

Configurator KW9M Operational Guide Book

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Chapter 1 Introduction

Using this software Configurator KW9M allows you to set various settings and to log and monitor the measured value of our simple wattmeter KW series Eco-POWER METER (Eco-POWER METER from next) via RS485/232C converter or Ethernet/RS485 convertor. In addition, it allows you to save the logging data.

<Caution!>

We don't recommend Web data logger unit (DLU), Data Logger Light (DLL) and ELC1 Control unit as a converter. We can NOT guarantee the working.

Refer to the user's manual and installation instruction of Eco-POWER METER about the settings or communication settings. You can download the user's manual from our website.

Operating Environment

OS: Windows XP SP3
Windows Vista Business
Windows 7
Windows 8

<Caution!>

-It is necessary to install Microsoft.NET Framework 4.0 or more. You can download '.net framework 4.0' from Microsoft website.

-With using Windows Vista or later, when you install this under Program Files, the file will be automatically stored in C:\%UserID%\AppData\Local\VirtualStore\ by user account function.
Logging file will be stored in C:\%UserID%\AppData\Local\VirtualStore\.

Execution requirement

CPU: 1GHz or more
Memory: 512MB or more
HDD: 1GB or more
Screen size: XGA (1024x768)

Applicable model

• KW9M Eco-POWER METER series

Communication protocol

MEWTOCOL
MODBUS (RTU)

Cautions for use

Specifications of this software and manual are subject to change without notice.

Microsoft Windows, Windows XP, Vista, 7, 8 and NET Framework are the trademark or registered trademark of Microsoft in USA and other countries.

Ethernet is the trademark or registered trademark of Xerox Corp in USA.

MODBUS is the trademark or registered trademark of Schneider Electric.

Company names and product names in this manual are the trademark or registered trademark of each company.

Chapter 2 Main Functions

1. Possible to set the unit setup with PC

You can set or change setting values for unit setup.

It is convenient that you can do the setup to several units at one time.

2. Monitoring the measurement values

(Electric power, Voltage, Current, Electricity charge, PF etc.)

You can check each measurement value of Eco-POWER METER with PC screen at real time.

You can check the value of each device.

3. Logging the measured values and output data with csv or Unicode (tsv) format

You can log the measurement values of connected Eco-POWER METER at selected cycle.

You can select a cycle from '1sec, 5sec, 10sec, 15sec, 30sec, 60sec, 1min, 5min, 10min, 15min, 30min and 60min'. The logging data can be saved as csv or Unicode (tsv) format, therefore you can use to analysis data.

<Caution!>

It may not satisfy the selected cycle according to the communication condition and connected number.

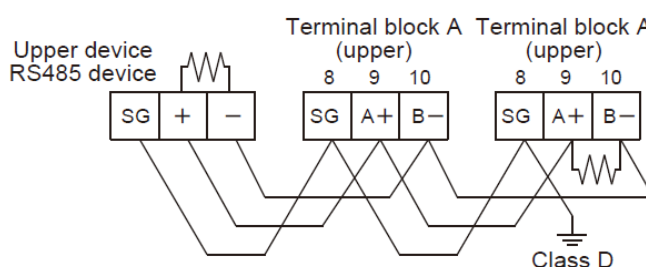
Refer to 7.2 for details.

Chapter 3 Wiring the Communication Line

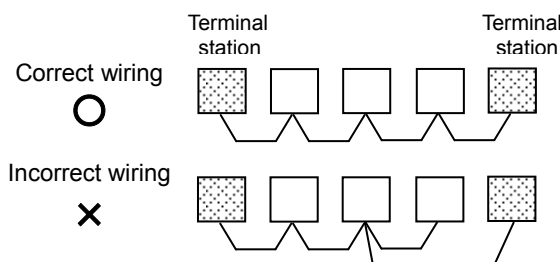
Wire the communication line of Eco-POWER METER.

- When using shielded cable for the RS485 transmission line, ground one end.
Use a class D dedicated earth for grounding. Do not share a ground with other earth lines. (Fig. 1)
- For terminal stations of both side including the upper device, termination resistors should be connected. KW9M Eco-POWER METER doesn't have any built-in termination resistors. Connect 120Ω, 1/2W or more termination resistor between [A+] and [B-] of Eco-POWER METER that is connected the end of RS485 transmission line. The RS485 transmission line shielded cable should be grounded at the end KW9M Eco-POWER METER. (Fig. 1)
- Be sure to connect with daisy chain the RS485 transmission line between each unit.
Do not use a splitter. (Fig. 2)
- To avoid noise, separate the transmission line from high-voltage line (power supply, voltage line).

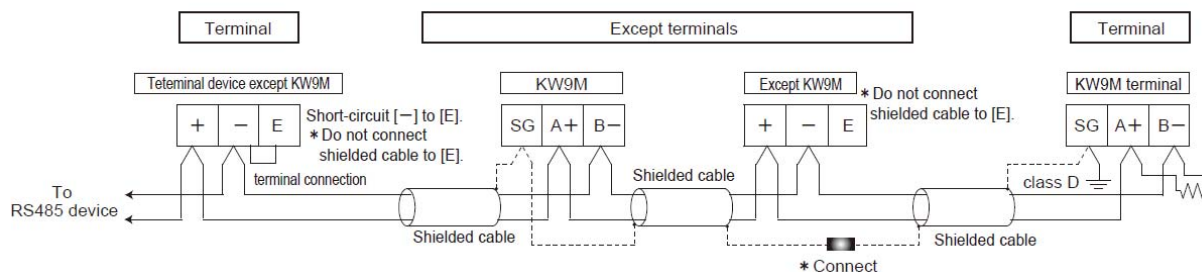
(Fig.1)



(Fig.2)

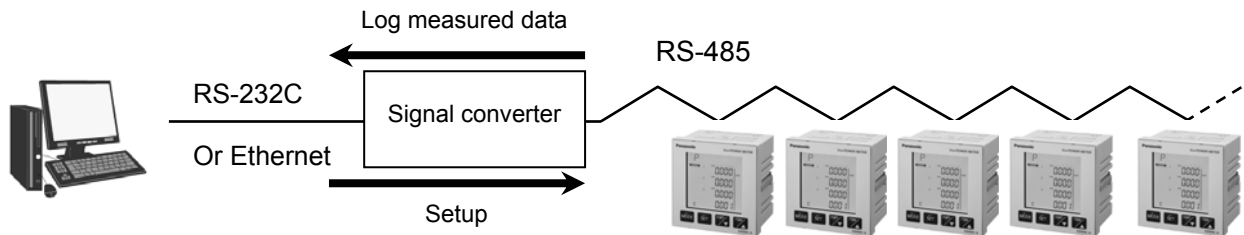


◆How to connect KW9M and the other devices with 2-wire system



Chapter 4 Operation

Using this software allows you to communicate with Eco-POWER METER (one to 99 units *1) via RS-232C/RS-485 converter or Ethernet/Serial converter.



*1 We recommend SI-35 and SI35-USB by LINE EYE.
When using SI-35 or SI-35USB, up to 99 units can be connected.
When using other signal convertor, up to 31 units can be connected.

When you communicate via USB, it communicates one-to-one.

4.1 Install

It is necessary to install '.net framework 4.0' by Microsoft.

- 1) Execute 'Configurator KW9M_freewXXX.exe'.
- 2) Start 'setup.exe'.
- 3) Select language to use during install.
- 4) Install 'Configurator KW9M' according to the procedures.

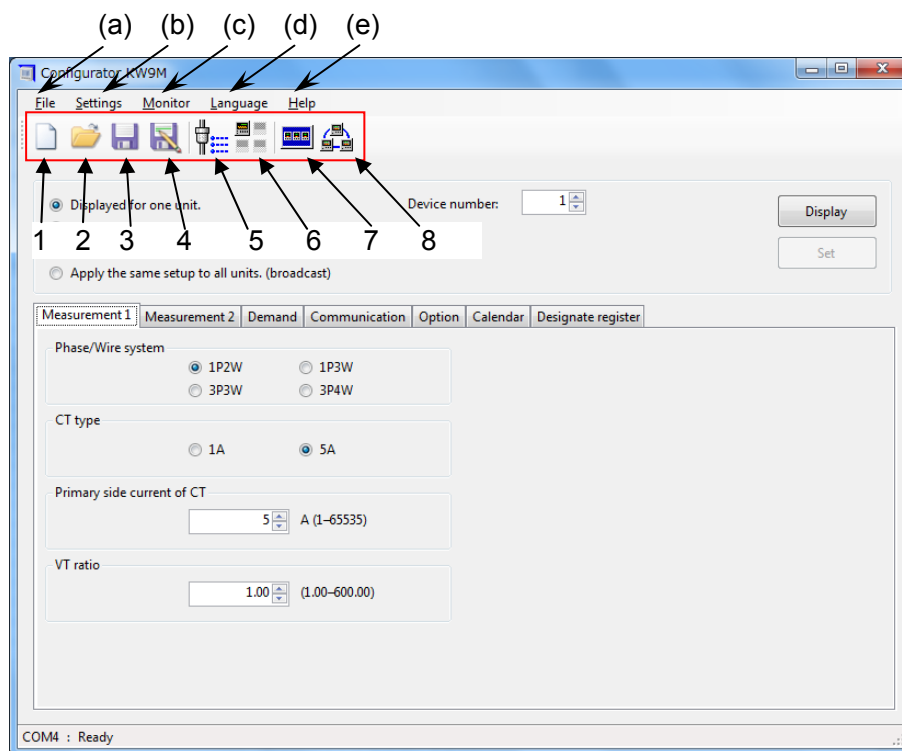
4.2 Uninstall

It is necessary to exit 'Configurator KW9M'.

