

SM EvaluationPro User Manual

Standard Package

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1 Introduction

1.1 Software Features

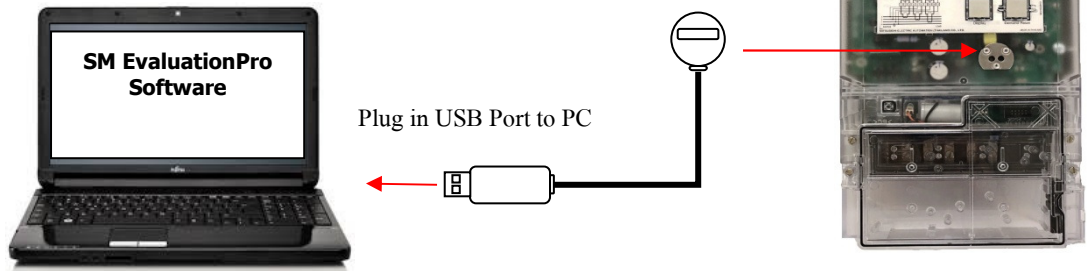
- Read billing data from meter such as kilowatt-hour, kilowatt demand, kilovar-hour, kilovar demand.
- Read data from meter as measured data, load profile data, PQM data, and previous data
- Set execution to meter as change meter date and time
- Set data to meter as display setting
- Export report file (*.csv, *.xlsx)
- Save template file (*.prg) for set data to meter.
- Save meter billing data to database.

1.2 Support Meter

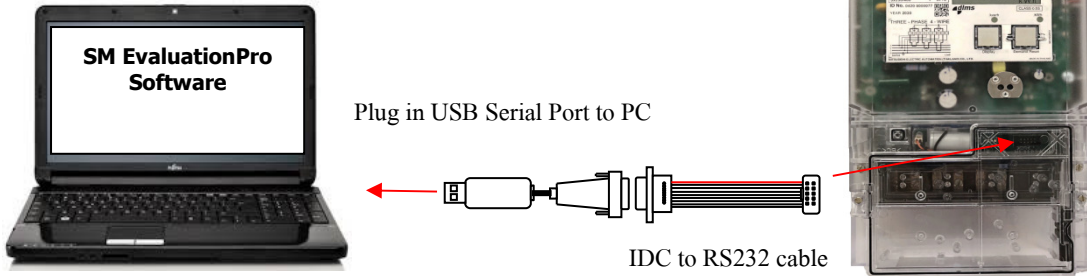
No.	Item	Model Type	Meter Model
1.	3P4W 2.5(10)A	SMW110	SMW110W4-N191C400
2.	3P4W 5(10)A	SMW110	SMW110W4-N181C400

1.3 Startup Diagram

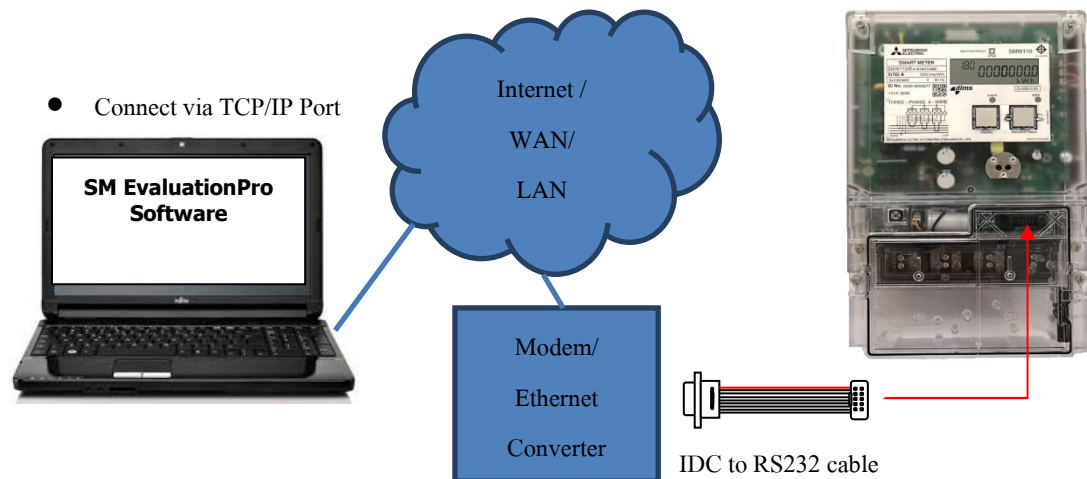
- Connect via Optical Port



- Connect via RS232 Port

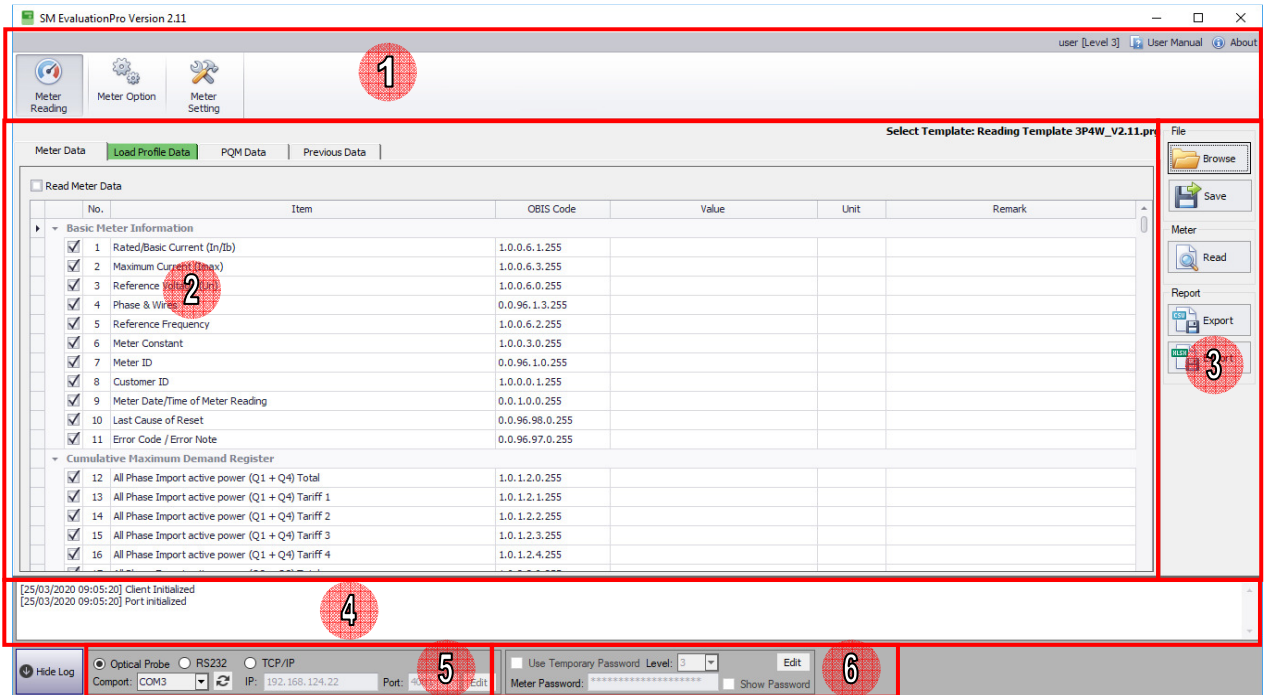


- Connect via TCP/IP Port



Picture 1: Startup diagram

1.4 Software Components



Picture 2: Software components

- 1) **Menu bar:** Show all menus of SM EvaluationPro
- 2) **Data area:** Show meter data such as reading data, setting data
- 3) **Button area:** Show button of each menu
- 4) **Log console:** Show communication information between software and meter
- 5) **Communication:** Show selection of communication that able to connect to meter
- 6) **Temporary password:** Show temporary password detail to connect to meter

Note: Date Time format in software is “dd/MM/yyyy HH:mm:ss” example 25/11/2015 19:30:45

Format	Description
dd	Represent to day of month.
MM	Represent to month.
yyyy	Represent to year. (Christian era)
HH	Represent to hour. (24 hour format)
mm	Represent to minute.
ss	Represent to second.

1.5 System Requirement

SM Evaluation Pro software has following minimum requirement

Content	Minimum Requirement
Operating System (OS):	Windows 10 Professional (64 bits)
Processor (CPU):	2.0 GHz or more
Hard Disk:	500 MB for installation
Memory (RAM):	8 GB or more
Monitor Resolution:	1366 x 768 or more
.Net Framework:	.Net Framework 4.5
Database:	SQL Server Compact Edition 4.0
PDF Reader Software:	Adobe Reader 11 or more
Other:	USB Optical Probe

2 Installation

2.1 Prerequisite Software Installation

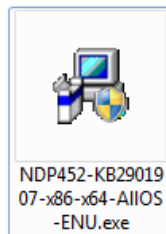
SM EvaluationPro Software requires prerequisite program as follow

2.1.1 Microsoft .NET Framework 4.5

2.1.2 Microsoft SQL Server Compact Edition 4.0

2.1.1 Microsoft .NET Framework 4.5 Installation

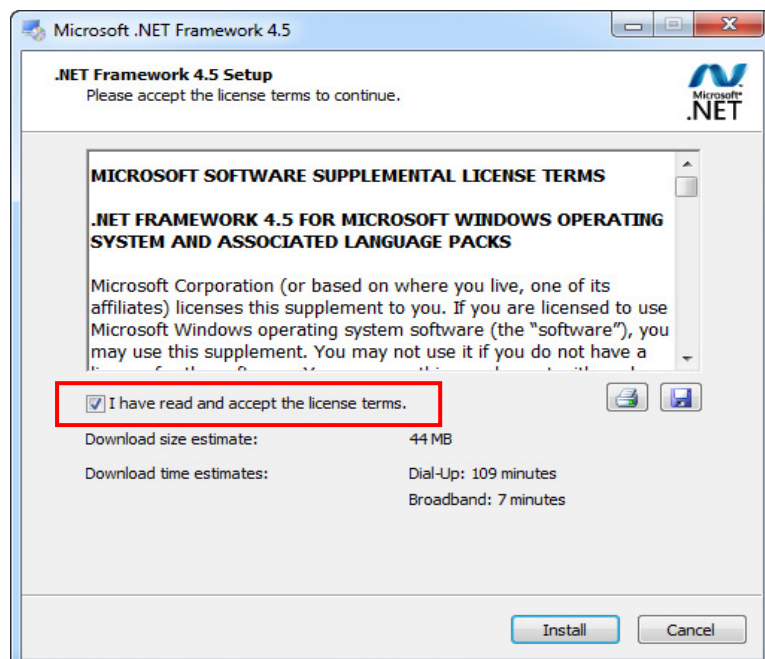
1) Double click .NET Framework 4.5 installation file.



Picture 3: .NET Framework 4.5 installation file

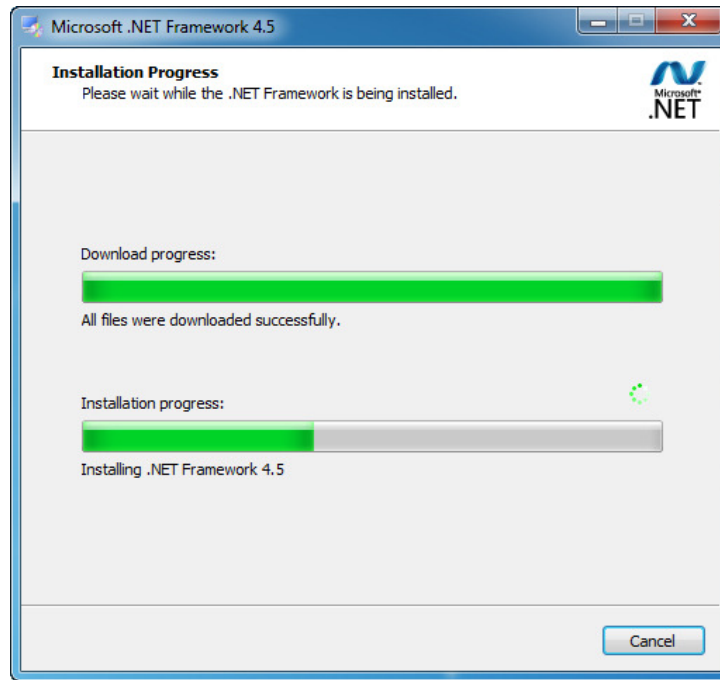
2) Select "I have read and accept the license terms."

3) Click **Install** button.



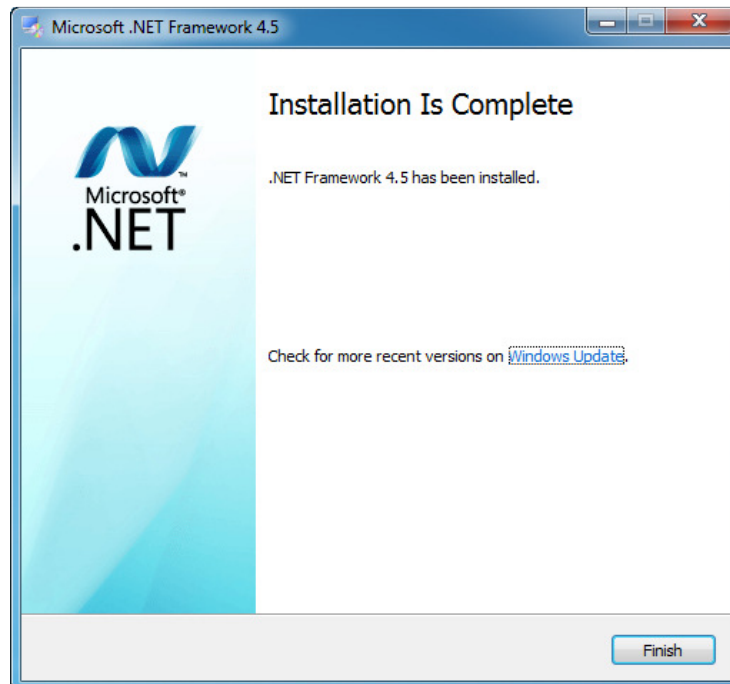
Picture 4: Install .NET Framework

4) Wait until installation finish.



Picture 5: .NET Framework installation progress

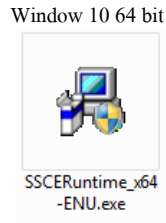
5) Click **Finish** button.



Picture 6: .NET Framework installation complete

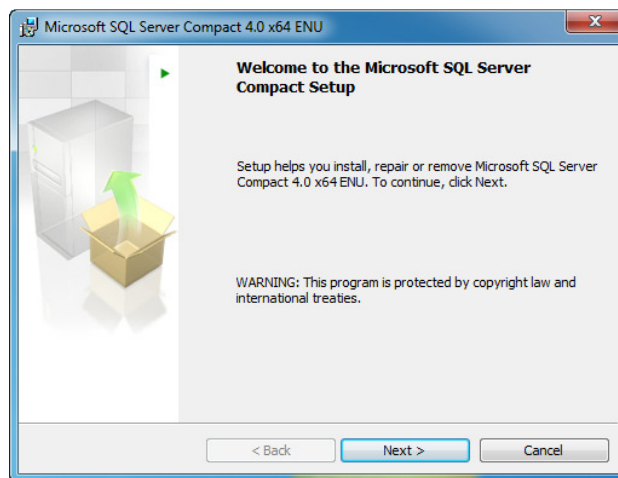
2.1.2 Microsoft SQL Server Compact Edition 4.0 Installation

- 1) For window 10 64 bit, Double click SQL CE 4.0 installation file “SSCERuntime_x64-ENU.exe”



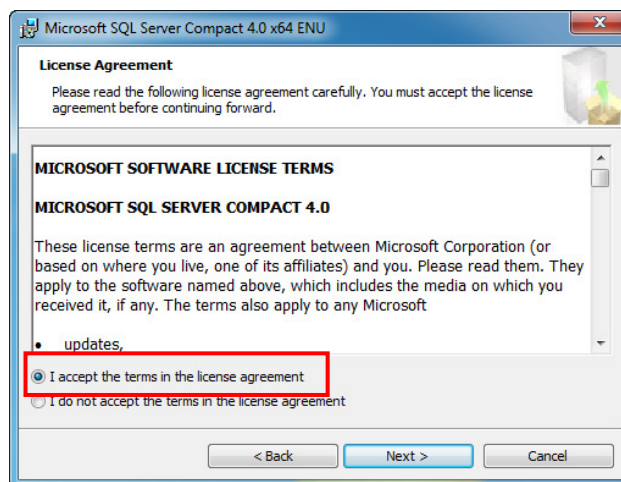
Picture 7: SQL CE 4.0 installation file

- 2) On welcome setup screen, click **Next** button.



