INST.NO. INE-919

CHINO

DI5000

Setting Software

INSTRUCTIONS

CHINO

Table of contents

1. Introduction

Thank you for using our DI5000 Setting Software.
This software provides application software function of parameter setup, data acquisition, data analysis to a DI5000 device and linking up each device.

This instruction manual describes how to prepare hardware, program installation and operation etc. Make sure to read this instruction manual in advance in order to understand this software well and to prevent troubles from occurring.

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Precautions

1. Keep this instruction manual carefully until the software is discarded.
2. When discarding the software, follow the local regulations for waste disposal and cooperate in recycling.

2. System Requirement

Use the software in the environment described below.

2-1 Operation Condition of the Software

Required instruments	Contents and condition	
PC	CPU	1GHz 32 bit or 64 bit.
	Memory	1GB or more (32bit), 2GB or more (64bit).
	Hard disk space	2GB or more free hard disk space.
	Removable disk drive	Compatible with CF
	Supported OS	Windows XP SP3 (32bit) English Windows 7 (32bit/64bit) English Windows 8 (32bit/64bit) English *.NET Framework4.0 or later need to be able to installed to the OS above.
Required library	.NET Framework4.0	
	Microsoft Office2007/2010 *If these are not installed, a part of file output function is to be restricted.	
Display	Screen resolution 1024x700 or more.	

3 How to Setup

3-1. Installation

3-1-1. New installation

Install the software from install medium to a PC before use.
Follow the procedures for installation below.

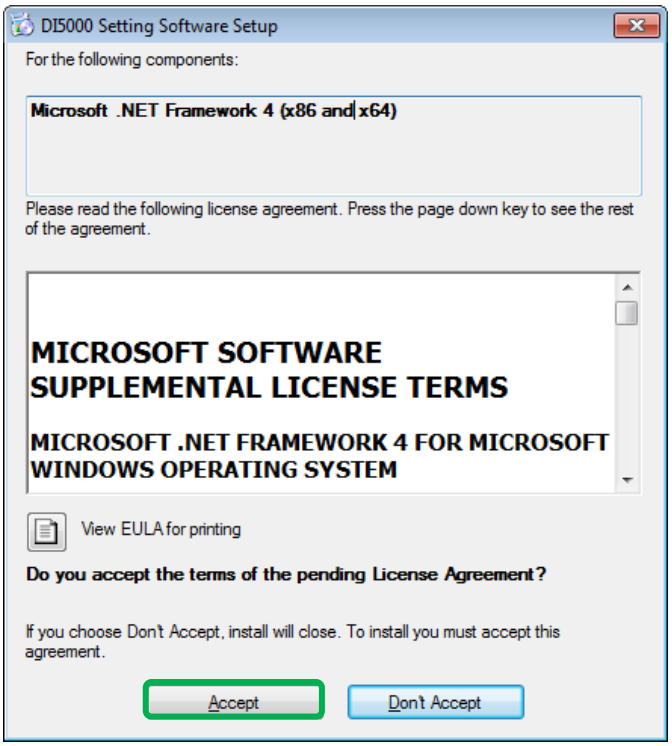
< Procedures >

(1) Start up installer.

Start Windows then start “setup.exe” from install medium.

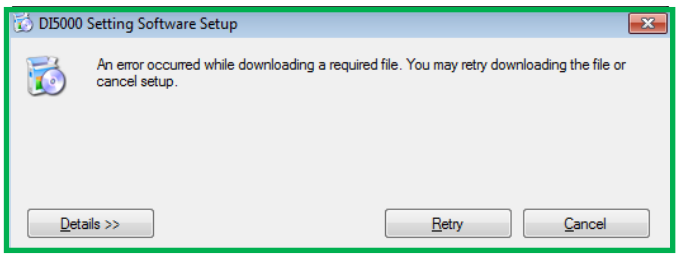
(2) License agreement.

Installation of “Microsoft .NET Framework 4” is required in advance.
Click [Accept] button.
*If it is installed, the dialog may not be displayed.



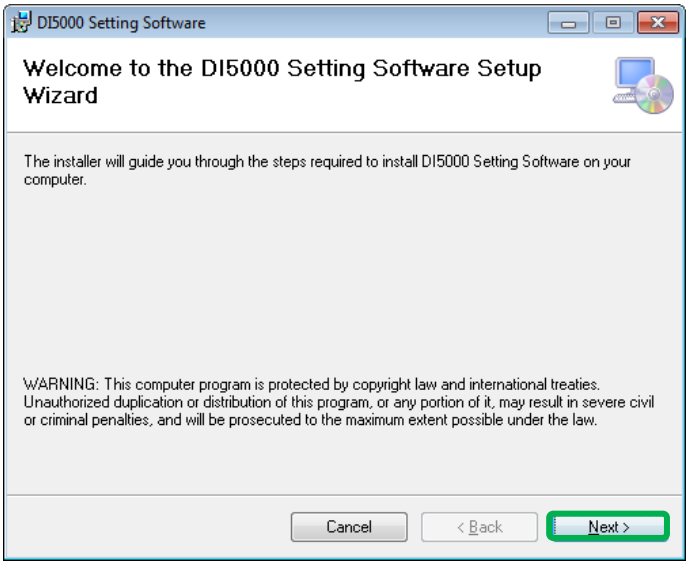
***Note on license agreement**

If this dialog is displayed, check that the PC is connected to the network. Execute the installation again in the condition of connected to the network.



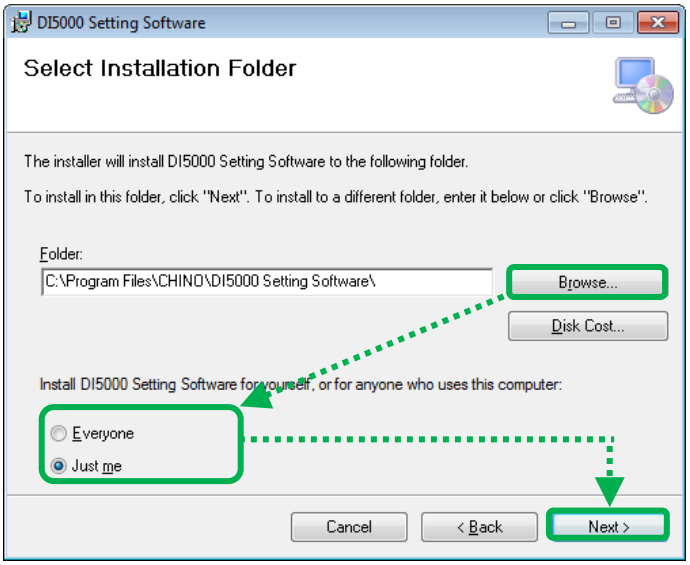
(3) Start the Installation Wizard.

DI5000 Setting Software Setup Wizard dialog is started. Click [Next] button.



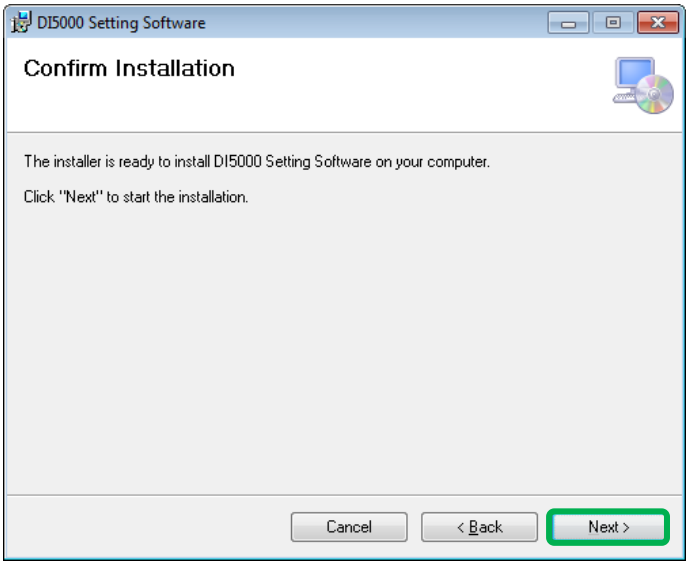
(4) Select the Installation Folder.

On Select Installation Folder dialog, select [the install folder] and [user]. Click [Next] button.



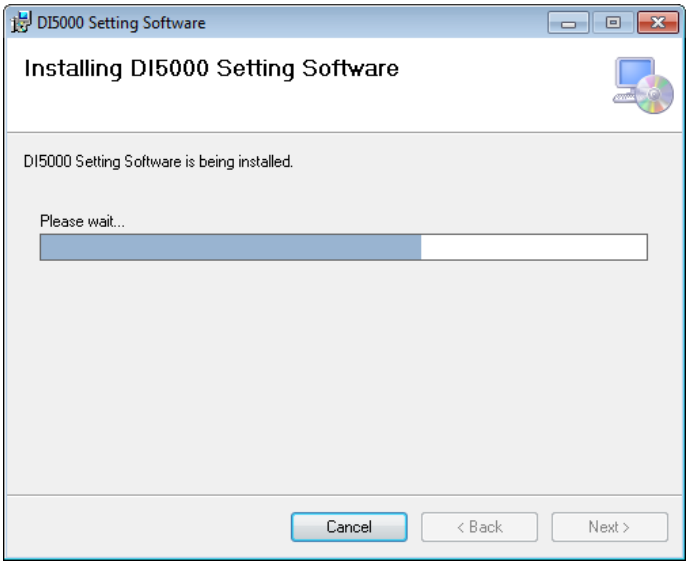
(5) Confirm the installation.

On Installation Confirmation dialog, click [Next] button.



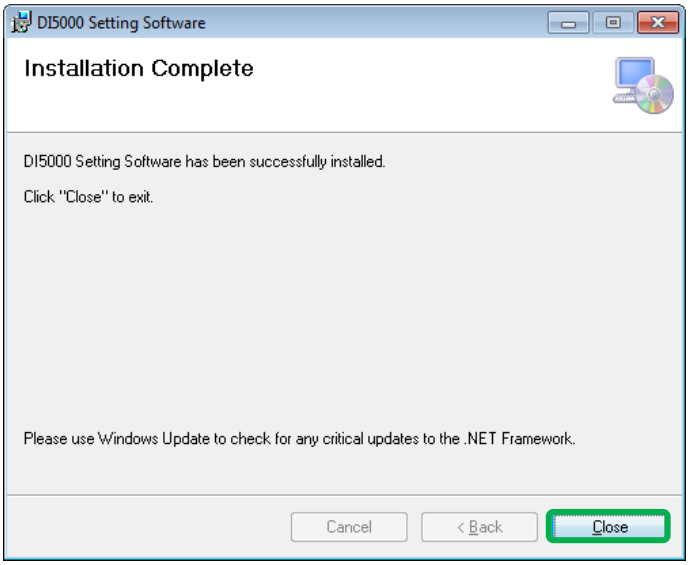
(6) Start the installation.

The installation is started.
The dialog indicating the progress of the installation appears. Wait until the installation completes.



(7) Complete the installation.

Installation Complete dialog appears.
Click [Close] button to finish.



3-1-2. Installation at version upgrade

This software may upgrade to a new version to add new functions and/or fix failures.
Follow the procedures for version upgrade below.

< Procedures >

(1) Uninstall the current version (refer to the section 3-2).
(2) Install a new version (refer to the section 3-1-1).

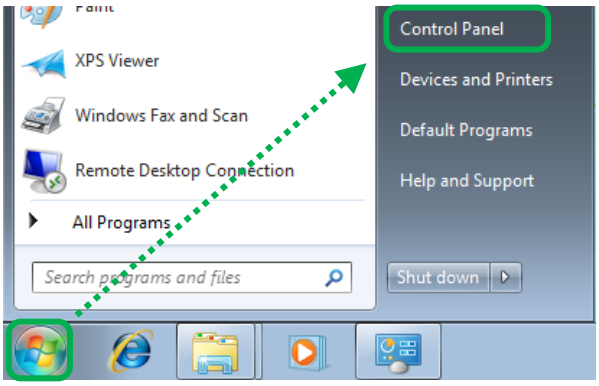
3-2. Uninstallation

This section describes how to delete the software from the hard disk.
Before starting the uninstallation, exit from all the programs that are related to this software.

< Procedures >

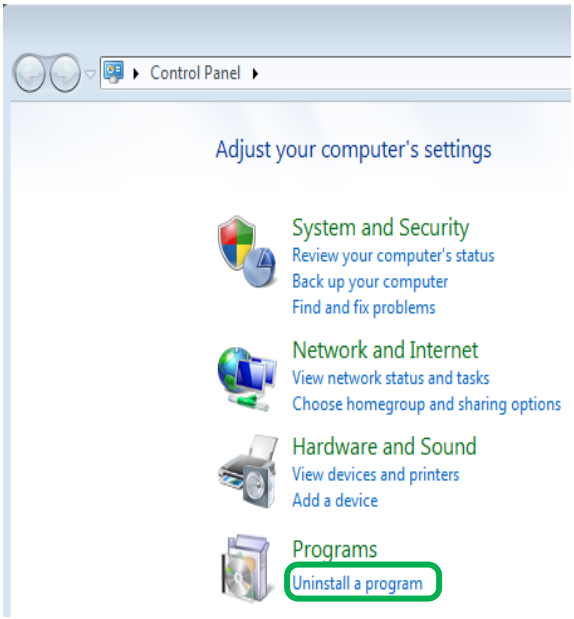
(1) Open a Control Panel.

Click in following order
[Start] → [Control Panel].



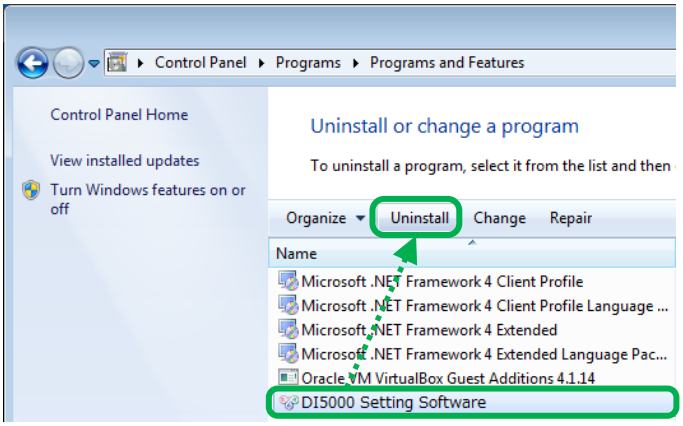
(2) Click [Uninstall a program].

After the Control Panel appears, click [Uninstall a program].



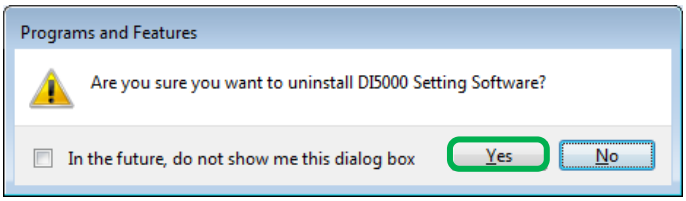
(3) Delete [DI5000 Setting Software].

Select [DI5000 Setting Software] from a list, then click [Uninstall].



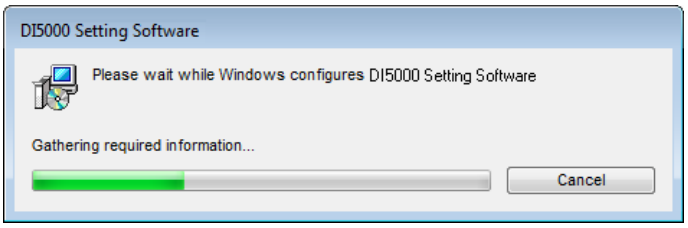
(4) Click [Yes].

Click [Yes], on Programs and Features dialog.



(5) Start the uninstallation.

The uninstallation is started. The dialog indicating the progress of the uninstallation appears. Wait until the uninstallation completes. When the uninstallation is completed, the dialog shown right is closed automatically.



***At this point, a folder related to the software still remains. To delete the folder completely, delete the related folder "DI5000 Setting Software" by Windows Explorer. The location of the folder is shown in the table below**

【Location of the folder related to the software】

OS	Location of the folder
Windows XP	C:¥Documents and Settings¥All Users¥Application Data¥ DI5000 Setting Software
Windows 7	C:¥ProgramData¥ DI5000 Setting Software
Windows 8	C:¥ProgramData¥ DI5000 Setting Software

4. Startup and Exit of the Software

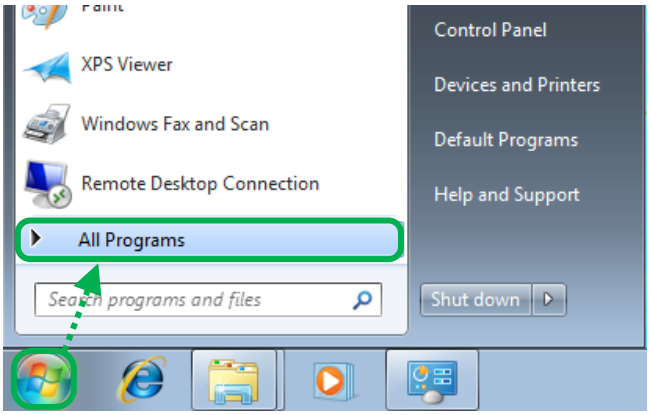
4-1. Startup

This section describes how to startup the software.

< Procedures >

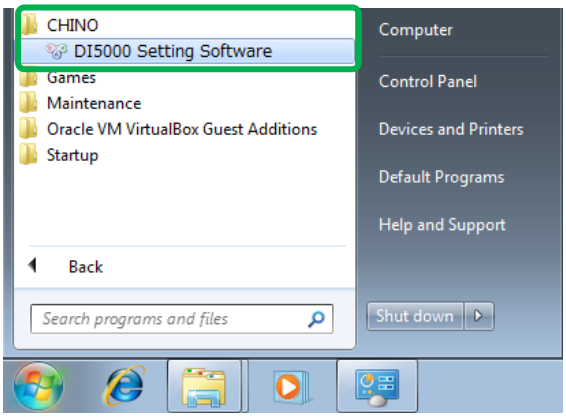
(1) Display [All Programs].

Click [Start] → [All Programs].



(2) Startup DI5000 Setting Software.

Next, click
[CHINO] → [DI5000 Setting Software]
to start up the software.

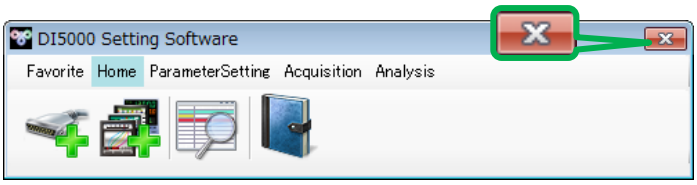


4-2. Exit

This section describes how to exit the software.

< Procedures >

Click [X] on the right end of the title bar and close the Main Operation window.



5. How to Operate

This section describes how to operate the application.

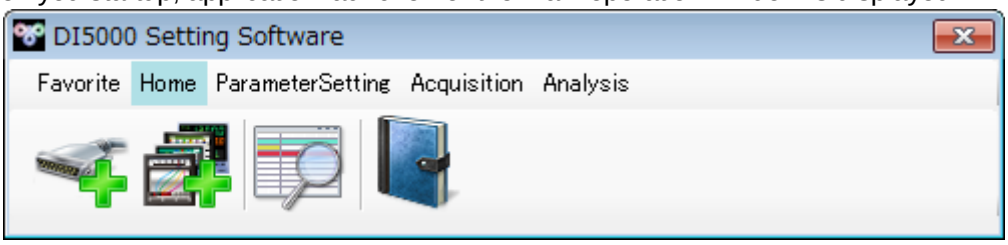
***The images used in the description are in the development phase. Please note that there may be differences between the actual images on the screen and images on this document.**

5-1. How to operate

< Procedures >

(1) Start this software.

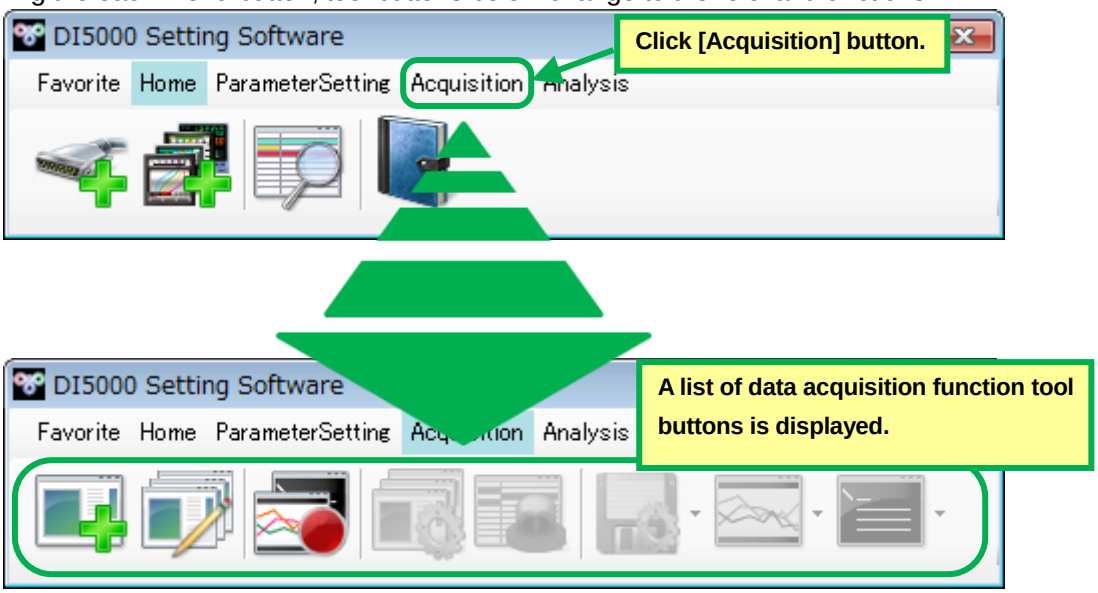
When you startup, application launcher for the main operation window is displayed.



(2) Select a function.

Five main functions are available at the application launcher.

From the left of menu bar, there are [Favorite], [Home], [ParameterSetting], [Acquisition] and [Analysis]. By clicking the each menu button, tool buttons below change to the relevant functions.



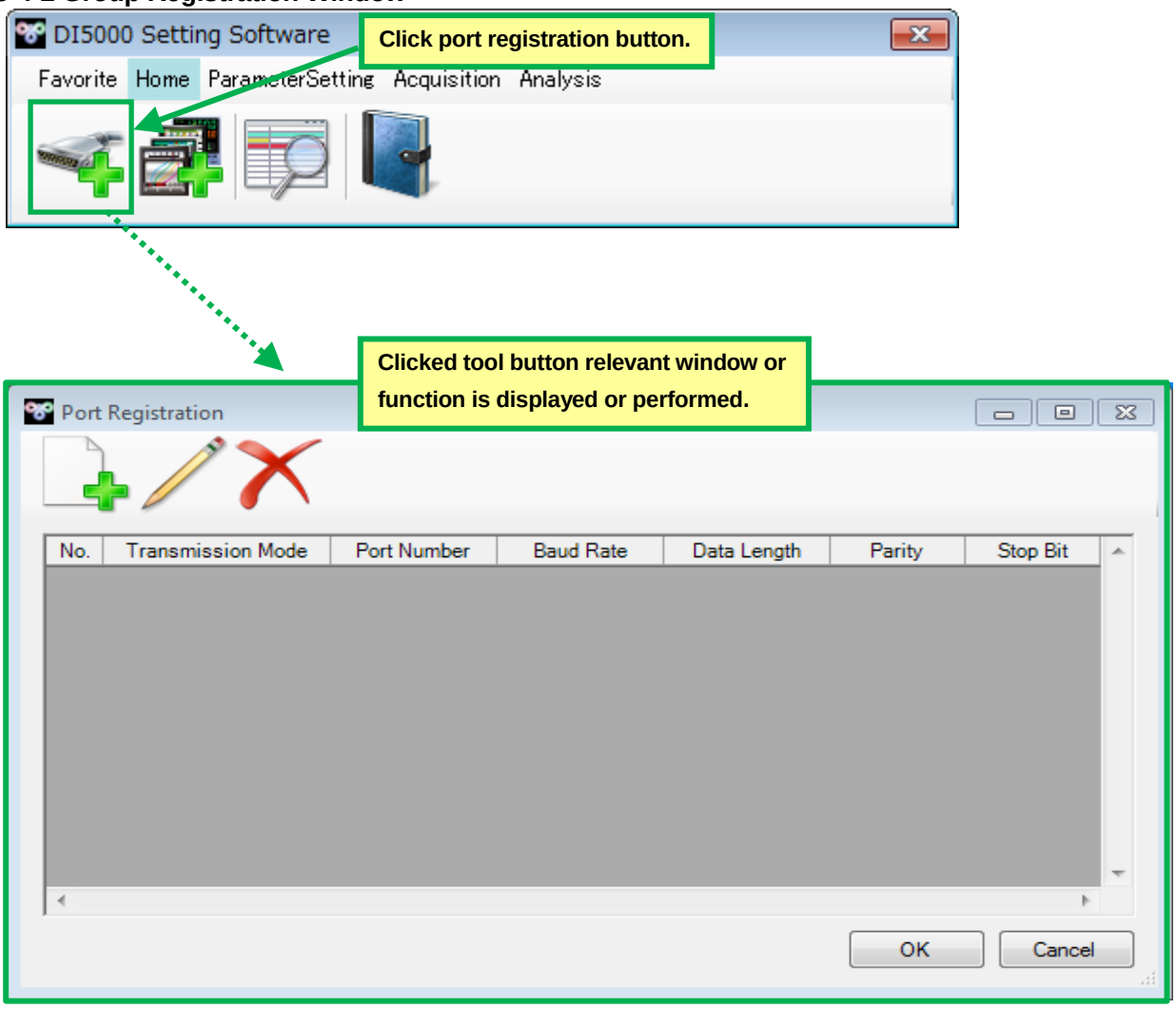
(3) Startup of each function.

After (2) Select a function, click tool button below.

By clicking the tool button, relevant function and/or window/dialog is started up.

***Maximum 10 screen can be opened. However following screen is excluded.**

- **"5-2-1 Port Registration Window"**
- **"5-2-2 Device Registration Window"**
- **"5-2-4 Version Information Dialog"**
- **"5-4-1 Data Registration Window"**
- **"5-4-2 Group Registration Window"**



(4) Exit this software.

Close the application launcher for main operation window.

Remarks **Precautions at exit**

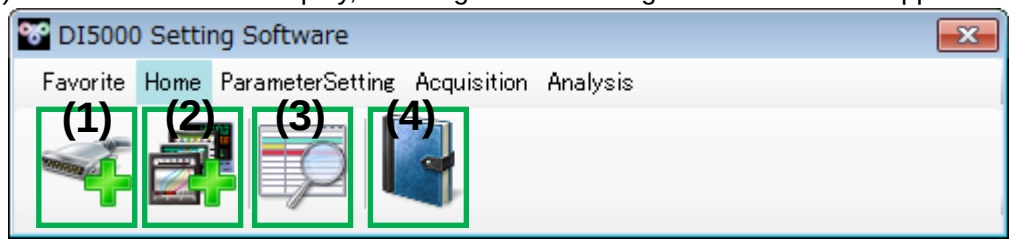
If close the application launcher while setting/acquisition/analysis is running, each of relevant function and window is also closed. For exit of the application, it is recommended to follow the transition of exit the relevant function first then exit the application launcher.

5-2. Operation of Home

Home provides whole application related registration of setting information and monitoring of condition etc.

< Name of home parts at application launcher >

Utilizing following functions (1) Port Registration, (2) Device Registration, (3) Summary Display, (4) Version Information Display, it manages basic setting information of this application.



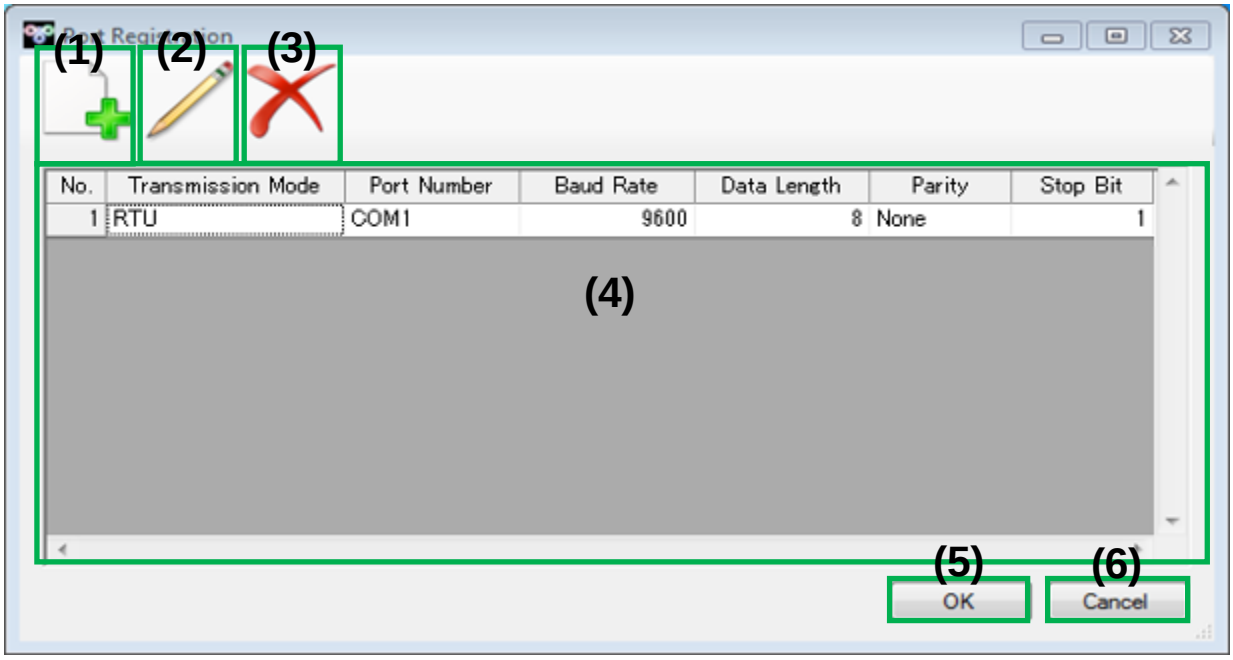
No.	Name	Description	Reference
(1)	Port Registration	Displays port registration window. It provides registration, editing and delete function of port setting.	5-2-1
(2)	Device Registration	Displays device registration window. It provides registration, editing and delete function of connecting device setting.	5-2-2
(3)	Summary Display	Displays a list of summary. It also provides setting related to display.	5-2-3
(4)	Version Information Display	Displays a list of version information of this application and DLL of holding devices.	5-2-4

5-2-1. Port Registration Window

It provides registration, editing and deleting of setting information for serial port communication of the application.

< Name of port registration window parts >

Utilizing followings (1) New Registration, (2) Edit, (3) Delete, (4) List of Registered Port Display, (5) OK and (6) Cancel, it sets serial port communication.



