SEM330/360/370/375 Energy Logger manual

MyWatt mywatt.biz en MyWatt mywatt.biz Real - Time Power Active Power(P) 458.8 W 5.879 kWh Total Power Voltage 217.4V Current 2.80 A POWER 60.0 Hz PF 0.747 Freq 2019- 6-21 8:25:06 CH 01 3P 01 3- Phase Smart Energy Logger 4.0 INDUSTRY Optional Temp-Humidity/CO2/Pressure/Dust Sensor

SEM330



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

SEM330 and SEM370 are using the same main pcb board except the extra function.

SEM330 basic version:

has Micro SD-Card slot, Modbus RS-485, TCP/IP, 3 Phase 4-Line voltage input, 3 clamp connection terminal and extra sensor terminals. We also provide Battery clock back-up device.

"B" type USB terminal is included.

In case of TCP/IP, you can get web cloud service directly by connecting LAN cable (2-channel service is free) 30channel service is option.

SEM330 optional items: *Temperature and humidity sensor *WIFI module *LORA module (FULL MESH networking service up to 100 channels) *Pressure sensor (0 to 10bar) *Dust sensor (3 channel)

SEM330 have 5 push buttons and 3 led display but not useful except the following button.

LED lamp: red led: power on indication

SEM330 Piano switch on top side Please press the piano switch #3 before start the SEM330.

If you are using WIFI module on SEM330, please press No. 5 button for WIFI pairing start. And press 3 seconds continuously, the green led lamp will blinking for WIFI pairing start.



If you want to measure Single phase but 3-channel application, please make the cable connection as the above photo.

But if your cable connection method is reverse, you can see "-" data when you are using rs-485 software which we provide free cost..

nevertheless if you see "-" data, please change the clamp connection position.

If you need to measure only single phase and 1 channel energy measuring, please connect only "N" and "T" pole.

"B" type USB terminal:

If you connect 5V DC power, SEM330 power is on and the clock is start to work. In this case, you can measure with optional sensors.



SEM330 Test Report dated on January 2019 by Official Lab.



2. AC Current Calibration (A, 60 Hz)

Range	Applide Value	Indicated Value	Correction Value	Measurement Uncertainty (신뢰수준 약 95 %, k = 2)
60 A	5.00 A	4.97 A	0.03 A	0.02 A
	10.00 A	9.93 A	0.07 A	0.03 A
	20.00 A	19.87 A	0.13 A	0.07 A
	30.00 A	29.87 A	0.13 A	0.10 A
	40.00 A	39.75 A	0.25 A	0.12 A
	50.00 A	49.72 A	0.28 A	0.14 A
	55.00 A	54.71 A	0.29 A	0.61 A

3. Power Calibration (A, 60 Hz, PF = 1)

Range	Applide Value	Indicated Value	Correction Value	Measurement Uncertainty (신뢰수준 약 95 %, k = 2)
AUTO	120 W	119 W	1 W	1 W
	240 W	239 W	1 W	1 W
	600 W	598 W	2 W	1 W
	1 200 W	1 196 W	4 W	1 W
	2 400 W	2 392 W	8 W	1 W
	3 600 W	3 596 W	4 W	2 W
	4 800 W	4 784 W	16 W	2 W
	7 200 W	7 192 W	8 W	3 W

4. Power factor Calibration (A, 60 Hz)

Applide Value	Indicated Value	Correction Value	Measurement Uncertainty (신뢰수준 약 95 %, <i>k</i> = 2)
1	1.00	0.00	0.01
0.8 (Lead)	0.79	0.01	0.01
0.8 (Lag)	0.82	-0.02	0.01
0.5 (Lead)	0.47	0.03	0.01
0.5 (Lag)	0.52	-0.02	0.01
0.3 (Lead)	0.27	0.03	0.01
0.3 (Lag)	0.33	-0.03	0.01

PCB board layer



SEM330 Smart Energy Logger



SEM370 3-Phase Energy Logger



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



has Micro SD-Card slot, Modbus RS-485, TCP/IP, 3 Phase 4-Line voltage input, 3 clamp connection terminal and extra sensor terminals. We also provide Battery clock back-up device.

"B" type USB terminal is included. 2.4" TFT lcd.

In case of TCP/IP, you can get web cloud service directly by connecting LAN cable (2-channel service is free) 30channel service is option.

SEM370 optional items: *Temperature and humidity sensor *WIFI module *LORA module (FULL MESH networking service up to 100 channels) *Pressure sensor (0 to 10bar) *Dust sensor (3 channel)

SEM370 have 5 push buttons and 3 led display.

LED lamp: red led: power on indication

SEM330 Piano switch on top side Please press piano switch #3 before start the indicator if necessary.



If you want to measure Single phase but 3-channel application, please make the cable as the above photo.

But if your cable connection method is reverse, you can see "-" data when you are using rs-485 software which we provide free cost..

nevertheless if you see "-"data, please change the clamp connection position.

