**CHINO**

# DB600

# Setting Software

# INSTRUCTIONS

**CHINO**

# Table of contents

# 1. Introduction

Thank you for using our DB600 Setting Software.

This software provides application software function of parameter setup, data acquisition, data analysis to a DB600 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.

## Note

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9. Operation on power failure

    This software stops when the power is impossible to be supplied, at a time such as power failure. Also, please note that, it is required to start up manually after the recovery from power failure.

10. Other

    Due to improvement or for some other reasons, the specifications of this software may be altered by CHINO without prior notice. There may be differences between the image of this manual and the actual image on the screen.

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2. Other described company names and product names are trademarks and registered products of the respective companies.
3. Please note that the marks "TM" and "®" are omitted throughout this manual.

## 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 7 (32bit/64bit) English |
| | | Windows 8 (32bit/64bit) English |
| | | Windows 10 (32bit/64bit) English |
| | | *.NET Framework4 or later need to be able to installed to the OS above. |
| Required library | .NET Framework4 | |
| | 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.
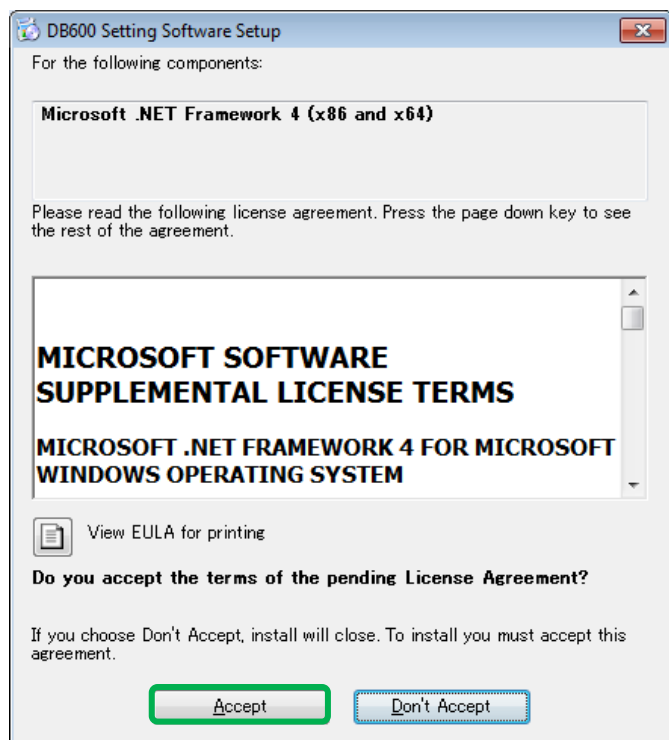