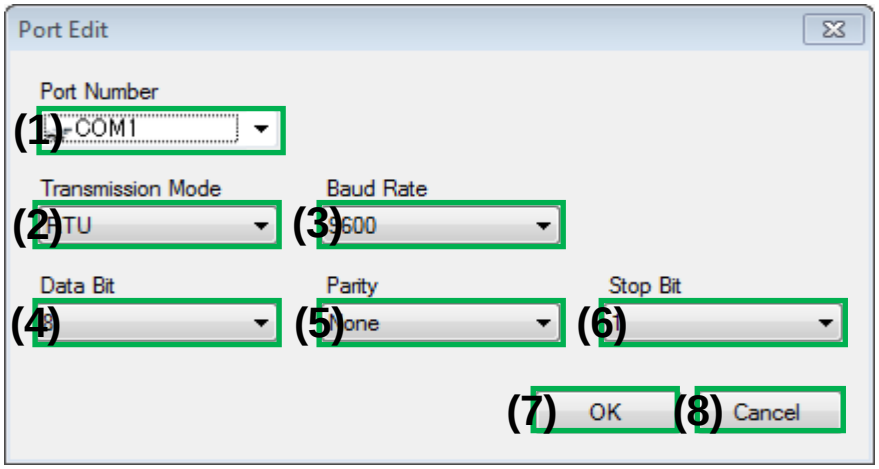
No.	Name	Description	Reference
(1)	New Registration	Displays port editing dialog. Adds new port to list of port information. *Only one port can be registered.	5-2-1-1
(2)	Edit	From registered port setting information, displays port editing dialog. *Only for the edit, double click (4) List of Registered Port Display enables displaying port editing dialog.	5-2-1-1
(3)	Delete	From registered port setting information, delete selected port. *Deleting multiples is available.	-
(4)	List of Registered Port Display	Displays currently registered port setting information.	-
(5)	OK	After starting up port registration window, reflect contents of new registration edit and delete.	-
(6)	Cancel	After starting up port registration window, cancel contents of new registration edit and delete.	-

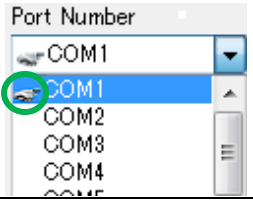
5-2-1-1. Port Edit Dialog

It provides editing function of port registration window; port setting information.

< Name of port edit dialog parts >

Utilizing followings (1) Port Number, (2) Transmission Mode, (3) Baud Rate, (4) Data Bit, (5) Parity, (6) Stop Bit, (7) OK and (8) Cancel, it edits or cancels for a port setting information.



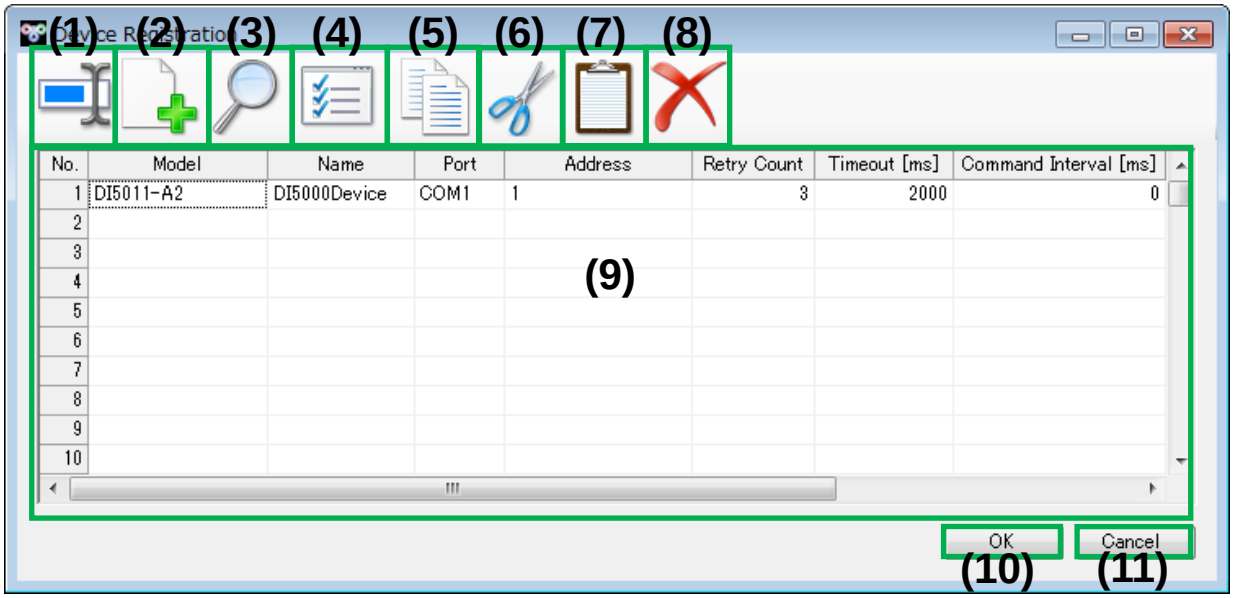
No.	Name	Description
(1)	Port Number	Select a port number from the range of COM1 to COM256. *Icon shown below is displayed for the available port number. 
(2)	Transmission Mode	Select either RTU or ASCII.
(3)	Baud Rate	Select from 9600, 19200 or 38400.
(4)	Data Bit	Select either 7 or 8.
(5)	Parity	Select from None, Even or Odd.
(6)	Stop Bit	Select either 1 or 2.
(7)	OK	Reflects edited port setting information on the port registration window.
(8)	Cancel	Cancels edited port setting information. If it is new registration, cancels add and if it is editing of registered port setting, returns to the prior to the editing.

5-2-2. Device Registration Window

It provides registration, editing and deleting of communication device setting information in the application.

< Name of device registration window parts >

Utilizing followings (1) Model Code Direct Entry, (2) Wizard Registration, (3) Device Scan, (4) Registered Device Detail Setting, (5) Copy, (6) Cut, (7) Paste, (8) Delete, (9) List of Registered Device Display, (10) OK and (11) Cancel, it sets device registration information.



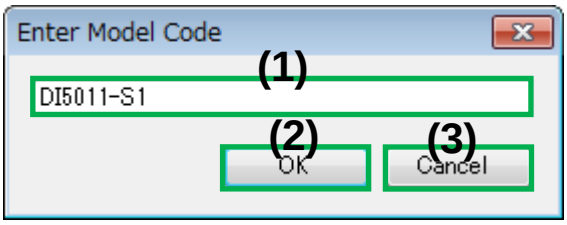
No.	Name	Description	Reference
(1)	Model Code Direct Entry	Displays model code entry dialog. Enter model code of desired device directly.	5-2-2-1
(2)	Wizard Registration	Starts device registration wizard. Specify desired device and each settings etc. from selections.	5-2-2-2
(3)	Device Scan	Displays device scan dialog. Specify communication settings and obtains model code from currently connecting device.	5-2-2-3
(4)	Registered Device Detail Setting	Displays device setting editing dialog. Edit detail setting information of device which model code is fixed.	5-2-2-4
(5)	Copy	Copies device information of select area in the list of registered device. *Shortcut is available with Ctrl + C key.	-
(6)	Cut	Cuts device information of select area in the list of registered device. *Shortcut is available with Ctrl + X key.	-
(7)	Paste	Pastes holding device information obtained by (5) Copy or (6) Cut after the selected row. *Shortcut is available with Ctrl + V key.	-
(8)	Delete	From registered device information, deletes selecting device information. *Deleting multiples is available.	-
(9)	List of Registered Device Display	Displays registered device setting information at present. *Up to 10 devices are able to be registered.	-
(10)	OK	After starting up device registration window, reflects contents of new registration edit and delete.	-
(11)	Cancel	After starting up device registration, cancels contents of new registration edit and delete.	-

5-2-2-1. Model Code Entry Dialog

It provides registration function of device information from device registration window; model code direct entry.

< Name of model code entry dialog parts >

Utilizing followings (1) Model Code Entry, (2) OK and (3) Cancel, it registers or cancel device information.



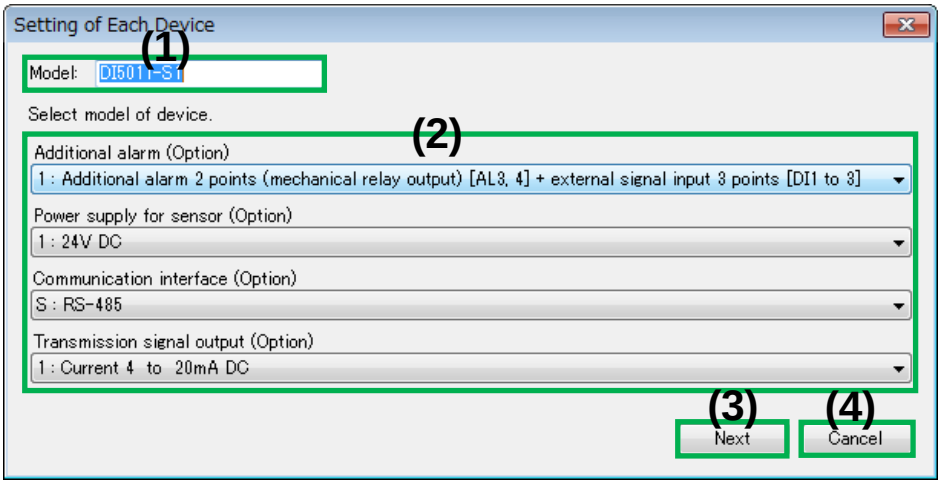
No.	Name	Description
(1)	Model Code Entry Block	Enter desired model code directly.
(2)	OK	Creates and register device information from entered model code. *If entered model code is not included in registerable model code, message of invalid registration appears.
(3)	Cancel	Ignoring entered model code, exit model code entry dialog.

5-2-2-2. Device Registration Wizard

It provides function of registration for device information from device registration window; wizard.

< 1. Name of device registration wizard (setting of each device) parts >

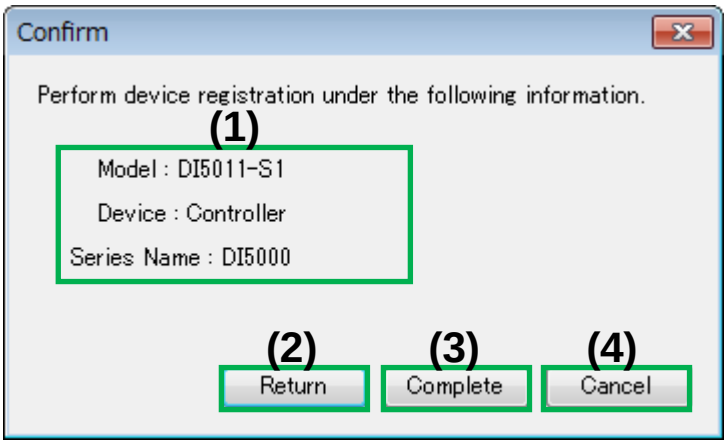
Utilizing followings (1) Model, (2) Model Selection, (3) Next and (4) Cancel, it progresses, regresses or cancels device registration wizard.



No.	Name	Description
(1)	Model	Displays current model code. By selecting (2) Model Selection, contents also changes. *Direct editing cannot be done.
(2)	Model Selection	Determines model by selecting each selection. By selecting each selection, (1) Model also changes.
(3)	Next	For registering device in specified model, it moves to the confirmation dialog.
(4)	Cancel	Ignoring specified model, exit device registration wizard.

< 2. Name of device registration wizard (confirm) parts >

Utilizing followings (1) Confirmation Contents, (2) Return, (3) Complete and (4) Cancel, it completes, regresses or cancels device registration wizard.



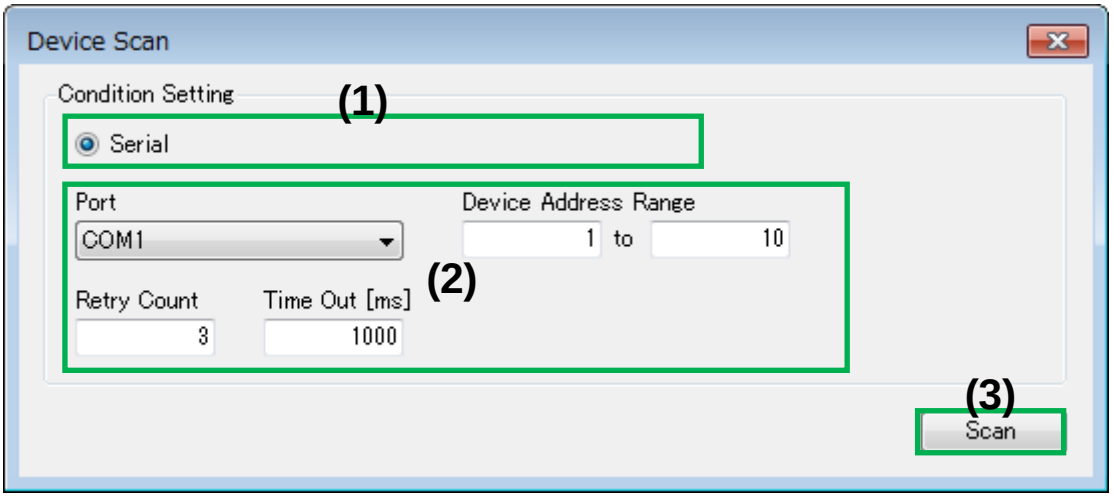
No.	Name	Description
(1)	Confirmation Contents	Registering model, device and series name are displayed.
(2)	Return	Returns to 2. Device registration wizard (setting of each device).
(3)	Complete	Registers the device as confirmed contents.
(4)	Cancel	Ignoring confirmed contents, exit device registration wizard.

5-2-2-3. Device Scan Dialog

It provides function of registration or setting from device registration window; model code scan of connecting device.

< 1. Name of device scan dialog parts >

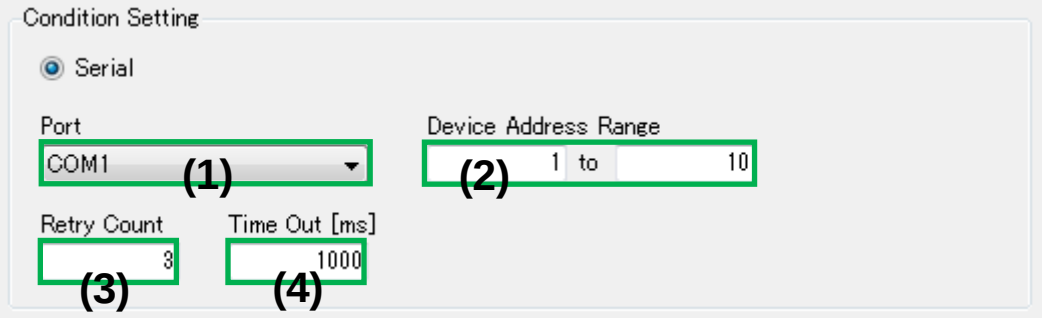
Utilizing followings (1) Communication Method, (2) Communication Condition Setting and (3) Scan, it performs device scan.



No.	Name	Description	Reference
(1)	Communication Method	Select communication methods to the connecting device from serial communication, USB communication or Ethernet communication.	-
(2)	Communication Condition Setting	Set specifics selected at (1) Communication Method Selection.	<2.>
(3)	Scan	Starts device scan under the condition setting set above.	<3.>

< 2. Name of device scan dialog; Serial communication condition setting parts >

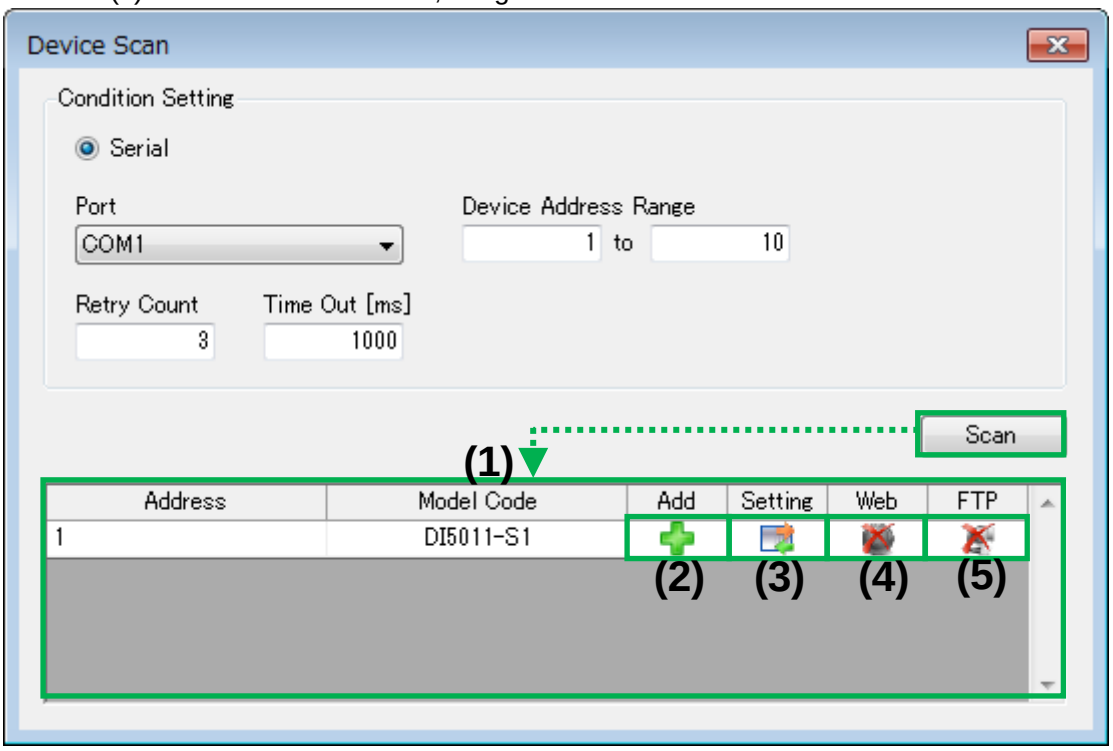
Utilizing followings (1) Port, (2) Device Address Range, (3) Retry Count and (4) Time Out, it sets under these conditions.



No.	Name	Description
(1)	Port	Select arbitrary port from the list of port set on 6-2-1. Port Registration Window.
(2)	Device Address Range	Specify desirable device address range to scan in a range of 1 to 99.
(3)	Retry Count	Specify communication retry count at scan in a range of 0 to 50.
(4)	Time Out	Specify communication time out at scan in a range of 0 to 10000.

< 3. Name of device scan dialog; dialog after the scanning parts >

Utilizing following functions (1) List of Scan Result, (2) Add Button, (3) Setting Button, (4) Web Connection Button and (5) FTP Connection Button, it registers or sets device information.



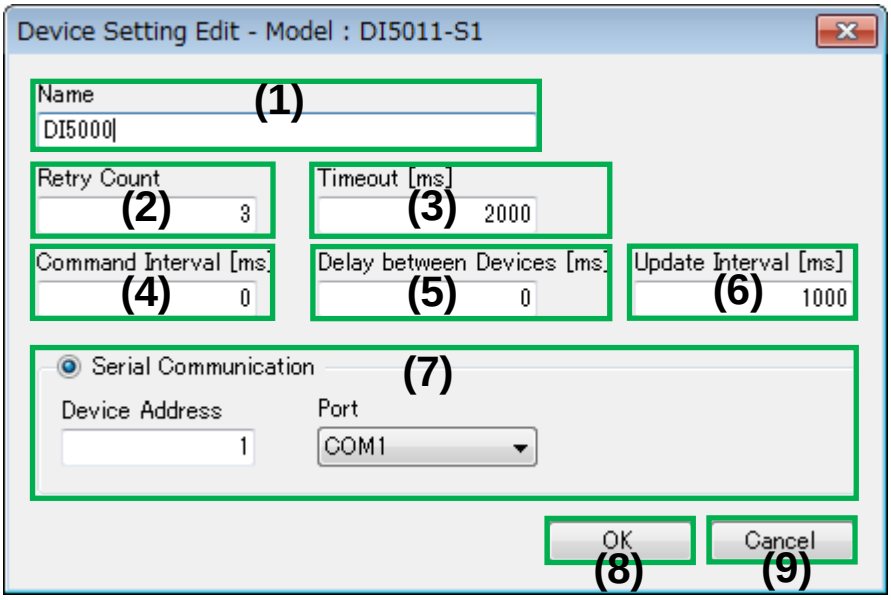
No.	Name	Description
(1)	List of Scan Result	After scan of connecting device, displays address which model code has been read and list of device model code. *Display is blank before the scan.
(2)	Add Button	Adds device information to the list of device registration by utilizing device model code of target row.
(3)	Setting Button	Startups parameter setting dialog for the device found by device scan. *Refer to 6-3-1. Parameter Setting for details.
(4)	Web Connection Button	By utilizing standard browser, displays Web setting dialog for target device. *Operation is available only if the target device supports Web setting.
(5)	FTP Connection Button	By utilizing standard browser, displays FTP setting dialog for target device. *Operation is available only if the target device supports FTP setting.

5-2-2-4. Device Setting Edit Dialog

It provides editing functions of device setting information.

< Name of device setting edit dialog parts >

Utilizing following functions (1) Name, (2) Retry Count, (3) Time Out [ms], (4) Command Interval [ms], (5) Delay between Devices [ms], (6) Update Interval [ms], (7) Serial Communication Setting, (8) OK and (9) Cancel, it edits or cancels device setting information.



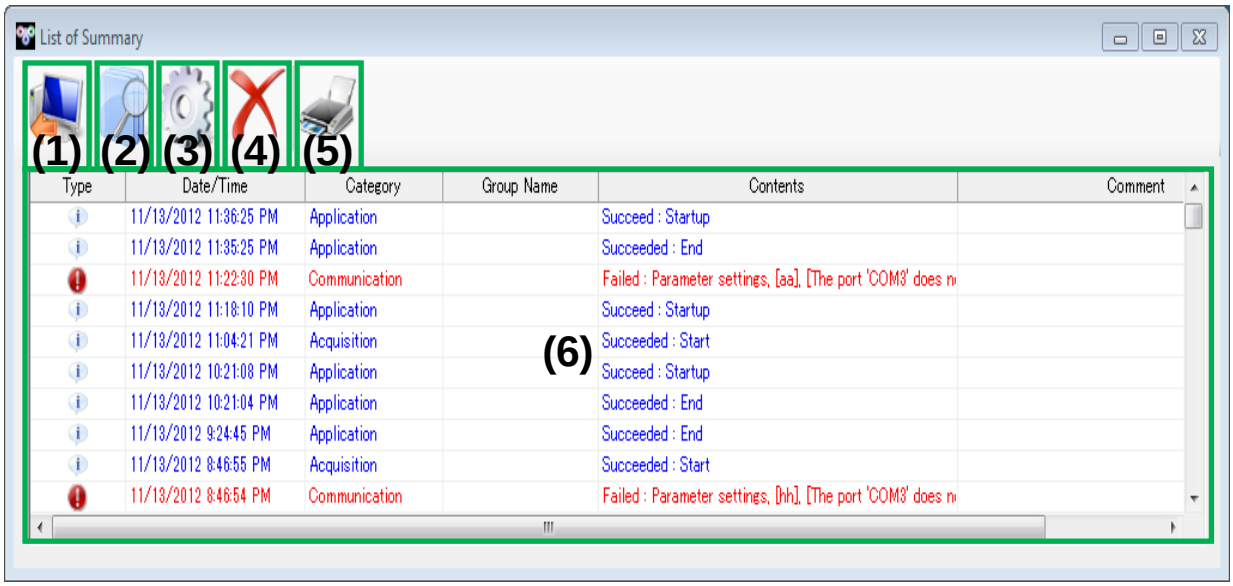
No.	Name	Description
(1)	Name	Specify device name to display. Up to 30 characters are able to be entered.
(2)	Retry Count	Specify retry count at communication in a range of 0 to 50.
(3)	Time Out [ms]	Specify response time out [ms] at communication in a range of 0 to 10000.
(4)	Command Interval [ms]	Specify sending command interval [ms] at communication in a range of 0 to 10000.
(5)	Delay between Devices [ms]	Specify delay between devices [ms] at acquisition in a range of 0 to 10000.
(6)	Update Interval [ms]	Specify update interval [ms] at communication in a range of 0 to 3600.
(7)	Serial Communication Setting	Specify device address for serial communication in a range of 1 to 99 and select and specify a port from the ports registered at 6-2-1.Port Registration Window.
(8)	OK	Retains setting information on the device setting edit dialog and reflects setting contents on device registration window.
(9)	Cancel	Ignores setting information on the device setting edit dialog and cancels reflecting setting contents on device registration window.

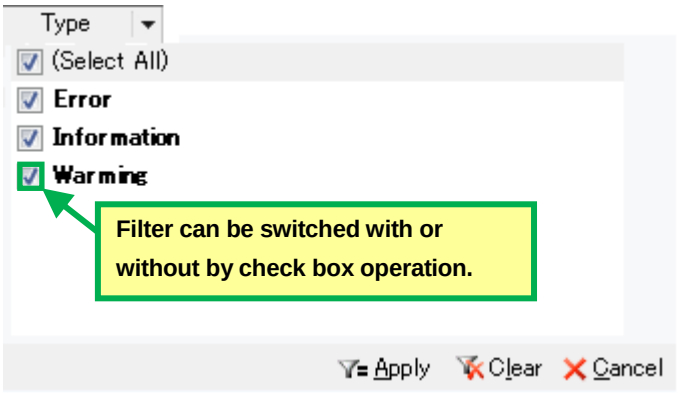
5-2-3. Summary Display Window

It provides function which accumulates fragmental process information in the application and display as a list.

< Name of summary display window parts >

Utilizing following functions (1) Export, (2) Summary Search, (3) Setting, (4) Delete, (5) Print and (6) List of Summary Display, it displays summary information for browsing.



No.	Name	Description	Reference
(1)	Export	Output currently displaying list of summary as a file. *Select file format from CSV, Text or Excel.	-
(2)	Summary Search	Displays summary search dialog. Search specified summary information by entering search condition.	5-2-3-1
(3)	Setting	Performs various settings for summary display window.	5-2-3-2
(4)	Delete	Delete selected summary information from displayed summary. *Deleting multiples is available.	-
(5)	Print	Output currently displayed list of summary as a print.	-
(6)	List of Summary Display	Accumulates and displays fragmental process information in the application. Sort filter function is at header of each column. By utilizing filter window shown below, specify desired event type to display.  *With check mark: Displays/Without check mark: Hidden *Right click sub menu: Resets sort. Clicking the button resets sort status.	-

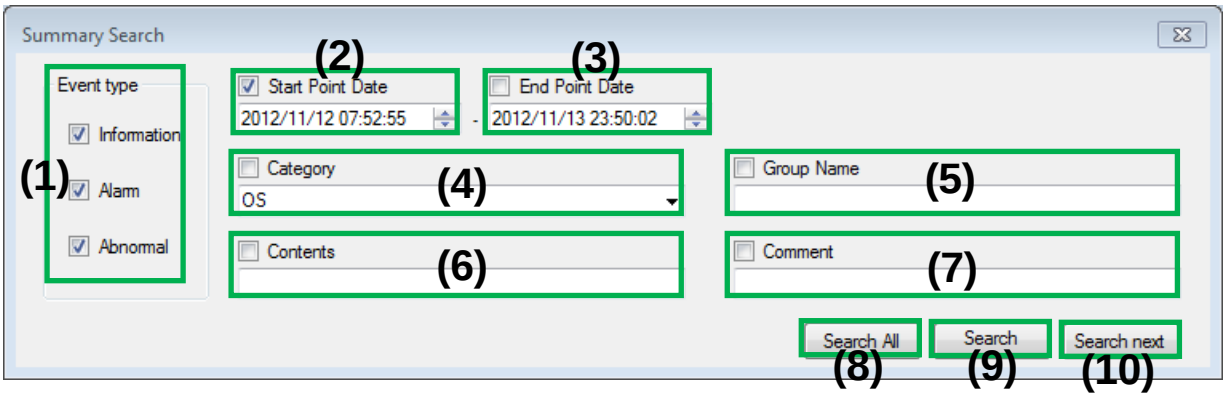
5-2-3-1. Summary Search Dialog

It provides search function by specifying multiple search conditions and search from list of summary.

< 1. Name of summary search dialog parts >

Utilizing followings (1) Event Type Selection, (2) Start Point Date, (3) End Point Date, (4) Category, (5) Group Name, (6) Contents, (7) Comment, (8) Search All, (9) Search Previous and (10) Search Next, it perform search process for list of summary.

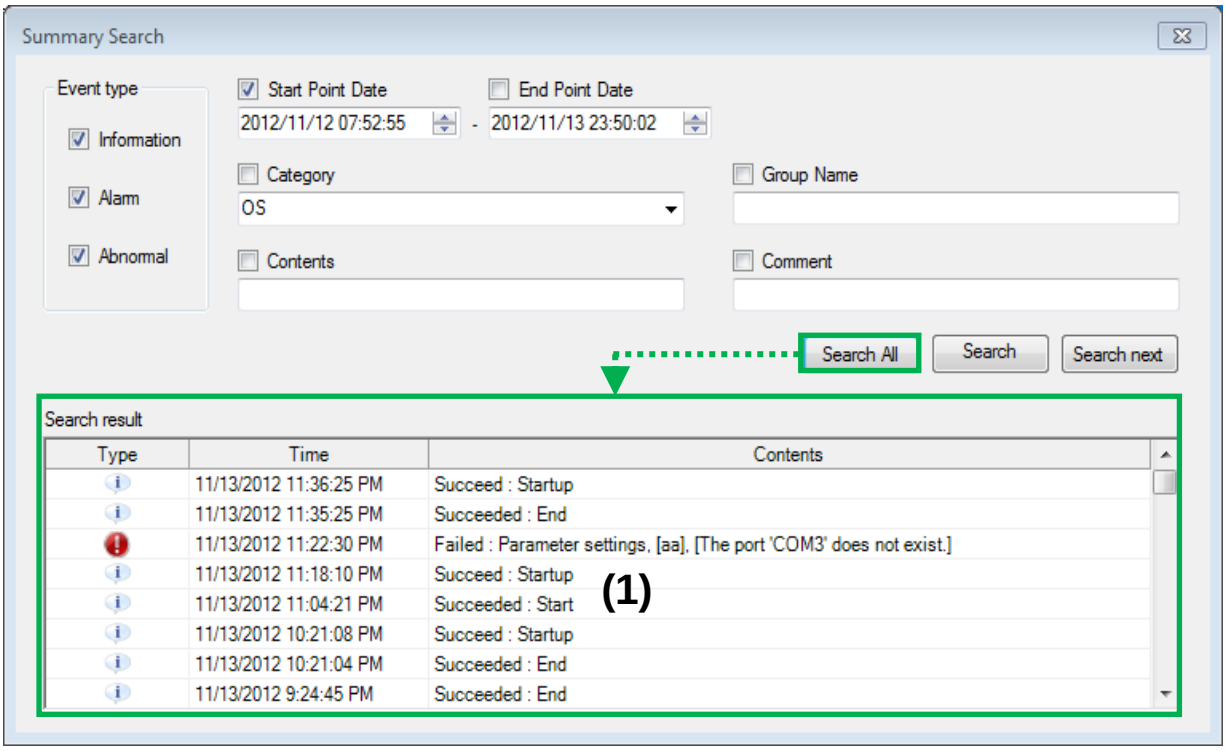
***For specifying multiple condition except for event type, all are searched by AND condition.**



No.	Name	Description	Reference
(1)	Even Type Selection	Specify event type. All three types; information, alarm and abnormal are specified as default value. If searching only for limited event information, check only desired event type.	-
(2)	Start Point Date	Specify the start point date. By checking the checkbox enables the function.	-
(3)	End Point Date	Specify the end point date. By checking the checkbox enables the function.	-
(4)	Category	Specify summary event category from selection or input directly. By checking the checkbox enables the function.	-
(5)	Group Name	Specify group name by input directly. By checking the checkbox enables the function.	-
(6)	Contents	Specify contents by input directly. By checking the checkbox enables the function.	-
(7)	Comment	Specify comments by input directly. By checking the checkbox enables the function.	-
(8)	Search All	Searches all the information matches to specified condition from the list of summary and displays in list of result.	<2.>
(9)	Search Previous	Search information matches to specified condition from the list of summary upward.	-
(10)	Search Next	Search information matches to specified condition from the list of summary downward.	-

< 2. Name of summary search dialog (list of search result display) parts >

Utilizing followings (1) List of Summary Result Display, it perform search process for list of summary.



