### MyWatt SEM3000 Series Operation Manual Version 6.9 December 1<sup>st</sup>, 2019)



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Thank you for choosing MyWatt SEM3000 Series Smart Energy Monitor and Logger with web cloud service.



### Energy saving with Smart Energy Logger



### 1. SEM3000 Series Model (5% accuracy without voltage connection)

We have 2 models (10 channels for 2.5 years data logging with 1 hour log interval)

SEM3010 model: You can download the data to pc by software.

**SEM3110 model**: You can download the data to pc by software. Or you can upload the data with 1minute interval to the web server through TCP/IP connector. We also provide web cloud service through http://mywatt.org

Options (2019 delivery): Please add \$50 more on SEM3110 price.

**SEM3500 model**: 10 channels for 4months data logging with 5minutes log interval to wireless receiver.

![](_page_1_Picture_8.jpeg)

If something is missing, please contact us: hyh@korins.kr

Homepage: <u>http://mywatt.biz</u> Web cloud server: <u>http://mywatt.org</u> Android & IOS App service : "mywatt30" sample site: <u>http://mywatt.biz/app/index.htm</u> (only for the customer who use http://mywatt.org web server.

Follow these simple steps to set up your SEM3000 and you will be able to:

Calculate the amount of power being used, the cost of that power, the amount of associated greenhouse gas emissions and download recorded data to your PC with free software. (You can download the free software at <a href="http://mywatt.biz/m">http://mywatt.biz/m</a> )

Before setting up your SEM3000, please ensure you carefully read the Safety Precautions.

### Before you start installation please ensure you have:

- 1. An electricity bill with details of your tariff and rates
- 2. A small cross head or flat bladed screwdriver

### STEP ONE INSTALL BATTERIES

Please connect the AC power adapter to the power linking hole of CRT3000 transmitter. You can use 10years continuously without battery. Do not use the battery if available AC power.

![](_page_2_Picture_11.jpeg)

Or remove the battery compartment cover and insert the "C" type alkaline batteries to CRT3000 wireless transmitter. Press the RESET button located on the rear of the Transmitter. (10 months life time)

Option: If you need battery only, we have extra battery support pack Model PPD1 (without 3pcs of D type alkaline battery). You can use 15 months more. If you are using 2 types of battery together, the total life time is 2 years.

![](_page_2_Picture_14.jpeg)

If you are using PPD1, please connect the plug to the CRT3000 power connector.

PPD1: unit price \$12 (without battery)

Please connect the AC power adapter to SEM3000 wireless receiver.

Option: Slide the rear battery compartment off the SEM3000 Display Unit. Insert 3 AA batteries in the Display Unit. (You can use AA alkaline battery only for the clock backup or 3days data display on lcd glass when necessary. It is not necessary for normal use.)

![](_page_3_Figure_2.jpeg)

1)Press and hold the CHECK key 5 seconds on the rear side of the CRT3000 wireless transmitter until the red LED flashes rapidly.

If you are using PIT3000 wireless transmitter, press [SET] button at the front side of PIT3000 until the red LED flashes rapdly.

![](_page_3_Picture_5.jpeg)

2)Please check the lcd display is in standby mode as below:

![](_page_4_Picture_0.jpeg)

If the lcd shows as below photo, the touch key of CHANGE, UP, DOWN is not working.

![](_page_4_Figure_2.jpeg)

3)Press the [CHANNEL] key located on the bottom right hand side of the SEM3000 Display Unit. If you could not see [CHANNEL] key, Press [MENU] key to change from [SET] -> [CHANNEL]. Press and hold the [CHANNEL] key 3 seconds and release the [CHANNEL] key after hearing the beep sound.

4)Now you can see below symbol NOW ENERGY screen on Top left side.

FΡ

5)After synchronization, the screen display will change to as below: If you are using 110V, please use it and do not change the voltage with [UP][DOWN] key.

But if you are using 100V, please change it with [UP][DOWN] key to 100V. If you are using 230V, please adjust the voltage what you want.

![](_page_4_Figure_8.jpeg)

5) Press the [CHANGE] key of display unit for to finish the pairing process.

The radio wave icon, in the top lefthand corner of the main screen, will show radio wave power strength from this time. The two units will be linking within 2 minutes. Once firmly linked, the radio wave icon at the top left of the screen will be fully illuminated and showing "0" W at the main real time display zone.

You can keep the SEM3000 wireless receiver up to 50 meters away from the CRT3000 wireless transmitter (subject to the building construction). Open space will cover 700 to 1000 meters.

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### YOUR DISPLAY UNIT HAS 6" SCREEN WITH 6 SECTION.

![](_page_5_Figure_2.jpeg)

C11: temperature compensation

1<sup>st</sup> section shows Radio Icon, Channel number (1-10), 4- different Alarm Display and Battery power strength display for CRT3000 transmitter and SEM3000 receiver each.

 $2^{nd}$  section displays Now Energy with Watt unit and 1 Month estimated Cost with ₩, \$, €, ¥, £ currency symbol mark. (Real time wattage x 24hr x 30days x unit price/KWh)

Additionally, it also shows Up, Down symbol mark and the energy increase and decrease difference on every 2 seconds. Additionally, it also shows the energy consumption percentage (%) vs monthly target on every 10 seconds. – You can adjust the monthly target by C8 calibration mode.

Top left side shows the energy billing method selection from "0" to "2". "0" is the single tariff rate selection. "1" is 4-step tiered tariff rate selection "2" is special rate tariff selection. For USA, please use "0" normally.

3<sup>rd</sup> section shows History data [this day (today)], [this week], [this month] and [month (31days)] accumulated energy consumption in kWh. The righthand side, it shows the actual energy cost of it with currency symbol mark.

