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2018/12/12

DPMSoft **User Manual**

www.deltaww.com

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DPMSoft User Manual

Revision History

Version	Revision	Date
1st	The first version was published.	2018/12/12

DPMSoft User Manual

Contents

Chapter 4 DPMSoft Settings

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Chapter 1 Introduction to DPMSoft

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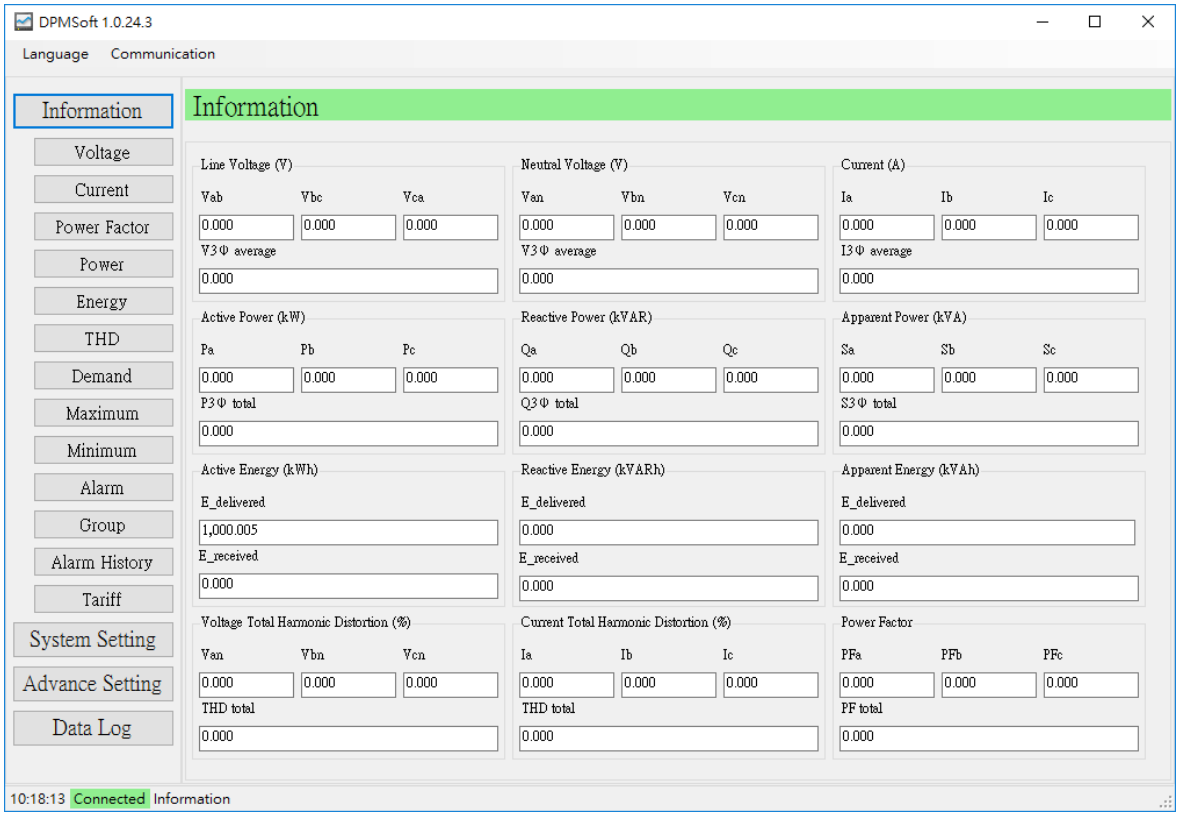
1.1 Overview

DPMSoft is a software designed to read data from Delta power meters and complete setups including communications, current transformers (CT) and alarms. In addition, DPMSoft supports advanced functions of power meter DPM Series, such as auto recording, data storage as well as data import and export.



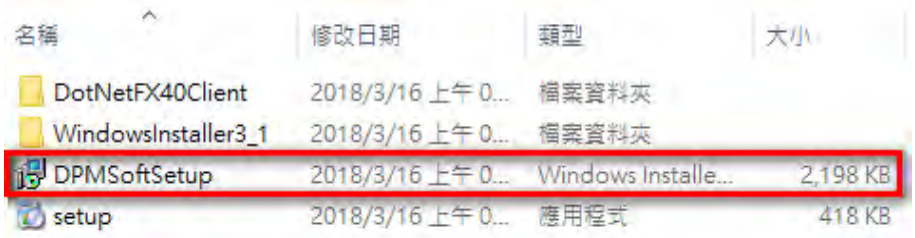
1.2 Install DPMSoft

Download DPMSoft via Delta Electronics official website: http://www.deltaww.com/

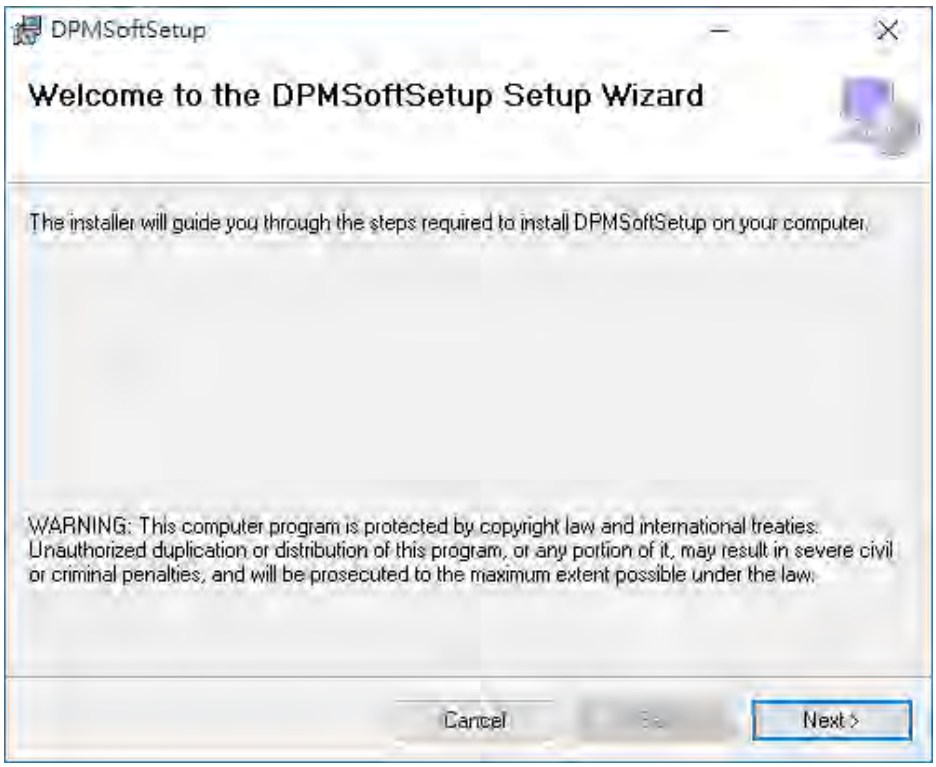
Software Info:
Operating system (Windows 7/8/10)

Steps to installing DPMSoft:

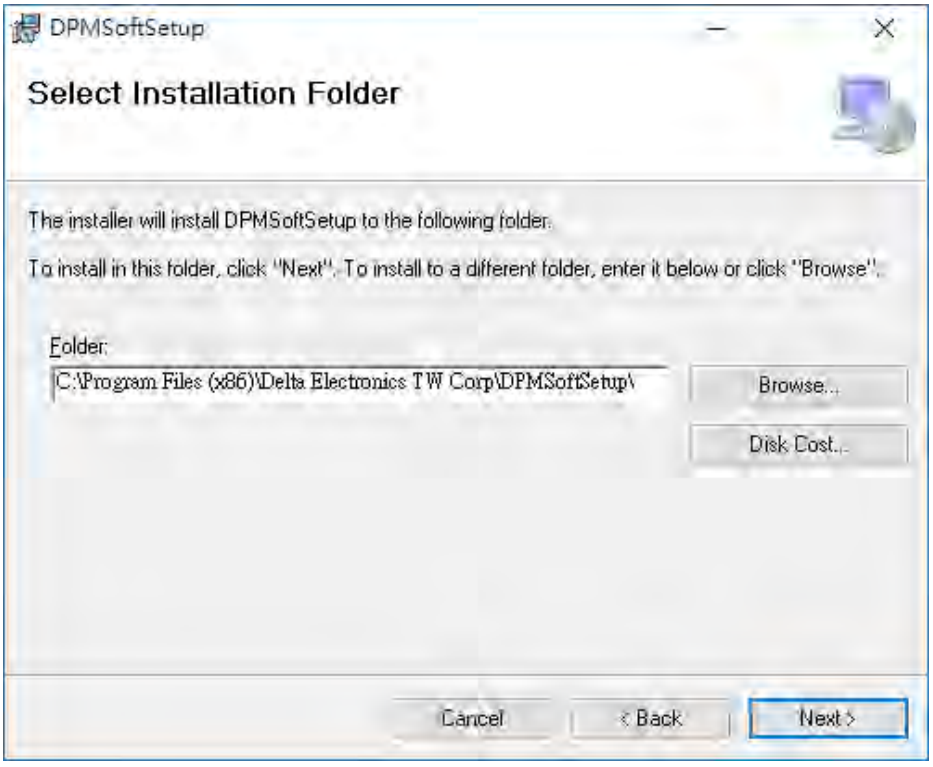
(1) Open the compressed file and double click “DPMSoftSetup.msi” for installation.



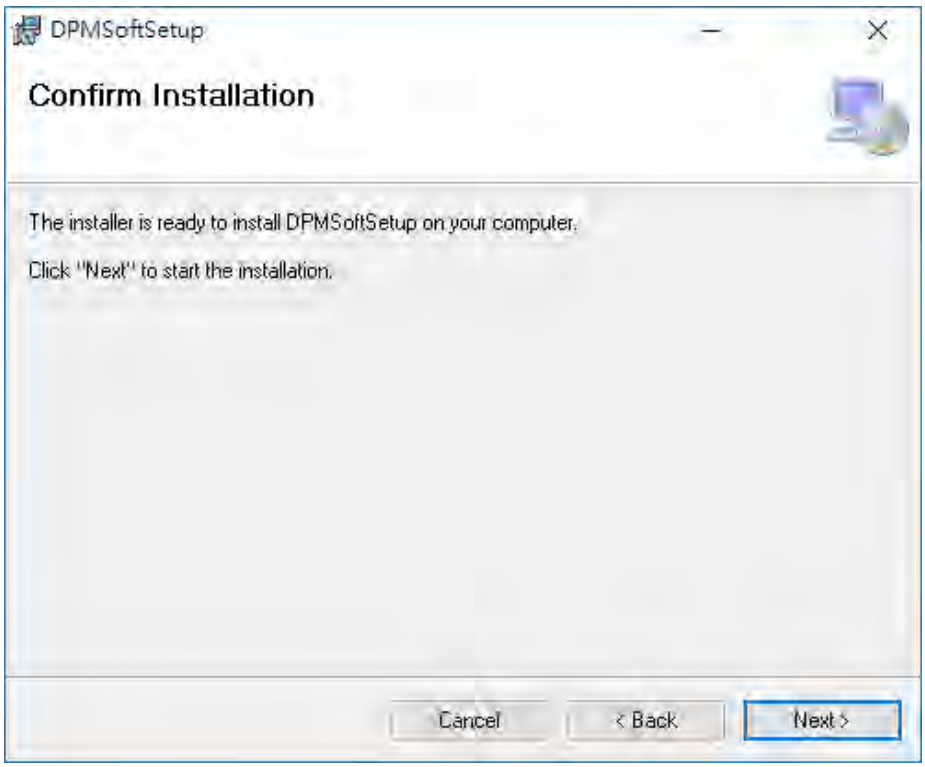
(2) Click "Next" when entering the DPMSoft setup page (see below).



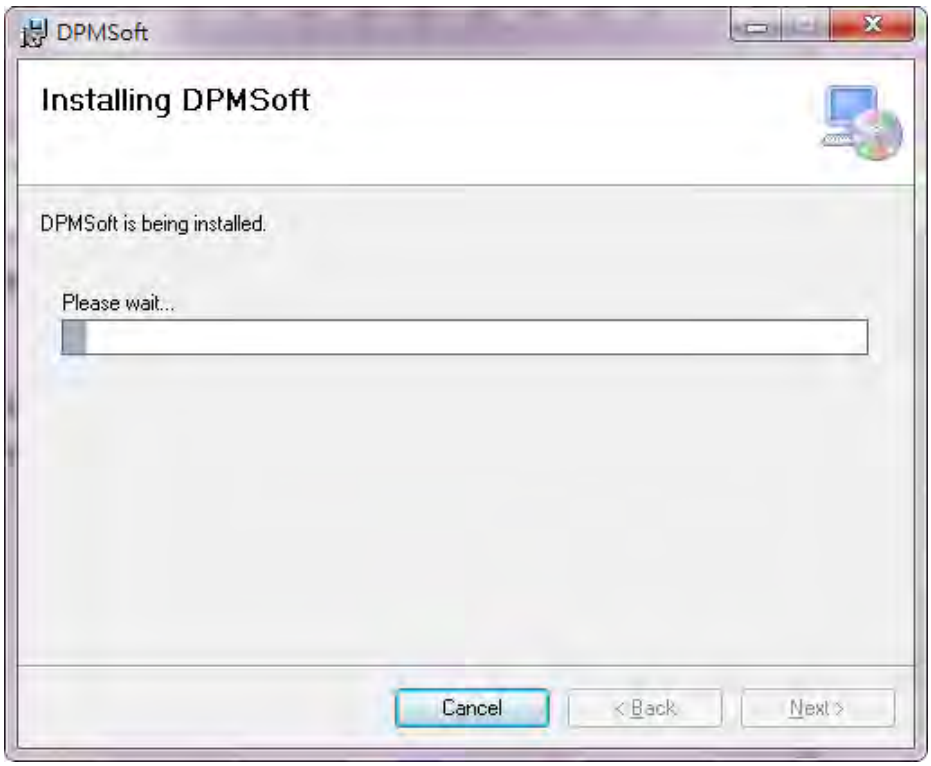
(3) Click "Browse" to select a location for the installation folder and click "Next" to continue the process.



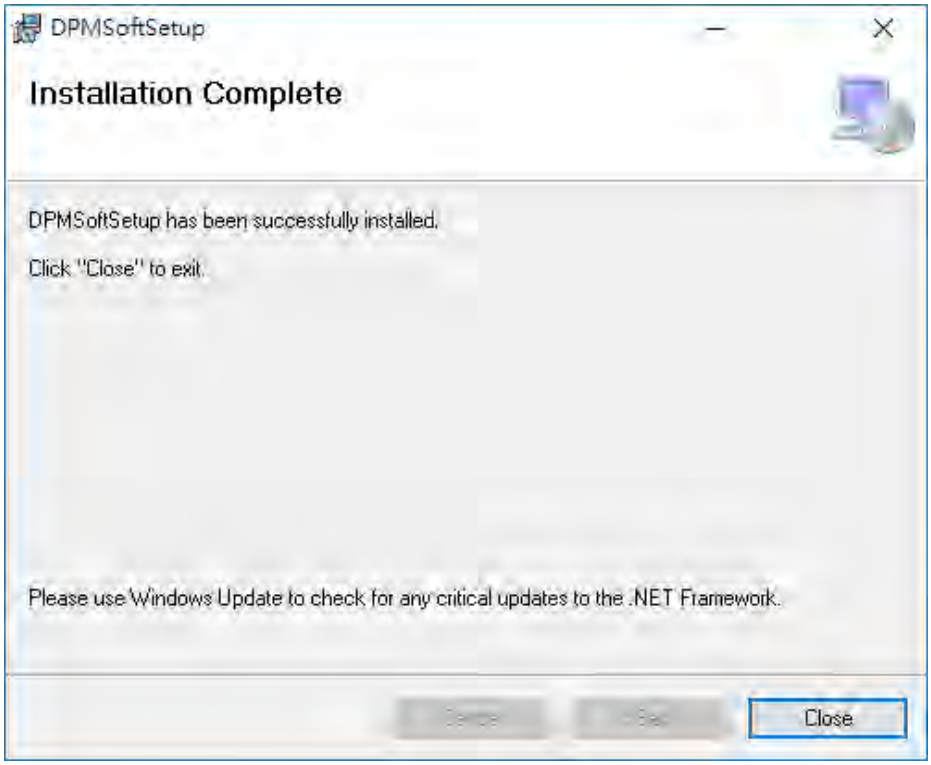
(4) After confirming the installation directory, click “Next” to start the installation.



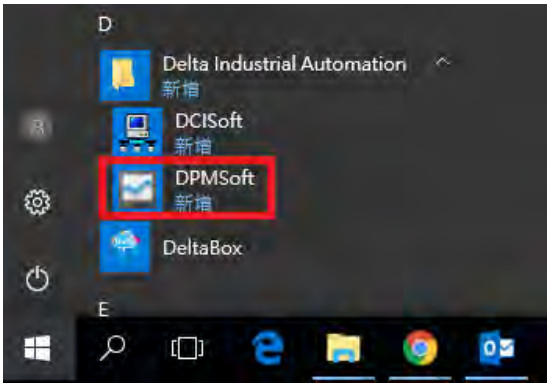
(5) A single bar diagram for installing DPMSoft is shown on the page.

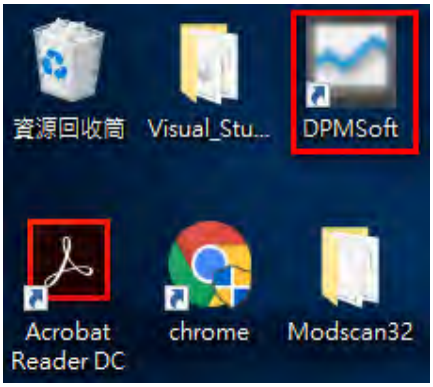


(6) When DPMSoft installation is complete, click "Close" to exit the process.



(7) After installation, click the desktop or system shortcut for DPMSoft to enable the software. In addition, users can view multiple windows on the power meter via clicking the DPMSoft shortcut icon.

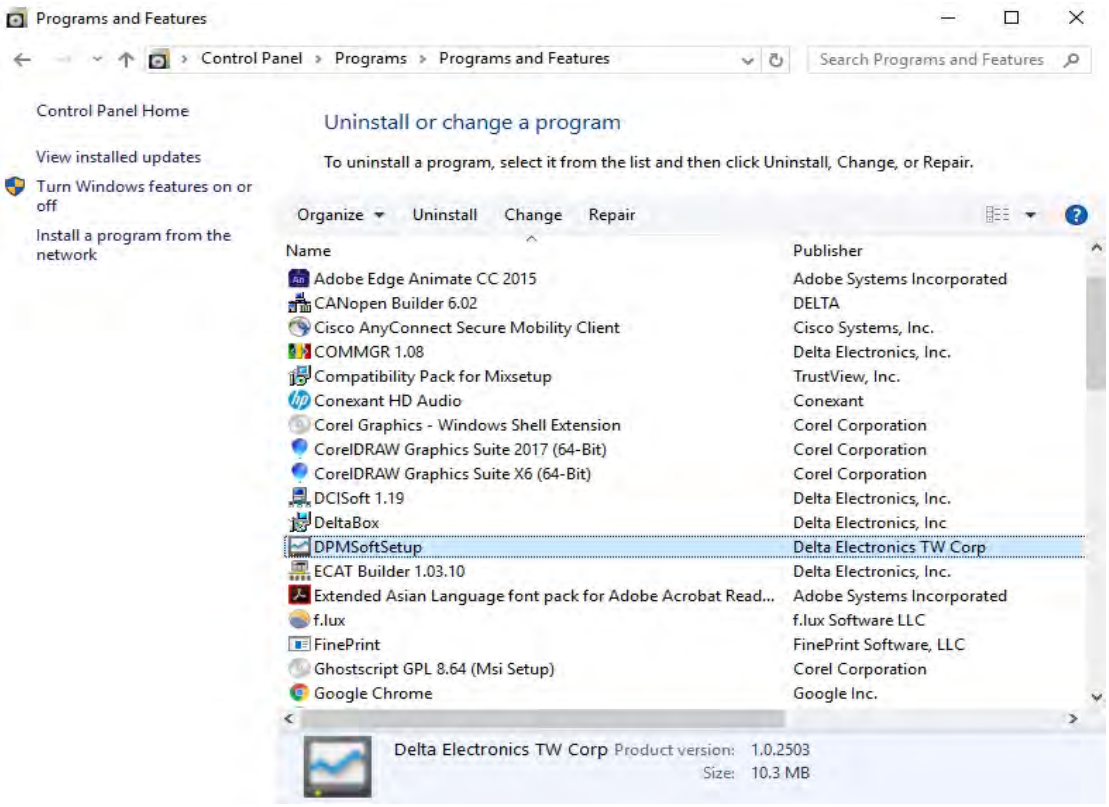




1.3 Uninstall DPMSoft

Steps to uninstall DPMSoft:

Enter 'Control Panel' and select **DPMSoftSetup** listed in the **'**Uninstall or change a program' page to remove the software.


Programs and Features
Control Panel › Programs › Programs and Features
Search Programs and Features
Control Panel Home
View installed updates
Turn Windows features on or off
Install a program from the network
Uninstall or change a program
To uninstall a program, select it from the list and then click Uninstall, Change, or Repair.
Organize
Uninstall
Change
Repair
Name
Publisher
Adobe Edge Animate CC 2015
Adobe Systems Incorporated
CANopen Builder 6.02
DELTA
Cisco AnyConnect Secure Mobility Client
Cisco Systems, Inc.
COMMGR 1.08
Delta Electronics, Inc.
Compatibility Pack for Mixsetup
TrustView, Inc.
Conexant HD Audio
Conexant
Corel Graphics - Windows Shell Extension
Corel Corporation
CorelDRAW Graphics Suite 2017 (64-Bit)
Corel Corporation
CorelDRAW Graphics Suite X6 (64-Bit)
Corel Corporation
DCISoft 1.19
Delta Electronics, Inc.
DeltaBox
Delta Electronics, Inc
DPMSoftSetup
Delta Electronics TW Corp
ECAT Builder 1.03.10
Delta Electronics, Inc.
Extended Asian Language font pack for Adobe Acrobat Read...
Adobe Systems Incorporated
f.lux
f.lux Software LLC
FinePrint
FinePrint Software, LLC
Ghostscript GPL 8.64 (Msi Setup)
Corel Corporation
Google Chrome
Google Inc.
Delta Electronics TW Corp Product version: 1.0.2503
Size: 10.3 MB

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Chapter 2 DPMSoft Connections

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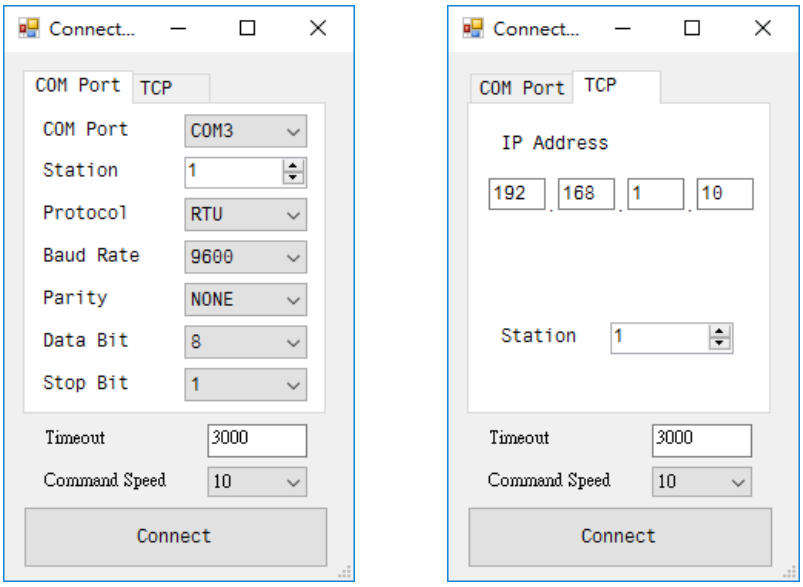
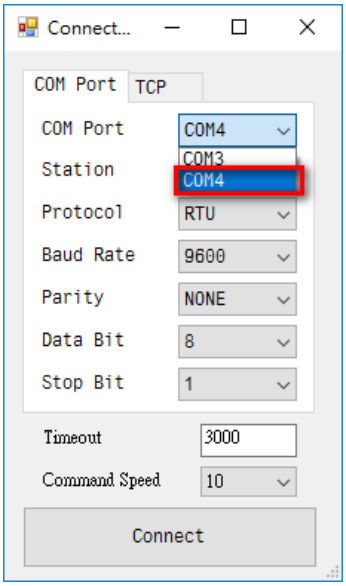
Double click the installed DPMSoft icon and a pop-up window for connection will appear. There are two methods for connecting the DPMSoft to the power meter; one is serial port communication (see bottom left) and the other is TCP/IP network connections (see bottom right).



2.1 Serial Port Communication Settings

- **Steps to set up serial port communication:**
  (1) Select a COM Port.



(2) Input the slave station, communication mode, Baud rate, data bit, parity, stop bit of the power meter. Enter the required timeout (ms) and the command speed for DPMSoft.

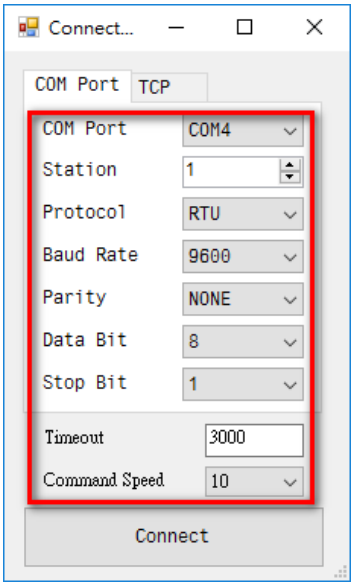
Communication Mode: RTU/ ASCII

Baud Rate: 9600/ 19200/ 38400

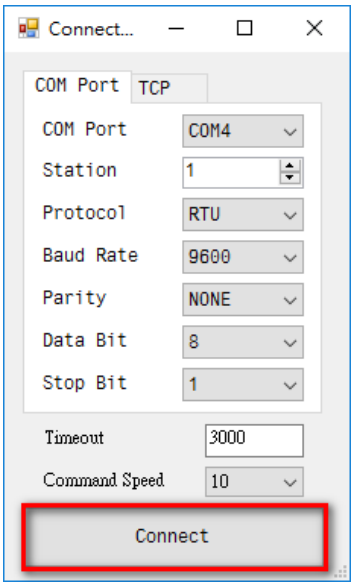
Parity: NONE/ EVEN/ ODD

Data Bit: 7/ 8

Stop Bit: 1/ 2



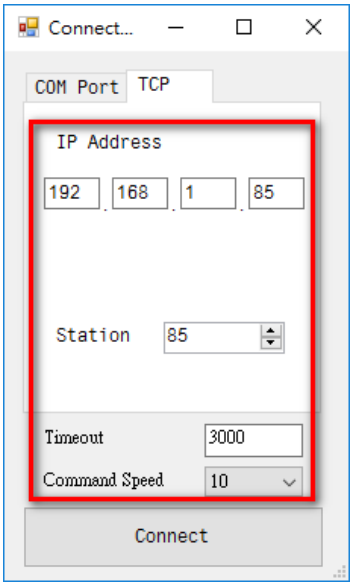
(3) After the setup, connect to the power meter by clicking 'Connect'. For successful connection, the DPMSoft main page window will pop-up; for unsuccessful connection, a pop-up window will appear to point out the connection failure.



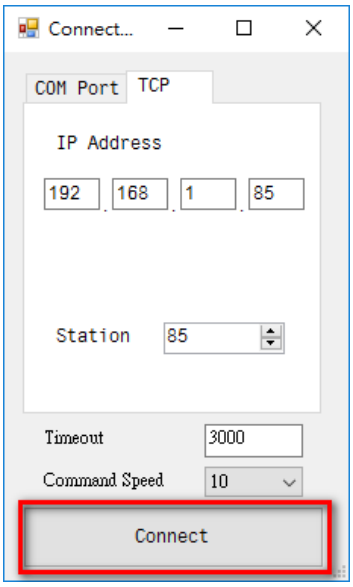
2.2 TCP / IP Network Connections

- **Steps to set up TCP/IP Network Connections:**

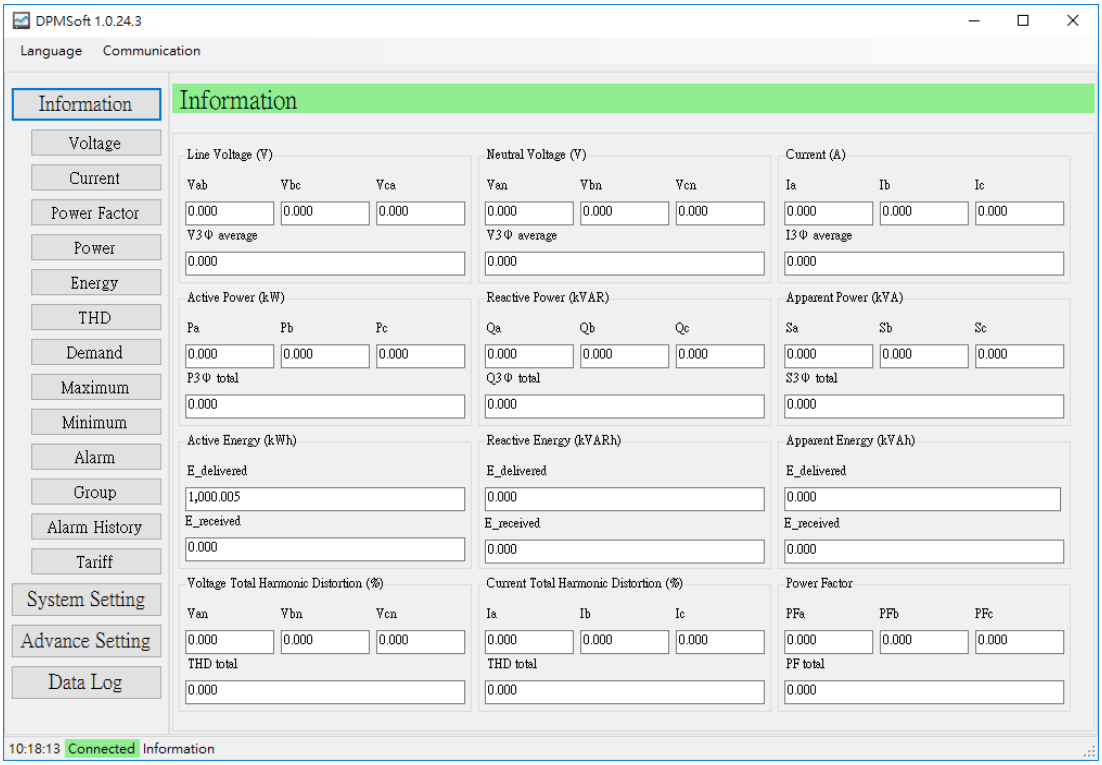
(1) Setup the IP address and station of the power meter. When the RS-485 is used to communicate between the power meter and Ethernet converter, enter the IP address and station of the router. Users also need to type in the required timeout (ms) and choose the command speed of the DPMSoft.



(2) When setup is complete, connect to the power meter by clicking ‘Connect’. For successful connection, the DPMSoft main page window will pop-up; for unsuccessful connection, a pop-up window will appear to point out the connection failure.



The DPMSoft main page window (see below) pops-up when connection is successful.



MEMO

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Chapter 3 DPMSoft Screen Display

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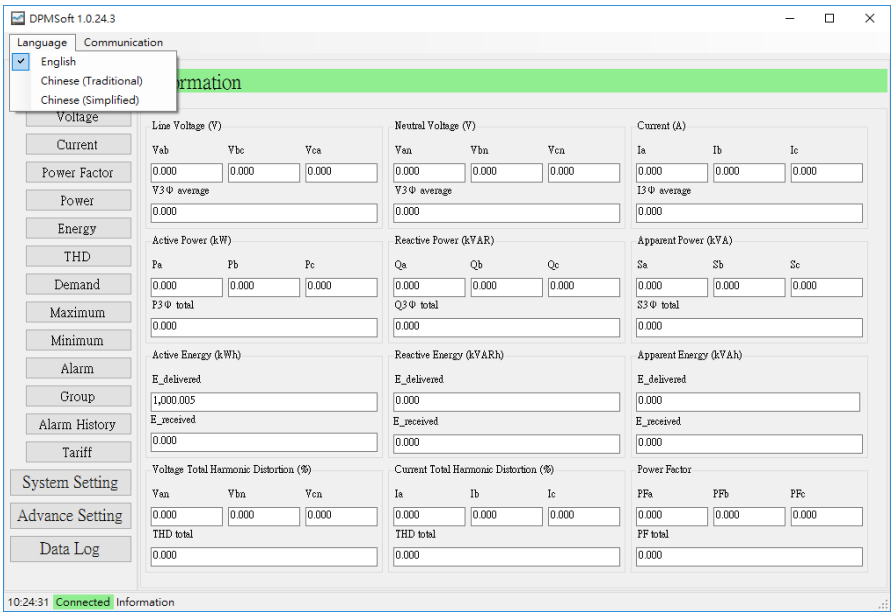
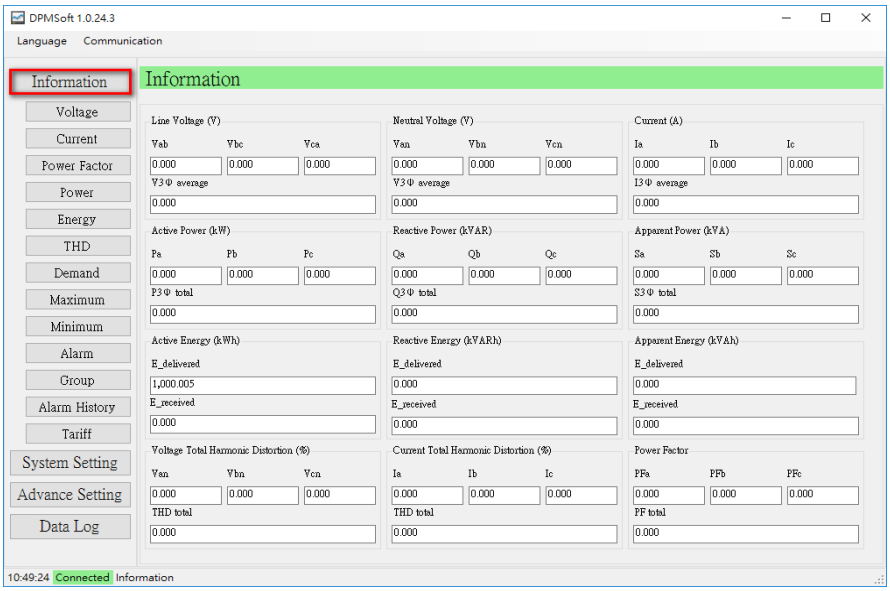
When DPMSoft and the Delta power meter is successfully connected, the software interface displays the language such as English, Traditional Chinese or Simplified Chinese base on the Windows system. To change the displayed language, select the Language menu on the upper right corner of the page and choose the desired language.