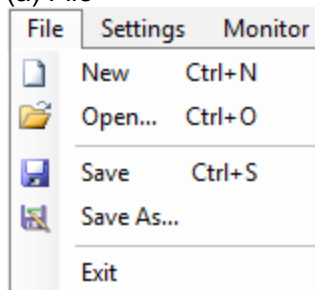
4.3 How to start

'Configurator KW9M' is started via start menu (Click Programs > Panasonic-ID SUNX Control > Configurator KW9M > Configurator KW9M) and the opening screen will appear and main window will be displayed. (Windows7)

4.4 Main Window

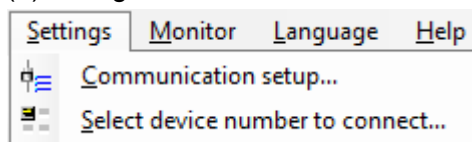


(a) File



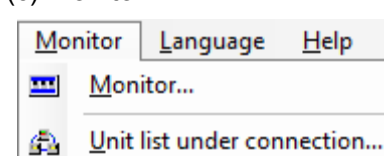
- [New]
 - Create new file
- [Open]
 - Open the existed file
- [Save]
 - Overwrite save the file
- [Save as]
 - Save file with new name
- [Exit]
 - Finish the application.

(b) Setting



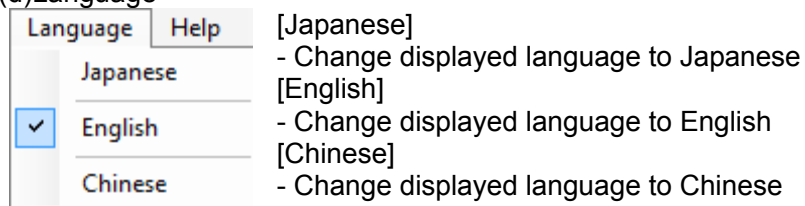
- [Communication setup]
 - Open Communication setup window. (Refer to 5.1)
- [Select device (station) number to connect]
 - Open Select device (station) number to connect window. (Refer to 5.2)

(c) Monitor



- [Monitor]
 - Open Monitor window. (Refer to Chapter 7.)
- [Unit list under connection]
 - Open Unit list under connection window. (Refer to 5.3)

(d) Language



(e) Help

Icons' function

1) New



Create new setting file.
Setting items are initialized. Save it beforehand if necessary.

2) Open



Open the saved setting file (Extension is '.kwml').
Setting items are deleted.

3) Save



Overwrite and Save file. When the file has been already saved, it will be overwritten.
When no file is saved, it will save after named.

4) Save As



Save file after named.

5) Communication setup



Setup the communication conditions with Eco-POWER METER (Refer to 5.1)

6) Select device number to connect



Select the device numbers to connect. (Refer to 5.2)

7) Monitor



Check each measured value of Eco-POWER METER main unit in real time.
It enables to save the logging file. (Refer to Chapter 7)

8) Unit list under connection



Check connection to each connected unit. (Refer to 5.3.)

Chapter 5 Communication setup

Setup procedure

1. Communication setup

Open Communication setup window and setup communication conditions of Configurator KW9M.

2. Select device number to connect

Open Select device number to connect window and set numbers to communicate.

3. Unit list under connection

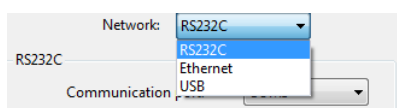
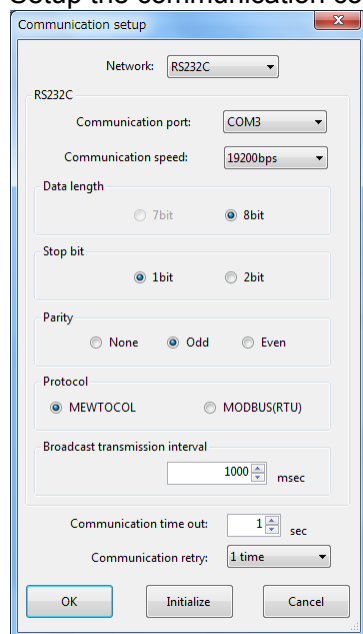
Open Unit list under connection window and check the connection.

5.1 Communication setup

Select connection network between PC and Eco-POWER METER.

Click 'Communication setup' to open Communication setup window.

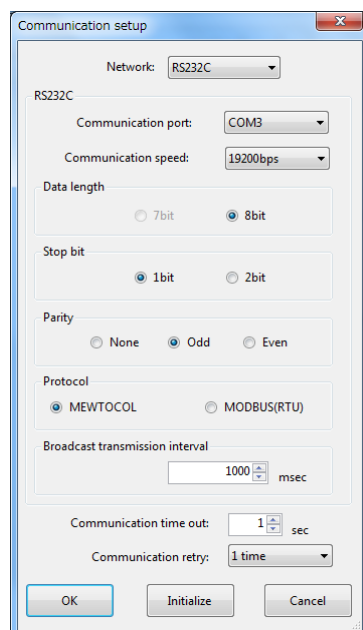
Setup the communication conditions of Configurator KW9M first.



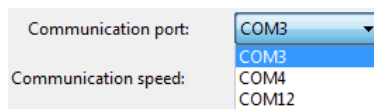
Select network type from RS232C, Ethernet and USB.

5.1.1 RS232C

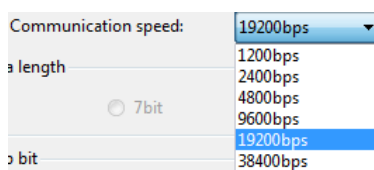
Set each item and click [OK].



Stop bit is fixed to 8-bit.



Select the communication port which connects Eco-POWER METER.



Set the communication speed. You can select from 1200/2400/4800/9600/19200/38400bps. Select same one as connected Eco-POWER METER.

*It doesn't communicate if the communication speed is different.

Stop bit

☒ 1bit ☐ 2bit

Set the stop bit same as connected Eco-POWER METER.

Parity

☐ None ☒ Odd ☐ Even

Set the parity same as connected Eco-POWER METER.

Protocol

☒ MEWTOCOL ☐ MODBUS(RTU)

Set communication protocol same as connected Eco-POWER METER.

Broadcast transmission interval

1000 msec

Set the broadcast transmission interval.

You can set from the range of 0 to 65535ms. Click upper button to add 1, click lower button to reduce 1. You can put in numbers directly.

Communication time out: 1 sec

Set the communication time-out.

You can select from 1 to 99s. Click upper button to add 1, click lower button to reduce 1. You can put in numbers directly.

Communication retry: 1 time

None
1 time
2 times
3 times

Initialize

Set the communication retry.

You can select from none, 1, 2 or 3 times. When you select none, it doesn't retry.

OK Initialize Cancel

[Initialize] – Initialize all communication setup.

<Initial value>

Communication port: smallest number

Communication speed: 19200

Data length: 8bit

Stop bit: 1bit

Parity: Odd

Protocol: MEWTOCOL

Broadcast transmission interval: 1000ms

Timeout: 1 s

Retry: 1-time

[OK]-Exit this window after saving the settings.

[Cancel]-Exit this window without saving the settings.

<Caution!>

Using KS1 signal converter (hereafter KS1), when timeout for Configurator KW9M is set to shorter than that of KS1, it may not connect correctly.

5.1.2 Ethernet

Set each item and click [OK].

*Ethernet/Serial converter is required to communicate via Ethernet.

Specify IP address of Ethernet/Serial converter with decimal number.

Specify port number of Ethernet/Serial converter with decimal number.

Set the communication protocol same as connected Eco-POWER METER.

Set the broadcast transmission interval.

You can set from the range of 0 to 65535ms.
Click upper button to add 1, click lower button to reduce 1. You can put in numbers directly.

Set the communication time-out.

You can select from 1 to 99s.
Click upper button to add 1, click lower button to reduce 1. You can put in numbers directly.

Set the communication retry.

You can select from none, 1, 2 or 3 times.
When you select none, it doesn't retry.

[Initialize] – Initialize all communication setup.

<Initial value>

IP address: 192.168.1.5

Port No.: 9095

Protocol: MEWTOCOL

Broadcast transmission interval: 1000ms

Timeout: 1 s

Retry: 1-time

[OK]-Exit this window after saving the settings.

[Cancel]-Exit this window without saving the settings.

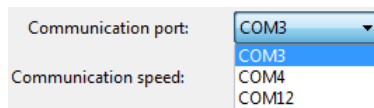
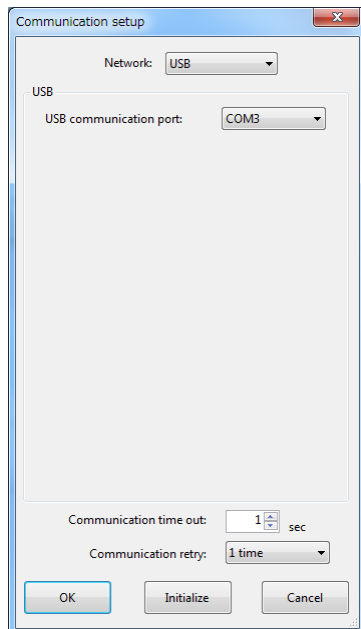
5.1.3 USB communication

It is necessary to install USB driver.

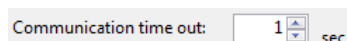
You can find the installer in this folder,

C:\Program Files\Panasonic-ID SUNX Control\Configurater\KW9M\Configurater KW9M_USB

Set each item and click [OK].



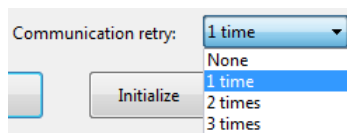
Set the communication port, which connects Eco-POWER METER. Port number differs according to the using PC.



Set the communication time-out.

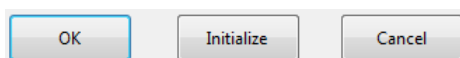
You can select from 1 to 99s.

Click upper button to add 1, click lower button to reduce 1. You can put in numbers directly.



Set the communication retry.

You can select from none, 1, 2 or 3 times. When you select none, it doesn't retry.



[Initialize] – Initialize all communication setup.

<Initial value>

Communication port: smallest number

Timeout: 1 s

Retry: 1-time

[OK]-Exit this window after saving the settings.