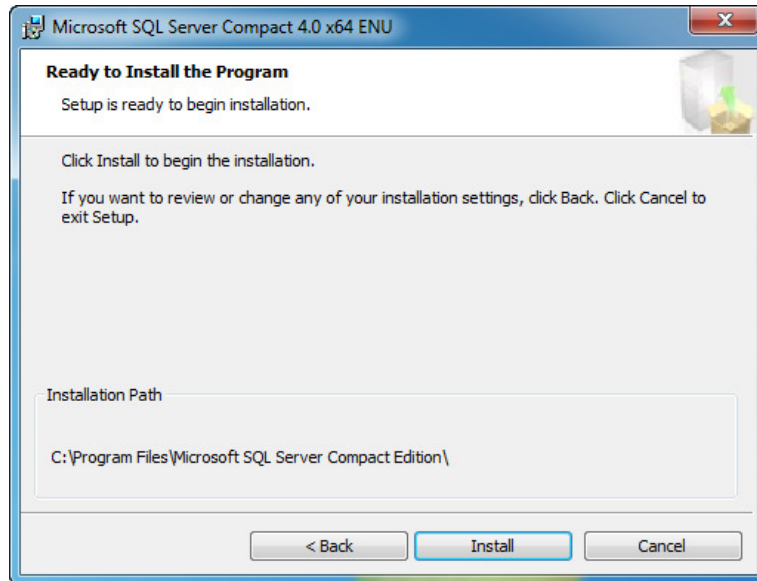
Picture 8: SQL CE 4.0 welcome screen

- 3) Select “I accept the terms in the license agreement”.
- 4) Click **Next** button.



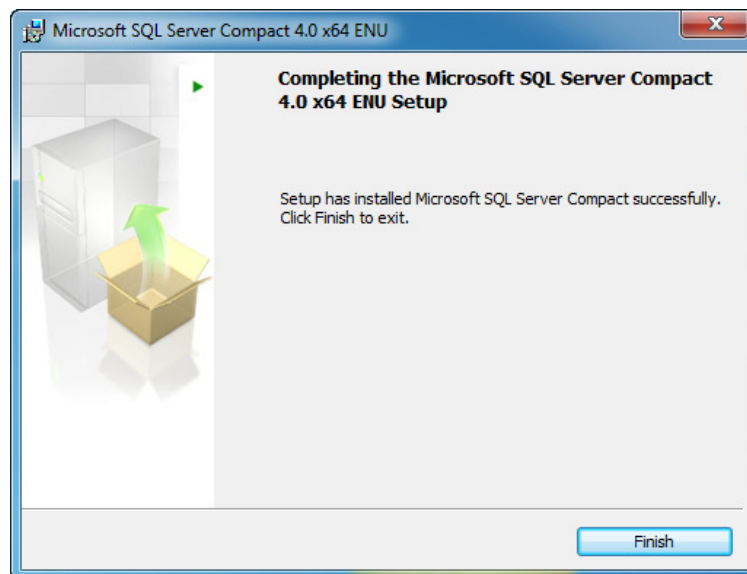
Picture 9: SQL CE 4.0 license agreement

5) Click **Install** button.



Picture 10: SQL CE 4.0 confirm installation

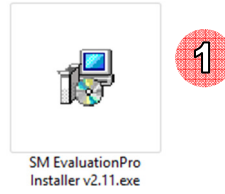
6) Wait until finish installation, click **Finish** button.



Picture 11: SQL CE 4.0 installation complete

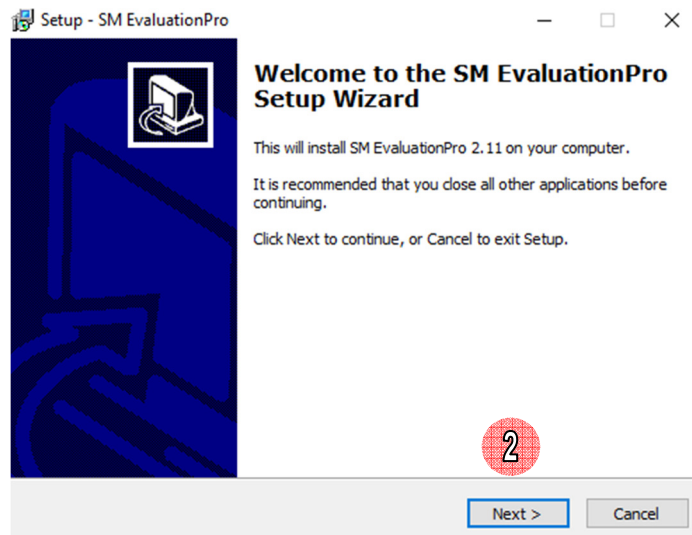
2.2 SM EvaluationPro Installation

1) Double click installation file.



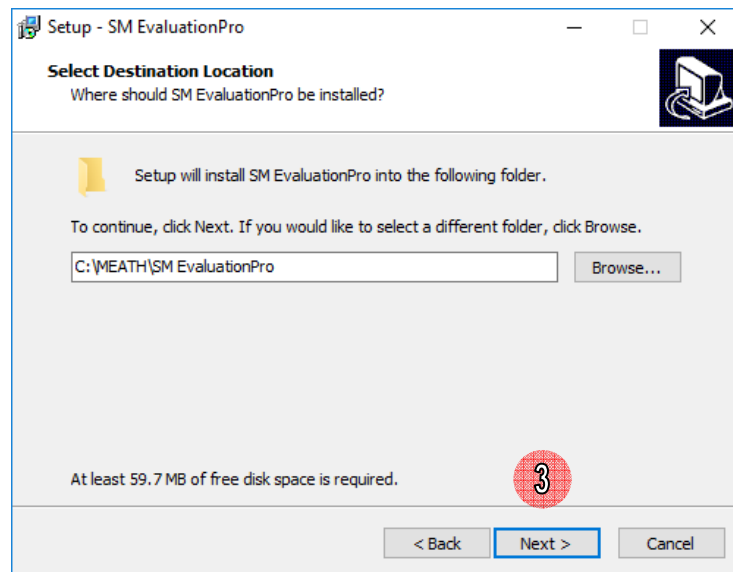
Picture 12: Installation file

2) In welcome screen click **Next** button.



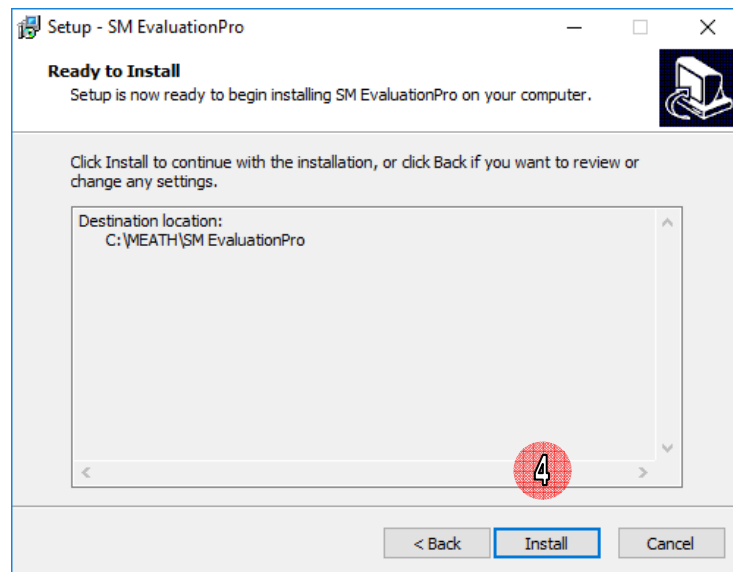
Picture 13: Welcome screen of installation

- 3) Select installation path and click **Next** button, for installation at default folder “C:\MEATH\SM EvaluationPro”, to install a different folder, enter it or click Browse button.



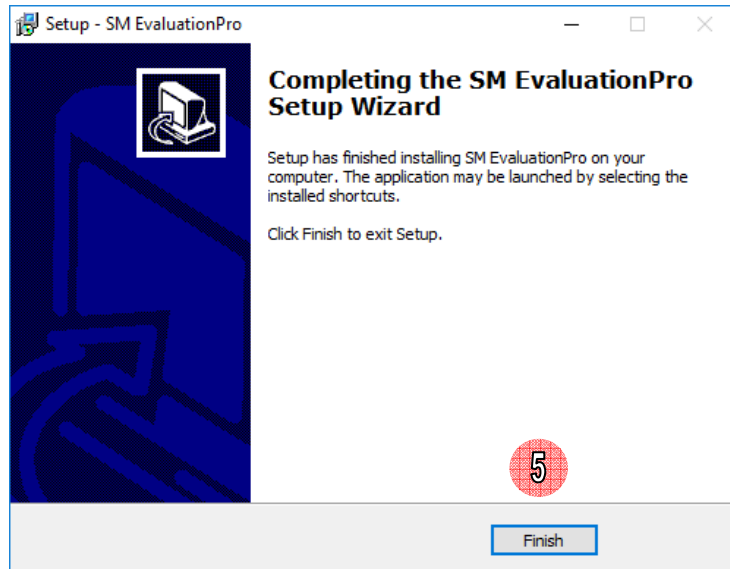
Picture 14: Select install location

- 4) Click **Install** button.



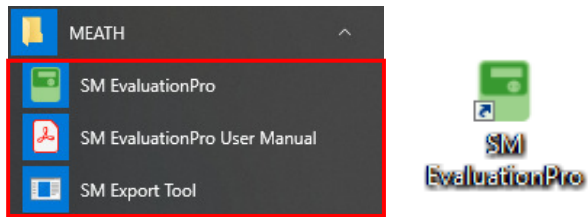
Picture 15: Ready to install

5) Click **Finish** button.



Picture 16: Finished installation

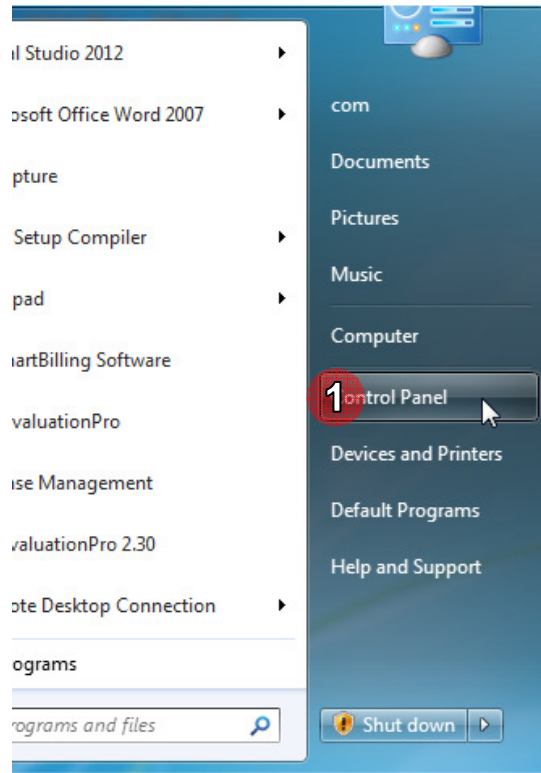
6) SM EvaluationPro icon on start menu and desktop will be created.



Picture 17: SM EvaluationPro icon

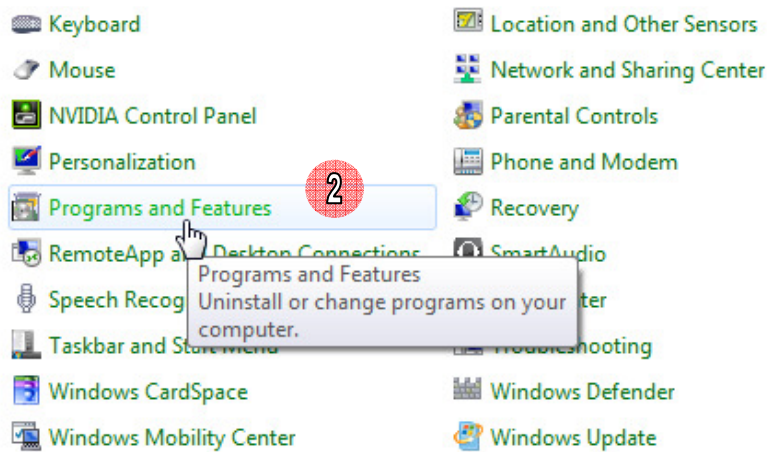
2.3 Software Uninstall

1) Click **Start** => **Control Panel**



Picture 18: Control Panel button

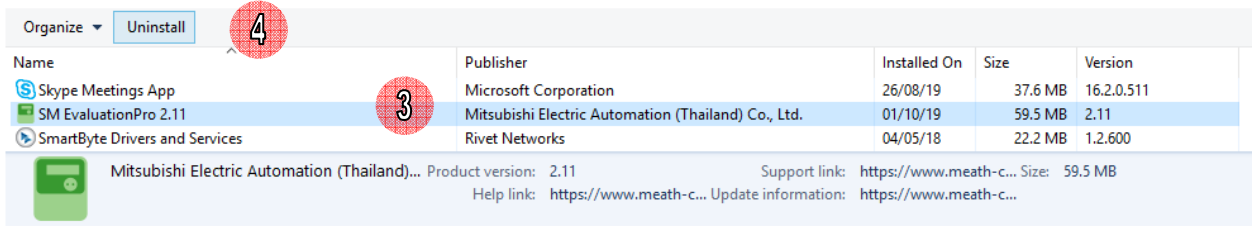
2) Click **Programs and Features**



Picture 19: Programs and features

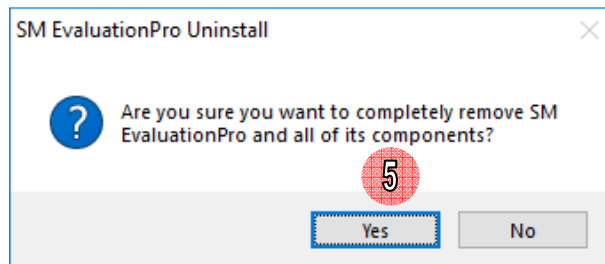
3) Select SM EvaluationPro

4) Click **Uninstall** button.



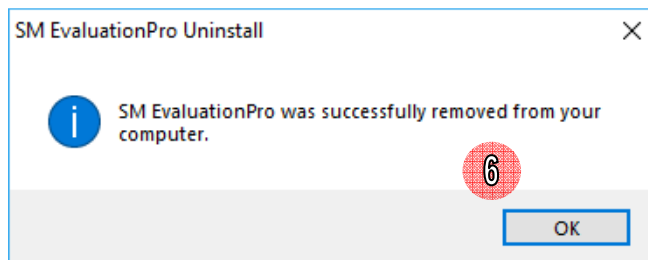
Picture 20: Uninstall SM EvaluationPro

5) Click **Yes** button to confirm.



Picture 21: Confirm uninstall

6) After finish click **OK**

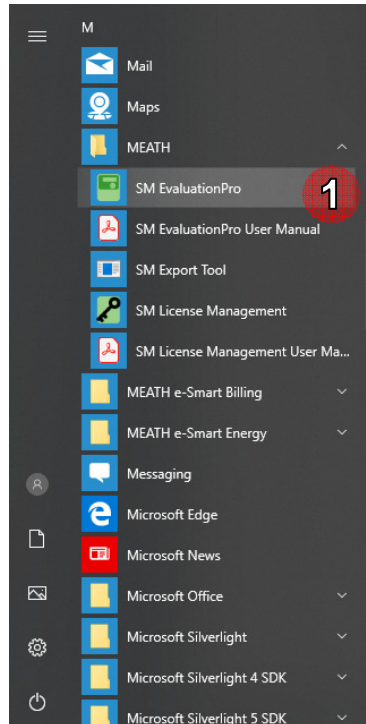


Picture 22: Finished uninstall

3 Getting Started with SM EvaluationPro

3.1 Start Software

- 1) Click Start => MEATH => SM EvaluationPro



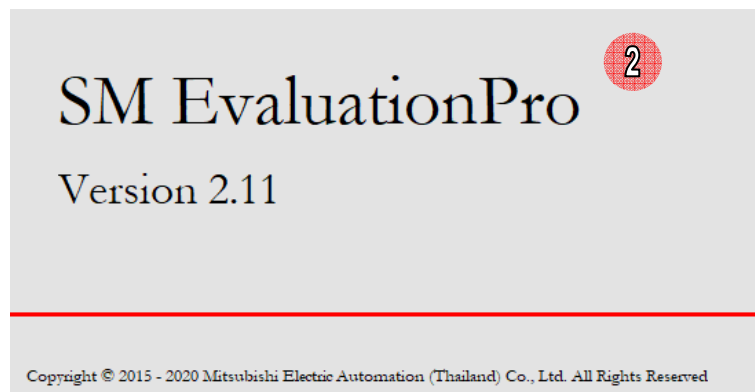
Picture 23: SM EvaluationPro start software

Or double click desktop shortcut.