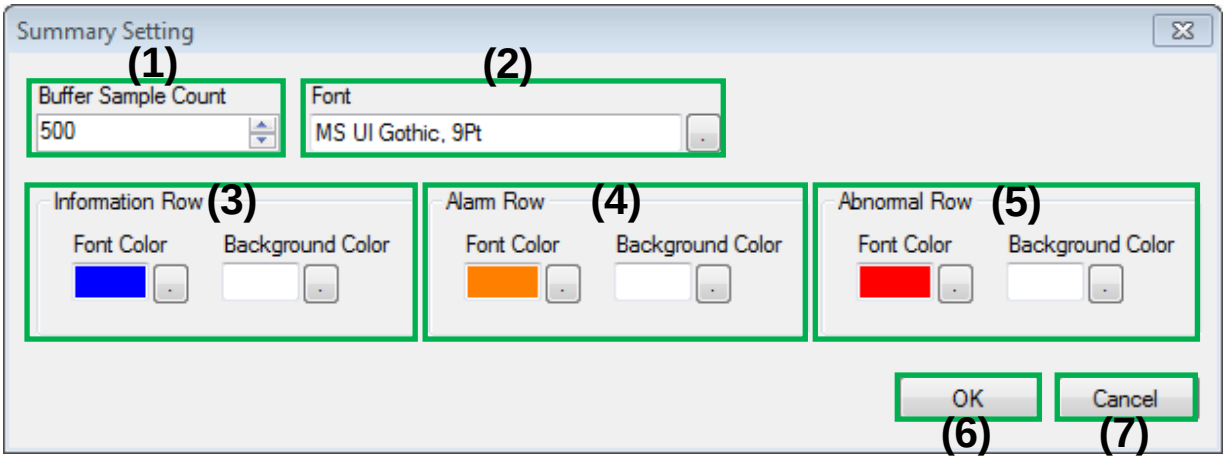
No.	Name	Description
(1)	List of Summary Result Display	Displays all the search result matches to the search condition. Double clicking summary information on the list of search result highlights target summary information on the summary display window. *Before clicking Search All, list of search result is hidden.

5-2-3-2. Summary Setting Dialog

It provides setting functions of summary display window; list of summary display.

< Name of summary setting dialog parts >

Utilizing followings (1) Buffer Sample Count, (2) Font, (3) Information Row Setting, (4) Alarm Row Setting, (5) Abnormal Row Setting, (6) OK and (7) Cancel, it perform setting process for list of summary display.



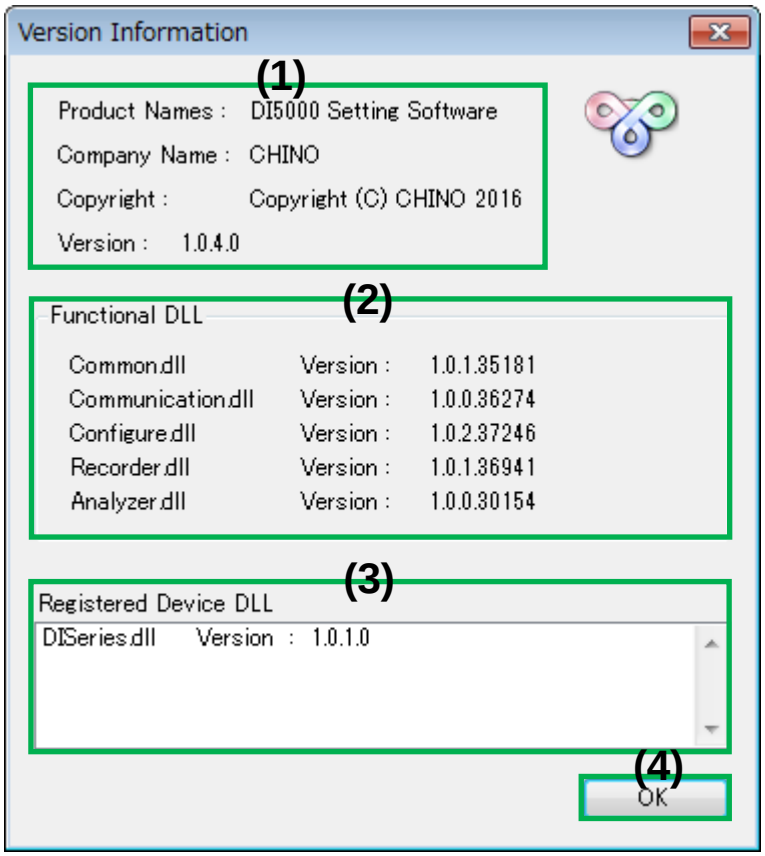
No.	Name	Description
(1)	Buffer Sample Count	Specify summary information count which this application retains in a range of 50 to 5000. Summary information in the range of specified count is kept although application exit and the information can be browsed at next startup.
(2)	Font	Specify font information of summary display window.
(3)	Information Row Setting	Specify summary font color and background color for information event.
(4)	Alarm Row Setting	Specify summary font color and background color for alarm event.
(5)	Abnormal Row Setting	Specify summary font color and background color for abnormal event.
(6)	OK	Retains setting information on the summary setting dialog and reflects setting contents on the summary display window.
(7)	Cancel	Ignores setting information on the summary setting dialog and cancels reflecting setting contents on the summary display window.

5-2-4. Version Information Dialog

It provides function of displaying list of version information for this application and device DLL which this application retains.

< Name of version information dialog parts >

Utilizing followings (1) Basic Application Information, (2) DLL Information for Each Function, (3) Registered Device DLL Information and (4) OK, it displays version information.



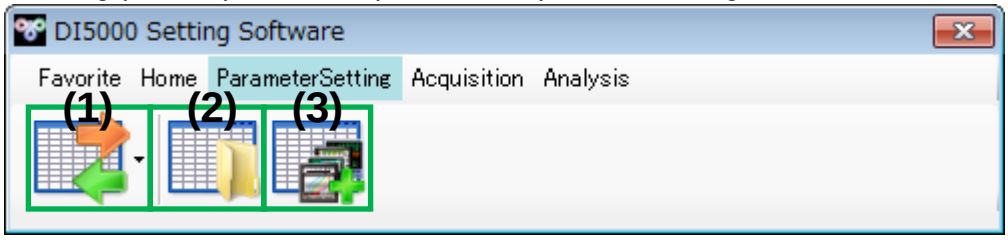
No.	Name	Description
(1)	Basic Application Information	Displays main EXE version information of this application.
(2)	DLL Information for Each Function	Displays DLL version information for each function used in this application.
(3)	Registered Device DLL Information	Displays DLL version information which have connecting device information used in this application. *Information varies depending on the extension of registered DLL.
(4)	OK	Close the version information dialog.

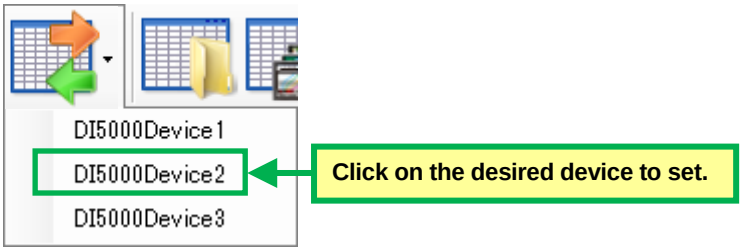
5-3. Operation of Parameter Setting

It provides function of parameter setting for the device registered at 5-2-2. Device Registration Window or for device parameter file which have been output.

< Name of parameter setting at launcher >

Utilizing following (1) Registered Device Setting, (2) Parameter File Setting (file start) and (3) Parameter File Setting (model specified start) it sets each parameter of registered device.



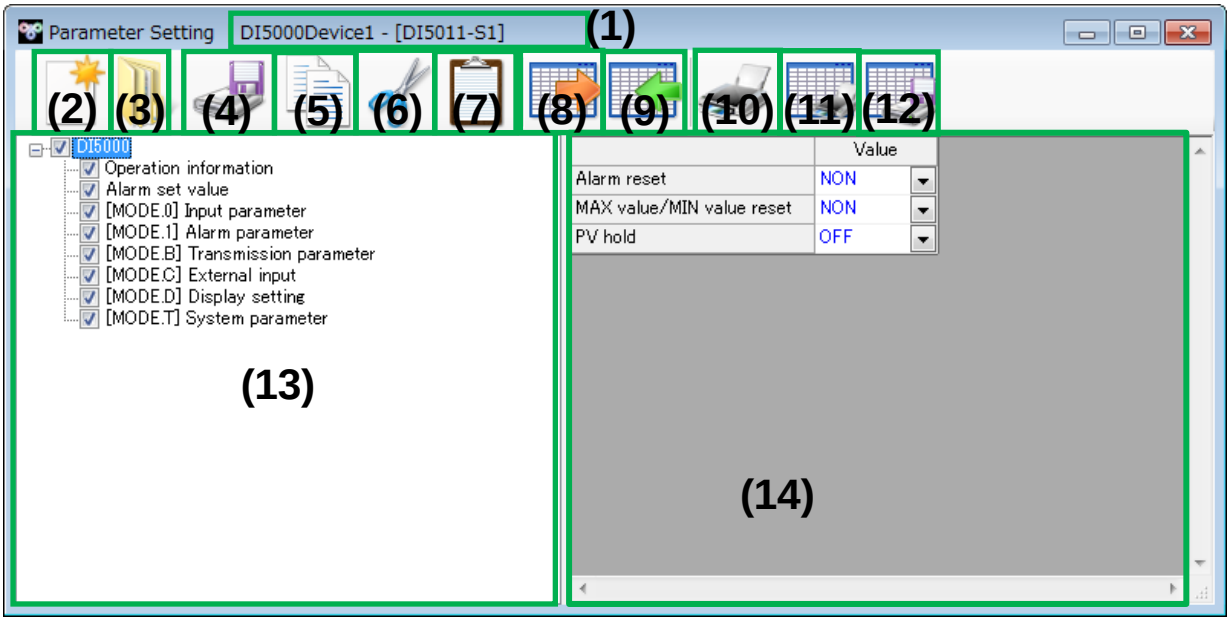
No.	Name	Description	Reference
(1)	Registered Device Setting	· List of registered device is displayed by clicking on the dropdown button. · Select desired registered device to set from the list of registered device.  · Displays parameter setting window. *Contents of setting item differ depending on the specified device.	5-3-1
(2)	Parameter File Setting (file start)	· File open dialog is displayed to search for parameter file etc. · Display parameter setting window (off-line) by using specified parameter file. *Contents of setting item differ depending on the specified device.	5-3-2
(3)	Parameter File Setting (model specified start)	· Device selection wizard starts to specify a device to set parameter file. · Display parameter setting window (off-line) by using specified device model specified on selection method. *Contents of setting item differ depending on the specified device. *Device selection wizard is similar to 5-2-2-2. Device Registration Wizard	5-3-2

5-3-1. Parameter Setting Window

It provides parameter setting function for registered device.
At startup of the window, it starts up reading setting function for the registered device. If reading is succeeded, current setting value is reflected on the window.

< Name of parameter setting window parts >

Utilizing followings (1) Registered Device Information, (2) New, (3) Open File (4) Save As, (5) Copy, (6) Cut, (7) Paste, (8) Write Settings, (9) Read Settings, (10) Print, (11) Print List of Setting Information (Device dedicated format), (12) CSV Output List of Setting Information (Device dedicated format), (13) List of Setting Value Category and (14) Setting Value Input, it sets parameter for registered device.



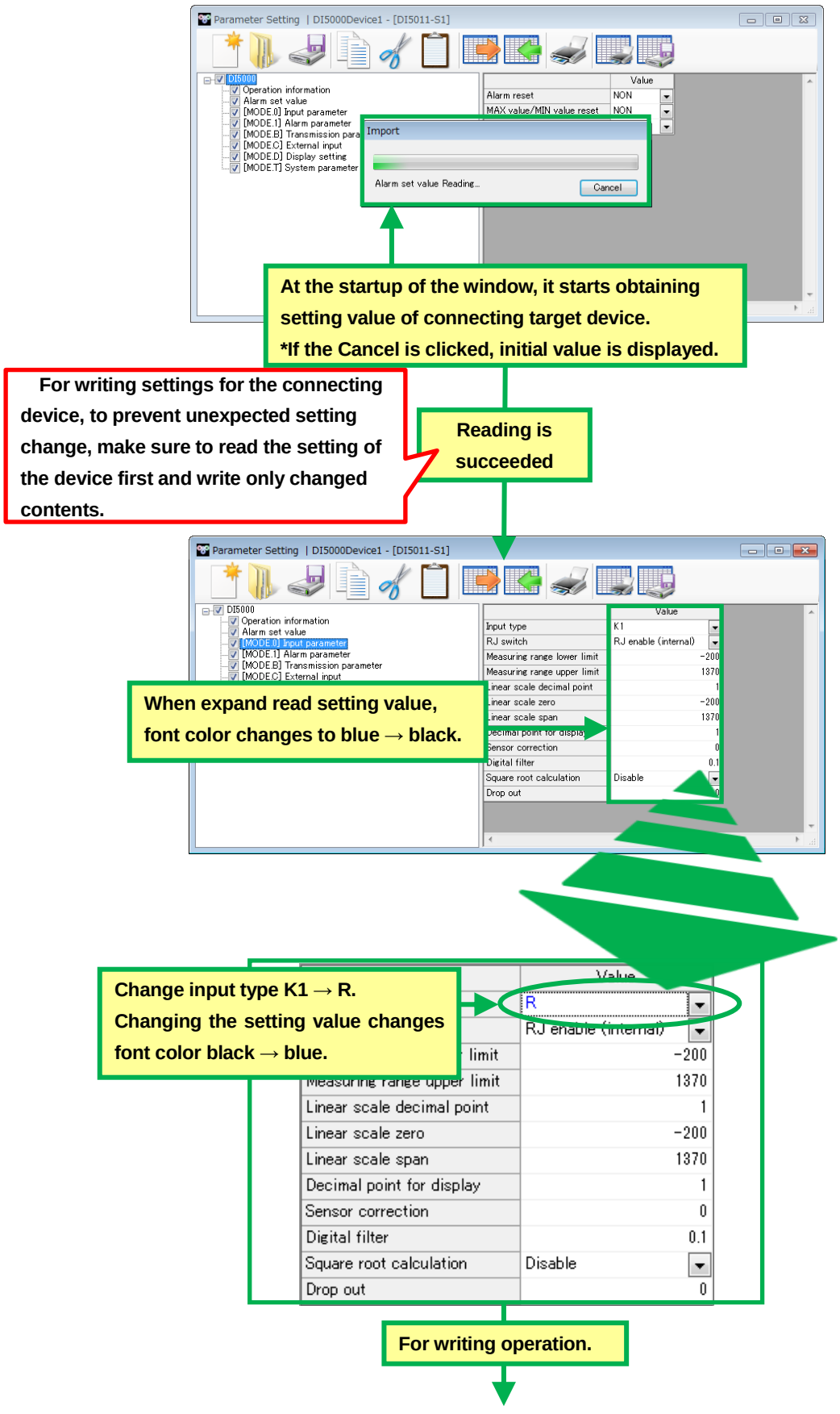
No.	Name	Description	Reference
(1)	Registered Device Information	Displays display name and model code of registered device.	-
(2)	New	Expand new setting file on the window. *Setting contents on the window will be initialized, perform (4) Save As if it's necessary.	-
(3)	Open File	Specifies device parameter setting file (*.pasconf) and expand on the window. *Confirmation message asking whether or not to rewrite registered device model is displayed when setting file which have different model code is read. Select "Yes" to rewrite and "No" to leave as it is. (Setting file is read only if "Yes" is selected.)	-
(4)	Save As	Specifies file name and save current setting contents as device parameter setting file (*.pasconf) format.	-
(5)	Copy	Copy selected cell information on the (12) Setting Value Input. *Shortcut is available with Ctrl + C key.	-
(6)	Cut	Cut selected cell information on the (12) Setting Value Input. *Shortcut is available with Ctrl + X key.	-

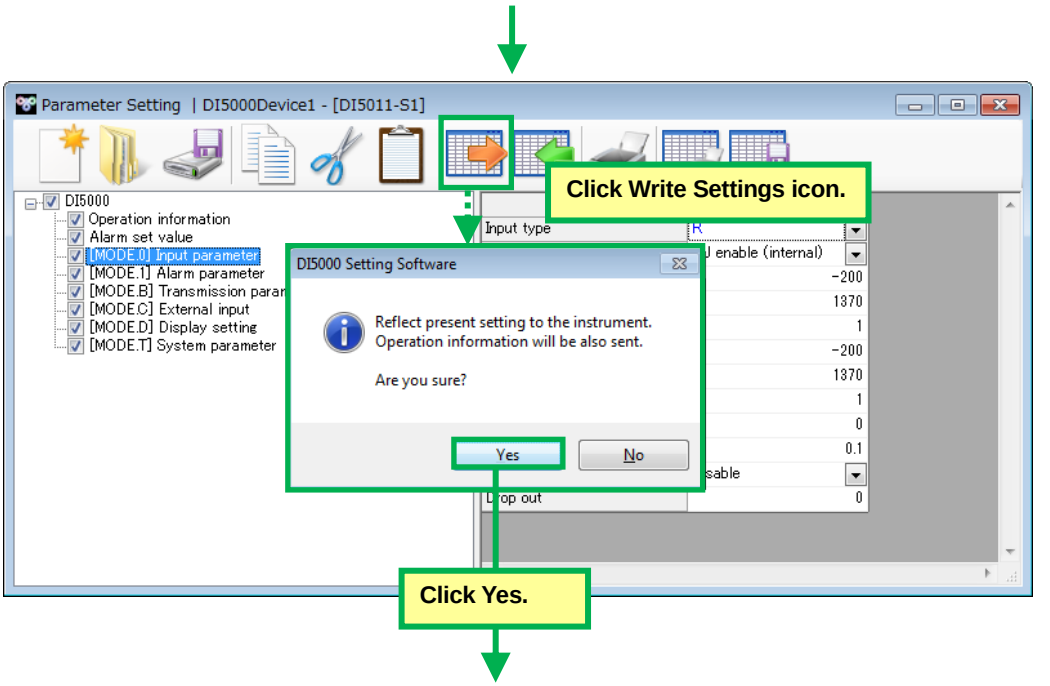
No.	Name	Description	Reference
(7)	Paste	Paste retained cell information by (5) Copy or (6) Cut after the selected cell. *If data type of the cell is different, it cannot be pasted. *Shortcut is available with Ctrl + V key.	-
(8)	Write Settings	Write setting value checked on the (11) List of Setting Value Category to the device.	5-3-1-1
(9)	Read Settings	Read setting value checked on the (11) List of Setting Value Category from the device.	5-3-1-1
(10)	Print	Print setting value checked on the (11) List of Setting Value Category.	-
(11)	Print List of Setting Information (Device dedicated format)	Print list of setting information of target model device.	
(12)	CSV Output List of Setting Information (Device dedicated format)	Output list of setting information of target model device in CSV.	
(13)	List of Setting Value Category	Displays list of setting device category of target registered device as tree view. Each category has checkbox and with the check mark, it is included as process target and without check mark, it is excluded from process target. Selecting the target item expand setting value group on the (12) Setting Value Input for each category.	5-3-1-2
(14)	Setting Value Input	Setting value group for item selected on the (11) List of Setting Value Category is expanded and displayed. Inputted or changed values in this part are set as parameters by (8) Write Settings. *Enable value to be set may vary depending on the model code or relating peripheral setting value.	-

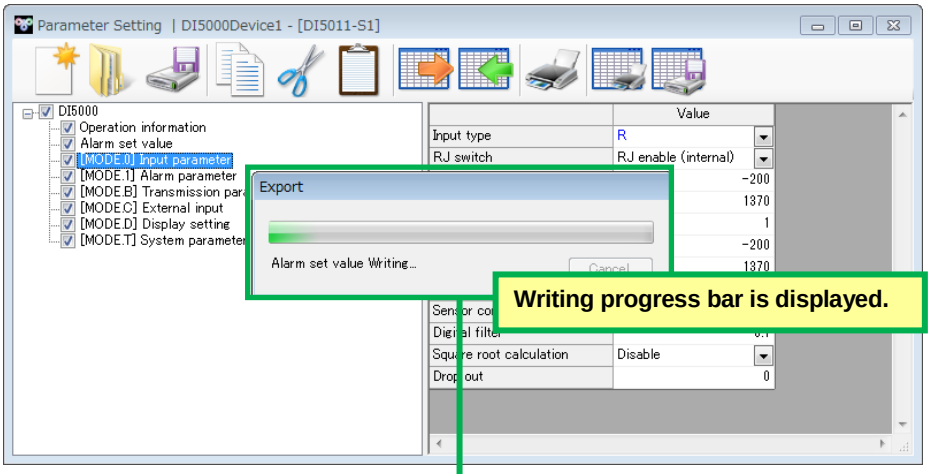
5-3-1-1. Flow of Parameter Setting

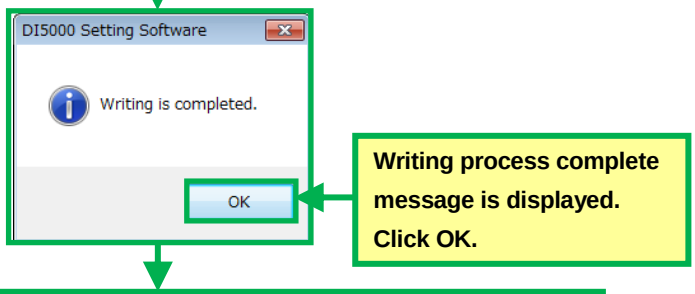
This section describes operation of communication with the device and reading/writing of the parameter settings from the parameter setting window startup as flow chart.

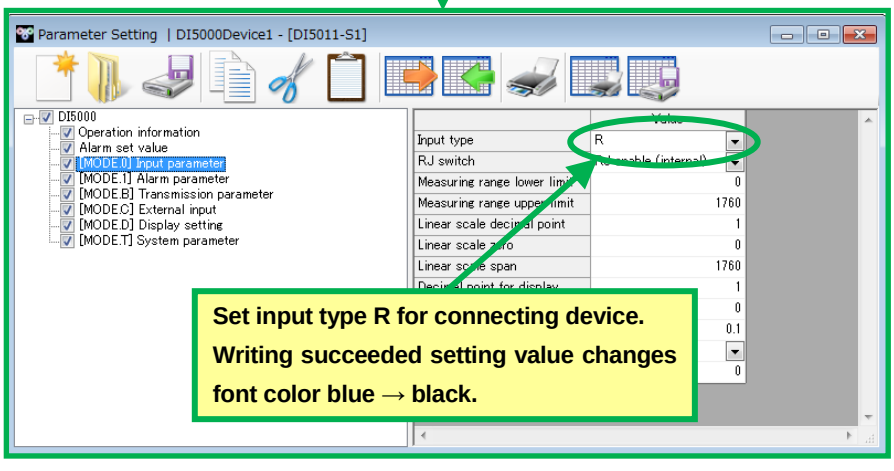
< Operation image of parameter setting window >




Parameter Setting | DI5000Device1 - [DI5011-S1]
Click Write Settings icon.
DI5000 Setting Software
Reflect present setting to the instrument.
Operation information will be also sent.
Are you sure?
Yes
No
Click Yes.


Parameter Setting | DI5000Device1 - [DI5011-S1]
Export
Alarm set value Writing...
Writing progress bar is displayed.


DI5000 Setting Software
Writing is completed.
OK
Writing process complete message is displayed.
Click OK.

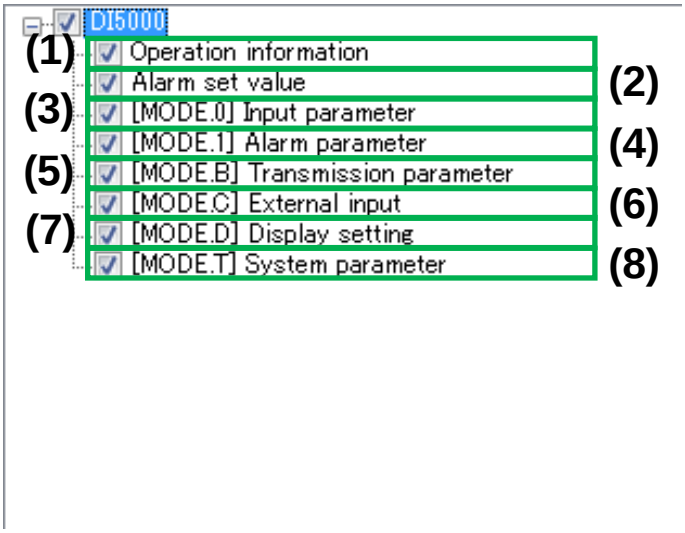

Parameter Setting | DI5000Device1 - [DI5011-S1]
Set input type R for connecting device.
Writing succeeded setting value changes font color blue → black.

5-3-1-2. List of Setting Value Category (DI5000)

It provides function of displaying list of setting value category for communication target device and expends setting parameter on the parameter setting window when specified category is selected. Each category has checkbox so switch of including to process target is also available.

< Setting Value Category List – Each Parameter Name >

Utilizing followings (1) Operation Information, (2) Alarm Set Value, (3) [MODE.0] Input Parameter, (4) [MODE.1] Alarm Parameter, (5) [MODE.B] Transmission Parameter, (6) [MODE.C] External Input Parameter, (7) [MODE.D] Display Setting Parameter, and (8) [MODE.T] System Parameter, it sets for category.



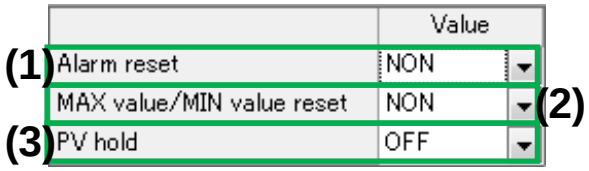
No.	Name	Description	Reference
(1)	Operation Information	Displays operation information category. When specified, expand setting parameter at the setting value input.	This section (a)
(2)	Alarm Set Value	Displays alarm set value category. When specified, expand setting parameter at the setting value input.	This section (b)
(3)	[MODE.0] Input Parameter	Displays input parameter category. When specified, expand setting parameter at the setting value input.	This section (c)
(4)	[MODE.1] Alarm Parameter	Displays alarm parameter category. When specified, expand setting parameter at the setting value input.	This section (d)
(5)	[MODE.B] Transmission Parameter	Displays transmission parameter category. When specified, expand setting parameter at the setting value input	This section (e)
(6)	[MODE.C] External Input Parameter	Displays external input parameter category. When specified, expand setting parameter at the setting value input.	This section (f)
(7)	[MODE.D] Display Setting Parameter	Displays display setting parameter category. When specified, expand setting parameter at the setting value input.	This section (g)
(8)	[MODE.T] System Parameter [MODEt]	Displays system parameter category. When specified, expand setting parameter at the setting value input.	This section (h)

(a) Operation Information

It provides function of editing operation information.

< Name of operation information each setting value >

Utilizing following various setting values (1) Alarm Reset, (2) MAX Value/ MIN Value Reset and (3) PV Hold, it edits operation information.



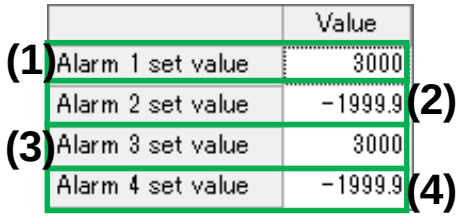
No.	Name	Description
(1)	Alarm Reset	Select and specify alarm reset setting form NON or RESET (alarm reset). *Immediately after writing of RESET (alarm reset), it is switched to NON.
(2)	MAX Value/ MIN Value Reset	Select and specify MAX value/ MIN value reset setting from .NON or RESET (MAX/MIN reset). *Immediately after writing of RESET (MAX/MIN reset), it is switched to NON.
(3)	PV Hold	0 = PV hold OFF 1 = PV hold ON *It is only available if set value other than PV hold is assigned for external contact..

(b) Alarm Set Value

It provides function of editing alarm set value.

< Name of alarm set value each setting value >

Utilizing following various setting values (1) Alarm 1 Set Value, (2) Alarm 2 Set Value, (3) Alarm 3 Set Value and (4) Alarm 4 Set Value, it edits execution parameter.



No.	Name	Description
(1)	Alarm 1 set value	Specify alarm 1 set value to alarm 4 set value in the range of -1999.9 to 3000.0. *Decimal point position is specified as the section (d) Alarm parameter alarm mode as follows. 【PV.H(Absolute value higher limit alarm), PV.L(Absolute value lower limit alarm)】 ・ (c) Input Parameter linear scale decimal point position becomes its decimal point position 【Non (No alarm setting), FAIL (FAIL alarm)】 ・ Decimal point position becomes 0 *If the section (d) Alarm parameter event mode is FAIL (FAIL alarm), writing is not available. *Alarm 3 set value and alarm 4 set value are only displayed if optional alarm 2-point is added to the connecting device specifications.
(2)	Alarm 2 set value	
(3)	Alarm 3 set value	
(4)	Alarm 4 set value	

(c) [MODE.0] Input Parameter

It provides function of editing input parameter.

< Name of input parameter each setting value >

Utilizing following various setting values (1) Input Type, (2) RJ Switch, (3) Measuring Range･Lower Limit, (4) Measuring Range･Higher Limit, (5) Linear Scale Decimal Point, (6) Linear Scale･Zero, (7) Linear Scale･Span, (8) Decimal Point For Display, (9) Sensor Correction, (10) Digital Filter, (11) Square Root Calculation and (12) Drop Out, it edits input parameter.