The DPMSoft screen displays including Information, Voltage, Current, Power Factor, Power, Energy, Total Harmonic Distortion (THD), Demand, Maximum, Minimum, Alarm, Group, Alarm History and Tariff with explanations in the following sections.

3.1 Information

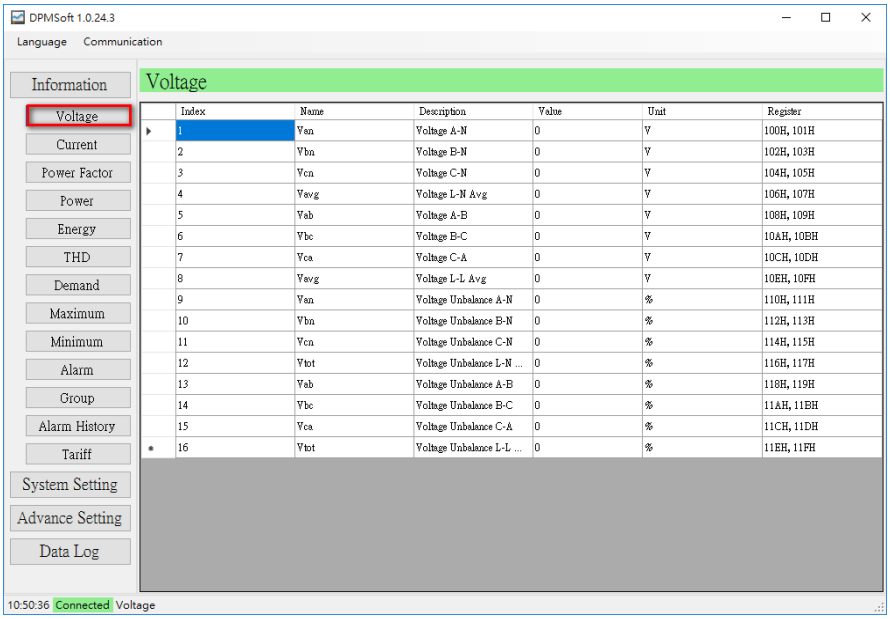
The page displays most commonly used parameters for measurements including voltage, neutral voltage, current, active power, reactive power, apparent power, active energy, power factor as well as voltage and current total harmonic distortions.



3.2 Voltage

The page displays the average voltage and voltage per phase, voltage unbalance rate as well as the average, phase to phase and unbalance rate value of line voltage.

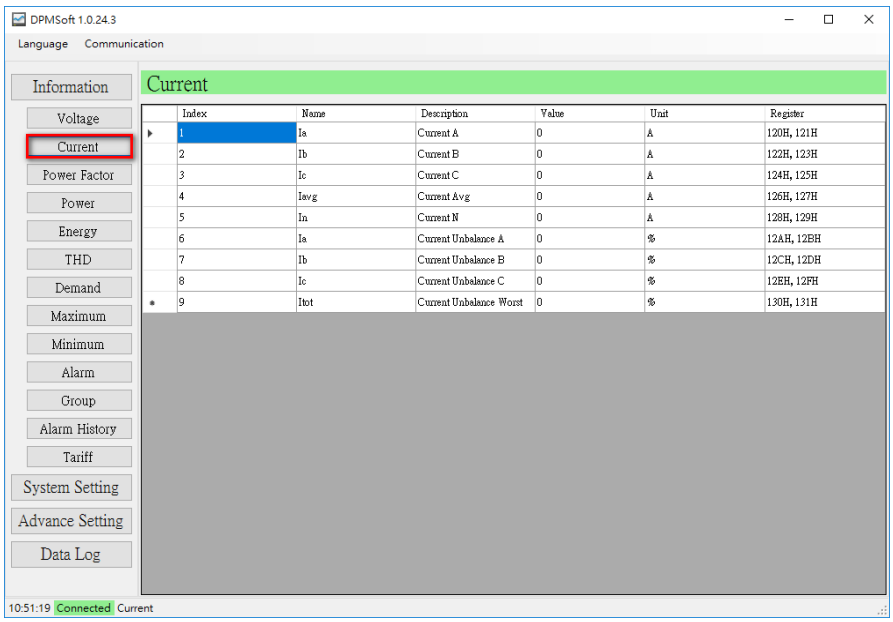
- Click the button on the left → select Voltage to enter the page (see below).



3.3 Current

The page displays current, current unbalance rate value.

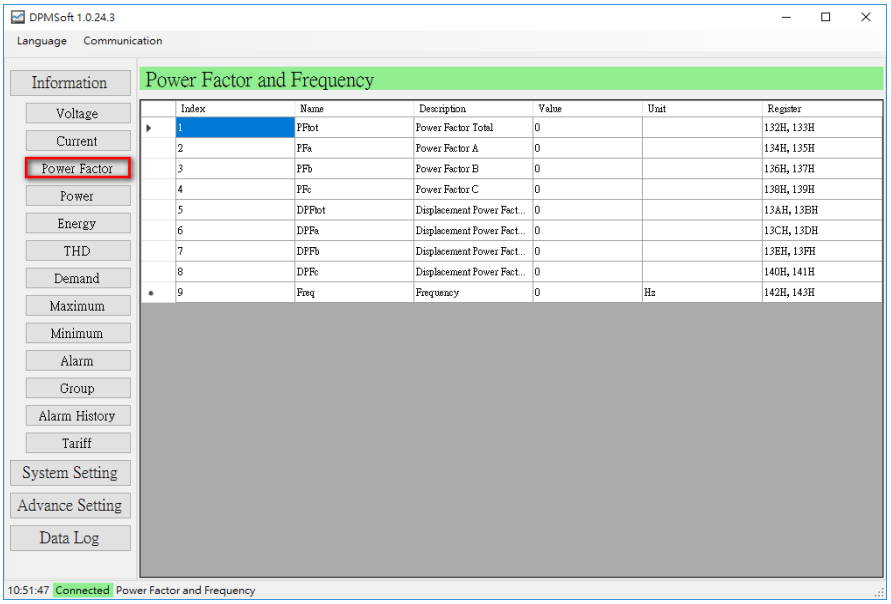
- Click the button on the left → select Current to enter the page (see below).



3.4 Power Factor

The page displays power factor and displacement power factor per phase and in total.

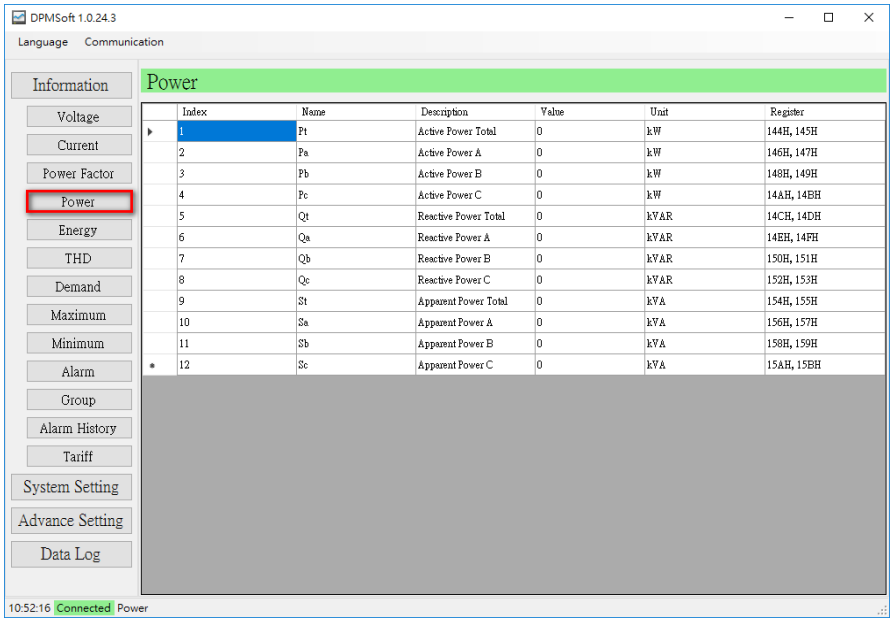
- Click the button on the left → select Power Factor to enter the page (see below).



3.5 Power

The page displays the active power, reactive power per phase and apparent power per phase and in total.

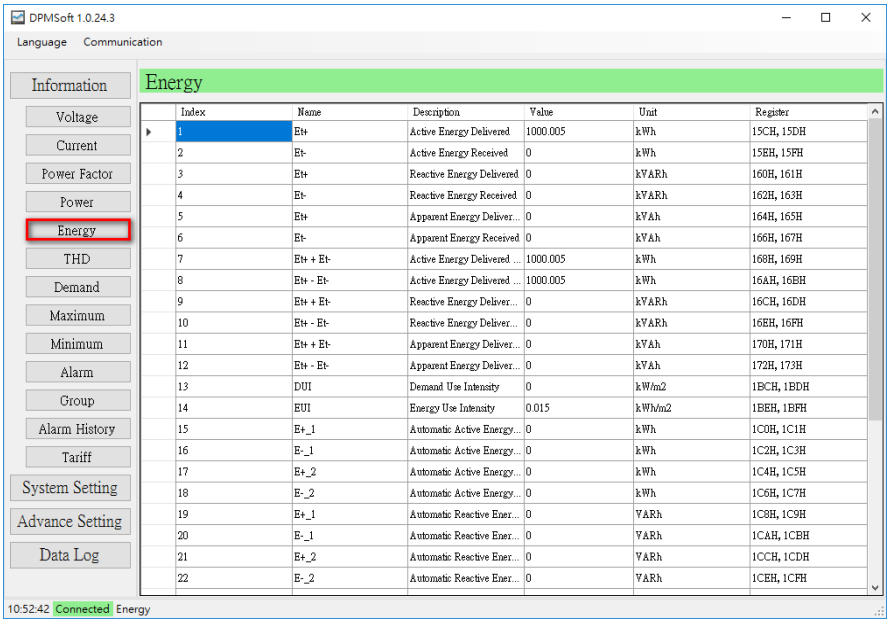
- Click the button on the left → select Power to enter the page (see below).



3.6 Energy

The page displays active, reactive and apparent energy delivered or received, automated energy recording as well as displacement energy values.

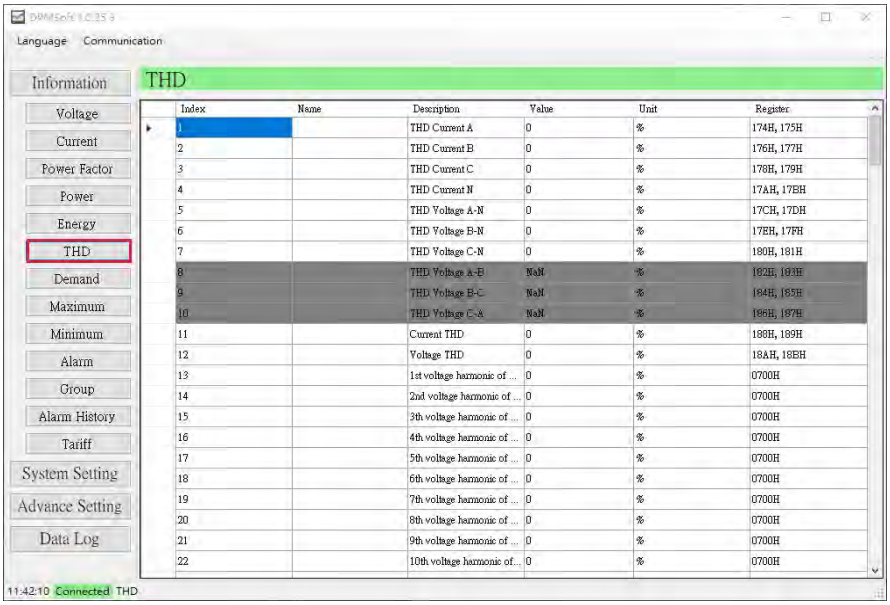
- Click the button on the left → select Energy to enter the page (see below).



3.7 Total Harmonic Distortion (THD)

The page displays voltage and current THD or THD per phase, 1st to 31st voltage harmonic values.

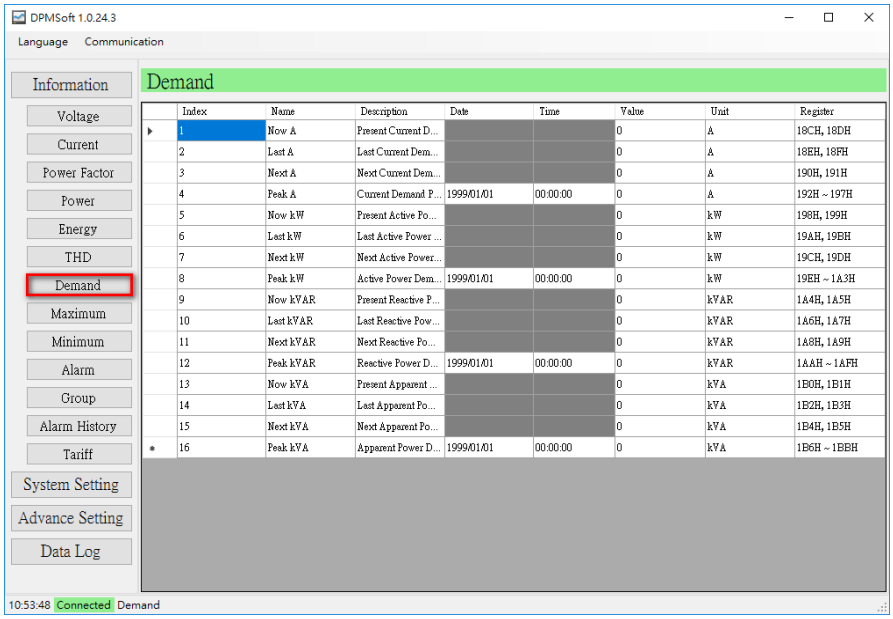
- Click the button on the left → select THD to enter the page (see below).



3.8 Demand

The page displays the present, last and next demand value. The list also shows the peak value and its occurring date and time.

- Click the button on the left → select Demand to enter the page (see below).

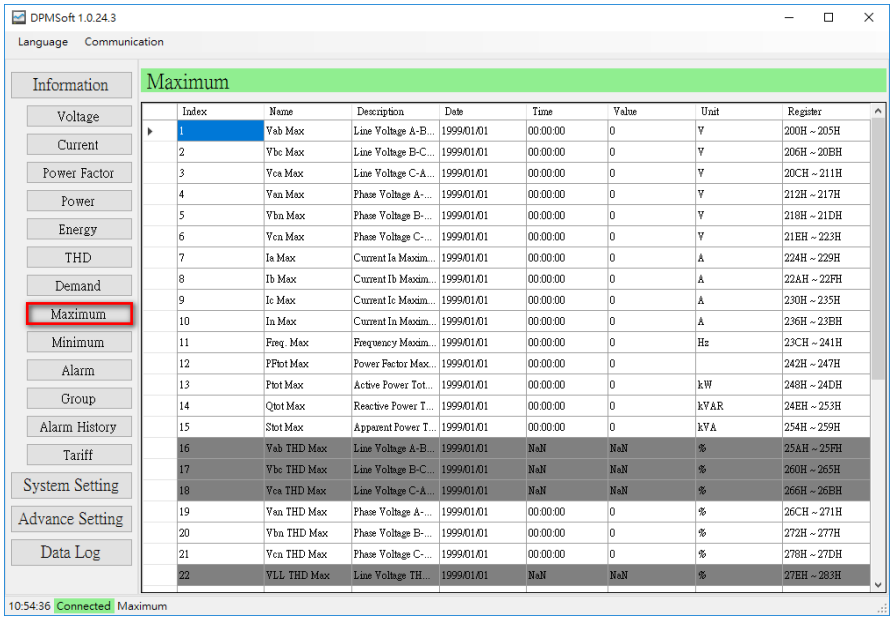


Index	Name	Description	Date	Time	Value	Unit	Register
1	Now A	Present Current D...			0	A	18CH, 18DH
2	Last A	Last Current Dem...			0	A	18EH, 18FH
3	Next A	Next Current Dem...			0	A	190H, 191H
4	Peak A	Current Demand P...	1999/01/01	00:00:00	0	A	192H ~ 197H
5	Now kW	Present Active Po...			0	kW	198H, 199H
6	Last kW	Last Active Power ...			0	kW	19AH, 19BH
7	Next kW	Next Active Power...			0	kW	19CH, 19DH
8	Peak kW	Active Power Dem...	1999/01/01	00:00:00	0	kW	19EH ~ 1A3H
9	Now kVAR	Present Reactive P...			0	kVAR	1A4H, 1A5H
10	Last kVAR	Last Reactive Pow...			0	kVAR	1A6H, 1A7H
11	Next kVAR	Next Reactive Po...			0	kVAR	1A8H, 1A9H
12	Peak kVAR	Reactive Power D...	1999/01/01	00:00:00	0	kVAR	1AAH ~ 1AFH
13	Now kVA	Present Apparent ...			0	kVA	1B0H, 1B1H
14	Last kVA	Last Apparent Po...			0	kVA	1B2H, 1B3H
15	Next kVA	Next Apparent Po...			0	kVA	1B4H, 1B5H
16	Peak kVA	Apparent Power D...	1999/01/01	00:00:00	0	kVA	1B6H ~ 1BBH

3.9 Maximum

The page displays the maximum values, date and time of parameters.

- Click the button on the left → select Maximum to enter the page (see below).

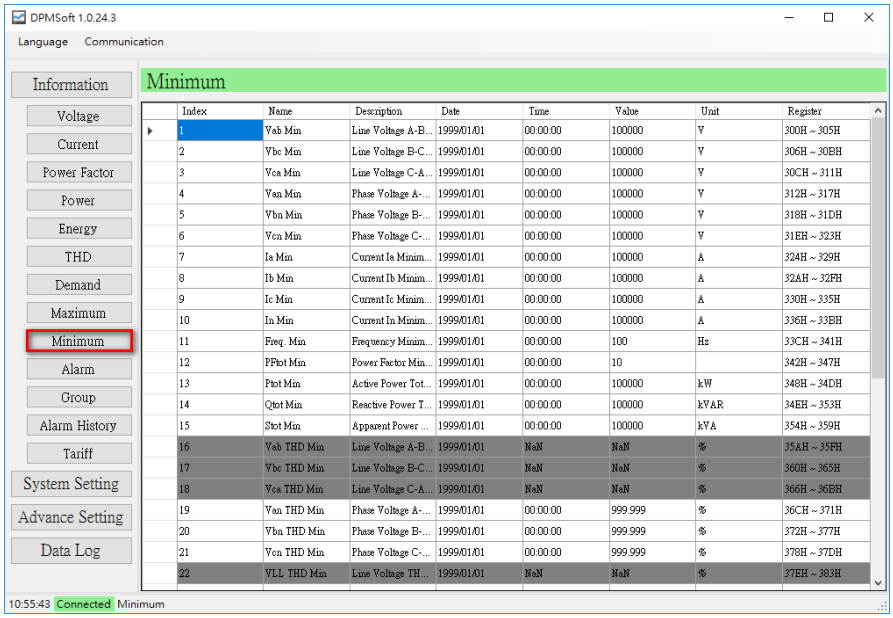


Index	Name	Description	Date	Time	Value	Unit	Register
1	Vab Max	Line Voltage A-B...	1999/01/01	00:00:00	0	V	200H ~ 205H
2	Vbc Max	Line Voltage B-C...	1999/01/01	00:00:00	0	V	206H ~ 20BH
3	Vca Max	Line Voltage C-A...	1999/01/01	00:00:00	0	V	20CH ~ 211H
4	Van Max	Phase Voltage A-...	1999/01/01	00:00:00	0	V	212H ~ 217H
5	Vbn Max	Phase Voltage B-...	1999/01/01	00:00:00	0	V	218H ~ 21DH
6	Vcn Max	Phase Voltage C-...	1999/01/01	00:00:00	0	V	21EH ~ 223H
7	Ia Max	Current Ia Maxim...	1999/01/01	00:00:00	0	A	224H ~ 229H
8	Ib Max	Current Ib Maxim...	1999/01/01	00:00:00	0	A	22AH ~ 22FH
9	Ic Max	Current Ic Maxim...	1999/01/01	00:00:00	0	A	230H ~ 235H
10	In Max	Current In Maxim...	1999/01/01	00:00:00	0	A	236H ~ 23BH
11	Freq. Max	Frequency Maxim...	1999/01/01	00:00:00	0	Hz	23CH ~ 241H
12	PFtot Max	Power Factor Max...	1999/01/01	00:00:00	0		242H ~ 247H
13	Ptot Max	Active Power Tot...	1999/01/01	00:00:00	0	kW	248H ~ 24DH
14	Qtot Max	Reactive Power T...	1999/01/01	00:00:00	0	kVAR	24EH ~ 253H
15	Stot Max	Apparent Power T...	1999/01/01	00:00:00	0	kVA	254H ~ 259H
16	Vab THD Max	Line Voltage A-B...	1999/01/01	NaN	NaN	%	25AH ~ 25FH
17	Vbc THD Max	Line Voltage B-C...	1999/01/01	NaN	NaN	%	260H ~ 265H
18	Vca THD Max	Line Voltage C-A...	1999/01/01	NaN	NaN	%	266H ~ 26BH
19	Van THD Max	Phase Voltage A-...	1999/01/01	00:00:00	0	%	26CH ~ 271H
20	Vbn THD Max	Phase Voltage B-...	1999/01/01	00:00:00	0	%	272H ~ 277H
21	Vcn THD Max	Phase Voltage C-...	1999/01/01	00:00:00	0	%	278H ~ 27DH
22	VLL THD Max	Line Voltage TH...	1999/01/01	NaN	NaN	%	27EH ~ 283H

3.10 Minimum

The page displays the minimum values, date and time of parameters.

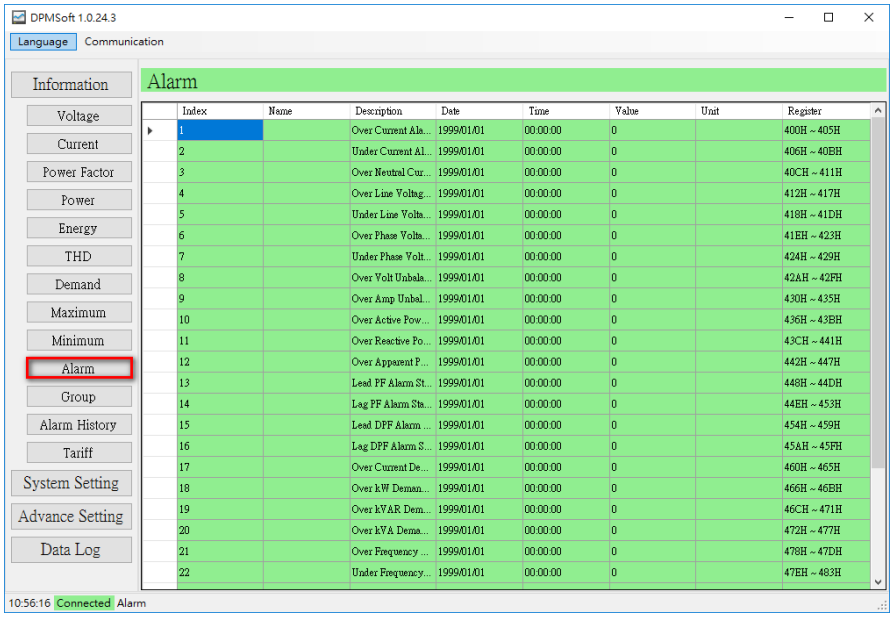
■ Click the button on the left → select Minimum to enter the page (see below).



3.11 Alarm

The page displays the current alarm status, the number of alarm events as well as time and date. If the alarm is deactivated, the page background color is green; however, if the alarm is activated, the background color turns red.

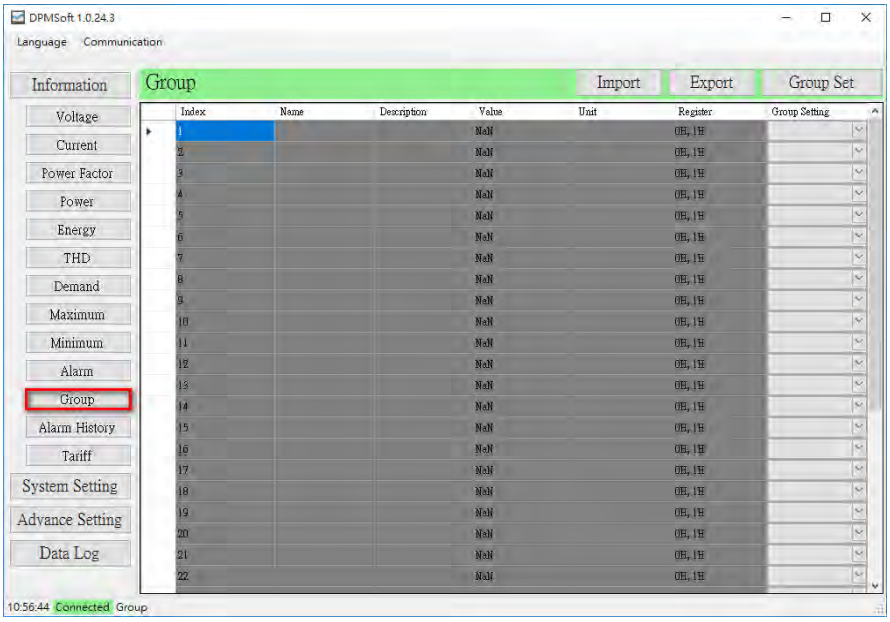
■ Click the button on the left → select Alarm to enter the page (see below).



3.12 Group

The page displays the mapping value regarding the group parameter setting.

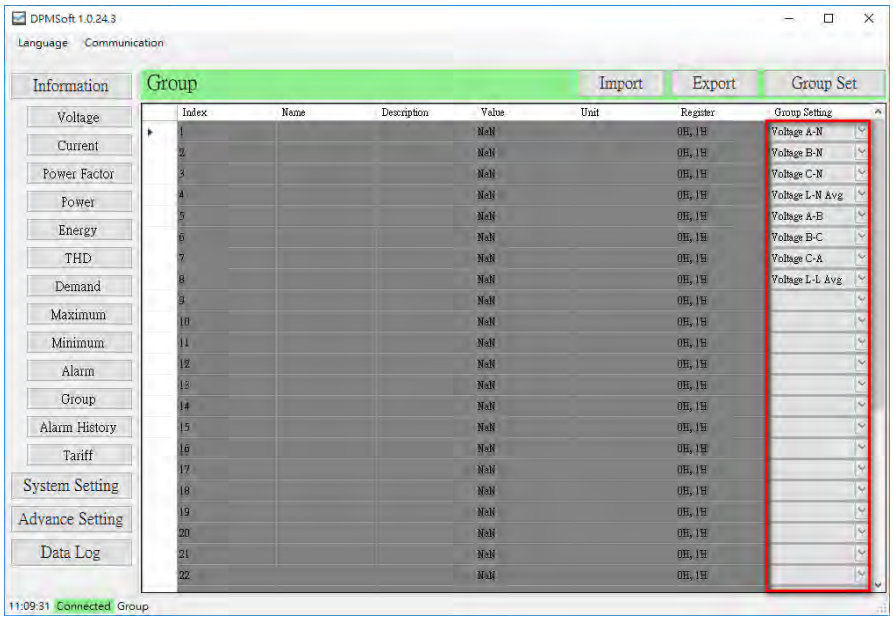
■ Click the button on the left → select Group to enter the page (see below).



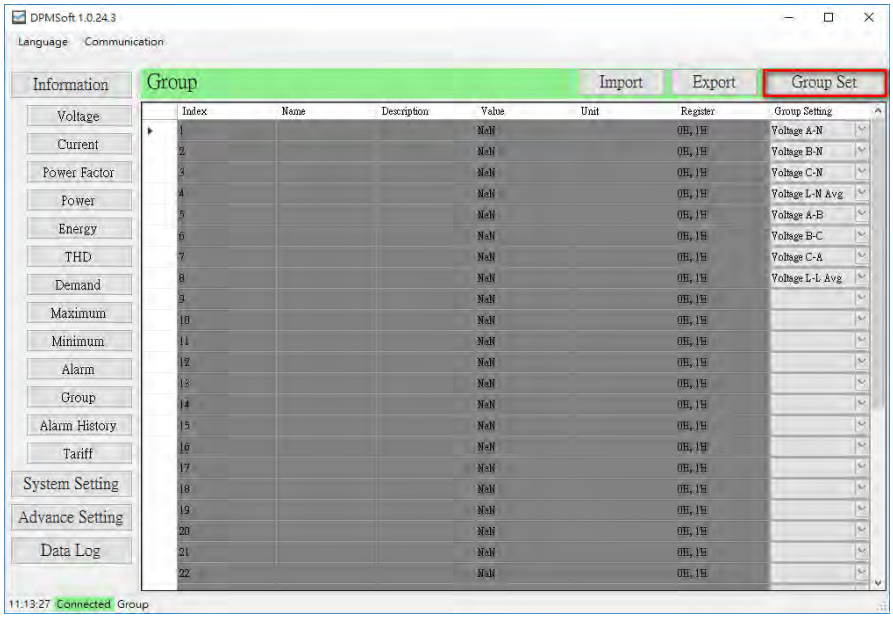
The Group page contains three useful buttons including "Group Set", "Import" and "Export" with the following explanations.

● **Group Set:** The button displays the parameter data for setup through the following steps:

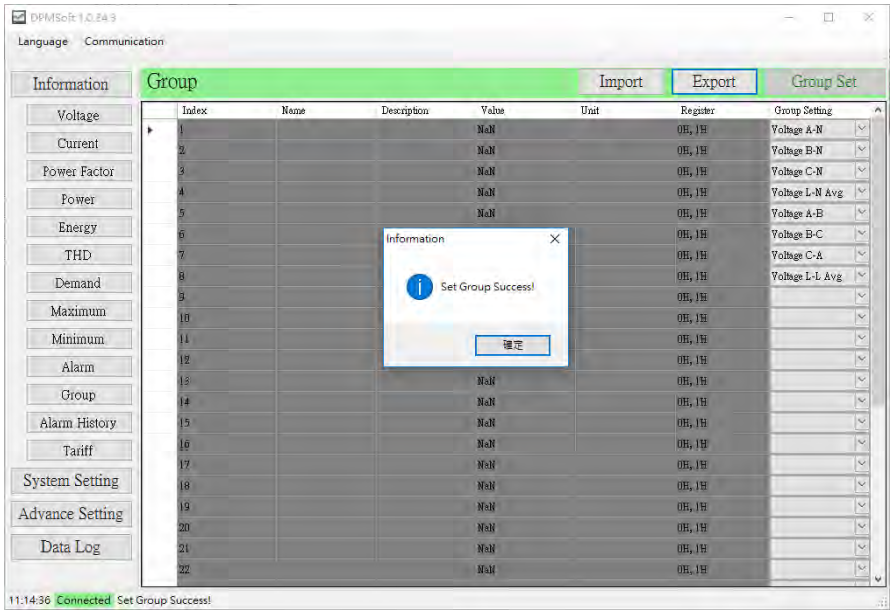
(1) First, select the parameters displayed on the page.

