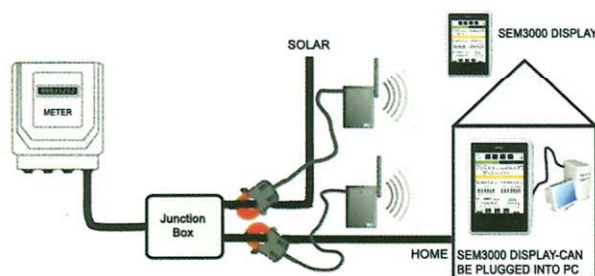


Characteristics

- ① Wireless power measurement device (a maximum distance of 30m)
- ② Permits monitoring of changing power rate and estimated electricity consumption as the home appliances are turned on or off
- ③ Displays instantaneous power and 1 day/1 week/1 month/ power usages
- ④ Displays the power consumption of previous day in graph
- ⑤ Permits the power consumption measurement and recording using 1 monitor with up to 10 wireless sensors installed
- ⑥ As an option, the power monitoring is possible with optical sensor installed to a digital totalizer meter
- ⑦ As an option, 300A wireless power clamp installation available (to a maximum instantaneous power of 30kW)
- ⑧ An optional software enables power graph of 1 hour/1 day/30 days/12 months/5 years
- ⑨ An optional bridge enables graphs of 1 day/1 week/power consumption with internet display
- ⑩ Monitors CO2 emission and saved
- ⑪ Power consumption graphs of previous day, today, current week (Monday – Sunday) and 7 months
- ⑫ Permits entering of 6 electricity unit rates for home
- ⑬ Function to count indoor residents and can confirm if all residents are out
- ⑭ Permits automatic power shut off for appliances that can be switched off in the event all residents are out
- ⑮ Displays date, month, year, time and day of the week
- ⑯ Displays power consumptions of 1 day, 7 days, 30 days and electricity consumption cost
- ⑰ It displays the power consumed vs. target power consumption in percentage(%) to enable users to estimate and control the power consumption for the remaining day in 1 month.
- ⑱ It provides the LCD boundary alert when the maximum power accommodation time period for to induce the power-savings in accordance with the national policy.
- ⑲ Displays the LCD boundary alert when the power consumption exceeds the monthly target for home

SEM3000 Internet Cloud Service functions (Option)

- ⑳ Provides 10 channels daily, weekly, monthly and yearly graph
- ㉑ Provides comparison graphs for one year of previous /present day, previous month/present month, previous year/present year
- ㉒ Permits integrated management of up to 999 sites (for a company with numerous branch office)