	Value
(1) Input type	R
RJ switch	RJ enable (internal) (2)
(3) Measuring range lower limit	0
Measuring range upper limit	1760 (4)
(5) Linear scale decimal point	1
Linear scale zero	0 (6)
(7) Linear scale span	1760
Decimal point for display	1 (8)
(9) Sensor correction	0
Digital filter	0.1 (10)
(11) Square root calculation	Disable
Drop out	0 (12)

No.	Name	Description
(1)	Input Type	Select and specify input type of device from following. B/R/S/N/K1/K2/E/J/T/U/L/W-WRe5-26/W-WRe26/NiMo-Ni/ CR-AuFe/PlatinelⅡ/PtRh40-20/Au-Pt/20mV/100mV/5V/10V/20mA/ Pt100Ω1/Pt100Ω2/JPt100Ω1/JPt100Ω2/Pt50Ω/Pt-Co *Writing input type to the connecting device interlocks with the other parameters and updates them; therefor it is recommended to write independently if changing the input type.
(2)	RJ Switch	Select and specify RJ switching from following. RJ (RJ INT), No RJ (RJ EXT) *If input type is thermocouple, setting is not available.
(3)	Measuring Range･ Lower Limit	Specify measuring range lower limit in the measuring range of (1) Input Type. *If specified value is not in the proper relationship with (3) Measuring Range Upper Limit, writing is not available.
(4)	Measuring Range･ Higher Limit	Specify measuring range upper limit in the measuring range of (1) Input Type. *If specified value is not in the proper relationship with (2) Measuring Range Lower Limit, writing is not available.
(5)	Linear Scale Decimal Point	Specify linear scale decimal point. *If (1) Input Type is belonging to thermocouple or resistance thermometer, this setting value is fixed value and specifying to freely selected value is not available. *Writing linear scale decimal point to the connecting device interlocks with the other parameter range and updates them; therefor it is recommended to write independently if changing the linear scale decimal point.
(6)	Linear Scale Zero	Specify linear scale zero position in the range of -19999 to 30000. *Decimal point position is interlocking with (5) Linear Scale Decimal Point. *If (1) Input Type is other than 20mV, 100mV, 5V, 10V or 20mA, writing is not available.
(7)	Linear Scale Span	Specify linear scale span in the range of -19999 to 30000. *Decimal point position is interlocking with (5) Linear Scale Decimal Point. *If (1) Input Type is other than 20mV, 100mV, 5V, 10V or 20mA, writing is not available.
(8)	Decimal Point for Display	Specify PV and/or SV decimal point position for operation window from the range of 0 to 4.
(9)	Sensor Correction	Specify sensor correction in the range of -19999 to 20000. (MAX 3 digits) *Decimal point position is PV decimal point (fixed value of each (1) Input Type)+1 digit
(10)	Digital Filter	Specify digital filter in the range of 0.0 to 99.9. *0.0=OFF
(11)	Square Root Calculation	Select and specify square root calculation from valid or invalid. *If (1) Input Type is other than 20mV, 100mV, 5V, 10V or 20mA, writing is not available.
(12)	Drop Out	Specify drop out in the range of 1.0 to 100.0. *If (1) Input Type is other than 20mV, 100mV, 5V, 10V or 20mA, writing is not available. *Setting is only available if square root calculation is valid.

(d) [MODE.1] Alarm Parameter

It provides function of editing alarm parameter.

< Name of alarm parameter each setting value >

Utilizing following various setting values (1) Alarm No., (2) Alarm Mode, (3) Alarm Extension Function, (4) Alarm Deadband, (5) Alarm Output Phase and (6) Delay Timer, it edits alarm parameter.

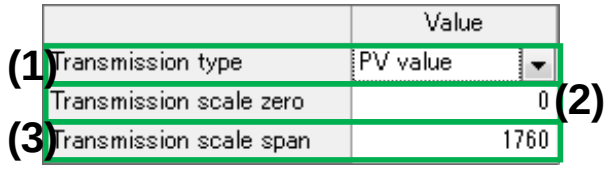
No.	Name	Description
(1)	Alarm No.	Displays alarm 1 to alarm 4 setting header. Changing is not available. *Alarm 3 set value and alarm 4 set value are only displayed if optional alarm 2-point is added to the connecting device specifications.
(2)	Alarm Mode	Select and specify alarm mode from following items. NON (No alarm), PV.H (Absolute value upper limit alarm), PV.L (Absolute value lower limit alarm) or FAIL (FAIL alarm) *Alarm 3 set value and alarm 4 set value are only displayed if optional alarm 2-point is added to the connecting device specifications.
(3)	Alarm Extension Function	Select and specify event expansion function from None, Wait, Keep or Wait/Keep. *Alarm 3 set value and alarm 4 set value are only displayed if optional alarm 2-point is added to the connecting device specifications.
(4)	Alarm Deadband	Specify alarm deadband in the range of 0 to 200 (0 to 20000) *Decimal point position is specified as (2) Alarm Mode as follows. 【PV.H (Absolute value upper limit alarm), PV.L (Absolute value lower limit alarm),】 ・ Decimal point position is (c) Input Parameter linear scale decimal point position+1 digit. (MAX 3digits) *If (3) Alarm Mode is FAIL (FAIL alarm) or Status Event, writing is not available. *Alarm 3 set value and alarm 4 set value are only displayed if optional alarm 2-point is added to the connecting device specifications.
(5)	Alarm Output Phase	Select and specify alarm output phase from output of normal phase or output of reverse phase. *Alarm 3 set value and alarm 4 set value are only displayed if optional alarm 2-point is added to the connecting device specifications.
(6)	Delay Timer	Select and specify delay timer in the range of 0.0 to 2000.0. *Alarm 3 set value and alarm 4 set value are only displayed if optional alarm 2-point is added to the connecting device specifications.

(e) [MODE.B] Transmission Parameter

It provides function of editing transmission parameter.

< Name of transmission parameter each setting value >

Utilizing following various setting values (1) Transmission Type, (2) Transmission Scale Zero and (3) Transmission Scale Span, it edits transmission parameter.



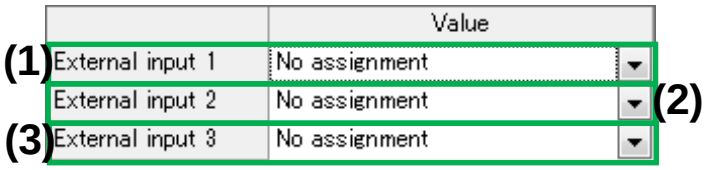
No.	Name	Description
(1)	Transmission Type	Select and specify transmission type setting form following items. PV value (measured value), MAX value (MAX value transmission), MIN value (MIN value transmission) *PV value changes corresponding to the setting of operation at PV hold of (h) System Parameter.
(2)	Transmission Scale Zero	Specify transmission scale zero position in the range of -19999 to 30000. *Writing is available only if transmission signal output specification is with the connecting device. *Decimal point position interlocks to (c) Input Parameter linear scale decimal point position.
(3)	Transmission Scale Span	Specify transmission scale span in the range of -19999 to 30000. *Writing is available only if transmission signal output specification is with the connecting device. *Decimal point position interlocks to (c) Input Parameter linear scale decimal point position.

(f) [MODE.C] External Input Parameter

It provides function of editing external input parameter.

< Name of external input parameter each setting value >

Utilizing following various setting values (1) External Input 1 to 3, it edit system.



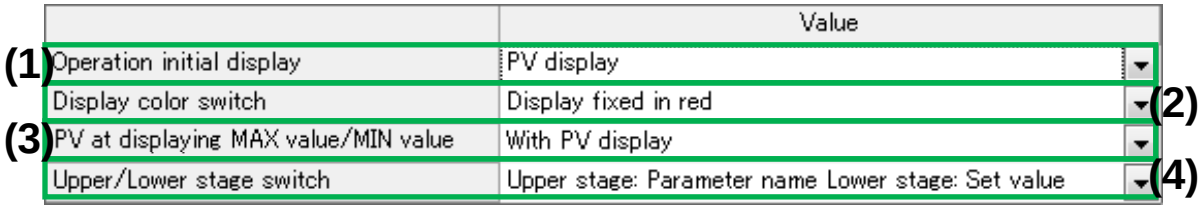
No.	Name	Description
(1)	External Input 1	Select and specify external input 1 to 3 from following items. NON (No assignment), AL.RST (Alarm reset), PV.HLD (PV hold), M.M.RST (MAX/MIN reset) or M.M.HLD (MAX/MIN hold) *Writing is available only if external signal input specification is with the connecting device.
(2)	External Input 2	
(3)	External Input 3	

(g) [MODE.D] Display Setting Parameter

It provides function of editing display setting parameter.

< Name of display setting parameter each setting value >

Utilizing following various setting values (1) Operation Initial Display, (2) Display Color Switch, (3) PV at MAX Value/ MIN Value indication and (4) Upper/ Lower Stage Switch, it edits system parameter.



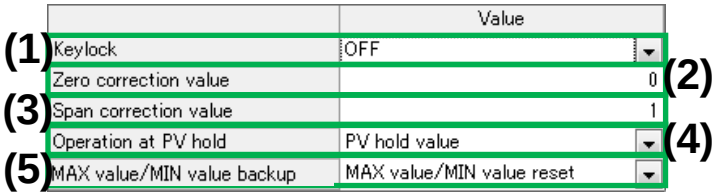
No.	Name	Description
(1)	Operation Initial Display	Select and specify operation initial display from following items. PV (PV display), MAX (MAX display), MIN (MIN display)
(2)	Display Color Switch	Select and specify display color switch from following items. Red (Display fixed in red), Green (Display fixed in green), Re/Gr (Red at normal/ Green at alarm activation), Gr/Re (Green at normal/ Red at alarm activation)
(3)	PV at MAX Value/ MIN Value Indication	Select and specify PV at MAX value/ MIN value indication from following items. With PV display (PV is displayed on lower stage at displaying MAX/ MIN indication), Without PV display (PV is not displayed on lower stage at displaying MAX/ MIN indication)
(4)	Upper/ Lower Stage Switch	Select and specify upper/lower stage switch from following items. Upper stage: Parameter name/ Lower stage: Set value, Upper stage: Set value/ Lower stage: Parameter name

(h) [MODE.T] System Parameter

It provides function of editing system parameter.

< Name of system parameter each setting value >

Utilizing following various setting values (1) Keylock, (2) Zero Correction Value, (3) Span Correction Value, (4) Operation at PV Hold and (5) MAX Value/MIN Value Backup, it edits system parameter.

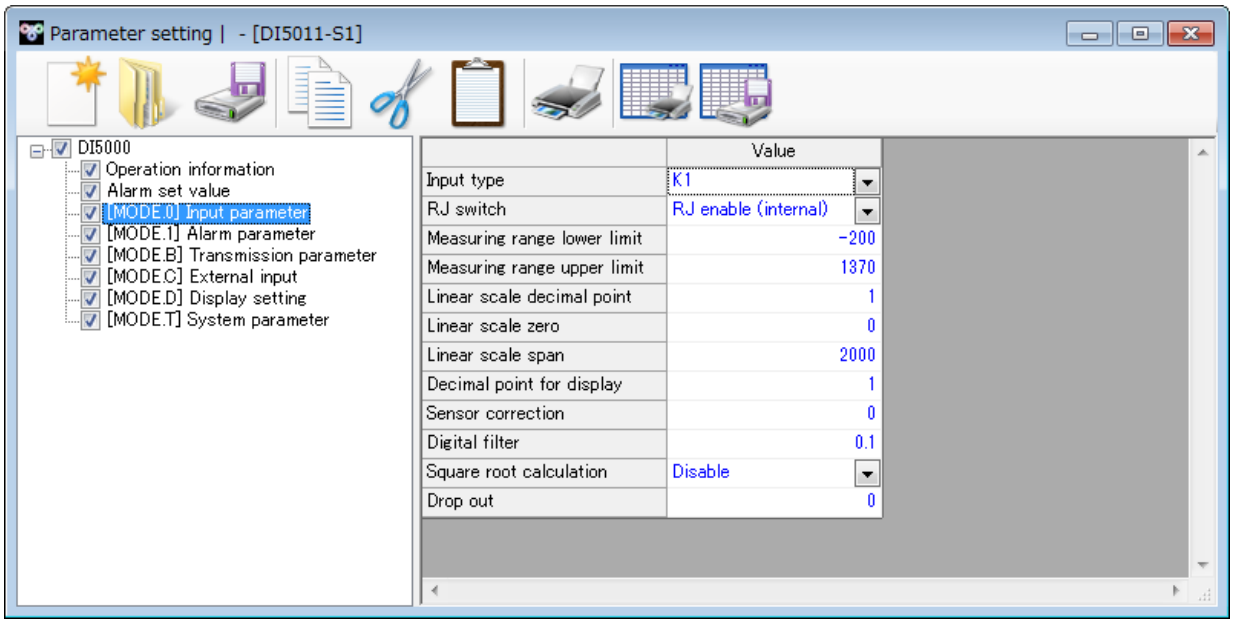


No.	Name	Description
(1)	Keylock	Select and specify key lock setting form following items. ON or OFF
(2)	Zero Correction Value	Select and specify zero correction value in the range of -19.999 to 20.000.
(3)	Span Correction Value	Select and specify span correction value in the range of 0.9000 to 1.1000.
(4)	Operation at PV Hold	Select and specify operation at PV hold from following items. PV hold value*1/ Present PV*2 *1 Alarm judgment and transmission is done at PV hold value if (f) External input parameter external input is "PV hold" and ON. *2 Alarm judgment and transmission is done at present PV value if (f) External input parameter external input is other than "PV hold" and OFF.
(5)	MAX value/ MIN value backup	Select and specify MAX value/ MIN value backup from following items. Obtains MAX value/ MIN value (Keeps MAX value/ MIN value when the power is turned ON again) Reset MAX value/ MIN value (Resets MAX value/ MIN value when the power is turned ON again)

5-3-2. Parameter Setting Window (Off-Line)

It provides parameter setting function of editing device parameter file (dose not provide communication).
There are startups by reading device parameter file and from device model selection wizard.
Refer to 5-3-1-2. List of Setting Value Category (DI5000) for how to edit.

< Image of parameter setting window (off-line) >



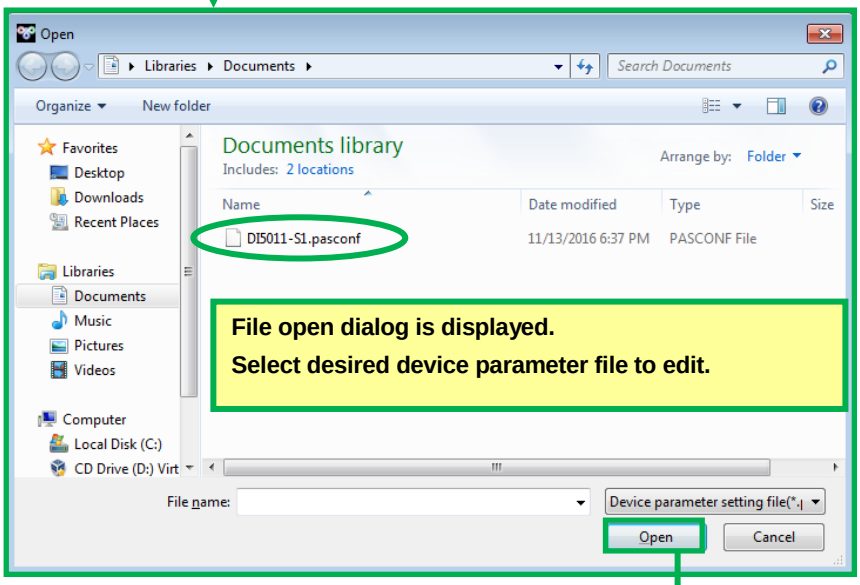
5-3-2-1. Setting Flow of Device Parameter

In flow chart, it describes the operation (startup from parameter setting window (off-line)) of editing and writing set values that are either read from a device or set values of device specified value that this application has and then writing to a device that has same model as the edited values of the device.

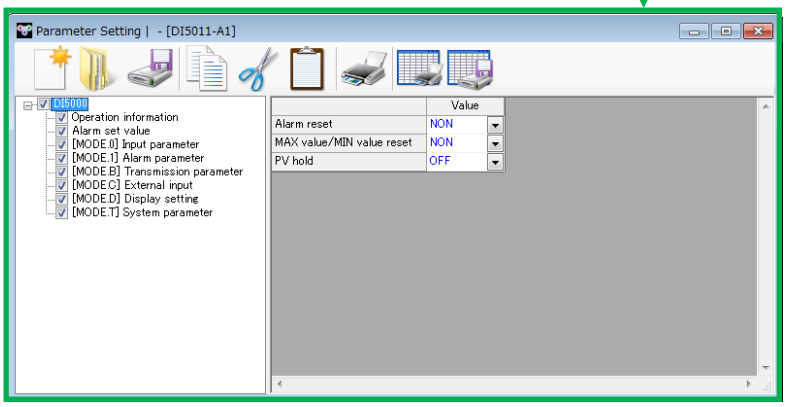
< Operation image of parameter setting window (off-line) >

(1) A case of editing set values from starting up parameter setting window and opening device parameter file

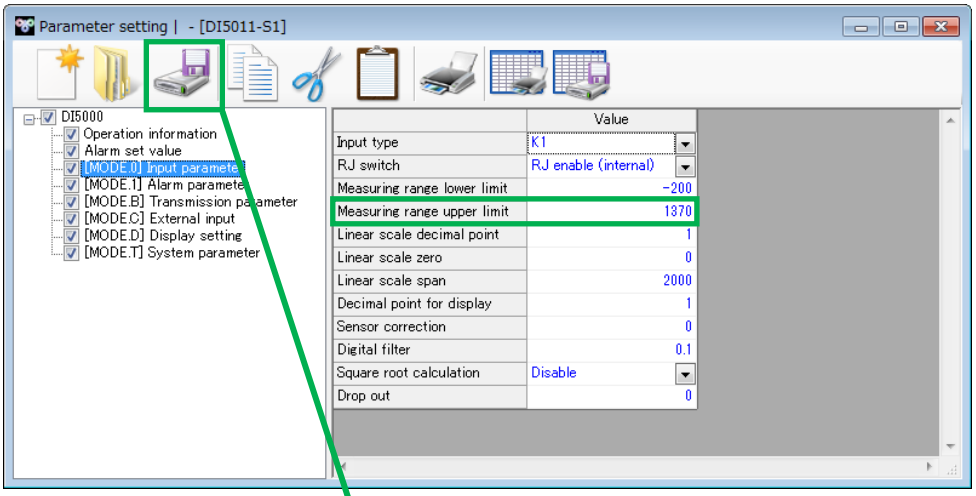
Click parameter setting window (file startup).



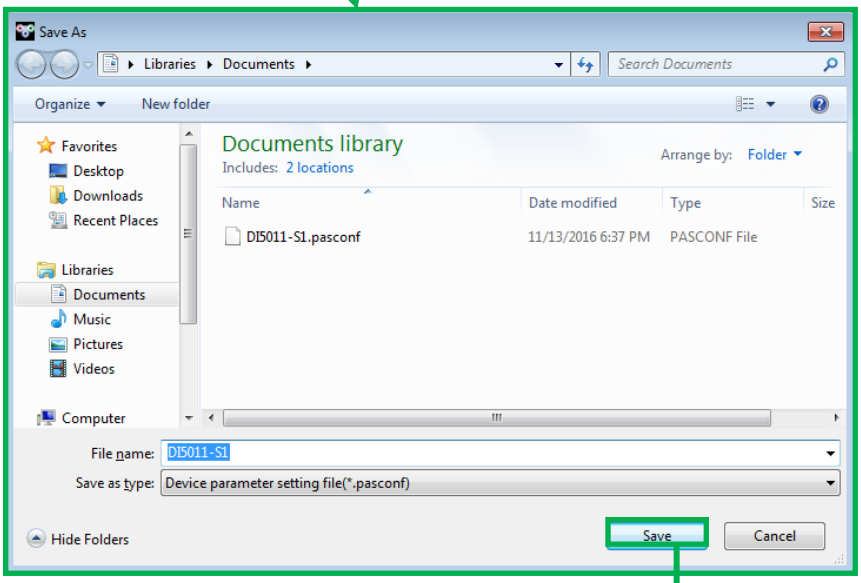
File open dialog is displayed.
Select desired device parameter file to edit.



Parameter setting window (off-line) of device model that is included in a target file is displayed.

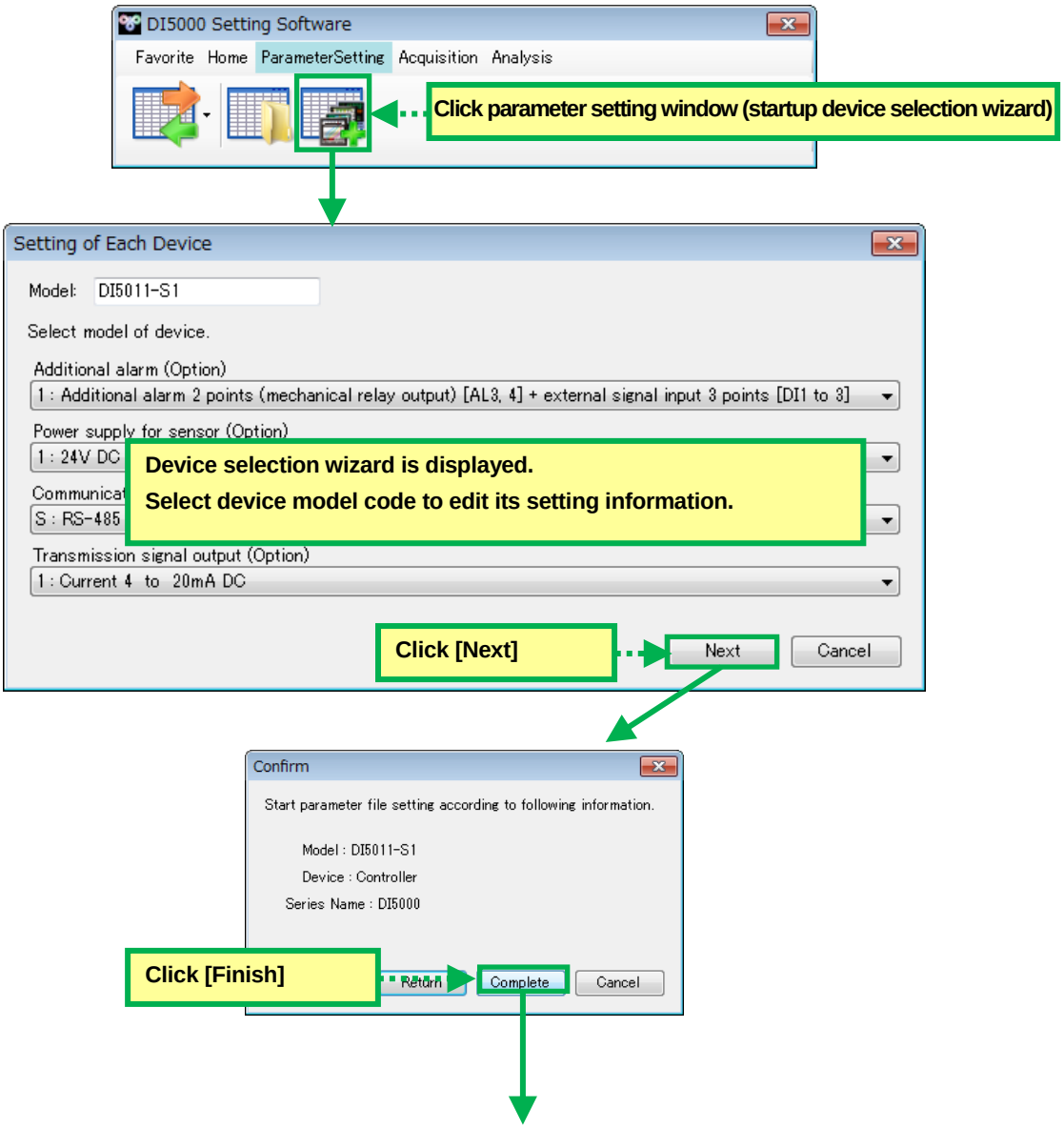


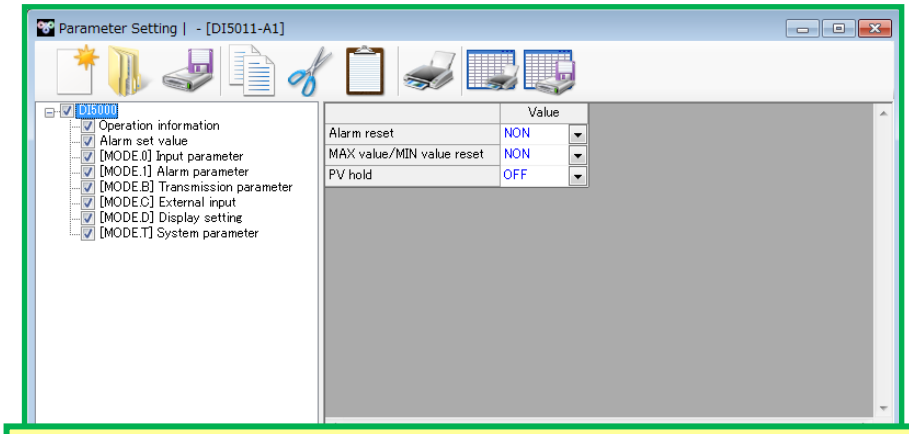
Select and change parameter and rewrite and save edited contents.



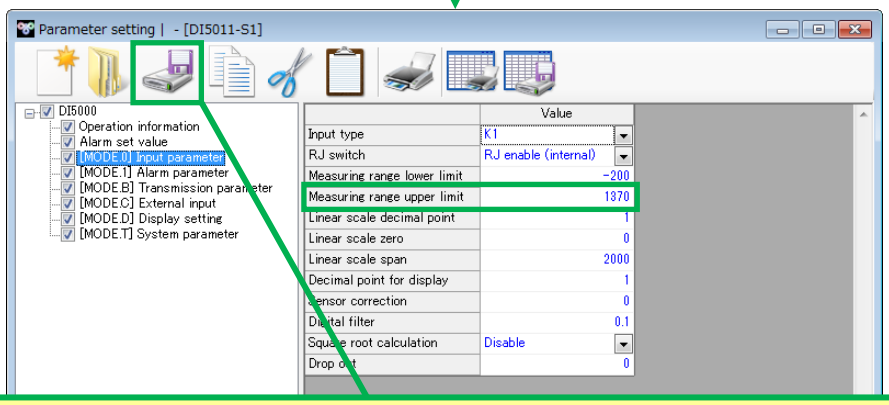
Device parameter file is saved.

(2) A case of editing set values of parameter setting window from device selection wizard

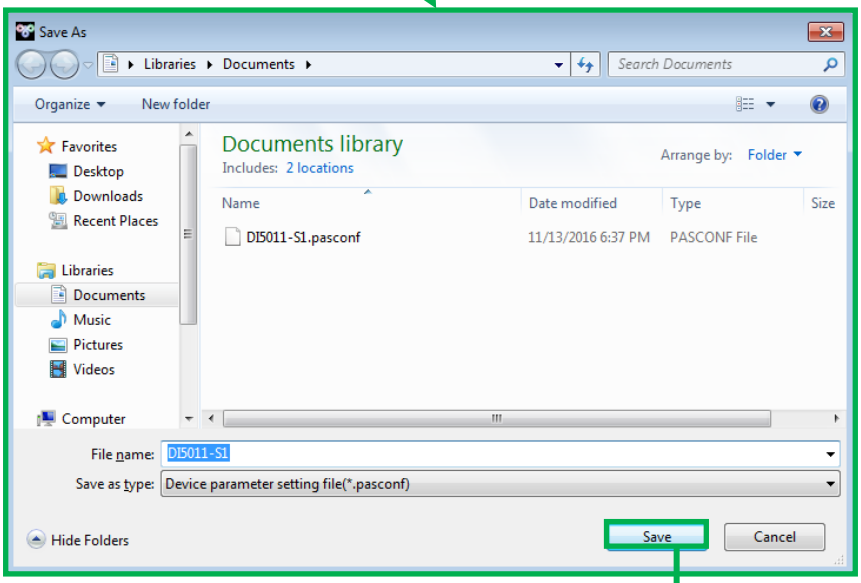




Parameter setting window (off-line) matches for selected device model is displayed.

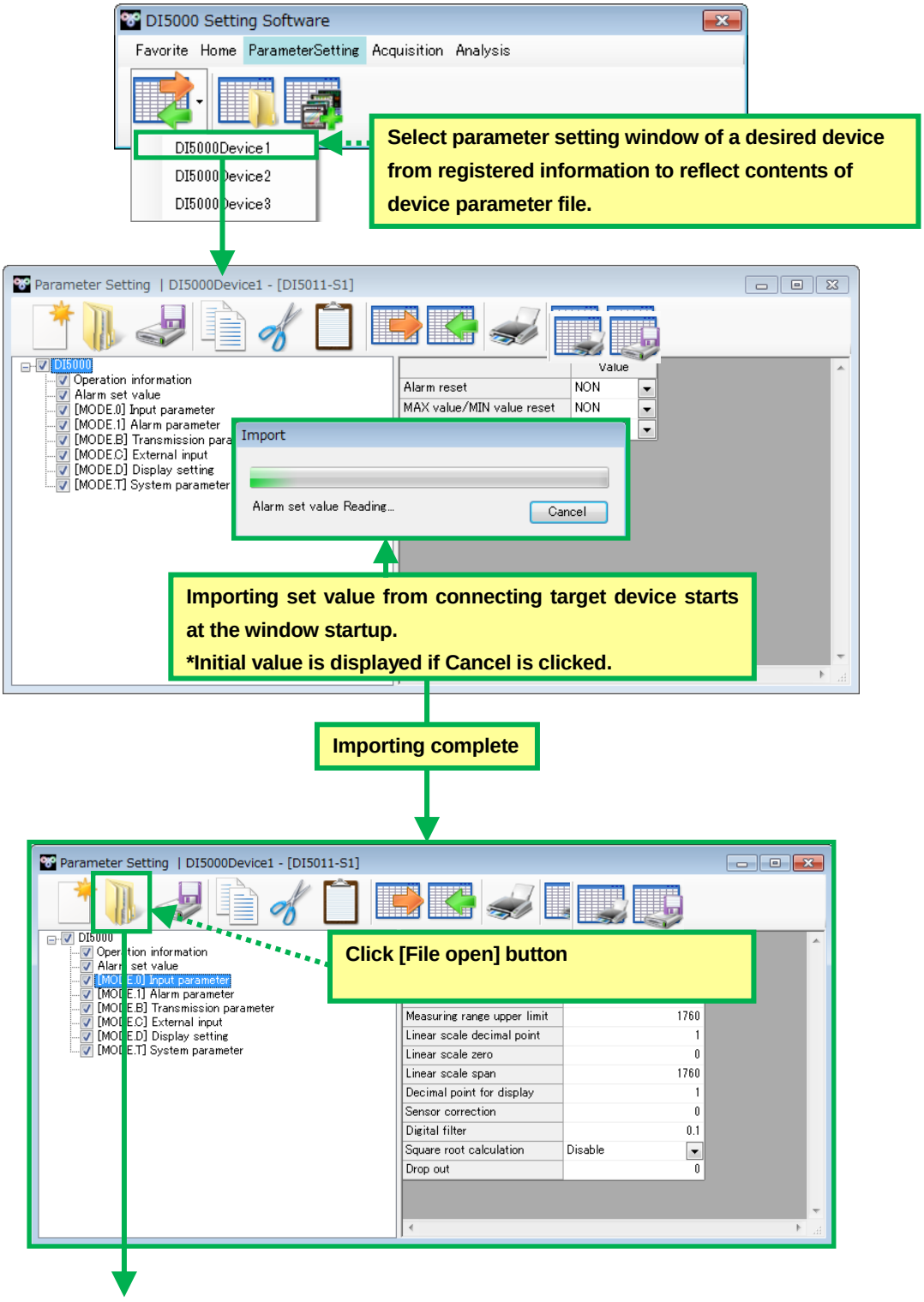


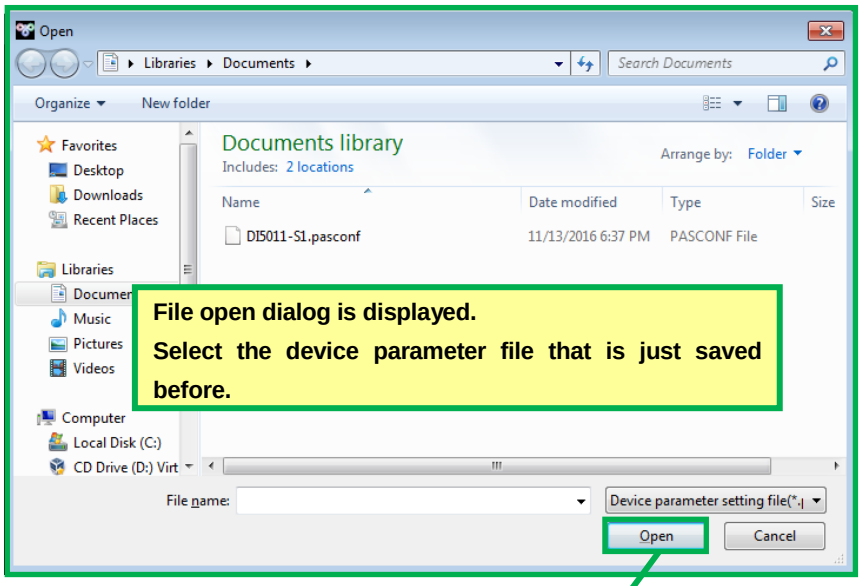
Select and change parameter and save edited contents as a device parameter file.