If you need to measure only single phase and 1 channel energy measuring, please connect only "N" and "T" pole.

"B" type USB terminal:

If you connect 5V DC power, SEM330 power is on and the clock is start to work. In this case, you can measure with optional sensors.

3-Phase 4-Line voltage energy measuring

Please connect 4-Line voltage connector with 4-line cables.



Please connect the RJ12 jack with 3-clamps on top of SEM370 case.



if you see "-" data on lcd display, please rotate the clamp connecting position

SEM370 clamps:

SEM370 clamps must be ordered separately. You must use the clamps which is confirmed by the We provide 30A, 60A, 100A, 200A, 500A clamps.

SEM370 LCD operation method.

SEM370 have 5 buttons. (MODE, UP, DOWN, ENTER, OTHERS)



#1: Mode Button

If you press Mode button, You can see 18 menu.

*ENERGY1:

You can see Active power(W), Total Energy power (Wh or kWh), Power Factor, Voltage, Frequency. *ENERGY2:

Active power(W), Total Energy power (Wh or kWh), Reactive Power (AVR), Apparent Power (VA), AVRh, Vah,

*COST & GRAPH:

Daily and Monthly Energy cost calculation will be provided in the future.

We will also provide Daily/Monthly/Yearly graph in the future.



*T&H (Temperature and Humidity): Option *Pressure sensor: Option



Model THS Temperature & Humidy Sensor for CRT5000



Clamp Type (200A, 500A, 60A)



DUST Sensor: Option. Will be available in the future



*SMART FARM: Will be available in the future.

*RS-485 (Modbus RS-485)

You can connect up to 30chnnels. If you use multi-channel, you must set the channel number on each device by using supplied RS-485 software.

*RF433MHz Will be available in the future.

*WIFI:

If you buy WIFI module and insert it onto the main pcb, you can use WIFI mode. Please move to WIFI mode and press the START icon and press the COMPLETE icon. Then you could see the ENERGY1 lcd page and could see the green led is blinking continuously. Then the WIFI pairing mode is starting now.

*LAN: (Web cloud service)

Please connect the LAN cable on to the tcp/ip slot and press the #1 piano switch down to up for the web cloud service starting.



*CLOCK

You can change the clock by using up/down/enter button. Or You can change the clock by using RS-485 software. Or you can change the clock by using WIFI or LAN web cloud service automatically.

*LANGUAGE: Now we provide English mode only.

*MODBUS RS-485 Please use the rs-485 software for to see the data,

*AUTO SCROLL: Will be available in the future

*ADMIN: You can adjust the CT/PT ratio with this mode.

* RS-485 software operation method:

We supply RS-485 to USB adapter as below photo. Please connect "+" to "+" and "-" to "-" by cable. You must provide the cable.



Please also use the pc software which we provide separately. You can see 30 kinds of data on one page with 2 seconds interval.

download site: www.mywatt.biz/download/485soft.zip

Port Connection	te and Time: 2017	7-07-25 14:54:21 Tim	ne duration: 0 hour	28 min, 7 sec,	Slave II Device (1 to 3	D selection
Port: COM7	Baudrate: 960	0 ~ 0	pen Clo	ose	Slave ID 1	Last ID
Power Data 1			Poll cour	nt: 843	Power Data 2	
Current, Phase A	0,11	Reactive Power, Phas	e A -22,25	Total Wh	WHA_POS	0,00
Current, Phase B	0,07	Reactive Power, Phas	e B -13,93	record	WHB_POS	0,00
Current, Phase C	0,10	Reactive Power, Phas	e C -20,89	(A R C)	WHC_POS	0,00
Current, 3-Phase Average	0,09	Power Factor A	-0,03	(A,B,C)		
Voltage A-N	213 76	Power Factor B	-0,02	Averag	VT_RMS	213,76
Voltage, B-N	213,76	Power Factor C	-0,04		PF_T	-0,03
Voltage, C-N	213,76	Frequency	59,72			00.00
Active Power, Phase A	-0,64	WATT TO Tatal	0.00	Apparen	t VA_A	23, 32
Active Power, Phase B	-0,32 Total	WATT_TS Total	0,00	power	VALD VALC	21.00
Active Power, Phase C	-0,84 energ	VAL 13 Total	0,00		VALC	21,33
	from	start	0,00	3-phase	WATT_T3	-1,83
Temperature-Humidity		Polling Control	ling interval se	total	VA_T3	60,43
Temperature	0.00	(2	sec to 200 sec) total	VAR_T3	-57, 33
Humid	0,00	Poll Interval	2 🔹 Sec.			
Temperature(Humid)	0,00	Sheet	Chan			
Temp/Humidity se	nsor	Start	Stop		Slave ID 1	Once Rea

When starting the software, please check the "Port" number is correct or not. If it is okay, please press the "Open" button then you could see the 30 kinds of data at once with 2 seconds interval. If you are not satisfied, you can change from 2 seconds to 200 seconds.

If you see "-" figure on Active power (W or kW), please rotate the clamp position or change the voltage pole when you made mistake.