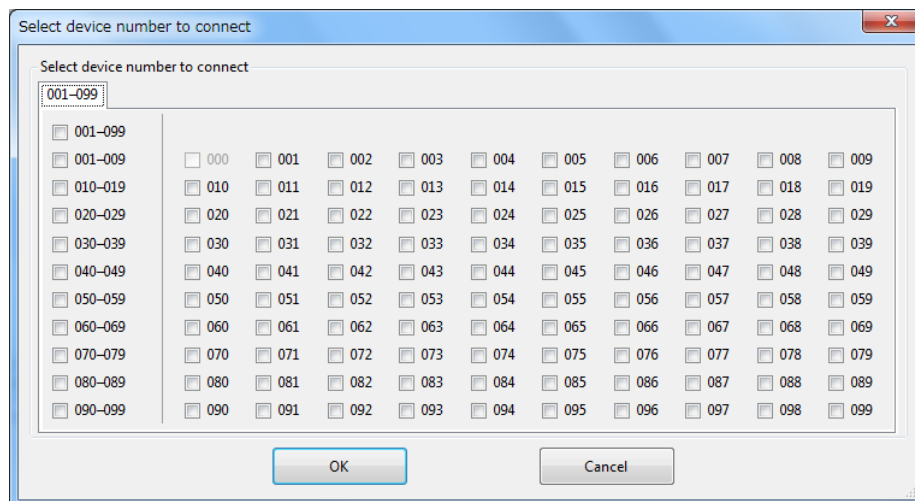
[Cancel]-Exit this window without saving the settings.

5.2 Select device number to connect

Click 'Select device number to connect' to open Select device number to connect window.

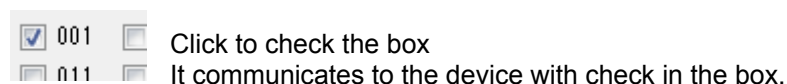
You can select device numbers to connect in this window.

When you select 'USB' for network at communication setup, it unable to use this window.

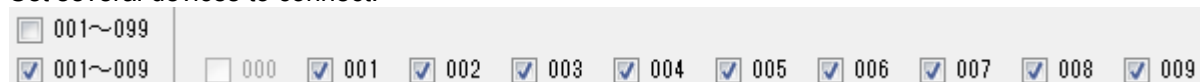


Check the device numbers which you connect

Set connected devices.



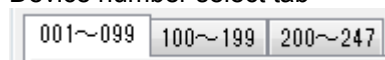
Set several devices to connect.



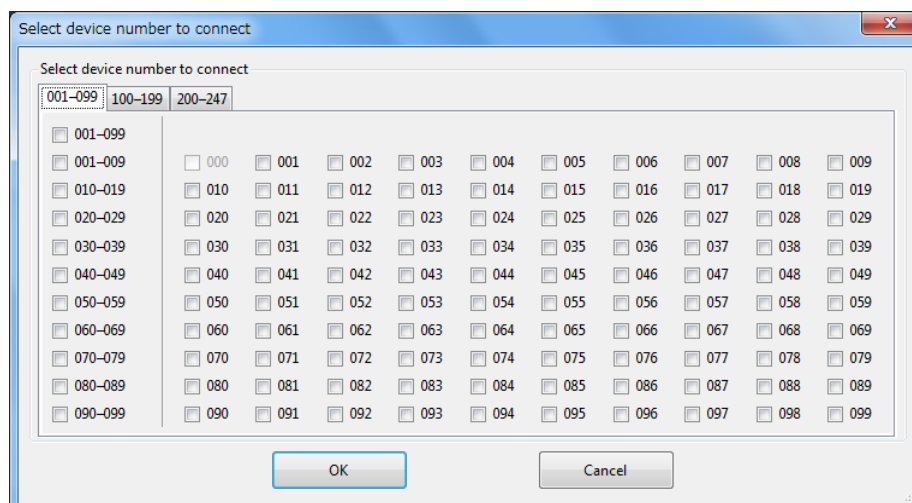
Check the box 001~009, 001~009, 010~019 and so on to add checks to all boxes in the line.

Undo the check and all checks in the line are deleted.

Device number select tab



When you select 'MODBUS(RTU)' for protocol at communication setup, device number tabs are displayed. Device numbers are changed according to the tab.



[OK]-Exit this window after saving the settings.

[Cancel]-Exit this window without saving the settings.

5.3 Unit list under connection

Click 'Unit list under connection' to open Unit list under connection window.

You can check connection to each unit with this window.

When you select USB for network at communication setup, it unable to use this window.

Press [Check connection] and it confirms the connection to devices that is set at Select device number to connect window. The confirmation result is shown by colors.



Green: Under connection

This is the unit under connection.



Red: Connection failure

This is the unit with connection failure.
Check the line or unit connection.



Grey: No connection

This is the unit which is never connected after
start this software.

[Clear all] - Recover all units' connection to 'No connection'.

[Check connection] – Check the connection

[OK] - Exit this window.

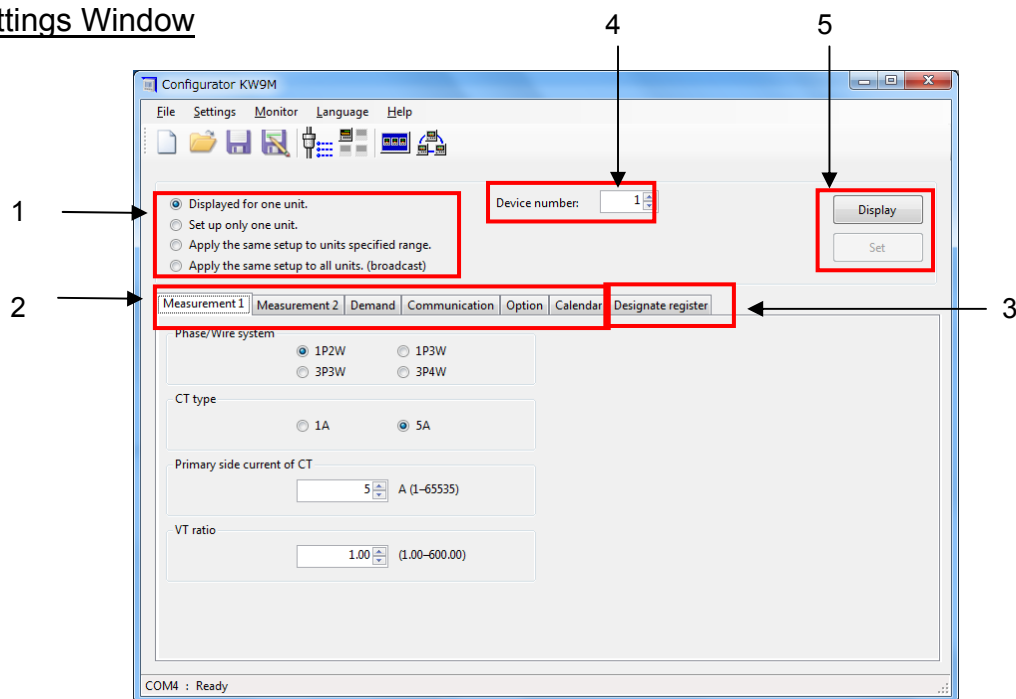
Chapter 6 Setup for Eco-POWER METER

Setup KW9M using tabs of [Measurement 1], [Measurement 2], [Demand], [Communication], [Option] and [Calendar].

When you'd like to set items except in the tabs or other than KW9M, you can setup by using tab [Designate register].

[Calendar] tab can be used only for KW9M advanced type.

6.1 Settings Window



1) Select type for display (read) and set (write)

- ☒ Displayed for one unit.
- ☐ Set up only one unit.
- ☐ Apply the same setup to units specified range.
- ☐ Apply the same setup to all units. (broadcast)

[Display for one unit.]

- Read and display setting values of one unit.

[Set up only one unit.]

- Set the setting values for one unit.

[Apply the same setup to units specified range.]

- Set the setting values for several units in the specified range.

- ☒ Apply the same setup to units specified range. Device number(Station number): from to

Designate the device number range to set.

[Apply the same setup to all units. (broadcast)]

- Set the setting values for all connected units.

- ☒ Apply the same setup to all units. (broadcast) ☒ Verify after broadcast

Check the box of [Verify after broadcast]' and the confirmation window of setup is displayed.

<Caution!>

When using [Apply the same setup to units specified range] or [Apply the same setup to all units. (broadcast)], check that all connected devices are KW9M or all connected devices are not KW9M before you set values.

If you set values to KW9M and the other devices at the same time, it will make change not to intend or malfunctions.

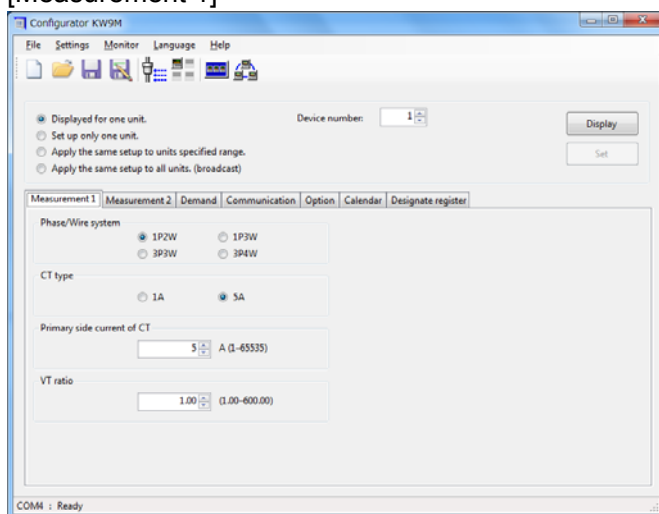
2) Setting items select tab (only for KW9M)

You can shift the setting items and set values.

Read setting values from the devices, it will display values.