Picture 24: SM EvaluationPro shortcut

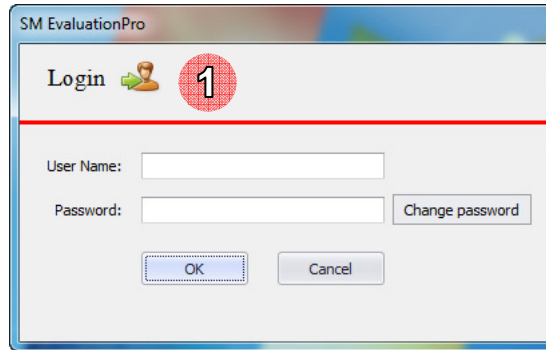
- 2) Software will show splash screen 3 seconds and then show login screen.



Picture 25: Splash screen

3.2 Login

1) After open SM EvaluationPro software login screen will be shown.

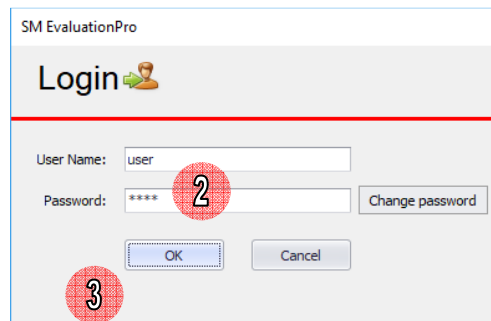


Picture 26: Login screen

2) Input user name and password.

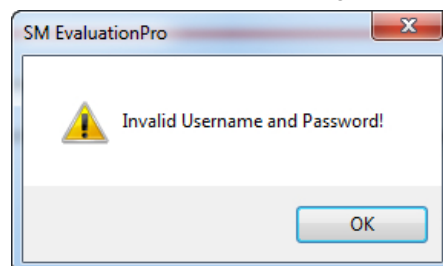
Note: User name : **user** password: **user**

3) Click **OK** button.



Picture 27: Input user name and password

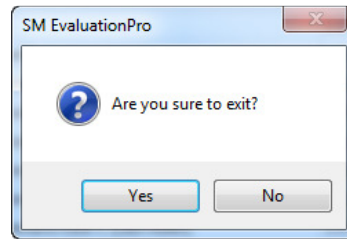
- If user name or password is not correct, software will show message “Invalid Username or Password!”



Picture 28: Warning invalid username or password

- If want to close login screen and exit software please follow these step.

- 1) Click **Cancel** button on login screen.
- 2) Software will show message “Are you sure to exit?”



Picture 29: Confirm exit software

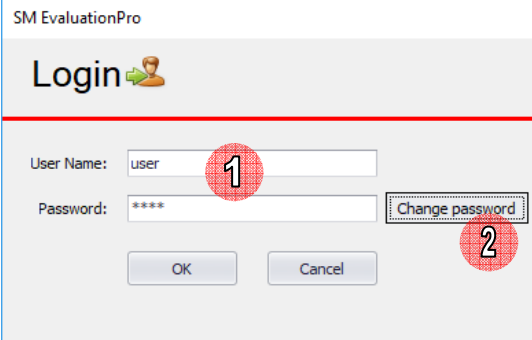
- 3) Click **Yes** button. Software will close screen and exit.

- If user name and password are correct software will show main screen with menu below

Screen	
Main Screen	Sub Screen
Meter Data	Meter Data
	Load Profile Data
	PQM Data
	Previous Data
Option	Change Meter Date and Time
Meter Programming	Display Setting

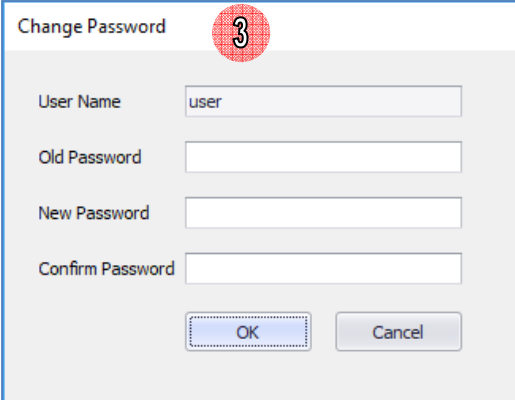
3.3 Change Password

- 1) On login screen input correct user name and password.
- 2) Click **Change password** button.



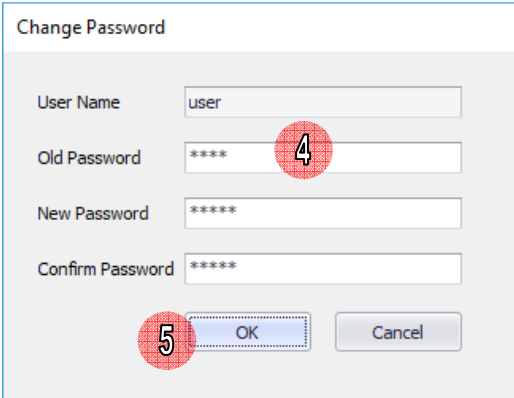
Picture 30: Change password

- 3) Software will show change password screen.



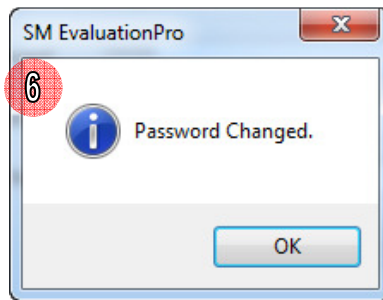
Picture 31: Change password screen

- 4) Input old password, new password and confirm password.
- 5) Click **OK** button.



Picture 32: Input change password information

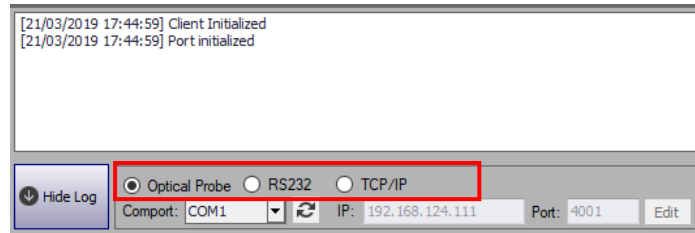
- 6) If change password complete software will show message "Password Changed."



Picture 33: Change password complete

3.4 Communication Selection

To communicate with meter for reading or setting data to meter, we have to select a communication method

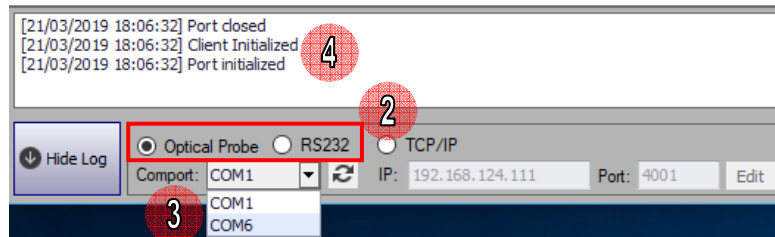


Picture 34: Select communication method


- **Optical Probe and RS232**

To check COM port see **How to Check COM Port**

- 1) Connect USB optical probe/RS232 with computer
- 2) Open SM EvaluationPro software and select communication method: optical probe or RS232
- 3) Select COM port of USB
- 4) If select correct COM port software will show message “Port initialized” on communication log

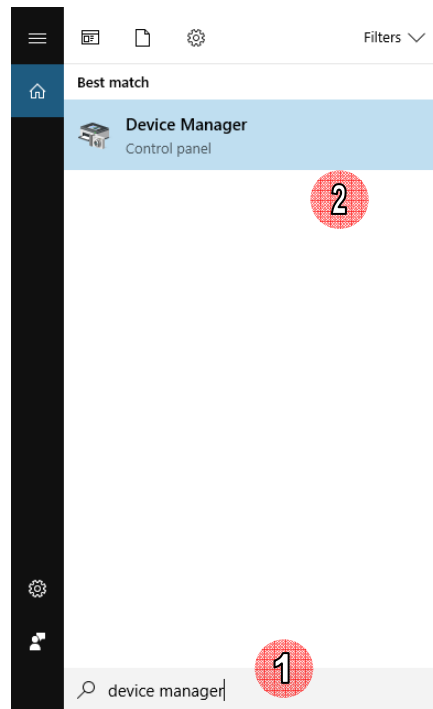


Picture 35: Select and Initialize COM port

User can click  (Refresh) button for refresh comport

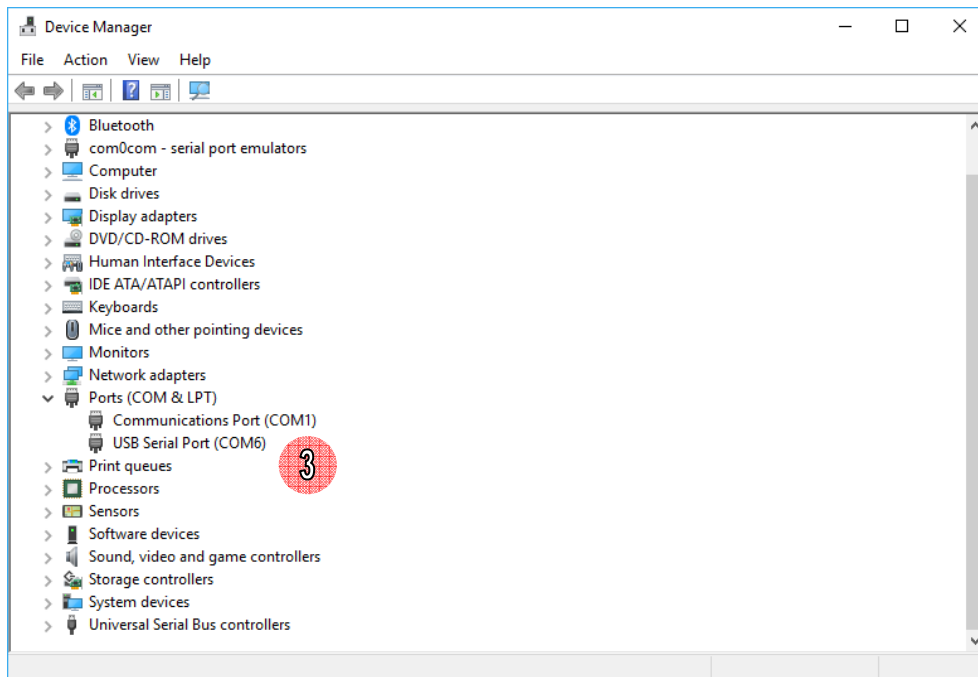
How to Check COM Port

- 1) Click **Start**, search the word “Device Manager”
- 2) Click **Device Manager**.



Picture 36: Open device manager

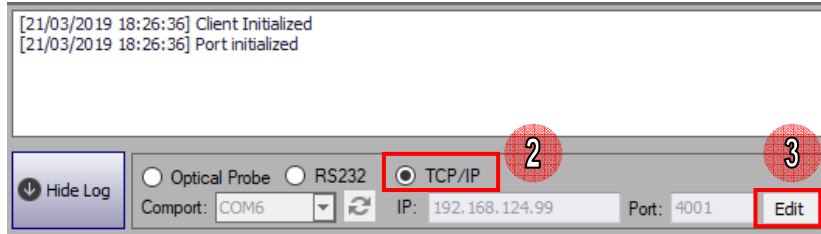
- 3) On Device Manager screen click **Port**.
- 4) Find “USB Serial Port” and check comport that use for optical probe.



Picture 37: Device manager screen

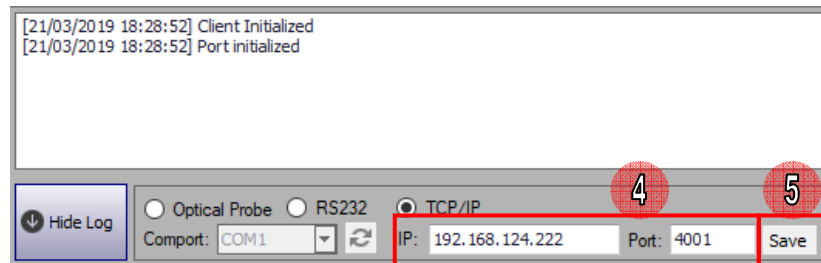
- **TCP/IP**

- 1) Connect network with computer
- 2) Open SM EvaluationPro software and select communication method: TCP/IP
- 3) Click Edit to set an IP and port to connect a meter



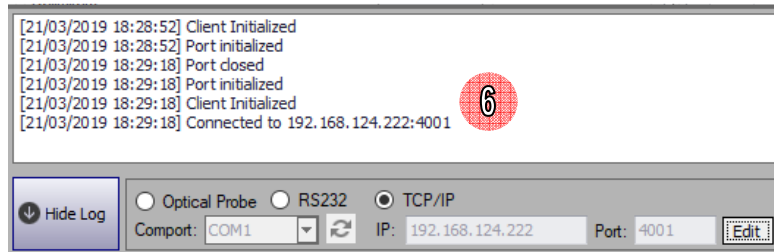
Picture 38: Select TCP/IP method to connect a meter

- 4) Set an IP and port to connect a meter
- 5) Click Save



Picture 39: Set an IP and port

- 6) If set correct software will show message “Connected toIP : port.....” on communication log

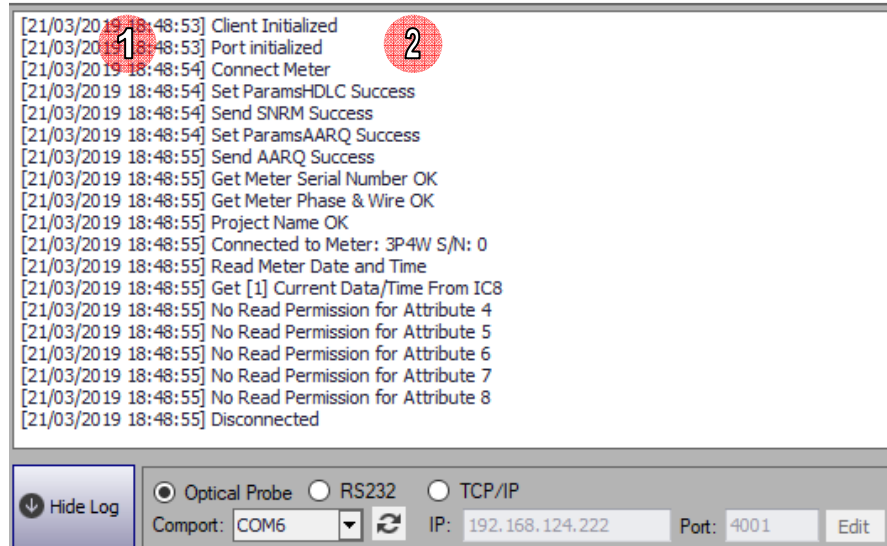


Picture 40: Connected to a meter with TCP/IP

3.5 Communication Log

Communication log of SM EvaluationPro is used for detect and show status during the software is communicating with a meter.

Communication Log Structure



Picture 41: Communication log

- 1) **Communication Date Time:** Show communication date and time.
- 2) **Description message:** Show communication description such as port initialized, connect to meter, disconnect.