F) Home(M)	Setting(S) 보	기(V) 도움	·말(H)		
🖗 🗏 🖉 I	Time Sync	ting			
Port Connect	Configratio	on	-00-00 00:00:00 Time dur	ration: O hour O min, O sec	
Port:	Setup		0000	Close	
POIG CO	Tcp IP Modbus		open open	Close	
Power Data 1	Database		•	Poll count: 0	
Current Ph	ase A	0	Beactive Power Phase A	0	
Current, Ph	ase B	0	Reactive Power, Phase B	0	
Current, Ph	ase C	0	Reactive Power, Phase C	0	
Current, 3-F	Phase Average	0	Power Factor A	0	
Voltage, A-	-N	0	Power Factor D	0	
Voltage, C-	N	0	Frequency	0	
Active Powe	er, Phase A	0	WATT_T3 Total	0	
Active Powe	er, Phase B	0	VA_T3 Total	0	
Active Powe	er, Phase C	0	VAR_T3 Total	0	
Temperature-	-Humidity		Polling Control		
Temperatur	e	0	Poll Interval 2	♦ Sec.	
Humid	o(Hursid)	0			
remperatur	e(Humia)		Start	Stop	
🎲 🖪 💋		±>1(V)	포함 홈 (N)		
		Date and T	Fime: 2017-07-25 14:32:47	Time duration: 0 h	our 6 min, 3
🖳 Time Synch	nronization			-	o ×
Slave ID Write Date1	Time	•	Read DateTime		
Slave ID Write Date1 Current Ti	Time me Synchron	zation	Read DateTime Year Month	17 7	
Slave ID Write Date1 Current Ti	Time me Synchron	• ization	Read DateTime Year Month Day	17 7 21	
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	Date	and Time: 2	2017-07-25 14:38:36	Time o	duration:	0 hour	12 min.	22
🖷 Time Synchronizati	ion				-		×	
Slave ID	1 🌲							
Write DateTime			Read DateTime		2			
Current Time Syn	nchronization		Year	1	17			
			Month		7			
			Day		25			
			Hour		14			
			Minite		38			
					10000			
			Second		32			
4			Second		32 ow tim	e/dat	P	
4 Do Write			Second 1 Do Read		32 ow tim	ie/dat	e	
4 Do Write			Second 1 Do Read		32 ow tim	ie/dat	e	
4 Do Write			Second 1 Do Read		32 ow tim	ie/dat	e	
4 Do Write 3 nodbus read: OK			Second 1 Do Read		32 ow tim	ie/dat	e	
4 Do Write 3 modbus read: OK	15000]		Second 1 Do Read		32 ow tim	ie/dat	e	
4 Do Write 3 modbus read: OK 1T-5000 PC Program_V1 - [CRT 7) Home(M) Setting(S)	T5000] 보기(V) 도움	응말(H)	Second 1 Do Read		32 ow tim	ne/dat	e	
4 Do Write 3 modbus read: OK 1-5000 PC Program_V1 - [CR: -) Home(M) Setting(S) -) Home(M) Setting(S)	T5000] 보기(V) 도형	음말(H) 2017-07-25 14:41;	Second 1 Do Read VIII_IS FORM 58 Time duration: 0	hour 15 min, 4	32 ow tim 0,00	e/dat	e	
4 Do Write 3 modbus read: OK (T-5000 PC Program_V1 - [CRI + Home(M) Setting(S) + Home(M) Setting(S) + Time Synchronization	T5000) 보기(V) 도립 Date and Time: ;	음 말(H) 2017-07-25 14:41:	Second 1 Do Read The duration: 0	hour 15 min, 4	32 ow tim 0,00	ne/dat	e	
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4 Do Write 3 modbus read: OK 1-5000 PC Program_V1 - (CR Home(M) Setting(S) Wite Synchronization Slave ID 1 Write Date Time Current Time Synchronization	TSOCOJ 보기(V) 도설 Date and Time: ; ation	8 월(H) 2017-07-25 14:41: Read Date Timu Year	Second Do Read Time duration: 0 - e	hour 15 min, 4	32 ow tim	ne/dat	e	
4 Do Write 3 modbus read: OK 11-5000 PC Program_V1 - (CR) → Home(M) Setting(S) → Home(M) Setting(S) → IIme Synchronization Slave ID 1 ← Write Date Time Current Time Synchronization	TSOCOJ 보기(V) 도년 Date and Time: ; ation	Read Date Time Year Month	Second Do Read Time duration: 0 - e 17 7	hour 15 min, 4	32 ow tim	ne/dat	e	
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4 Do Write 3 modbus read: OK 17-5000 PC Program_V1 - [CRT 2 Home(M) Setting(S) 3 8 2 10 1 1 Write Date Time Current Time Synchronized	TS000) 보기(V) 도급 Date and Time: ;	응말(H) 2017-07-25 14:41: Year Month Day Hour Minite Second	Second Do Read 58 Time duration: 0 - e 17 7 25 14 41 51	hour 15 min, 4	32 ow tim		e	

If you want to erase the PC software logged data, please do the following action:

Setting -> Database -> Delete Data

You can see the logged data is deleting.