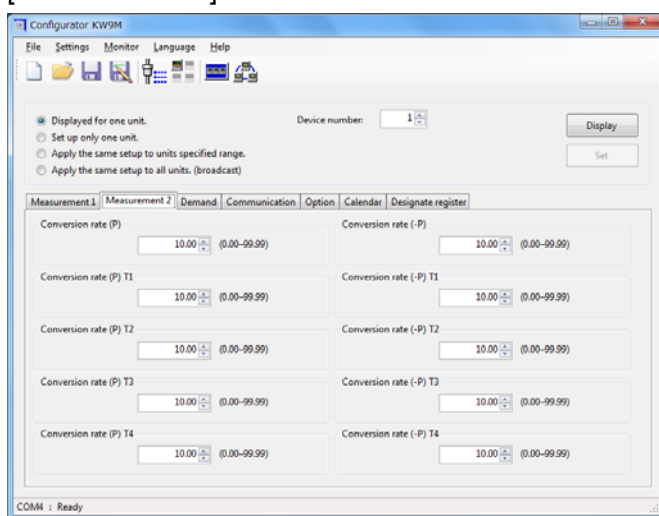
You can set/display as below with each tab.

[Measurement 1]



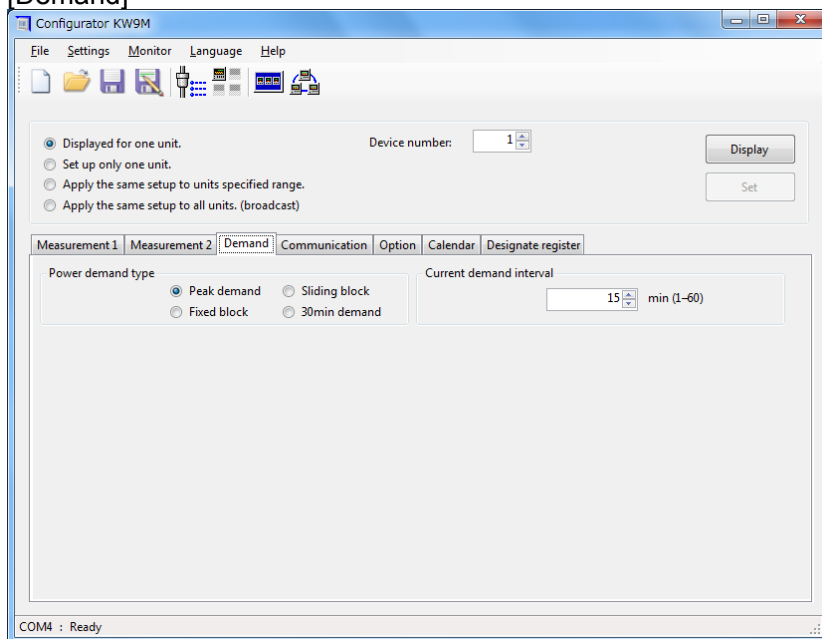
- Phase/Wire system
Select from 1P2W, 1P3W, 3P3W and 3P4W.
- CT type
Select 1A or 5A according to using CT.
- Primary side current of CT
Set value in the range of 1 to 65535 according to using CT.
- VT ratio
Set value in the range of 1.00 to 600.00 according to using VT.

[Measurement 2]

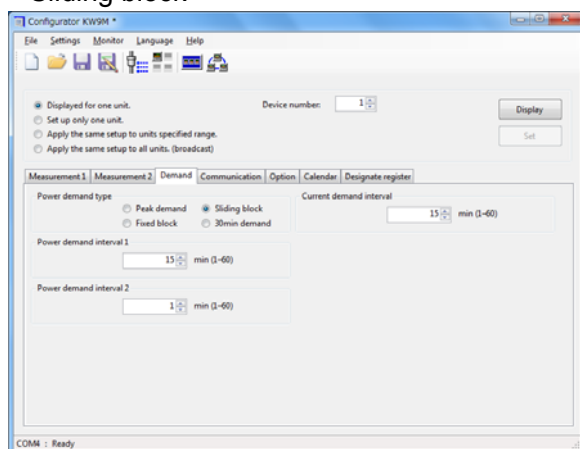


You can set the conversion values per kWh of import energy and export energy in the range of 0.00 to 99.99 for all time-zone, time-zone 1, time-zone 2, time-zone 3 and time-zone 4.

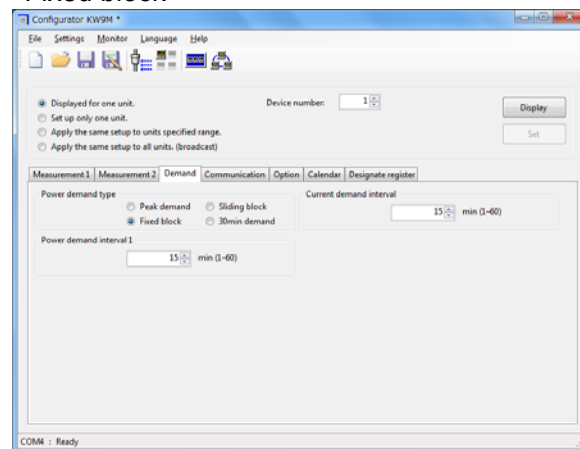
- Conversion rate (P)
- Conversion rate (P)T1
- Conversion rate (P)T2
- Conversion rate (P)T3
- Conversion rate (-P)T4
- Conversion rate (-P)
- Conversion rate (-P)T1
- Conversion rate (-P)T2
- Conversion rate (-P)T3
- Conversion rate (-P)T4

[Demand]

- Power demand type
Select from Peak demand, Sliding block, Fixed block and 30min demand.
- Current demand interval
Set value in the range of 1 to 60 according to your usage.

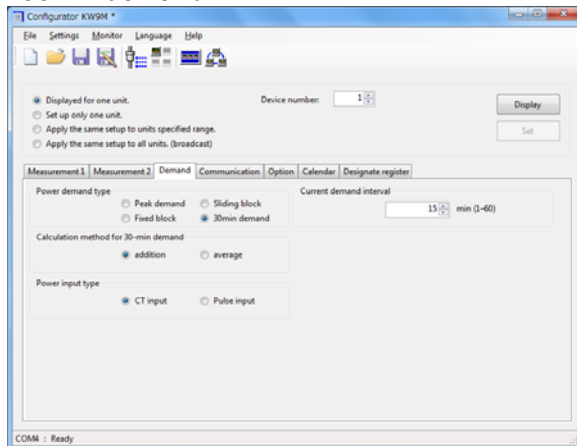
< Sliding block >

- Power demand interval 1
Set value in the range of 1 to 60 according to your usage.
- Power demand interval 2
Set value in the range of 1 to 60 according to your usage.

<Fixed block>

- Power demand interval 1
Set value in the range of 1 to 60 according to your usage.

<30min demand>



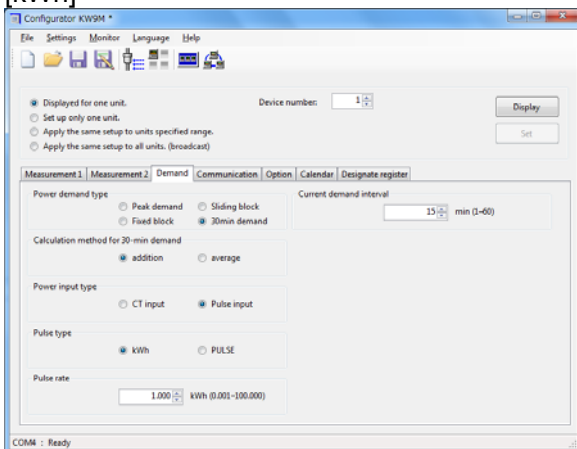
- Calculation method for 30-min demand
Select from addition and average.

- Power input type
Select from CT input and Pulse input.

*The below window is displayed when [Pulse input] is selected for power input type.
It differs according to the selected pulse type.

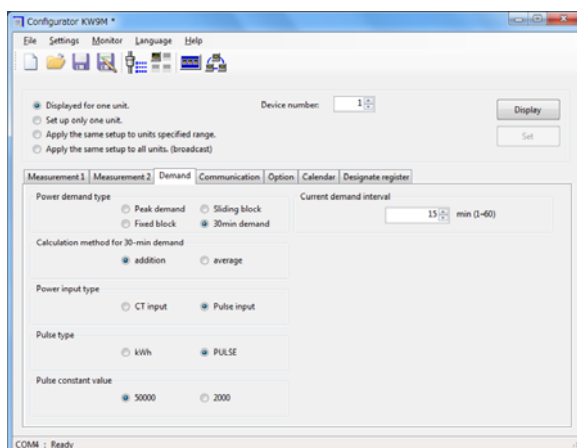
- Pulse type
Select from kWh and PULSE.

[kWh]



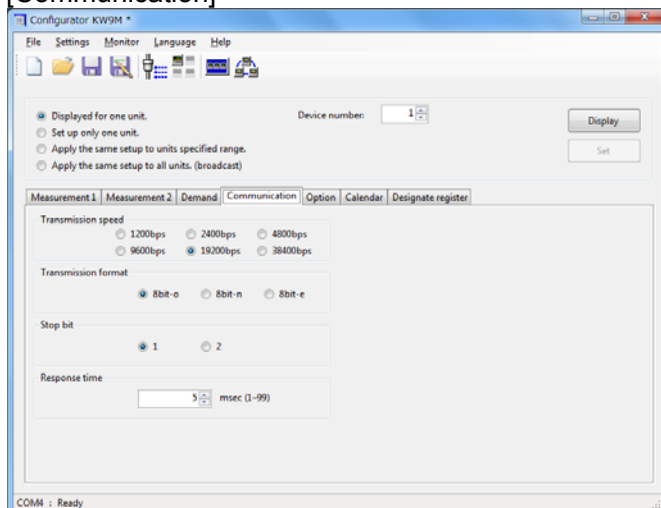
-Pulse rate
Set value in the range of 0.001 to 100.00
per 1 pulse.

[PULSE]



- Pulse constant value
Select 50000 or 2000 according to using
pulse detector.