Log Message Description

No.	Log Message	Description
1	Client Initialized	Inner process to initial client, this will process when starting application.
2	Port Initialized	Initialize comport. If has default comport in configuration file, will initialize default comport. If no default comport, will initialize first comport in dropdown list. (status bar in main screen)
3	Port Close	Close comport, occur when change comport from dropdown list. (close for initialize selected new comport)
4	Connected to Meter S/N: {S/N}	Connect to meter successful. By {S/N} is meter serial number.
5	Disconnected	Disconnect from meter successful.
6	SNRM Fail	Cannot connect to meter. (check communication port)
7	AARQ Fail	Cannot connect to meter. (check association level and password)
8	Read Billing Data	Start reading process for billing data.
9	Read Meter Data	Start reading process for meter data.
10	Read Meter Date and Time	Start reading process for meter date and time. (meter option)
11	Set Meter Date and Time by Synchronize with PC Date and Time	Start writing process for meter date and time by synchronize with pc date and time. (meter option)
12	Set Meter Date and Time by Manual	Start writing process for meter date and time by manual setting.
13	Manual Demand Reset	Start process to execute manual demand reset script.
14	Read Energy Compensation Value	Start reading process for energy compensation value. (energy error offSet)

No.	Log Message	Description
15	Set Energy Compensation Value	Start writing process for energy compensation value. (energy error offset)
16	Read Current Firmware	Start reading process to read current firmware version.
17	Upgrade Firmware	Start process to upgrade new firmware. (browsed firmware)
18	Start Image Transfer	Start process to transfer new image from file to meter. (take a several minute)
19	Image Transfer Fail. Return Error {E}	Occur when process of transfer new image is failure. {E} is error code. (see error description from Kalkitech DLMS Client OCL document)
20	Image Transfer Usage Time: {Time}	Image transfer complete, display usage transfer time. {Time} is usage time of image transfer process.
21	Verifying Transferred Image	Start process to verify new image (wait for 1 minute), will return status of verification follow <ul style="list-style-type: none"> - Image Verification Successful (status: 3), continue to activate new image process. - Image Verification Failed (status: 4), stop process, upgrade new firmware failure.
22	Activating Transferred Image	Start process to activate new image (wait for 5 seconds), will return status of activation follow <ul style="list-style-type: none"> - Image Activation Successful (status: 6), upgrade new firmware successful. - Image Activation Failed (status: 7), stop process, upgrade new firmware failure.
23	Activating Default Image	Start process to activate default image in meter (wait for 5 seconds), will return status of activation follow <ul style="list-style-type: none"> - Image Activation Successful (status: 6), restore default firmware successful. - Image Activation Failed (status: 7), stop process, restore default firmware failure.
24	Clear Event Log and Counter	Start process to clear event log and counter.
25	Clear Metering Data	Start process to clear metering data.
26	Clear Alarm Register	Start process to clear alarm register.
27	Read Relay State	Start reading process for relay state.
28	Relay Load Disconnect	Start process to load disconnect.
29	Relay Load Connect	Start process to load connect.
30	Read Meter Setting	Start reading process for meter setting data.
31	Program Meter Setting	Start programming process for meter setting data.
32	Get [{N}] {Item Name} From IC {ID}	Process to get data from meter where <ul style="list-style-type: none"> - {N} is number of item in template. - {Item Name} is name of item in template. - {ID} is interface class of item in template.
33	No Read Permission for Attribute {I}	Displays when association has no read permission in attribute. {I} is attribute index.
34	Set [{N}] {Item Name} From IC {ID}	Process to set data to meter where <ul style="list-style-type: none"> - {N} is number of item in template. - {Item Name} is name of item in template. - {ID} is interface class of item in template.
35	No Write Permission for Attribute {I}	Displays when association has no write permission to attribute. {I} is attribute index.
36	Execute [{N}] {Item Name} From IC {ID}	Process to execute action to meter where <ul style="list-style-type: none"> - {N} is number of item in template. - {Item Name} is name of item in template. - {ID} is interface class of item in template.
37	No Action Permission for Method {I}	Display when association has no action permission to method. {I} is method index.

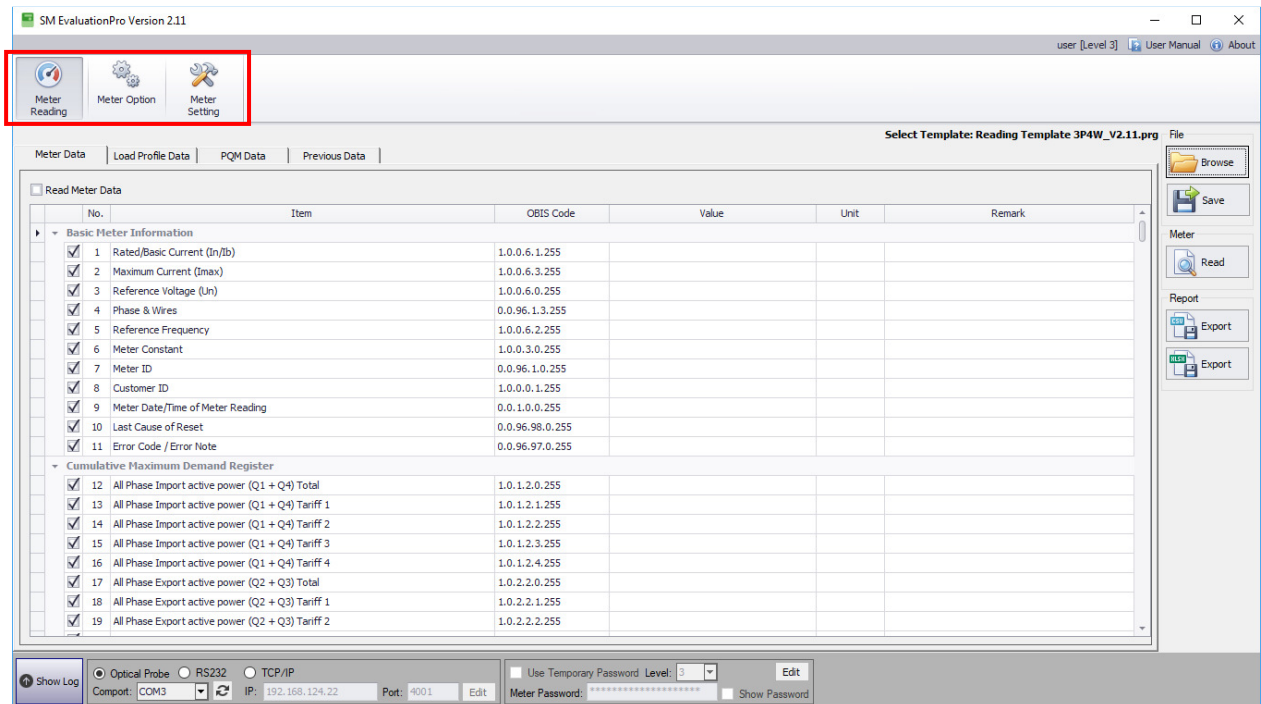
No.	Log Message	Description
38	Skip Attribute/Method {I}	Display when skip to read item attribute, write item attribute or execute item method. {I} is attribute index or method index.
39	Meter Date/Time: {DateTime}	Display after finish read process or program process. {DateTime} is date and time read from meter.
40	Done	Display when process complete. (successful)
41	Project Name OK	Display when software connect to meter successfully with correct license file
42	License has No Access Right. Meter Project Name is {Project Name}, Please contact Administrator.	Display when software connect to meter unsuccessfully with incorrect license file {Project Name} is name of project name in meter.

Note:

1. Software will clear communication log after closed software.
2. Software will record all communication logs in text file. File will be saved in C:\MEATH\SM EvaluationPro\Log

3.6 SM EvaluationPro Menu

SM EvaluationPro software consists of 3 menus.



Picture 42: SM EvaluationPro main screen



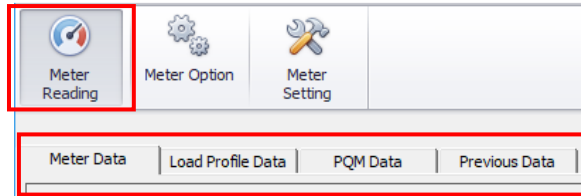
Picture 43: SM EvaluationPro menu

- 1) **Meter Reading:** Use for read meter data, load profile data, PQM data, previous data. This menu able to read data from meter and export data to .csv file, .xlsx file
- 2) **Meter Option:** Use for read, set change meter date and time
- 3) **Meter Setting:** Use for read and set data to meter display setting and CT Ratio. This menu also able to save data to template file (.prg file) and export data to .csv file, .xlsx file

4 Meter Reading

4.1 Meter Reading Tab Menu

Meter reading menu consist 4 tab menus: Meter Data, Load Profile, PQM Data, Previous Data



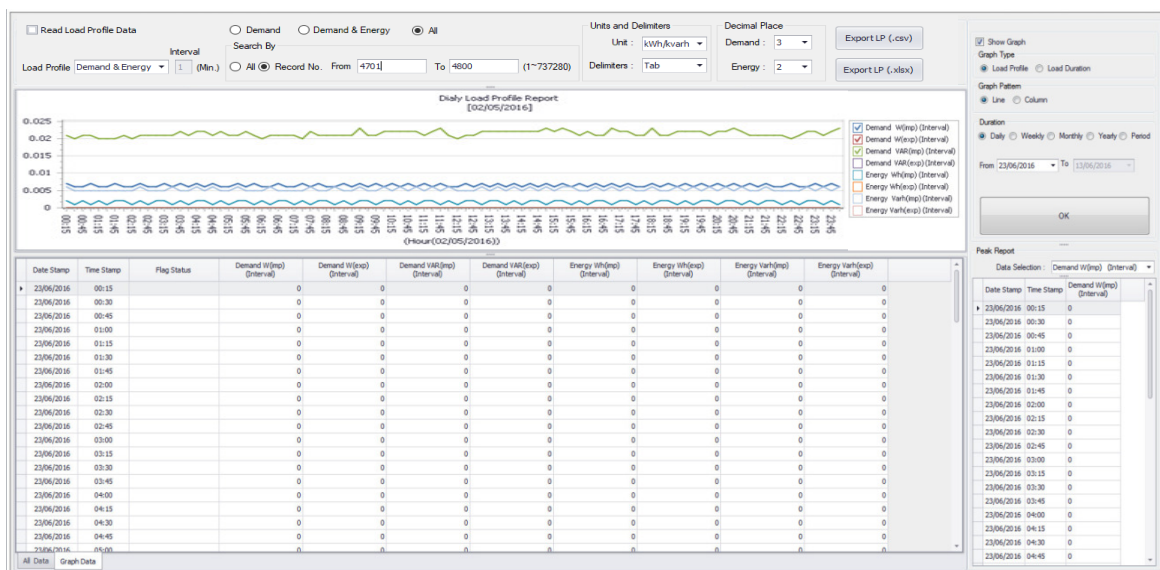
Picture 44: Meter Reading tab menus

- 1) Meter Data Tab:** For read basic meter information, cumulative maximum demand register, demand register, maximum demand register and present total energy register.

No.	Item	OBIS Code	Value	Unit	Remark
Basic Meter Information					
1	Rated/Basic Current (In/Ib)	1.0.0.6.1.255			
2	Maximum Current (Imax)	1.0.0.6.3.255			
3	Reference Voltage (Un)	1.0.0.6.0.255			
4	Phase & Wires	0.0.96.1.3.255			
5	Reference Frequency	1.0.0.6.2.255			
6	Meter Constant	1.0.0.3.0.255			
7	Meter ID	0.0.96.1.0.255			
8	Customer ID	1.0.0.0.1.255			
9	Meter Date/Time of Meter Reading	0.0.1.0.0.255			
10	Last Cause of Reset	0.0.96.98.0.255			
11	Error Code / Error Note	0.0.96.97.0.255			
Cumulative Maximum Demand Register					
12	All Phase Import active power (Q1 + Q4) Total	1.0.1.2.0.255			
13	All Phase Import active power (Q1 + Q4) Tariff 1	1.0.1.2.1.255			
14	All Phase Import active power (Q1 + Q4) Tariff 2	1.0.1.2.2.255			
15	All Phase Import active power (Q1 + Q4) Tariff 3	1.0.1.2.3.255			
16	All Phase Import active power (Q1 + Q4) Tariff 4	1.0.1.2.4.255			
17	All Phase Export active power (Q2 + Q3) Total	1.0.2.2.0.255			
18	All Phase Export active power (Q2 + Q3) Tariff 1	1.0.2.2.1.255			
19	All Phase Export active power (Q2 + Q3) Tariff 2	1.0.2.2.2.255			

Picture 45: Meter Data tab

- 2) Load Profile Tab:** For read load profile data consist of Demand & Energy profile load profile and PQM load profile.



Picture 46: Load Profile tab

Demand and Energy load profile

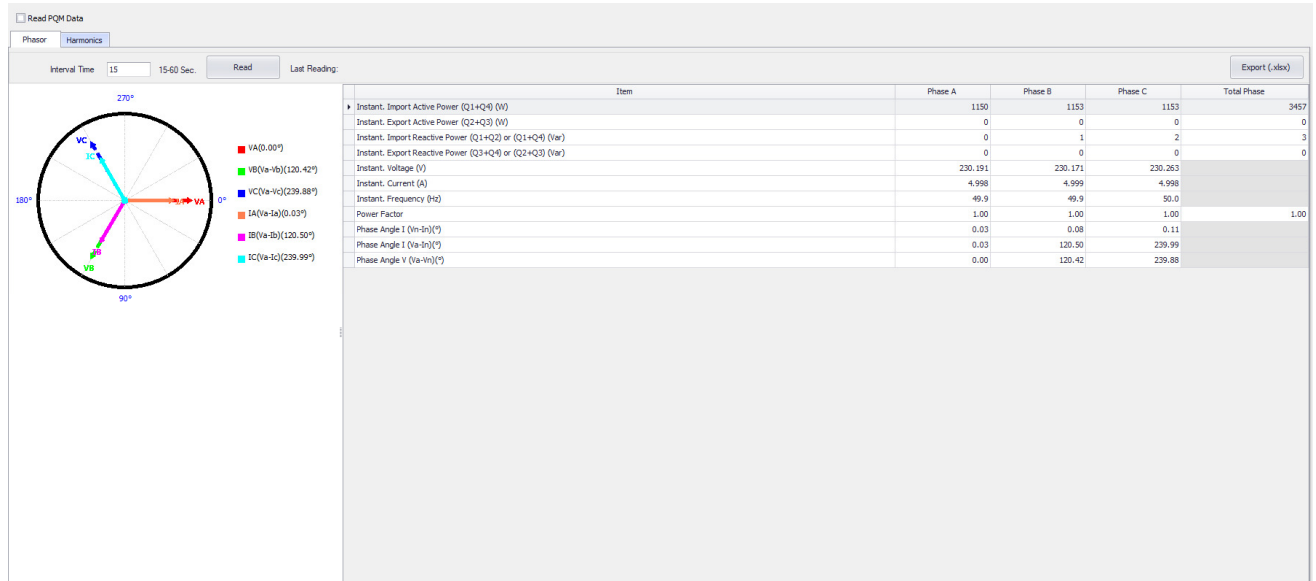
No.	Column Name	Description
1	Record No	For show record number
2	Date Stamp	For show date stamp
3	Time Stamp	For show time stamp
4	Flag Status	For show flag status (separate by " " (pipe))
5	Demand W(imp)	Show demand W(imp) value
6	Demand W(exp)	Show demand W(exp) value
7	Demand W Net (imp-exp)	Show demand W Net (imp-exp) value
8	Demand Var(imp)	Show demand Var(imp) value
9	Demand Var(exp)	Show demand Var(exp) value
10	Demand Var Net (imp-exp)	Show demand Var Net (imp-exp)value
11	Energy Wh(imp)	Show energy Wh(imp) value
12	Energy Wh(exp)	Show energy Wh(exp) value
13	Energy Wh Net (imp-exp)	Show energy Wh Net (imp-exp) value
14	Energy Varh(imp)	Show energy Varh(imp) value
15	Energy Varh(exp)	Show energy Varh(exp) value
16	Energy Varh Net (imp-exp)	Show energy Varh Net (imp-exp) value

PQM load profile.