File(F) H	lome(M) Se	etting(S) 보	기(V) 도울	음말(H)	
金日命	5 21	Time Sync	hronization		
		Device Set	ting	-07-25 14:44:15 Time du	ration: Obour 18 min Osec
Por	t Connect Port: 🛄	Configratio Setup Tcp IP Modbus	n	D V Open	Close
Pov	wer Data 1	Database		Delete Data	Poll count: 540
с	urrent, Phase	a A	0,11	Reactive Power, Phase A	-22,41
С	urrent, Phase	B	0,07	Reactive Power, Phase B	-14,42
С	urrent, Phase	e C	0,10	Reactive Power, Phase C	-21,19
С	urrent, 3-Pha	ise Average	0,09	Power Factor A	-0,04
v	/oltage, A-N		214.92	Power Factor B	-0,01
v	oltage, B-N		214,92	Power Factor C	-0,02
V	/oltage, C-N		214,93	Frequency	60, 02
A	ctive Power,	Phase A	-0,85	WATT T3 Total	0.00
A	ctive Power,	Phase B	-0,10	VA T3 Total	0,00
A	ctive Power,	Phase C	-0.44	VAR_T3 Total	0,00

If you want to save the logged data to PC, Please do as below:

Home -> CVS selection and save the file to your wanted file position.

-3000 PC Plogram_v1 - [CK1300	51				
F) Home(M) Setting(S) 보	기(V) 도움말(H)			
Monitoring					
CVS					
Dat	e and Time: 2019-	-03-11 17:02:02 Time du	ration: 1 hour 55 min, 27 sec.		
Port Connection				Device	
Port: COMB	Baudrate: 9600	0000	Cloco		
	Dadurate: 3000	open V	Close	Slave ID	Last ID
			D. II		
Power Data 1			Poll count: 7689	Power Data 2	
					0.50
Current, Phase A	0,95	Reactive Power, Phase A	-20, 39	WHA_POS	0,50
Current, Phase B	0,96	Reactive Power, Phase B	-21,17	WHB_POS	0,51
Current, Phase C	0,98	Reactive Power, Phase C	-25,13	WHC_POS	0,52
Current, 3-Phase Average	0.96	Power Factor A	0.99		
		Power Factor B	0.99	VT_RMS	215, 13
Voltage, A-N	215,23	Power Factor C	0.99	PF T	0.99
Voltage, B-N	215, 12	1 offer 1 deter e	0,00		0,00
Voltage, C-N	215,05	Frequency	59,72	VA A	204 58
Active Power, Phase A	204,49	WATT TO T AL	0.00	¥0-0	204,50
		WAII_15 Iotal	0,00	VA_B	207,42

If you want to connect up to 30 channels of SEM370, you must memorize the Device Number by using RS-485 software.

Slave ID number setting as below

🛃 CRT-5000 PC Program	n_V1 - [CRT	5000]	
File(F) Home(M) S	letting(S)	보기(V)	도움말(H)
🏡 🐡 📕 🖉 📼	1		
Configration	-		a: 2017-07-25 14:51:47 Time duration: 0 hour 25 min
Slave ID 1	\$: 9600 V Open Close
Reset			Poll count: 766
Do Wr	ite		
Slave ID	writing		Reactive Power, Phase A -22,05
Eastary initial			Reactive Power, Phase B -14,48
r actory initial			Reactive Power, Phase C -21,10
Do Wr	ite		Power Factor A -0,03
			Power Factor B 0,00
			Power Factor C -0.01
Ready			Frequency 60,02

Micro SD card data logging: 1-minute interval data logging. 1 month 1 file is saving now.