### From the 2018 1<sup>st</sup> quarter delivery, we will add the following display also:

1) [Day (24hr)] total display

2) Select one of 5 types total display [this day/day/this week/this month/month] and show only 1 type continuously.

- Press [menu] key 3 seconds continuous.

4<sup>th</sup> section shows [Today graph] and [This week graph] simultaneously.

5<sup>th</sup> section shows channel number, time, date, week, month and year display. The right-hand side, it shows the temperature (°C. °F) and CO2 emission display.

6<sup>th</sup> section shows touch keys. You will hear a short beep sound every time you press one of the keys, [MENU], [CHANGE], [DOWN], [UP], [CHANNEL] and [SET]. We recommend you use the sound to help you program the settings accurately.

LCD protection cover film: Please take off the scratched cover film when you use it. You can see more clear display.

![](_page_6_Picture_8.jpeg)

### CALIBRATION MODE: C1 ~ C11

Before calibration, please see the lcd display must be as below photo:

![](_page_6_Picture_11.jpeg)

### A. TIME/CLOCK: [C1]

1)Press and hold the [MENU] key until you hear a beep. [SET] icon will appear in bottom right hand corner instead of [CHANNEL].

2)Press [SET] key 3 seconds and you could see below symbol on NOW ENERGY:

![](_page_6_Picture_15.jpeg)

3)Press [SET] key to see [F] [YEAR] blinking. Press [UP][DOWN] key to adjust the correct [YEAR] and press [SET] to confirm.

4)[MINUTE] is blinking. Press [UP][DOWN] key to adjust the correct [MINUTE] and press [SET] to confirm.

5)[HOUR] is blinking. Press [UP][DOWN] key to adjust the correct [HOUR] and press [SET] to confirm.
6)[DAY] is blinking. Press [UP][DOWN] key to adjust the correct [DAY] and press [SET] to confirm.
7)[MONTH] is blinking. Press [UP][DOWN] key to adjust the adjust [MONTH] and press [SET] to confirm.

![](_page_7_Figure_1.jpeg)

8)Press [CHANGE] key to store it.

Attention: If you are using SEM3110 model and connect it to the web cloud by LAN cable connection, the clock of SEM3100 will be automatically calibrated within 15 minutes by the web clock. Therefore, you do not need the clock calibration when the area power failure. Web cloud: http://mywatt.org

### B. TARIFF SELECTION: [C2]

1)Press [MENU] key for to change [CHANNEL] -> [SET]

2)Press the [SET] key 3 seconds to see [F] [C1] symbol. Press [MENU] key once to change [C1] -> [C2].

3)Press [SET] key to see [F] blinking to see [0]. Press [UP][DOWN] key to select [0] -> [2].

[0]: Single Rate (Flat Rate), [1]: 4-step Tiered Rate, [2]: Time of Use Rate for all week (7 Day) [3] Time of Use Rate

for weekdays + weekend

4)Press [CHANGE] to go normal display

### C. TARIFF RATE FOR SINGLE (FLAT) RATE: [C3]

1)Press [MENU] key for to change [CHANNEL] -> [SET]

2)Press the [SET] key 3 seconds to see [F] [C1] symbol. Press [MENU] key 2 times to change [C1] -> [C3].

3)Press the [SET] key to see [F] blinking. Press [SET] key again to see Single (Flat) rate [\$0.20] on COST screen.

4)Move the cursor to proper position using [MENU] key.

5)Press [UP][DOWN] key to adjust the correct value.

6)Press [MENU] to move next position and adjust the correct value. Change all the correct value continuously. 7)Press [CHANGE] to store.

TIER No.	TIER1	TIER2	TIER3
BASE BILLING	\$0		
THRESHOLD	0 ~ 1300kwh	1300~2300kwh	2300kwh over
RATE	\$0.10/kwh	\$0.16/kwh	\$0.24/kwh

### D. TARIFF RATE FOR 4-STEP TIERED RATE: [C4]

1)Press [MENU] key for to change [CHANNEL] -> [SET]

2)Press the [SET] key 3 seconds to see [F] [C1] symbol. Press [MENU] key 3 times to change [C1] -> [C4].

3)Press [SET] key to see [F] blinking. Press [SET] key again to see 1-STEP Tiered rate [\$0.10] on COST screen.

4)Move cursor to proper position using [MENU] key.

5)Press [UP][DOWN] key to adjust the correct value.

6)Press [MENU] to move next position and adjust the correct value. Change all the correct value continuously.

7)Press [SET] to see 1-THRESHOLD Range [1300KWh].

8)Press [MENU] to move next position. And adjust the correct value Change all the value continuously.

9)Press [MENU] key to see [F] [1300kWh] blinking. Press [UP] key to change the [Tier 2] and you can see [2300 KWh].

10)You can see [\$0.16] If it is okay, press [UP] key to see [\$0.24] If it is okay, press [SET] key to see [00000 KWh] 11)Press change to store.

### E. SET TARIFF TIME OF USE WEEK BILLING RATE: [C5]

	BILLING RATE		
OFF PEAK	\$0.10/KWh	week days	MO ~ FR
MID PEAK	\$0.16/KWh	WEEK ENDS	SUNDAY, SATURDAY
on peak	\$0.24/KWh		

•

1)Press [MENU] key for to change [CHANNEL] -> [SET]

2)Press the [SET] key 3 seconds to see [F] [C1] symbol. Press [MENU] key to change [C1] -> [C5].

3]Press [SET] key to see [MON][TUE][WED][THU][FRI] and [F][COST] is blinking. Please change the [MID PEAK COST \$0.16/KWh]. Press [SET] to change [ON PEAK COST \$0.24/KWh]

4)Press [SET] key to change [OFF PEAK COST \$0.10/KWh]

5)Press [SET] key to see [SUN][SAT] and [OFF PEAK COST \$0.10/KWh]. Press [SET] to change [MID PEAK COST \$016/KWh]

6)Press [CHANGE] to save it.