No.	Column Name	Description
1	Record No	For show record number
2	Date Stamp	For show date stamp
3	Time Stamp	For show time stamp
4	Flag Status	For show flag status (separate by " " (pipe))
6	Voltage A	Show voltage phase A
7	Voltage AB	Show voltage phase B
8	Voltage C	Show voltage phase C
10	Current A	Show current phase A
11	Current B	Show current phase B
12	Current C	Show current phase C
13	Current N	Show current phase N
15	THD_V A	Show THD_V phase A
16	THD_V B	Show THD_V phase B
17	THD_V C	Show THD_V phase C
19	THD_I A	Show THD_I phase A
20	THD_I B	Show THD_I phase B
21	THD_I C	Show THD_I phase C
22	PF All Phase	Show PF All phase
23	PF A	Show PF phase A

No.	Column Name	Description
24	PF B	Show PF phase B
25	PF C	Show PF phase C
26	Angle A	Phase 1 phase angle (V1-I1)
27	Angle B	Phase 2 phase angle (V2-I2)
28	Angle C	Phase 3 phase angle (V3-I3)
29	Angle VB	Phase angle (V1-V2)
30	Angle VC	Phase angle (V3-V1)
32	Instant Voltage A	Show Instant Voltage A
33	Instant Voltage B	Show Instant Voltage B
34	Instant Voltage C	Show Instant Voltage C
36	Instant Current A	Show Instant Current A
37	Instant Current B	Show Instant Current B
38	Instant Current C	Show Instant Current C
39	Instant Current N	Show Instant Current N
41	Instant THD_V A	Show Instant THD_V A
42	Instant THD_V B	Show Instant THD_V B
43	Instant THD_V C	Show Instant THD_V C
45	Instant THD_I A	Show Instant THD_I A
46	Instant THD_I B	Show Instant THD_I B
47	Instant THD_I C	Show Instant THD_I C
48	Instant PF All Phase	Show Instant PF All phase
49	Instant PF A	Show Instant PF A
50	Instant PF B	Show Instant PF B
51	Instant PF C	Show Instant PF C
52	Instant Angle IA	Show Instant Angle IA
53	Instant Angle IB	Show Instant Angle IB
54	Instant Angle IC	Show Instant Angle IC
55	Instant Angle VB	Show Instant Angle VB
56	Instant Angle VC	Show Instant Angle VC

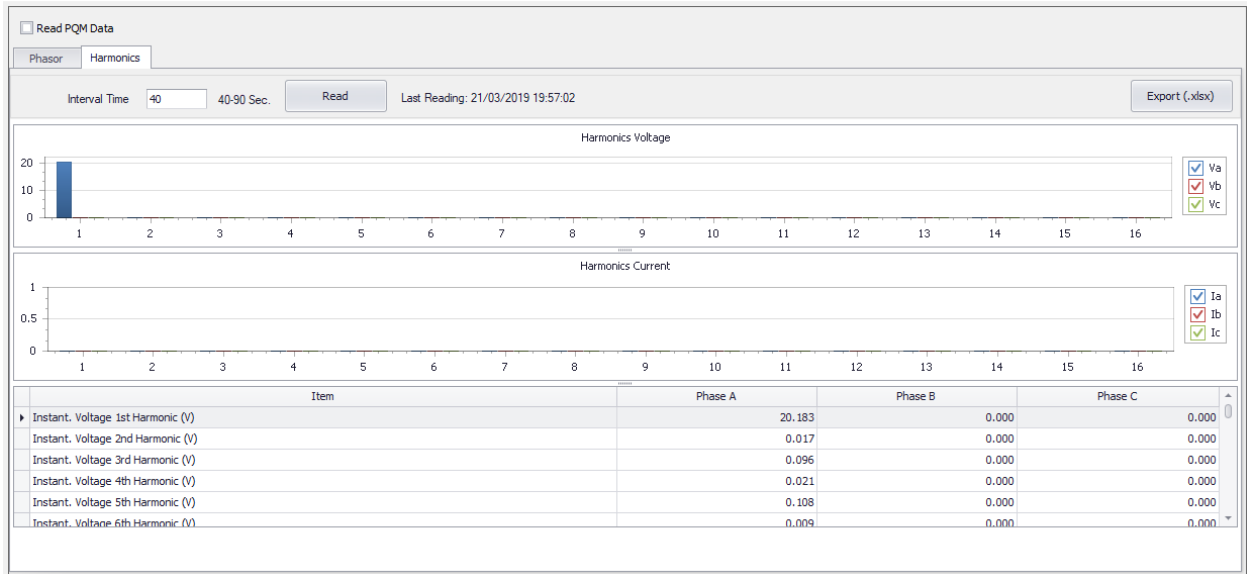
3) PQM Data Tab: For read phasor, harmonics voltage, harmonics current.



Picture 47: PQM Data tab (Phasor)

Phasor data

No.	Column Name	Description
1	Item	For show item
2	Phase A	For show phasor data of Phase A
3	Phase B	For show phasor data of Phase B
4	Phase C	For show phasor data of Phase C
5	Total Phase	For show phasor data of Total phase



Picture 48: PQM Data tab (Harmonic)

Harmonics Voltage data, Current Data

No.	Column Name	Description
1	Item	For show item
2	Phase A	For show Harmonics Voltage data of Phase A
3	Phase B	For show Harmonics Voltage data of Phase B
4	Phase C	For show Harmonics Voltage data of Phase C

4) **Previous Data Tab:** For read previous data up to 12 previous



Picture 49: Previous Data Tab

Previous Data

No.	Column Name	Description
1	No.	Show running no.
2	Item	Show item name
3	OBIS Code	OBIS Code Column: Show OBIS Code of each item
4	Value	For input and set item value

Software support for viewing previous data with unit selected as

1) kW/kvar => to show data as kW/kvar

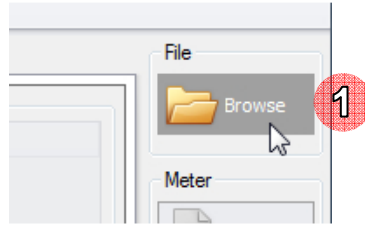
2) W/var => to show data as W/var

Default : W/var

4.2 Browse File

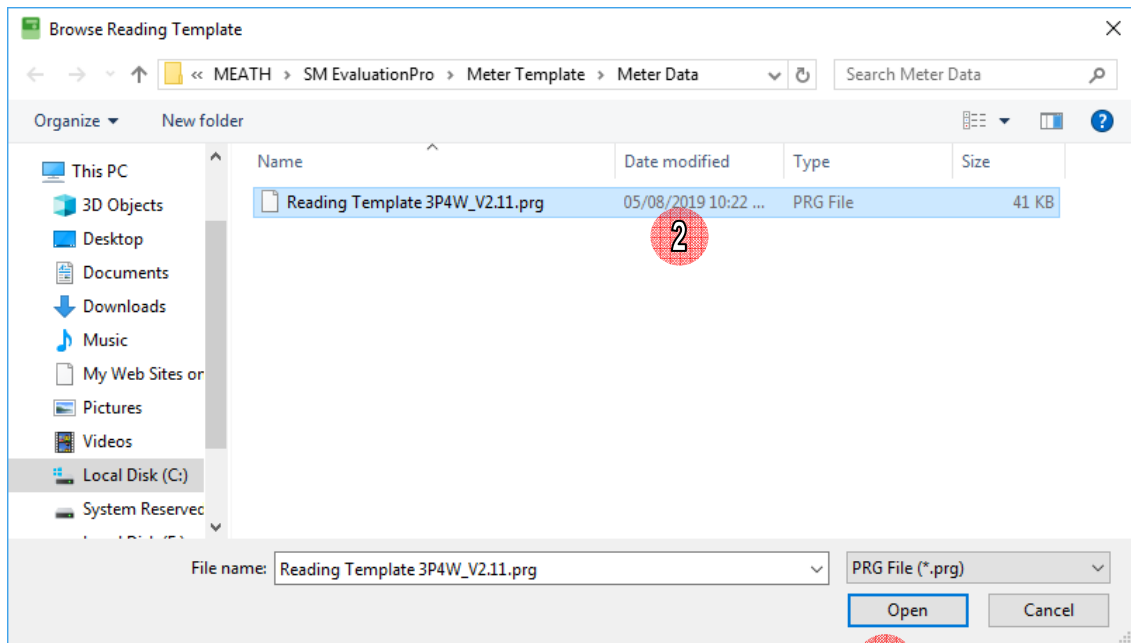
Before read data from meter we have to browse template file for use in reading operation.

- 1) Click **Browse** button.



Picture 50: Browse reading template button

- 2) Select template file (.prg file).
- 3) Click **Open** button.



Picture 51: Select reading template

- 4) After browse file software will show template name and item list.

4.3 Read Data

Note: Please browse template file before read data (See 5.2 **Browse File**)

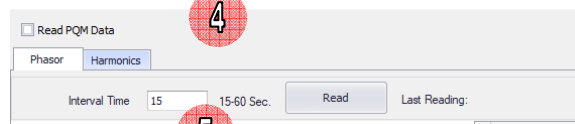
Software will read all data which check box mark for reading consist of Meter Data, Load Profile data, PQM, Previous Data respectively

- For Meter Data tab, software support multiple check by
 “Hold Ctrl button + checkbox select” for separate selection
 “Hold Shift button + “start” checkbox to “end” check box for continued selection
- For Load Profile data has reading condition, User can change reading condition by follow step as
 - 1) Click Load Profile Data tab.
 - 2) Select load profile reading condition, read all or read by record number. Default record number is from 4701 to 4800, this range can be changed.
 - 3) If select Record No. input record range that want to read.



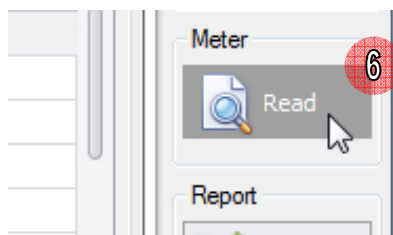
Picture 52: Read load profile condition

- 4) For PQM Data, software will read both phasor data and harmonics data
- 5) Input Interval Time that want to read repeat every interval time setting.



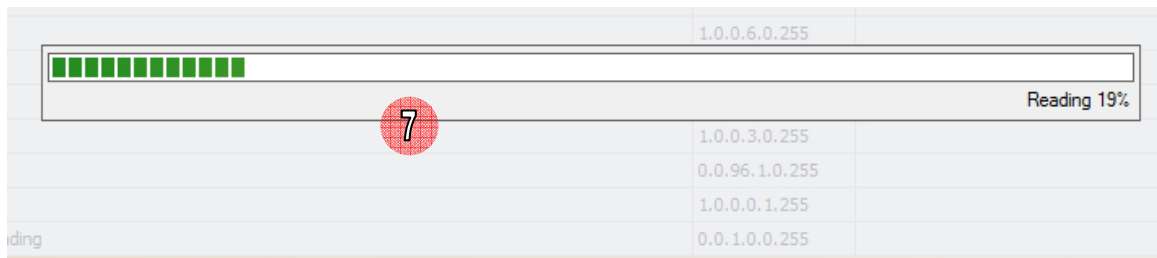
Picture 53: Read PQM condition

- 6) Click **Read** button.



Picture 54: Read button

7) During read meter software will show progress bar, please wait until finish.



Picture 55: Software is reading data

8) After finished reading software will show data in all tab menus.

No.	Item	Value	Unit	Remark
Basic Meter Information				
1	Rated/Basic Current (In/Ib)		5.0 A	
2	Maximum Current (Imax)		100 A	
3	Reference Voltage (Un)		230.0 V	
4	Phase & Wires		3P4W	
5	Reference Frequency		50 Hz	
6	Meter Constant		5.000 1/(Wh)	
7	Meter Serial Number	00389765432		
8	Multiply Factor of energy and Demand (CT/VT Ratio)		1	
9	Error Code / Error Note		Er0000000	
10	Meter Date/Time of Meter Reading	01/02/2020 00:35:48		
Demand Register				
11	All Phase Import active power (Q1 + Q4) Total	14545029 14545129	W	current average value last average value
12	All Phase Export active power (Q2 + Q3) Total	15121497 15121597	W	current average value last average value
13	All Phase Import reactive power (Q1 + Q2) or (Q1 + Q4) Total	16274433 16274533	var	current average value last average value
14	All Phase Export reactive power (Q3 + Q4) or (Q2 + Q3) Total	16850901 16851001	var	current average value last average value
15	All Phase reactive power (Q1) Total	17427369 17427469	var	current average value last average value
16	All Phase reactive power (Q2) Total	854633 854733	var	current average value last average value
17	All Phase reactive power (Q3) Total	1667573 1667673	var	current average value last average value
18	All Phase reactive power (Q4) Total	2480513 2480613	var	current average value last average value
Maximum Demand Register				
19	All Phase Import active power (Q1 + Q4) Total		4106393 W	
20	All Phase Export active power (Q2 + Q3) Total		4919333 W	

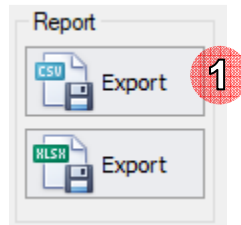
Picture 56: Reading data finished

4.4 Export Data

Software support exporting meter reading data file 2 format as *.csv files and *.xlsx files

- You can export meter reading report to CSV file by

1) After read data click **Export** button.



Picture 57: Export reading data button (CSV)

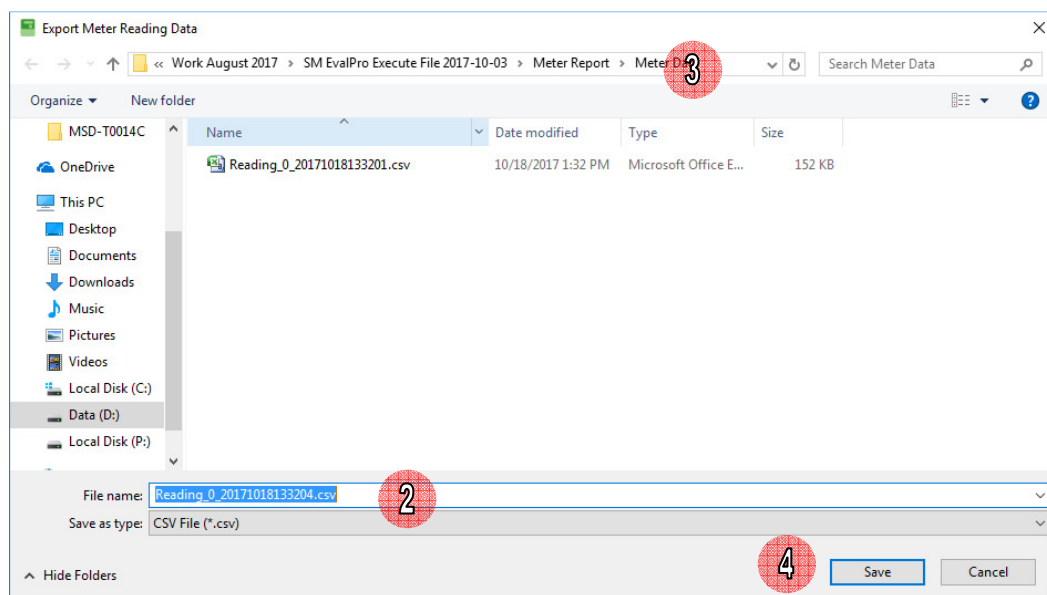
2) Software will generate file name automatically. Default file name is

Reading_[Meter Serial No.]_yyyyMMddHHmmss.csv

yyyyMMddHHmmss is date time example: 20171018133204

3) Select path to save file. Default save path is C:\MEATH\SM EvaluationPro\Meter Report\Meter Data

4) Click **Save** button.



Picture 58: Save reading report file (CSV)

5) The report file will be exported.

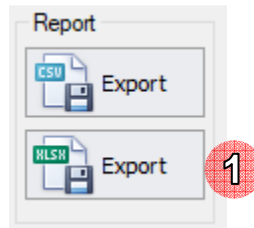
Name	Date modified	Type	Size
Reading_0_20171018133201.csv	10/18/2017 1:32 PM	Microsoft Office E...	152 KB
Reading_0_20171018133204.csv	10/18/2017 1:32 PM	Microsoft Office E...	152 KB

Picture 59: Export reading report finished (CSV)

Note: If reading data was unsuccessful, data in report file will be blank.

- You can export meter reading report to XLSX file by

1) After read data click **Export** button.