1	A	В	С	D	E	F	G	Н	1	J	к	L	м	N	0
1			Current				Voltage			Active Pow	wer		Reactive P	ower	
2	DEV ID	DATETIME	CPR	CPS	CPT	C3PA	VRN	VSN	VTN	PPR	APPS	APPT	RPPR	RPPS	RPPT
3	1	2017-02-08 0:00	2.28	0.99	0.19	1.15	220.53	220.6	220.57	323.4	67.33	33.99	-205.65	-156.77	-20.13
4	2	2017-02-08 0:01	2.62	0.99	0.19	1.27	220.49	220.53	220.42	415.19	66.69	34.33	-210.39	-156.92	-20.34
5	3	2017-02-08 0:02	2.45	0.99	0.19	1.21	220.35	220.42	220.39	381.59	66	34	-211.61	-157.23	-20.84
6	4	2017-02-08 0:03	2.67	1.18	0.19	1.35	219.93	220.02	219.94	435.66	137.72	34.11	-202.1	-159.77	-20.72
7	5	2017-02-08 0:04	2.29	1.01	0.18	1.16	220.56	220.55	220.5	315.13	61.29	33.8	-210.49	-162.13	-19.96
8	6	2017-02-08 0:05	2.69	0.98	0.18	1.28	220.24	220.31	220.26	443.24	66.82	33.2	-205.7	-155.55	-20.16
9	7	2017-02-08 0:06	2.27	0.99	0.19	1.15	220.16	220.23	220.2	320.31	67.78	33.88	-207.02	-155.7	-20.41
10	8	2017-02-08 0:07	2.41	1.01	0.19	1.2	220.37	220.36	220.3	354.52	62.11	33.79	-212	-160.69	-20.66
11	9	2017-02-08 0:08	2.29	0.99	0.19	1.16	220.47	220.55	220.42	316.29	64.76	33.73	-204.68	-156.75	-20.71
12	10	2017-02-08 0:09	2.7	0.98	0.19	1.31	220.19	220.27	220.23	443.73	65.08	34.25	-208.88	-156.25	-20.52
13	11	2017-02-08 0:10	2.65	1.07	0.18	1.24	219.88	219.88	219.84	418.52	80.18	33.63	-213.98	-160.27	-20.23
14	12	2017-02-08 0:11	2.94	0.98	0.18	1.42	220.22	220.29	220.22	556.96	64.88	33.9	-30.33	-156.05	-19.66
15	13	2017-02-08 0:12	2.02	0.99	0.19	1.06	220.39	220.38	220.36	251.26	63.76	33.94	-211.97	-157.76	-20.47
16	14	2017-02-08 0:13	4.18	1.04	0.19	1.83	219.81	219.87	219.76	778.8	80.7	34.21	-313.8	-154.94	-20.62
17	15	2017-02-08 0:14	2.2	0.98	0.19	1.18	220.3	220.36	220.24	313.01	65.41	33.71	-206.89	-155.81	-20.89
18	16	2017-02-08 0:15	2.17	1.09	0.18	1.14	220.25	220.23	220.2	302.92	118.18	33.78	-206.78	-160.98	-20.01
19	17	2017-02-08 0:16	2.01	0.98	0.18	1.06	220.19	220.24	220.13	251.96	66.8	33.14	-202.52	-156.3	-21.06

1	A	В	С	D	E	F	G	н	1	J	K	L	М	N	0	Р
1	Count	저장시간	전류R상	전류S상	전류T상	3상평균전	상전압R실) 상전압S상	상전압T상	유효전력	유효전력	유효전력1	「무효전력F	무효전력S	무효전력T	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	274	2 68	2.28	-0.31	-0.12	-0.38	0.27

1	Q	R	S	т	U	V	W	X	Y	Z		AA	AB	AC	AD	AE	AF	AG	AH
1	역률S상	역률T상	주파수	유효전력령	유효전력령	유효전력령	3상 유효전	무효전력	른무효전력	루무효전	력론3성	상 무효진DI	TempA DI	TempB D	Humid DI	_1A(CoLD	I_1B(Cou	DI_2A(Col	DI_2B(
2	PFS	PFT	HZ	WHR_POS	WHS_POS	WHT_POS	WHTOTAL	VARHR_P	VARHS_F	VARHT	PCVA	ARHTOT. DI	TempA DI	TempB D	Humid DI	_1A(CoLD	I_1B(Cou	DI_2A(Col	DI_2B(
3	0.31	0.3	60	47	57	55	159	()	1	2	3	0	0	0	0	0	0	
4	0.27	0.25	59.97	47	57	55	159	()	1	2	3	0	0	0	0	0	0	
5	0.29	0.25	60	47	57	55	159	()	1	2	3	0	0	0	0	0	0	
6	0.25	0.31	59.95	47	57	55	159	()	1	2	3	0	0	0	0	0	0	
7	0.3	0.25	59.97	47	57	55	159	()	1	2	3	0	0	0	0	0	0	
8	0.26	0.23	59.97	48	57	55	160	(2	1	2	3	0	0	0	0	0	0	

SD CARD: Please do take in and take out when you are necessary.

Temperature unit adjustment: Please press the "ENTER" button and you could see the unit is changing.

Electricity energy phase change: You can change L1/L2/L3/3P phase by pressing the ENTER button.

If you have problem to connect R/S/T/N 4-pole now due to the factory electricity line problem, you can use 2 pole connect as below photo:





TCP/IP WEB CLOUD SERVICE

You can use TCP/IP web cloud service with free of charge service but only 2-channels. But if you want to get 30 channel service, please contact to Korins Inc. directly.