### F. SELECT TARIFF TIME OF USE WEEK SELECTION & BILLING RATE: [C6]

1)Press [MENU] key for to change [CHANNEL] -> [SET]

2)Press the [SET] key 3 seconds to see [F] [C1] symbol. Press [MENU] key 5 times to change [C1] -> [C6].

3)Press [SET] key to see [F] blinking. Press [SET] key again to see "00:" on TIME screen.

4) Move cursor to proper position using [SET] key.

5)Press [UP][DOWN] key to adjust the Tier level, Time, Rate.

6)Press [SET] to move next position and adjust the correct value. Change all the correct value continuously. 7)Press [CHANGE] to store.

### G. TARIFF RATE FOR BASIC RATE: [C7]

1)Press [MENU] key for to change [CHANNEL] -> [SET]

2)Press the [SET] key 3 seconds to see [F] [C1] symbol. Press [MENU] key 6 times to change [C1] -> [C7].
3)Press [SET] key to see [F] blinking. Press [SET] key again to see Basic rate [\$0.00] on COST screen.
4)Move cursor to proper position using [MENU] key.

5)Press [UP][DOWN] key to adjust the correct value.

6)Press [MENU] to move next position and adjust the correct value. Change all the correct value continuously. 7)Press [CHANGE] to store.

### H. MONTHLY KWH TARGET SETTING: [C8]

Your default setting is 300KWh.

This is useful if your household is running on a monthly budget and you need to monitor costs closely. 1)Press [MENU] key for to change [CHANNEL] -> [SET] 2)Press the [SET] key 3 seconds to see [F] [C1] symbol. Press [MENU] key to change [C1] -> [C8]. 3)Press [SET] key to see [F] blinking. Press [MENU] [UP][DOWN] key to adjust the correct wattage (W). 4)Press [CHANGE] to store.

### I. VOLTAGE SETTING: [C9]

Your default setting is 100 Volts.

1)Press [MENU] key for to change [CHANNEL] -> [SET]

2)Press the [SET] key 3 seconds to see [F] [C1] symbol. Press [MENU] key 8 times to change [C1] -> [C9].

3)Press [SET] key to see [F] blinking and [0 V]. Press [UP] key continuously until you reach [100V = AUTO V]. 4)Press [CHANGE] to store.

\*If you are using Channel 2 – 10 with PIT3000, Your CRT3000 Channel (e.g. No.1) will get the Voltage value from PIT3000 automatically when you set the Voltage as [AUTO].

### J. TEMPERATURE unit change: [C10]

Your default setting is Centigrade, shown as °C. You can choose to display the temperature in Fahrenheit, shown as °F.

1)Press [MENU] key for to change [CHANNEL] -> [SET]

2)Press the [SET] key 3 seconds to see [F] [C1] symbol. Press [MENU] key 9 times to change [C1] -> [C10]

3)If you want to select °C, you must select [CELSI 0]

4) If you want to select °F, you must select [FARRE 1]

5)Press [CHANGE] to save it.

### K. SELECT SYMBOL for the MONEY UNIT FOR EACH COUNTRY: [C11]

Press [MENU] key for to change [CHANNEL] -> [SET]
 Press the [SET] key 3 seconds to see [F] [C1] symbol. Press [MENU] key to change [C1] -> [C11].
 Press [SET] key to see [F] blinking. Press [MENU] [UP][DOWN] key to adjust symbol for the money unit.
 Press [CHANGE] to store. It takes 20 seconds.

1)Press [MENU] key for to change [CHANNEL] -> [SET]

2)Press the [SET] key 3 seconds to see [F] [C1] symbol. Press [MENU] key to change [C1] -> [C12].

3)Press [SET] key to see [F] blinking. Press [MENU] [UP][DOWN] key to adjust the correct number [0] ->[1] 4)Press [CHANGE] to store. It takes 20 seconds.

5) if you do not want to erase the kWh memory, please change [1] -> [0] and press [CHANGE].

### M. TEMPERATURE COMPENSATE: [C13]

1)Press [MENU] key for to change [CHANNEL] -> [SET]

2)Press the [SET] key 3 seconds to see [F] [C1] symbol. Press [MENU] key to change [C1] -> [C13]. 3)Press [SET] key to see [F] blinking. Press [UP][DOWN] key to adjust the correct number -5 ~ 5 4)Press [CHANGE] to store. It takes 20 seconds.

### N. Power Factor calibration: [C14]

factory setting: 1.00 If your energy system power factor is lower than 1.00, you must adjust the power factor. Wattage = Voltage x Current x Power Factor

1)Press [MENU] key for to change [CHANNEL] -> [SET]

2)Press the [SET] key 3 seconds to see [F] [C1] symbol. Press [MENU] key to change [C1] -> [C14].
3)Press [SET] key to see [F] blinking. Press [UP][DOWN] key to adjust the correct number.
4)Press [CHANGE] to store. It takes 20 seconds.

### O. GREEN HOUSE GAS UNITS:

Your SEM3000 can calculate the amount of CO2 emissions per unit of electricity used. Existing setting: 0.42kg/kwh

### P. TO REVIEW YOUR SETTINGS

1)Press [MENU] key for to change [CHANNEL] -> [SET]

2)Press the [SET] key 3 seconds to see [F] [C1] symbol. Press [MENU] key to scroll through your settings [C1] -> [C9].

3)After review all the settings, press [MENU] to change [SET] -> [CHANNEL]

### Q. CALIBRATION STOP

If you do not want to save the calibration data or made mistake during the calibration procedure, please do this:

Press [MENU] key continuously and you could see normal display state without calibration.

# STEP FOUR LOCATE OUTGOING CABLE

Identify the live cable to electricity meter (usually grey, red or brown and located on the right as you look at the meter).