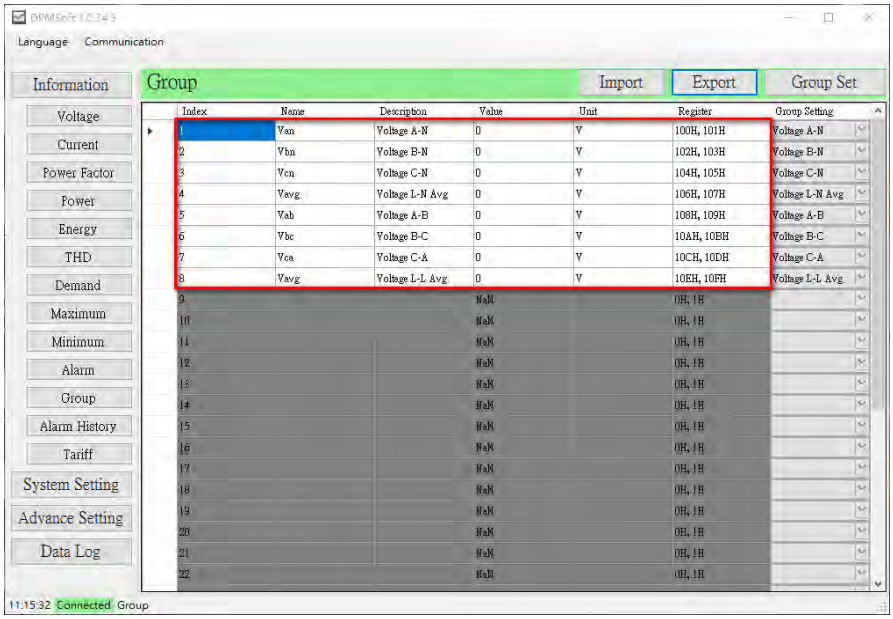


(2) Click "Group Set" to start the process after selecting the parameters.



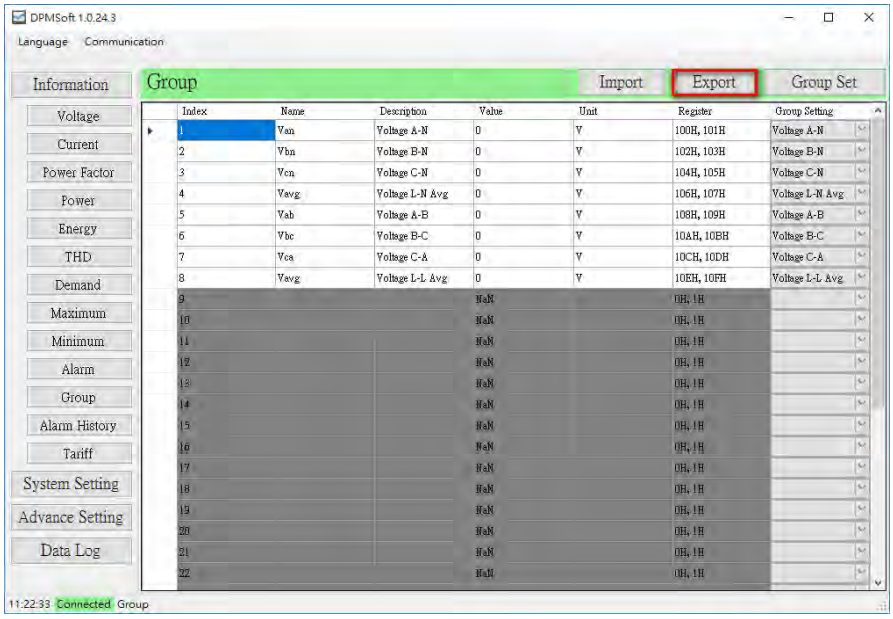
(3) When the setup is complete, a pop-up window will appear to show the setting is successful, click OK to view the selected parameter data on the page.



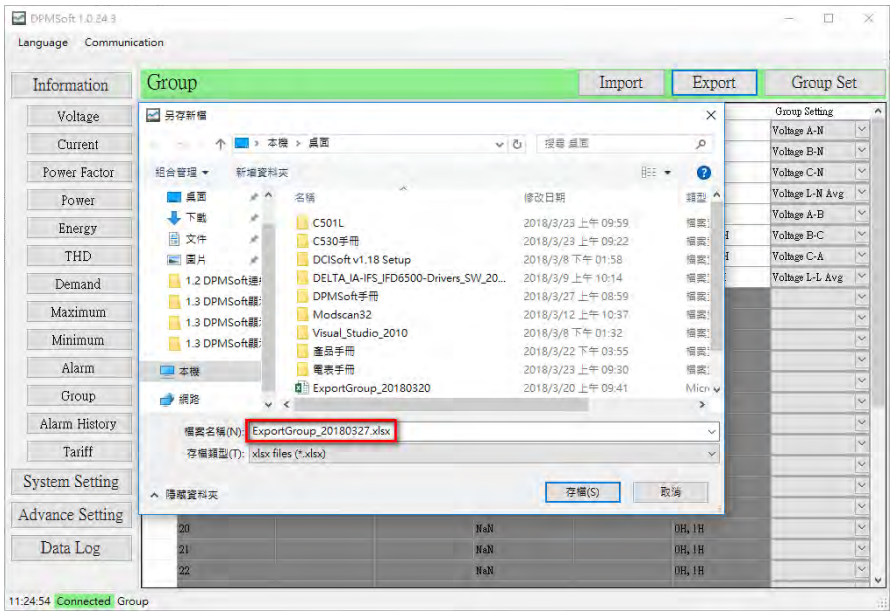


- **Export**: The button exports large number of parameters through the following steps.

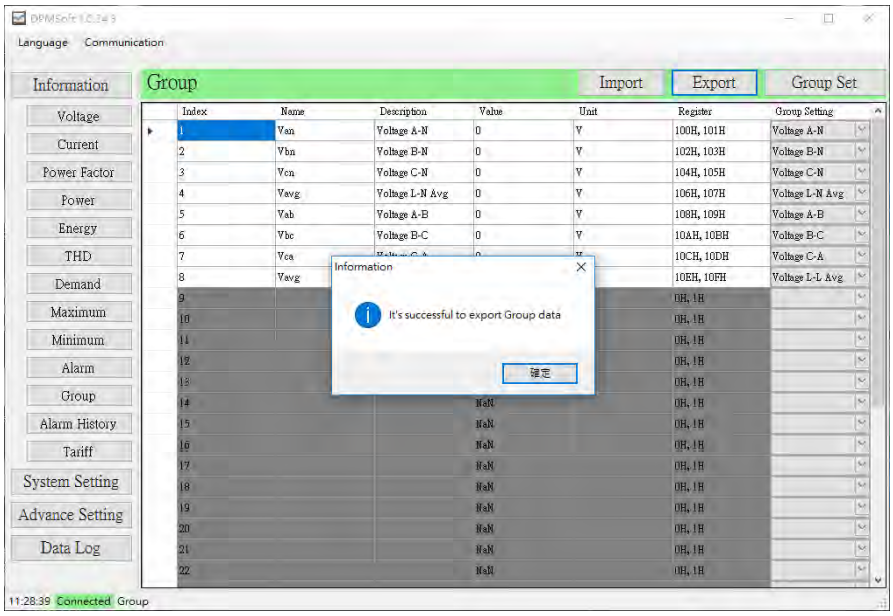
(1) Select the parameters and click ‘Export’ button.

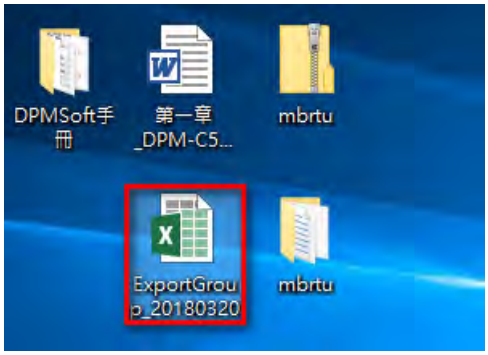


(2) After clicking the 'Export' button, a pop-up window for file saving appears. Users need to choose the appropriate directory and click 'Save' to start the process.

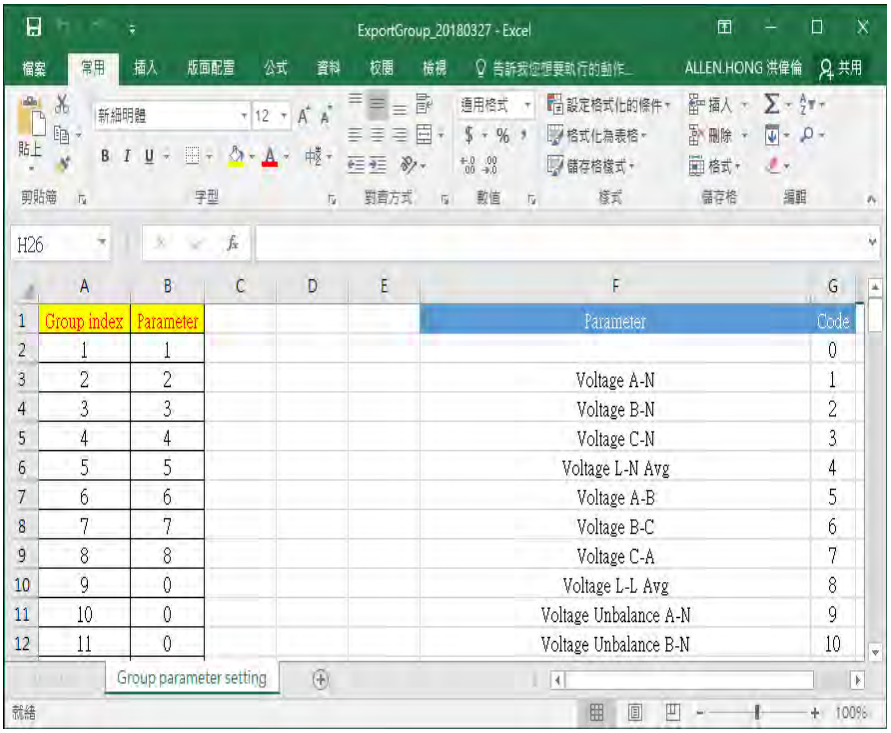


(3) A pop-up window appears when the group data export is a success. Click OK and the export file can be viewed from the desktop.



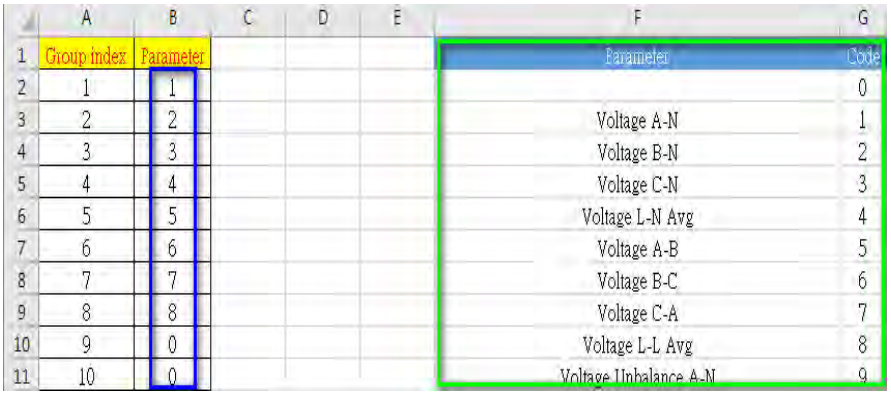


(4) Open the ExportGroup.xls from the desktop (see below).



	A	B	C	D	E	F	G
1	Group index	Parameter				Parameter	Code
2	1	1					0
3	2	2				Voltage A-N	1
4	3	3				Voltage B-N	2
5	4	4				Voltage C-N	3
6	5	5				Voltage L-N Avg	4
7	6	6				Voltage A-B	5
8	7	7				Voltage B-C	6
9	8	8				Voltage C-A	7
10	9	0				Voltage L-L Avg	8
11	10	0				Voltage Unbalance A-N	9
12	11	0				Voltage Unbalance B-N	10

Description on exporting files: Below, the blue frame on the left are the group parameters for import, while the green frame on the right provides parameter codes for reference.



	A	B	C	D	E	F	G
1	Group index	Parameter				Parameter	Code
2	1	1					0
3	2	2				Voltage A-N	1
4	3	3				Voltage B-N	2
5	4	4				Voltage C-N	3
6	5	5				Voltage L-N Avg	4
7	6	6				Voltage A-B	5
8	7	7				Voltage B-C	6
9	8	8				Voltage C-A	7
10	9	0				Voltage L-L Avg	8
11	10	0				Voltage Unbalance A-N	9

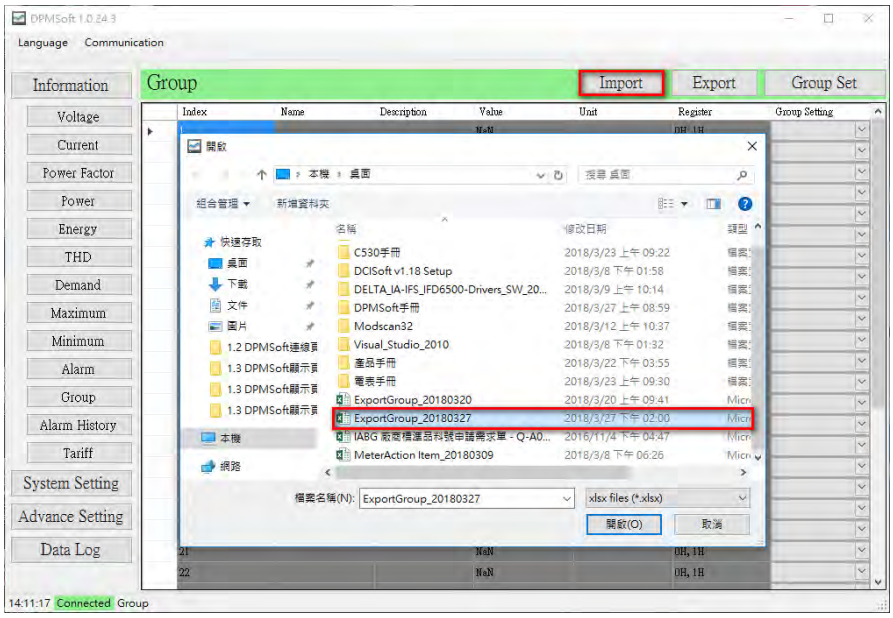
Parameter Code List:

Code	Parameter	Code	Parameter
0	None	31	Displacement Power Factor A
1	Voltage A	32	Displacement Power Factor B
2	Voltage B	33	Displacement Power Factor C
3	Voltage C	34	Frequency
4	Voltage Average	35	Power Factor Total
5	Voltage A-B	36	Active Power Factor A
6	Voltage B-C	37	Active Power Factor B
7	Voltage C-A	38	Active Power Factor C
8	Line Voltage Balance	39	Reactive Power Factor Total
9	Voltage Unbalance A	40	Reactive Power Factor A
10	Voltage Unbalance B	41	Reactive Power Factor B
11	Voltage Unbalance C	42	Reactive Power Factor C
12	Phase Voltage Unbalance	43	Apparent Power Total
13	Voltage Unbalance A-B	44	Apparent Power A
14	Voltage Unbalance B-C	45	Apparent Power B
15	Voltage Unbalance C-A	46	Apparent Power C
16	Line Voltage Unbalance	47	Active Energy Delivered
17	Current A	48	Active Energy Received
18	Current B	49	Reactive Energy Delivered
19	Current C	50	Reactive Energy Received
20	Average Current	51	Apparent Energy Delivered
21	Current N	52	Apparent Energy Received
22	Current Unbalance A	53	Active Energy Delivered + Reactive Energy Delivered
23	Current Unbalance B	54	Active Energy Delivered - Reactive Energy Delivered
24	Current Unbalance C	55	Active Energy Received + Reactive Energy Received
25	Three-Phase Current Unbalance	56	Active Energy Received - Reactive Energy Received
26	Power Factor Total	57	Apparent Energy Delivered + Apparent Energy Received
27	Power Factor A	58	Apparent Energy Delivered - Apparent Energy Received
28	Power Factor B	59	THD Current A
29	Power Factor C	60	THD Current B
30	Displacement Power Factor Total	61	THD Current C

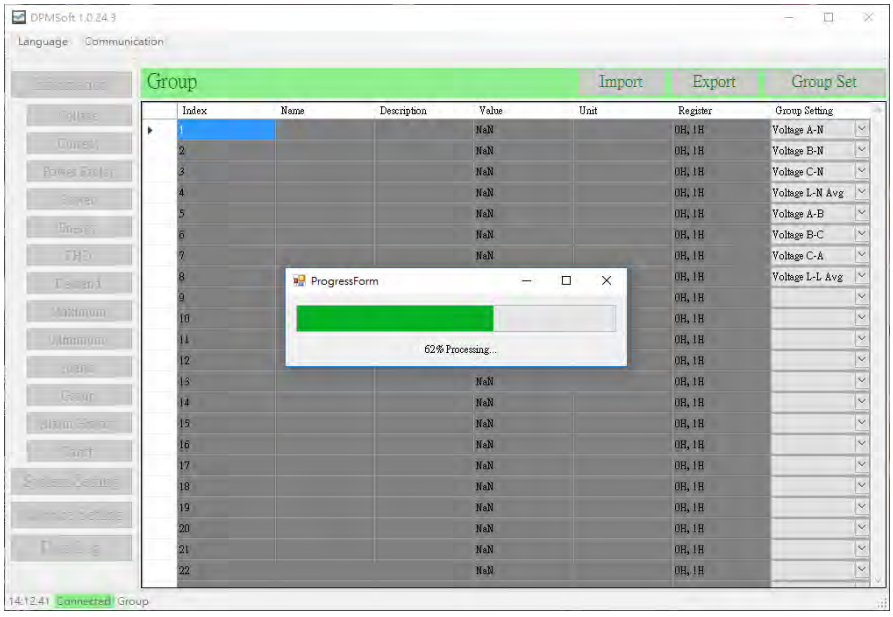
Code	Parameter	Code	Parameter
62	THD Current N	90	Last Apparent Power Demand
63	THD Voltage A	91	Next Apparent Power Demand
64	THD Voltage B	92	Apparent Power Demand Peak
65	THD Voltage C	93	Apparent Power Demand Peak Date
66	THD Voltage A-B	94	Apparent Power Demand Peak Time
67	THD Voltage B-C	95	Energy Demand Intensity
68	THD Voltage C-A	96	Energy Use Intensity
69	Total Current THD	97	Auto Recording Active Power 1
70	Total Voltage THD	98	Auto Recording Reactive Power 1
71	Present Current Demand	99	Auto Recording Active Power 2
72	Last Current Demand	100	Auto Recording Reactive Power 2
73	Next Current Demand	101	Auto Recording Reactive Energy Delivered 1
74	Current Demand Peak	102	Auto Recording Reactive Energy Received 1
75	Current Demand Peak Date	103	Auto Recording Reactive Energy Delivered 2
76	Current Demand Peak Time	104	Auto Recording Reactive Energy Received 2
77	Current Active Power Demand	105	Total Instantaneous Active Power
78	Last Active Power Demand	106	Instantaneous Active Power A
79	Next Active Power Demand	107	Instantaneous Active Power B
80	Active Power Demand Peak	108	Instantaneous Active Power C
81	Active Power Demand Peak Date	109	Total Instantaneous Reactive Power
82	Active Power Demand Peak Time	110	Instantaneous Reactive Power A
83	Current Reactive Power Demand	111	Instantaneous Reactive Power B
84	Last Reactive Power Demand	112	Instantaneous Reactive Power C
85	Next Reactive Power Demand	113	Total Instantaneous Apparent Power
86	Reactive Power Demand Peak	114	Instantaneous Apparent Power A
87	Reactive Power Demand Peak Date	115	Instantaneous Apparent Power B
88	Reactive Power Demand Peak Time	116	Instantaneous Apparent Power C
89	Current Apparent Power Demand		

- **Import:** The button imports excel files and large number of parameters through the following steps.

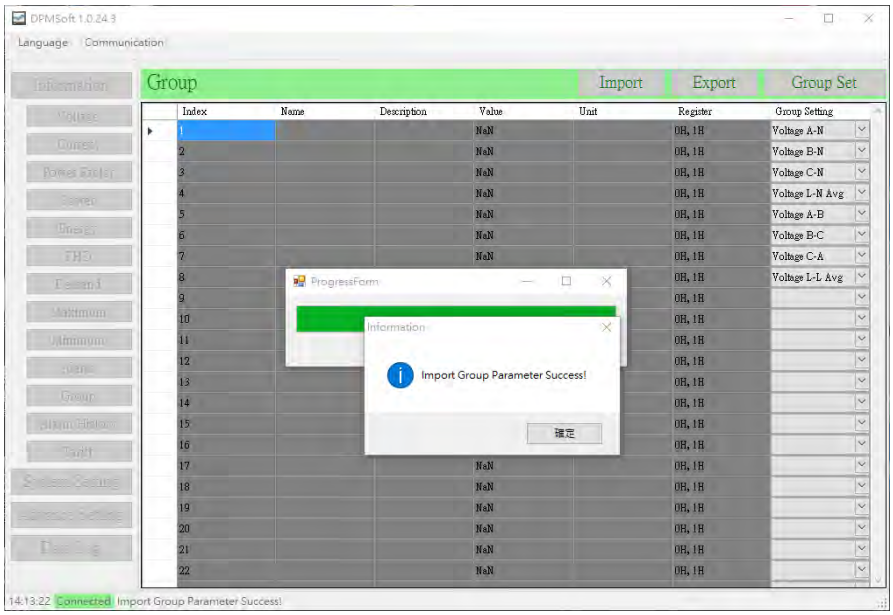
(1) Click 'Import' and a pop-up window will appear for users to choose and open the selected file.

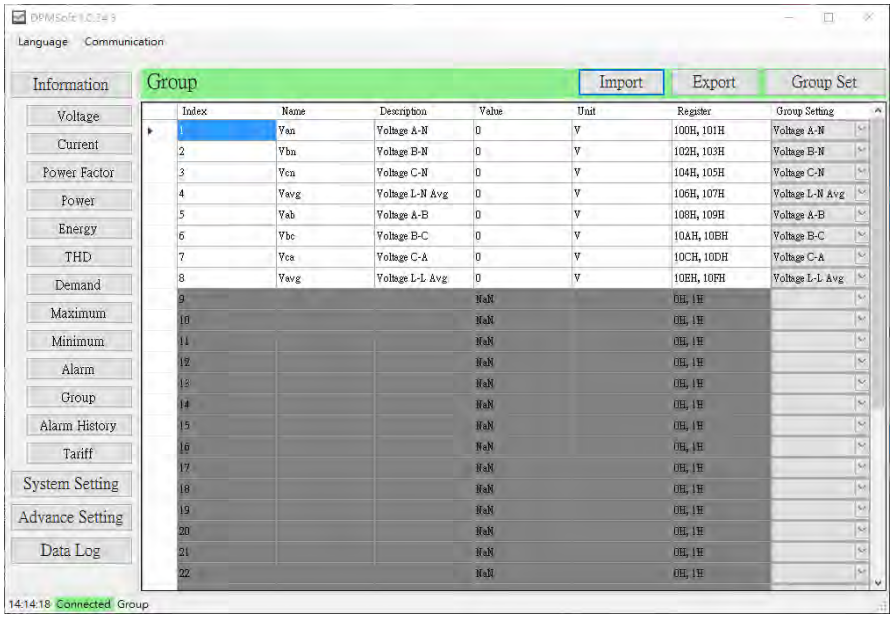


(2) The import process for the selected excel file starts and a diagram showing the current import progress will appear.



(3) A pop-up window appears when the imported group parameter is a success. Click OK and the selected parameter data can be viewed from the desktop.

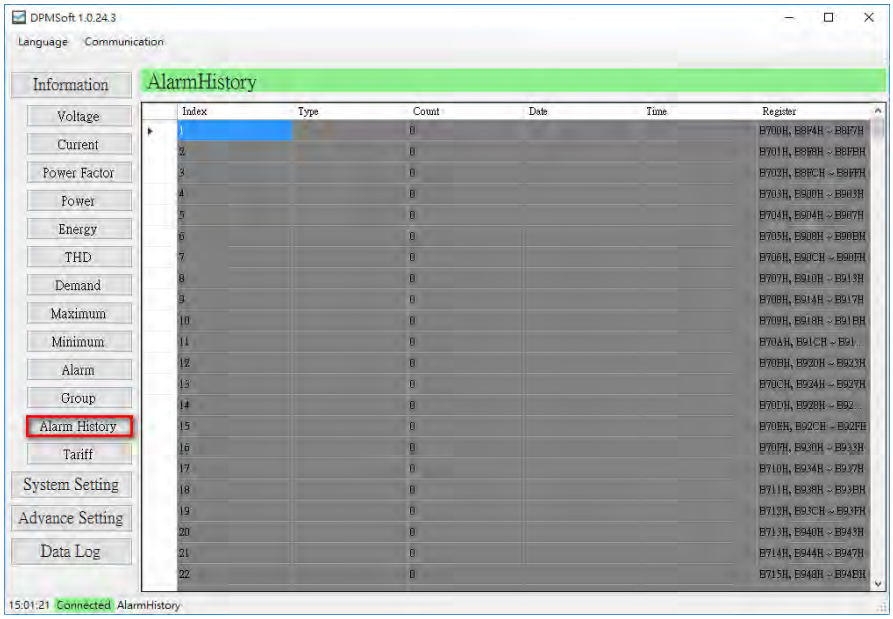




3.13 Alarm History

The page displays the mapping value regarding the group parameter setting.

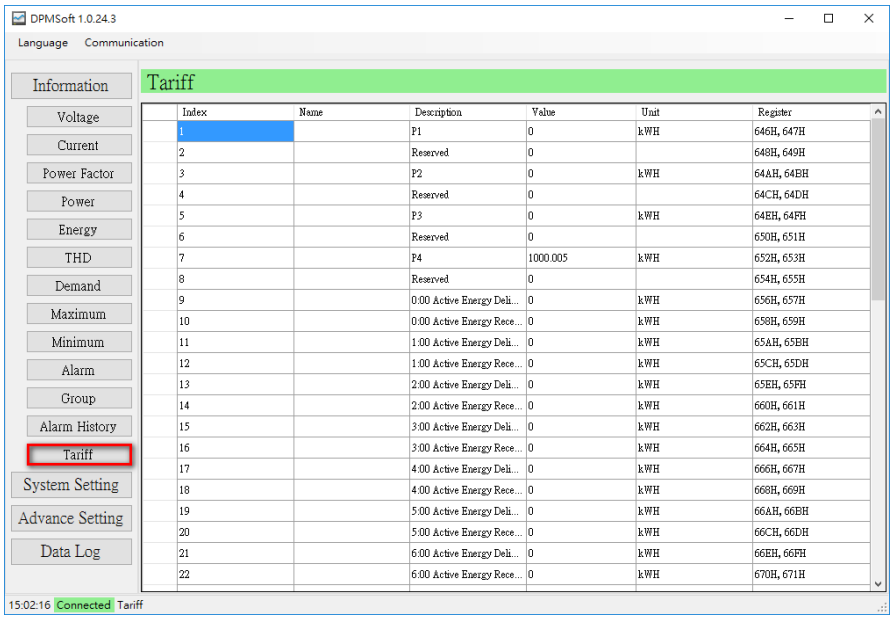
- Click the button on the left → select Alarm History to enter the page (see below).



3.14 Tariff

The page displays the tariff point (P1), peak (P2), plateau (P3), valley (P4) for power usage as well on hourly basis daily.

- Click the button on the left → select Tariff to enter the page (see below).



MEMO

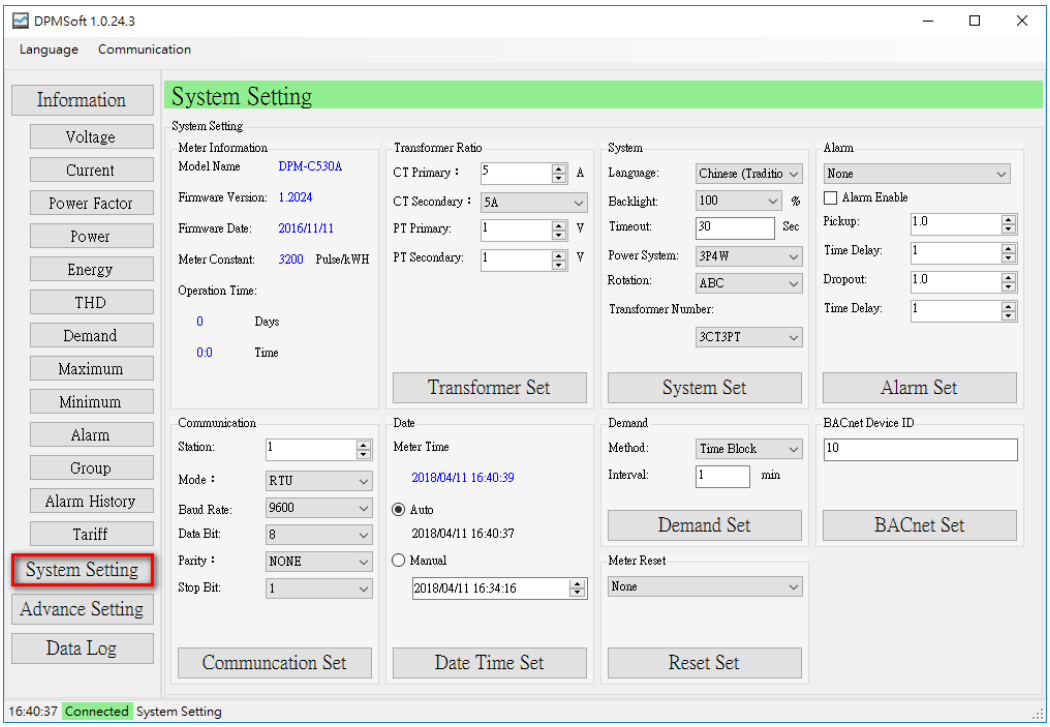
4

Chapter 4 DPMSoft Settings

Table of Contents

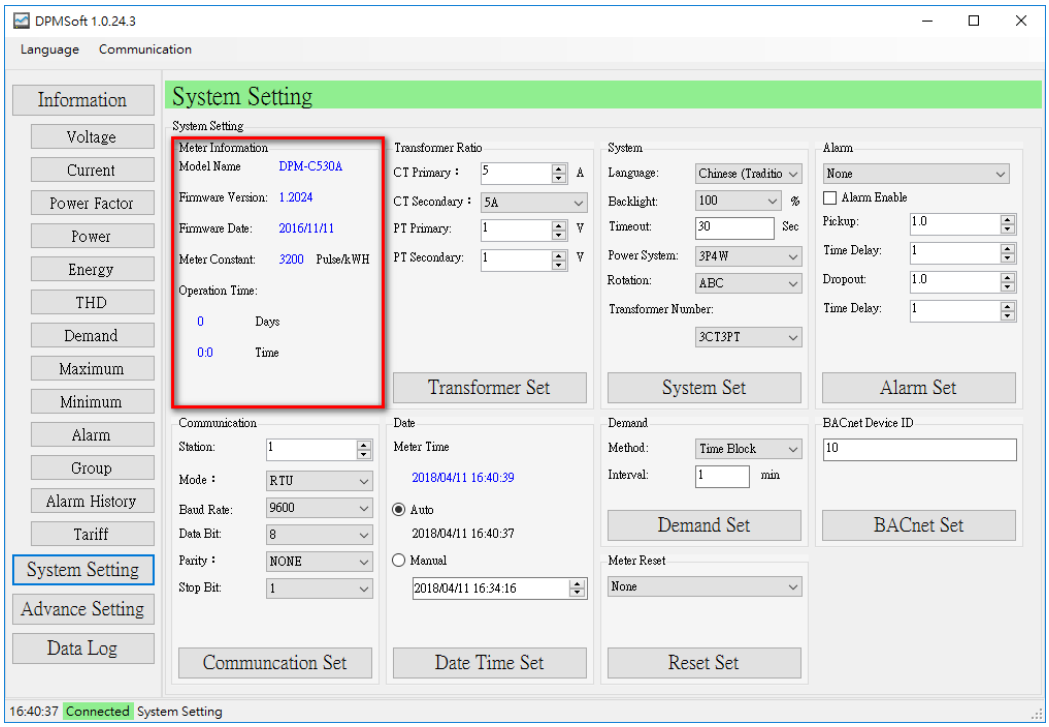
DPMSoft contains options including System Setting, Advanced Setting and Data Log for power meter setup with the following explanations.

4.1 System Setting



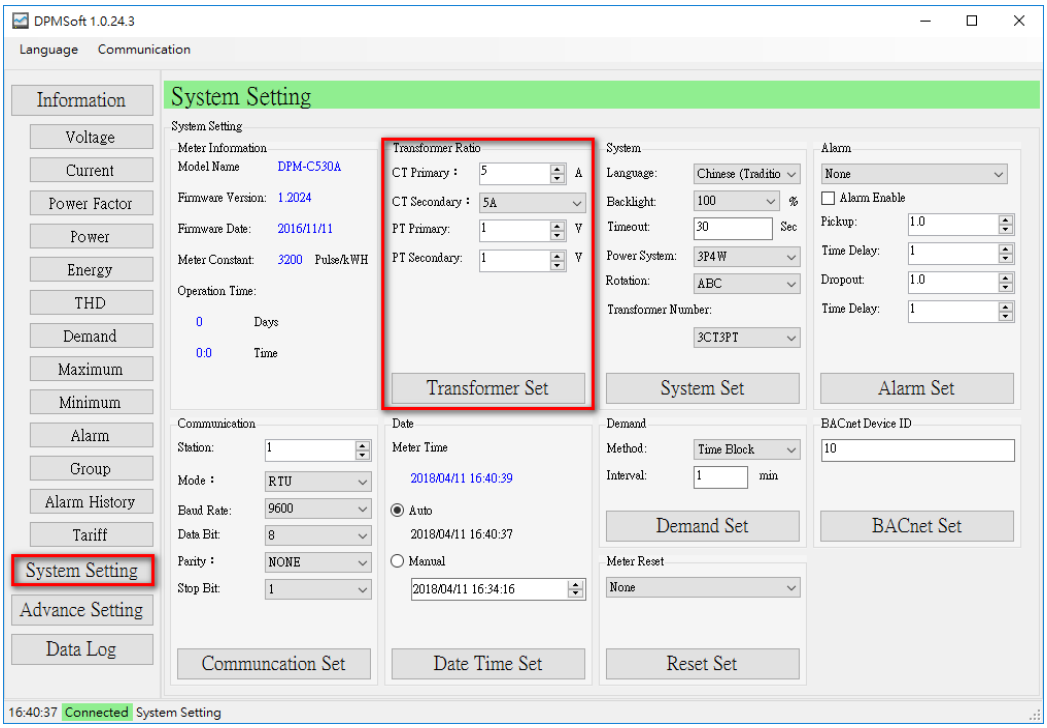
1. Meter Information:

Displays including meter model name, firmware version, date and operation time.