Korins Inc. <u>www.mywatt.biz</u> Phone : +82-31-777-1588, Mobile: +82-10-8905-1244 Email: <u>hyh@korins.kr</u>

Contro	<pre></pre>	us SEM370	_101051	▼ ALL	•	Daily usage	▼ 2019-05	-02 N	lext > 🕑 Ar	uto Refres
				1	ED.Board					
		April 2	29 firmwar	e						
				:	2019.05.02					
30k										3
20k						100				2
		2								
										1
					Time					
- ch 1 - ch 15	— ch 2 — ch	3 — ch 4 ch 17 — cl	ch 5 —	- ch 6 — ch 9 — ch 20	7 — ch 8 — ch 21		- ch 10 cl ch 23 ch	n 11 — ch 24 — ch 3	12 — ch 13 25 — ch 26	— c
ch 1 - ch 15 - ch 28	- ch 2 - ch ch 16 - ch 29 -	3 — ch 4 ch 17 — cl ch 30 — Te	— ch 5 — n 18 — ch 19 emperature (°C)	ch 6 — ch 9 — ch 20	7 — ch 8 — ch 21	ch 9 ch 22	- ch 10 cl ch 23 ch	n 11 — ch 24 — ch 3	12 — ch 13 25 — ch 26	— c — ch
ch 1 - ch 15 - ch 28	- ch 2 - ch ch 16 - ch 29 - ch 1	13 — ch 4 ch 17 — cl ch 30 — Te ch 2	ch 5 - ch 19 - ch 3 - ch	- ch 6 — ch 9 — ch 20 1 ch 4	7 — ch 8 — ch 21 ch 5		- ch 10 ch ch 23 ch ch 7	n 11 — ch 24 — ch 3 ch 8	112 — ch 13 25 — ch 26 ch 9	- c ch
- ch 1 - ch 15 - ch 28 Now	- ch 2 - ch ch 16 - ch 29 - ch 1 25 W	ch 2 ch 2 ch 2 ch 2 ch 2		ch 6 ch 9 ch 20 ch 4 7 W	7 — ch 8 — ch 21 ch 5 0 W	- ch 9	- ch 10 ch ch 23 ch 1 ch 7 0 W	ch 8 0 W	ch 9 0 W	c ch ch 01
- ch 1 - ch 15 - ch 28 Now Today	- ch 2 - ch ch 16 - ch 29 - ch 1 25 W 486 Wh	ch 2 ch 2 ch 2 ch 2 4 W 87 Wh	- ch 5 - n 18 - ch 19 emperature (°C) ch 3 13 W 251 Wh	ch 6 ch 20	7 — ch 8 — ch 21 ch 5 0 W 0 Wh	- ch 9	- ch 10 ch ch 23 ch ch 7 0 W 0 Wh	ch 8 0 W 0 Wh	ch 9 0 W 0 Wh	c ch 01 0 V
- ch 1 - ch 15 - ch 28 Now Today Cost	- ch 2 - ch ch 16 - ch 29 - ch 1 25 W 486 Wh 0(KRW)	3 - ch 4 ch 17 - cl ch 30 - Te ch 2 4 W 87 Wh 0(KRW)	ch 5 ch 19 ch 3 ch 3 ch 3 ch 3 251 Wh 0(KRW)	ch 6 ch 20 ch 4 7 W 139 Wh 0(KRW)	7 — ch 8 — ch 21 ch 5 0 W 0 Wh 0(KRW)	ch 9 ch 22 0 W 0 Wh 0(KRW)	- ch 10 ch ch 23 ch 0 W 0 Wh 0 (KRW)	ch 8 0 W 0 Wh 0(KRW)	ch 9 0 W 0 Wh 0 (KRW)	ch ch 0 V 0 (KF
- ch 1 - ch 15 - ch 28 Now Today Cost	- ch 2 - ch ch 16 - ch 29 - ch 1 25 W 486 Wh 0(KRW) ch 11	3 - ch 4 ch 17 - ct ch 30 - Te ch 2 4 W 87 Wh 0(KRW) ch 12	ch 5	ch 6 ch 20 ch 4 7 W 139 Wh 0(KRW) ch 14	7 — ch 8 — ch 21 0 W 0 Wh 0 (KRW) ch 15	ch 9 ch 22 0 W 0 Wh 0(KRW) ch 16	- ch 10 - ch ch 23 - ch 0 W 0 Wh 0 (KRW) ch 17	ch 8 0 W 0 Wh 0 (KRW) ch 18	ch 9 0 W 0 Wh 0 (KRW) ch 19	ch ch 0 1 0 (K) ch
- ch 1 - ch 15 - ch 28 Now Today Cost	ch 2 - ch ch 16 - ch 29 - ch 1 25 W 486 Wh 0(KRW) ch 11 13	3 - ch 4 ch 17 - cl ch 30 - Te d W 87 Wh 0(KRW) ch 12 2	- ch 5 n 18 ch 19 mperature (*C) ch 3 13 W 251 Wh 0(KRW) ch 13 7	ch 6 — ch 9 — ch 20 7 W 139 Wh 0(KRW) ch 14 4	7 — ch 8 — ch 21 0 W 0 Wh 0 (KRW) ch 15 0	ch 9 ch 22 0 W 0 Wh 0 (KRW) ch 16 22	- ch 10 - ch ch 23 - ch 0 W 0 Wh 0 (KRW) ch 17 14	ch 8 0 W 0 Wh 0 (KRW) ch 18 0	112 — ch 13 25 — ch 26 0 W 0 Wh 0 (KRW) ch 19 8	c ch 0 1 0 V 0 (KF ch