Unclip the clamp and fit it around the live cable. Snap the clip shut to fasten securely in place (see the images to the right).

Please Note: It is normal for the clamp to be loose fit or be able to slide along the cable.

![](_page_11_Picture_4.jpeg)

# STEP FIVE FIT THE TRANSMITTER

Fix the mounting bracket (optional) to the wall or the baseboard used to mount your meter, next to the fuse box or nearby.

Slot the Transmitter into its bracket and connect the Sensor cable to any one of the three Transmitter sockets, located on the base of the unit.

You can connect 3 clamps for 3 phase applications. AC power adapter is needed.

![](_page_11_Picture_9.jpeg)

### CONGRATULATIONS

You have now set up and installed your SEM3000 successfully. For Trouble shooting and additional information please visit <a href="http://mywatt.biz">http://mywatt.biz</a>

### New information:

If the customer whose web server is <u>http://mywatt.org</u> and buy the SEM3100 after April 2018 from Amazon, already have ID and Password from Korins.

The covering page on the packing box, you can see the registered ID and default Password. You do not need the ID registration process.

In this case, you can log on with the ID and Password and will see the web cloud service graph immediately.

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If you are using MyWatt Cloud SEM3110 Model, you can upload all the data to the Web Cloud Server by using LAN cable. You can upload the data every 1-minute interval.

If you connect the Power Adapter and LAN cable to the SEM3110 receiver, you SEM3110 clock will be calibrated automatically. In this case, you do not need to calibrate the clock by manually.

Web Cloud service, please go to http://mywatt.org.

and click "Register Now" icon and register you ID and Password. After you register the ID as the above, please log on as below:

mywatt.org/account/regist.php

### Regist NOW!

NAME		
🕑 ID	Verify	SEM3110 Serial Number is best
Password	* 6 - 16 char/number, small	/big letter, special characters more than 2combination is required.
Pass.Confirm		
🕑 E-mail	@ Verify	
Phone	Fax	
Cell.Phone		
🕝 Country	AFGHANISTAN	
Address 1	Address 2	
Zip Code	State/city	USA must type "state" for the
	SAVE	

# SEM3000

### Login

![](_page_13_Figure_3.jpeg)

Then you must register your SEM3110 serial number on the website.

And your web cloud service will follow within 10 to 15 minutes after the LAN cable connection to the internet and will show the following graph at first.

![](_page_13_Figure_6.jpeg)

![](_page_13_Figure_7.jpeg)

![](_page_13_Figure_8.jpeg)

				Healt	th					=
10k	015 0.1		A	mun	Office	& Others	hollow	man	heren	aller
5k	Health Health	v's Saunal	hand	and the second	Addressla	Men's S	auna Ladv'	Sauna	and over here	Health
0k 21. Ma	02:00	04:00	06:00	08:00	10:00 Time	12:00	14.00 16	00 10	8.00 20:0	0 22:00
	— Total —	Health — Health	Swimming -	— Golf — N Golf	M. Sauna — M. Sauna	L. Sauna —	Office &	8 — 9 ·	— Restaurant	Restaurant
Now	— Total — Total 34.9 kW	Health — Health 1.4 kW	Swimming Swimming 7.1 kW	Golf N Golf 5.3 kW	M. Sauna — M. Sauna 5.8 KW	L. Sauna — L. Sauna 6.8 kW	Office &	8 0W	— Restaurant 9 0 W	Restaurant 1.2 kW
Now Today	Total Total 34.9 kW 821.9 kWh	Health — Health 1.4 kW 123.2 kWh	Swimming Swimming 7.1 kW 116.2 kWh	Golf N Golf 5.3 kW 88.9 kWh	M. Sauna — M. Sauna 5.8 kW 126.9 kWh	L. Sauna	Office & Office & 9.1 kW 182.2 kWh	8 9 8 9 0 Wh	- Restaurant 9 0 W 0 Wh	Restaurant 1.2 kW 75.6 kWh

### SAFETY INFORMATION

Keep the equipment out of the reach of children, especially infants.

Installation of this product must be carried out by adults only and if there is any doubt, a qualified electrician.

Do not install your equipment in a humid room (bathroom, laundry, kitchen etc.). Do not expose the equipment to moisture, splashes or spray.

The equipment and all associated components are for indoor use and in normal temperature conditions only. Avoid extreme temperatures. Store away from sources of heat, ignition or fire.

Do not attempt to open, disassemble or repair the equipment.

The equipment contains a radio transmitter, which may affect the operation of medical or emergency equipment. Before using this equipment in a medical environment, always seek the advice of a qualified medical expert.

The LCD screen is made of glass and may break if dropped.

Please take special care when handling a damaged Display screen, as the liquid crystals may be harmful to your health.

Do not cover the ventilation holes on the equipment.

Please ensure you read this Installation and Programming Guide carefully before using the equipment.

### Korins Inc.

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### WARRANTY INFORMATION

Korins Inc. guarantees that the SEM3000 will work for a minimum period of 12 months from date of purchase and

that it will be free from defects in materials, workmanship or design. If during this limited 1year period of guarantee, from date of purchase, you find that the equipment is not working properly, you may return it to us and we will replace, or, (at our discretion) repair it, free of charge except the freight cost.

Korins Inc. will not accept any liability for defects arising from fair wear and tear, accidental or willful damage, misuse or failure to follow product or safety instructions.

If you return any equipment as faulty, Korins Inc. reserves the right to test the equipment and if found to be in perfect working order, to return it to you. In this event, Korins Inc. reserves the right to charge for any testing or postage costs incurred. This does not affect your legal rights relating to equipment, which is faulty.

Warranty conditions only apply where Proof of Purchase is provided.