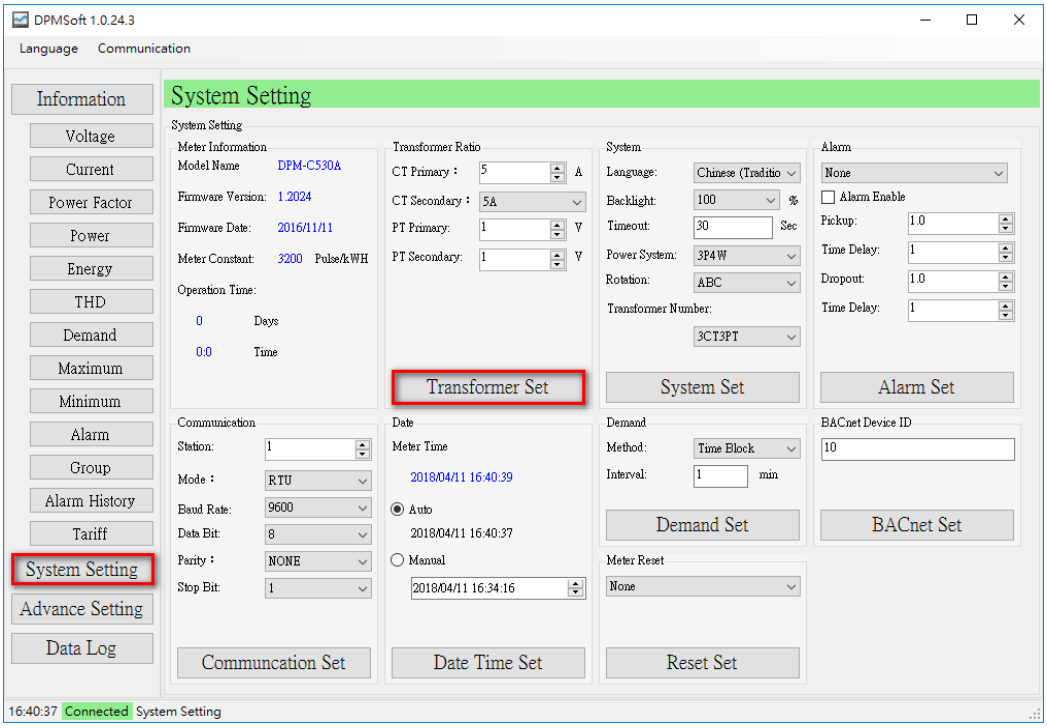
2. Transformer Ratio:

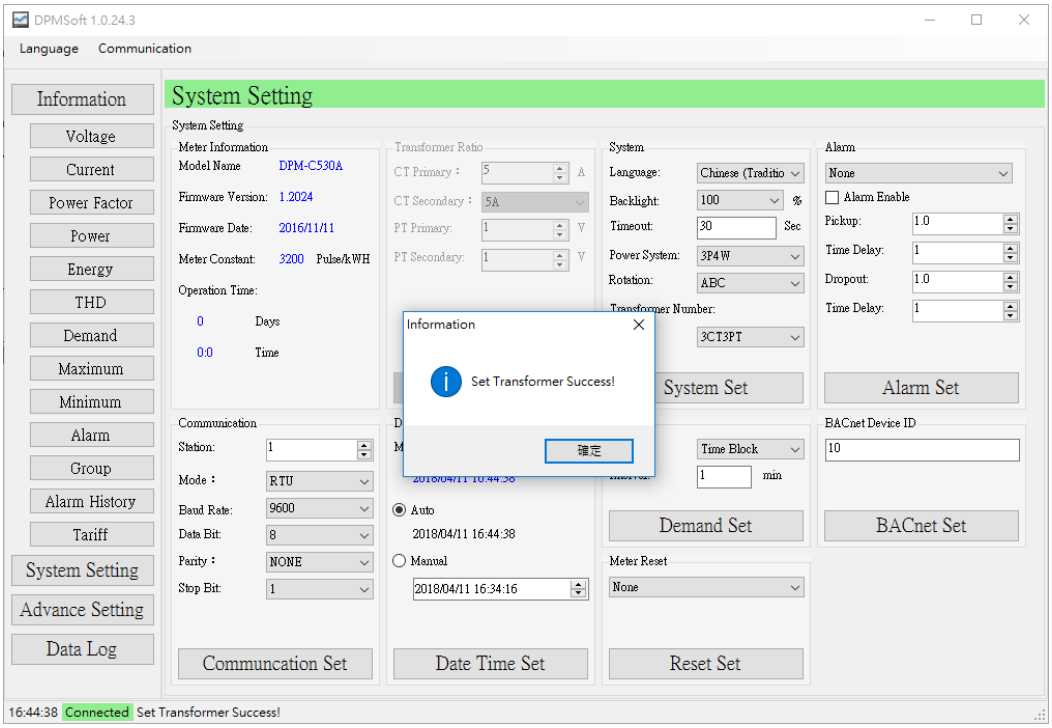
Provides CT Primary, CT Secondary, PT Primary and PT Secondary setups.



- CT Primary: Set the primary CT within the range of 1 to 9999 A.
- CT Secondary: Set the secondary CT within the available options of 1A, 5A and 2.5A.
- PT Primary: Set the primary PT within the range of 1 to 99999 V.
- PT Secondary: Set the secondary PT within the range of 1 ~ 9999 V.

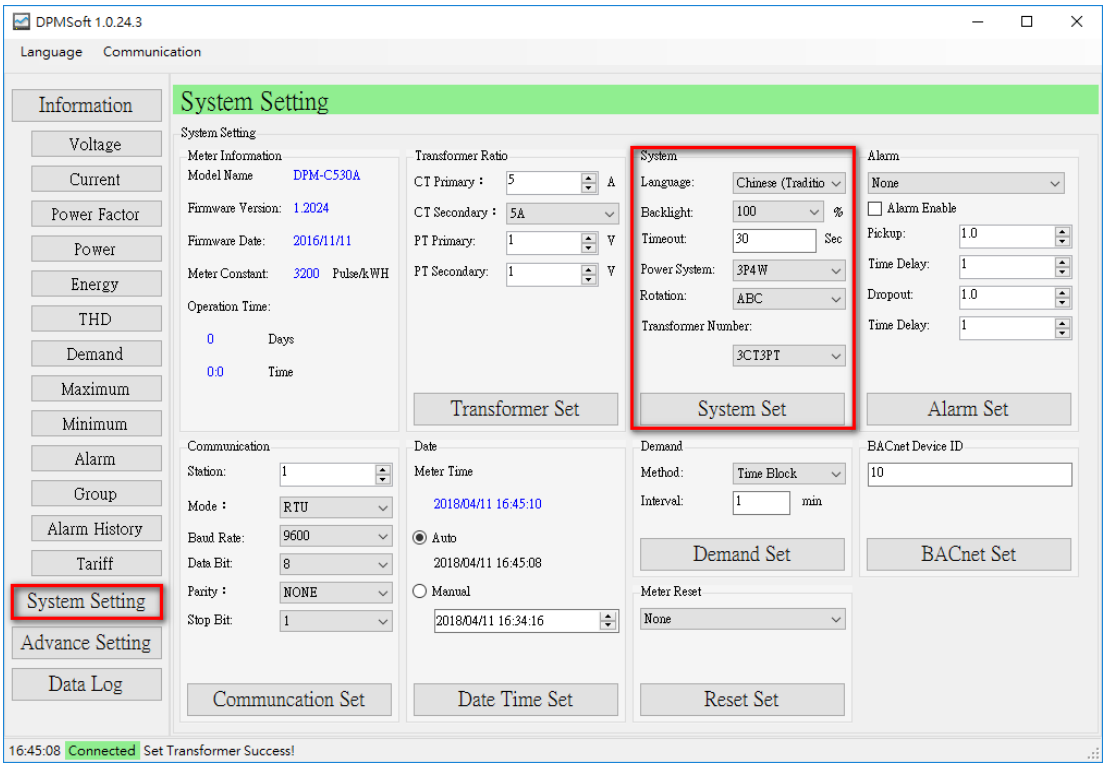
Click "Transformer Set" when the setting is complete and a pop-up window appears showing whether the setting is successful or not.





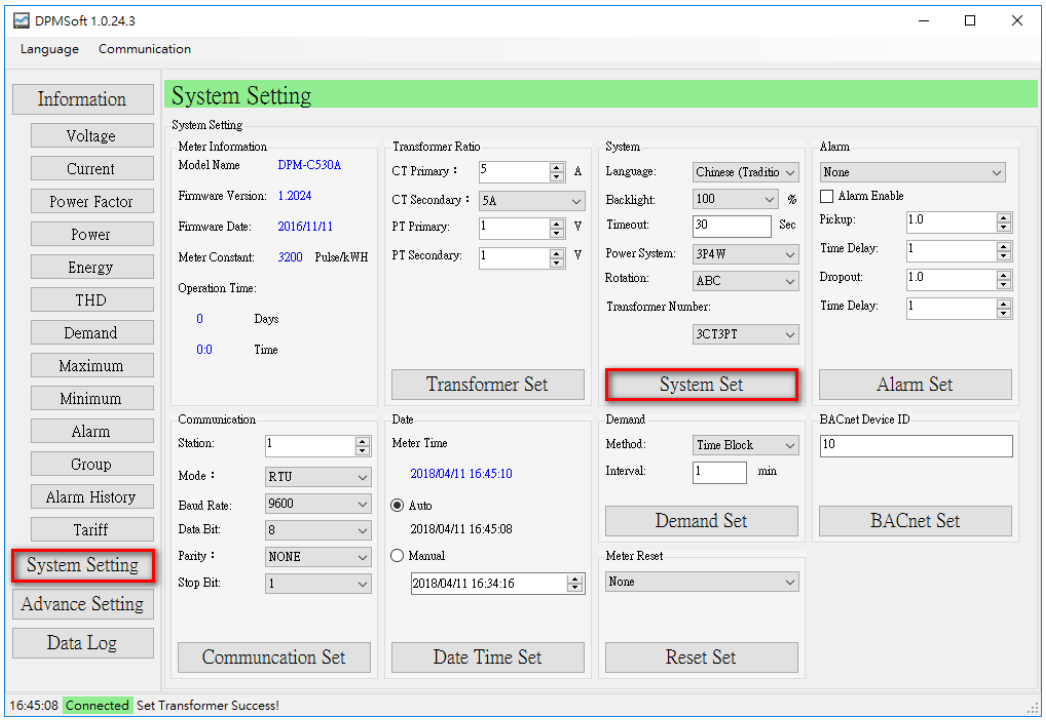
3. System:

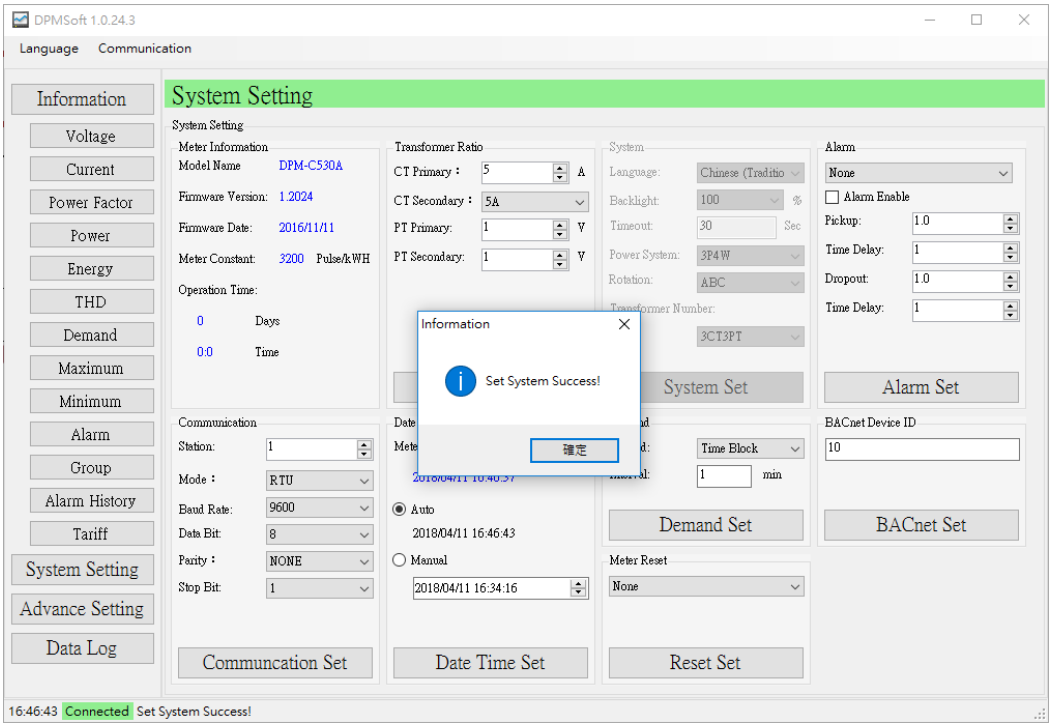
Provides setups for user interface regarding the power meter and parameters on wiring.



- Language: The display language on the user interface of the power meter include English, Traditional Chinese and Simplified Chinese.
- Backlight: The brightness of the screen backlight includes 25%, 50% and 100%.
- Timeout: When the user do not press the button on the power meter during the timeout, the brightness of the screen backlight is based on the previous percentage setup, but when the button is pressed, the brightness of the screen backlight is 100%.
- Power System: Supports power wiring including 3P4W, 3P3W, 1P2W and 1P3W.
- Rotation: When current A and C are incorrectly wired, set the rotation parameter and rewire is not necessary.
- Transformer Number: The number of CT & PT used in the system.

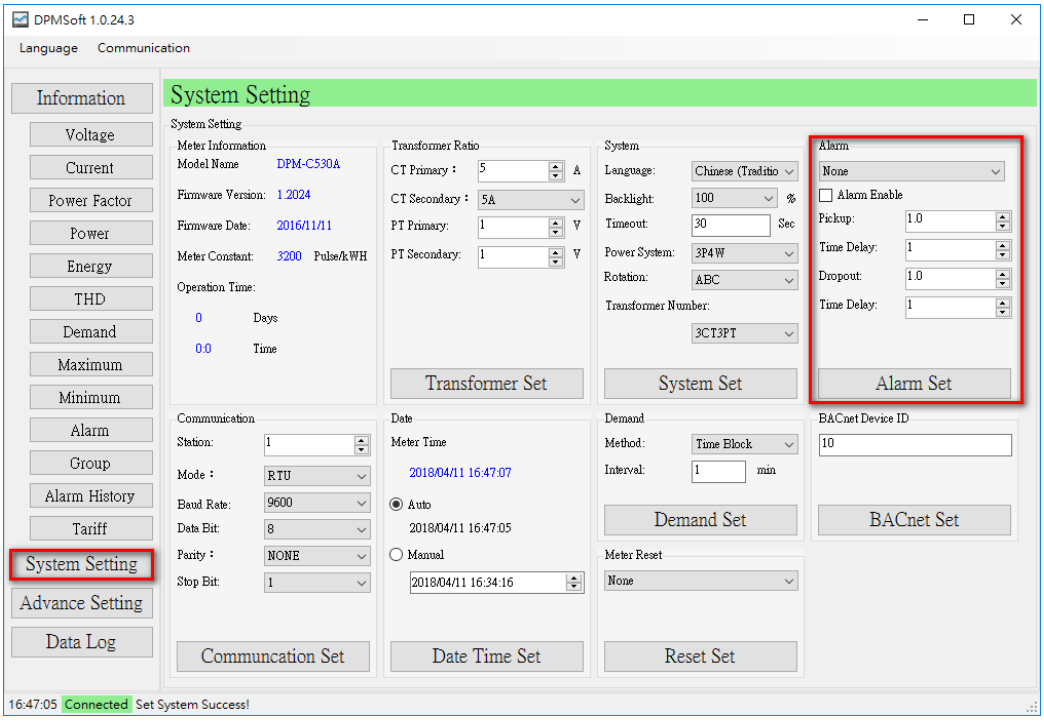
Click "System Set" when the setup is complete and a pop-up window appears showing whether the setting is successful or not.





4. Alarm:

Setup the alarm parameters for the power meter.

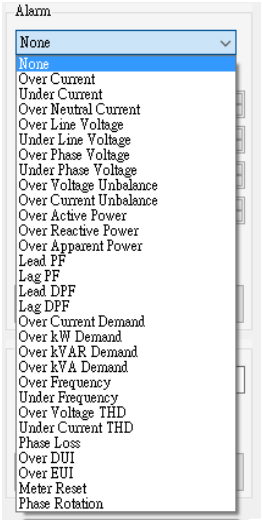


- Dropdown Menu: Select a required alarm from 29 alarm types.
- Alarm Enable: Choose ☑ to enable or ☐ to disable the alarm.
- Pickup: When higher than the pickup current, the alarm is enabled
- Time Delay: When higher than the pickup current and exceeds the time delay, the alarm is enabled.

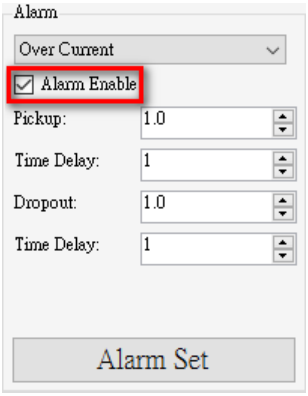
- Dropout: When lower than the drop-out current, the alarm is disabled.
- Time Delay: When lower than the drop-out current and exceeds the time delay, the alarm is disabled.

Steps to setting the alarm:

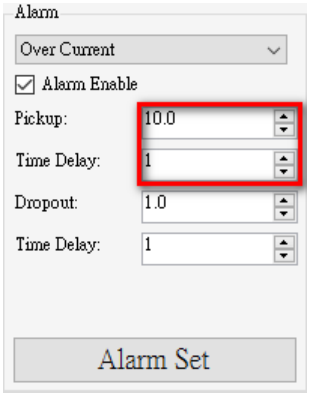
(1) Select an alarm type.



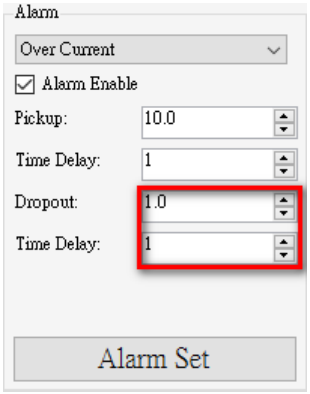
(2) Click “Alarm Enable”.



(3) Select the Pickup value and Time Delay.

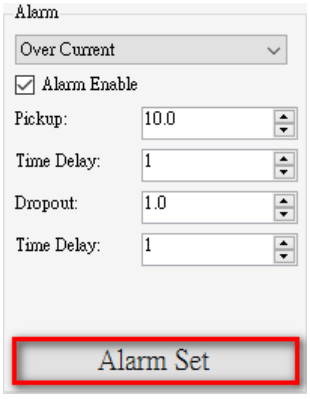


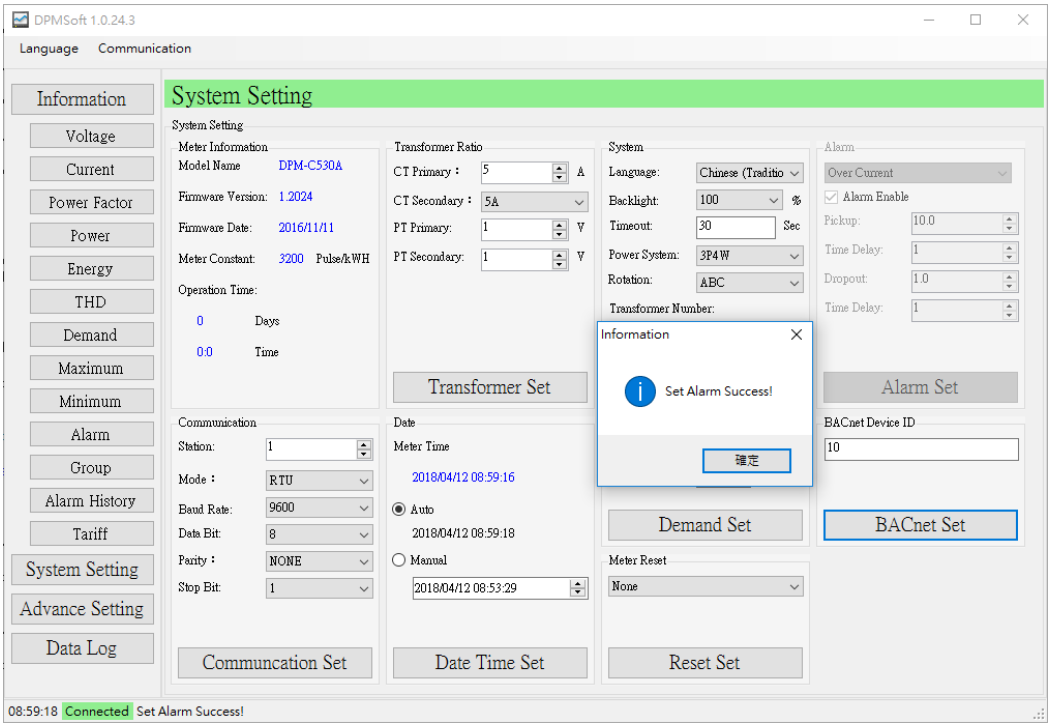
(4) Select the Drop-out value and Time Delay.



Click “Alarm Set” when the setting is complete and a pop-up window appears showing whether the setting is successful or not.

(5)

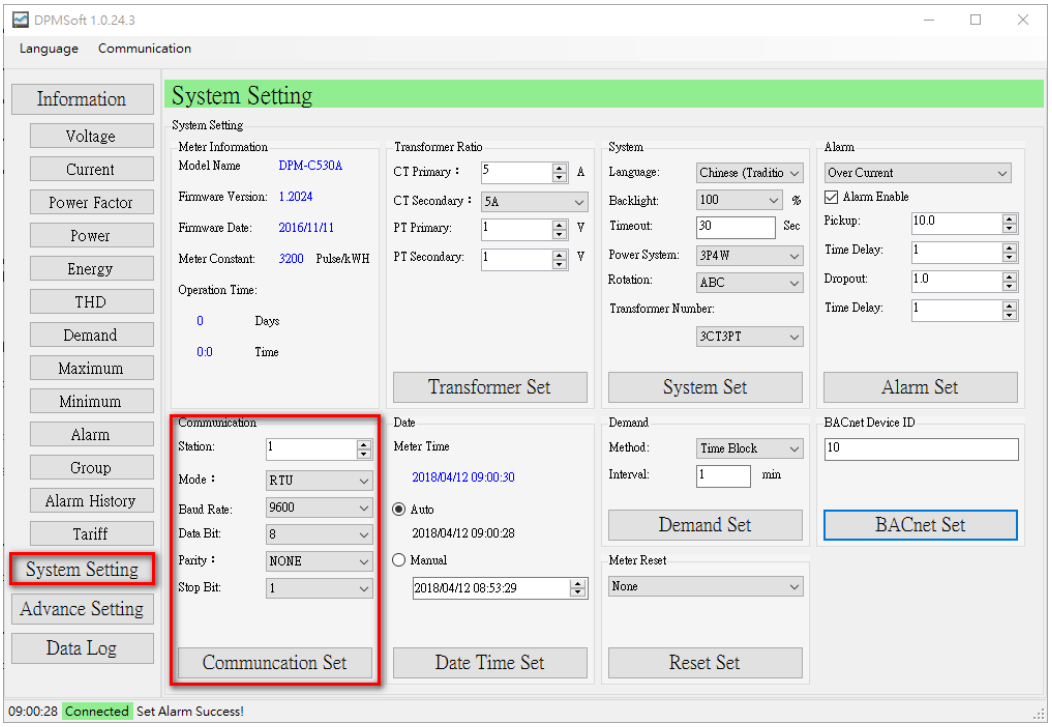




(6) Repeat steps (1) ~ (5) for settings regarding all the other 28 alarm types.

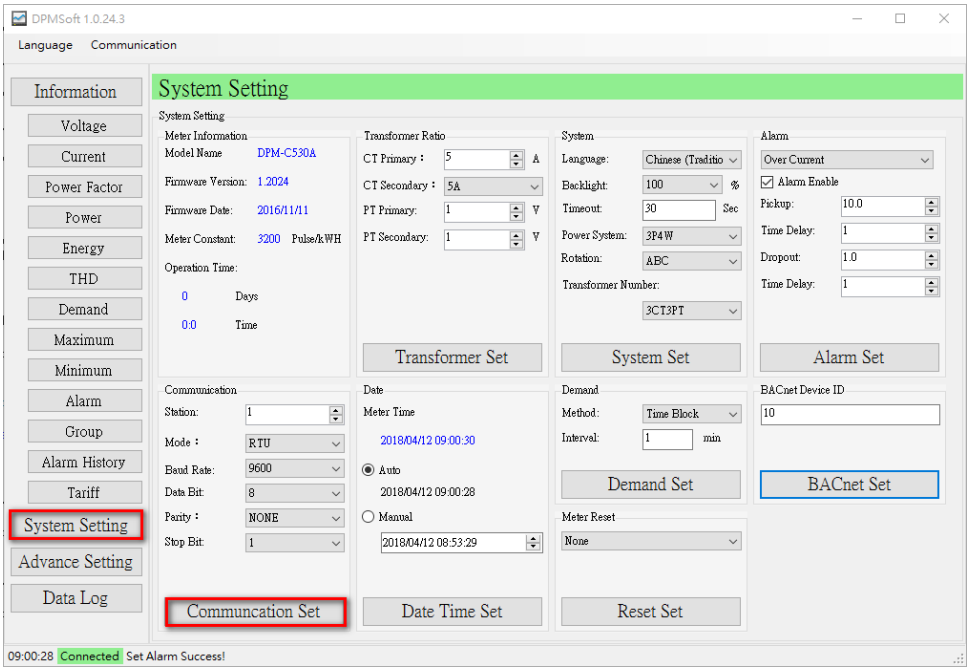
5. Communications:

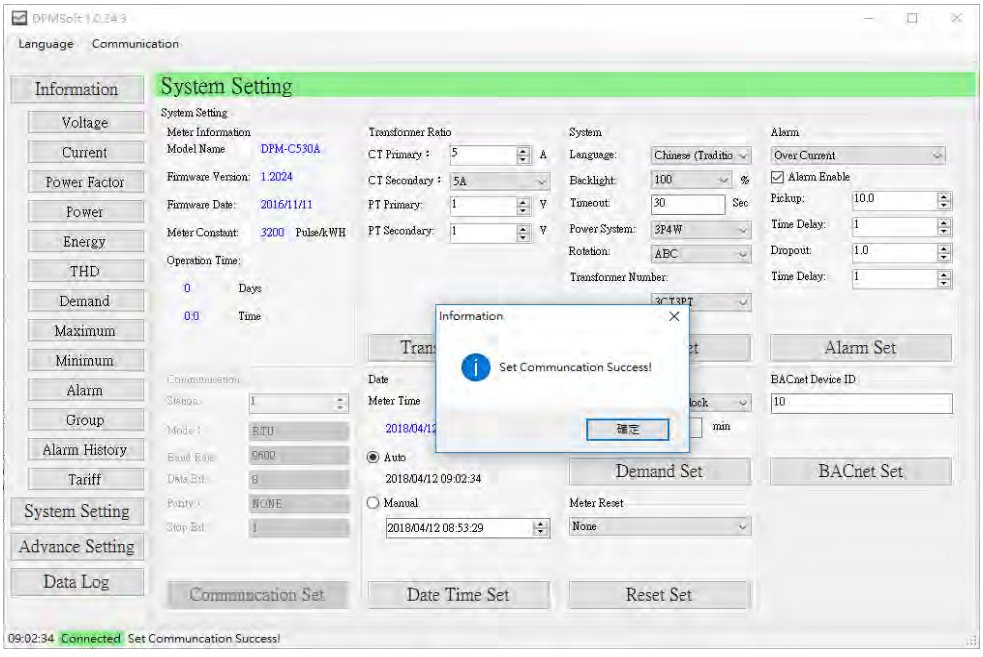
Setup the communications parameters for the power meter.



- Station: Modbus slave station ranges from 1~254. When using BACnet MS/TP as communication mode, the MAC ID ranges from 1~127.
- Mode: Supports RS-485, Modbus ASCII / RTU and BACnet MS/TP.
- Baud Rate: For RS-485, communication speed supports 9600, 19200 or 38400 bps. If the mode is BACnet MS/TP, the default setting speed is 38400 bps.
- Data bit: Supports 7-bit or 8-bit data.
- Parity: The parity bit for RS485 communications include None, Odd or Even.
- Stop bit: Supports 1 or 2 bit to indicate the end of data transmission.

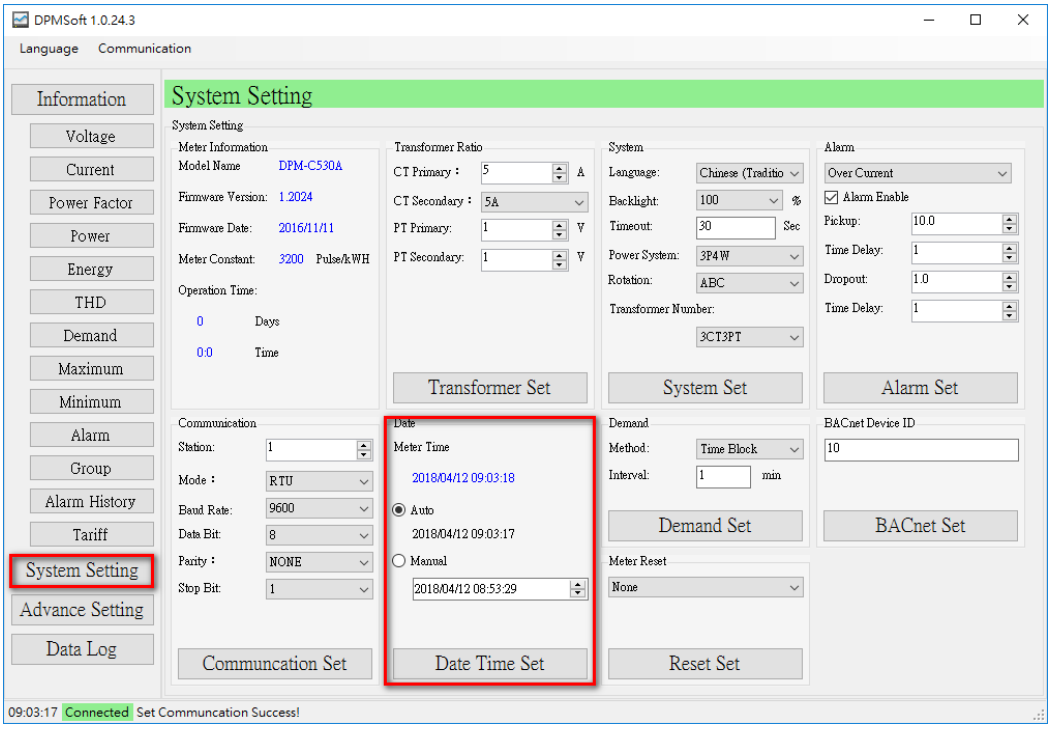
Click "Communication Set" when the setting is complete and a pop-up window appears showing whether the setting is successful or not.