- ch 1 - ch 15 - ch 28 Now Today Cost Now Today	- ch 2 - ch ch 16 ch 29 ch 29 d86 Wh 0(KRW) ch 11 13 256 4	3 - ch 4 ch 17 - cl ch 30 - Te ch 2 4 W 87 Wh 0(KRW) ch 12 2 47.8	- ch 5 - n 18 - ch 19 mperature (*C) ch 3 13 W 251 Wh 0(KRW) ch 13 7 133.9	ch 6 — ch 20 ch 4 7 W 139 Wh 0(KRW) ch 14 4 74.9	7 — ch 8 — ch 21 0 W 0 Wh 0 (KRW) ch 15 0 0	ch 9 ch 22 0 Wh 0 Wh 0 (KRW) ch 16 22 300.3	- ch 10 - ch ch 23 - ch 0 W 0 Wh 0 (KRW) ch 17 14 192.3	ch 8 0 W 0 Wh 0 (KRW) ch 18 0 0	ch 9 0 W 0 W 0 Wh 0 (KRW) ch 19 8 107.9	ch ch 0 1 0 (KF ch 0 0
- ch 1 - ch 15 - ch 28 Now Today Cost Now Today Cost	- ch 2 - ch ch 16 - ch 29 - 25 W 486 Wh 0(KRW) ch 11 13 256.4 33.280(KRW)	3 - ch 4 ch 17 - cl ch 30 - Te ch 2 4 W 87 Wh 0(KRW) ch 12 2 47.8 6.110(KRW)	- ch 5 1 18 ch 11 emperature (°C) ch 3 13 W 251 Wh 0(KRW) ch 13 7 133.9 17,290(KRW)	ch 6 — ch 9 — ch 20 139 Wh 0(KRW) ch 14 4 74.9 9.620(KRW)	7 — ch 8 — ch 21 0 W 0 Wh 0 (KRW) ch 15 0 0 0 (KRW)	ch 9 ch 22 0 W 0 Wh 0 (KRW) ch 16 22 300.3 39,000(KRW)	ch 10 ch ch 23 ch 7 0 W 0 Wh 0 (KRW) ch 17 14 192.3 24.960(KRW)	ch 8 0 W 0 Wh 0 (KRW) ch 18 0 0 (KRW)	ch 9 0 W 0 Wh 0 (KRW) ch 19 8 107.9 13.910(KRW)	cl ch 0 V 0 V 0 (KF ch 0 0 (KF
- ch 1 - ch 15 - ch 28 Now Today Cost Now Today Cost	ch 2 - ch 1 ch 16 - ch 29 - ch 1 25 W 486 Wh 0(KRW) ch 11 13 256 4 33,280(KRW) ch 21	3 - ch 4 ch 17 - cl ch 30 - Te 4 W 87 Wh 0(KRW) ch 12 2 47.8 6.110(KRW) ch 22	ch 5	ch 6ch 9ch 20ch 20	7 — ch 8 — ch 21 0 W 0 Wh 0 (KRW) ch 15 0 0 (KRW) ch 25	ch 9 ch 22 0 Wh 0 Wh 0 (KRW) ch 16 22 300.3 39,000(KRW) ch 26	ch 10 ch ch 23 ch 0 W 0 Wh 0 (KRW) ch 17 14 192.3 24.960(KRW) ch 27	ch 8 0 W 0 Wh 0 (KRW) ch 18 0 0 (KRW) ch 18 0 0 (KRW) ch 28	ch 9 0 W 0 Wh 0 (KRW) ch 19 8 107.9 13.910(KRW) ch 29	ch ch 0 V 0 (KF ch 0 (KF ch
- ch 1 - ch 15 - ch 28 Now Today Cost Now Today Cost	- ch 2 - ch ch 16 - ch 29 - ch 1 25 W 486 Wh 0(KRW) ch 11 13 256 4 33.280(KRW) ch 21 214	3 ch 4 h17 ch 2 ch 2 4 W 87 Wh 0(KRW) 0(KRW) ch 12 2 47.8 6.110(KRW) ch 22 0.11	ch 5	ch 6ch 9ch 20 ch 4 7 W 139 Wh 0(KRW) ch 14 4 74.9 9,620(KRW) ch 24 59	7 - ch 8 - ch 5 0 W 0 Wh 0 (KRW) ch 15 0 0 0 (KRW) ch 25 0	ch 9 ch 22 ch 6 0 W 0 Wh 0(KRW) ch 16 22 300.3 39,000(KRW) ch 26 0	- ch 10 ch 23 ch 7 0 W 0 Wh 0 (KRW) ch 17 14 192.3 24.960(KRW) ch 27 0	ch 8 0 W 0 Wh 0 (KRW) ch 18 0 0 (KRW) ch 28 46	ch 9 0 W 0 Wh 0 (KRW) ch 19 8 107.9 13,910(KRW) ch 29 0	ch ch 0 V 0 W 0 (KF ch : 0 0 (KF ch : 0 0 (KF ch : 0 0 (KF
- ch 1 - ch 15 - ch 28 Now Today Cost Now Today Cost	ch 2 - ch 6 - ch 16 - ch 125 W - 486 Wh - 0(KRW) - 0(KRW) - ch 11 - 13 - 256 4 - 33.280(KRW) - ch 21 - 214 - 2.8	3 ch 4 h17 ch 2 ch 30 Tc ch 30 Tc 4 W 87 Wh 0(KRW) ch 12 2 47.8 6.110(KRW) ch 22 0.11 2.02	- ch 5	ch 6 ch 20 ch 4 7 W 139 Wh 0(KRW) ch 14 4 9 9.620(KRW) ch 24 9 9.757	7 ch 8 ch 21 0 W 0 Wh 0 (KRW) ch 15 0 0 (KRW) ch 25 0 0	ch 6 0 Wh 0 Wh 0 (KRW) ch 16 22 300.3 39,000(KRW) ch 26 0 0	- ch 10 - ch 2 ch 23 - ch 2 0 W 0 Wh 0 (KRW) ch 17 14 192.5 24.960(KRW) ch 27 0 0	ch 8 0 W 0 Wh 0 (KRW) ch 18 0 0 0 (KRW) ch 28 46 597	112 ch 13 25 ch 26 0 W 0 Wh 0 (KRW) ch 19 8 107.9 13.910(KRW) ch 29 0 0	