[Communication]



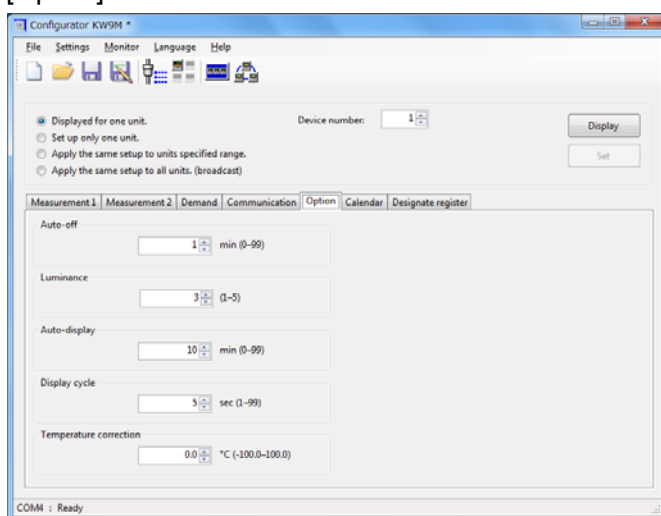
- Transmission speed
Select from 1200, 2400, 4800, 9600, 19200, and 38400.
- Transmission format
Select from 8bit-o, 8bit-n and 8bit-e.
- Stop bit
Select from 1 or 2.
- Response time
Set value in the range of 1 to 99.

<Caution!>

When you change communication setting, during you select except USB for network type, it will become that it can't communicate.

If it can't communicate after changing the settings, adjust the communication settings of Configurator KW9M and the device.

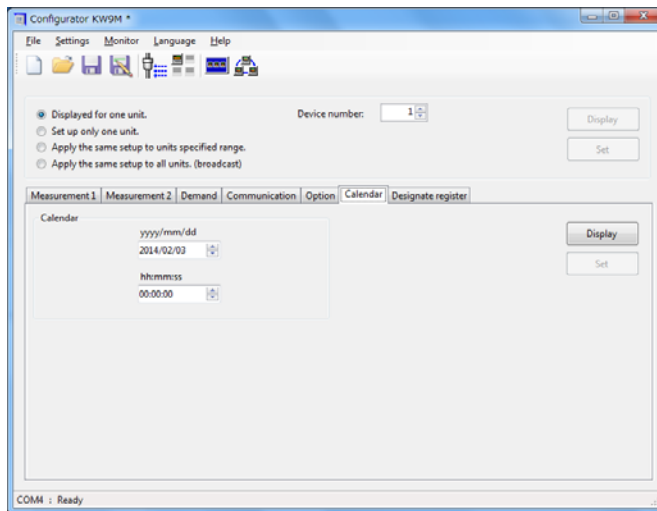
[Option]



- Auto-off
Set value in the range of 0 to 99.
After it passes the setting time, backlight will turn off.
- Luminance
Select from 1,2,3,4 and 5.
- Auto-display
Set value in the range of 0 to 99.
When it passes the setting time after key operation, the integral value is shifted automatically.
- Display cycle
Set value in the range of 1 to 99.
- Temperature correction
Set value in the range of -100.0 to 100.0.

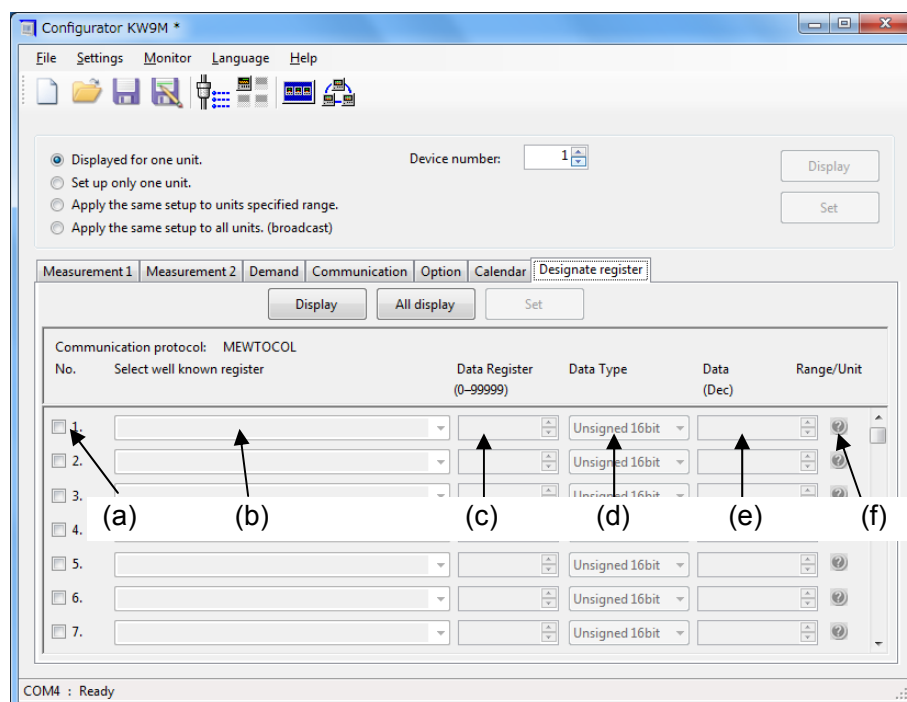
[Calendar]

Read out and write values of calendar build in Eco-POWER METER.



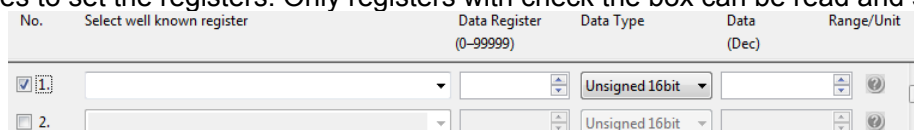
3) Designate register (for all models)

Using 'Designate register' allows you to setup your pointed registers.



(a) No.

Check boxes to set the registers. Only registers with check the box can be read and set.

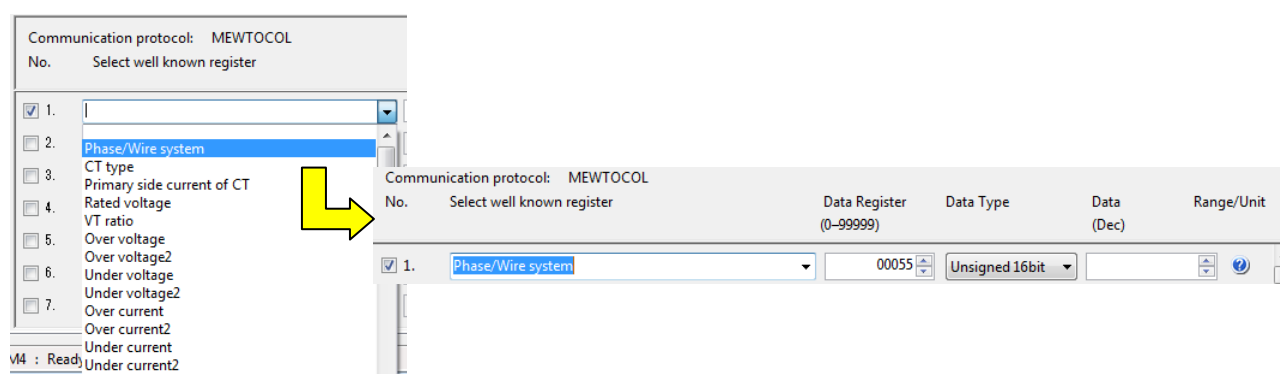


(b) Select well known register

For KW9M setting, select register intended to set from the list.

For other than KW9M, input register name by yourself.

When you select from the list, data register and data type are input automatically.



<Caution!>

Register number is different between KW9M and other Eco-POWER METER, therefore do not select from the list when you set for other devices.

If you set for the other model with selecting from the list, it will change not to intend or malfunctions.

(c) Data Register

Input data register by yourself.

*Refer to the user's manual for Eco-POWER METER as to data register number.

<Caution!>

- If you set with wrong register, it will change not to intend.
- When protocol is set to MEWTOCOL, input data register with decimal number. When protocol is set to MODBUS (RTU), input the data register with hex number.

(d) Data type

Select from the list.

*Refer to the user's manual for Eco-POWER METER as to data type.

(e) Data

Input value to set. Click [Display] button to read out the value.

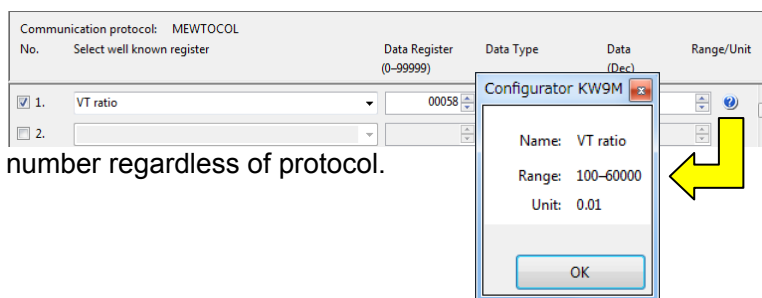
*Refer to the user's manual for Eco-POWER METER as to data range.

*Input with decimal number regardless of protocol.

(f) Range/Unit

When you select registers from the list, you can click '?' mark to check the range and unit.

Input value in the range.



*The range is displayed with decimal number regardless of protocol.

4) Device number

Select device number to read or write.

5) Display/Set

Click display or set button to read or write during you select tab of [Measurement1], [Measurement2], [Demand], [Communication] or [Option].

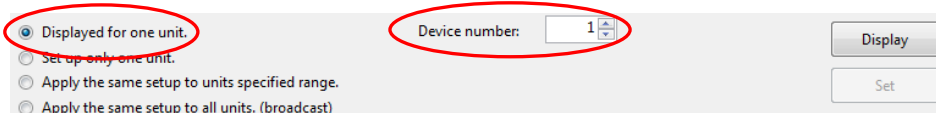
<Caution!>

- When you click set button, it will write all setting values in tabs of [Measurement1], [Measurement2], [Demand], [Communication] and [Option]. Be sure to set all value before click.
- Items not to support KW9M standard type are not written. In case of you click display button for KW9M standard type, only supported items are displayed.