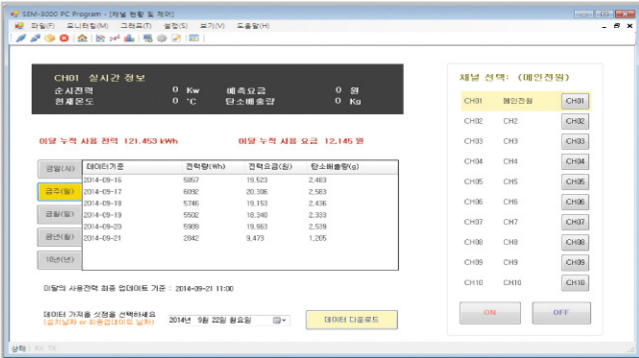


200 Amp main plus PV Solar panel and windmill

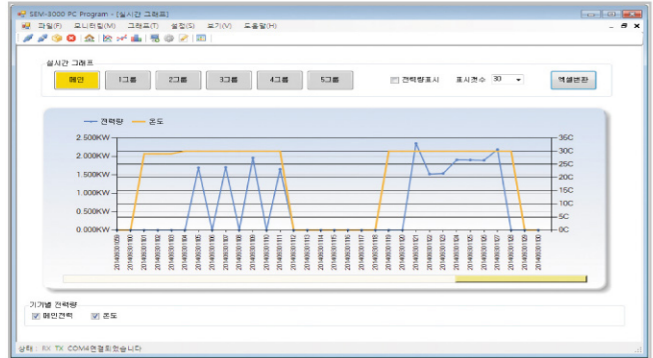


Computer software using USB and RS232 cable

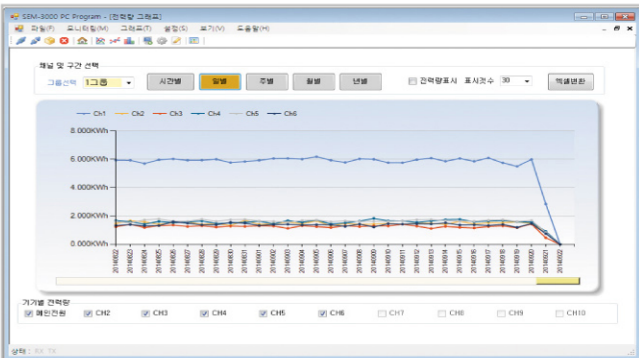
■ Status and control for each channel



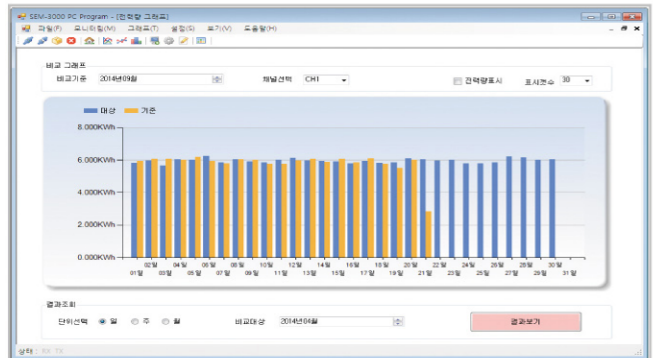
■ Real-time graph






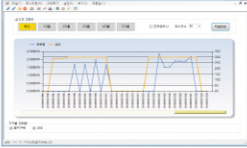


■ Graph for each channel



■ Comparison graph



Product

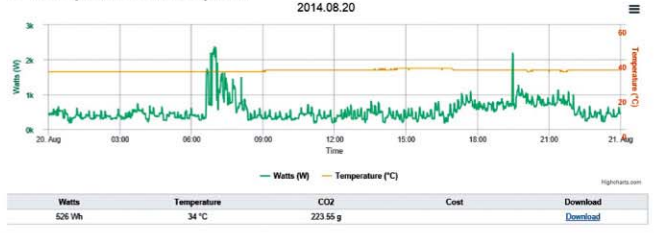
Items	Contents
	<p>Wireless transmitter (CRT3000) Non-contact clamp is connected to a wire of the electricity measuring device and transmits measured current data wirelessly to the receiver at 433MHz. (supply of two types, 80A & 200A are possible) Three-phase electricity can be measured by connecting 3 clamps.</p>
	<p>Wireless IN-HOME DISPLAY Receiver (SEM3000) The receiver can receive and save data up to 10 transmitters. The transmitter shows the power consumption of 1 day/1 week/7 weeks/7 months. The real-time power consumption, fee, and monthly goal are displayed in comparison of current usage in percentage format. It is possible to display the monthly power consumption and the amount.</p>
	<p>Plug-in Wireless Transmitter (PIT3000) Most of the home appliances can be plugged into the PIT3000 Plug-in Wireless Transmitter Option: PIT3100 model has a remote on-off function additionally</p>
	<p>Software (SOFT3000) Data measured by the device can be seen or saved on the computer or saved as a graph or a test file through a USB cable</p>
	<p>IHD + Gateway (SEM3100) Connection to the Internet cloud by an imbedded Gateway function within the IHD main body through a LAN cable. Up to 10 transmitter's data can be received into the internet server.</p>
	<p>Cloud Service (CLOUD-1) Real-time graphs and data extracted from the transmitted and saved electric power information data to the Cloud Server are provided on the web. A project to provided customer required service by processing the saved data. A basic service is a data graph of 10 CH power measurement data graph. A limited premium service is provided to the multi-user of 100 CH or 1000 CH</p>

Product Specifications

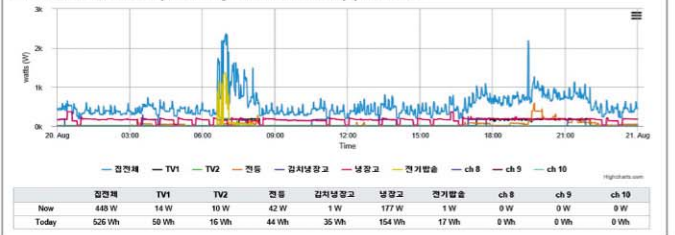
Items		Specifications		
		Display Unit (IHD)	Transmitter with CT	Plug-in type Sensor
Dimension	Size	175.8 X 124.1 X 30.7 (mm)	111.3 X 68 X 42 (mm)	124.5 X 60 X 33.5 (mm)
	Weight	270g	100g	140g
Display	Panel Size	6 Inch	-	-
	Panel Type	FSTN	-	-
Touch Panel	-	5 Buttons / Capacitive	-	-
Pairing Button	-	-	Back side 1 Button	Front side 1 Button
Input Voltage	Adapter - 5V/0.7A	DC 5V	DC 5V	-
	Battery - 4.5V	1.5V×3, Alkaline AA(LR6)	1.5V×3, Alkaline C(LR14)	-
	AC	-	-	AC100 ~ 250V - 50 ~ 60Hz
Instantaneous Power	-	100KW	3.3kW	-
	SEM3010A / SEM3110A	10KW	100KW	3.3KW
	SEM3210 / SEM3310	100KW	100KW	3.3KW
Power Factor	-	-	-	1PF
Memory	RAM - Processor	4352 byte	4352 byte	4352 byte
	Flash - Processor	64KB	32KB	32KB
	Flash Memory	16Mbit	-	-
Input&Output	Data Transfer	Micro USB B-type	-	-
Network	Number of Channels	10 Ch	10 Ch	10 Ch
CT Sensor	-	-	CT 3 Port / 10ch	10ch
Operation	Temperature	-30 °C ~ 60 °C	-30 °C ~ 60 °C	-30 °C ~ 60 °C

10-channel Internet cloud services

■ Total power consumption



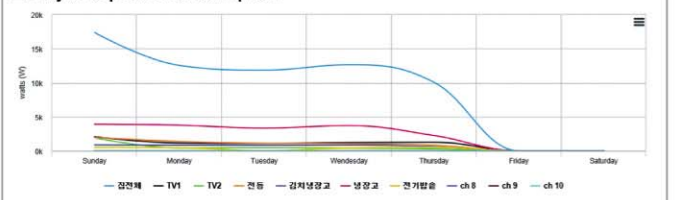
■ Power consumption by household appliances



■ Power consumption by household appliances



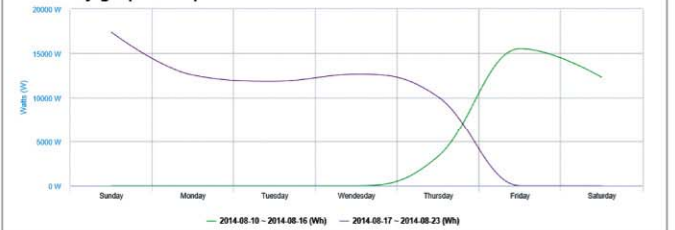
■ Daytime power consumption



■ Monthly power consumption



■ Weekly graph compares



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