To return your SEM3000 contact <u>hyh@korins.kr</u> to report the issue and reason for returning your product. Korins Inc. will issue you a form and reference number. Once we have received the completed form and proof of purchase we will commence the returns process.

### COMPLIANCE

The CE marking certifies that this product meets the main requirements of the European Parliament and Council Directive 1999/5/EC. A copy of the signed and dated Declaration of Conformity is available on

### Request.

Korins Inc. is manufactured under an ISO 9001 Quality Management System.

### TROUBLESHOOTING

ISSUE	POSSIBLE CAUSE	TRY THIS
Display is blank	Batteries	Check they are correctly installed or
		replace batteries
"0" is displayed	No current detected or wattage data is	1. Check Sensor is correctly attached to
	zero.	and closed properly over the Live cable
		(SEE STEP 5)
		2. Check Sensor is connected on
		CRT3000
"•""" are displayed	Batteries or lost synchronization	Check the batteries are correctly
		installed or replace batteries or start full
		reset process.
Readings appear high	Tariff or voltage settings may be	Check your tariff and voltage settings
	incorrect	(see overleaf) and reset if necessary

Readings appear low	Sensors are not attached properly.	Although the sensor clip maybe closed,
	or	if it is a tight fit then the core may not
	USA and Japan, we need 2 clamps on	close properly. Check the diameter of
	live cable.	your cable (up to 10mm cable for
		standard sensors and 17mm for large
	3-phase application, we need 3 clamps	sensor).
	on live cable.	Reposition the clip on a straight piece
		of cable.
"" in display	Display Unit & Transmitter have lost	See [STEP 2] for the pairing resetting.
	radio link and repeating STEP 2	
	synchronize units has failed	
	In the unlikely event that synchronizing	
	fails you will need to reset your	
	SEM3000 Receiver back to factory	
Synchronization fails in STEP	settings and clear the unit's memory by	
2	following these instructions:	

LCD Touch key of CHANGE, UP and DOWN is not working, please press MENU button.

![](_page_16_Picture_2.jpeg)

ADDITIONAL INFORMATION

"CHANNEL".

USB Power Adapter Rating: 5Vdc, 50mA

INSTALLING SEM3000 FOR 3-PHASE MEASUREMENT

If you have a 3-phase power supply you need 3 CT clamps and possibly larger size clamps depending on the size of your cables.

a) Installing SEM3000 in USA & JAPAN for single phase: We supply 2pcs of 30A clamps for 110V measurement.

b) Installing SEM3000 in USA & JAPAN for 3 phase: We supply 3pcs of 60A clamps for 3 phase application.

(This case, the voltage setting must be single phase voltage as 100V to 110V. Please do not change to 3-phase voltage)

c) Installing SEM3000 in USA & JAPAN for 3 phase: If you have only 2 clamps, you can use 2 clamps for 3 phase application.

This case, the voltage setting must be 1.5 times of single phase voltage.

Example: If the single-phase voltage is 110V, you must change the voltage to 165V (110 x 1.5 = 165V) by using [C9] calibration mode.

![](_page_17_Picture_1.jpeg)

SEM3110A2US + PIT3100 = SEM3110B2US

![](_page_17_Picture_3.jpeg)

Power Adapter for CRT3000	"D" type Battery Pack	500A, CRT3005,	200A, 350A clamp
CRT3000 Series Wireless Transm	itter (RF433MHz) for Sing	le Phase in USA	
We have 3 different type: <u>http</u>	://www.mywatt.biz/model,	/index2.htm	
1)CRT3000 transmitter with 2pc	s of 30A (or 75A) clamps	and AC power ad	apter: \$60
2)CRT3001 transmitter with 2pc	s of 200A clamps and AC	power adapter:	\$80
3)CRT3005 transmitter with 2pc	s of 500A clamps and AC	power adapter:	\$125
CRT3000 Series Wireless Transm	nitter (RF433MHz) for 3-Ph	nase in USA	

We have 3 different type: <a href="http://www.mywatt.biz/model/index2.htm">http://www.mywatt.biz/model/index2.htm</a> 1)CRT3000 transmitter with 3pcs of 30A (or 75A) clamps and AC power adapter: \$70 2)CRT3001 transmitter with 3pcs of 200A clamps and AC power adapter: \$100 3)CRT3005 transmitter with 3pcs of 500A clamps and AC power adapter: \$165 attention: CRT3000, CRT3001 and CRT3005 is not compatible. Each transmitter type is calibrated on its measuring range. We recommend you to use it:

CRT3000: 0.4A to 75A, CRT3001: 1A to 200A, CRT3005: 2.5A to 450A

### Plug-in type Transmitter (RF433MHz) for Home Appliance energy measurement

1)PIT3000 without Relay (measuring range: 0 to 16A)	\$40
2)PIT3100 with on-off Relay (110V, 16A):	\$45

### WHAT IS THE ALARM FUNCTION?

We have 3 different alarm display.

1)The alarm function is designed to warn you when your pre-determined electricity usage peaks above a specified rate. This is useful if your household is running on a budget and you need to monitor costs closely.

2) Monthly target setting over alarm. This is useful if your household is running on a monthly budget and you need to monitor costs closely.

3) Black-out time alarm. This is useful for to support the power plant & government.

### UNDERSTANDING TARIFFS AND TIERED TARIFFS

Electricity suppliers sell electricity at different rates to different people across the country. Rates may also vary at different times of the night or day. The rate you pay for your electricity is called a "tariff" and is clearly identified on your electricity bill.

Some electricity users will have primary/secondary rates based on usage. To make use of this data you will need to calculate an average based on usage and enter this figure into tariff 1.

### HOW MUCH DATA CAN BE STORED ON MY SEM3000?

1)Data will be log to the SEM3000 receiver for the last 900 days as hourly value of electricity used for 10 channels, the data is accessible by connecting pc-cable and software.