Picture 60: Export reading data button (XLSX)

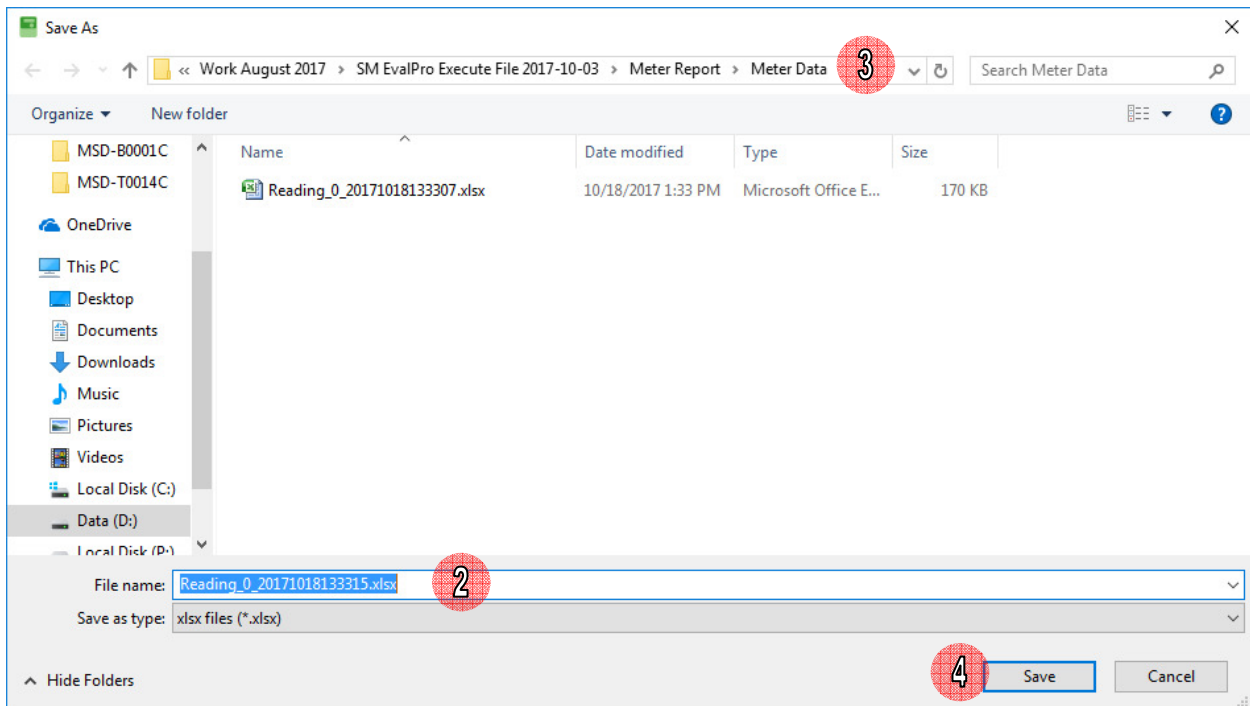
2) Software will generate file name automatically. Default file name is

Reading_[Meter Serial No.]_yyyyMMddHHmmss.xlsx

yyyyMMddHHmmss is date time example: 20171018133315

3) Select path to save file. Default save path is C:\MEATH\SM EvaluationPro\Meter Report\Meter Data

4) Click **Save** button.



Picture 61: Save reading report file (XLSX)

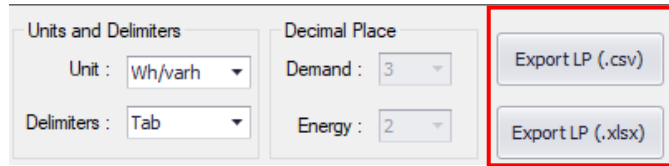
5) The report file will be exported.

Name	Date modified	Type	Size
Reading_0_20171018133307.xlsx	10/18/2017 1:33 PM	Microsoft Office E...	170 KB
Reading_0_20171018133315.xlsx	10/18/2017 1:33 PM	Microsoft Office E...	170 KB

Picture 62: Export reading report finished (XLSX)

Note: If reading data was unsuccessful, data in report file will be blank.

In Load Profile data screen, user can export only load profile data both CSV and XLSX file with unit and delimiters selected



Picture 63: Export load profile report

Note: Unit as follow

- 1) kWh/kvarh => display load profile data in kWh/kvarh unit
 - 2) Wh/varh => display load profile data in Wh/varh unit
- Default : kWh/kvarh

Delimiters as follow

- 1) Comma => in which the comma character (,) usually separates each field of text.
 - 2) Tab => in which the TAB character usually separates each field of text.
 - 3) Space => in which the Space character usually separates each field of text.
- Default : Comma

1) After read data, open Load Profile Tab, Select Unit, Delimiters, select Load Profile (Demand & Energy/ PQM)

If Click **Export LP (.csv)** button.

Software will generate file name automatically. Default file name is

If select "Demand & Energy" => LP_[Meter Serial No.]_DemandEnergy_YYYYMMDDHHmmss.csv

If select "PQM" => LP_[Meter Serial No.]_PQM_YYYYMMDDHHmmss.csv

YYYYMMDDHHmmss is date time example: 20171018134903

If Click **Export LP (.xlsx)** button.

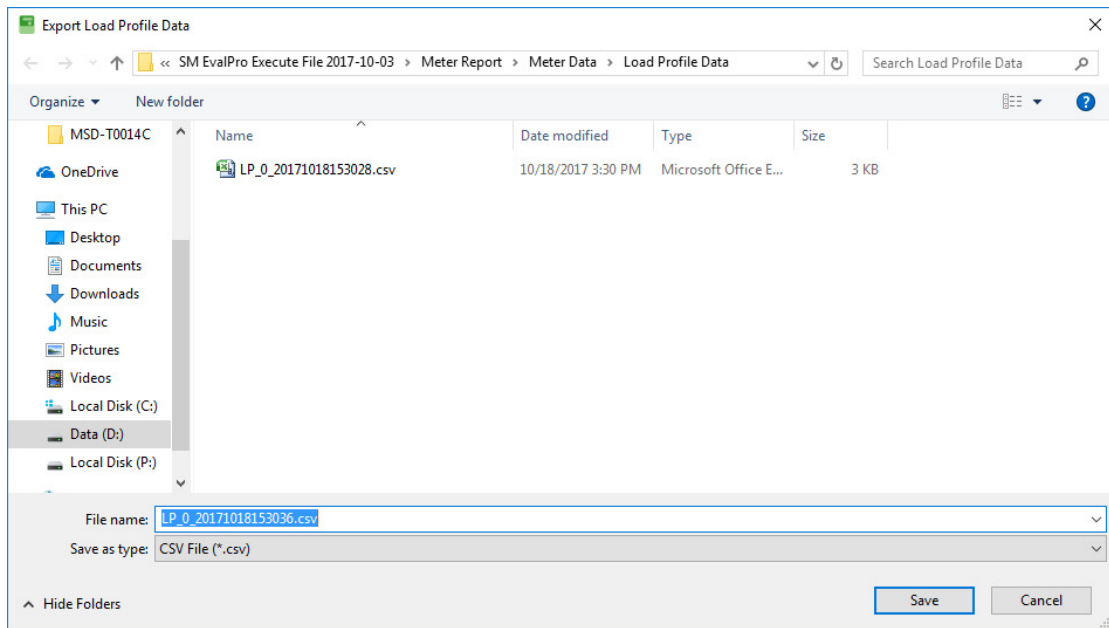
Software will generate file name automatically. Default file name is

If select "Demand & Energy" => LP_[Meter Serial No.]_DemandEnergy_YYYYMMDDHHmmss.xlsx

If select "PQM" => LP_[Meter Serial No.]_PQM_YYYYMMDDHHmmss.xlsx

YYYYMMDDHHmmss is date time example: 20171018134903

- 2) Select path to save file. Default save path is C:\MEATH\SM EvaluationPro\Meter Report\Meter Data\Load Profile Data

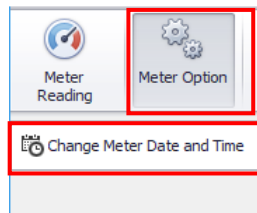


Picture 64: Save load profile report file

- 3) Click **Save** button.
- 4) The report file will be exported.

5 Meter Option

Meter option menu consist 1 tab menu: Change Meter Date and Time



Picture 65: Meter Option tab menus

5.1 Change Meter Date and Time

Read Current Date Time

- 1) Click **Meter Option** => **Change Meter Date and Time**

 A screenshot of a configuration window titled 'Change Meter Date and Time'. The window is divided into two main sections. The top section, 'Current Date and Time', contains a 'Clock Base' field, and two columns for 'Date Time' and 'Time Zone'. Below these are input fields for 'PC Date and Time' and 'Meter Date and Time', along with a 'Read Date and Time' button. The bottom section, 'Meter Date and Time Setting', has two radio buttons: 'Synchronize Meter Date and Time with PC' (which is selected) and 'Manual Date and Time Setting'. The manual setting includes dropdowns for date (25/03/2019), time (08:41:22), and time zone (UTC + 07:00), with a 'Set Date and Time' button below. A note at the bottom states: 'Note: Backward time changing must not be more than 1 interval time. Backward time changing more than 1 interval time is allowed after clear metering data. (Menu Option > Clear Data)'. A red circle with the number '1' is overlaid on the right side of the window.

Picture 66: Change meter data and time option

2) Click **Read Date and Time** button to check date time of PC and meter.

Current Date and Time

Clock Base

Date Time Time Zone

PC Date and Time

Meter Date and Time

Picture 67: Read data time

3) Software will show PC and meter date time.

Current Date and Time

Clock Base

Date Time Time Zone

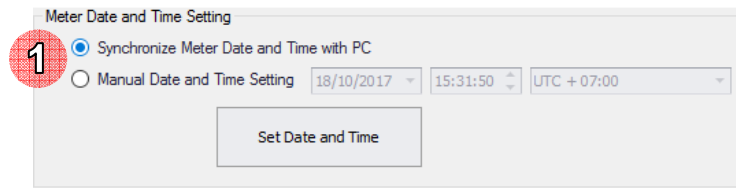
PC Date and Time

Meter Date and Time

Picture 68: Show date time

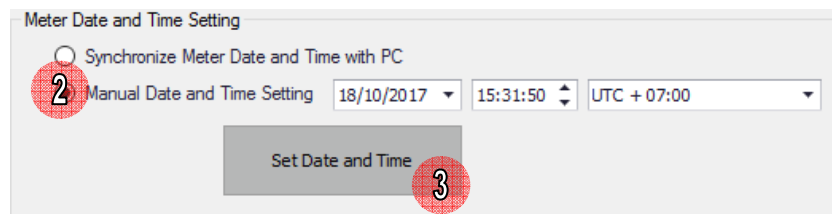
Set Date Time

- 1) To setting date and time to meter, please select setting option by synchronize with PC or manual.



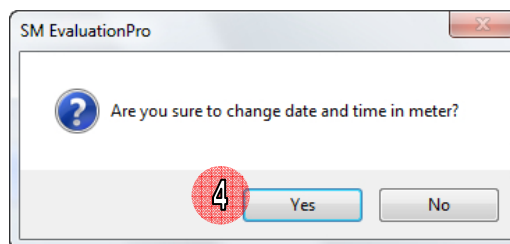
Picture 69: Synchronize data time with PC

- 2) If select Manual Date and Time Setting, please select date and time that want to set to meter.
- 3) Click **Set Date and Time** button.



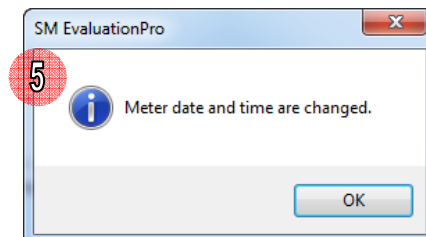
Picture 70: Manual set date time

- 4) Click **Yes**.



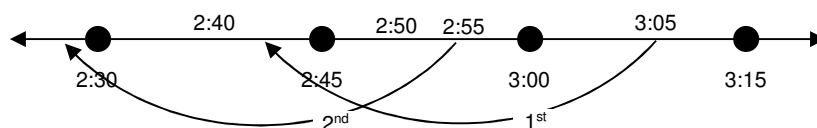
Picture 71: Confirm set date time

- 5) If set date time complete software will show message "Meter date and time are changed".



Picture 72: Set date time complete

Note: Backward time changing must not be more than the Demand Interval Time

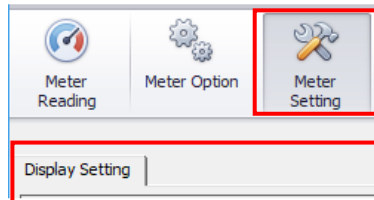


From the figure, the 2nd effort of System Time Changing must be blocked.

6 Meter Setting

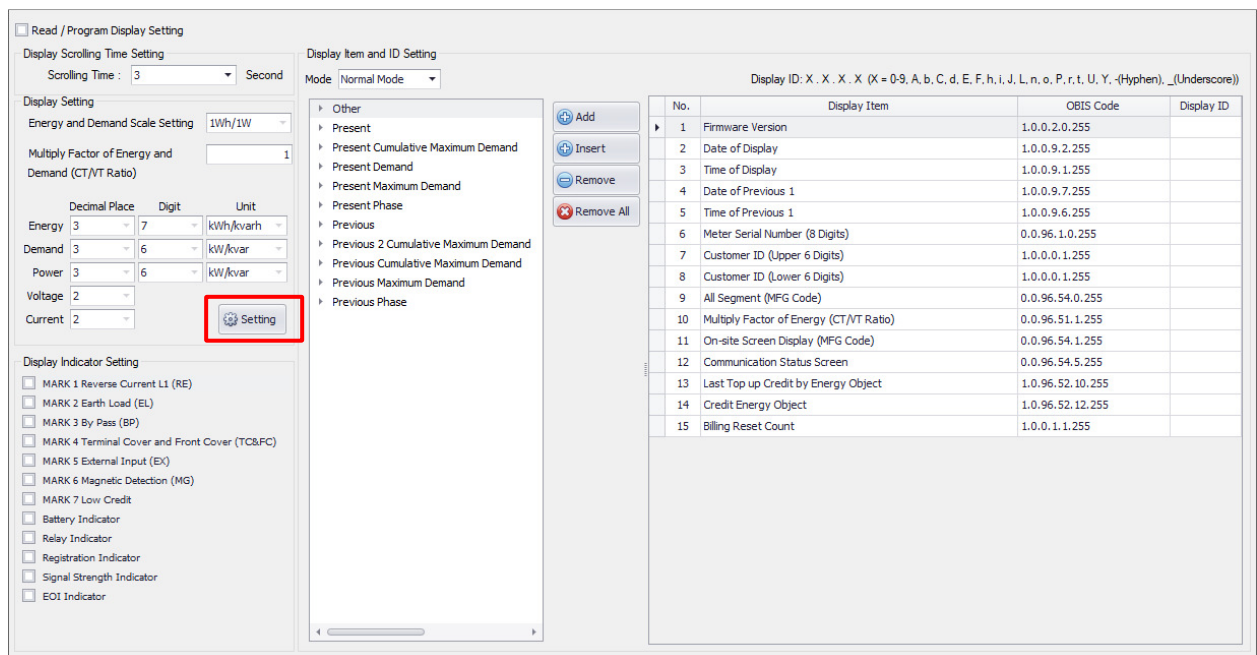
6.1 Meter Setting Tab Menu

Meter setting menu consist 1 tab menus: Display Setting



Picture 73: Meter Setting tab menus

1) **Display Setting Tab:** For read and set display setting of meter.