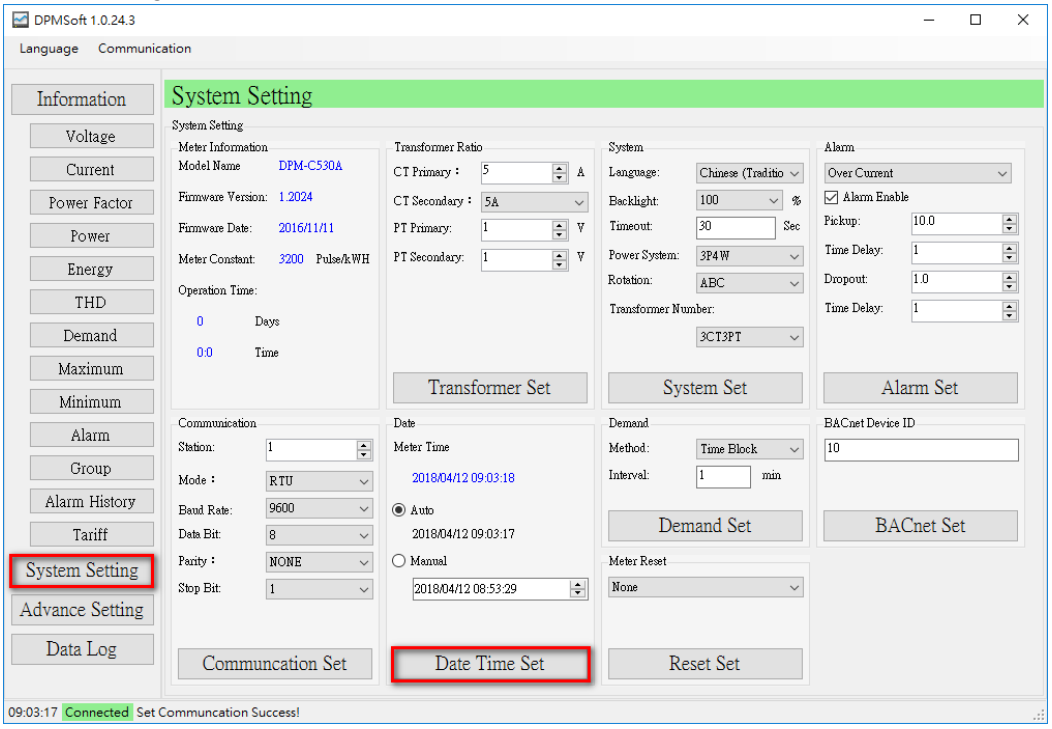
6. Date:

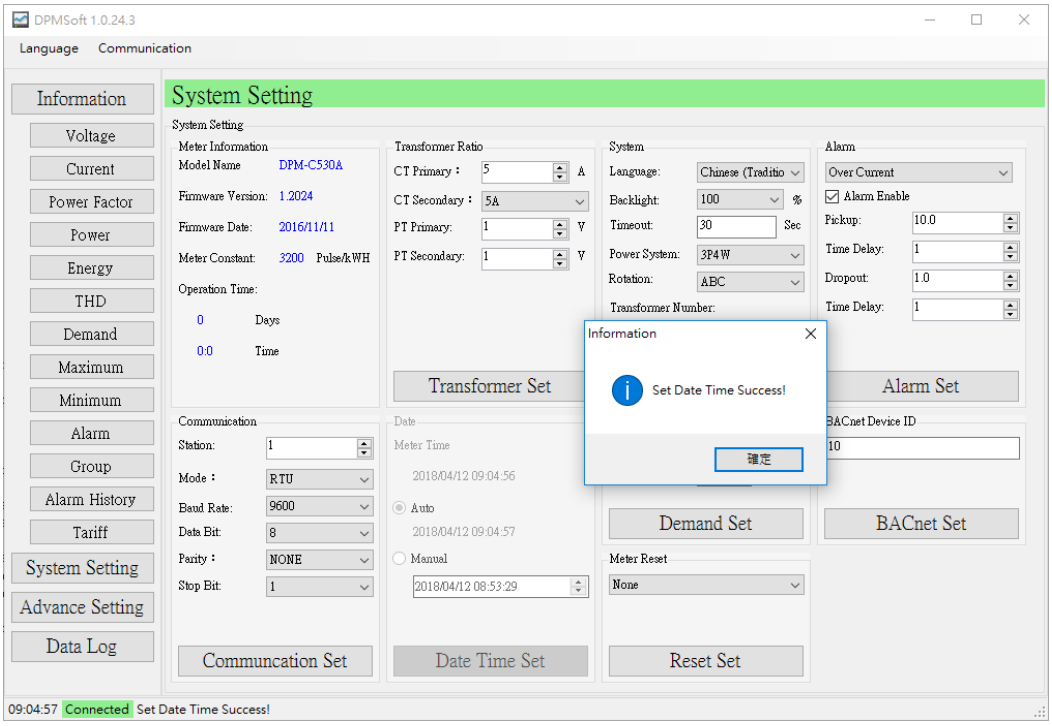
Provides date and time parameters for power meter setup.



- Auto: Automatically sets the date and time based on the PC, no manual setting required.
- Manual: Manually select the time and date

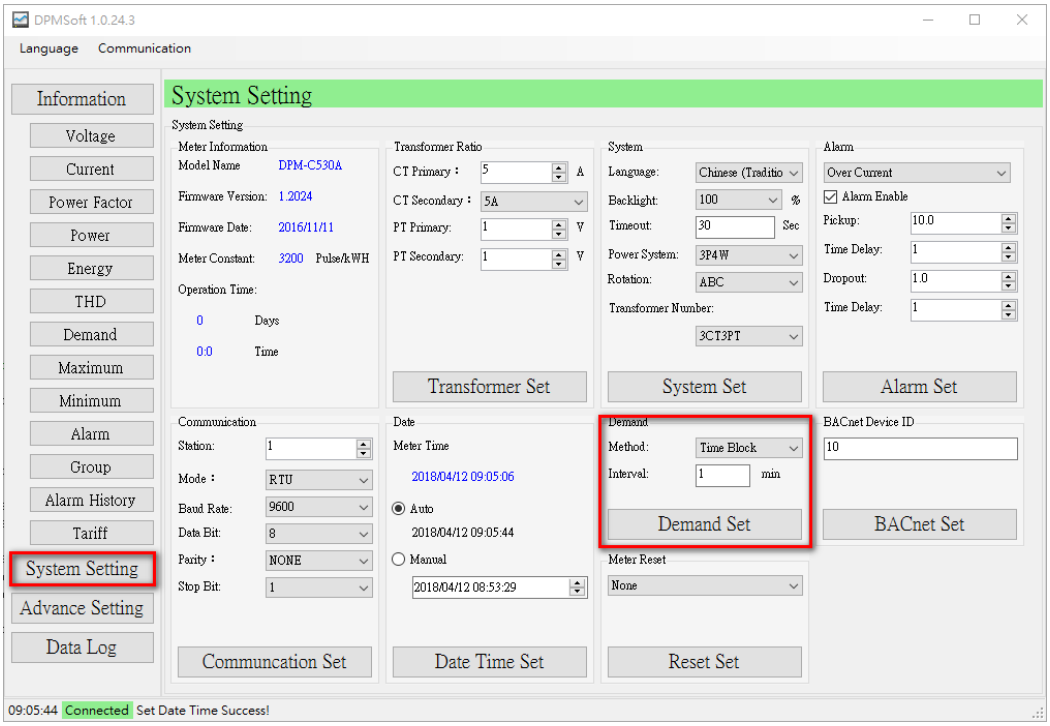
Click "Date Time Set" when the setting is complete and a pop-up window appears showing whether the setting is successful or not.





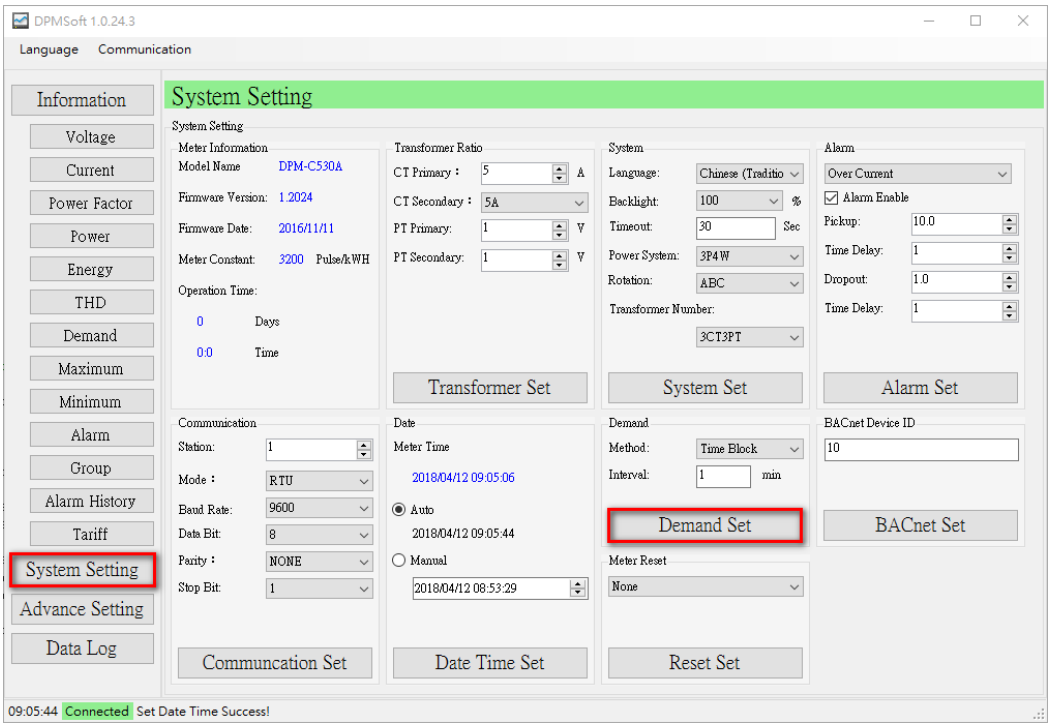
7. Demand:

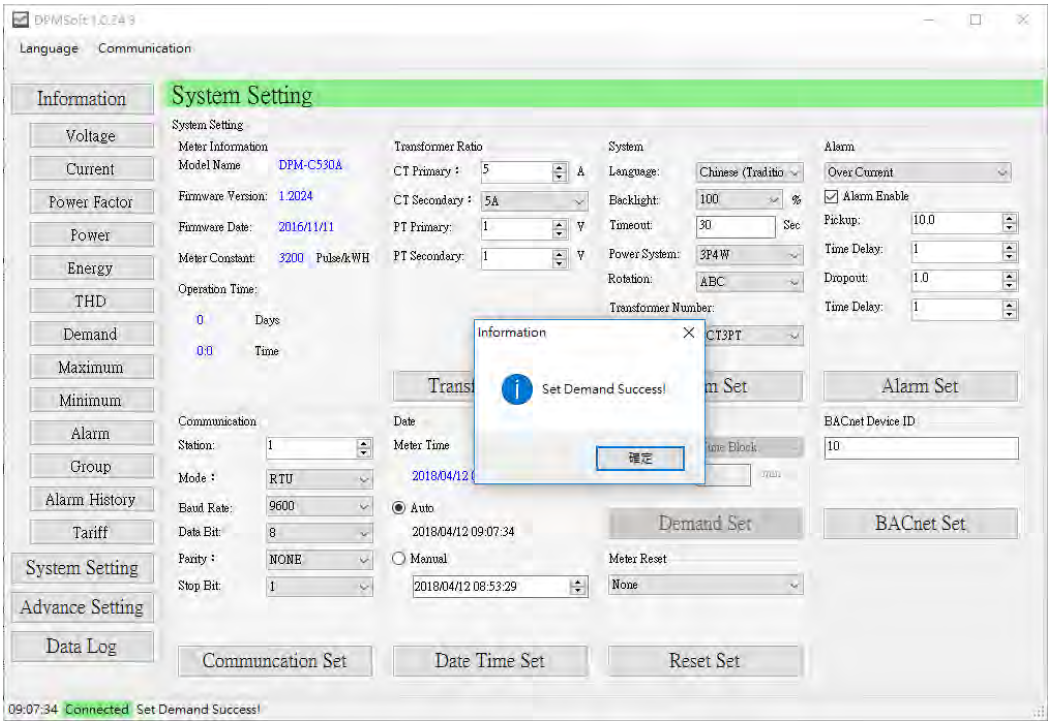
Setup methods for measuring power meter’ s demand.



- Method: Currently supports Time Block for measuring power meter’ s demands.
- Interval: Supports demand measuring interval time ranging from 1 to 60 min.

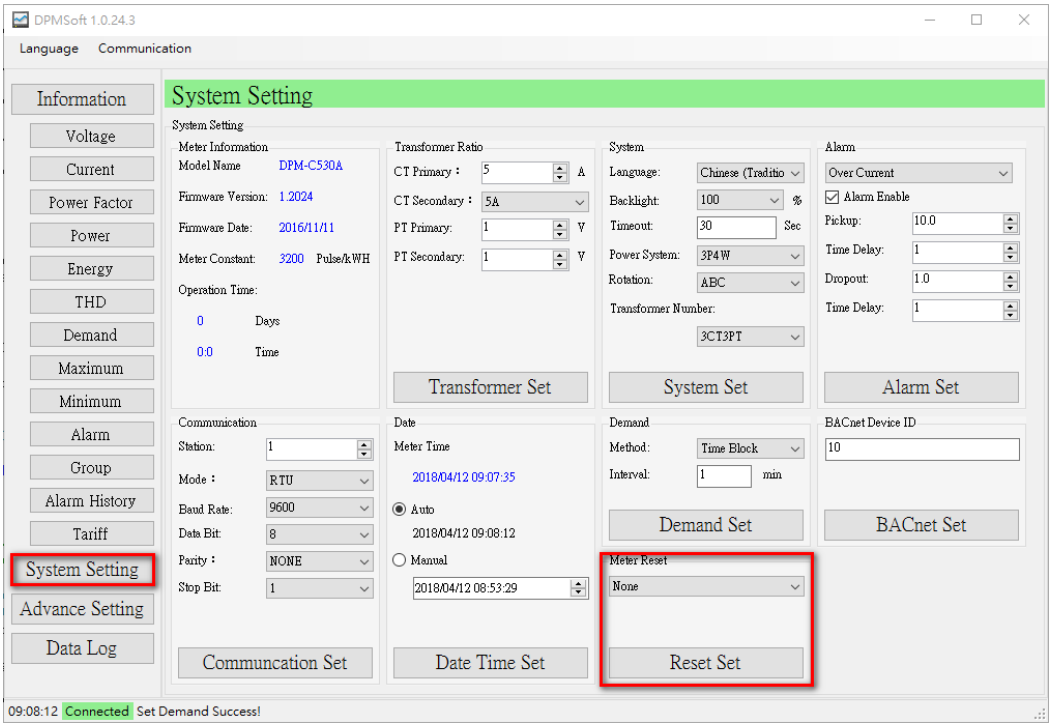
Click “Demand Set” when the setting is complete and a pop-up window appears showing whether the setting is successful or not.



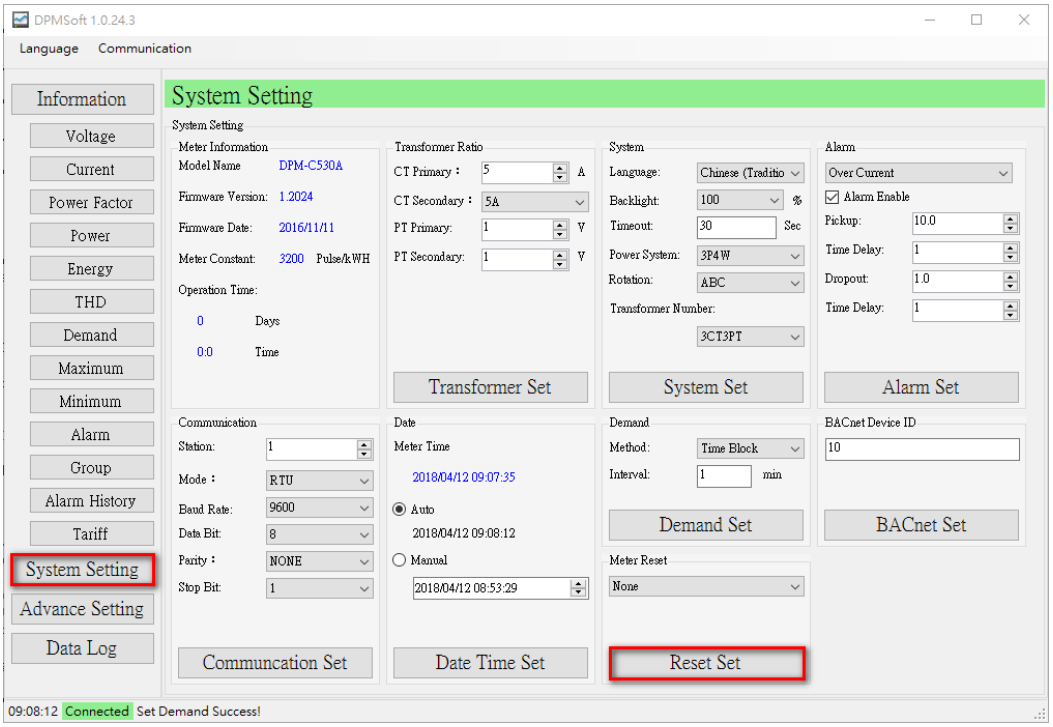


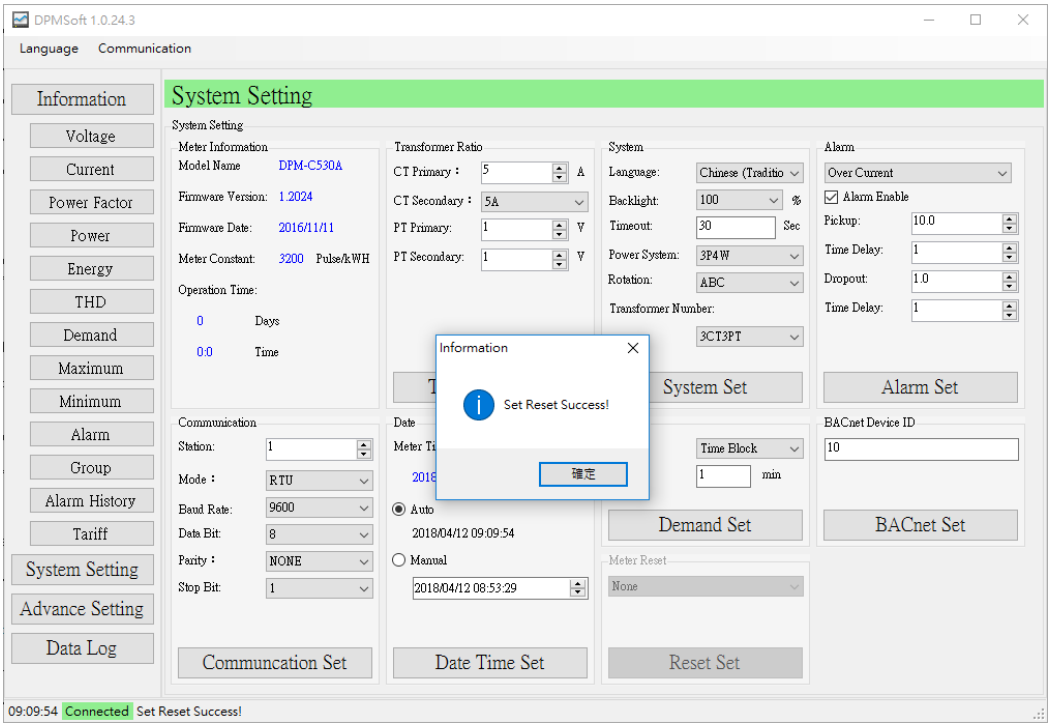
8. Meter Reset:

Provides parameters regarding power meter reset.



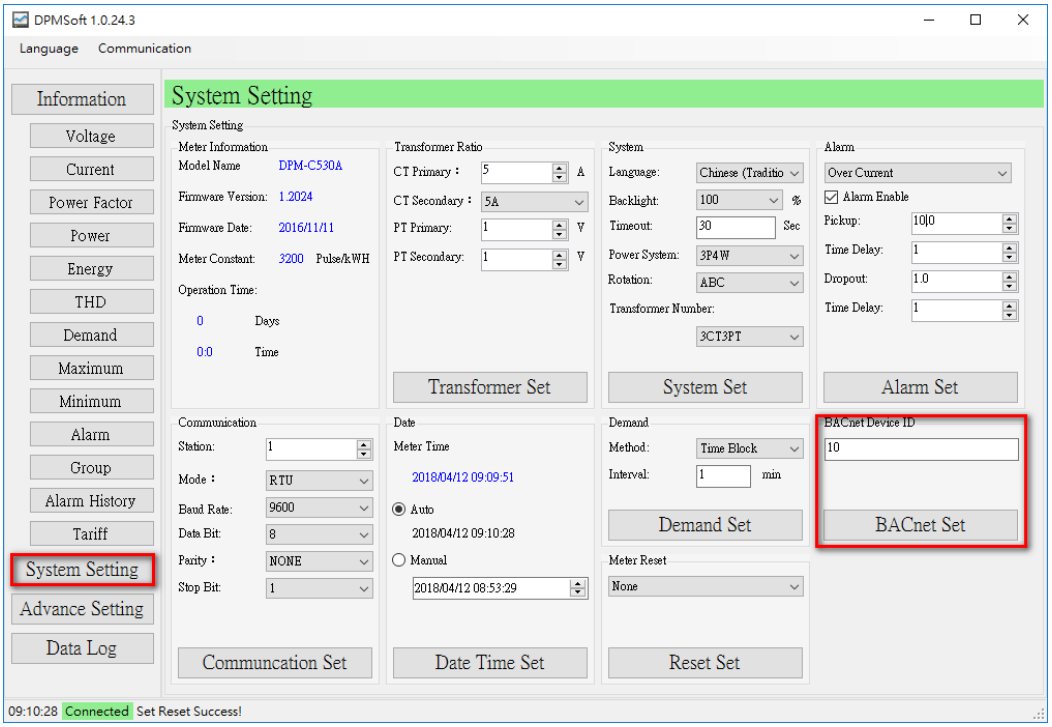
Click "Reset Set" when the setting is complete and a pop-up window appears showing whether the setting is successful or not.





9. BACnet Device ID：

Setup the parameter for BACnet ID.



- BACnet Device ID: The device identifier in BACnet MS/TP include 0 ~ 4194303.
- Station: The MAC ID supports 1 ~ 127 stations for BACnet MS/TP mode.
- Baud Rate: For RS485 communications, the baud rate supports 9600, 19200 or 38400 bps. If the setup is BACnet MS/TP mode, the default setting is 38400 bps.

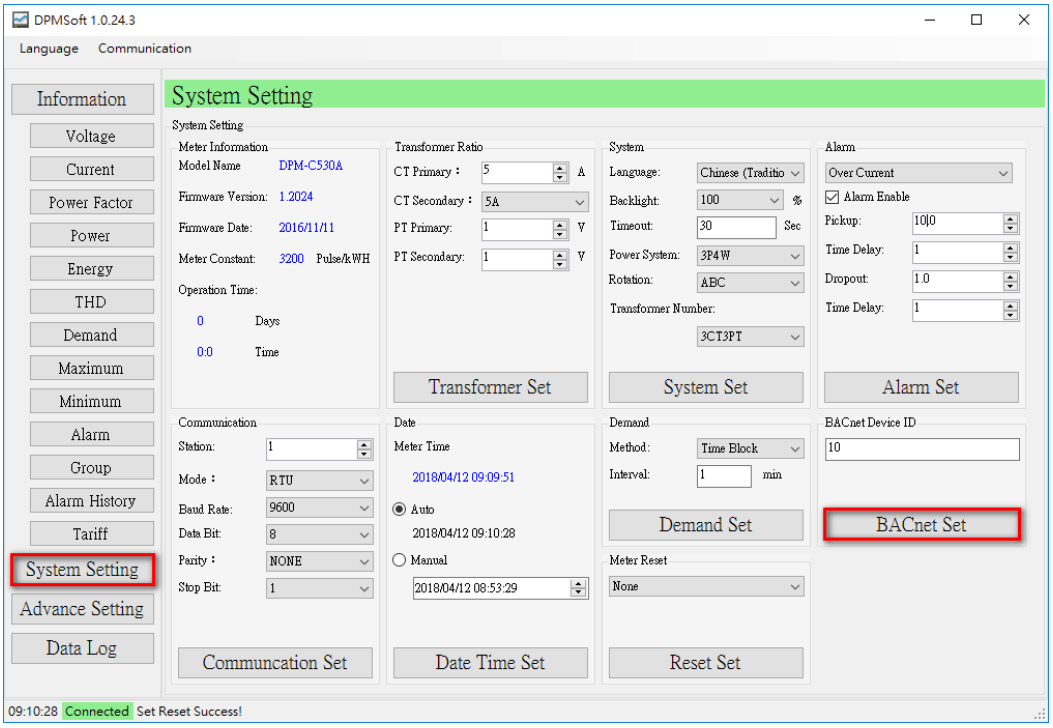
- Data bit: Supports 7-bit or 8-bit data. For BACnet MS/TP mode, the default setting is 8 bit.
- Parity: The parity bit for RS485 communications include None, Odd or Even. For BACnet MS/TP mode, the default setting is None.
- Stop bit: Supports 1 or 2 bit to indicate the end of data transmission. For BACnet MS/TP mode, the default setting is 1 bit.

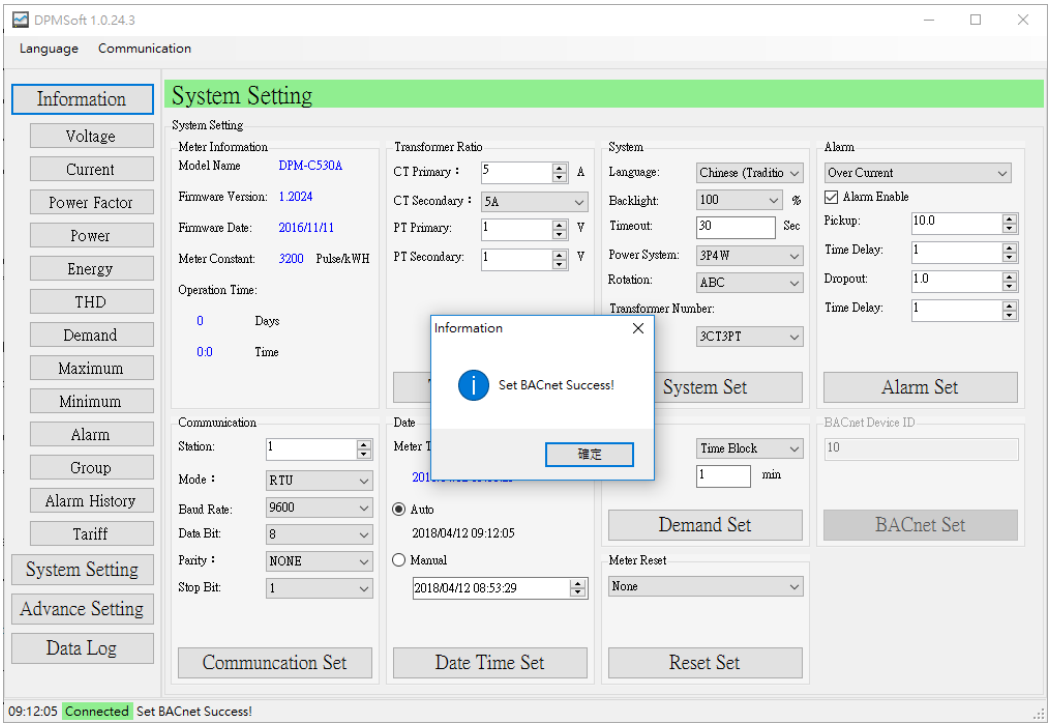
※Note:

a.) Switch to BACnet MS/TP mode, the baud rate, data bit, parity and stop bit automatically change to its default setting in the order of 38400 bps, 8 bit, None and 1 bit.

b.) The BACnet MS/TP MAC ID and Modbus slave station shares the same parameter.

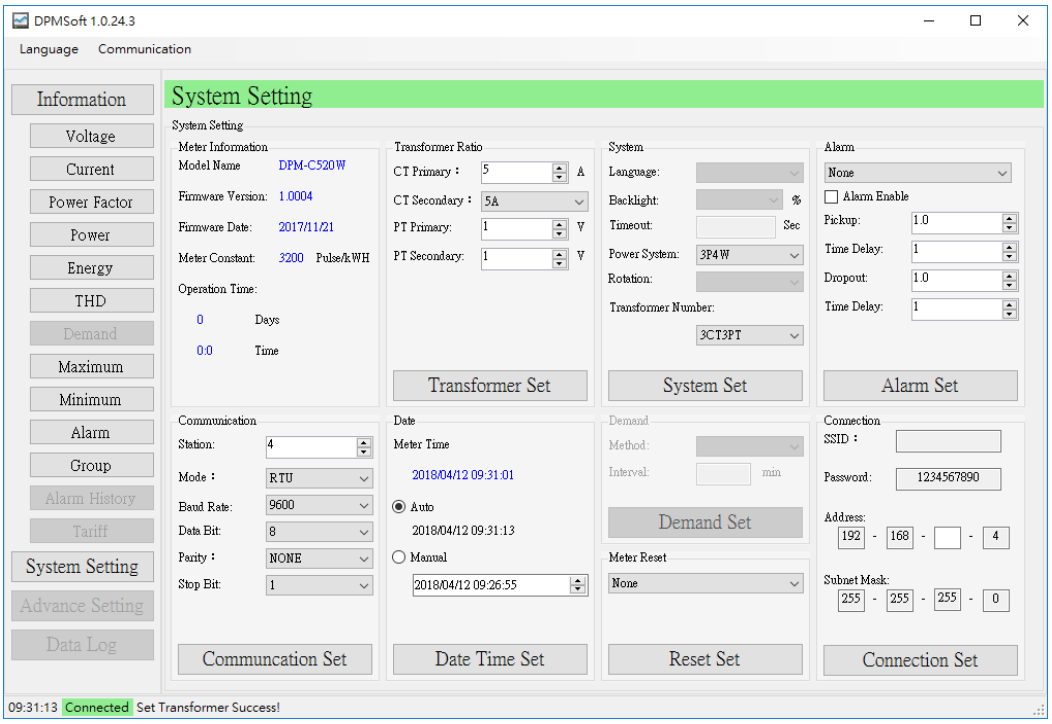
Click "BACnet Set" when the setting is complete and a pop-up window appears showing whether the setting is successful or not.



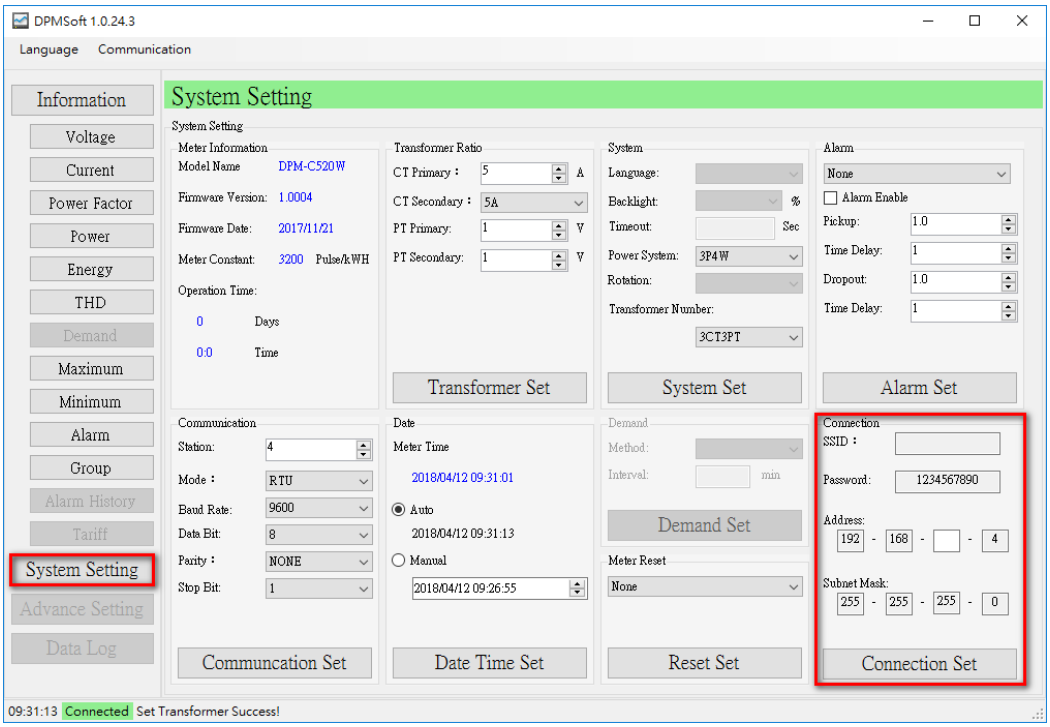


※ **Note: The system setting page differs based on the power meter type and together the displayed setting blocks is also different.** The setting page for DPM-C520W and DPM-C501L are described below.

■ **DPM-C520W System Setting Page:**



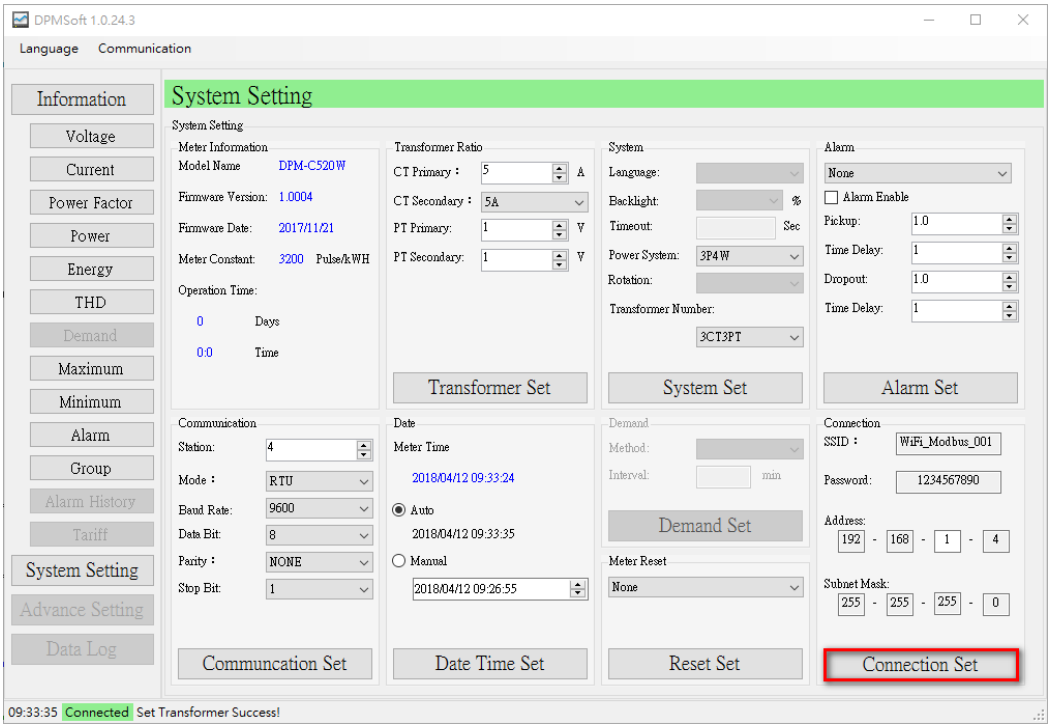
The difference regarding the setting page of a standard DPMSoft and DPM-C520W connecting to DPMSoft is that a BACnet ID setting box is presented with router connection setups on the bottom right of the page, but this setting is not available for standard DPMSoft page.