2)Data is also stored every 1 minute to the PC in real time value automatically by using 2017 new software.

### INSTALLING THE PC-SOFTWARE APPLICATION TO DOWNLOAD THE DATA TO PC?

Please read the User Manual on the Software Application file supplied with SEM3000. Install the software following the installation guide in the user manual.

Software samples :<a href="http://mywatt.biz/soft">http://mywatt.biz/soft</a>New English pc software download site:<a href="http://www.mywatt.biz/m/">http://www.mywatt.biz/m/</a>

			Stol-2000 PC Program - Real Time Graph
	MONTORINI GRAPHITI SETUPISI VENISI HELPHI		
			Real Time Graph
	2101 Real-Time POWER PedW/dt 0.55 kWh Prediction rates 30 \$	CH-Select (Main Power)	MAIN IGroup Ziroup Xiroup Kiroup Stimus Power flow display 30 • CVS
	Current Temp 28 'C Carbon emissions .233 Kg	CHO1 main CHO1	
		CHIZ CHIZ CHIZ	Vidage Terp
	this use power 1,135 kWh. Monthly Use rates 114 \$	0102 013 0103	2.500KW T 35C
			20000
	Ref.day POWER(Wh) Use Power(\$) Carbon emissions(\$)	CHA CHA	1 5000W
	2014-09-16 5057 19.523 2.403	0105 015 0105	
	2014-09-10 5745 19,153 2,436	0406 046 0406	1000
	Miday 2014-09-19 9932 18.340 2.300	040 047 040	0.500KW
	(104-01-20 900) 1363 2559 (2014-01-21 2642 9.473 1.205	0.00 0.00 (0.000)	0.000KW
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an 20 CH2 20 CH3 20 CH4 20 CH5 20 CH5 20 CH5 CH5 CH15 State on the Comparison path 201-04 (CH15 State on the Comparison path 201-04 (CH15 State on the Ch15		200000 - 200000 - 200000 - 200000 - 200000 - 200000 - 200000 - 200000	District Marke
			20000 - 200
	MA (0.04)		Exception - A water and a set of a set

### HOW DO I DOWNLOAD THE DATA TO MY PC?

### PC software have 2 functions:

1) 1-minute interval real time data display to the PC and automatically data logging on PC.

2) SEM3000 logged data down load function by selecting the download start time.

Simply connect the pc cable between SEM3000 and PC with specially made mini-USB cable only.

CH01	실시간 정보					채널 선	택: (메인경	5원)
순시건 현재원	인력 골도	0 Kw 0.0 °C	예측요금 탄소배출량	0	원 Kg	CH01	메인전원	CH01
						CH02	CH2	CH02
미달 누적	사용 전력 0 kWh		이달 누적 사용 3	요금 0원		CH03	СНЗ	CH03
금입(시)	데이터기준	전력량()	Wh) 전력요금(원)	탄소배출량(	(g)	CH04	CH4	CH04
77(0)						CH05	CH5	CH05
금수(일)						CH06	CH6	CH06
금월(일)						CH07	CH7	CH07
금년(월)						CH08	CH8	CH08
10년(년)						CH09	CH9	CH09
이루이 11	로재령 치조 어데이트	기주 : 2014-01-01	01:00			CH10	CH10	CH10
		12 . 2014 01 01	01:00					
tup dat	e or date of f	inal update	) 2015-01-01			ſ		AU

<u> </u>			20-0-0-0			
Logged data dowr	load and graph disp	lay for day/week/month/	year.			
CH01 실시간 ?	형보	al = 0 - 7	0 0	채널 선	택: (메인건	<sup>턴</sup> 원)
군시신덕 현재몬도	0.0 °C	예속요금 탄소배출량	0 원 0 Kg	CH01	메인전원	CH01
				CH02	CH2	CH02
갈 누적 사용 전력 O	kWh	미달 누적 사용 1	요금 0원	CH03	CH3	CH03
갈 누적 사용 전력 0 일(시) 데이터기준	k₩h 전력량	이달 누적 사용 1 (Wh) 전력요금(원)	2금 0원 탄소배출량(g)	CH03 CH04	CH3 CH4	CH03 CH04
알 누적 사용 전력 0 일(시) 데이터기준	<b>k₩h</b> 전력량	이달 누적 사용 1 (Wh) 전력요금(원)	<b>요금 0원</b> 탄소배출량(g)	CH03 CH04 CH05	снз сн4 сн5	CH03 CH04 CH05
같 누적 사용 전력 0 일(시) 데미터기준 주(일)	<b>kWh</b> 전력량	이달 누적 사용 1 (Wh) 전력요금(원)	요금 0원 탄소배출량(g)	CH03 CH04 CH05 CH06	снз сн4 сн5 сн6	CH03 CH04 CH05 CH06
왕 누적 사용 전력 0 알(시) 데이터기준 주(일) 칠(일)	<b>kWh</b> 전력량	이당 누착 사용 1 (Wh) 전력요금(원)	2급 0 원 탄소배출량(g)	CH03 CH04 CH05 CH06 CH07	снз сн4 сн5 сн6 сн7	CH03 CH04 CH05 CH06 CH07
2 <b>누적 사용 전역 0</b> (일(A)) 데이터기존 주(일) 원(일) 년(원)	<b>kWh</b> 전력량	이달 누족 사용 1 (Wh) 전력요금(원)	2급 0 원 탄소배출량(g)	CH03 CH04 CH05 CH06 CH07 CH08	СН3 СН4 СН5 СН6 СН7 СН8	CH03 CH04 CH05 CH06 CH07 CH08

![](_page_20_Picture_1.jpeg)

## MYWATT30 IOS APP Operation Manual (Version 1.0)

September 1st, 2018

App name: "mywatt30".You can find "mywatt30" app from Android shop or Apple shop.Korins Inc.<a href="http://mywatt.biz">http://mywatt.org</a>

You can use web server ID and Password for App operation.