30 Channel web cloud service

If the company or factory have problem with WIFI, you can use 4G router instead. Please connect I to TCP/IP line as below photo:



<mark>WIFI</mark>

WIFI module operation method:

A)If you buy WIFI module and insert it onto the main pcb, you can use WIFI mode. Please move to WIFI mode and press the START icon and press the COMPLETE icon. Then you could see the ENERGY1 lcd page and could see the green led is blinking continuously. Then the WIFI pairing mode is starting now.

B)Please download the "mywatt30" App from Google shop or IOS Shop to your mobile phone. And you must register your ID with your email address or company email address on this App site.

1)Please log on the MYWATT30 app with your ID and password.

2) Please select the NEW DEVICE icon and select the WIFI icon and select the SEM360 device.

3) Please go to WIFI channel display mode on your smart phone:



4) Please find and select the "SEM370_XXX123" number which is matching your SEM370 serial number.

5) After selection, the above SEM370_XXX123 with be chosen as your default WIFI line.

6) Please insert the password number "korins1234".

- 7) After finish the above process, please move to the remained APP process.
- 8) Please write your office or factory available WIFI line (2.4G line only) ID.

9) Please also write your WIFI line password.

10) Then please press 'NEXT" icon until it stop the pairing process.



11)If the pairing process is finishing, please write an email or call a phone to Korins for to register the DEVICE number at the web server.

Korins staff will support on this final process.

<mark>SEM360 Model</mark>



SEM375 Model

SEM375 is suitable for wall mounting or stand type for the service staffs. It has magnet on back side plastic part and could easily attach on to the steel plate.

SEM375 also have rechargeable battery for the clock backup.



New lcd menu for SEM375 and SEM370PRO

1) Graph (Day/Week/Month/Year)

You can change the date by up/down key. You can change the day/week/month/year by using the Enter key.



2) Chart (Day/Month/Year)



Optional Graphic software – MYWATT-GRAPH: \$300.00





Optional FEMS or BEMS software named Smart Electric Power Monitoring System Software.

- 1-	·트 전력 모니터팅 시스템		전 력 사 용 당					
	전별	81	전일	금일				
HV 4 MAIN	0.0 kWh	1.7 kWh	1.0 kWh	1.7kWh			_	
LV 10 108	0.0 kWh	0.0 kWh	-4,535.4 kWh	-4,535.4 kWh	10F		SUNTECHCITY	
LV 8 88, 98	a.o kwh	1.7 kWh	-4,534.4 kWh	-4,533.7 kWh	9F 8F		1	
LV 6 58, 68, 78	0.0 kWh	1.2 kWh	0.7kWh	1.2 kWh	7F 6F 5F		-	
LV 4 28, 38, 48	0.0 kWh	1.6 kWh	-4,535.4kWh	-4,534.8 kWh	4F 3F 2F			
LV 2 지하1음, 1음	0.0 kWh	1.7 kWh	1.0 kwh	1.7 kWh	1F B1F			
LV 11 비상등역 및 공용부	0.0 kWh	0.0 kWh	-4,535.4 kWh	-4,535.4 kWh				



Optional sd card file software: \$300.00

You can see realtime/hour/day graph for W/P.F/Ampere/Voltage with this new software



David Hong/chairman of MyWatt Inc./Korins Inc.

http://mywatt.biz

hyh@korins.kr 031-777-1588 010-8905-1244