Picture 74: Display Setting tab

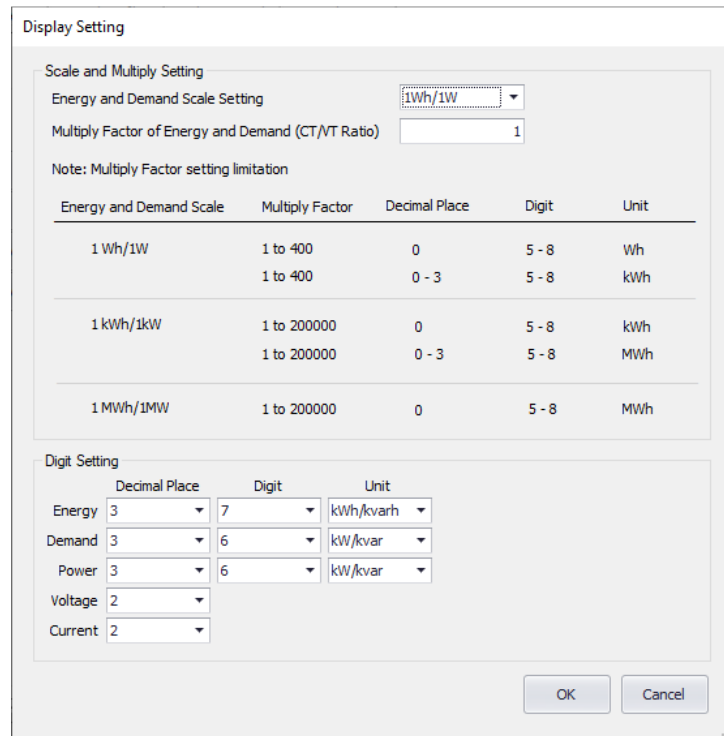
Note: Software has 3 modes for display item and id setting as Normal mode, Alternate mode and Backup mode

Maximum Display Item Setting for Normal mode is 40 set

Maximum Display Item Setting for Alternate mode is 40 set

Maximum Display Item Setting for Backup mode is 3 set

4.1) Display Setting button: For setting display group



Picture 75: Display Setting screen

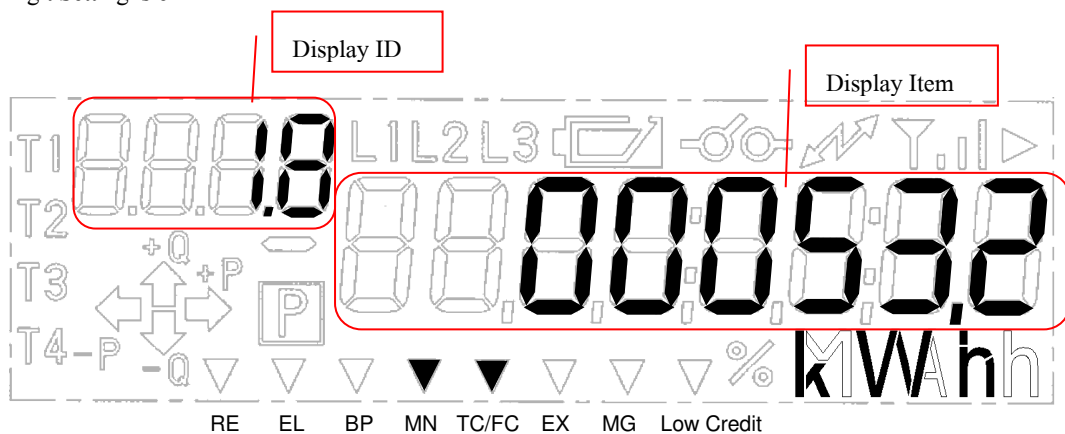
Example of LCD display is as the following

Display Item Setting is Total Rate All phase energy kWh (import)

Display ID Setting is 1.8

Terminal cover open tamper, Front cover open tamper and Missing Neutral tamper

Energy Digit Setting is 6

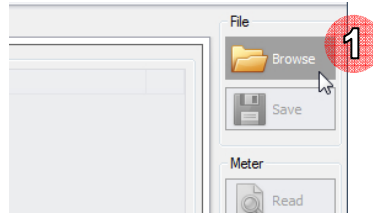


Picture 76: Meter Display

6.2 Browse File

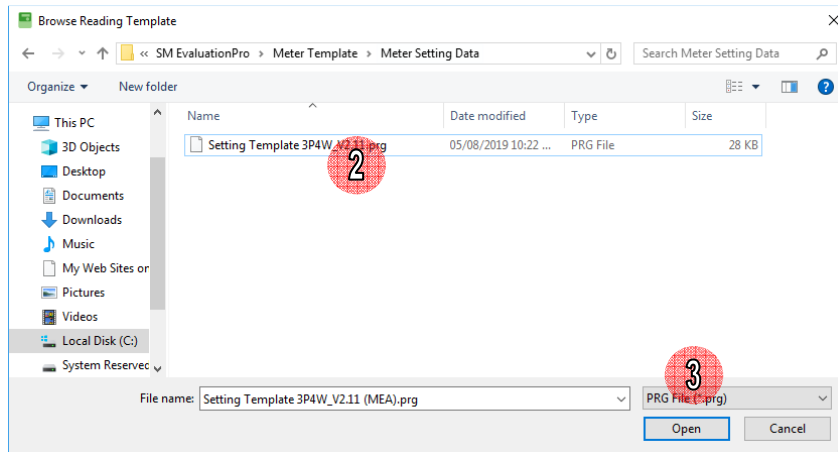
Before read data from meter or set data to meter we have to browse template file for use in reading and setting operation.

- 1) Click **Browse** button.



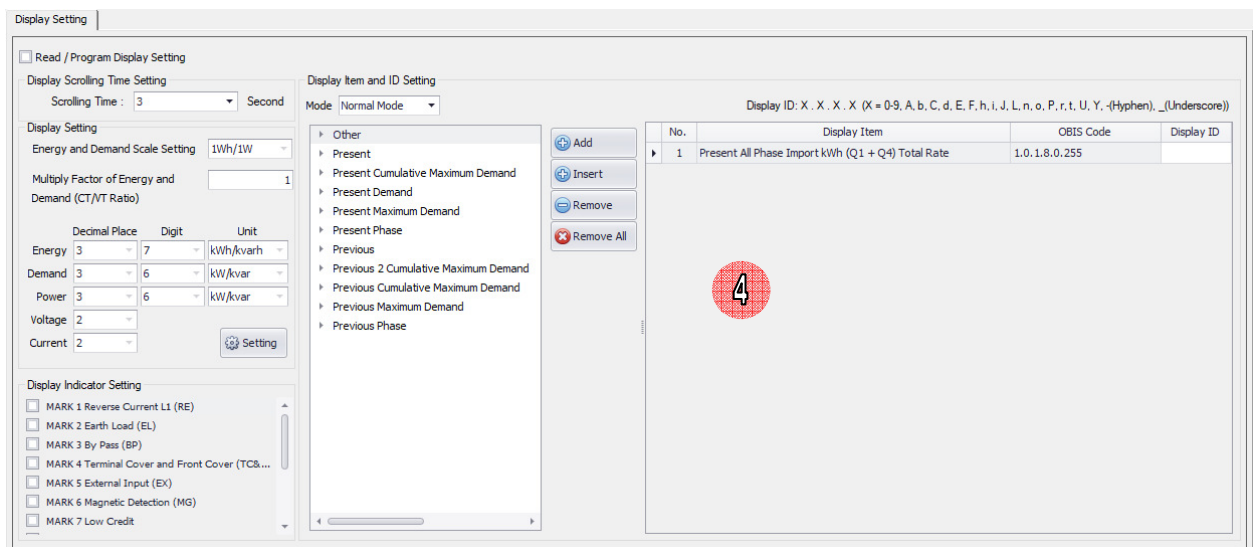
Picture 77: Browse setting template file button

- 2) Select template file (.prg file).
- 3) Click **Open** button.



Picture 78: Select setting template file

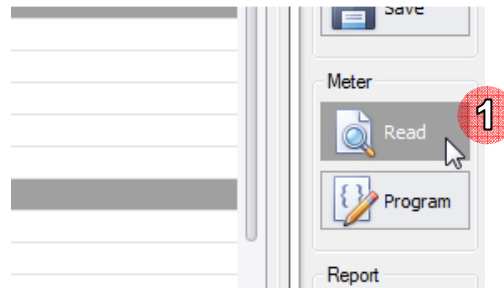
- 4) Software will show selected template name and show item list on table.



Picture 79: After browse setting template

6.3 Read Data

1) After browsed template file click **Read** button. Software will read item that checked on checkbox of Display setting.



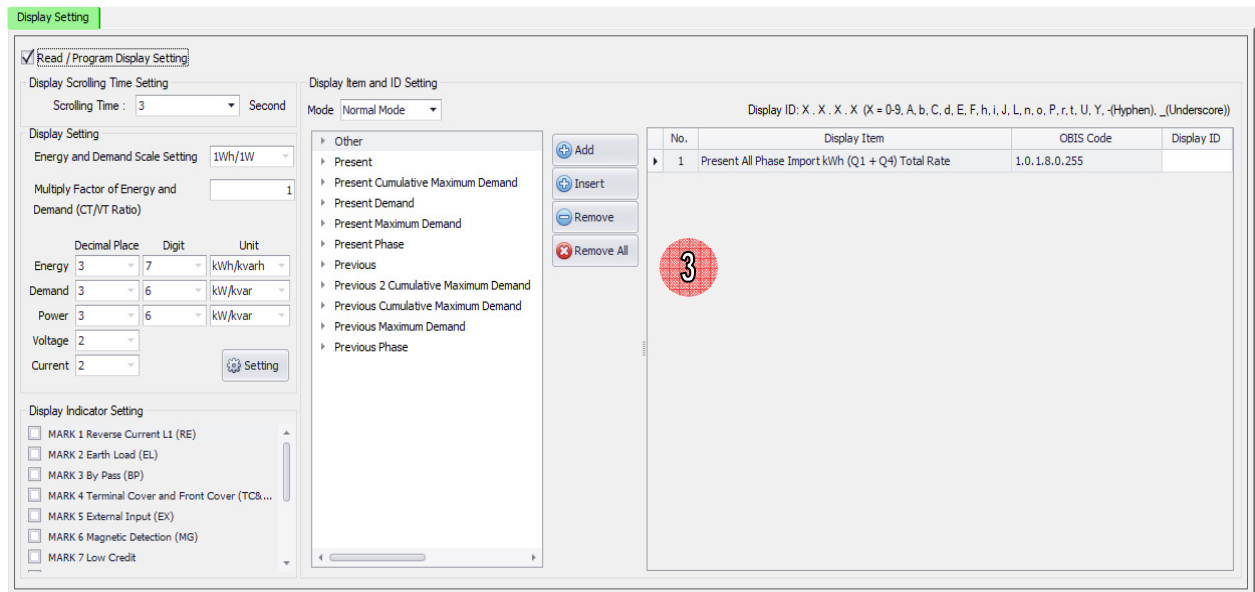
Picture 80: Read setting data button

2) Software will show progress bar during reading value from meter. Please wait until finish.



Picture 81: Reading progress bar

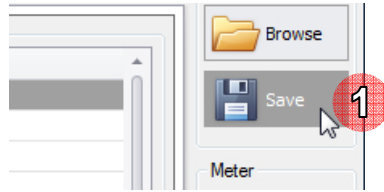
3) When finished reading software will show data in all tabs.



Picture 82: Show setting data after read

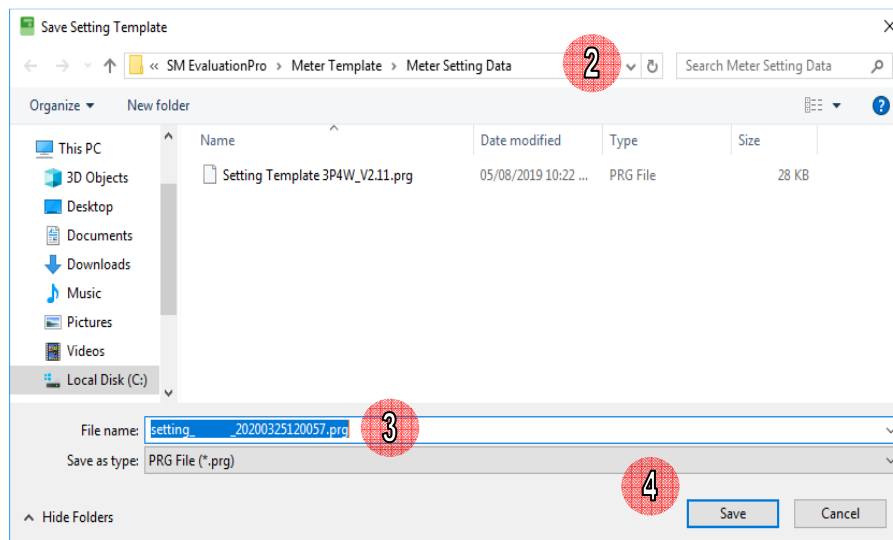
6.4 Save File

- 1) To save template file (.prg) click **Save** button.



Picture 83: Save setting template button

- 2) Select save file path.
- 3) If want to change file name, please input new file name.
- 4) Click **Save** button.



Picture 84: Save setting template

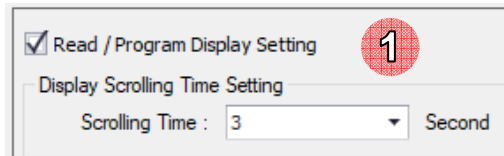
- 5) Software will save template file.

6.5 Program (Setting Data to Meter)

Note: Software will set items that be checked on checkbox Display setting tab.

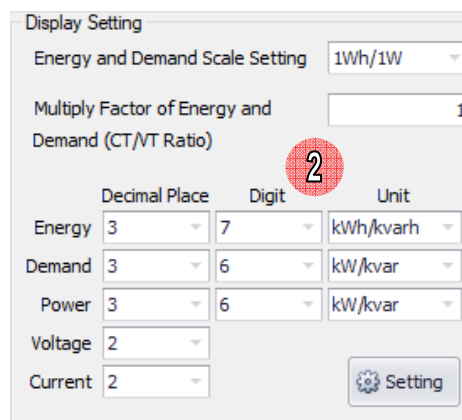
Recommend: User should read data from meter then modify data that want to set new value after that program to meter

- 1) **On Display Setting tab**, select scrolling time.

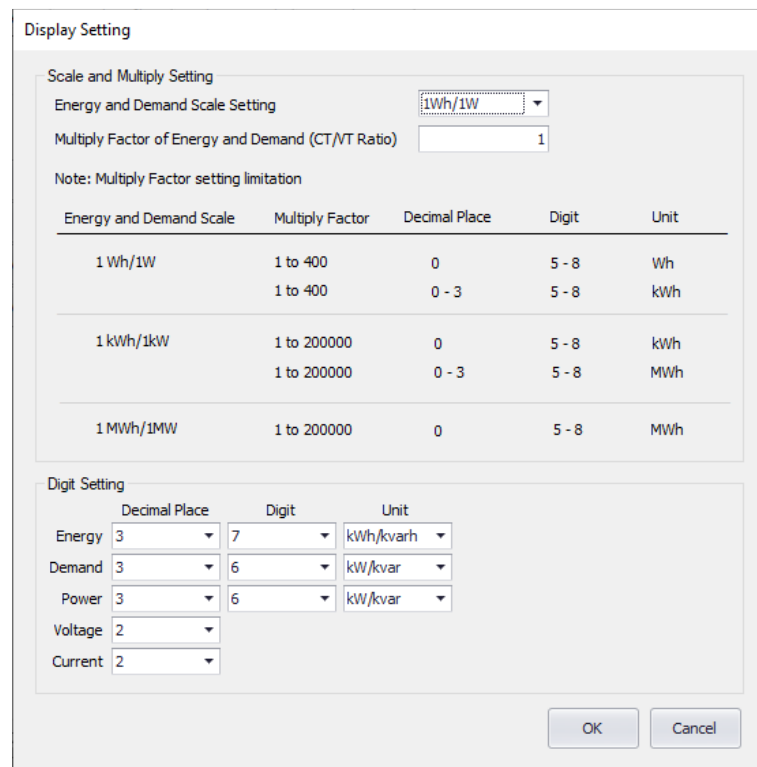


Picture 85: Scrolling time setting

- 2) Set display setting of energy, demand, power, Voltage, and Current. Click “Setting” button

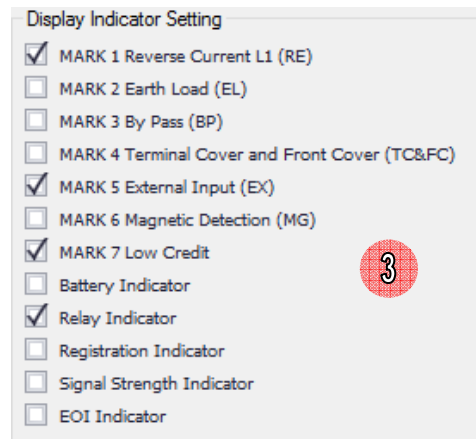


Picture 86: Display setting



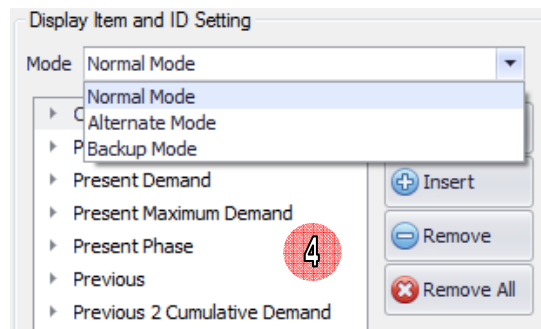
Picture 87: Display setting popup screen

3) Select display indicator.