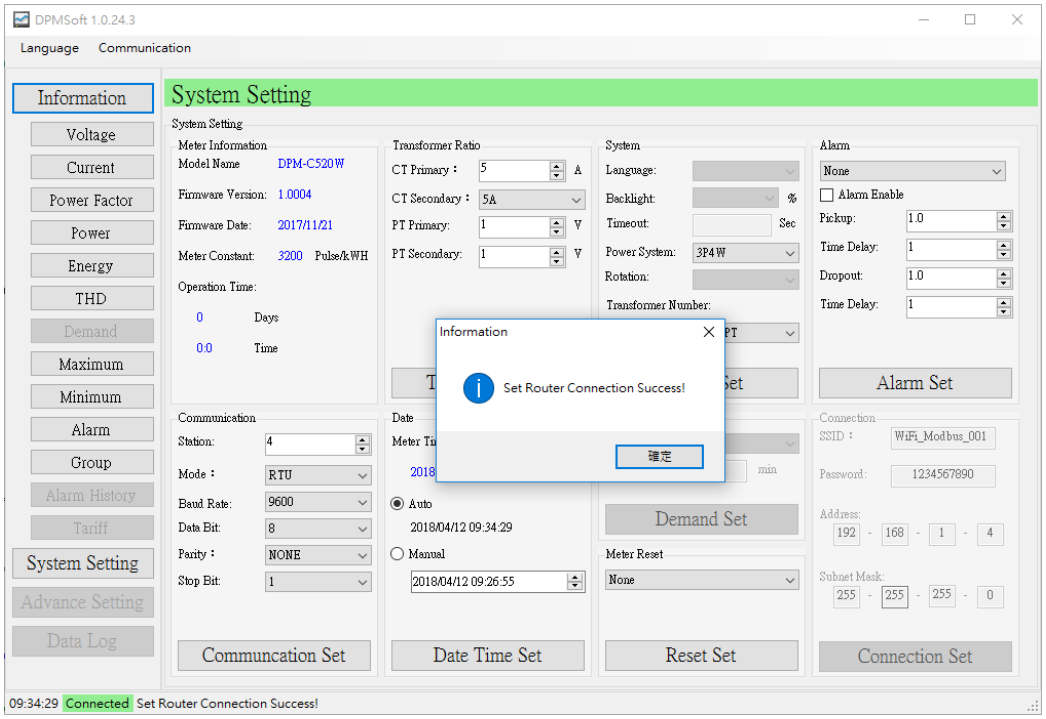


- SSID: Type the SSID name that connects the DPM-C520W to a router. The naming format is WiFi_Modbus_00X, the X differs based on the third digit box in the IP address.
- Password: The fixed password for connecting DPM-C520W to a router is 1234567890.
- IP Address: The IP for DPM-C520W is fixed, but the third digit box varies according to the domains, while the fourth digit box refers to the power meter station.
- Subnet Mask: Fixed as 255.255.255.0

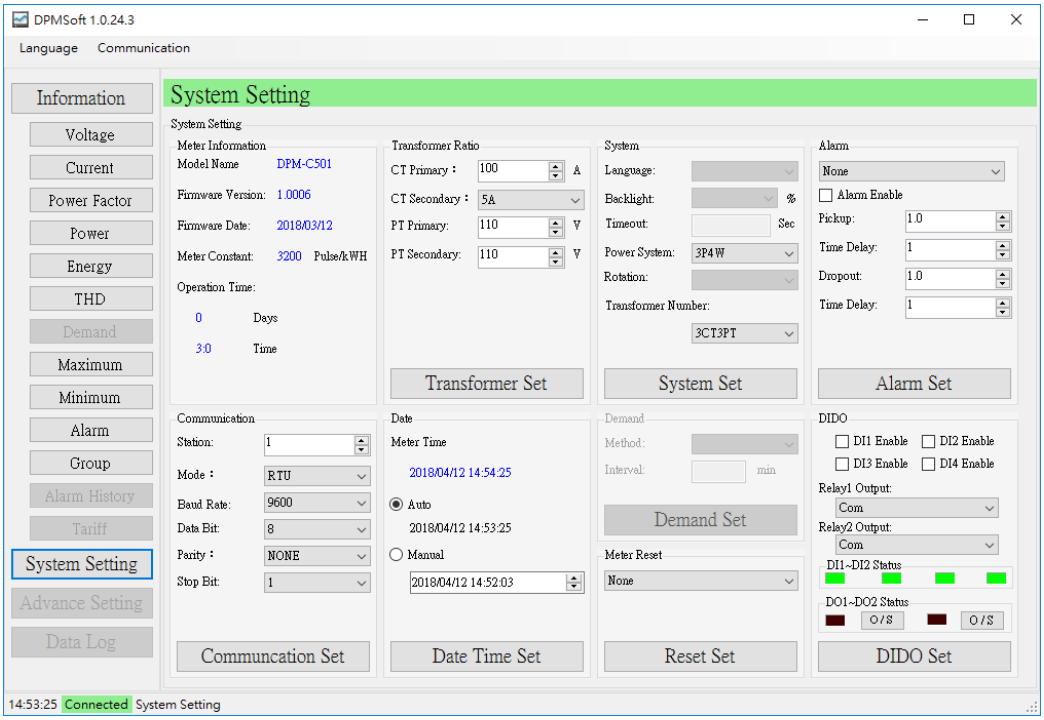
When the setup for the third digit box is complete, the SSID will also change accordingly (see below):

Click “Connection Set” when the connection settings for the router is complete and a pop-up window appears showing whether the setting is successful or not.

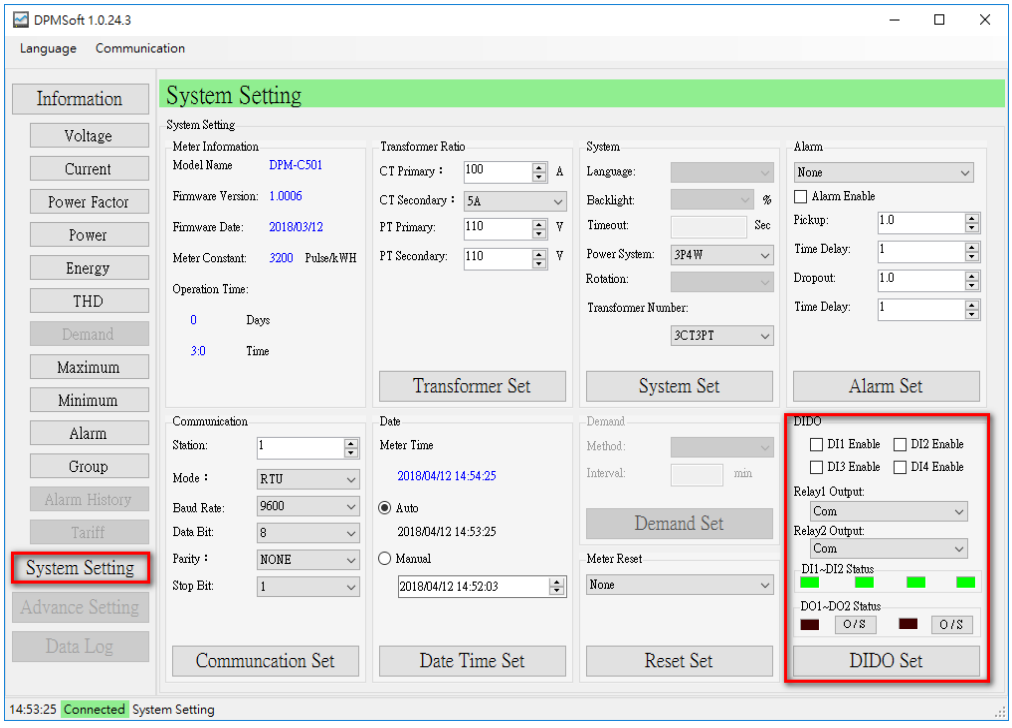




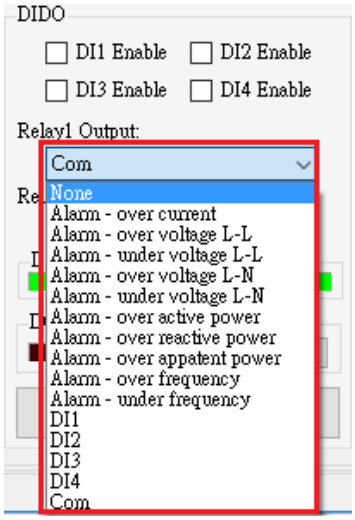
■ DPM-C501L System Setting Page:



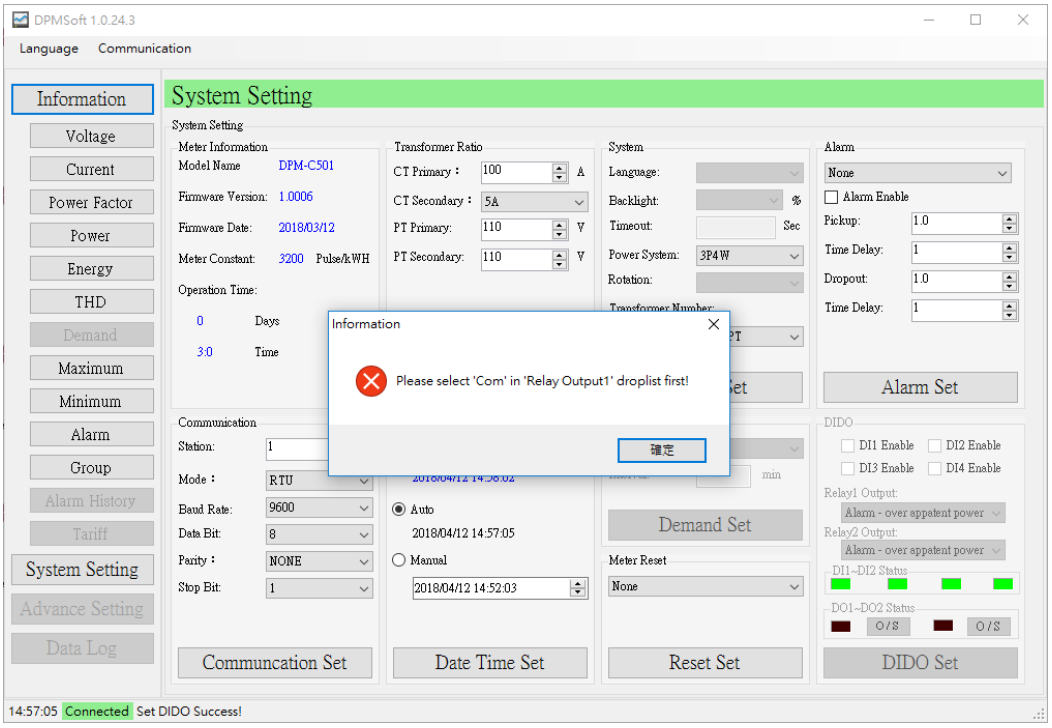
The difference regarding the setting page of a standard DPMSoft and C501L connecting to DPMSoft is that a DIDO setting box is presented on the bottom right of the page, but this setting is not available for standard DPMSoft page.



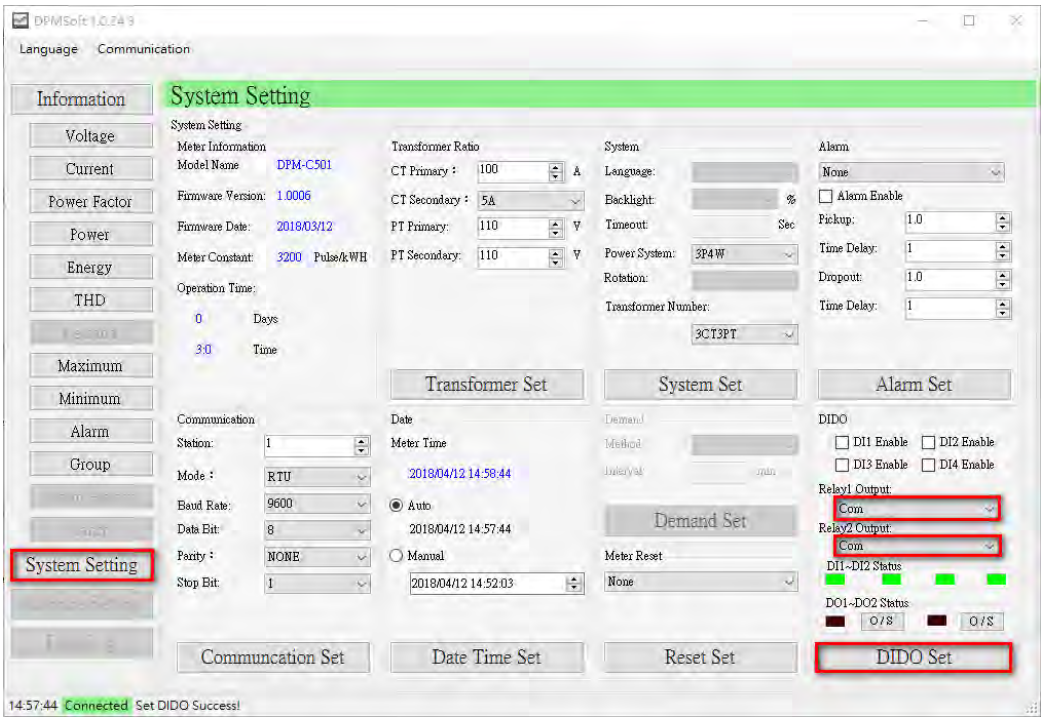
- Enable DI1~DI4: To enable or disable digital input function.
- Relay1~Relay4 Output: A high signal appears when DI enables or an alarm occurs.



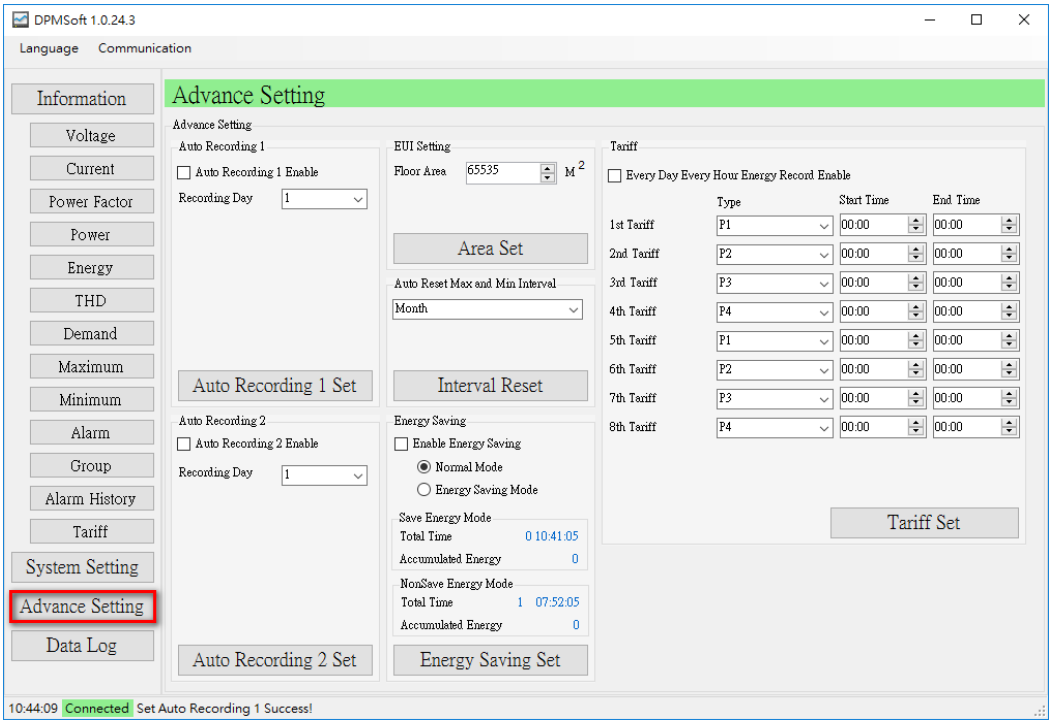
- DI1~DI4: DI status.
- DO1~DO2 Status: The DO status shows lights off for open circuit, lights on for short circuit. Select 'Com' in 'Relay Output' drop-list first or the following error window will appear.



Methods for relay control setting via computers:
Select Com for Relay1 Ouput or Relay2 Out, then click “DIDO Set”.

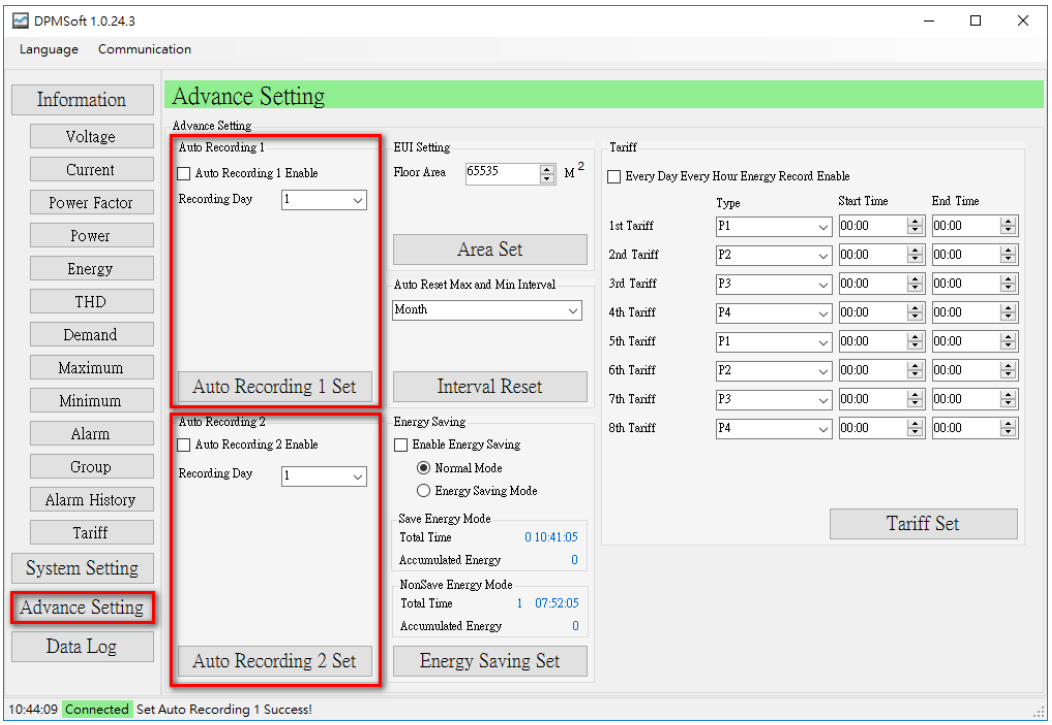


4.2 Advance Setting



1. Auto Recording:

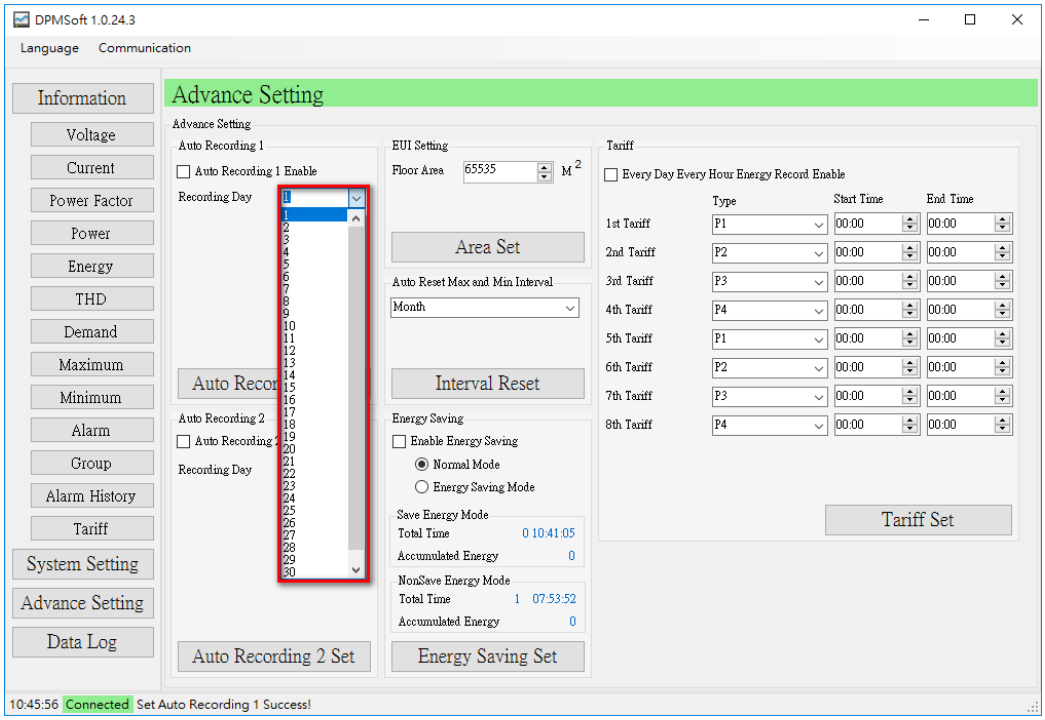
Auto recording monthly power usage.



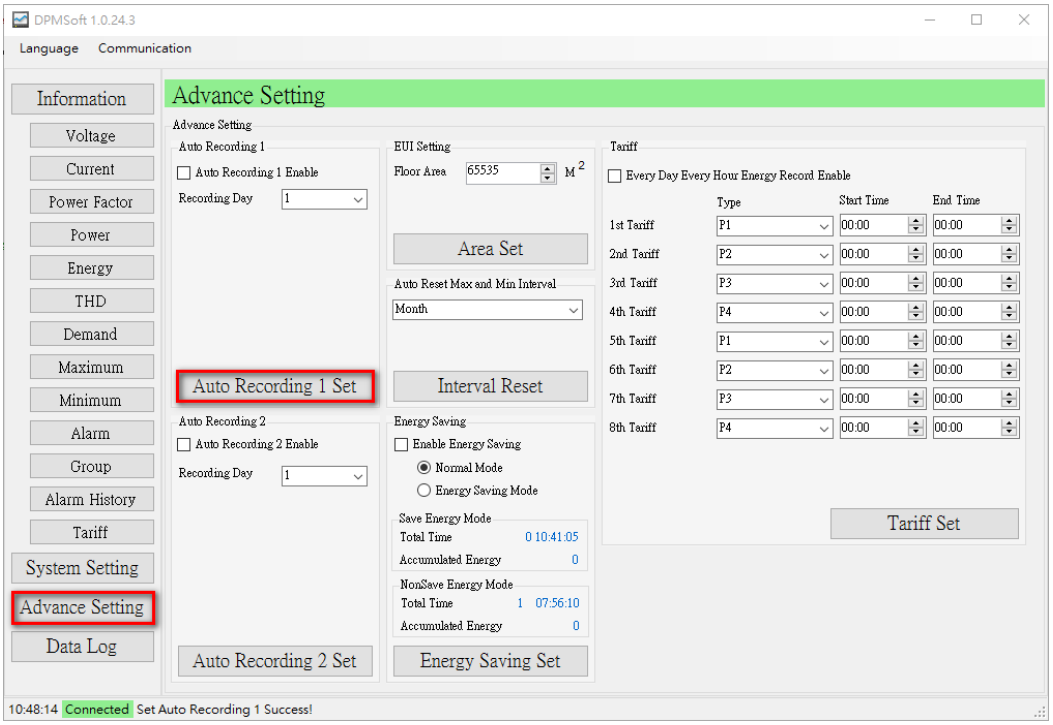
- Auto Recording1 Enable: Choose ☑ to enable or ☐ to disable auto recording1.
- Recording Day: Select a day to measure monthly power usage regarding group1.
- Auto Recording2 Enable: Choose ☑ to enable or ☐ to disable auto recording2.
- Recording Day: Select a day to measure monthly power usage regarding group2.

Steps for auto recording:

(1) Choose a day (1~31) every month to start recording.



(2) Click "Auto Recording1 Enable" and choose "Auto Recording 1 Set" (see below) to start auto recording 1.



(3) Repeat the same steps (1) ~ (2) for setting Auto Recording2.

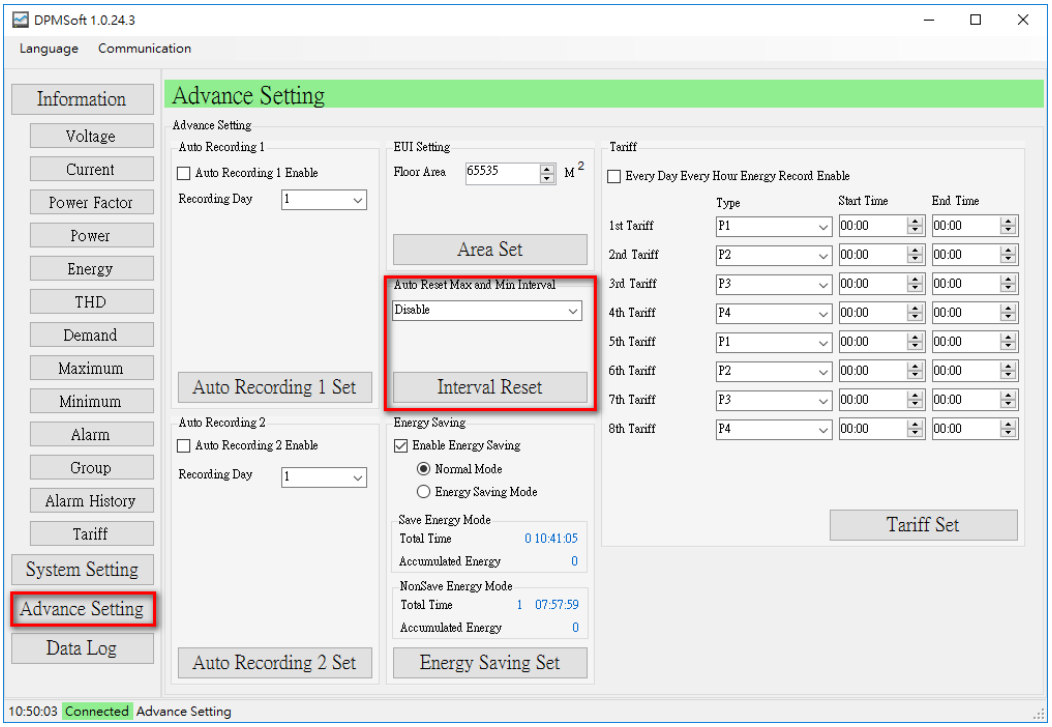
※ Note:

a.) If the setting day exceeds the last day of that month, use the last day of that month instead.

b.) Calculation: Assume the calculation starts from on the 1st of this month, 0 hr 0 min 0 sec and record the data to the last day of this month, 23 hr 59 min 59 sec. (The end day of the month varies and is set on the 28th, 30th or 31st based on the month.)

2. Auto Max and Min Interval Reset

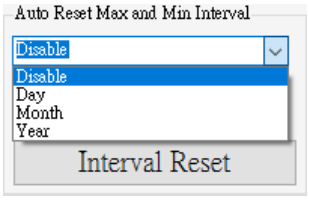
Provides auto reset for maximum and minimum interval setting.

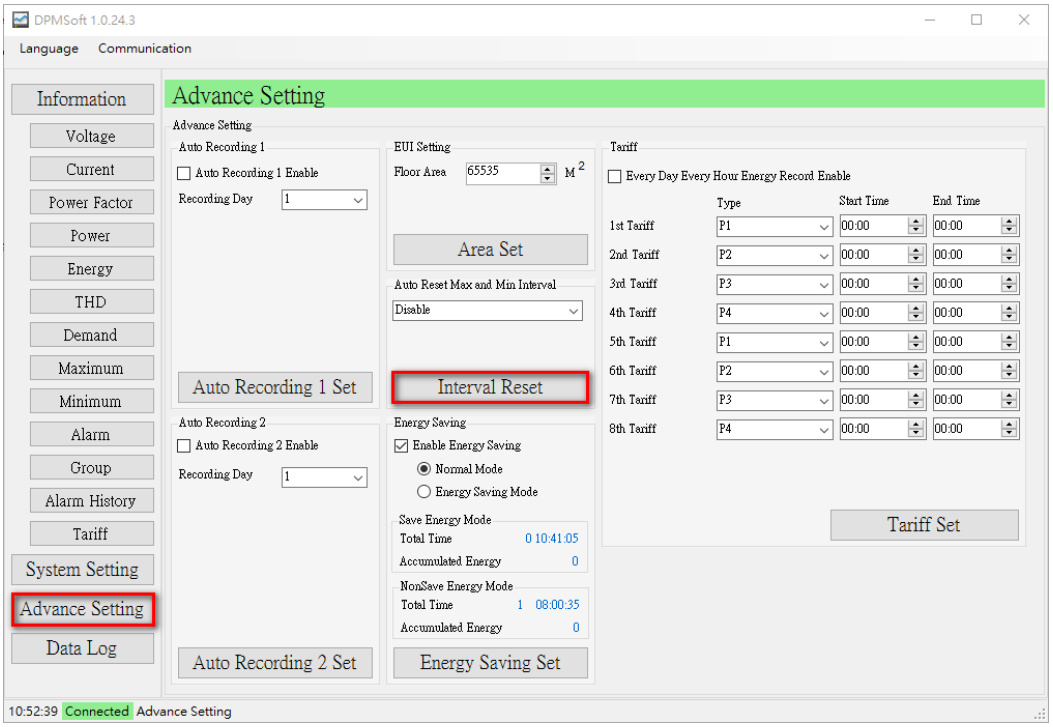


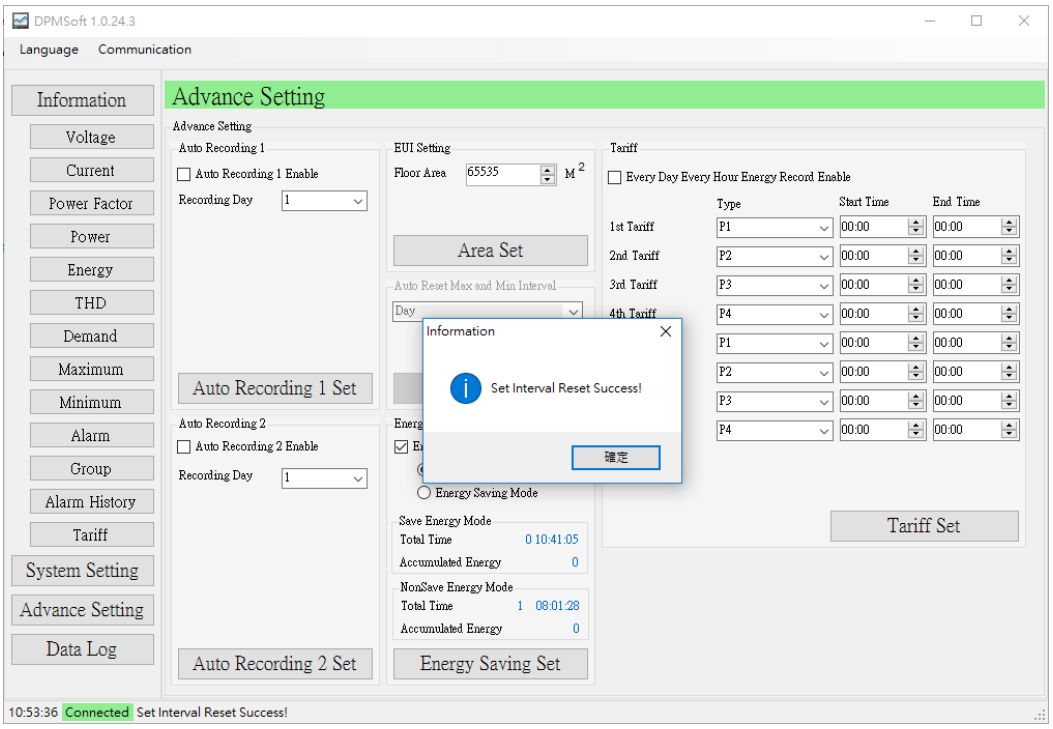
■ Auto Reset Max and Min Interval: The software automatically reset the maximum and minimum interval base on a specific period (per day, month or year).