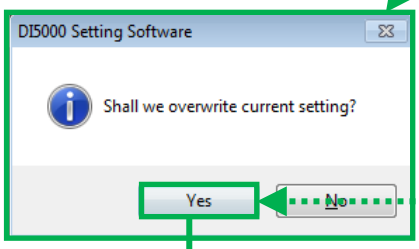
Device parameter file is saved.

(3) A case of writing saved device parameter file to a read device

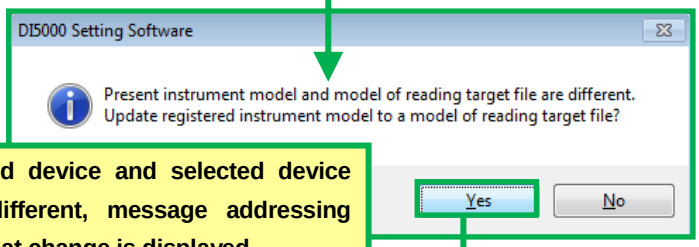




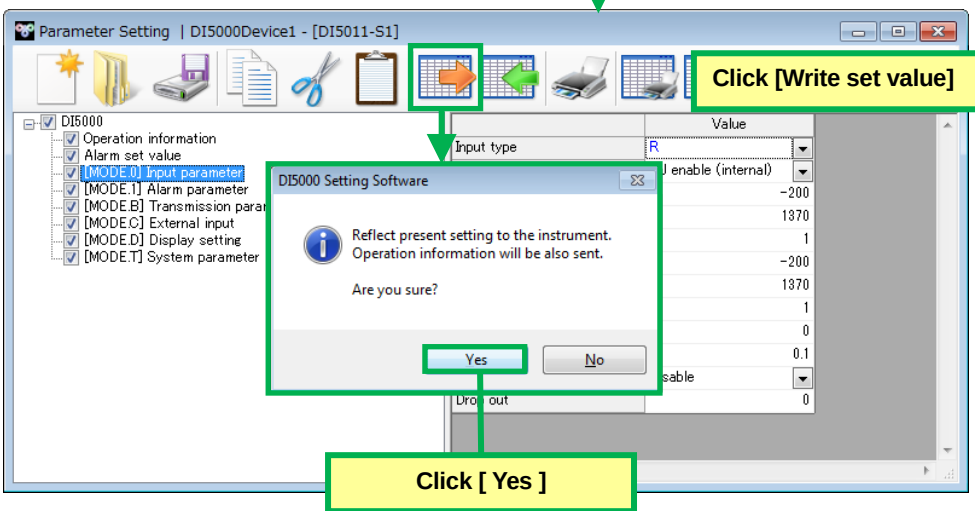
File open dialog is displayed.
Select the device parameter file that is just saved before.



Present set contents are deleted and message addressing rewrite is displayed.
Click [Yes].

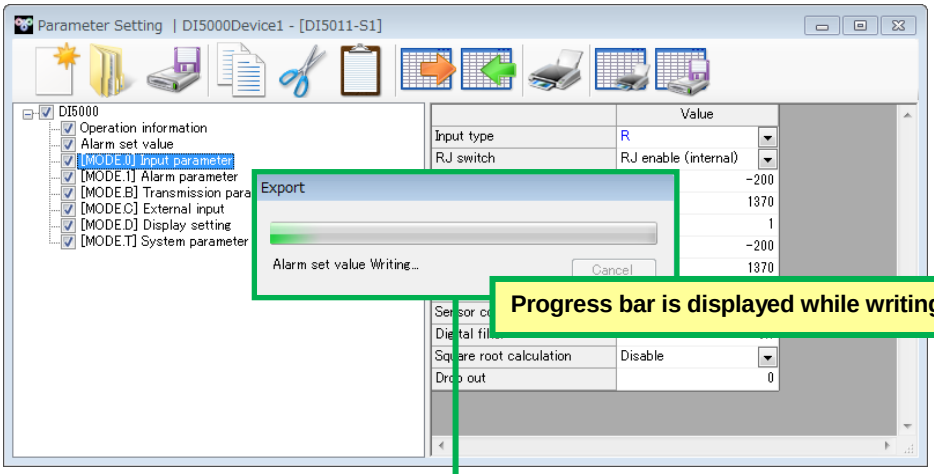


If format of registered device and selected device parameter file are different, message addressing registered device format change is displayed.
Click [Yes].
It is not displayed if device format matches.

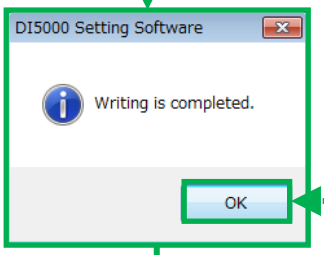


Click [Write set value]

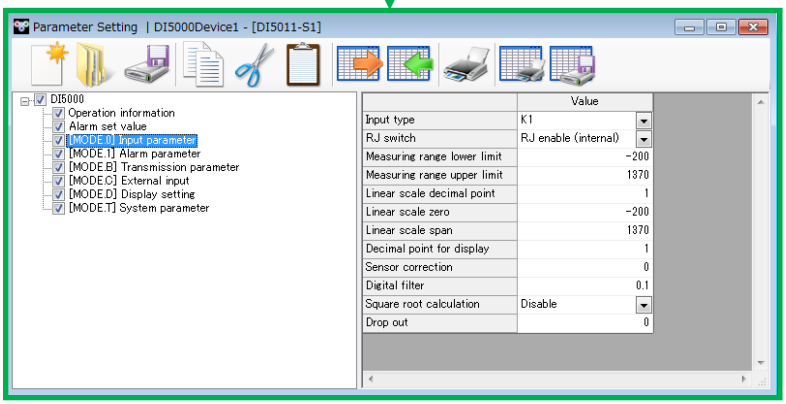
Click [Yes]



Progress bar is displayed while writing.



Message addressing writing complete is displayed.
Click [OK]



Set value of device parameter file is set to the connecting device.
Writing completed set value change its font color blue → black,

5-4. Operation of Acquisition

Acquisition provides functions of acquisition, recording (saves a file), displays real time trend and displays real time data etc. for the data value which of device registered at 5-2-2. Device Registration Window and supports acquisition.

< Name of acquisition parts at application launcher (data not yet acquired) >

Utilizing following functions (1) Data Registration, (2) Group Registration and (3) Start Acquisition, it processes data registration for acquisition, editing of group and start acquisition.

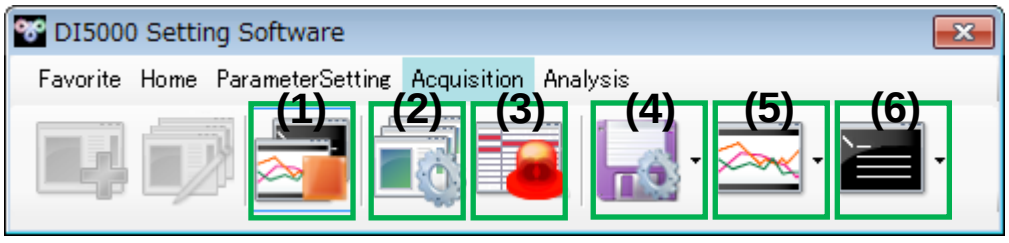
***Disabled tool button becomes enabled when acquisition starts.**

No.	Name	Description	Reference
(1)	Data Registration	Displays data acquisition window. It provides function of registration, editing and deleting of data value for acquisition.	5-4-1
(2)	Group Registration	Displays group registration window. It provides editing function for group for acquisition. *Data for acquisition registered at (1) Data Registration is excluded from data acquisition if not register to the group.	5-4-2
(3)	Start Acquisition	Starts data acquisition and periodical communication.	-

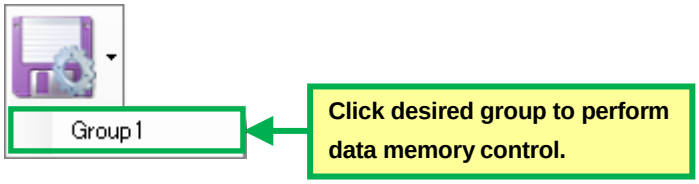
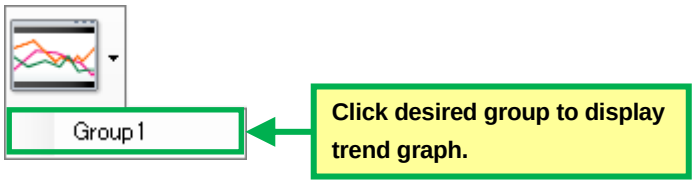
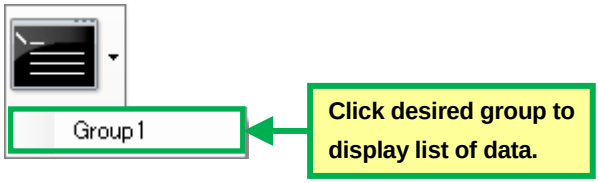
< Name of acquisition parts at application launcher (during data acquisition) >

Utilizing following functions (1) Stop Acquisition, (2) Acquisition Group Management, (3) Display List of Alarm, (4) Data Memory Control, (5) Display Trend and (6) Display List of Data, it processes stopping acquisition and monitoring acquisition etc.

***During acquisition, data registration, group registration and port registration and device registration of home function tool buttons become disabled.**



No.	Name	Description	Reference
(1)	Stop Acquisition	Stops data acquisition and periodical communication.	-
(2)	Acquisition Group Management	It provides functions of recording (data memory) start, stop and control of acquisition group and monitoring of alarm status.	5-4-3
(3)	Display List of Alarm	It provides functions of alarm status of acquisition group and each acquisition data, real time display and confirmation of alarm contents.	5-4-4
(4)	Data Memory Control	・ Clicking the drop down button displays list of acquisition group. ・ Select and click a group desired to data memory control from the list of acquisition group.	5-4-5

		 ・ Displays data memory control window.	
(5)	Display Trend	・ Clicking the drop down button displays list of acquisition group. ・ Select and click a group desired to display trend graph from the list of acquisition group.  ・ Displays trend graph display window.	5-4-6
(6)	Display List of Data	・ Clicking the drop down button displays list of acquisition group. ・ Select and click a group desired to display a list of data from the list of acquisition group.  ・ Displays a list of real time data display window.	5-4-7

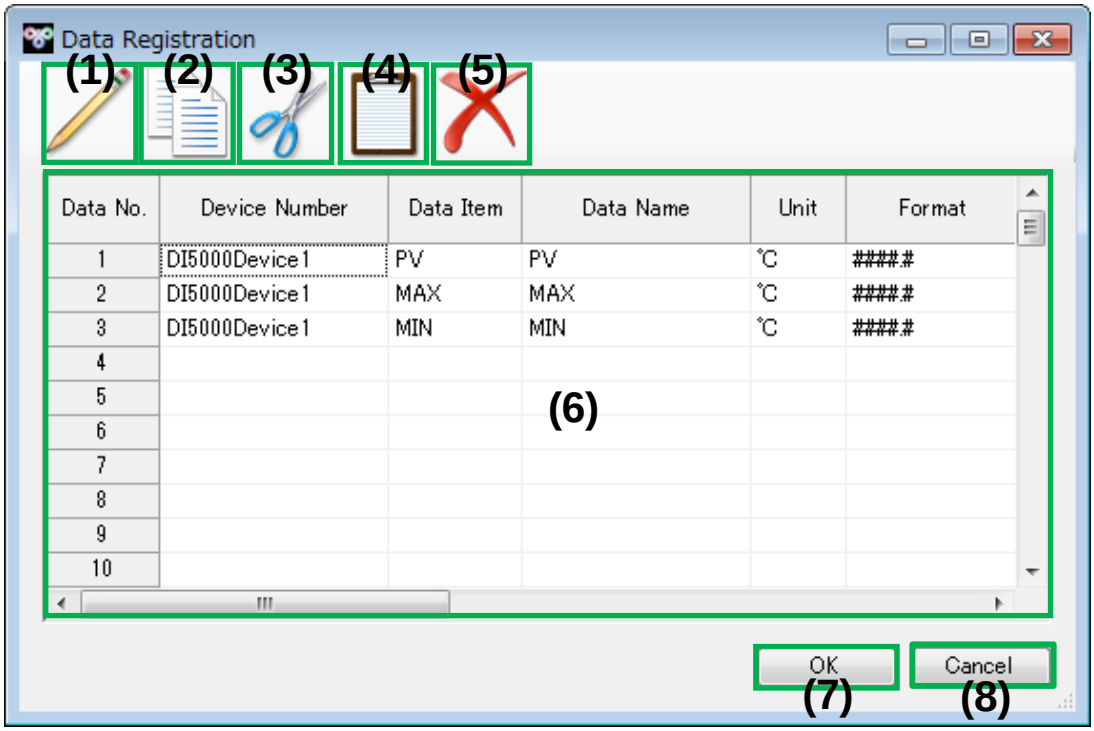
5-4-1. Data Registration Window

It provides function of registration, editing and deleting for data value desired to acquire.

***It is for the data value which of device registered at 6-2-2. Device Registration Window and supports acquisition.**

< Name of data registration window parts >

Utilizing following functions (1) Edit (2) Copy, (3) Cut, (4) Paste, (5) Delete, (6) Data for Acquisition Setting Information Display, (7) OK and (8) Cancel, it sets data for acquisition.



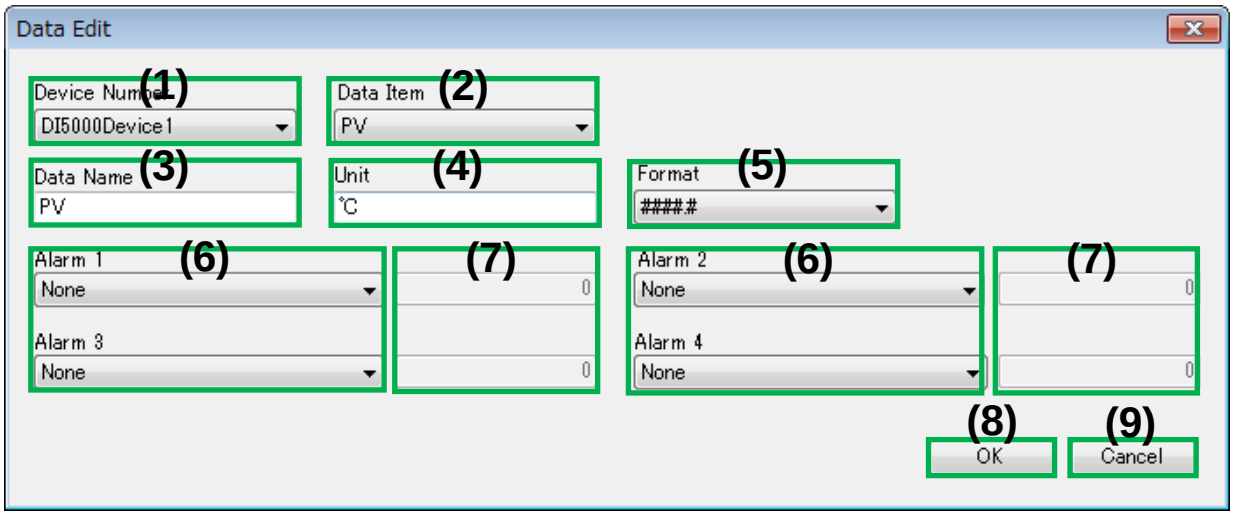
No.	Name	Description	Reference
(1)	Edit	Displays data edit dialog.	5-4-1-1
(2)	Copy	Copies setting information of select area in the list of data for acquisition setting information. *Shortcut is available with Ctrl + C key. *Belonging group is initialized.	-
(3)	Cut	Cuts setting information of select area in the list of data for acquisition setting information. *Shortcut is available with Ctrl +X key. *Belonging group is initialized.	-
(4)	Paste	Pastes holding device information obtained by (2) Copy or (3) Cut after the selected row. *Shortcut is available with Ctrl +V key.	-
(5)	Delete	From registered data for acquisition setting information, deletes selecting data. *Deleting multiples is available.	-
(6)	Data for Acquisition Setting Information Display	Displays list of currently registered data for acquisition setting information. *Double clicking a cell enables setting of target row data for acquisition. Same as (1) Edit, it displays data edit dialog.	-
(7)	OK	After starting up data registration window, reflects contents of registration, edit and delete.	-
(8)	Cancel	After starting up data registration window, cancels contents of registration, edit and delete.	-

5-4-1-1.Data Edit Dialog

It provides editing function of data registration window; data for acquisition setting information.

< Name of data edit dialog parts >

Utilizing following functions (1) Device, (2) Data, (3) Data Name, (4) Unit, (5) Format, (6) Alarm 1 to 4, (7) Alarm Value of Alarm 1 to 4, (8) OK and (9) Cancel, it edits or cancels for data for acquisition setting information.



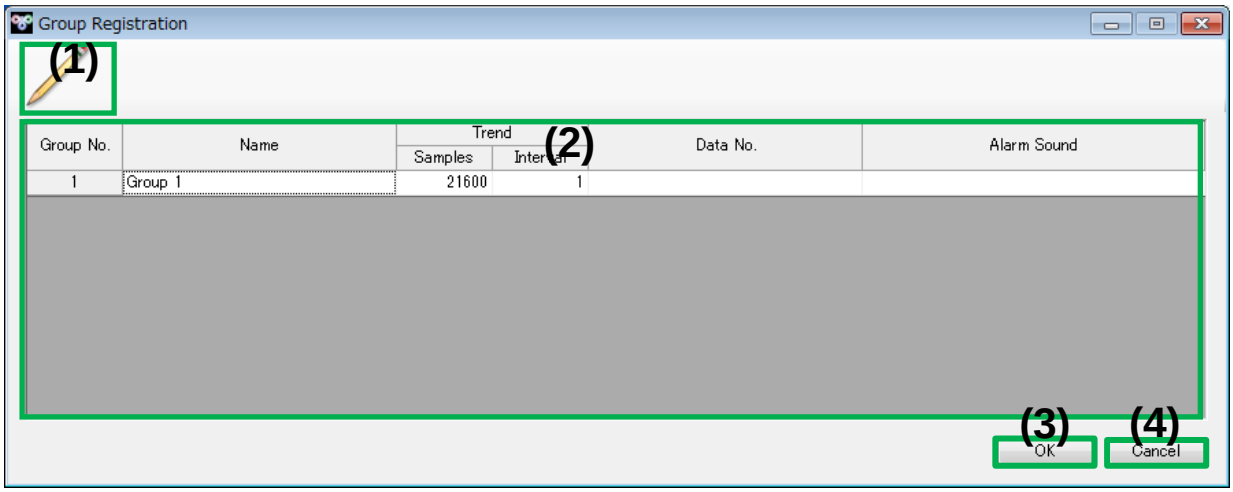
No.	Name	Description
(1)	Device	Select a device to perform data acquisition. *Device registered at the section 6-2-2. Device Registration Window which has data for acquisition can only be selected.
(2)	Data	Select an acquisition data type of device specified at (1) Device. *Acquisition data type differs depending on the specified device.
(3)	Data Name	Specify acquisition data name for display. Up to 30 characters are able to be entered.
(4)	Unit	Specify acquisition data unit for display. Up to 30 characters are able to be entered.
(5)	Format	Select and specify format for acquisition data display from #####, ####.#, ###.##, ##.###, #.####, 0E+00, 0.0E+00, 0.00E+00 or 0.000E+00.
(6)	Alarm 1 to 4	Select and specify alarm type. *Alarm type differs depending on the specified device and data for acquisition.
(7)	Alarm value of Alarm 1 to 4	Specify alarm value for alarm specified at (6) Alarm 1 to 4 in the range of -99999.9999 to 99999.9999. *Alarm type: it is only enabled when computer judgment (upper limit) or computer judgment (lower limit) is specified. Other alarms are depended on the devices.
(8)	OK	Reflects edited data for acquisition setting information on the data registration window.
(9)	Cancel	Cancels edited data for acquisition setting information and returns to the prior to editing.

5-4-2. Group Registration Window

It provides functions of data adding, editing and deleting to the acquisition group.

< Name of group registration window parts >

Utilizing following functions (1) Edit, (2) Group Setting Information Display, (3) OK and (4) Cancel, it sets for acquisition group setting.



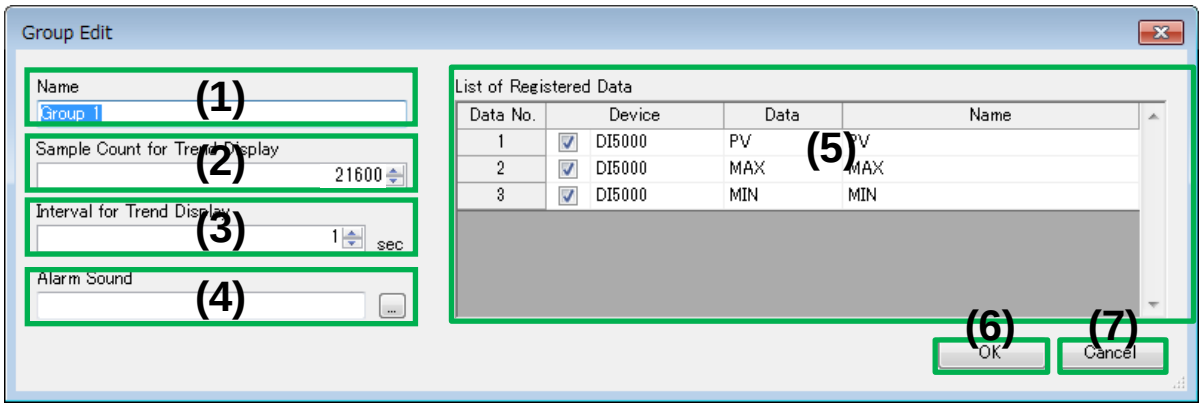
No.	Name	Description	Reference
(1)	Edit	Displays group edit dialog from selected acquisition group setting information.	5-4-2-1
(2)	Group Setting Information Display	Displays list of acquisition group setting information. *Double clicking a cell enables setting of target row acquisition group setting. Same as (1) Edit, it displays group edit dialog.	-
(3)	OK	Reflects edited contents from startup of group registration window.	-
(4)	Cancel	Cancels edited contents from startup of group registration window.	-

5-4-2-1. Group Edit Dialog

It provides functions of editing group registration window; acquisition group setting information.

< Name of group edit dialog parts >

Utilizing following functions (1) Name, (2) Sample Count for Trend Display, (3) Interval for Trend Display, (4) Alarm Sound, (5) List of Registered Data, (6) OK and (7) Cancel, it edits or cancels for acquisition group setting information.



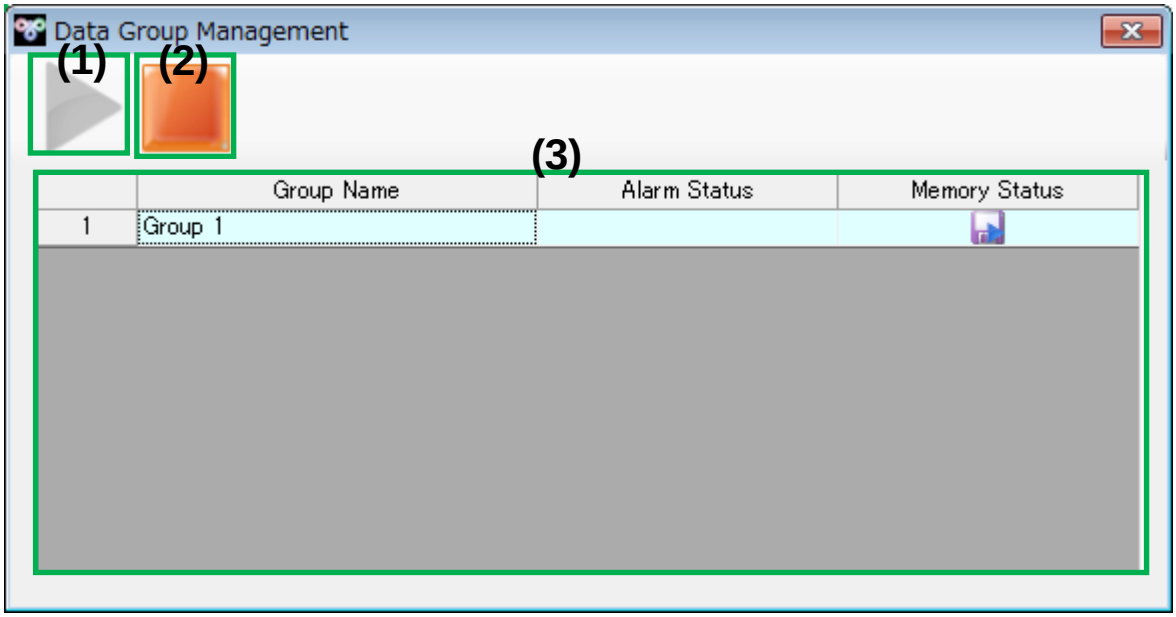
No.	Name	Description
(1)	Name	Specify acquisition group name for display. Up to 30 characters are able to be entered.
(2)	Sample Count for Trend Display	Specify trend buffer sample number at the acquisition in the range of 1 to 21600.
(3)	Interval for Trend Display	Specify trend buffer interval at the acquisition in the range of 1 to 10.
(4)	Alarm Sound	Select and specify alarm sound from *.wav format file.
(5)	List of Registered Data	List of data for acquisition registered at the section 5-4-1. Data Registration Window is displayed. *With check mark: Include in the group. Without check mark: exclude from the group. *Multiple devices are not able to include in the group simultaneously.
(6)	OK	Reflects edited data for acquisition group setting information on the group registration window.
(7)	Cancel	Cancels edited data for acquisition group setting information and returns to the prior to editing.

5-4-3. Acquisition Group Management Window

It provides functions of alarm status display of acquisition group and data memory start/stop.

< Name of acquisition group management window parts >

Utilizing following functions (1) Data Memory Start, (2) Data Memory Stop and (3) List of Acquisition Group Display, it manages and controls data group.



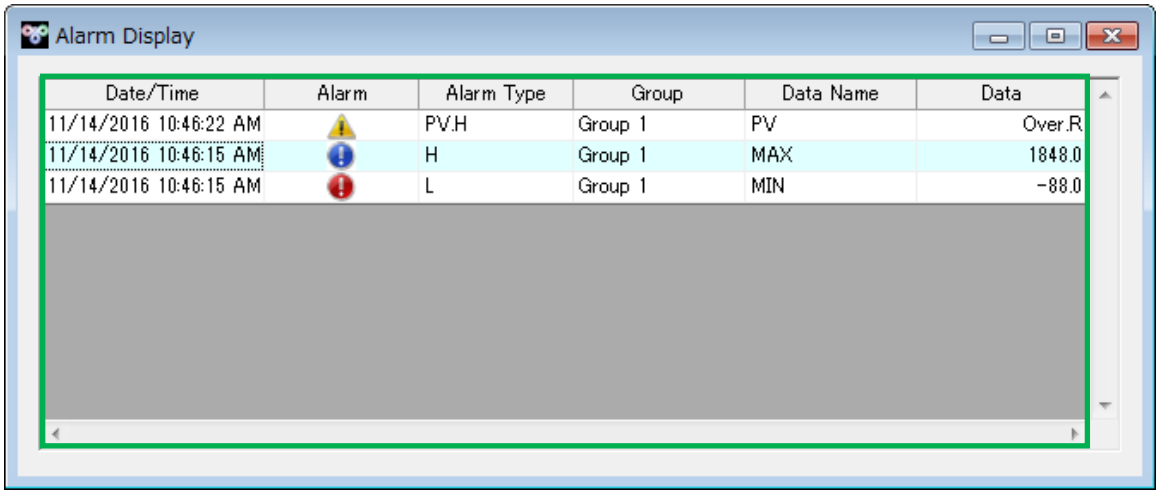
No.	Name	Description
(1)	Data Memory Start	Start data memory of selected row acquisition group. *Enable/disable of the button switches at start/stop. *Refer to 5-4-5 Data Memory Operation Window for more details.
(2)	Data Memory Stop	Stop data memory of selected row acquisition group. *Enable/disable of the button switches at start/stop.
(3)	List of Acquisition Group Display	Displays currently acquiring list of acquisition group information. Information of group name, alarm status and memory status etc. is displayed. [Alarm Status] The icon below is displayed if there is an alarm activated data in the acquisition group. ⋯Alarm activation [Memory Status] Four types of icon below describe data memory status. ..Stop (Data memory have not executed) ..Recording (Data memory is executing and file is being outputted) ..Waiting (Data memory is executing but file output is on the wait) *It only occurs when memory mode is on specify time. ..Abnormal (Data memory is failed for some reasons) *Error information is displayed on 5-2-3 Summary Display Window.

5-4-4. Alarm Display Window

It provides functions of alarm status display confirmation for each data for acquisition.

< Name of alarm display window parts >

Utilizing following function (1) List of Alarm Display, it enables browsing and confirmation of list of alarm display.



No.	Name	Description
(1)	List of Alarm Display	Displays list of alarm activation and activated alarm. Activated alarm information of date, alarm, alarm type, belonging group, data name and acquisition data is displayed. **[Alarm]** Three types of icon below describe alarm activation status. ..Alarm activation, unconfirmed by operator (red) ..Alarm activation, confirmed by operator (blue) ..Alarm activation → alarm unconfirmed by operator (yellow) *By clicking on the alarm row icon, it is judged that confirmation is done by operator. At confirmation, change of icon or delete of alarm information is performed. If alarm sound is set to a group of a target alarm which alarm is activated, in addition to the alarm reset, the alarm sound stops after operator confirmation.