![](_page_20_Picture_6.jpeg)

![](_page_21_Figure_0.jpeg)

🖲 💿 🔕	iPhone 8 - 11.4 12:16 PM		●         ●         iPhone 8 - 11.4         ●         iPhone 8 - 11.4           Carrier ♥         12:18 PM         ●         iPhone 7 = 12:19 PM	
<	Account		SEM250-KORINS-R2 Channel Settings	ngs
Profile p	icture	<b>)</b> >	Delete Device > Delete Device	>
Nickr	Change Nickname Please enter a nickname change	< qo	Change Device Name 250 USE 133 > Change Device Name 250 USE 133 > Change	- 
E-Ma	geunseop	< do	Chan 250WiFL133 R2 Chan SEM250-KORINS	
	Cancel Confirm		Cancel Confirm Cancel Confirm	
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q w	ertyui	o p	<u> </u>	H
a s	d f g h j	k I		
ŵΖ	xcvbn	n 🗵		
123	€ Space	return	123 🜐 🖉 간격 🖵 123 🌐 🖗 간격	Ļ
Change	e Nickname		Change Device Name Change Channel Name	

### 10 Channels Energy Logger Set with 10 to 30pcs clamp.

![](_page_22_Picture_2.jpeg)

![](_page_22_Picture_3.jpeg)

![](_page_22_Picture_4.jpeg)

30 cl np data wireless transmission

![](_page_22_Picture_6.jpeg)

3-phase 10 channel wireless receiver

& App Service

Android App service

![](_page_22_Figure_9.jpeg)

3-1 30 cl data mp wireless transmission

New Smart Energy Monitor & Controller

![](_page_22_Picture_12.jpeg)

![](_page_22_Picture_13.jpeg)

![](_page_22_Picture_14.jpeg)

10 channel Web & App Service

![](_page_23_Figure_0.jpeg)

![](_page_23_Picture_1.jpeg)

	Ko	orins MyWa	tt 2019 P	rice List (	(\$)				
Item	Available	Single-Phase, 3-	3-Phase, 1-Channel						
		sem250WIFI	sem330-WIFI	sem360lcd-WIFI	sem370lcd-WIFI	SEM375LCD-WIFI			
						HARD BEAM STREET			
Extra Function		Rail mounting with no display (same width as MCCB)	Rail mounting wih No display	Rail mounting with 3.5" lcd	Rail mounting with 2.4" tft lcd	Table top and wall mounting case with 2.4" tft lcd and 4 magnet ring.			
Size		32mm x 110mm	110mm x 85mm	110mm x 85mm	110mm x 85mm	145mm x 120mm			
Accuracy		1%	1%	1%	1%	1%			
Electricity monitor: W, V, A, var, VA, Wh, varh, vah, PF, Hz		Included	Included	Included	Included	Included			
WIFI (Option), web cloud service & App service (mywatt30)		Available	Available	Available	Available	Available			
Modbus RS-485		Included	Included	Included	Included	Included			
8G Mico sd-card		20	20	20	20	20			
Basic model including Modbus RS-485 software and cable, tcp/ip, Micro-SD card	February			17.	2				
60A clamp, 2pcs (\$30)		30							
120A clamp, 3 pcs (\$60)			60	60	60	60			
200A clamp, 3 pcs ((\$90)									
SOUA clamp, 3 pcs (\$90)) Rechargable battery clock backup for 2 weeks (\$20)	April					20			
Temp/Humidity Sensor (\$25)	February								
Pressure sensor (\$60)	April								
CO2 sensor (\$80)	-								
Dust sensor (\$100)									
wifi with 2 years free web cloud service (\$50)	April		1						
tcp/ip (LAN) with 2 years free web cloud service (\$30)	Мау								
total				<u> </u>					

### SEM250WIFI Single Phase, 3-channel Smart Energy Logger.

![](_page_25_Figure_0.jpeg)

![](_page_25_Picture_1.jpeg)

![](_page_25_Picture_2.jpeg)

### SEM250 RS-485 Software (free)

### SEM250 Application in Home & Building

![](_page_25_Figure_5.jpeg)

SEM270LCD-WIFI model will be available September, 2019.

![](_page_25_Picture_7.jpeg)

https://www.youtube.com/watch?v=ITHPLNFtXhw

### SEM330 Smart Energy Logger

### 3-Phase, 4-Line Voltage Energy Logger with 3 clamps. (1% accuracy)

C MyWatt mywatt.biz	( <b>Q</b> M
	w-s • 🧶 †
	SYSTEM • 🧕 🗼
SEM330 Smart Energy Logger	

3 Phase 4-Line Energy Logger \*75A, 120A, 200A, 350A, 500A current clamp \*Micro SD Card data logger \*Modubus RS-485, TCP/IP, USB \*Wi-Fi, RF433MHz, LORA \*Web Cloud service: http://mywatt.org \*Application: "mywatt30" \*Temperature, Humidity, Pressure sensor

### SEM360LCD-WIFI Smart Energy Logger

![](_page_26_Figure_5.jpeg)

### https://youtu.be/TTNHDYOKcQI

3 Phase 4-Line Energy Logger \*75A, 120A, 200A, 350A, 500A current clamp \*Micro SD Card data logger \*Modubus RS-485, TCP/IP, USB \*Wi-Fi, RF433MHz, LORA \*Web Cloud service: http://mywatt.org \*Application: "mywatt30" \*Temperature, Humidity, Pressure sensor