**\*Note on license agreement**

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.
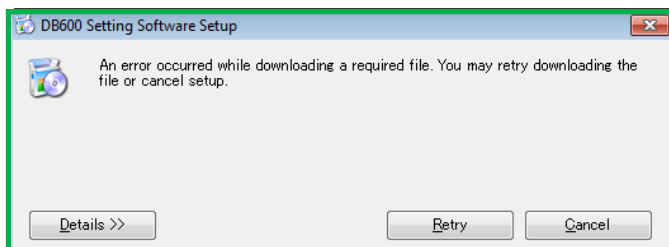
**(3) Start the Installation Wizard.**
DB600 Setting Software Setup Wizard
dialog is started. Click [Next] button.
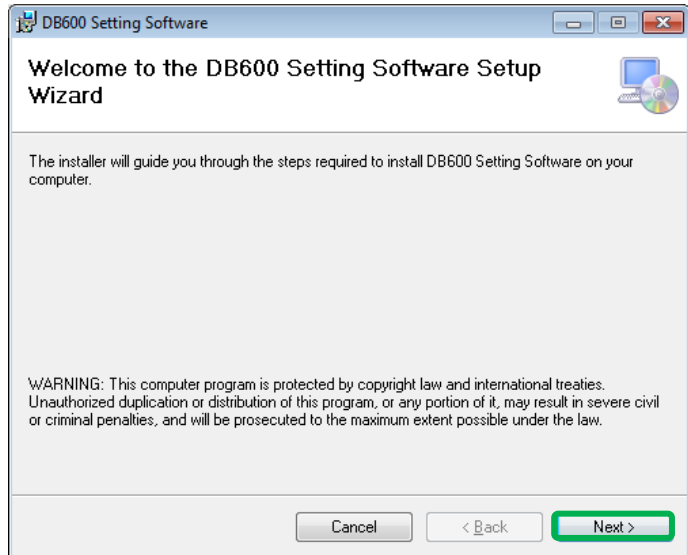
**(4) Select the Installation Folder.**
On Select Installation Folder dialog, select
[the install folder] and [user]. Click [Next]
button.
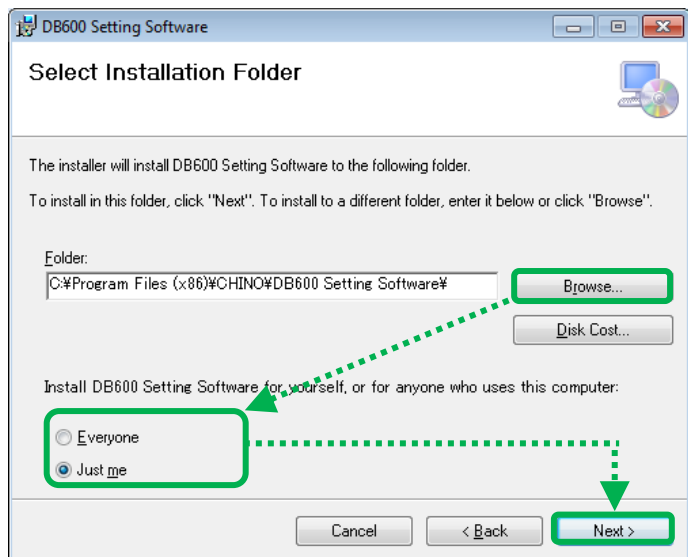
**(5) Confirm the installation.**
On Installation Confirmation dialog, click
[Next] button.
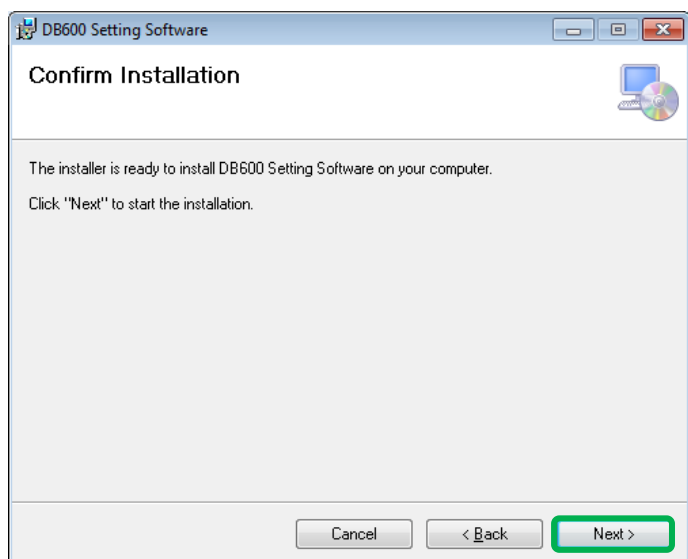
**(6) Start the installation.**

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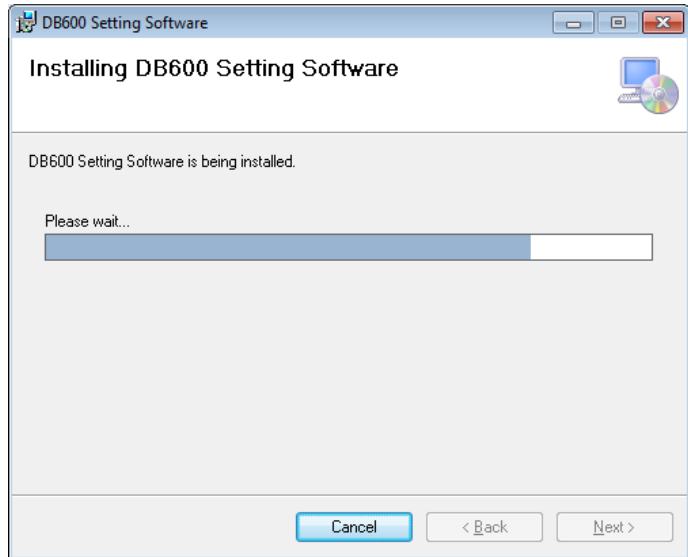


**(7) Complete the installation.**

Installation Complete dialog appears.
Click [Close] button to finish.
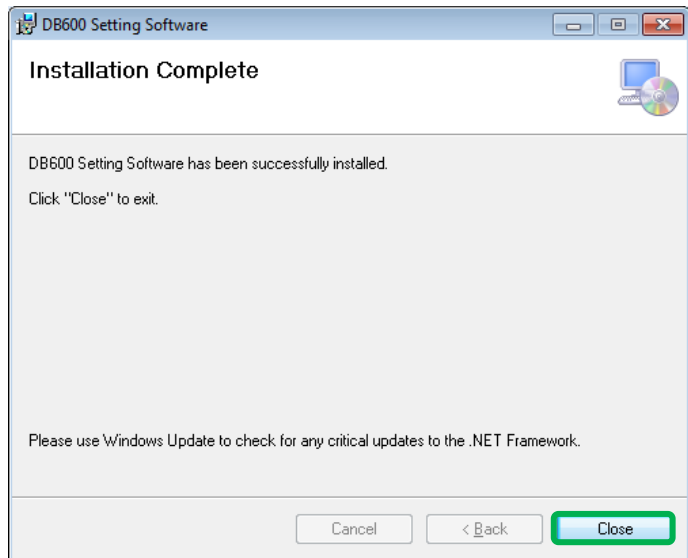
### 3-1-2. Installation at version upgrade