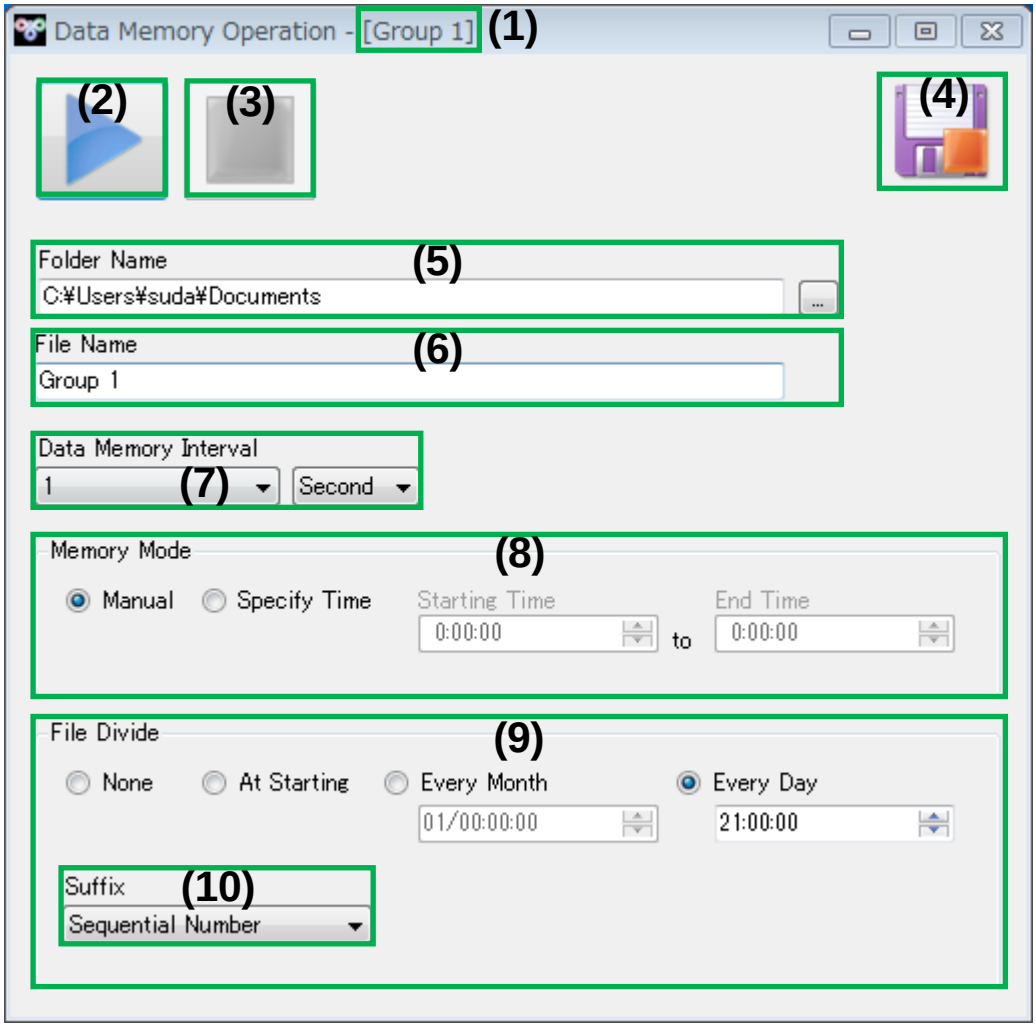
5-4-5. Data Memory Operation Window

It provides functions of each acquisition group data memory setting and control.

***Setting information is saved at data memory start or when closing the window. Confirmation dialog addressing saving the information is only displayed at closing setting information edit window.**

< Name of data memory operation window parts >

Utilizing following functions (1) Acquisition Group Name, (2) Data Memory Start, (3) Data Memory Stop, (4) Data Memory Status, (5) Saving Folder Name, (6) Saving File Name, (7) Data Memory Interval, (8) Memory Mode Setting, (9) File Divide Setting and (10) Suffix, it performs data memory setting and control.



No.	Name	Description
(1)	Acquisition Group Name	Displays selected acquisition group name.
(2)	Data Memory Start	Start data memory. *Enable/disable of the button switches at start/stop.
(3)	Data Memory Stop	Stop data memory. *Enable/disable of the button switches at start/stop.
(4)	Data Memory Status	Displays data memory status of target acquisition group. *According to the changes of status, display also changes in real-time.
(5)	Saving Folder Name	Specify saving folder name. *Direct input is not allow.
(6)	Saving File Name	Specify saving file name.

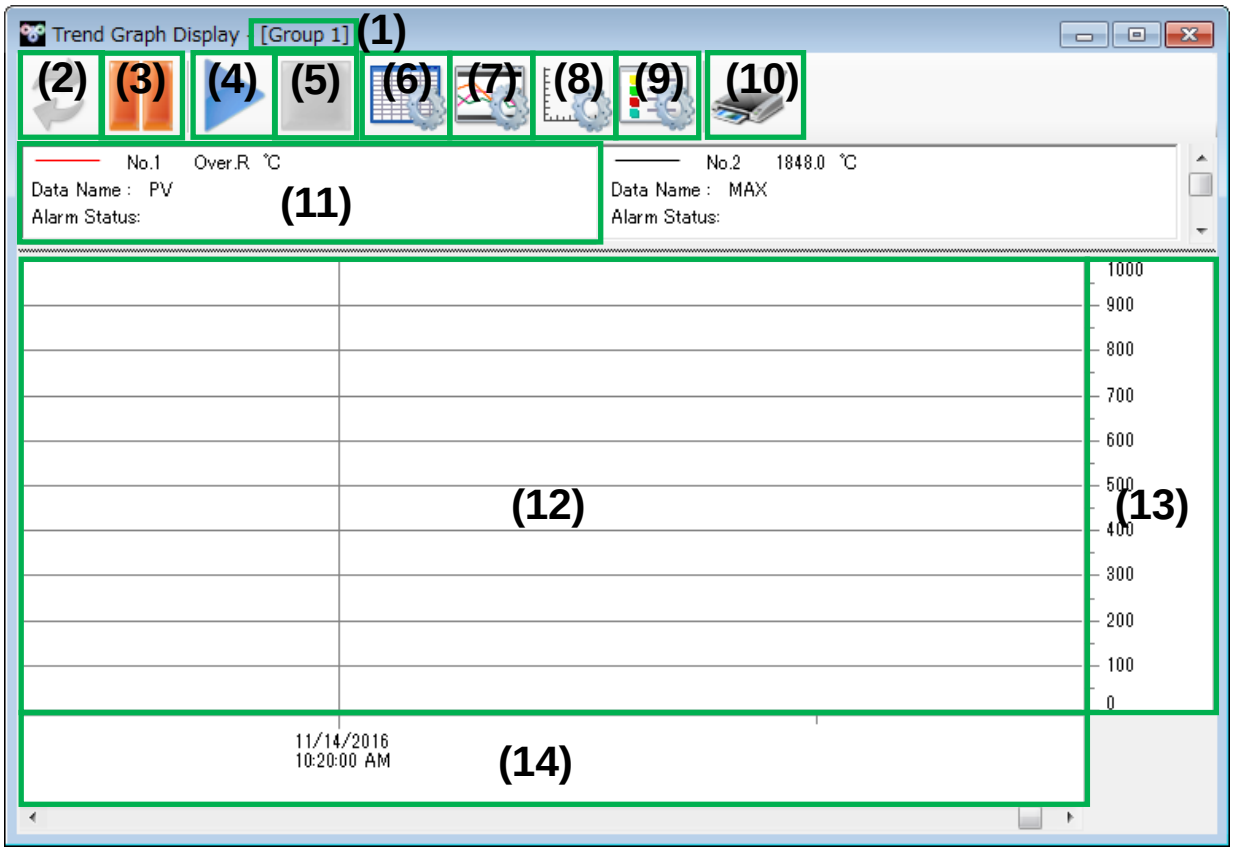
No.	Name	Description
(7)	Data Memory Interval	Select and specify data memory interval from 1, 5, 10 [second].
(8)	Memory Mode Setting	Select and specify memory mode from Manual or Specify Time. *If select Specify Time, specify Starting Time and End Time. *Same time cannot be specified for Starting time and Ending time. Also, set the time as Starting time 00:00:00 and Ending time 23:59:59; only 1 sec. shift enables continuous data memory.
(9)	File Divide Setting	Select and specify types of file divide from None, At starting, Every Month and Every Day. According to the specified condition, it performs file divide at data memory. *This setting specify file divide (not divide) timing with suffix at data memory file saving. *If select None, set (10) Suffix. *If select Every Month, specify date and time of file divide. *If select Every Day, specify starting time of file divide.
(10)	Suffix	Select and specify suffix at file divide from Sequential number, yy/MM/dd/hh/mm/ss, yy/MM/dd/hh/mm, yy/MM/dd/hh, yy/MM/dd or yy/MM. *According to the specified suffix, the suffix is added to the saving file name.

5-4-6. Trend Graph Display Window

It provides functions of illustrating each acquisition group acquiring status graphically and display.

< Name of trend graph display window parts >

Utilizing following functions (1) Acquisition Group Name, (2) Update Resume, (3) Pause Update, (4) Data Memory Start, (5) Data Memory Stop, (6) Data Setting, (7) Graph Area Setting, (8) Scale Plate Setting, (9) Numeric Data Setting, (10) Print, (11) Numeric Value Data Display, (12) Graph Area, (13) Scale Plate and (14) Time Axis Scale, it displays each acquisition group acquiring status as a graph.



No.	Name	Description	Reference
(1)	Acquisition Group Name	Displays selected acquisition group name.	-
(2)	Update Resume	When update of trend graph is at pause, resume update. *Enable/disable of the button switches at Update/Pause.	-
(3)	Update Pause	During updating trend graph, pause data update. *Enable/disable of the button switches at Update/Pause.	-
(4)	Data Memory Start	Start data memory. *Enable/disable of the button switches at Start/Stop.	-
(5)	Data Memory Stop	Stop data memory. *Enable/disable of the button switches at Start/Stop.	-
(6)	Data Setting	Displays Data Setting dialog. *Setting information differs depending on the each group.	5-4-6-1
(7)	Graph Area Setting	Displays Graph Area Setting dialog. *Setting information differs depending on the each group.	5-4-6-2
(8)	Scale Plate Setting	Displays Scale Plate Setting dialog. *Setting information differs depending on the each group.	5-4-6-3

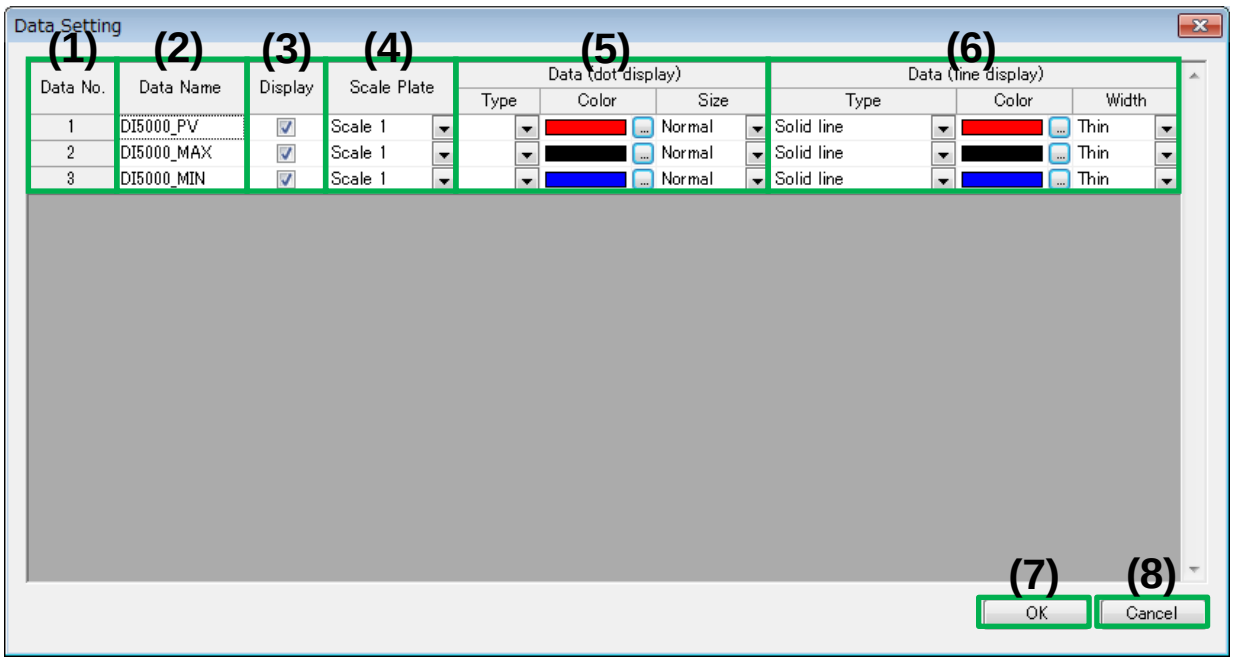
No.	Name	Description	Reference
(9)	Numeric Value Data Setting	Displays Numeric Value Data Setting dialog. *Setting information differs depending on the each group.	5-4-6-4
(10)	Print	Prints screen image. *Displays Print Preview.	-
(11)	Numeric Value Data Display	Displays information of data number, legend, data name, numeric value data, unit, scale number and alarm status etc. for each acquiring data.	-
(12)	Graph Area	Illustrates acquiring data in real-time.	-
(13)	Scale Plate	Displays scale which indicates temperature area of trend graph. *Specify the range by dragging with mouse magnifies the area.	-
(14)	Time Axis Scale	Displays scale which indicates time axis of trend graph. *Specify the range by dragging with mouse magnifies the area.	-

5-4-6-1. Data Setting Dialog

It provides editing function of trend graph display window; data setting information.

< Name of data setting dialog parts >

Utilizing following functions (1) Data No., (2) Data Name, (3) Display, (4) Scale Plate, (5) Dot Setting, (6) Line Setting (7) OK and (8) Cancel, it edits or cancels for trend graph display setting information.



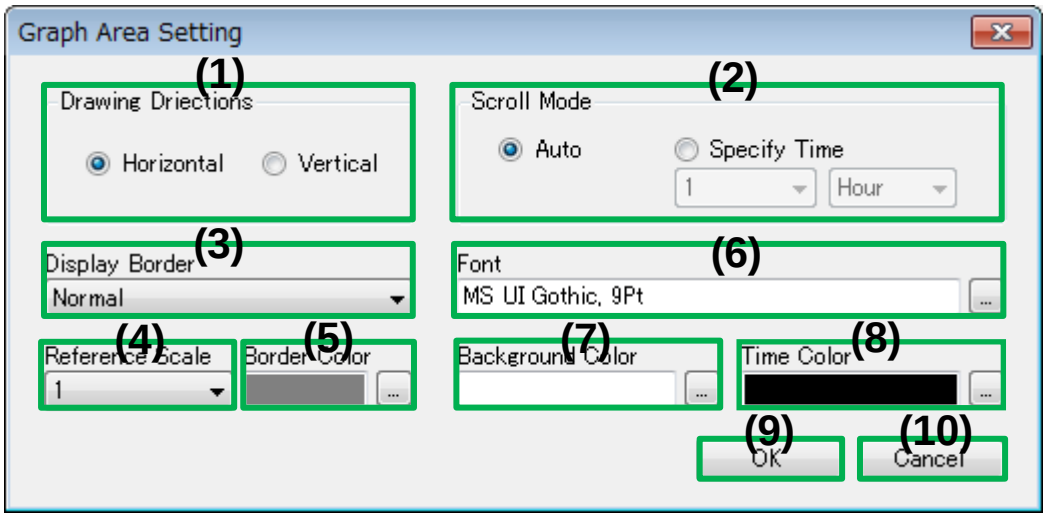
No.	Name	Description
(1)	Data No.	Displays data No. It cannot be changed.
(2)	Data Name	Displays data name. It cannot be changed.
(3)	Display	Specify display or hide display. *With check mark: Displays/Without check mark: Hidden
(4)	Scale Plate	Select and specify target scale plate from Scale 1, Scale 2, Scale 3 or Scale 4 for the data value to plot.
(5)	Dot Setting	Specify types, colors or size of the dot to displays. **[Type]** Select and specify from None, □, ■, ◇, ◆, △, ▲, ×, ✳, ○, ●or +. **[Color]** Specify from color dialog. **[Size]** Select and specify from Small, Normal or Large.
(6)	Line Setting	Specify types, colors or width of the line to display. **[Type]** Select and specify from None, Solid line, Chain dash line, Wave line, Dash dotted line or Dash double dotted line. **[Color]** Specify from color dialog. **[Width]** Select and specify from Thin, Normal or Thick.
(7)	OK	Retains setting information on the data setting dialog and reflects setting contents on the trend graph display.
(8)	Cancel	Ignores setting information on the data setting dialog and cancels setting contents on the trend graph display.

5-4-6-2. Graph Area Setting Dialog

It provides editing function of trend graph display window; graph area setting information.

< Name of graph area setting dialog parts >

Utilizing following functions (1) Drawing Directions, (2) Scroll Mode, (3) Display Border, (4) Reference Scale,(5) Border Color, (6) Font, (7) Background Color, (8) Time Color, (9) OK and, (10) Cancel , it edits or cancels for trend graph; graph area setting information.



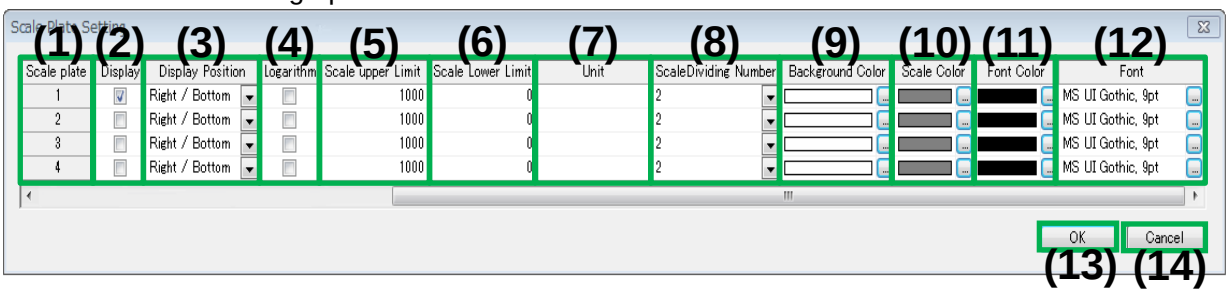
No.	Name	Description
(1)	Drawing Directions	Select and specify scroll method of the graph from Horizontal or Vertical.
(2)	Scroll Mode	Select and specify scroll method from Auto or Specify Time. *If select Specify Time, select and specify displaying time interval from 1 to 59 minutes,1 to 23 hours, 1 to 31 days or 1 to 12 months.
(3)	Display Border	Select and specify displaying border type from None, Normal (drawn as scale) or Detail (drawn also as sub scale).
(4)	Reference Scale	Select and specify target scale plate for displaying border from 1, 2, 3 or 4.
(5)	Border Color	Specify the color of drawing border.
(6)	Font	Specify the font used in graph area and time axis.
(7)	Background Color	Specify the background color of graph area.
(8)	Time Color	Specify the foreground color of time axis.
(9)	OK	Retains setting information on the graph area setting dialog and reflects setting contents on the trend graph display window.
(10)	Cancel	Ignores setting information on the graph area setting dialog and cancels reflecting setting contents on the trend graph display window.

5-4-6-3. Scale Plate Setting Dialog

It provides editing function of trend graph display window; scale plate setting information.

< Name of scale plate setting dialog parts >

Utilizing following functions (1) Scale Plate, (2) Display, (3) Display Position, (4) Logarithm, (5) Scale Upper Limit, (6) Scale Lower Limit, (7) Unit, (8) Scale Dividing Number, (9) Background Color, (10) Scale Color, (11) Font Color, (12) Font, (13) OK and (14) Cancel, it edits or cancels for scale plate setting information used on trend graph.



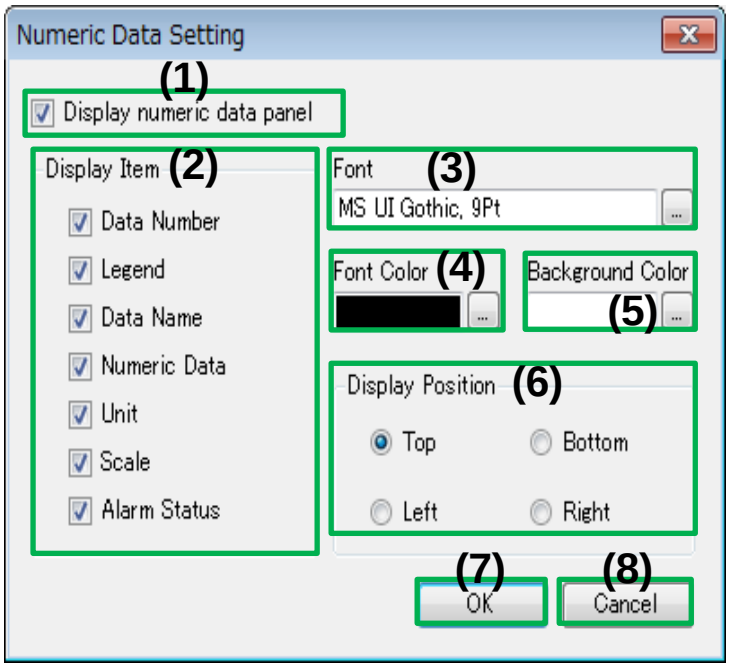
No.	Name	Description
(1)	Scale Plate	Displays 1 to 4 scale plate No. It cannot be changed.
(2)	Display	Specify display or hide display. *With check mark: Displays/Without check mark: Hidden
(3)	Display Position	Select and Specify scale plate display position from Right (horizontal)/Down (vertical). *By changing Drawing Direction on 5-4-6-2. Graph Area Setting Dialog, Left/Up or Right/Down switches automatically.
(4)	Logarithm	Select and specify scale value expression from normal or Logarithm. *With check mark: Logarithm/Without check mark: normal
(5)	Scale Upper Limit	Specify scale plate upper limit in the range of -99999.999 to99999.999. *For logarithm scale, it becomes exponential format.
(6)	Scale Lower Limit	Specify scale plate lower limit in the range of -99999.999 to99999.999. *For logarithm scale, it becomes exponential format.
(7)	Unit	Specify unit to display on scale plate. Up to 30 characters are able to be entered.
(8)	Scale Dividing Number	Select and specify number of scale line division from 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 and 20. *9 are fixed for logarithm scale.
(9)	Background Color	Specify the background color of scale plate.
(10)	Scale Color	Specify the scale line drawing color.
(11)	Font Color	Specify the scale value foreground color.
(12)	Font	Specify the scale value font.
(13)	OK	Retains setting information on the scale plate setting dialog and reflects setting contents on the trend graph display window.
(14)	Cancel	Ignores setting information on the scale plate setting dialog and cancels reflecting setting contents on the trend graph display window.

5-4-6-4. Numeric Data Setting Dialog

It provides editing function of trend graph display window; scale plate setting information.

< Name of numeric data setting dialog parts >

Utilizing following functions (1) Display Numeric Data, (2) Display Item, (3) Font, (4) Font Color, (5) Background Color, (6) Display Position, (7) OK and (8) Cancel, it edits or cancels for numeric data setting information.



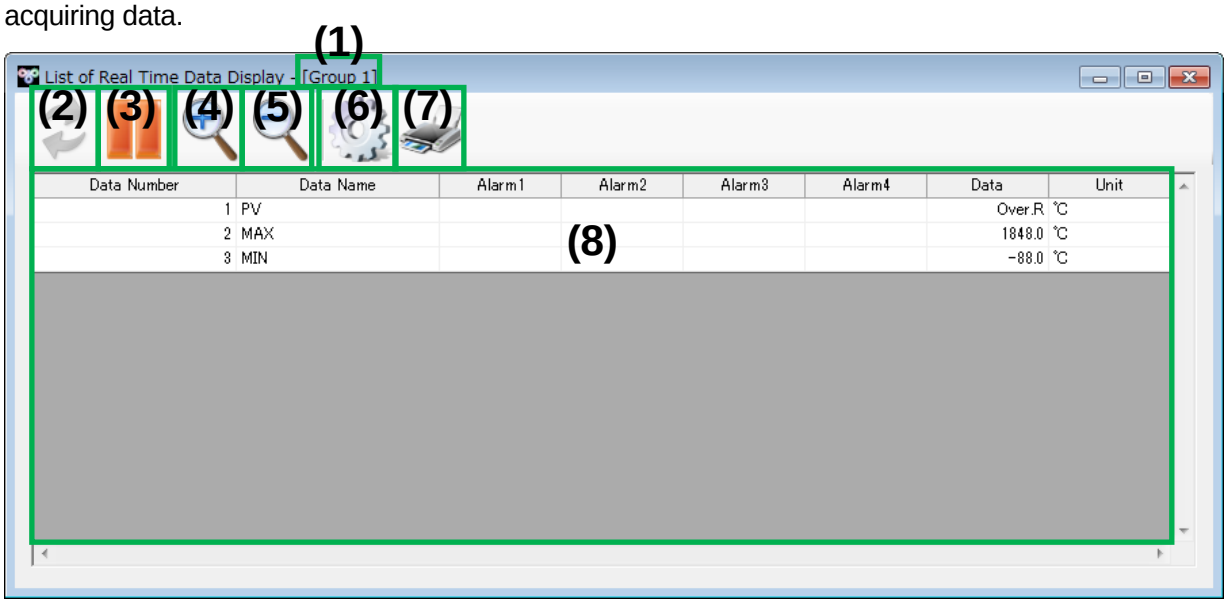
No.	Name	Description
(1)	Display Numeric Data	Specify display or hide numeric data. *With check mark: Displays/Without check mark: Hidden
(2)	Display Item	Specify items for displaying of numeric data. *With check mark: Displays/Without check mark: Hidden
(3)	Font	Specify font information of numeric data.
(4)	Font Color	Specify foreground color of numeric data.
(5)	Background Color	Specify background color of numeric data.
(6)	Display Position	Select and Specify numeric data display position from Top, Bottom, Right or Left.
(7)	OK	Retains setting information on the numeric data setting dialog and reflects setting contents on the trend graph display window.
(8)	Cancel	Ignores setting information on the numeric data setting dialog and cancels setting contents on the trend graph display window.

5-4-7. List of Real Time Data Display Window

It provides functions of expand list of acquiring data included in the selected acquiring group then update and display in real-time.

<Name of list of real time data display window parts>

Utilizing following functions (1) Acquisition Data Name, (2) Update Resume, (3) Update Pause, (4) Magnify, (5) Reduce, (6) Display Setting, (7) Print and (8) List of Real Time Data Display, it displays and updates list of acquiring data.



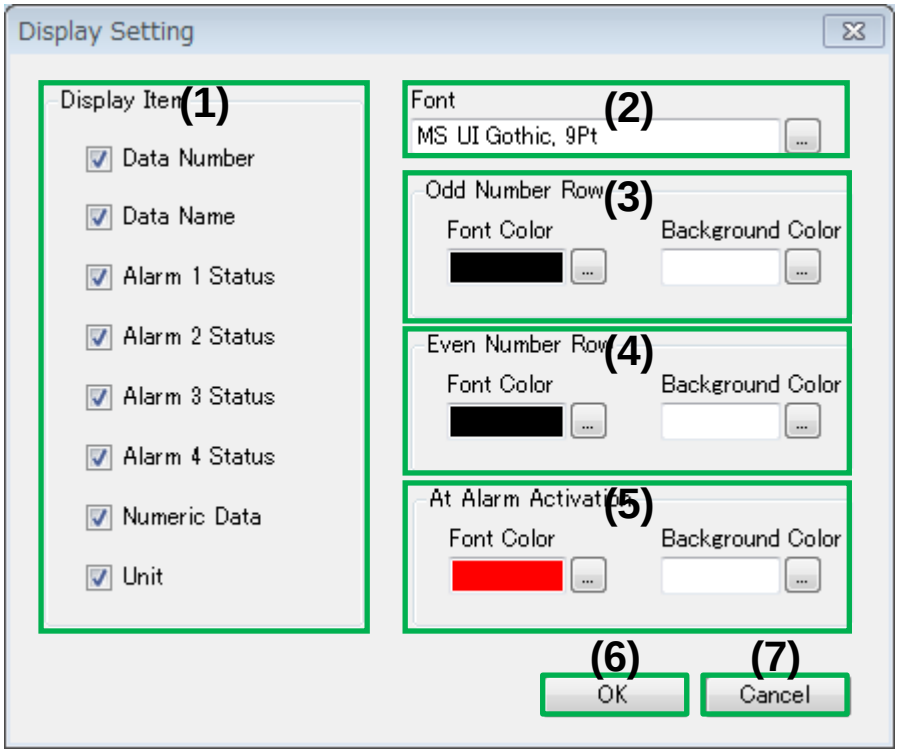
No.	Name	Description	Reference
(1)	Acquisition Data Name	Displays selected acquisition group display name.	-
(2)	Update Resume	When update of list of data is at pause, resume update. *Enable/disable of the button switches at Pause/Update.	-
(3)	Update Pause	During updating the list of data, pause data update. *Enable/disable of the button switches at Pause/Update.	-
(4)	Magnify	Magnifies font size of displayed list. *Magnify twice as much as standard value in maximum.	-
(5)	Reduce	Reduces font size of displayed list. *Reduce 0.5 times of standard value in maximum.	-
(6)	Display Setting	Displays display setting of list of real time data. *It can be displayed by double clicking on the (8) List of Real Time Data Display.	5-4-6-1
(7)	Print	Prints displaying list of data. *Displays Print Preview.	-
(8)	List of Real Time Data Display	Displays list of acquiring data included in the selected acquiring group in real-time.	-

5-4-7-1. Display Setting Dialog

It provides editing function of list of real time data display window; display setting information.

< Name of display setting dialog parts >

Utilizing following functions (1) Display Item, (2) Font, (3) Odd Number Row, Cell Setting, (4) Even Number Row, Cell Setting, (5) Cell Setting at Alarm Activation, (6) OK and (7) Cancel, it edits or cancels for list of real time data; display setting information.



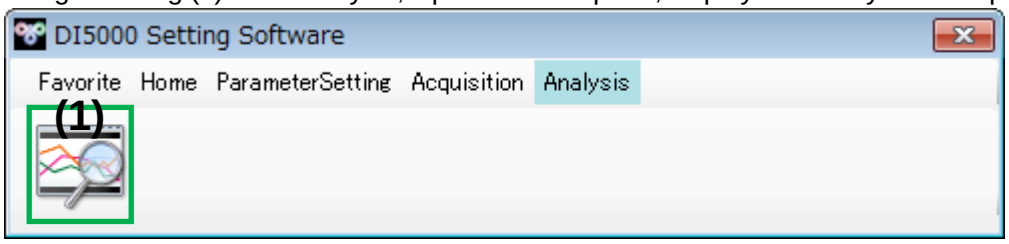
No.	Name	Description
(1)	Display Item	Specify display or hide for each column of list of real time data. *With check mark: Displays/Without check mark: Hidden
(2)	Font	Specify the font information of list of real time data display window.
(3)	Odd Number Row, Cell Setting	Specify the font color and the background color of odd number row cell of list of real time data display window.
(4)	Even Number Row, Cell Setting	Specify the font color and the background color of even number row cell of list of real time data display window.
(5)	Cell Setting at Alarm Activation	Specify the font color and the background color of alarm activation cell of list of real time display window.
(6)	OK	Retains setting information on the display setting dialog and reflects setting contents on the list of real time data display window.
(7)	Cancel	Ignores setting information on the display setting dialog and cancels reflecting setting contents on the list of real time data display window.