Item	Function Description
Disable	Close the function, manual reset required
Day	Reset daily
Month	Resets on the first day of every month
Year	Resets on the first of January every year

When setups for auto reset maximum and minimum interval is complete, a pop-up window will show whether the setting is successful or not.

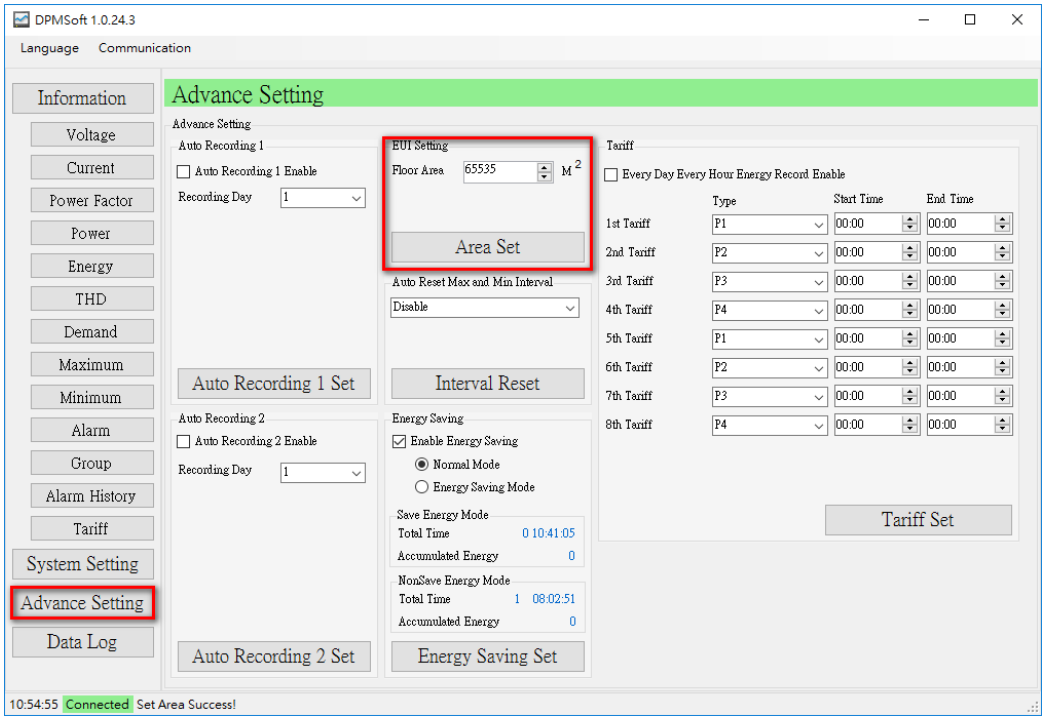






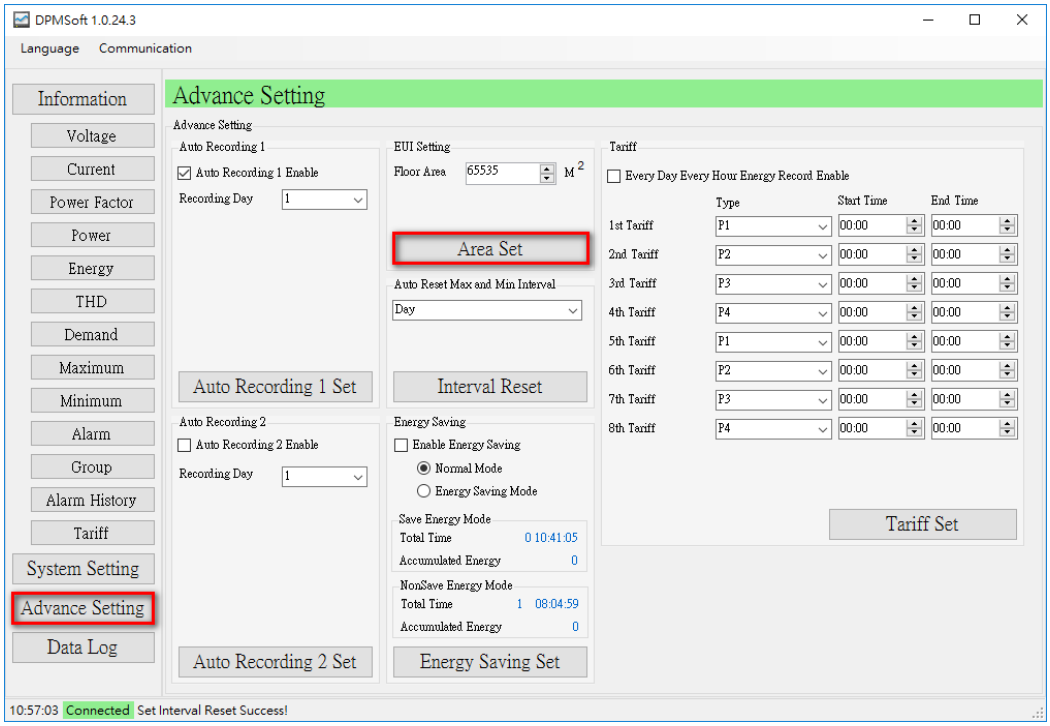
3. Energy Use Intensity (EUI):

Calculate the EUI via using its formula: kWh / Area (m2). The calculated value expresses the energy utility consumed per square feet of conditioned space.



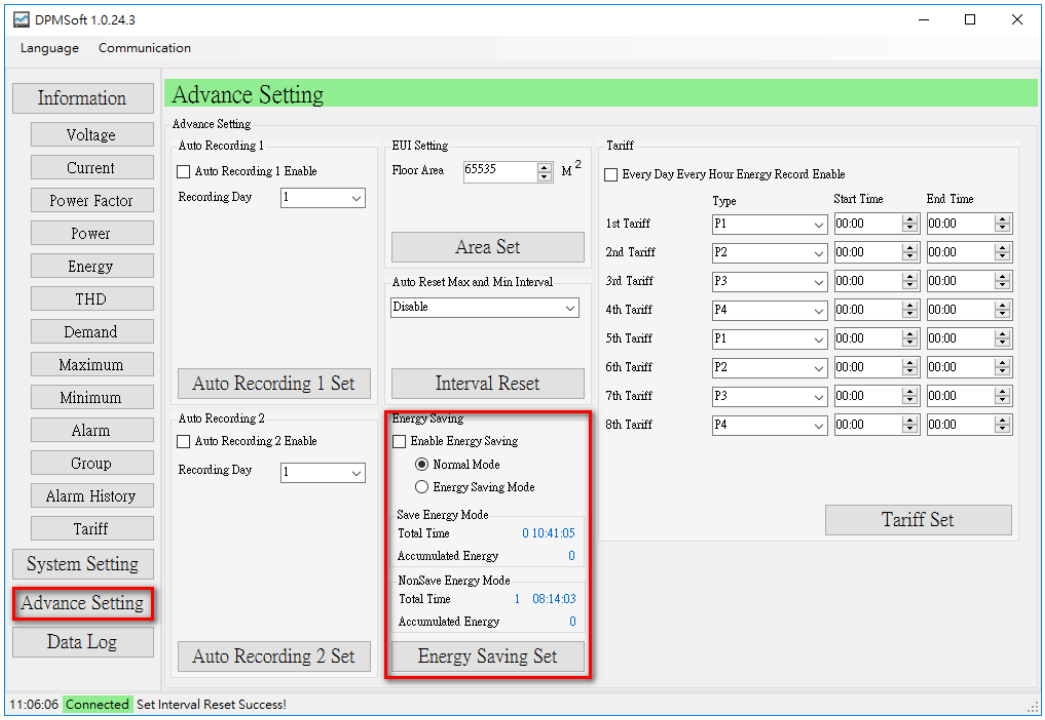
- Floor Area: Square feet of the building interior space

When parameter settings for floor area is complete, click "Area Set" and a pop-up window appears showing whether the setting is successful or not.



4. Energy Saving:

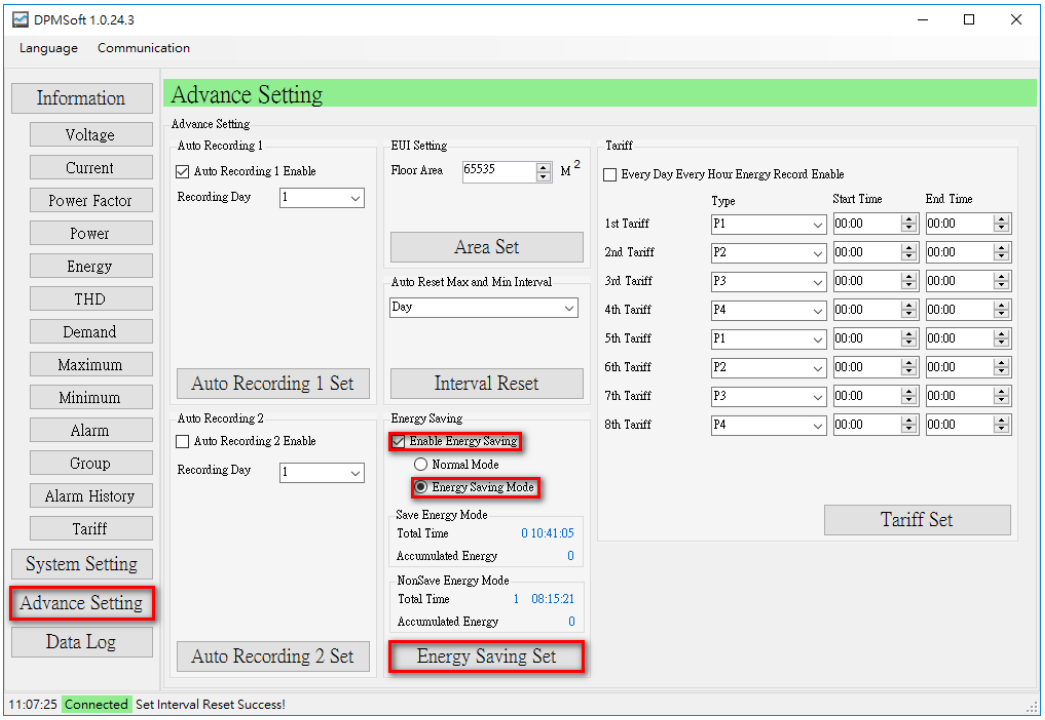
The current accumulated energy is categorized into normal or energy saving mode.

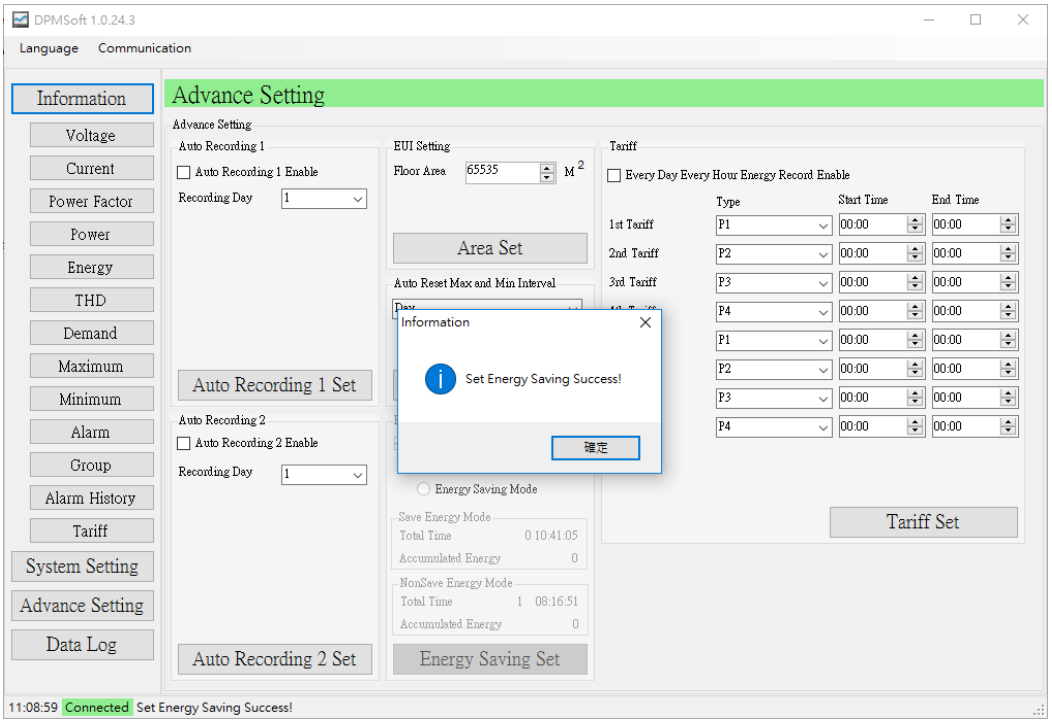


- Enable Energy Saving: Select ☑ to enable or ☐ to close energy saving / non-energy saving mode.
- Normal / Energy Saving Mode: Switch the accumulated energy to either energy saving or non-energy saving mode.

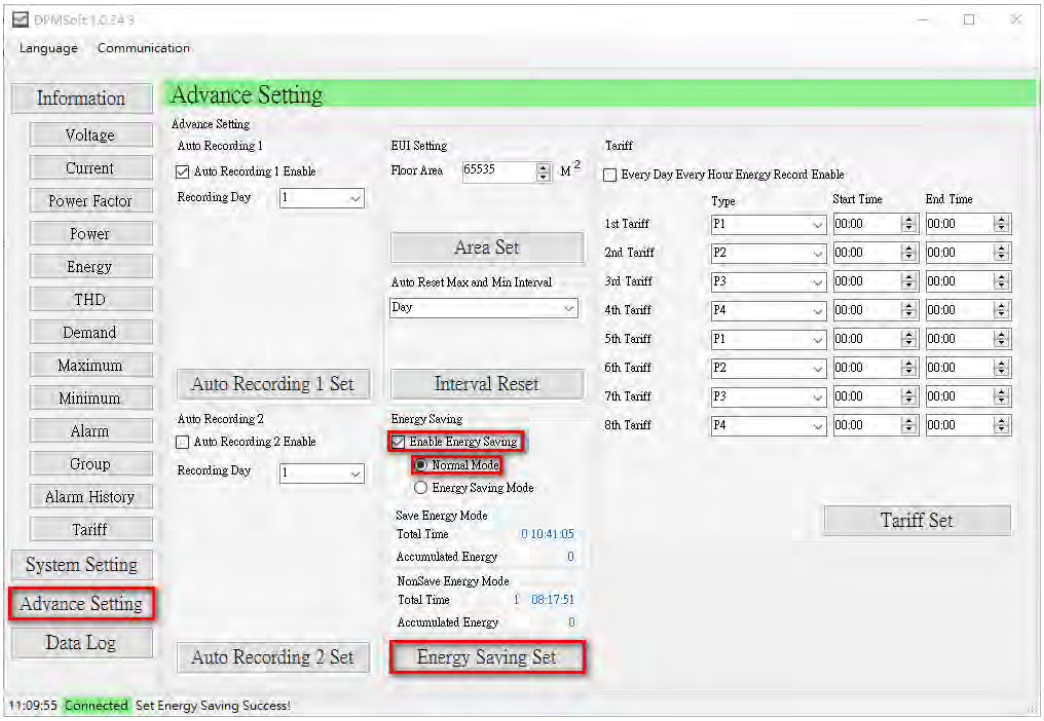
The following steps describe the energy saving mode settings:

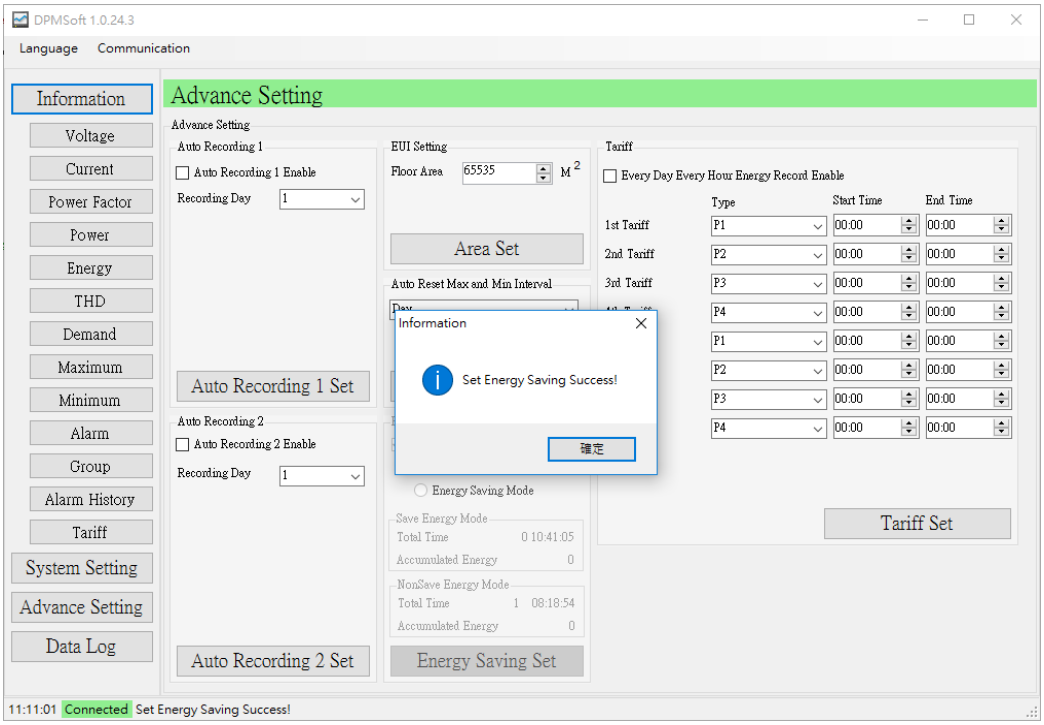
(1) Choose "Enable Energy Saving" and "Energy Saving Mode". Then, click "Energy Saving Set" to enable this function.





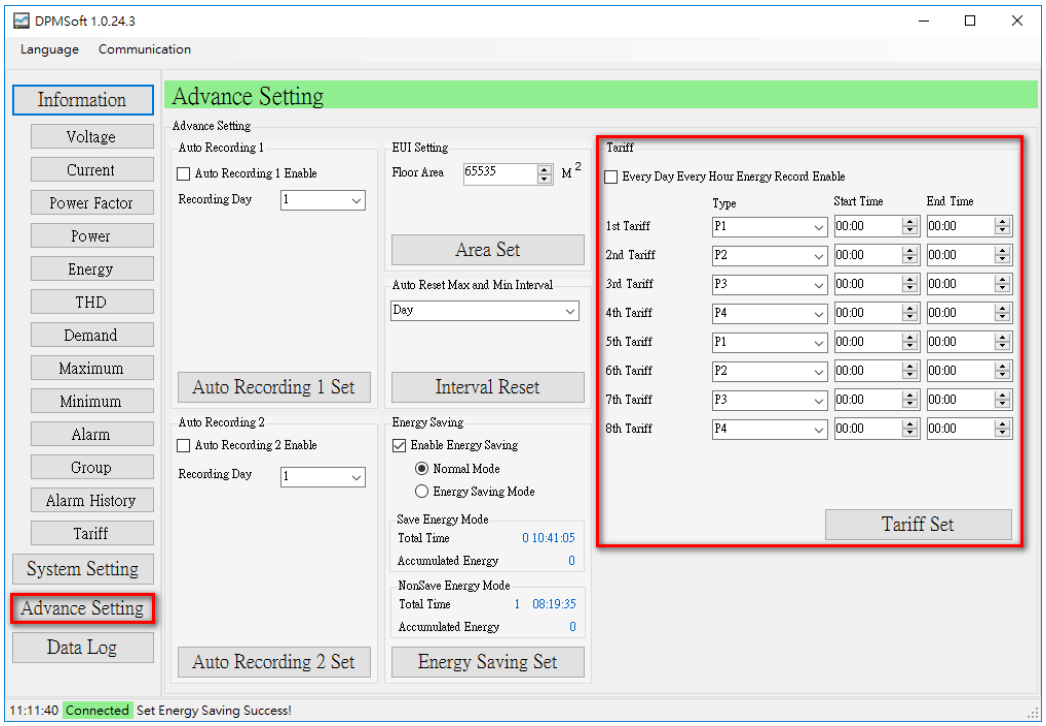
(2) Choose “Normal Mode” and click “Energy Saving Set” to switch the accumulated energy to normal mode.





5. Tariff:

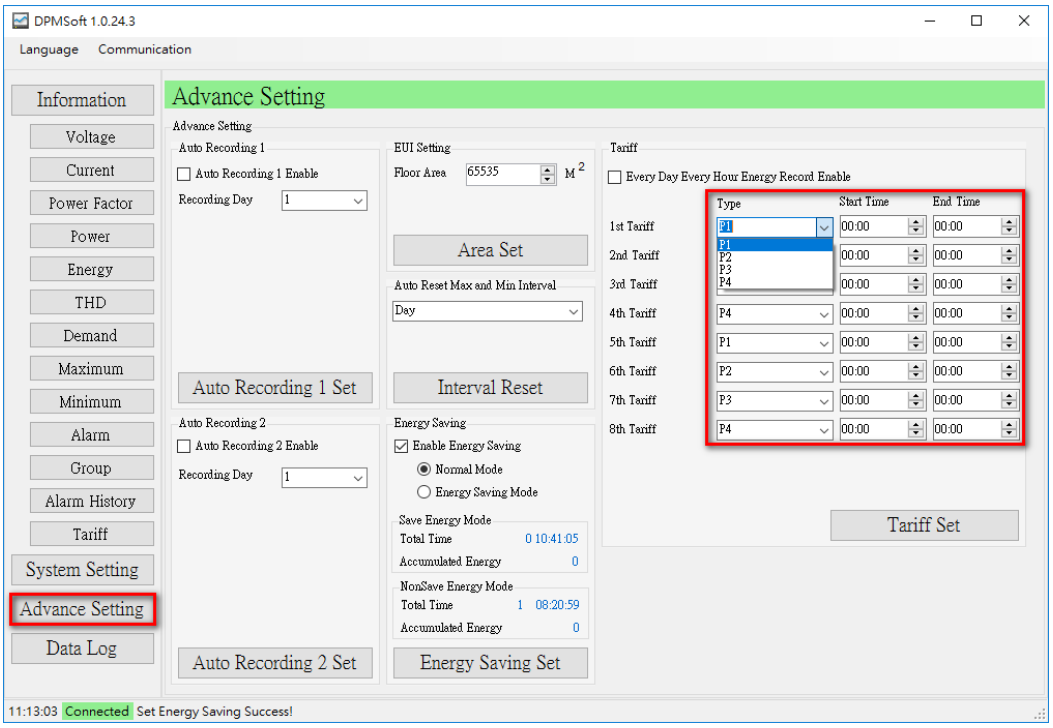
Record energy base on the off-peak times.



- Type: Select from the 4 types of tariff during a day including point (P1), peak (P2), plateau (P3) or valley (P4).
- Start Time: The starting time to record accumulated energy
- End Time: The ending time to record accumulated energy.

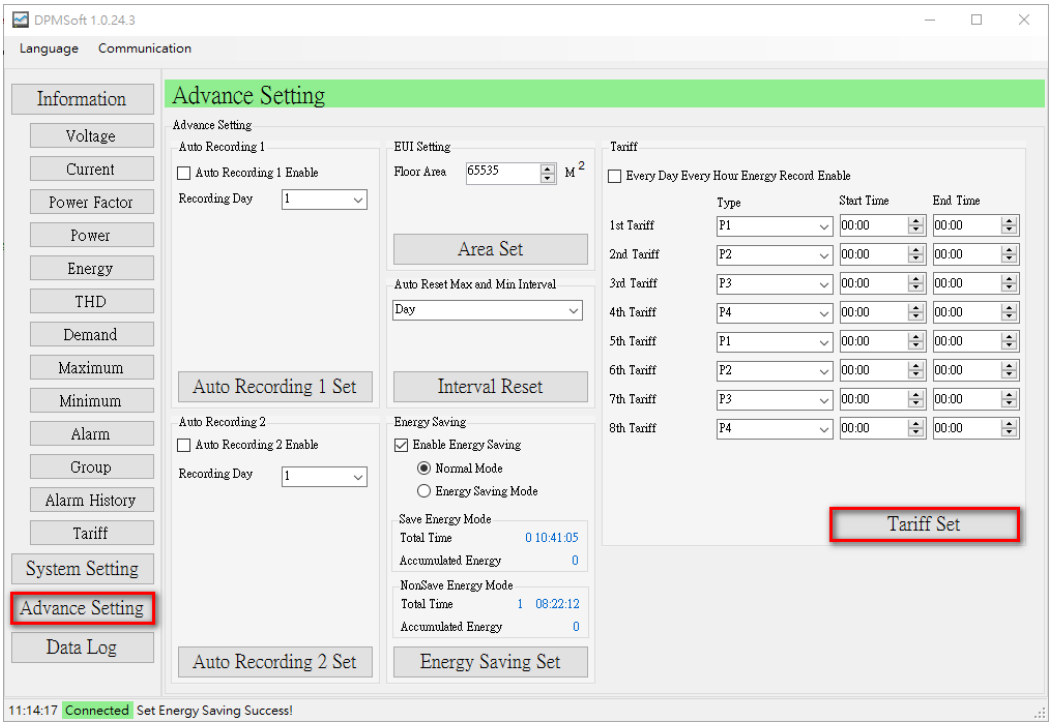
The following steps describe the tariff settings:

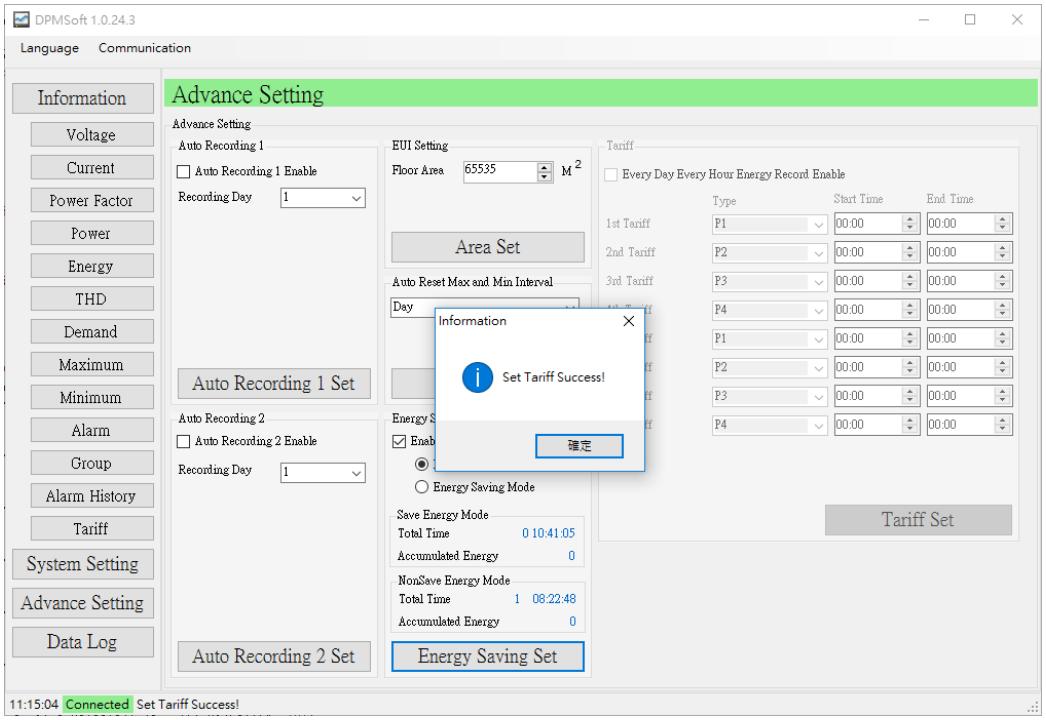
(1) Select the desired "point (P1), peak (P2), plateau (P3) or valley (P4)" and setup the start and end time.



(2) Repeat step (1) regarding tariff setups for the 2nd to 8th group.

(3) When the setups are complete, click "Tariff Set".

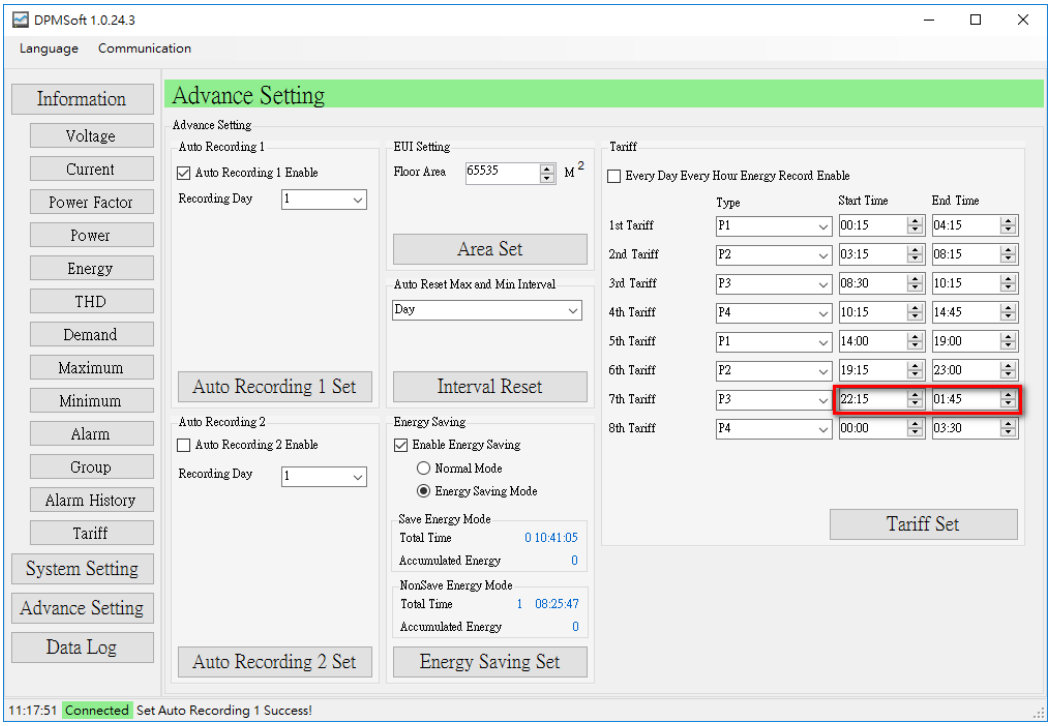




※ Note:

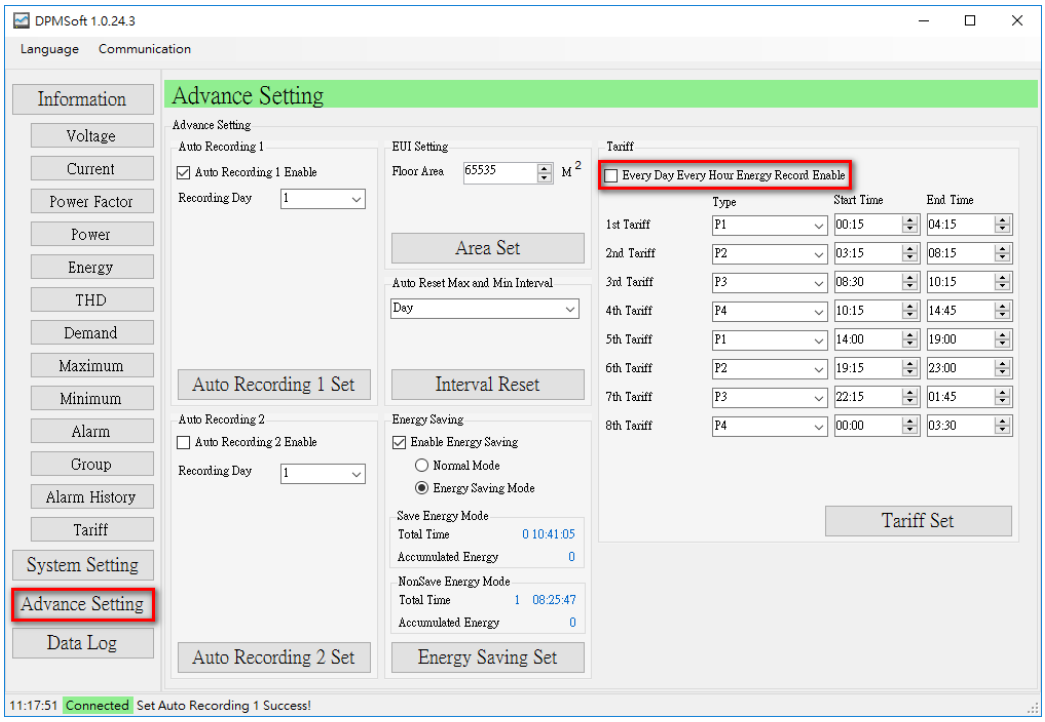
a.) When the start and end time are set to be the same, the tariff function is disabled.

b.) If the start time exceeds the end time (see below), this means the tariff is calculated till the next day.