6.2 Read the setup values

[Measurement1], [Measurement2], [Demand], [Communication] [Option] (only for KW9M series)

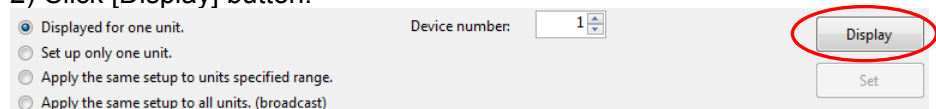
1) Select [Display for one unit] and select device number to read out.



Displayed for one unit. Device number: 1

Buttons: Display, Set

2) Click [Display] button.

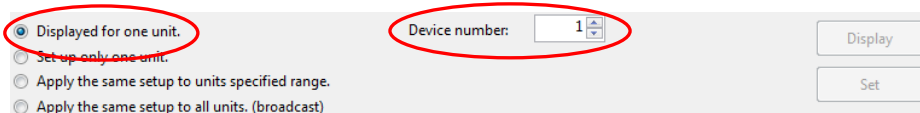


Displayed for one unit. Device number: 1

Buttons: Display, Set

[Calendar] (only for KW9M advanced type)

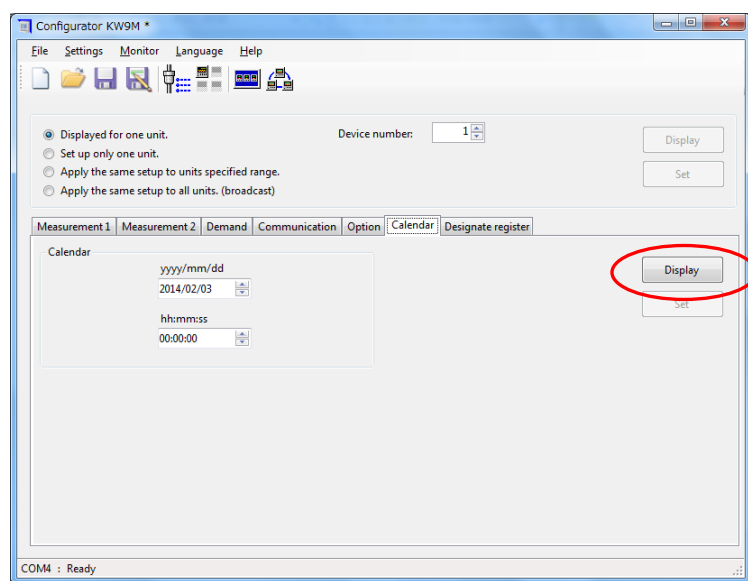
1) Select [Display for one unit] and device number to read out.



Displayed for one unit. Device number: 1

Buttons: Display, Set

2) Click [Display] button in the tab.



Configurator KW9M

File Settings Monitor Language Help

Displayed for one unit. Device number: 1

Buttons: Display, Set

Measurement 1 Measurement 2 Demand Communication Option Calendar Designate register

Calendar

yyyy/mm/dd

2014/02/03

hh:mm:ss

00:00:00

Buttons: Display, Set

COM : Ready

[Designate register]

1) Select [Display for one unit] and device number to read out.

Displayed for one unit. Device number: 1

Set up only one unit.

Apply the same setup to units specified range.

Apply the same setup to all units. (broadcast)

Display Set

2) Select registers from the list for KW9M or input register for other device and click [Display] button in the tab.

Configurator KW9M

File Settings Monitor Language Help

Displayed for one unit. Device number: 1

Set up only one unit.

Apply the same setup to units specified range.

Apply the same setup to all units. (broadcast)

Display Set

Measurement 1 Measurement 2 Demand Communication Option Calendar Designate register

Communication protocol: MEWTOCOL

No. Select well known register Data Register (0-99999) Data Type Data (Dec) Range/Unit

1	Phase/Wire system	00055	Unsigned 16bit		
2	CT type	00056	Unsigned 16bit		
3	Rated voltage	00088	Unsigned 16bit		
4	VT ratio	00058	Unsigned 16bit		
5			Unsigned 16bit		
6			Unsigned 16bit		
7			Unsigned 16bit		

COM4 : Ready

<Caution!>

*Register number is different between KW9M and other Eco-POWER METER, therefore do not select from the list when you use other devices.

*If you input register by yourself, input data register and data type.

6.3 Write the setup values

[Measurement1], [Measurement2],[Demand], [Communication] [Option] (only for KW9M series)

- 1) Select one from [Set up only one unit], [Apply the same setup to units specified range] or [Apply the same setup to all units (broadcast)], and select device number to set.

Displayed for one unit.
☒ Set up only one unit.
☐ Apply the same setup to units specified range.
☐ Apply the same setup to all units. (broadcast)

Device number: 1

Display
Set

- 2) Click [Set] after setting to write.

Displayed for one unit.
☒ Set up only one unit.
☐ Apply the same setup to units specified range.
☐ Apply the same setup to all units. (broadcast)

Device number: 1

Display
Set

<Caution!>

- When you click set button, it will write all setting values in tabs of [Measurement1], [Measurement2], [Demand], [Communication] and [Option]. Be sure to set all value before click.

[Calendar] (only for KW9M advanced type)

- 1) Select one from [Set up only one unit], [Apply the same setup to units specified range] or [Apply the same setup to all units (broadcast)], and select device number to set.

Displayed for one unit.
☒ Set up only one unit.
☐ Apply the same setup to units specified range.
☐ Apply the same setup to all units. (broadcast)

Device number: 1

Display
Set

- 2) Click [Set] after setting to write.

Calendar

yyyy/mm/dd
2014/02/03

hh:mm:ss
00:00:00

Display
Set

COM4 : Ready

[Designate register]

- 1) Select one from [Set up only one unit], [Apply the same setup to units specified range] or [Apply the same setup to all units (broadcast)], and select device number to set.

- 2) Select registers from the list or input register for KW9M, or input register for others.
After the setting, click [Set] button in the tab.
When you input register by yourself, input data register and data type.

No.	Select well known register	Data Register (0-99999)	Data Type	Data (Dec)	Range/Unit
<input checked="" type="checkbox"/> 1.	Phase/Wire system	00055	Unsigned 16bit	1	
<input checked="" type="checkbox"/> 2.	CT type	00056	Unsigned 16bit	5	
<input checked="" type="checkbox"/> 3.	Rated voltage	00088	Unsigned 16bit	100	
<input checked="" type="checkbox"/> 4.	VT ratio	00058	Unsigned 16bit	100	
<input type="checkbox"/> 5.			Unsigned 16bit		
<input type="checkbox"/> 6.			Unsigned 16bit		
<input type="checkbox"/> 7.			Unsigned 16bit		

<Caution!>

- *When you set values to wrong registers, it will change values not to intend.
- *When using [Apply the same setup to units specified range] or [Apply the same setup to all units. (broadcast)], check that all specified devices or all connected devices are KW9M and all specified devices or all connected devices are not KW9M before you set values.
If you set values to KW9M and the other devices at the same time, it will make change not to intend or malfunctions.
- *Register number is different between KW9M and other Eco-POWER METER, therefore do not select from the list when you set for other devices.
If you set for the other model with selecting from the list, it will change not to intend or malfunctions.
- *If you input values out of the range to set, and click [Set], it doesn't set values. In Configurator KW9M, it will display values of the connected device.

6.4 Copy setting conditions

You can copy the setting conditions of Eco-POWER METER.

● For KW9M

1) Select [Displayed for one unit] and select device number to read out.

☒ Displayed for one unit. Device number: 1

☐ Set up only one unit.

☐ Apply the same setup to units specified range.

☐ Apply the same setup to all units. (broadcast)

2) Click [All display] in the tab 'Designate register'.

Communication protocol: MEWTOCOL

No.	Select well known register	Data Register (0-99999)	Data Type	Data (Dec)	Range/Unit
1.			Unsigned 16bit		
2.			Unsigned 16bit		
3.			Unsigned 16bit		
4.			Unsigned 16bit		
5.			Unsigned 16bit		
6.			Unsigned 16bit		
7.			Unsigned 16bit		

Reading values will be displayed.

Communication protocol: MEWTOCOL

No.	Select well known register	Data Register (0-99999)	Data Type	Data (Dec)	Range/Unit
1.	Phase/Wire system	00055	Unsigned 16bit	0	
2.	CT type	00056	Unsigned 16bit	5	
3.	Primary side current of CT	00057	Unsigned 16bit	5	
4.	VT ratio	00058	Unsigned 16bit	100	
5.	Conversion rate(P)	00093	Unsigned 16bit	1000	
6.	Conversion rate(-P)	00087	Unsigned 16bit	1000	
7.	Transmission speed	00051	Unsigned 16bit	4	

3) Select [Set up only one unit], [Apply the same setup to units specified range] or [Apply the same setup to all units (broadcast)], and select device number of to set.

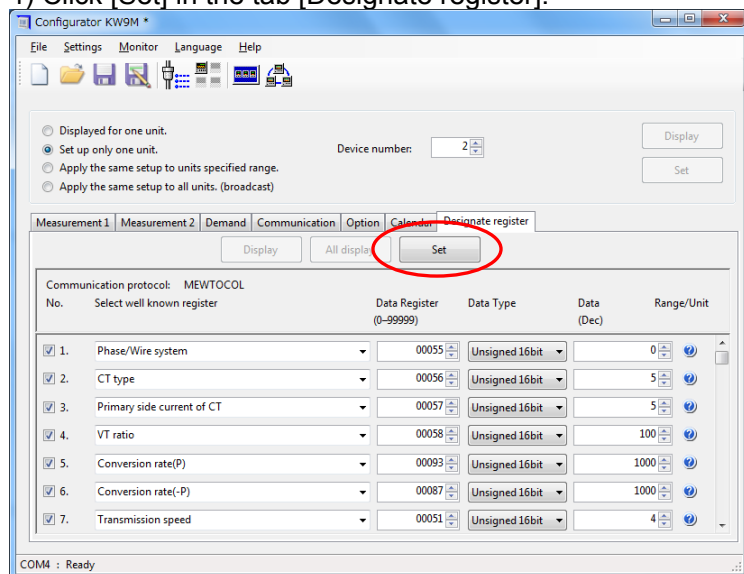
☐ Displayed for one unit.