5-5. Operation of Data Analysis

Data analysis provides function of expand, display and analyze recorded acquisition data file in this application, acquired data file recorded by each device side and analysis file saved at this function.

< Name of data analysis at application launcher >

Utilizing following (1) Data Analysis, it processes expand, display and analysis of acquisition data file etc.



No.	Name	Description	Reference
(1)	Data Analysis	・ Displays file open dialog to search acquisition data file etc. ・ Displays data analysis window by using specified data file. ・ If combining acquisition data files is desired, select multiple files while displaying file open dialog.	5-5-1

*Combining acquisition data file requires following conditions (Refer to 5-4-2-1. Group Edit Dialog and 5-4-5. Data Memory Operation Window for condition setting).

・ Combining acquisition data files shall be same group configurations (group name, data configuration and data memory interval shall be the same).

・ Combining acquisition data files shall be same extensions.

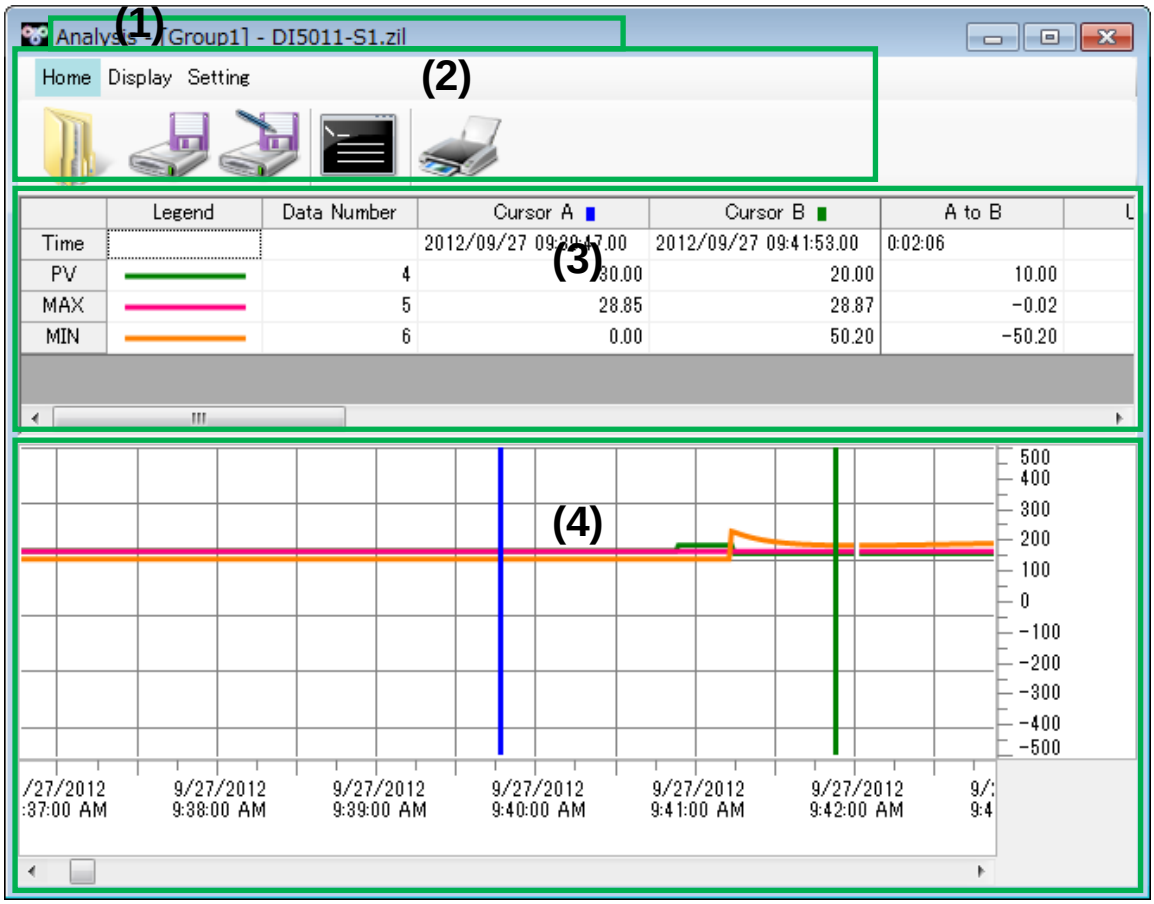
*If the selected acquisition data files are not fulfilling the combining conditions, combining is not carried out and files are displayed on the other windows.

5-5-1. Data Analysis Window

It provides function of expand, display and analyze acquired data by this application, each device side or analysis file saved at analysis function.

< Name of data analysis window parts >

Utilizing following functions (1) Data Analysis Window Title, (2) Toolbar (3) Numeric Data/Bar Graph Display and (4) Trend Graph Display, it expands, displays and analyzes target analysis file.



No.	Name	Description	Reference
(1)	Data Analysis Window Title	Displays in order of Analysis – [analysis file title property of analysis file] – name of analysis file. *Default of analysis data file name is group name of currently open data.	-
(2)	Toolbar	Execute each function of data analysis window.	5-5-1-1
(3)	Numeric Data/Bar Graph Display	Displays data which links to cursor etc. on expended and displayed trend graph.	5-5-1-2
(4)	Trend Graph Display	Displays acquisition data value of analysis data file as a graph.	5-5-1-3

5-5-1-1. Toolbar

It provides function of tool buttons which startup and execute each function of data analysis window and its switch function.

< Each toolbar, operation flow >

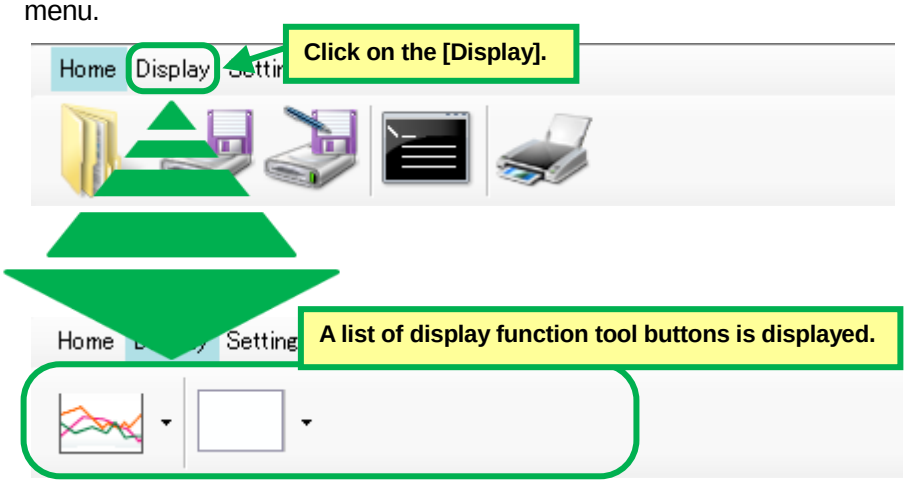
(1) Startup data analysis window.

When startup and display data analysis window, it displays [Home] menu.

(2) Select a function.

Broadly three functions are available to select.

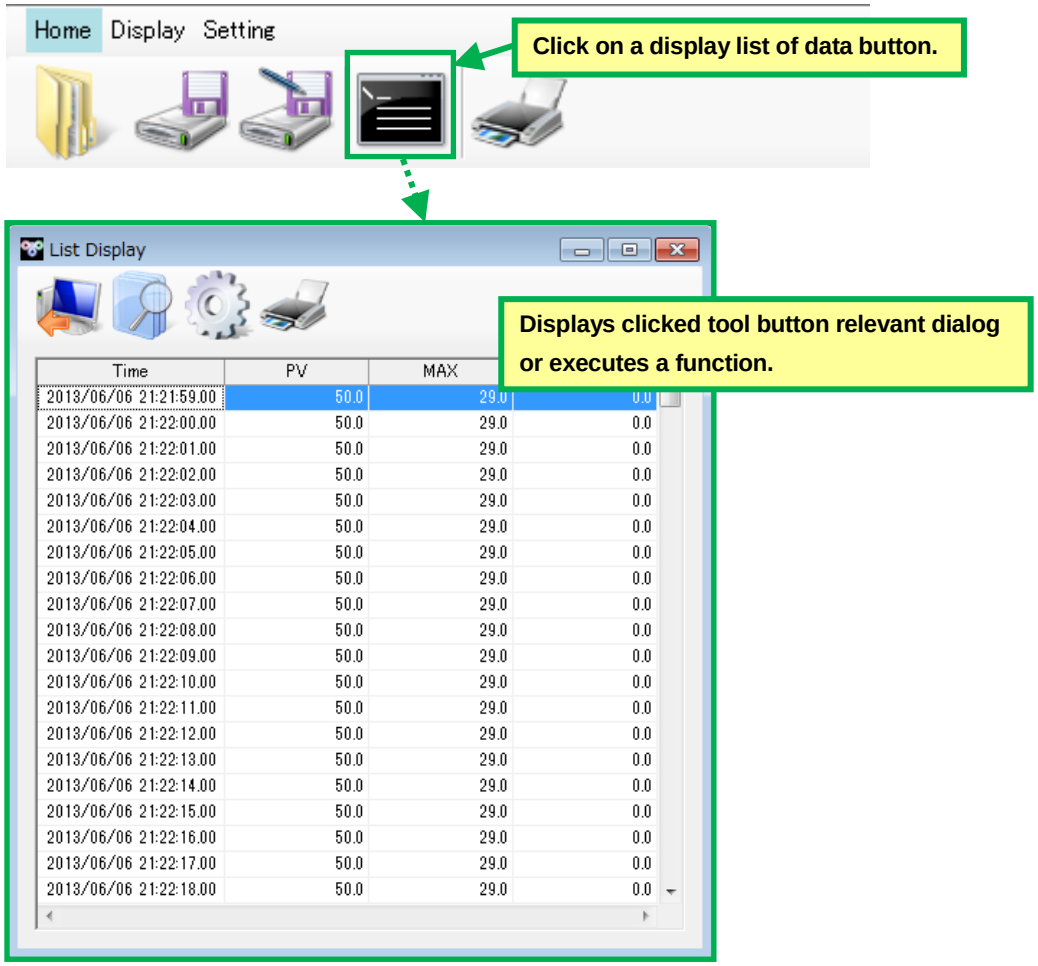
From left of menubar, [Home], [Display] and [Setting] are switched to relevant tool buttons by clicking on a menu.



(3) Starting up each function.

After selecting a function at (2), click a tool button in below.

Clicking on a tool button enables startup relevant function and display a dialog/window.



(a) Operation of Home

It provides basic function of data analysis.

< Name of home toolbar parts >

Utilizing following functions (1) Open File, (2) Save, (3) Save as, (4) Display List of Data, (5) Print Screen Image, it performs basic operation of data analysis.

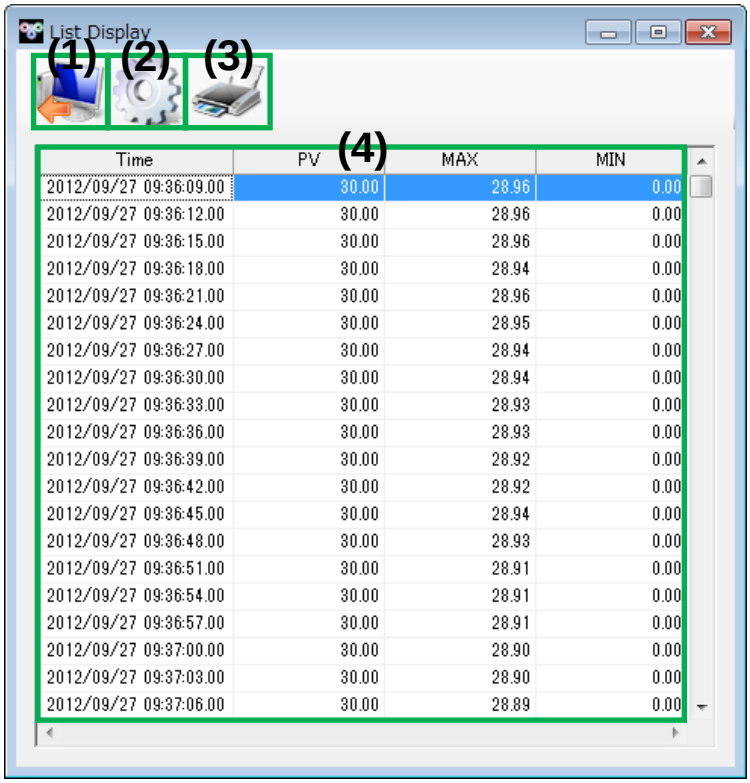
No.	Name	Description	Reference
(1)	Open File	・ Displays file open dialog. ・ Specify data file, expands and displays data analysis window. *1 *.dmf file or *.zil file can be selected. *2 Data values which are able to combine is combined to original data then expanded and displayed. For other case, another window startup then expanded and displayed. *3 If the number of the windows exceeds prescribed displayable number, it cannot be startup.	-
(2)	Save	Saves analysis data file. *The file was saved as zil format, it saves as same format and in other case, it saves the file with a new name.	-
(3)	Save as	Specify arbitrary folder and saves the file with a new name.	-
(4)	Display List of Data	Displays list of data dialog.	(a)-1.
(5)	Print Screen Image	Prints current screen image. *Displays print preview.	-

(a)-1. Data List Display Window

It provide function of expand and display for data value of data analysis window trend graph as a list of numeric value.

< Name of data list display window parts >

Utilizing following functions (1) Export, (2) Display Setting, (3) Print and (4) Data List Display, it displays list of data analysis.



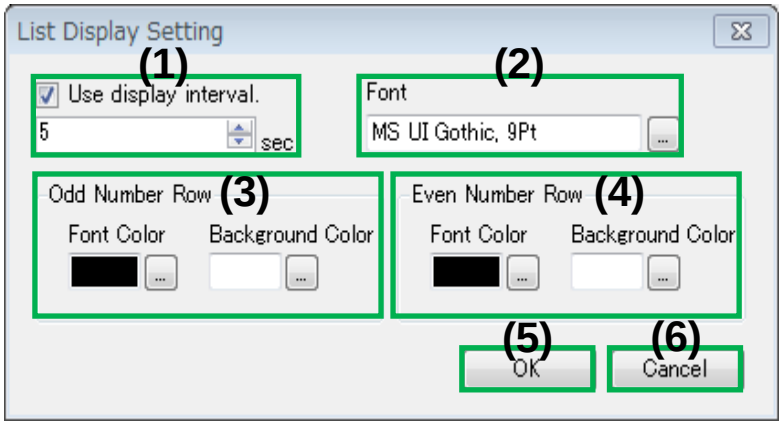
No.	Name	Description	Reference
(1)	Export	Select a file format from ・ CSV (Comma delimited) ・ Text (Tab delimited) ・ Excel (xlsx) and specify output destination then output a file. *A graph is added only for Excel (xlsx) format.	-
(2)	Display Setting	Displays display setting dialog.	(a)-1-1.
(3)	Print	Prints displayed data list. *Displays print preview.	-
(4)	Data List Display	Displays list of acquisition time and a list of acquisition value. *Double click on the data list display displays a cursor on the 5-5-1-3. Trend Graph Display. Refer to the 5-5-1-3. Trend Graph Display (2) List Cursor for more detail.	-

(a)-1-1. List Display Setting Dialog

It provides editing function of data list display; display setting information.

< Name of list display setting dialog parts >

Utilizing following functions (1) Display Interval Setting, (2) Font, (3) Odd Number Row Setting, (4) Even Number Row Setting, (5) OK, and (6) Cancel, it edits for display setting information.



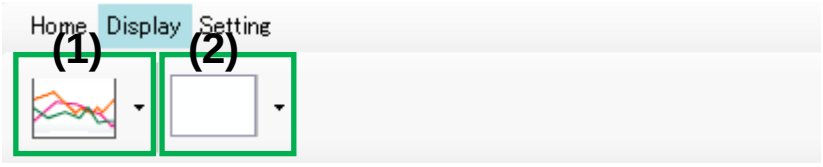
No.	Name	Description
(1)	Display Interval Setting	Specify usage of display interval and setting for display interval of time for data value to list display from the range of 1 to 86400 [sec]. *Display data list by the specified interval on the data list display window according to the display interval.
(2)	Font	Specify the font information of data list display window.
(3)	Odd Number Row Setting	Specify the font color and background color of odd number row on the data list display window.
(4)	Even Number Row Setting	Specify the font color and background color of even number row on the data list display window.
(5)	OK	Retains setting information on the list display setting dialog and reflects setting contents on the data list display window.
(6)	Cancel	Ignores setting information on the list display setting dialog and cancels reflecting setting contents on the data list display window.

(b) Operation of Display

It provides function of switching display setting in data analysis.

< Name of display toolbar parts >

Utilizing following functions (1) Display Period Switching, (2) Border Display Switching, it switches display setting of data analysis.



No.	Name	Description
(1)	Display Period Switching	Select and specify display period on the trend graph from All period, Standard or Between AB cursor. Click on the dropdown button then specify one of the icons below by clicking. *While selecting Between AB cursor, clicking on the icon part of its button changes display area (on the display, place the AB cursor → click icon).  …All Period  …Standard  …Between AB cursor
(2)	Border Display Switching	Select and specify border display on the trend graph from None, Standard or Detail. Click on the dropdown button then specify one of the icons below by clicking.  …None  …Standard  …Detail

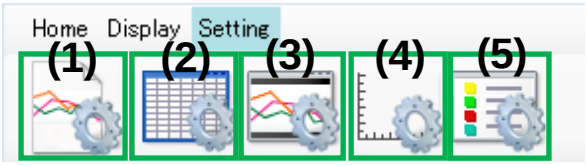
(c) Operation of Setting

It provides function of various setting for data analysis.

< Name of setting toolbar parts >

Utilizing following functions (1) Analysis File Setting, (2) Data Setting, (3) Graph Area Setting, (4) Scale Plate Setting, and (5) Numeric Data/Bar Graph Setting, it edits setting information of data analysis.

***Refer to the section 3-1 List of function restriction of free of charge edition about restriction of free of charge edition.**



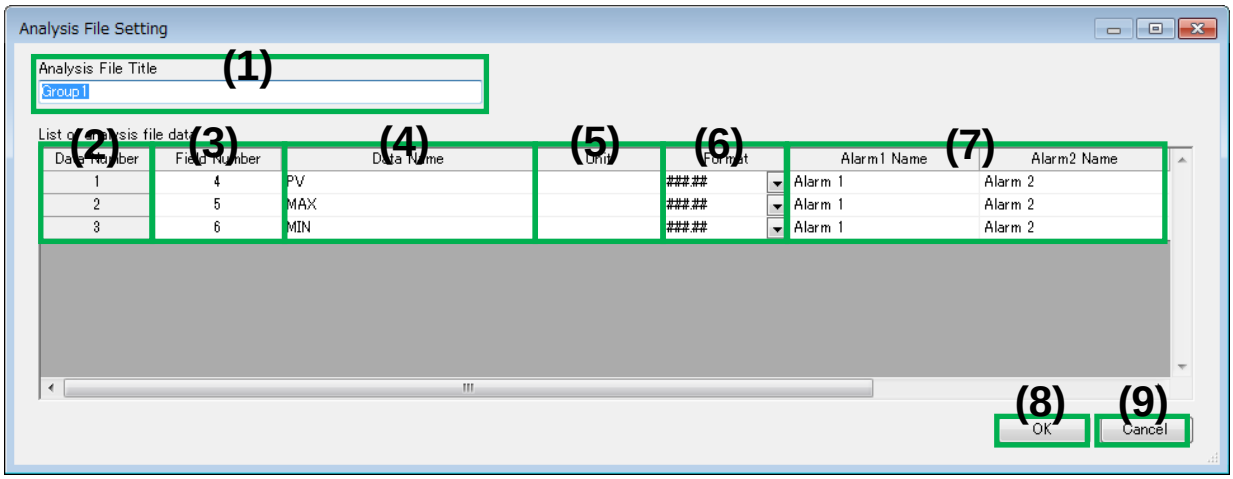
No.	Name	Description	Reference
(1)	Analysis File Setting	Displays analysis file setting dialog.	(c)-1.
(2)	Data Setting	Displays data setting dialog.	(c)-2.
(3)	Graph Area Setting	Displays graph area setting dialog.	(c)-3.
(4)	Scale Plate Setting	Displays scale plate setting dialog.	(c)-4.
(5)	Numeric Data/Bar Graph Setting	Displays numeric data/bar graph setting dialog.	(c)-5.

(c)-1. Analysis File Setting Dialog

It provides editing function of data analysis window, analysis file setting information.

< Name of analysis file setting dialog parts >

Utilizing following functions (1) Analysis File Title, (2) Data Number, (3) Field Number, (4) Data Name, (5) Unit, (6) Format, (7) Alarm 1 to 4 Name, (8) OK, and (9) Cancel, it edits analysis file setting information.



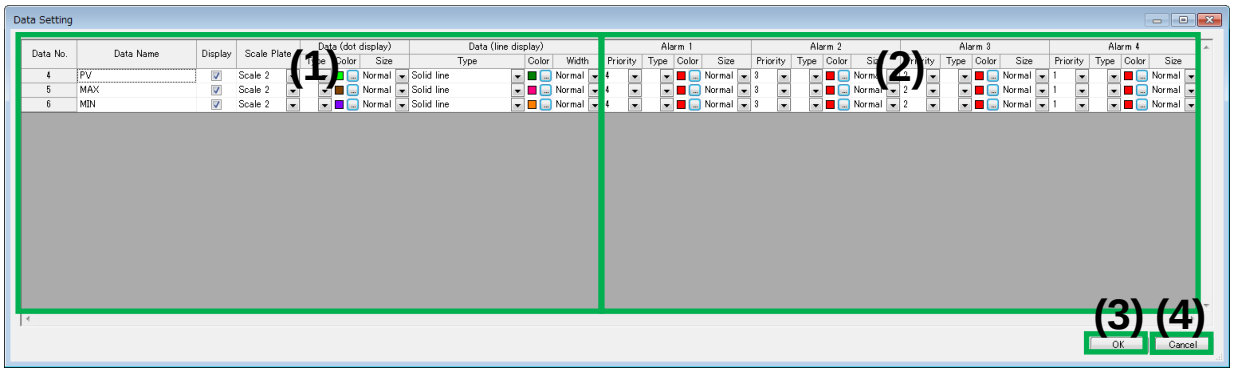
No.	Name	Description
(1)	Analysis File Title	Specify analysis file title which is expanded on the data analysis window. Up to 30 characters are able to be entered. *Specified analysis file title is reflected on the data analysis window header text string.
(2)	Data Number	Displays data number which exists on the data analysis window. It cannot be changed.
(3)	Field Number	Displays data No.at acquisition. It cannot be changed.
(4)	Data Name	Specify data name. Up to 30 characters are able to be entered.
(5)	Unit	Specify unit. Up to 30 characters are able to be entered.
(6)	Format	Select and specify display format for analysis data from #####, ####.#, ###.##, ##.###, #.####, 0E+00, 0.0E+00, 0.00E+00 or 0.000E+00.
(7)	Alarm 1 to 4 Name	Specify each alarm name. Up to 30 characters are able to be entered.
(8)	OK	Retains setting information on the analysis file setting dialog and reflects setting contents on the data analysis window.
(9)	Cancel	Ignores setting information on the analysis file setting dialog and cancels reflecting setting contents on the data analysis window.

(c)-2. Data Setting Dialog

It provides editing function of data analysis window; data setting information.

< Name of data setting dialog parts >

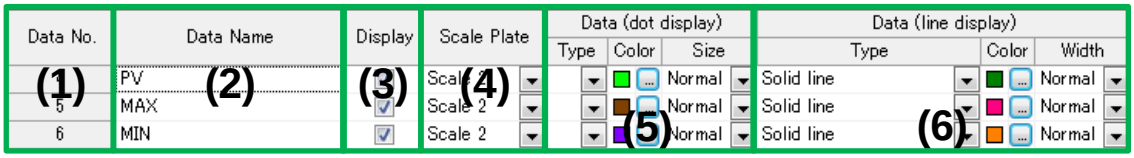
Utilizing following functions (1) Basic Setting, (2) Alarm Setting, (3) OK and (4) Cancel, it edits or cancels data analysis window; data setting information.



No.	Name	Description
(1)	Basic Setting	***Refer to name of basic setting parts.**
(2)	Alarm Setting	***Refer to name of alarm setting parts.**
(3)	OK	Retains setting information on the data setting dialog and reflects setting contents on the data analysis window.
(4)	Cancel	Ignores setting information on the data setting dialog and cancels reflecting setting contents on the data analysis window.

< Name of basic setting parts >

Utilizing following functions (1) Data No., (2) Data Name, (3) Display (4) Scale Plate, (5) Dot Setting and (6) Line Setting, it edits data analysis window; data setting information; basic setting.

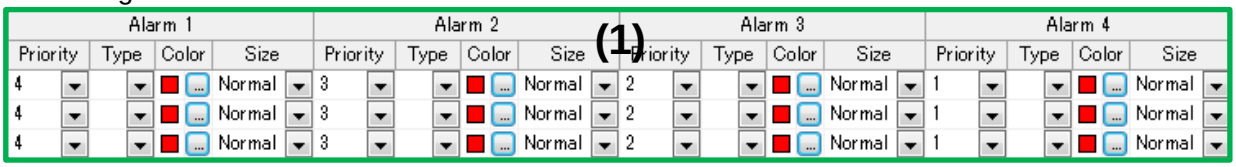


No.	Name	Description
(1)	Data No.	Displays data No.at acquisition. It cannot be changed.
(2)	Data Name	Displays data name. It cannot be changed.
(3)	Display	Specify display or hide display data value. *With check mark: Displays/Without check mark: Hidden
(4)	Scale Plate	Select and specify target scale plate for data value to plot from Scale 1, Scale 2, Scale 3 or Scale 4.
(5)	Dot Setting	Specify type, color and size of displaying dot. **[Type]** Select and specify from None/ □ / ■ / ◇ / ◆ / △ / ▲ / × / ✳ / ○ / ● / + **[Color]** Specify from color dialog. **[Size]** Select and specify from Small, Normal or Large.
(6)	Line Setting	Specify type, color and width of displaying line. **[Type]** Select and specify from None, Solid line, Chain dash line, Wave line, Dash dotted line or

		Dash double dotted line. **[Color]** Specify from color dialog. **[Width]** Select and specify from Thin, Normal or Thick.

< Name of alarm setting parts >

Utilizing following function (1) Alarm 1 to 4 Setting, it edits data analysis window; data setting information; alarm setting.



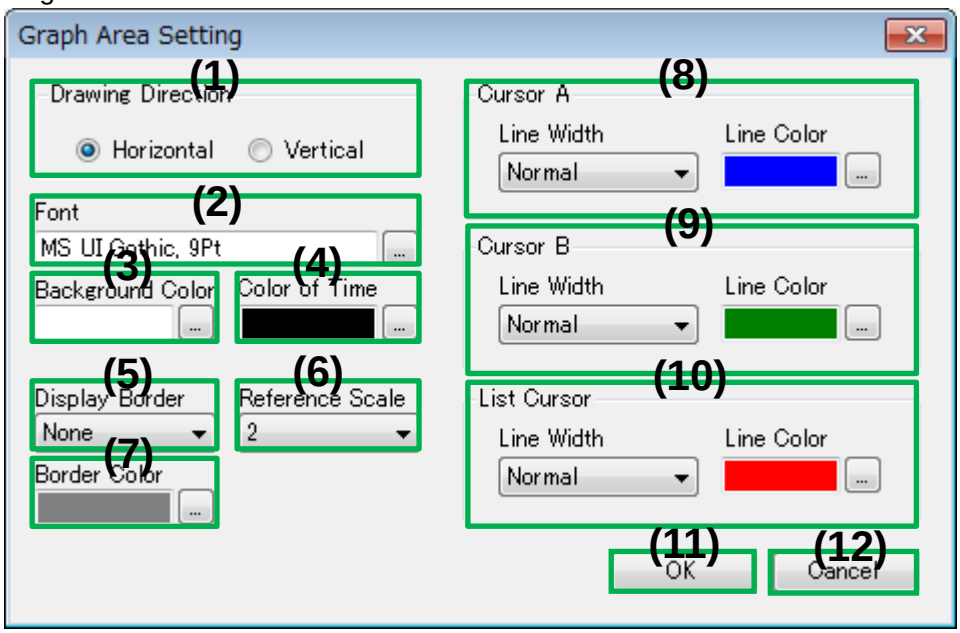
No.	Name	Description
(1)	Alarm 1 to 4 Setting	Specify type, color, width and its priority of displaying dot for each alarm. **[Priority]** Select and specify from 1, 2, 3 or 4. *Priority is 1 [high] to 4 [low]. **[Type]** Select and specify from None/ □ / ■ / ◇/ ◆/ △/ ▲/ ×/ ✳/ ○/ ●/ + **[Color]** Specify from color dialog. **[Size]** Select and specify from Small, Normal or Large.

(c)-3. Graph Area Setting Dialog

It provides editing function of data analysis window; graph area setting information.

< Name of graph area setting dialog parts >

Utilizing following functions (1) Drawing Direction, (2) Font, (3) Background Color, (4) Color of Time, (5) Display Border, (6) Reference Scale, (7) Border Color, (8) Cursor A Setting, (9) Cursor B Setting, (10) List Cursor Setting, (11) OK, and (12) Cancel, it edits or cancels data analysis window; graph area setting information.



No.	Name	Description
(1)	Drawing Direction	Select and specify scroll method of the graph from Horizontal or Vertical.
(2)	Font	Specify the font using at graph area and time axis.
(3)	Background Color	Specify the background color of graph area.
(4)	Color of Time	Specify the foreground color of time axis.
(5)	Display Border	Select and Specify display type of border from None, Normal (drawn as scale) or Detail (drawn also as sub scale).
(6)	Reference Scale	Select and specify target scale plate for displaying border from 1, 2, 3 or 4.
(7)	Border Color	Specify the color of drawing border line..
(8)	Cursor A Setting	Specify line width and line color of cursor A. **[Line Width]** Select and specify from Thin, Normal or Thick. **[Line Color]** Specify from color dialog.
(9)	Cursor B Setting	Specify line width and line color of cursor B. **[Line Width]** Select and specify from Thin, Normal or Thick. **[Line Color]** Specify from color dialog.

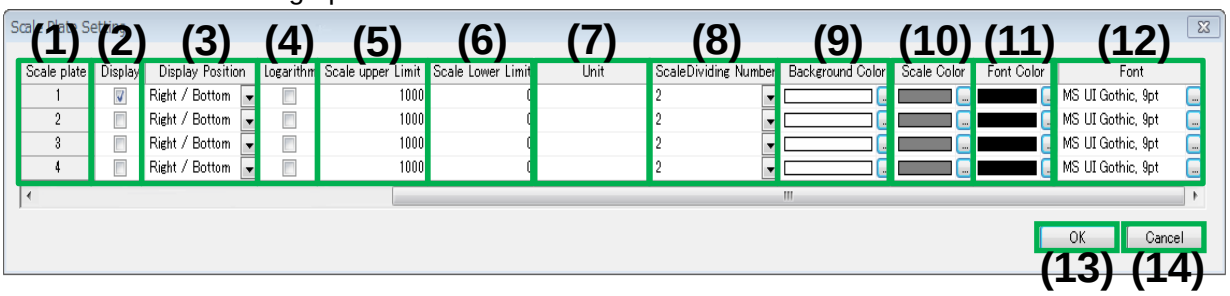
(10)	List Cursor Setting	Specify line width and line color of list cursor. **[Line Width]** Select and specify from Thin, Normal or Thick. **[Line Color]** Specify from color dialog.
(11)	OK	Retains setting information on the graph area setting dialog and reflects setting contents on the data analysis window.
(12)	Cancel	Ignores setting information on the graph area setting dialog and cancels reflecting setting contents on the data analysis window.