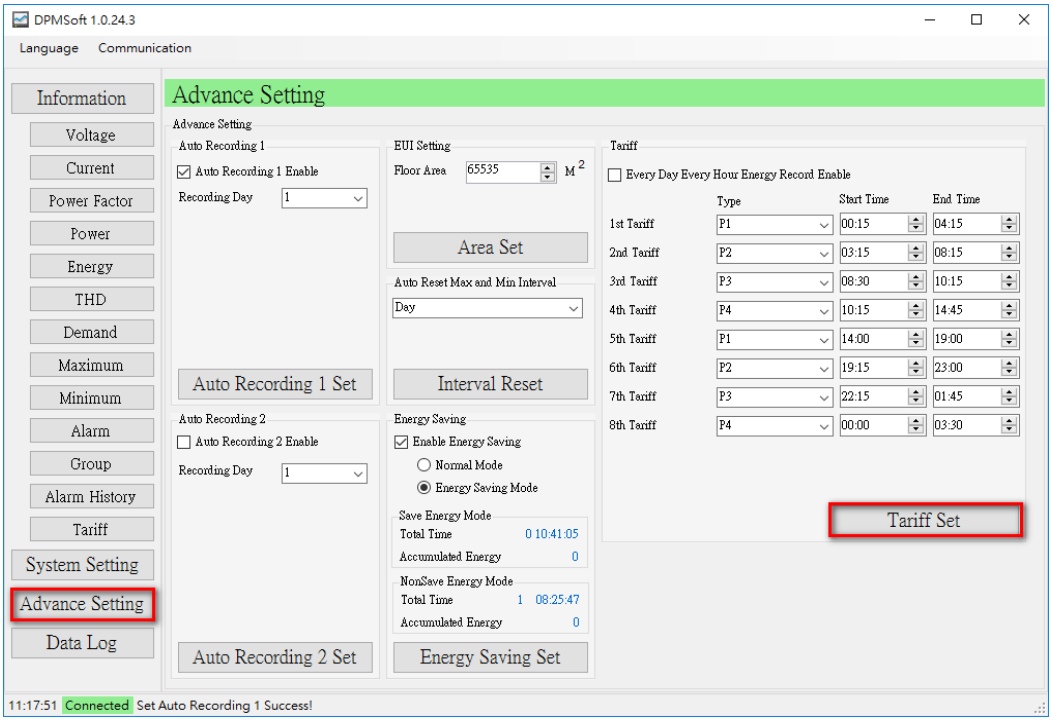
6. Every Day Every Hour Energy Record:

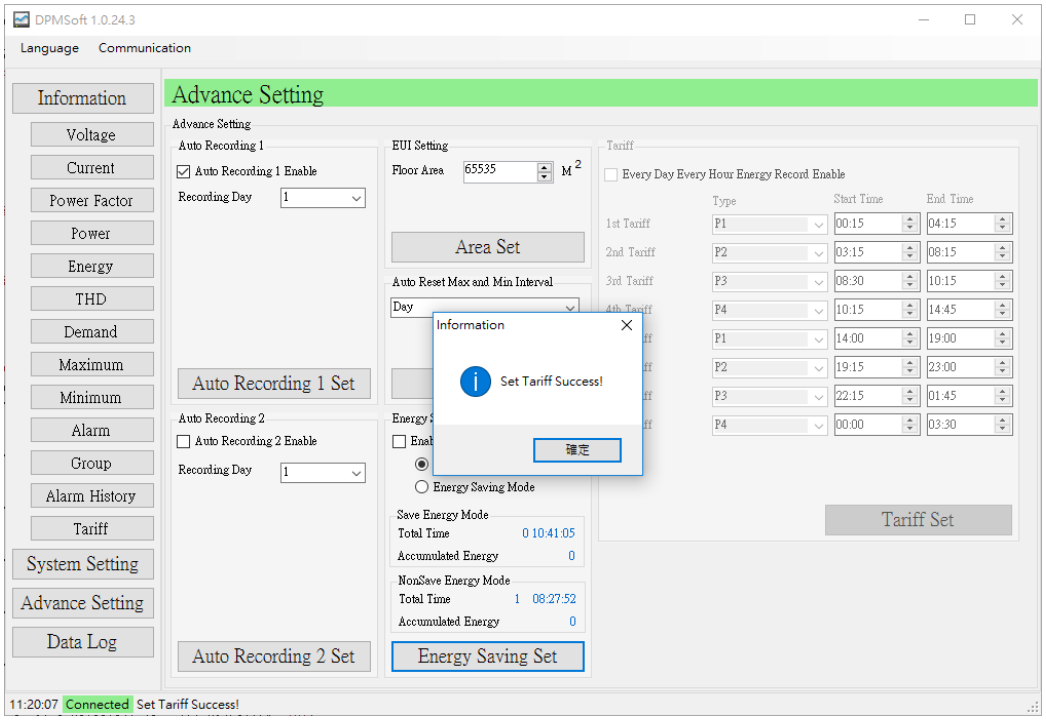
Record the hour-by-hour accumulated energy in a day.



- Every Day Every Hour Energy Record Enable: Choose ☑ to enable or ☐ to close the function.

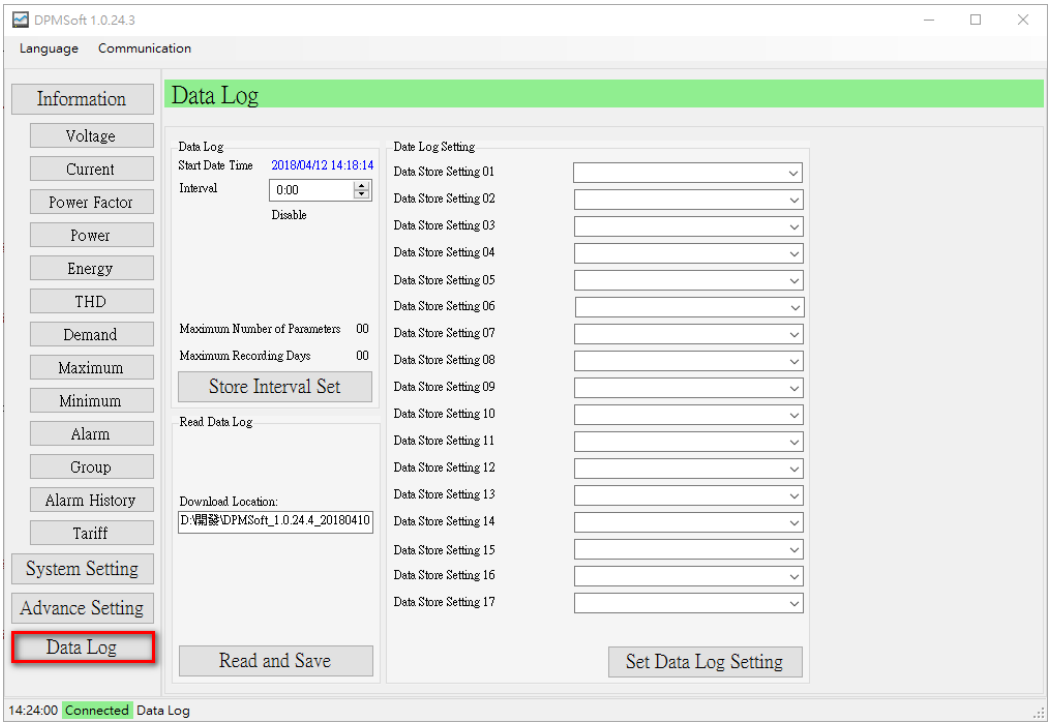
When the "Every Day Every Hour Energy Record" is enabled, click "Tariff Set" and a pop-up window appears showing whether the setting is successful or not.





4.3 Data Log

Store the logs regarding parameters in the non-volatile memory (NVM) and download the data logs via RS-485 communications.



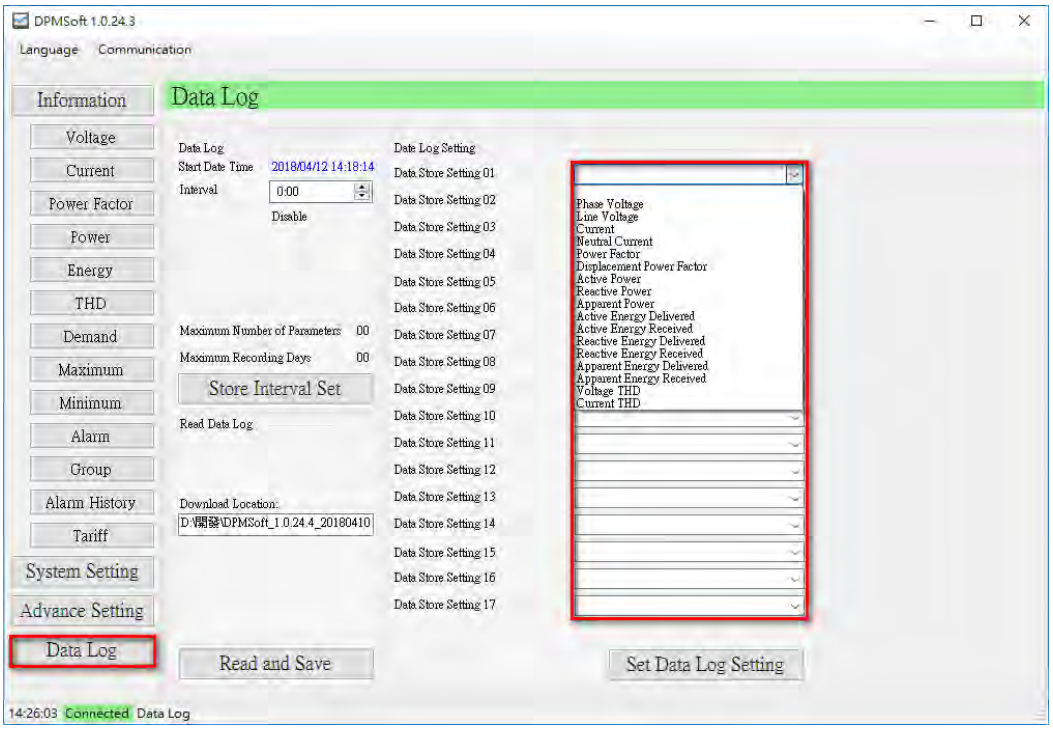
- Start Date Time: The time and date to enable data log.
- Interval: Record the interval of the power meter, with the minimum interval as 0 (min) : 5 (sec), the maximum interval as 60 (min) : 0 (sec). If the interval is set as 0 (min) : 0 (sec), this means the interval function is disabled.

- Read and Save: The exported logs are in CSV format and select a download location.
- Data Log Setting 01~17: Choose from up to 17 content parameters and sequence for data storage.
- Data Log Specification:

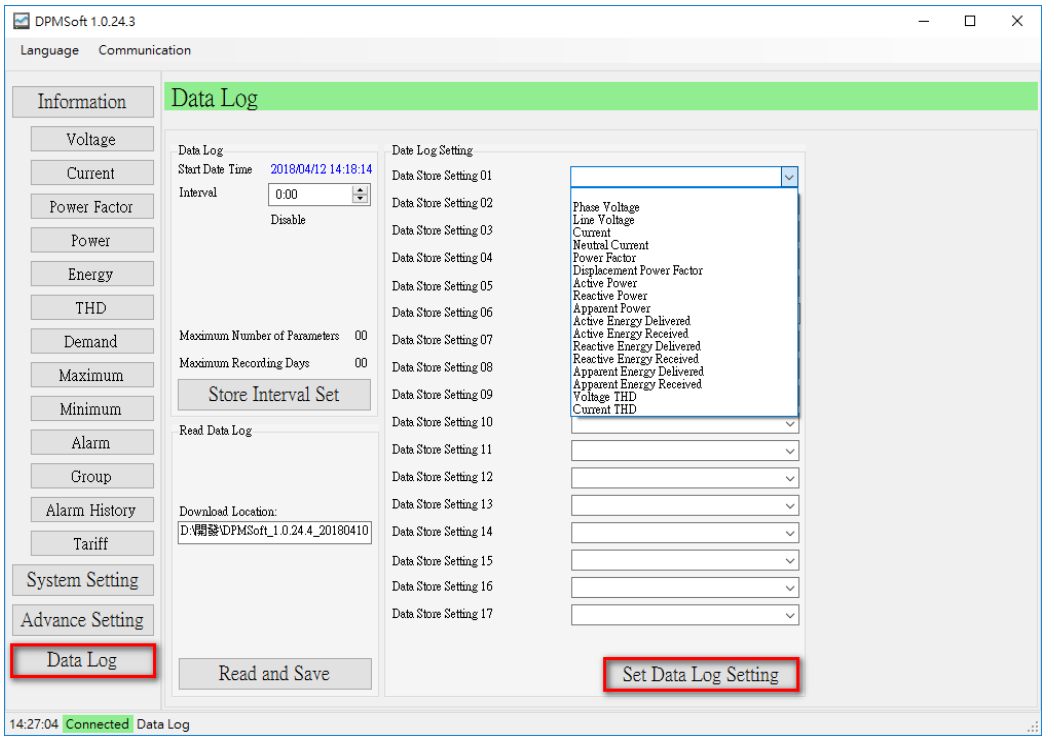
Item \ Interval	0 min 0 sec ~ 0 min 59 sec	1 min 0sec ~ 4 min 59 sec	5 min 0 sec ~ 60 min 0 sec
Maximum Parameters (number)	6	17	17
Maximum Capacity (Day)	7	31	62

Setup data log through the following steps:

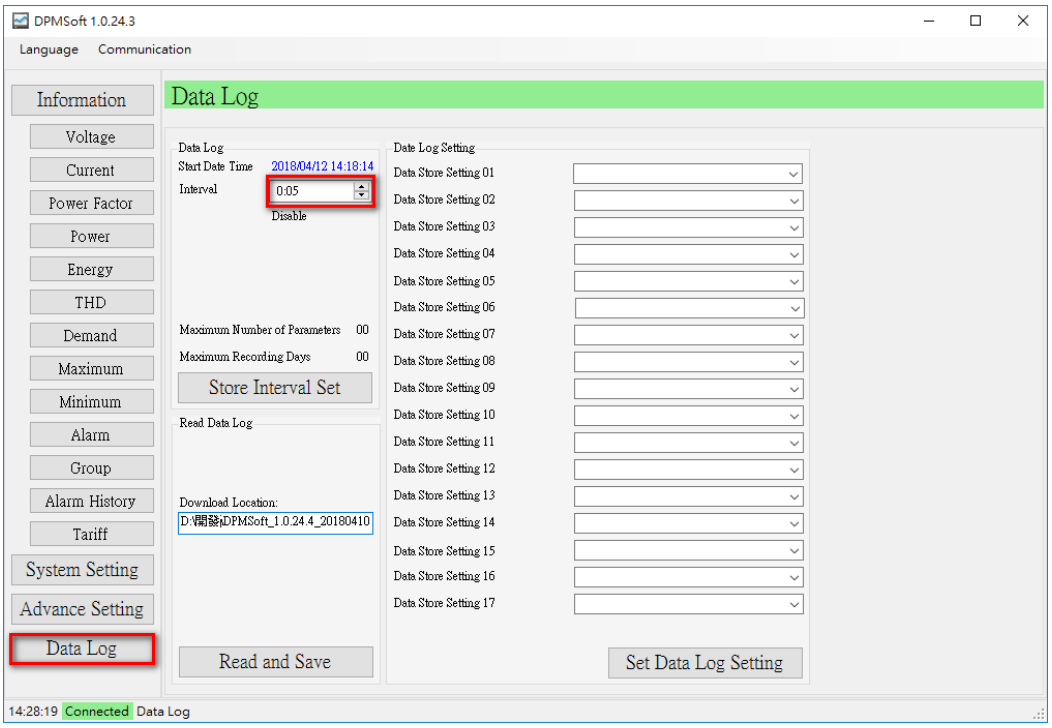
(1) Select the desired parameters in the order 01 to 17 from the data log setting section and base on the above specifications for data storage.



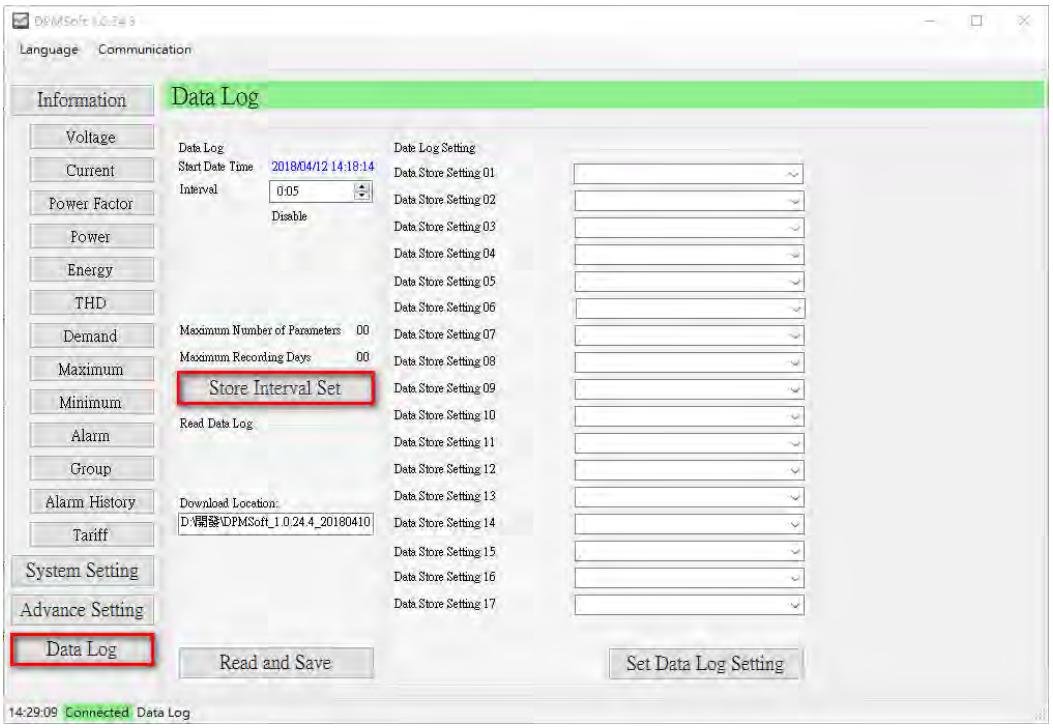
(2) Click "Set Data Log Setting" (see below) to complete the setting.



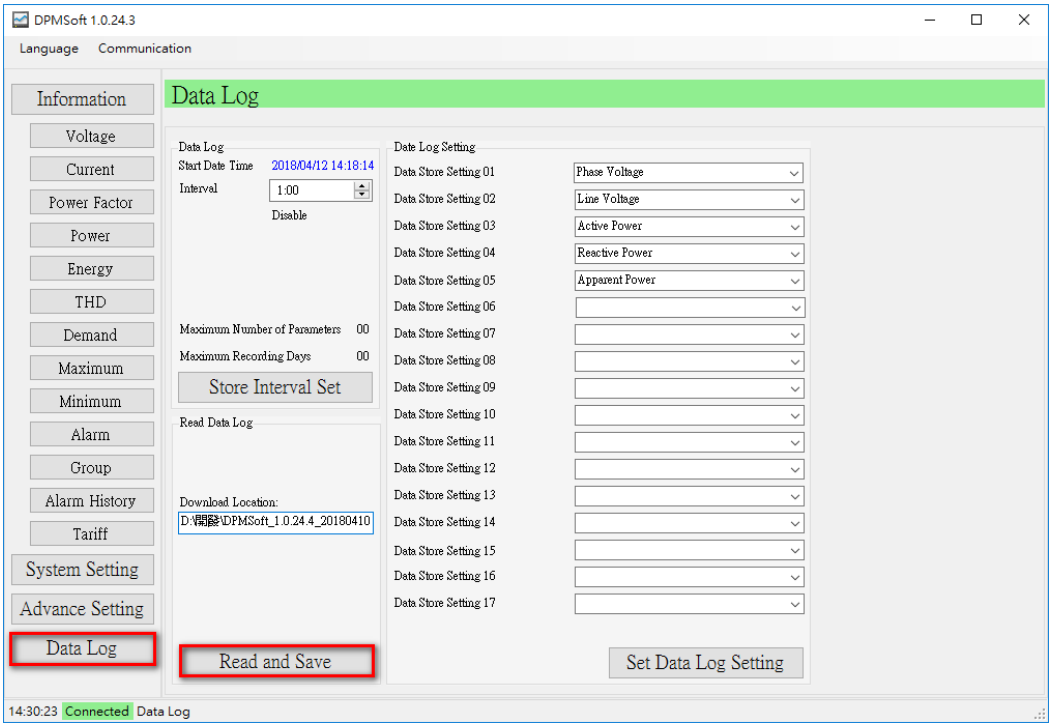
(3) Select the desired data log interval.



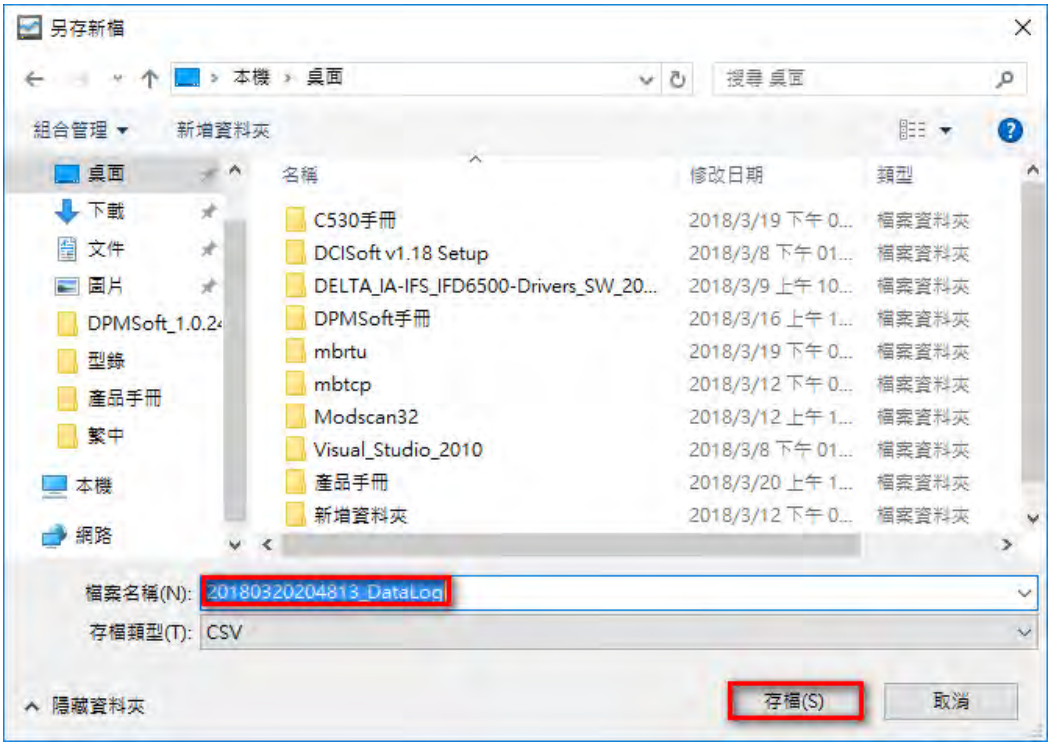
(4) Click “Store Interval Set” to complete the setting.



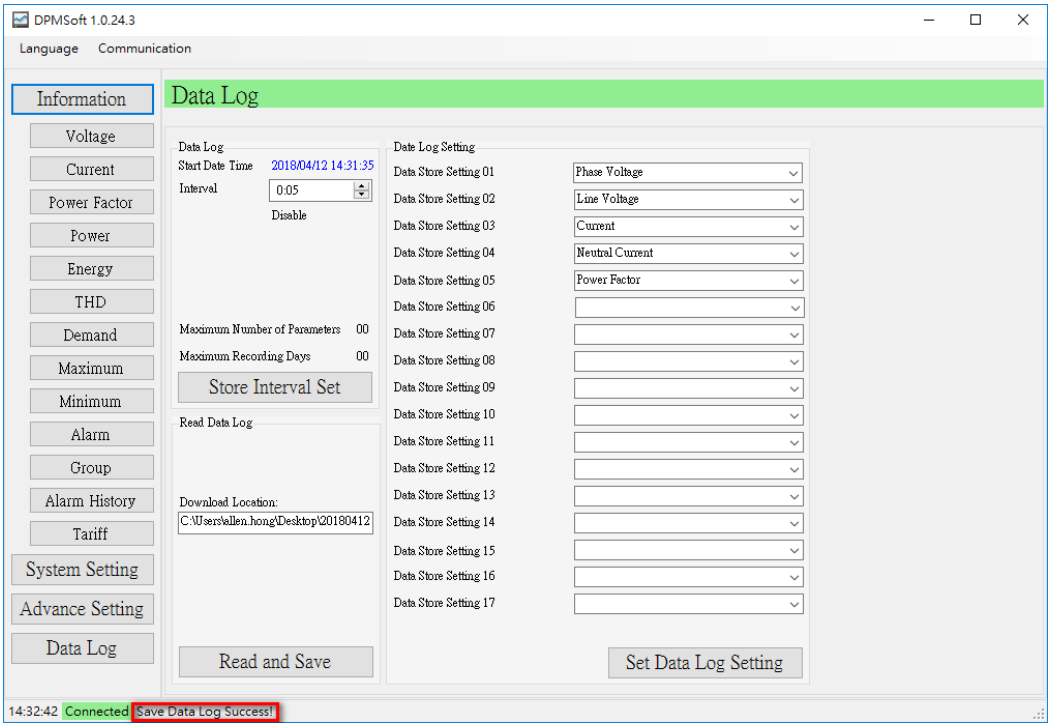
(5) To download the data log onto the PC, click “Read and Save”.



(6) Choose the data log file and download location, then click “Save”.



(7) The sentence “Save Data Log Success” appears at the bottom of the page when the download is complete.



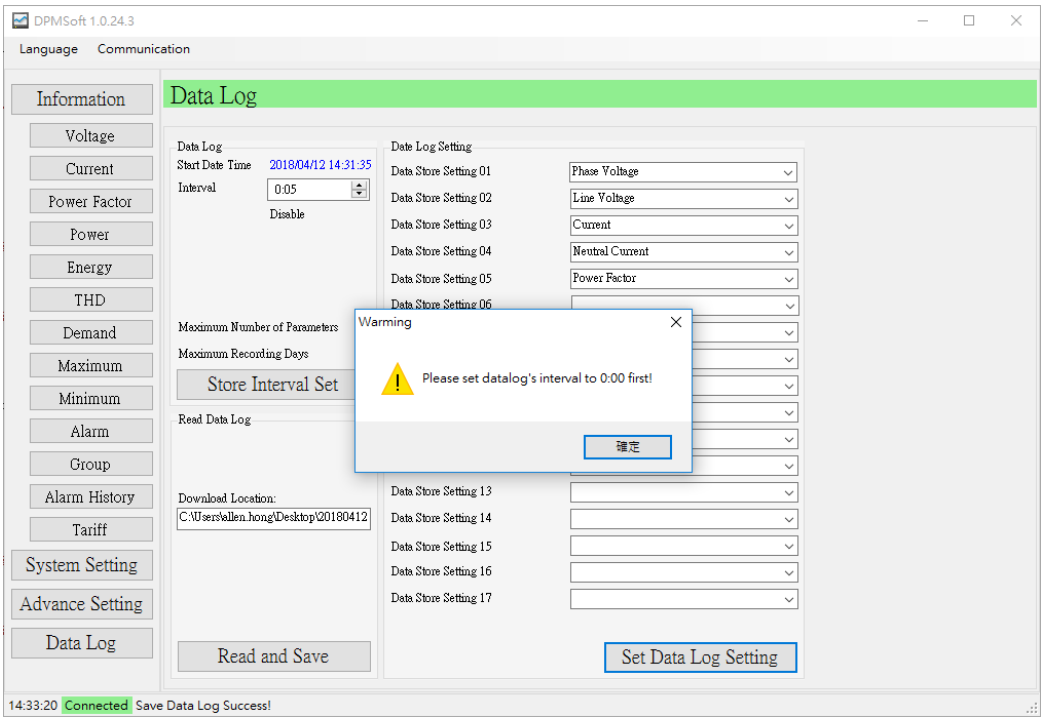
※ **Note：**

a.) First complete the "Data Log Setting 01~17" to setup the sequence and then select the "Interval". If "Interval" is set first, then "Data Store Setting 01~17" cannot be setup.（"Set Data Log Setting" button cannot be clicked）

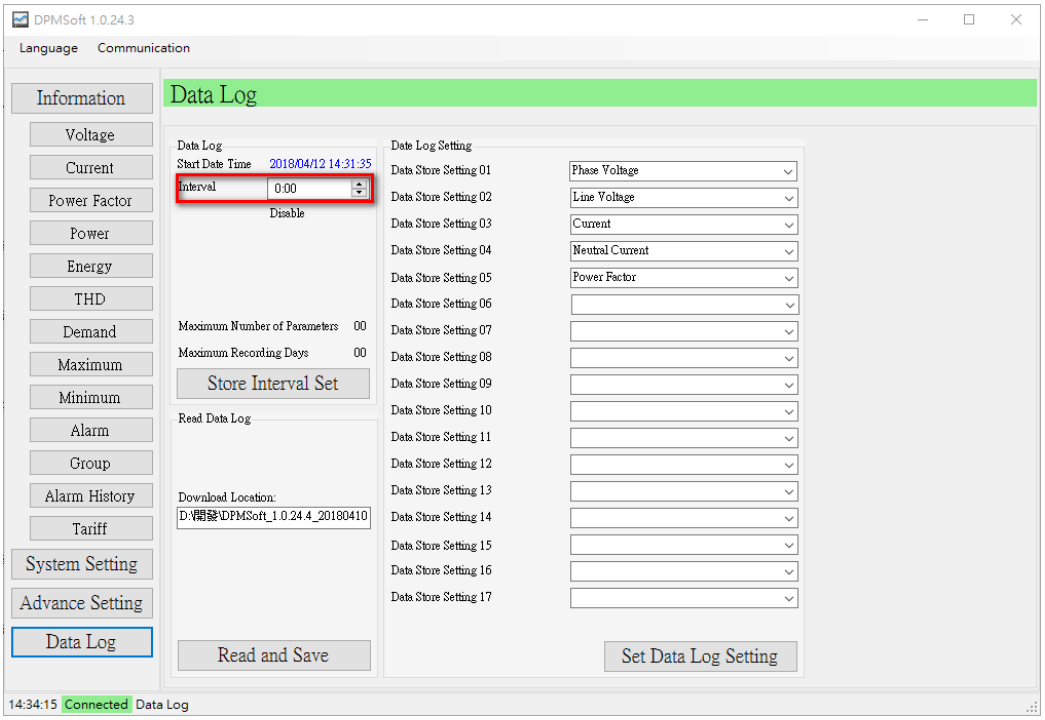
b.) When the data store setting exceeds the specification, the exceeding content is ignored. In other words, if the interval is set at 5 sec, the data store setting from 07 and more are automatically ignored.

※ **Modify Setups:**

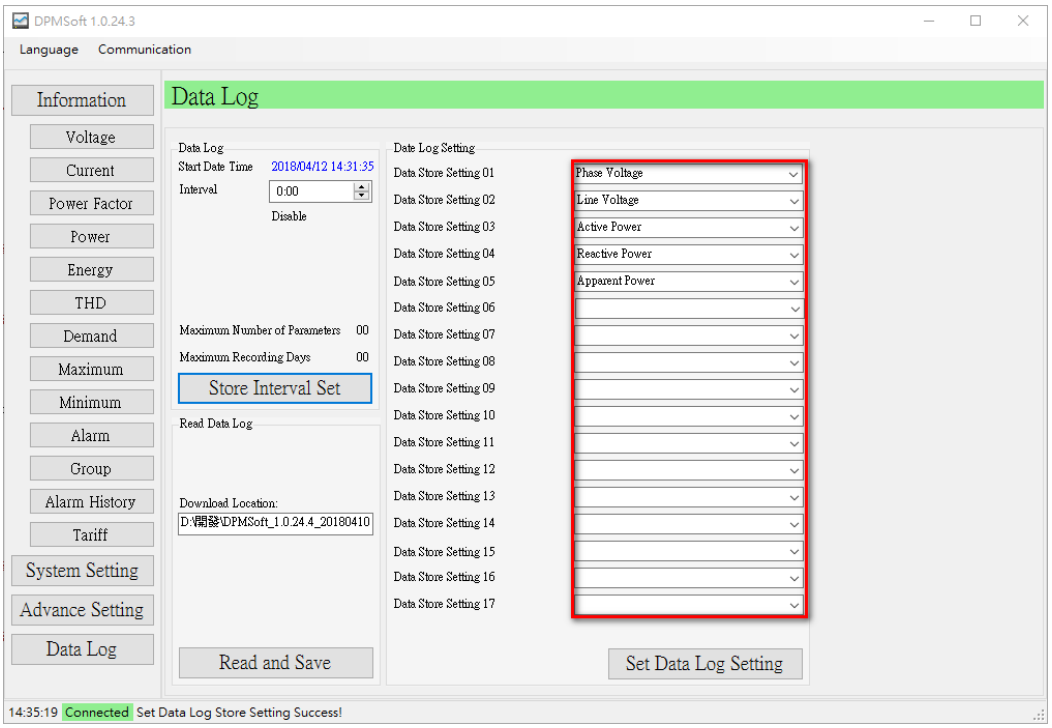
(1) When the interval is set at 5 sec and the "Set Data Log Setting" clicked, a pop-up window appears pointing out the data log interval need to be set as 0:00 first to correctly set up the data log.



(2) Therefore, the “Interval” is set as 0 min 0 sec (disable the function) then click “Set Data Log Setting”.



(3) When step (2) is complete, users can modify the data log setting section (01~17) and click “Set Data Log Setting”.



(4) When “Interval” is set, click “Store Interval Set”.