Picture 88: Display indicator setting

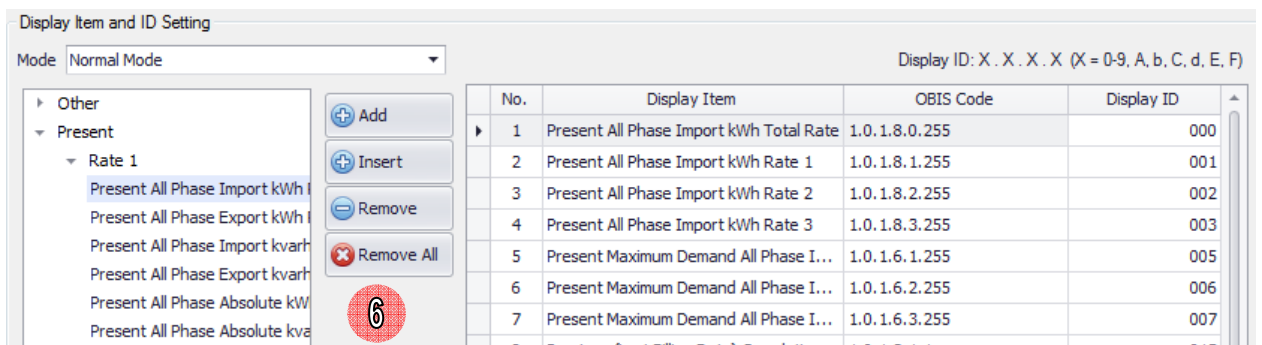
4) Select mode.



Picture 89: Display mode setting

5) Select item and click **Add** button. Display Item will be added to bottom of display item list, Input Display ID which display item selected

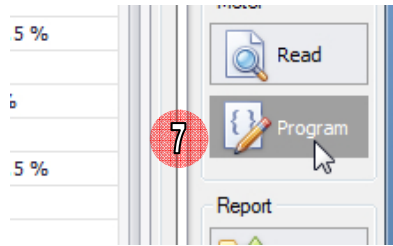
6) Select item, select list of display item and click **Insert** button. Display Item will insert to above of selected display item list.



Picture 90: Add display item

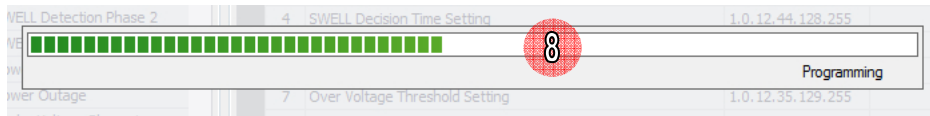
If want to remove click **Remove** button or **Remove All** button.

7) Click **Program** button.



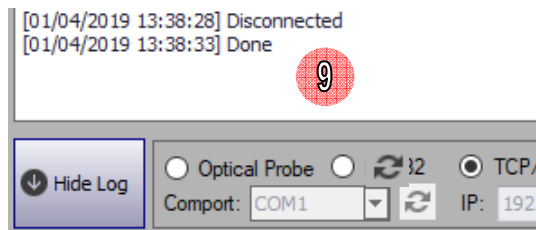
Picture 91: Program button

8) Software will show progress bar during program data to meter, please wait until finish.



Picture 92: Programming progress bar

9) After program data finished software will show message “Done” on communication log.



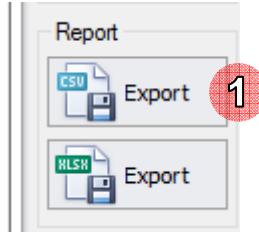
Picture 93: Program data to meter finished

6.6 Export Data

Software support exporting meter setting data file 2 format as *.csv files and *.xlsx files

- You can export meter setting report to CSV file by

1) To export setting report file (.csv) click **Export** button.



Picture 94: Export setting report button (CSV)

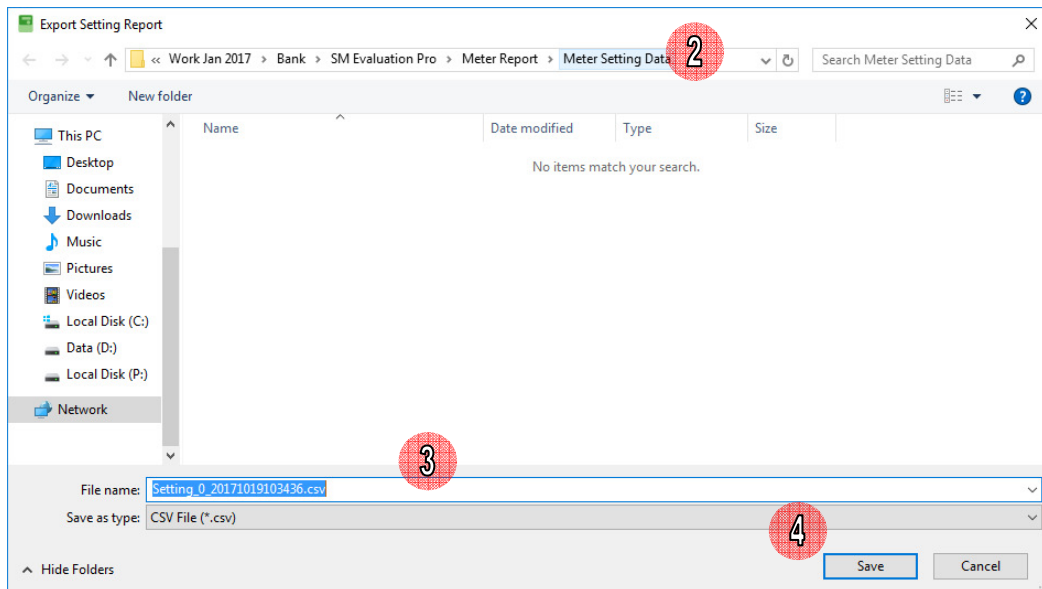
1) Software will generate file name automatically. Default file name is

Setting_[Meter Serial No.]_yyyyMMdHHmmss.csv

yyyyMMdHHmmss is date time example: 20171019103436

2) Select path to save file. Default save path is C:\MEATH\SM EvaluationPro\Meter Report\Meter Data

3) Click **Save** button.

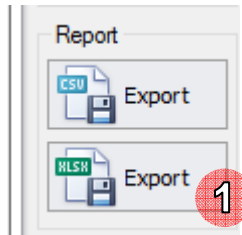


Picture 95: Save setting report (CSV)

4) Report file will be exported.

- You can export meter setting report to XLSX file by

1) To export setting report file (.xlsx) click **Export** button.



Picture 96: Export reading data button (XLSX)

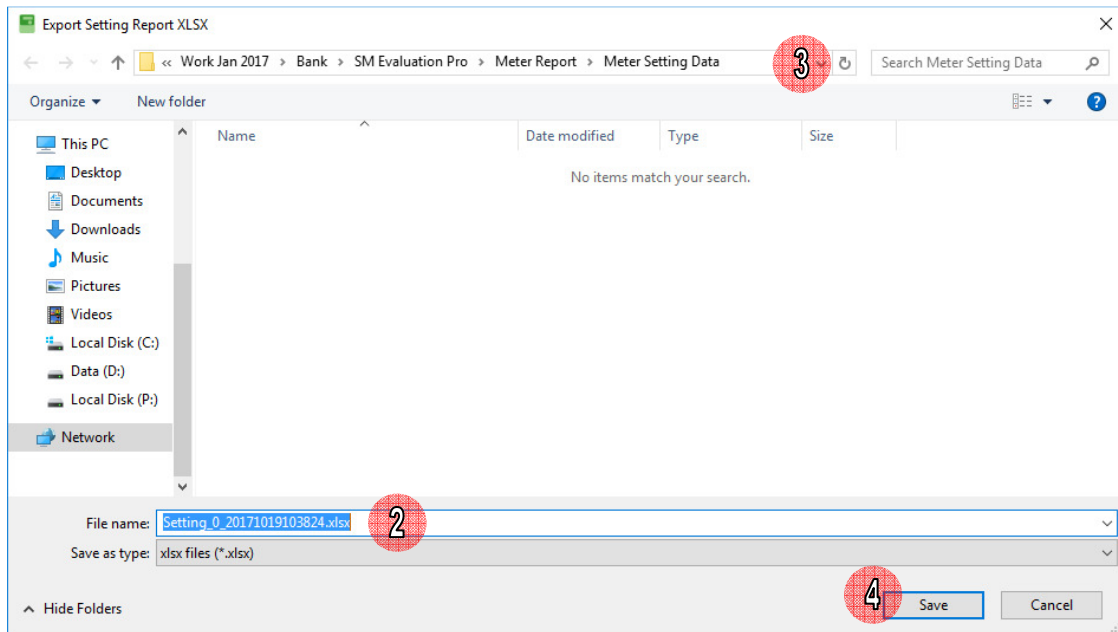
2) Software will generate file name automatically. Default file name is

Setting_[Meter Serial No.]_yyyyMMddHHmmss.xlsx

yyyyMMddHHmmss is date time example: 20171019103824

3) Select path to save file. Default save path is C:\MEATH\SM EvaluationPro\Meter Report\Meter Data

4) Click **Save** button.



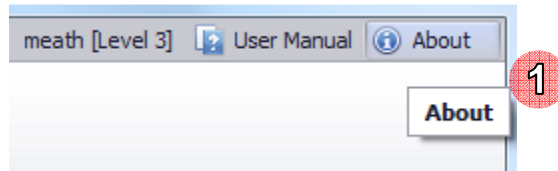
Picture 97: Save reading report file (XLSX)

5) The report file will be exported.

7 About Software

About

- 1) To show software information click **About** button.



Picture 98: About button

- 2) Software will show About screen.

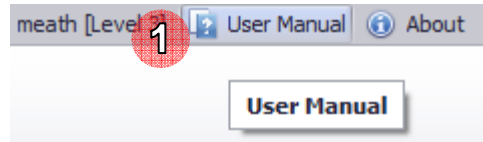


Picture 99: About screen

- 3) Click **OK** button to close this screen.

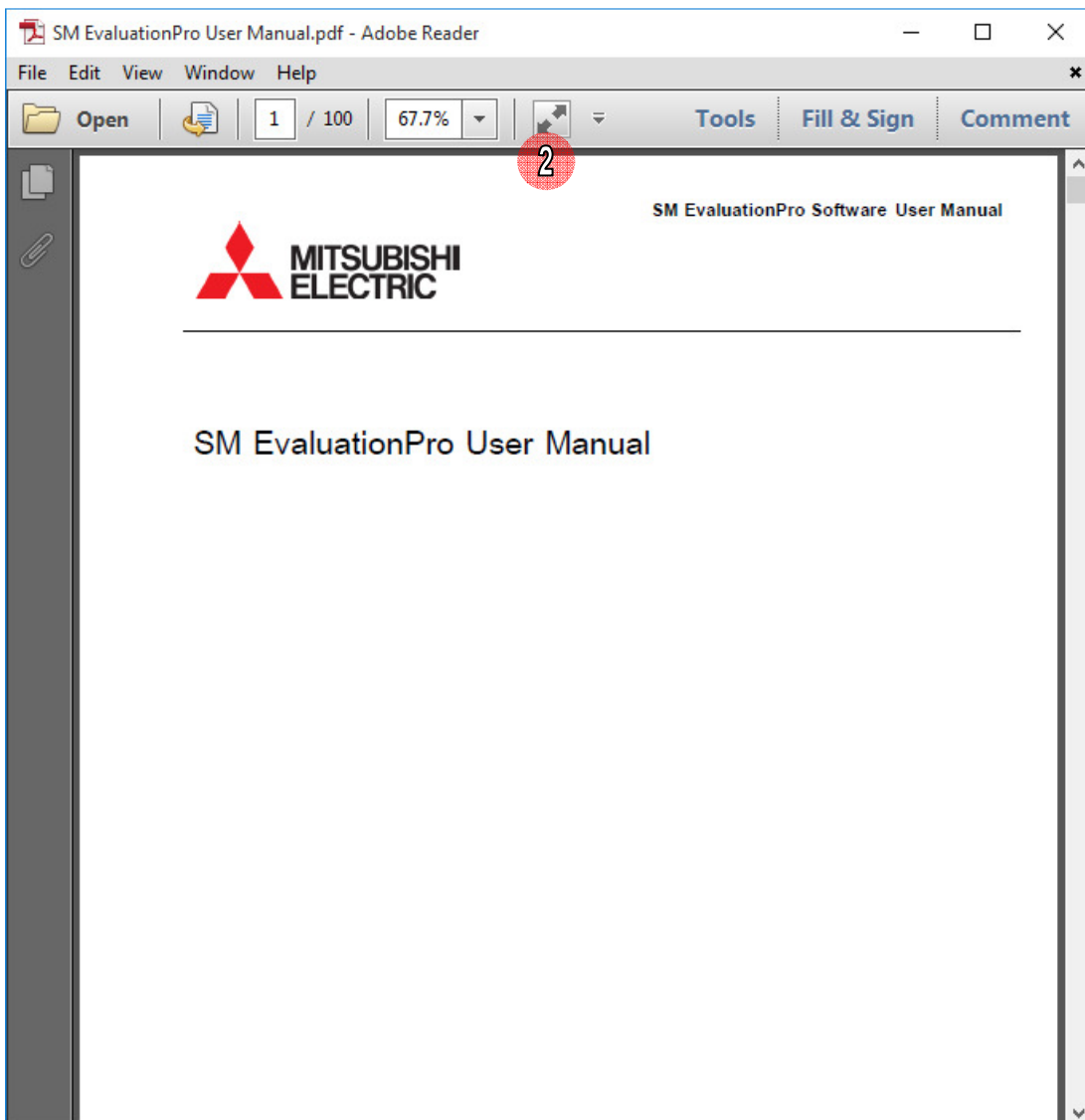
8 User Manual

- 1) To SM EvaluationPro user manual click **User Manual** button.



Picture 100: User Manual button

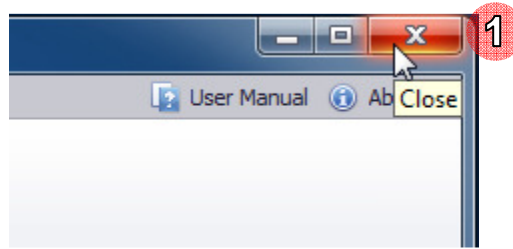
- 2) Software will show user manual.



Picture 101: Show user manual

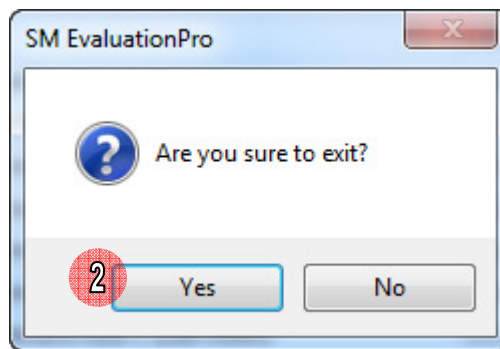
9 Exit Software

- 1) To exit software click close button.



Picture 102: Close button

- 2) Software will show question message “Are you sure to exit?” click **Yes** button.



Picture 103: Confirm to exit software

- 3) Software will close screen and exit.

Note: During communicating with meter (reading, setting, executing) should wait until finish operation and exit software.

10 Troubleshooting

Problem	Cause	Solution
1. Connection fails.	<ul style="list-style-type: none"> ● Wrong connection of optical probe. ● Select wrong COM port. 	1. Check Optical probe connect with meter in correct position.
2. SNMR fails.	<ul style="list-style-type: none"> ● Wrong connection of optical probe. ● Cannot disconnect from last communication. 	2. Check USB port of optical probe has already connected with PC, or try to change connection to new USB port of PC. 3. Try to initialize COM port again by selecting Comport in software. 4. Read meter again.
3. Temporary fails.	<ul style="list-style-type: none"> ● Meter cannot answer at the moment. 	1. Wait a few minutes and read meter again. 2. Close software, wait a few minutes, open software and read meter again.
4. Cannot login software.	<ul style="list-style-type: none"> ● Username or password is incorrect. ● License file miss or broken. 	1. Check license file "License.lic" exist, default path "C:\MEATH\SM EvaluationPro" 2. Update new license file.
5. Cannot connect meter.	<ul style="list-style-type: none"> ● Meter password is incorrect. 	1. Modify meter password in license file and update license file to use correct meter password.
6. Cannot connect database, database error.	<ul style="list-style-type: none"> ● Not install SQL CE. ● SQL CE has a problem. 	1. In the case not install SQL CE yet, please install SQL CE. 2. For case SQL CE has a problem, please uninstall and reinstall SQL CE.