(c)-4. Scale Plate Setting Dialog

It provides editing function of data analysis window; scale plate setting information.

< Name of scale plate setting dialog parts >

Utilizing following functions (1) Scale Plate, (2) Display, (3) Display Position, (4) Logarithm, (5) Scale Upper Limit, (6) Scale Lower Limit, (7) Unit, (8) Scale Dividing Number, (9) Background Color, (10) Scale Color, (11) Font Color, (12) Font, (13) OK and (14) Cancel, it edits or cancels for scale plate setting information used on trend graph.



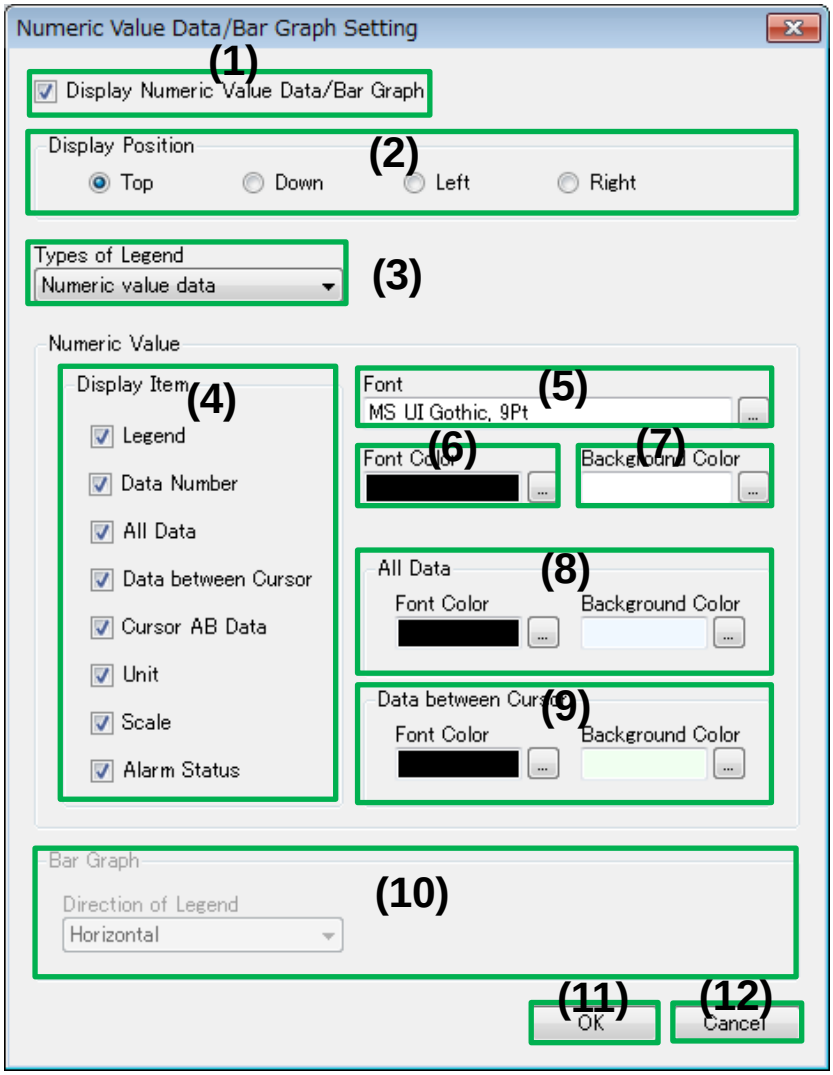
No.	Name	Description
(1)	Scale Plate	Displays scale No. 1 to 4. It cannot be changed.
(2)	Display	Specify display or hide display of scale plate. *With check mark: Displays/Without check mark: Hidden
(3)	Display Position	Select and Specify scale plate display position from Right (horizontal)/Down (vertical). *By changing Drawing Direction on 5-4-6-2. Graph Area Setting Dialog, Left/Top or Right/Bottom switches automatically.
(4)	Logarithm	Select and specify scale value expression from normal or Logarithm. *With check mark: Logarithm/Without check mark: normal.
(5)	Scale Upper Limit	Specify scale plate upper limit in the range of -99999.999 to 99999.999. *For logarithm scale, it becomes exponential format.
(6)	Scale Lower Limit	Specify scale plate lower limit in the range of -99999.999 to 99999.999. *For logarithm scale, it becomes exponential format.
(7)	Unit	Specify unit to display on scale plate. Up to 30 characters are able to be entered.
(8)	Scale Dividing Number	Select and specify number of scale line division from 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 and 20. *9 are fixed for logarithm scale.
(9)	Background Color	Specify the background color of scale plate.
(10)	Scale Color	Specify the scale line drawing color.
(11)	Font Color	Specify the scale value foreground color.
(12)	Font	Specify the scale value font.
(13)	OK	Retains setting information on the scale plate setting dialog and reflects setting contents on the trend graph display window.
(14)	Cancel	Ignores setting information on the scale plate setting dialog and cancels reflecting setting contents on the trend graph display window.

(c)-5. Numeric Value Data/Bar Graph Setting Dialog

It provides editing function of data analysis window; numeric value data/bar graph setting information.

< Name of numeric value data /bar graph setting dialog parts >

Utilizing following functions (1) Display or Hide Numeric Value Data/Bar Graph, (2) Display Position, (3) Types of Legend, (4) Numeric Value Data, Display Item, (5) Numeric Value Data, Font, (6) Numeric Value Data, Font Color, (7) Numeric Value Data, Background Color, (8) Numeric Value Data, All Data Setting, (9) Numeric Value Data, Data between Cursor Setting (10) Bar Graph, Direction of Legend, (11) OK and (12) Cancel, it edits or cancels for numeric value data/bar graph setting information.



No.	Name	Description
(1)	Display or Hide Numeric Value Data/Bar Graph	Specify display or hide numeric value data and bar graph. *With check mark: Displays/Without check mark: Hidden
(2)	Display Position	Select and specify display position of numeric data and bar graph from Top, Down, Left or Right.
(3)	Types of Legend	Select and specify types of legend from Numeric value data, Bar graph or Stacked bar graph. *When numeric value data is selected, numeric value data setting becomes enabled and bar graph setting becomes disabled. *When bar graph or stacked bar graph is selected, bar graph setting becomes enabled and numeric value data setting becomes disabled.

No.	Name	Description
(4)	Numeric Value Data, Display Item	Select and specify numeric value data display item. *With check mark: Displays/Without check mark: Hidden
(5)	Numeric Value Data, Font	Specify font information of numeric value data.
(6)	Numeric Value Data, Font Color	Specify foreground color of numeric value data.
(7)	Numeric Value Data, Background Color	Specify background color of numeric value data.
(8)	Numeric Value Data, All Data Setting	Specify font color and background color of numeric value data, all data related strings. *Default background color is located at “Custom color” in the color selecting dialog.
(9)	Numeric Value Data, Data between Cursor Setting	Specify font color and background color of numeric value data, data between cursor related strings. *Default background color is located at “Custom color” in the color selecting dialog.
(10)	Bar Graph, Direction of Legend	Specify bar graph direction.
(11)	OK	Retains setting information on the numeric value data setting dialog and reflects setting contents on the trend graph display window.
(12)	Cancel	Ignores setting information on the numeric value data setting dialog and cancels reflecting setting contents on the trend graph display window.

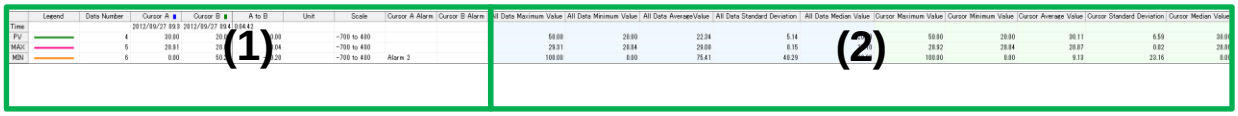
5-5-1-2. Numeric Value Data/Bar Graph Display

It provides display area for numeric value data or bar graph which accumulated from expanded data on data analysis window.

***It is interlocked with 5-5-1-3. Trend Graph Display therefore moving of AB cursors on the trend graph performs recalculation and so changes display contents.**

< Name of numeric value data parts >

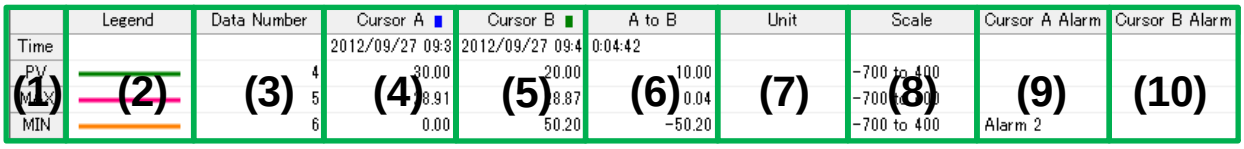
Utilizing following functions (1) Basic Data, Cursor AB Data Display and (2) All Data, Data between Cursor Display, it displays data analysis window, numeric value data.



No.	Name	Description
(1)	Basic Data, Cursor AB Data Display	***Refer to <Name of basic data, cursor AB data> below.** *Double click on the display displays (c)-5. Numeric Value Data/Bar Graph Setting Dialog.
(2)	All Data, Data between Cursor Display	***Refer to <Name of all data, data between cursor display> below.** *Double click on the display displays (c)-5. Numeric Value Data/Bar Graph Setting Dialog.

< Name of basic data, cursor AB data parts >

Utilizing following functions (1) Data Name, (2) Legend, (3) Data Number, (4) Cursor A, (5) Cursor B, (6) Cursor A to B, (7) Unit, (8) Scale, (9) Cursor A Alarm and (10) Cursor B Alarm, it configures numeric value data display.

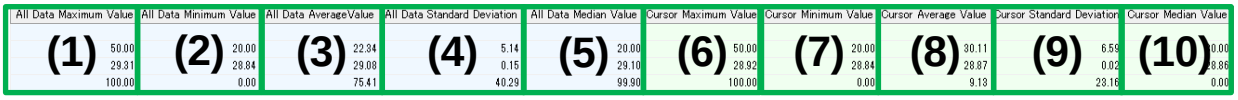


No.	Name	Description
(1)	Data Name	Displays data name as row header.
(2)	Legend	Displays legend line corresponding to each data value.
(3)	Data Number	Displays data number at acquisition for each data value.
(4)	Cursor A	Displays value of cursor A position within each data value. For time row, time of target data value is displayed. Displayed color next to the header shows color of the cursor. *It is displayed at the same time when cursor AB is placed at 5-5-1-3. Trend Graph Display. Data value is deleted at the same time when cursor A is deleted.
(5)	Cursor B	Displays value of cursor B position within each data value. For time row, time of target data value is displayed. Displayed color next to the header shows color of the cursor. *It is displayed at the same time when cursor AB is placed at 5-5-1-3. Trend Graph Display. Data value is deleted at the same time when cursor B is deleted.
(6)	A-B	Displays difference which subtracts cursor B value from cursor A value while (4) and (5) are displayed. *It is displayed at the same time when cursor AB is placed at 5-5-1-3. Trend Graph Display. Calculation result is deleted at the same time when cursor A or cursor B is deleted.
(7)	Unit	Displays unit specified for each data value.
(8)	Scale	Displays scale plate, scale information specified for each data value.
No.	Name	Description
(9)	Cursor A Alarm	Displays alarm status of cursor A position within each data value.

(10)	Cursor B Alarm	Displays alarm status of cursor B position within each data value.

< Name of all data, data between cursor display parts >

Utilizing following functions (1) All Data Maximum Value, (2) All Data Minimum Value, (3) All Data, Average Value, (4) All Data Standard Deviation, (5) All Data Median Value, (6) Cursor Maximum Value, (7) All Data Minimum Value, (8) Cursor Average Value, (9) Cursor Standard Deviation and (10) Cursor Median Value, it configures numeric value data display.



No.	Name	Description
(1)	All Data Maximum Value	Displays maximum value within all data values for each data value.
(2)	All Data Minimum Value	Displays minimum value within all data values for each data value.
(3)	All Data, Average Value	Displays average value within all data values for each data value.
(4)	All Data Standard Deviation	Displays standard deviation value within all data values for each data value.
(5)	All Data Median Value	Displays median value within all data values for each data value.
(6)	Cursor Maximum Value	Displays maximum value between cursor AB for each data value.
(7)	All Data Minimum Value	Displays minimum value between cursor AB for each data value.
(8)	Cursor Average Value	Displays average value between cursor AB for each data value.
(9)	Cursor Standard Deviation	Displays standard deviation value between cursor AB for each data value.
(10)	Cursor Median Value	Displays median value between cursor AB for each data value.

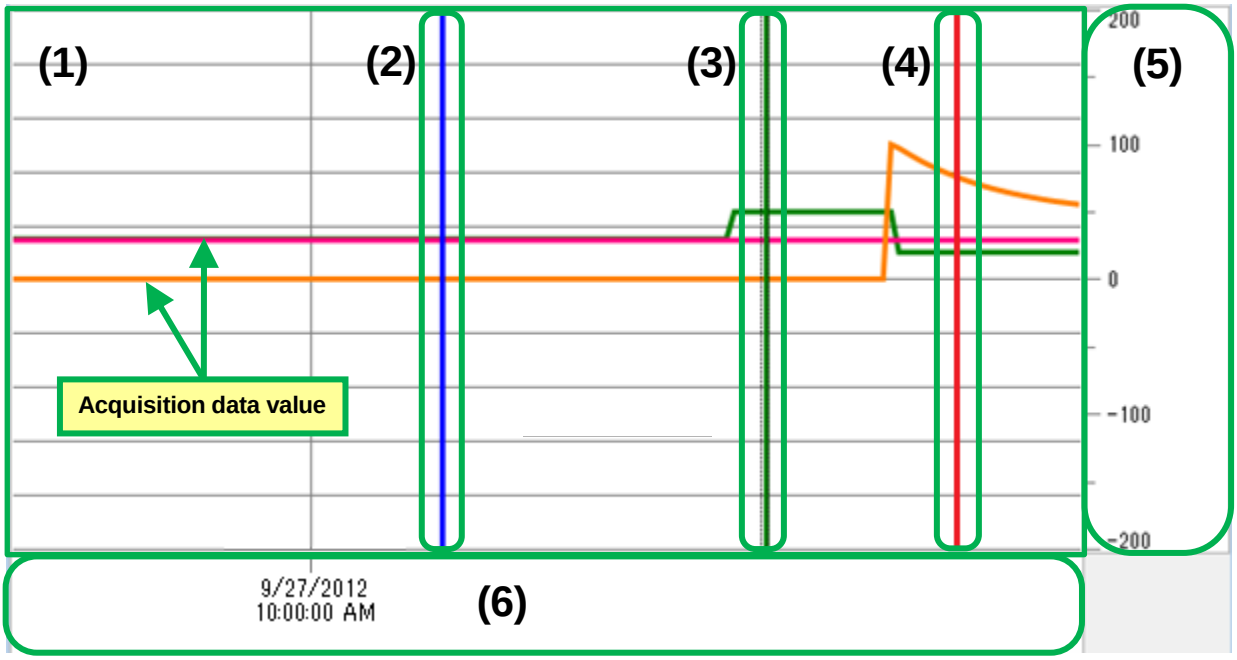
5-5-1-3. Trend Graph Display

It provides functions of illustrating graphically and displaying for retained acquisition data value of data analysis window, analysis data file.

***It is interlocked with 5-5-1-2. Numeric Value Data/Bar Graph Display therefore moving of AB cursors on the trend graph performs recalculation and so changes display contents.**

< Name of trend graph display parts >

Utilizing following functions (1) Graph Area, (2) Cursor A, (3) Cursor B, (4) List Cursor, (5) Scale Plate Area and, (6) Time Axis Area, it displays trend graph and analysis on the data analysis window.



No.	Name	Description	Reference
(1)	Graph Area	Illustrates analysis data value as graph and displays graph etc. *Border line, A cursor and B cursor which conform reference scale are displayed. *Right clicking on the graph area displays Add message of (5) Message.	-
(2)	Cursor A	Clicking on the mouse on the (1) Graph Area displays A cursor. *Cursor A being selected status enables moving the cursor by mouse drag or press of arrow key and delete the cursor by press of a Delete key.	-
(3)	Cursor B	Cursor B is displayed by mouse drag after displaying (3) Cursor A *Cursor B being selected status enables moving the cursor by mouse drag or press of arrow key and delete the cursor by press of a Delete key.	-
(4)	List Cursor	Double click on the (a)-3. Data Display Window (5) Data List Display displays a cursor on the corresponding data location. *List cursor disappears when data list display is closed.	-

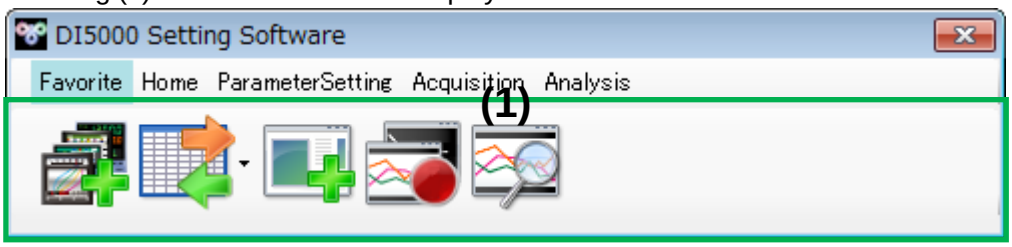
No.	Name	Description	Reference
(5)	Scale Plate Area	Displays border line reference scale of (1) Graph Area. *Editing scale plate upper limit/lower limit etc. setting is available at (c)-4. Scale Plate Setting Dialog. *If multiple scale plates are displayed, mouse click on the desired scale plate to set border line reference scale. *Attention is required for each data value reference scale since it is the setting contents of (c)-2. Data Setting Dialog. *Specify the range by dragging with mouse magnifies the area.	-
(6)	Time Axis Area	Displays time axis of (1) Graph Area. *Specify the range by dragging with mouse magnifies the area.	

5-6. Operation of Favorite

Favorite provides function of user support by adding arbitrary function which is enabled on launcher of this application so the function with high frequency of use can startup and execute smoothly.

< Name of favorite parts at application launcher >

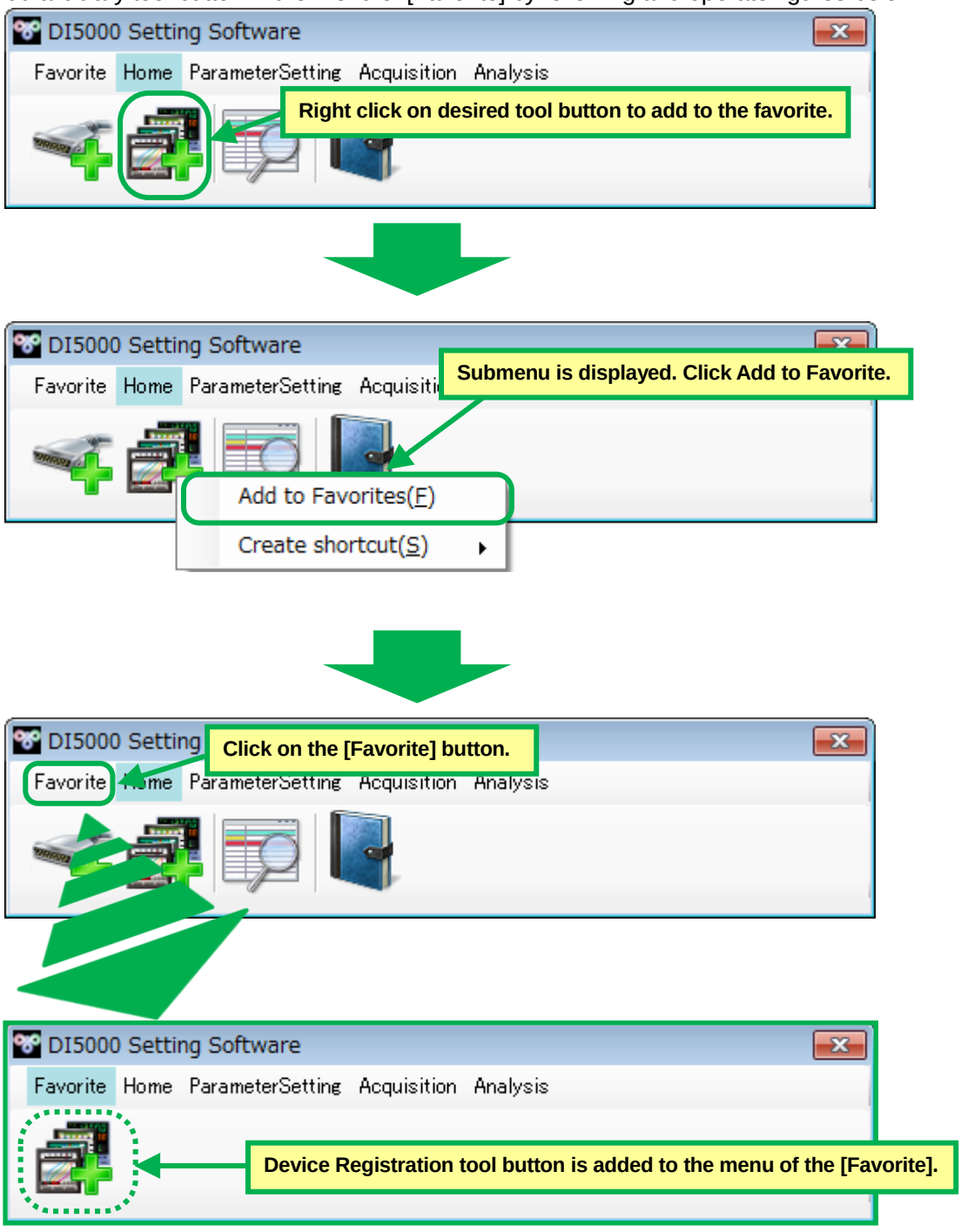
Processing (1) Favorite Tool Button Display.



No.	Name	Description
(1)	Favorite Tool Button Display	Displays tool button which user added or registered arbitrary. ***Refer to <Flow of adding favorite>.**

< Flow of adding favorite >

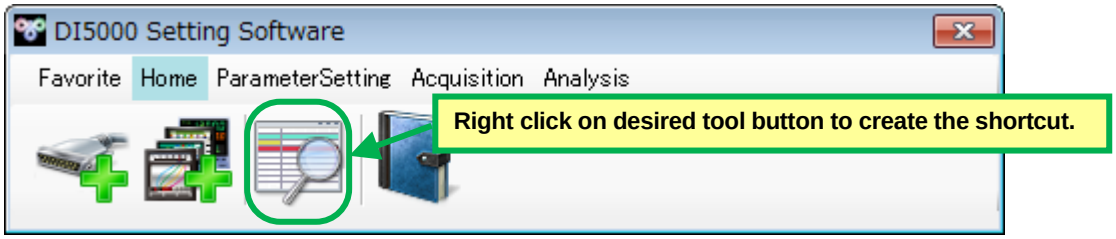
Add arbitrary tool button in the menu of [Favorite] by following and operate figures below.

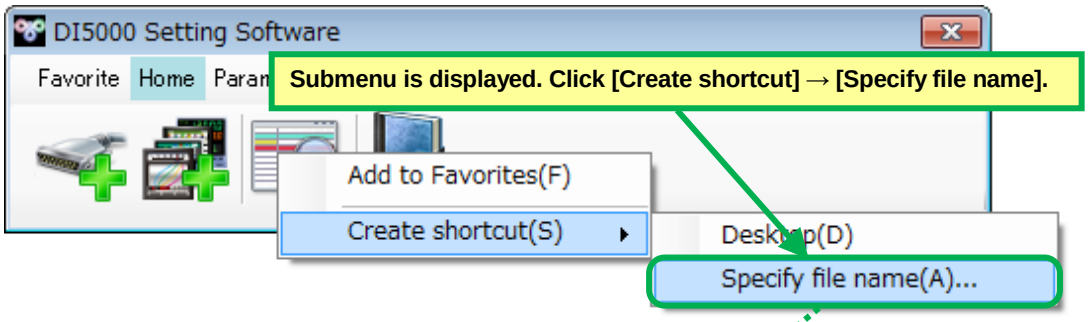


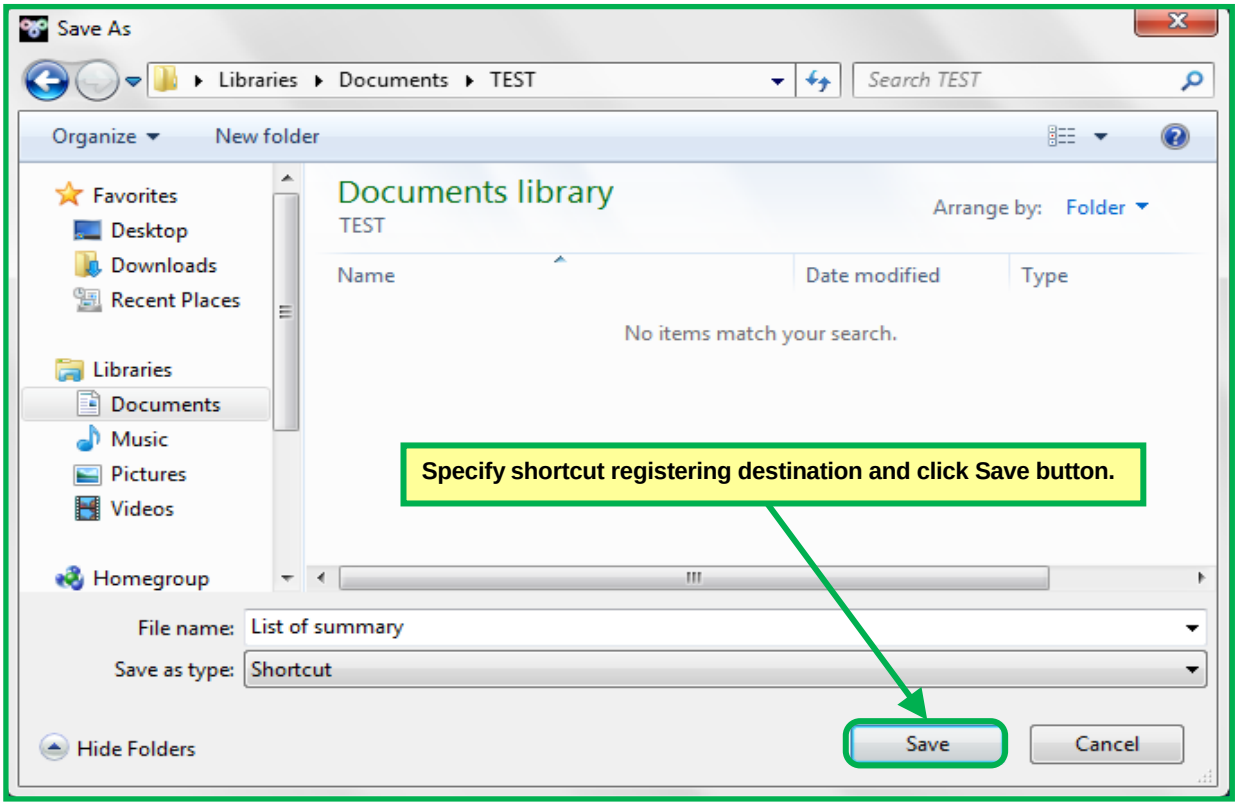
< Flow of creating shortcut >

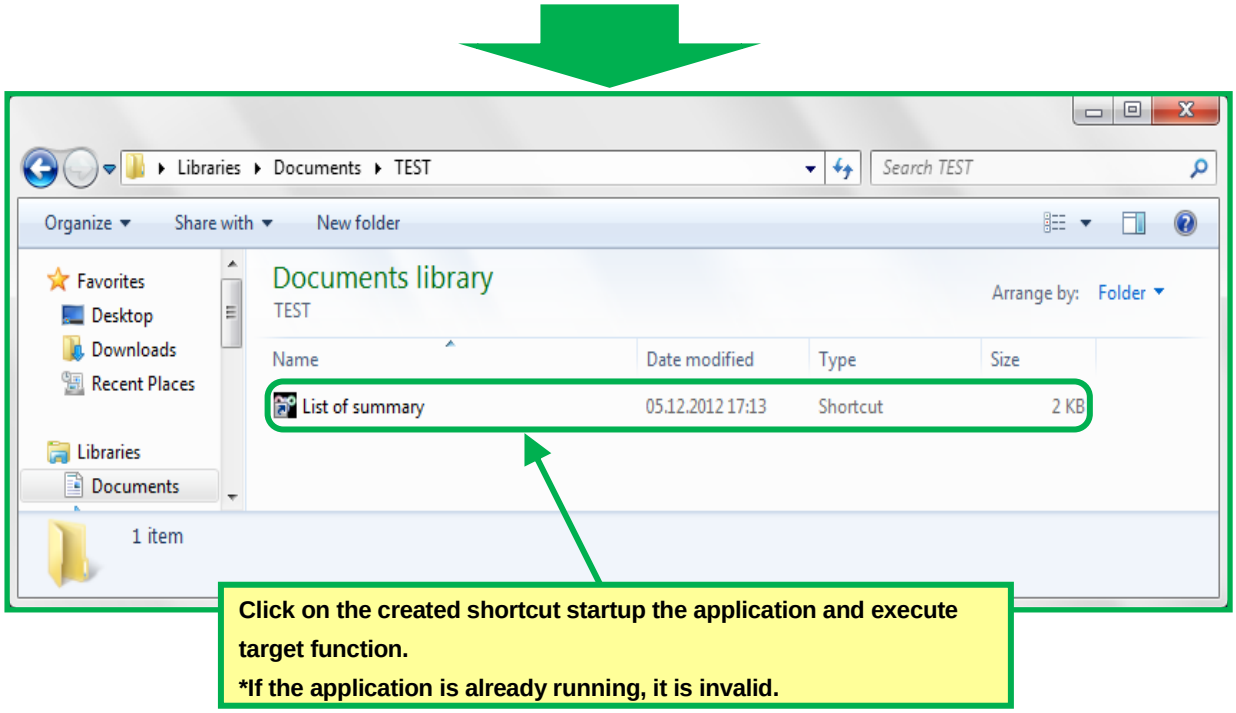
Create arbitrary tool button shortcut by following and operate figures below.

***Shortcut is able to be located on the desktop or specify a file name and put in the arbitrary place.**









Click on the created shortcut startup the application and execute target function.
***If the application is already running, it is invalid.**

6. Troubleshooting

This section describes symptoms, cause and remedy when a trouble is found in operation or function of this software.

No.	Symptom	Cause and Remedy
1	Installation does not complete correctly.	Confirm that there is enough free hard disk space (refer to the section 2-1).
2	The software does not startup.	The installation might not be completed correctly. Uninstall the software then install it again, and check if the software is able to startup.
3	The software has been operating correctly, but suddenly a malfunction occurs.	Exit the software, then startup the software again. *If the software exits due to an unexpected error, unsaved data would not be backed up. Please set it again.

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