☒ Set up only one unit. Device number: 2

☐ Apply the same setup to units specified range.

☐ Apply the same setup to all units. (broadcast)

4) Click [Set] in the tab [Designate register].

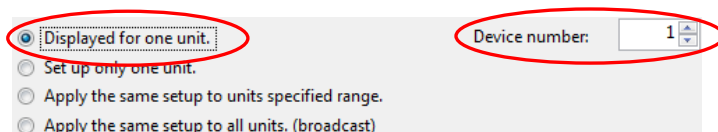


<Caution!>

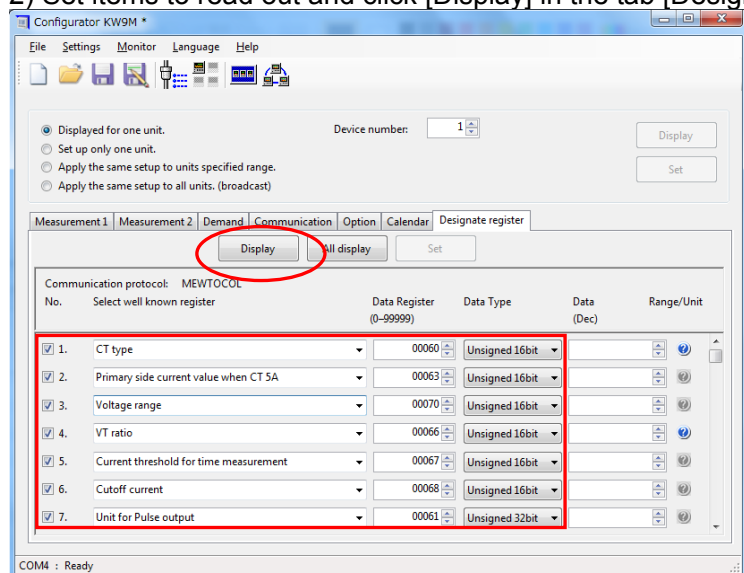
When you copy settings from KW9M standard type to advanced type, it set only items supported by standard type. When you copy settings from KW9M advanced type to standard type, it set only items supported by standard type.

● For Eco-POWER METER except KW9M

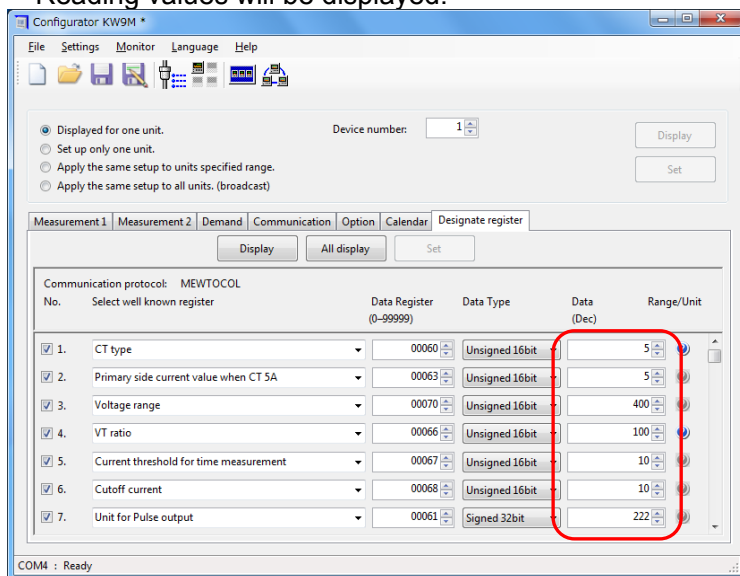
1) Select [Display for one unit] and select device number to read out.



2) Set items to read out and click [Display] in the tab [Designate register].

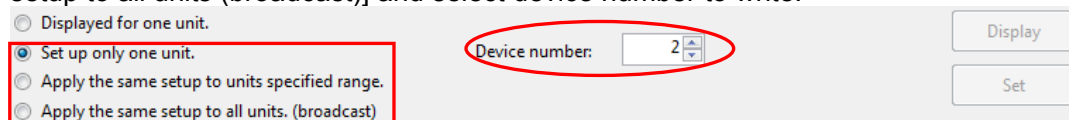


Reading values will be displayed.

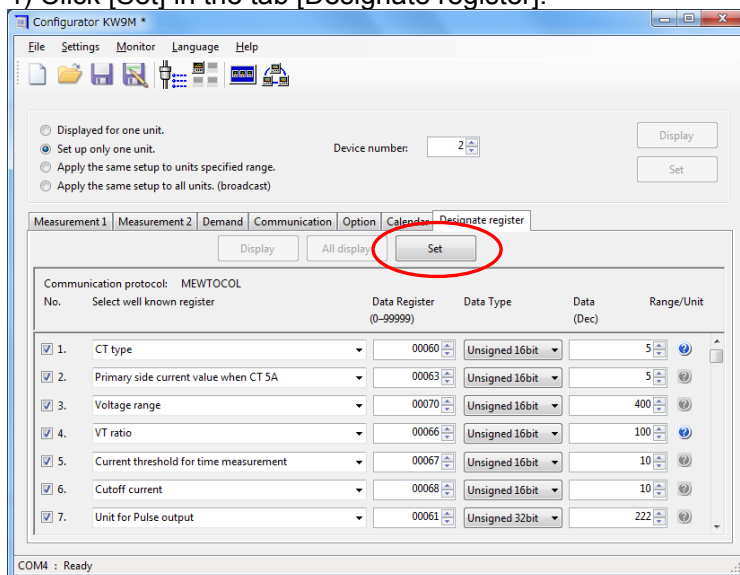


3) Reading values will be displayed.

Select [Set up only one unit], [Apply the same setup to units specified range] or [Apply the same setup to all units (broadcast)] and select device number to write.



4) Click [Set] in the tab [Designate register].



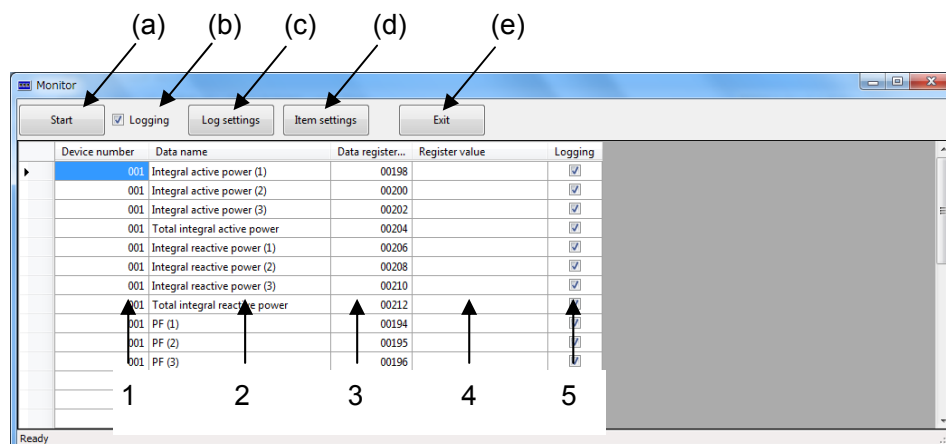
- Register number is different between KW9M and other Eco-POWER METER, therefore do not select from the list when you set for other devices.
- If you set to other devices, it will change not to intended and may cause malfunctions.

Chapter 7 Monitor register value

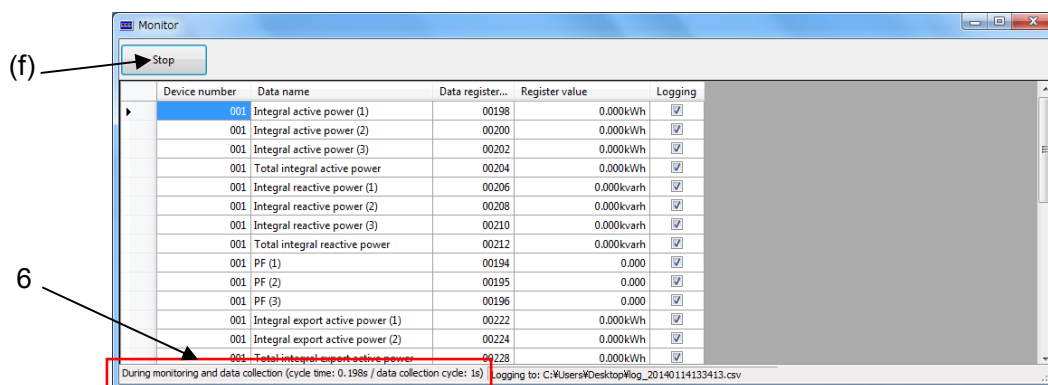
You can monitor and log the measured values of designated registers.
Click [Monitor] to open this window.

7.1 Monitor window

Before start monitoring



During monitoring

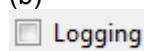


(a)



Start monitoring and/or logging.

(b)



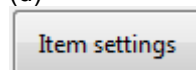
Check the box to log and save data according to the settings. (Refer to 7.2.1-8)

(c)



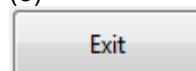
Set conditions for log file. (Refer to 7.2.2)

(d)



Set items for monitoring and logging.

(e)



Finish this window.

(f)



Stop monitoring and/or logging.
When you click [Stop], it will create file to save data at that time.