# Real - Time Power Image: State S

SEM370LCD-WIFI Smart Energy Logger for rail mounting

### https://youtu.be/JH4FUTWXMB8

### 3 Phase 4-Line Energy Logger \*2.4" TFT lcd display \*75A, 120A, 200A, 350A, 500A current clamp \*Micro SD Card data logger \*Modubus RS-485, TCP/IP, USB \*Wi-Fi, RF433MHz, LORA \*Web Cloud service: http://mywatt.org \*Application: "mywatt30"

\*Temperature, Humidity, Pressure sensor

### SEM370 SD CARD

1	A	В	С	D	E	F	G	н	1	J	K	L	М	N	0	Р
1	Count	저장시간	전류R상	전류S상	전류T상	3상평균전	상전압R싱	상전압S상	상전압T상	유효전력R	유효전력	유효전력T	무효전력R	무효전력S	무효전력1	역률R상
2	COUNT	DATETIME	IR	IS	IT	I_A	VR	VS	VT	WATT_R	WATT_S	WATT_T	VAR_R	VAR_S	VAR_T	PFR
З	4215	2017-02-02 0:00	0.05	0.04	0.04	0.04	215.27	215.27	215.28	2.37	2.79	2.8	0.29	0.02	0	0.23
4	4216	2017-02-02 0:01	0.05	0.04	0.04	0.04	216.67	216.68	216.68	1.57	2.56	2.31	-0.01	0.23	0.31	0.16
5	4217	2017-02-02 0:02	0.05	0.04	0.04	0.04	216.48	216.48	216.48	2.02	2.74	2.31	-0.2	-0.11	0.25	0.19
6	4218	2017-02-02 0:03	0.05	0.04	0.04	0.04	217.05	217.05	217.05	1.69	2.41	3	-0.28	-0.3	0.22	0.17
7	4219	2017-02-02 0:04	0.05	0.04	0.04	0.04	216.4	216.4	216.4	2.74	2.68	2.28	-0.31	-0.12	-0.38	0.27

# Modbus RS-485 up to 32 Channel

![](_page_27_Picture_1.jpeg)

SEM370 Menu Button

Real – Time	Power Energy1 Energy2	MyWatt mywatt.biz	
Active Power Total Power	Cost Tall Pressure Dust	wi	-fi 💿 🌘
Voltage 219.5V	Currer RS-485	SYS	TEM •
PF 0.932	Freq LAN	PO	WER O
2019- 6- 1 13:48:40	D CH 01 Language~	SEM300	

### web cloud service

![](_page_28_Figure_2.jpeg)

### rs-485 software

Dat Port Connection	e and Time: 20	019-05-28 12:39:33 Time dur	ation: O hour 4 min, 38 sec,	Device	
Port: COM7	Baudrate: 9	.0pen	Close	Slave ID 1	Last ID
'ower Data 1			Poll count: 139	Power Data 2	
Current, Phase A	0,87	Reactive Power, Phase A	-0.02	WHA_POS	0,01
Current, Phase B	0,87	Reactive Power, Phase B	-0,02	WHB_POS	0,01
Current, Phase C	0,87	Reactive Power, Phase C	-0,02	WHC_POS	0,01
Current, 3-Phase Average	0,87	Power Factor A	0,99	L	
Voltage A-N	210.00	Power Factor B	0,99	VT_RMS	210,72
Voltage B-N	210,30	Power Factor C	0,99	PF_T	0, 99
Voltage, C-N	210,50	Frequency	59, 72	VA A	0.10
Active Power, Phase A	0,18	WATT T3 Total	0.00	VA_A VA B	0,18
Active Power, Phase B	0,18	VA_T3 Total	0.00	VA_C	0.19
Active Power, Phase C	0, 18	VAR_T3 Total	0,00		
				WATT_T3	0,55
emperature-Humidity		Polling Control		VA_T3	0,55
Temperature	0,00	2		VAR_T3	-0,05
		Poll Interval 4	➡ 50C,		

App service

![](_page_29_Picture_1.jpeg)

### optional software: extra price

### **Option 1:**

![](_page_29_Figure_4.jpeg)

Option 2 – up to 300 channels Smart Energy Monitoring System for BEMS & FEMS.

![](_page_30_Picture_0.jpeg)

SEM375LCD-WIFI Smart Energy Logger for wall mounting & portable (1% accuracy)

### BEST SELLER

SEM375 have magnet on backside and you can attach it onto the steel plate.

![](_page_30_Figure_4.jpeg)

3 Phase 4-Line Energy Logger \*2.4" TFT lcd display \*75A, 120A, 200A, 350A, 500A current clamp \*Micro SD Card data logger \*Modubus RS-485, TCP/IP, USB \*Wi-Fi, RF433MHz, LORA \*Web Cloud service: http://mywatt.org \*Application: "mywatt30" \*Temperature, Humidity, Pressure sensor

![](_page_31_Picture_0.jpeg)

SEM375 have battery clock backup device. You can keep clock 2 months without power. SEM375 Graph LCD display (Day, Week, Month, Year)

![](_page_31_Picture_2.jpeg)

### SEM390-4CH model

![](_page_31_Picture_4.jpeg)

https://youtu.be/uky0y1xMfQg

3 Phase 4-Line Energy Logger \*2.4" TFT lcd display Enegy -4 Channel \*75A, 120A, 200A, 350A, 500A current clamp \*Micro SD Card data logger \*Modubus RS-485, TCP/IP, USB \*Wi-Fi, RF433MHz, LORA \*Web Cloud service: http://mywatt.org \*Application: "mywatt30" \*Temperature, Humidity, Pressure sensor

SEM390 could connect up to 12 clamps.

![](_page_32_Picture_0.jpeg)

### Smart Plug

SEM200 (SEM210) Smart Plug: \$40.00

![](_page_32_Picture_3.jpeg)

WIFI version, Unlimited Timer setting.

SEM810 Smart Aircon Controller: \$50

![](_page_32_Picture_6.jpeg)