- 1) Device number
Device numbers to monitor and/or logging are displayed. Refer to 7.2.1 for settings.
- 2) Data name
Data names to monitor and/or logging are displayed. Refer to 7.2.1 for settings.
- 3) Data register
Data registers to monitor and/or logging are displayed. Refer to 7.2.1 for settings.
- 4) Register value
Values of monitoring and/or logging are displayed.
- 5) Logging
Check these boxes to log measurement data.
- 6) cycle time
It displays cycle time that it takes to monitor all selected items.
In order to save log data, the data collection cycle should be longer than the cycle time.

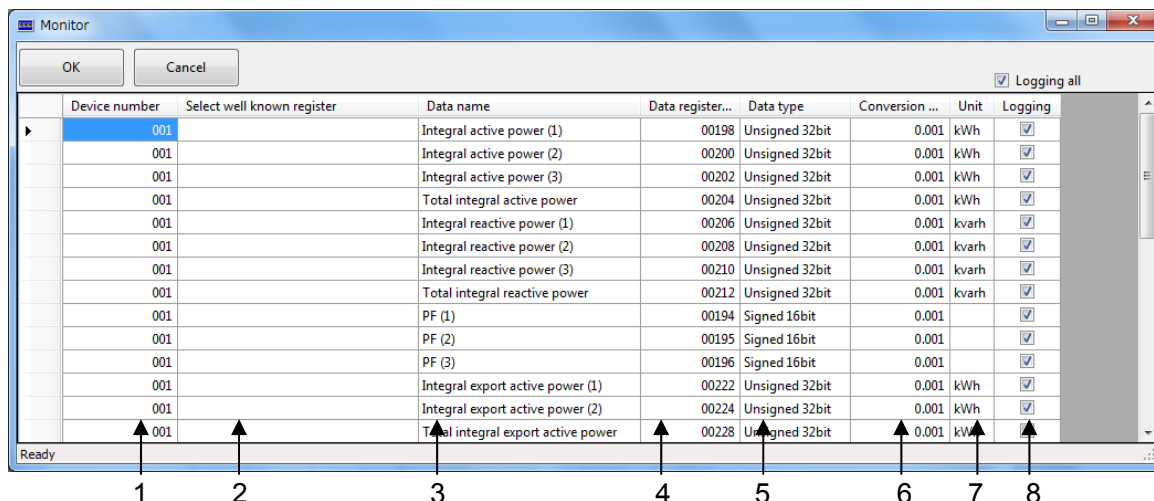
7.2 Setup Monitoring and Logging

Item settings

Click <Item settings> to open the setting window. Set registers to monitor or log.

For monitoring, set conditions according to the below procedure 1) to 7).

For logging, set conditions by [Item settings] and [Log settings].



[OK]-Exit this window after saving the settings.

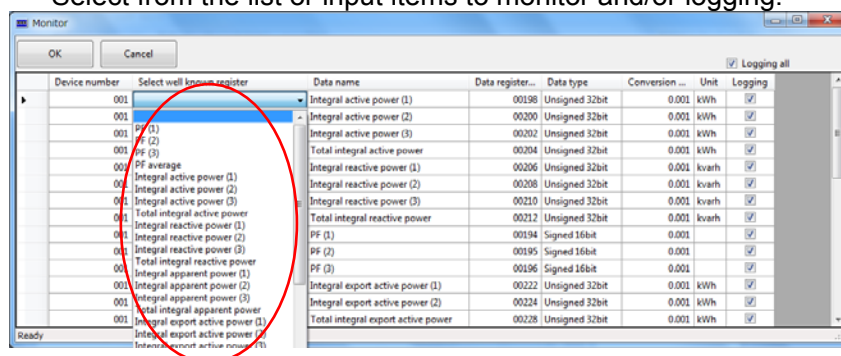
[Cancel]-Exit this window without saving the settings.

1) Device number

Input device numbers to monitor and/or logging.

2) Select well known register

Select from the list or input items to monitor and/or logging.



*Register number is different between KW9M and other Eco-POWER METER, therefore do not select from the list when you set for other devices.

3) Data name

Input data name.

4) Data register

Input data registers to monitor and/or logging.

*When protocol is set to MEWRTOCOL, input data register with decimal number.

When protocol is set to MODBUS (RTU), input the data register with hex number.

5) Data type

Select data type according to the data register.

6) Conversion value

The register value at monitor main window (measurement value) is displayed after conversion.

7) Unit

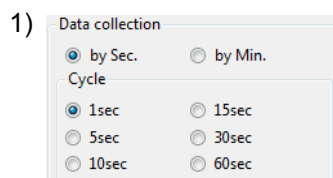
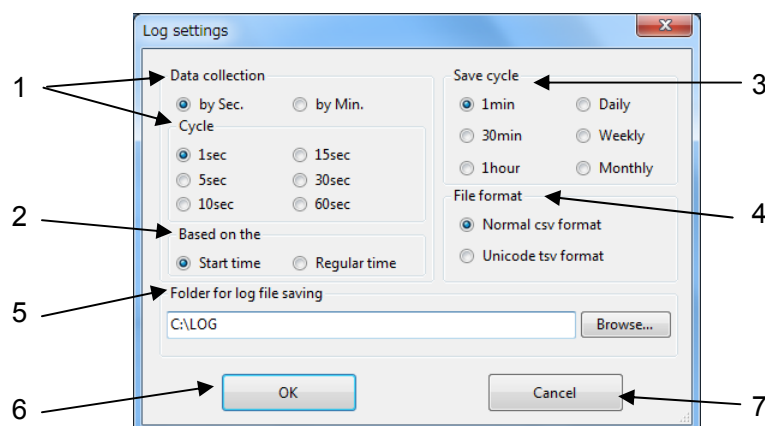
The register value at monitor main window (measurement value) is displayed with unit that input here.

8) Logging

When you check boxes, it saves log data with the conditions setting at Log settings window.

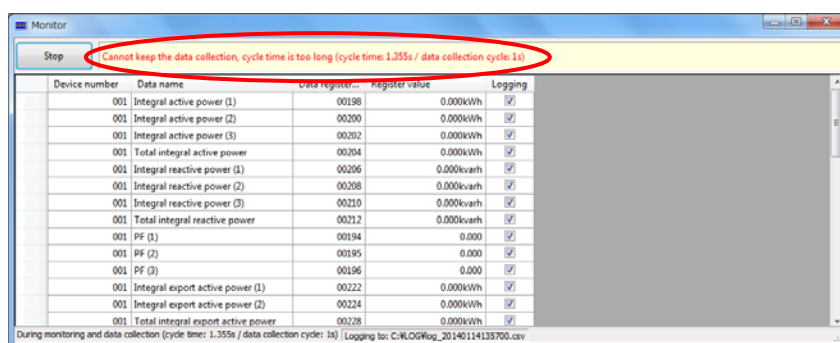
Log settings

Check box of [Logging] and click <Log settings> to open Log settings window.
Set conditions for logging with this window.



Select data collection timing.
You can select from by Sec. or by Min. for unit,
from 1sec/5sec/10sec/15sec/30sec/60sec for cycle.

*In case of that 'Cannot keep the data collection, cycle time is too long' is
appeared, set data collection cycle longer than displayed cycle time.



Data collection cycle

It may not satisfy the selected cycle according to the communication condition and connected number.
The below table is for the standard of data collection cycle and it doesn't guarantee it.

[Connection environment]

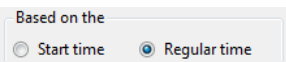
Network type: Ethernet

Communication speed: 19200bps

Broadcast transmission interval: 5000ms

KS1 signal converter

Type	Logging points	Data collection cycle
KW9M	10	1 sec.

- 2)  Set timing to start logging.
You can select Start time or Regular time.

When you select [Start time], it starts collecting data at the time to click [Start].

Ex.1) Set to [5sec] and click [Start] at 12:15:12

It will collect data at 12:15:12, 12:15:17, 12:15:22

Ex.2) Set to [15min] and click [Start] at 12:10:00

It will collect data at 12:10:00, 12:25:00, 12:40:00

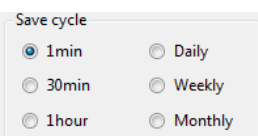
When you select [Regular time], it starts collecting data at the time according to selected data collection timing.

Ex.1) Set to [5sec] and click [Start] at 12:15:58

It will collect data at 12:16:00, 12:16:05, 12:16:10, 12:16:50, 12:16:55

Ex.2) Set to [15min] and click [Start] at 12:15:58

It will collect data at 12:30:00, 12:45:00, 13:00:00, 13:15:00

- 3) 

Set cycle to save data.

You can select from 1min/ 30min/ 1hour/ Daily/ Weekly/ Monthly.

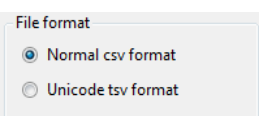
It saves files every time when passing the selected cycle after start logging automatically.

Ex.1) Set to [Start time] [1min] and click [Start] at 12:15:12

It will save the first data at 12:16:12.

Ex.2) Set to [Regular time] [1hour] and click [Start] at 12:10:00

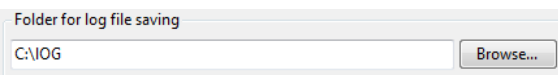
It will save the first data at 13:10:00.

- 4) 

Set file format to save data.

You can select from Normal csv format/ Unicode tsv format.

*When it get garbled with csv format, select tsv format.

- 5) 

Set the folder that you'd like to save log files
Input directly or browse folders.

6) [OK]-Exit this window after saving the settings.

7) [Cancel]-Exit this window without saving the settings.

Revision History

Date	Manual No.	Content of revision
February 2014	WUME-Configurator KW9M-01	First Version: Software version 1.00

Please contact

Panasonic Industrial Devices SUNX Co., Ltd.

■ Overseas Sales Division (Head Office): 2431-1 Ushiyama-cho, Kasugai-shi, Aichi, 486-0901, Japan

■ Telephone: +81-568-33-7861 ■ Facsimile: +81-568-33-8591

panasonic.net/id/piddsx/global

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Specifications are subject to change without notice.

WUME-ConfiguratorKW9M-01