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].
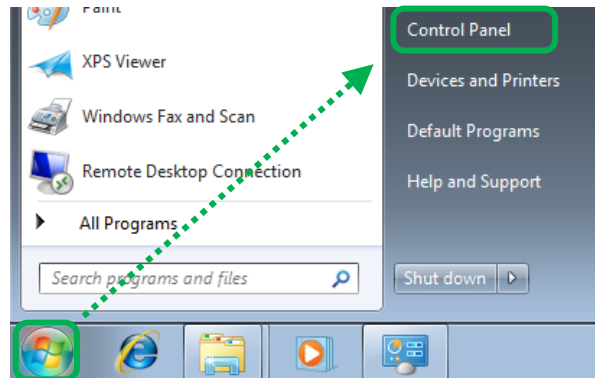
**(2) Click [Uninstall a program].**
After the Control Panel appears, click
[Uninstall a program].
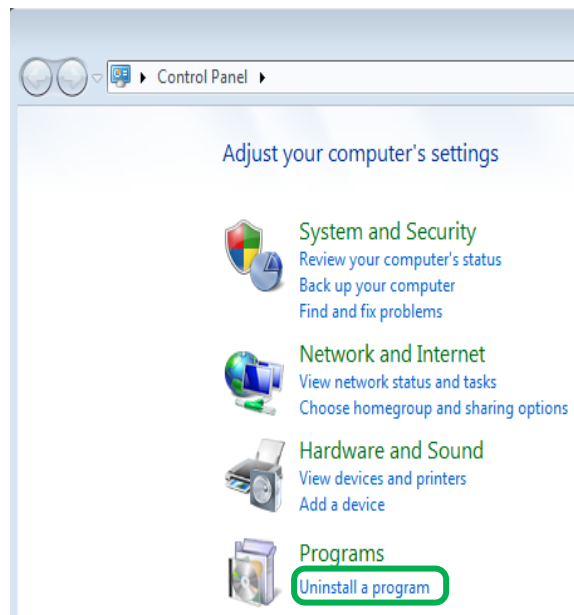
**(3) Delete [**DB600 Setting Software**].**
Select [DB600 Setting Software from a
list, then click [Uninstall].
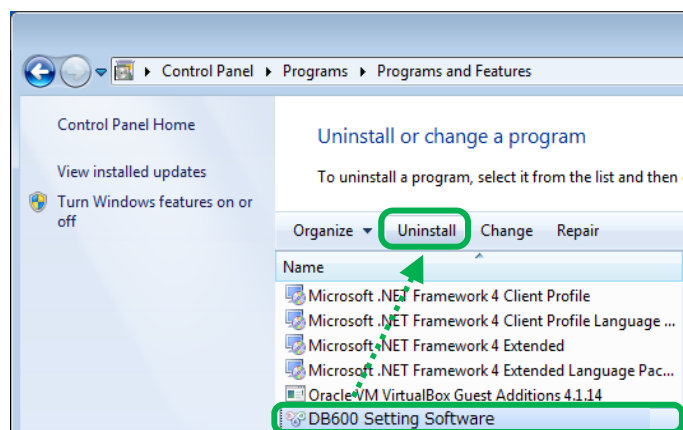
**(4) Click [Yes].**

Click [Yes], on Programs and Features dialog.

Programs and Features

⚠ Are you sure you want to uninstall DB600 Setting Software?

☐ In the future, do not show me this dialog box     [ Yes ]     [ No ]
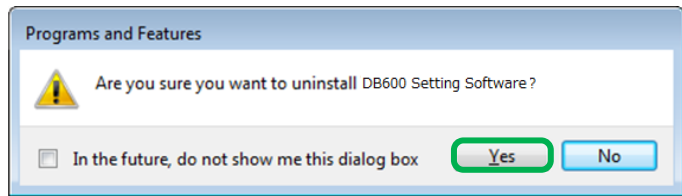
**(5) Start the uninstallation.**

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

DB600 Setting Software

Please wait while Windows configures DB600 Setting Software

Gathering required information...

[ Cancel ]
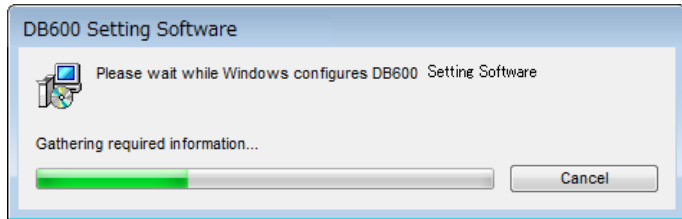
**\*At this point, a folder related to the software still remains. To delete the folder completely, delete the related folder "DB600 Setting Software" by Windows Explorer. The location of the folder is shown in the table below**

【Location of the folder related to the software】

| OS | Location of the folder |
|---|---|
| Windows 7 | C:¥ProgramData¥ DB600 Setting Software |
| Windows 8 | C:¥ProgramData¥ DB600 Setting Software |
| Windows 10 | C:¥ProgramData¥ DB600 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].
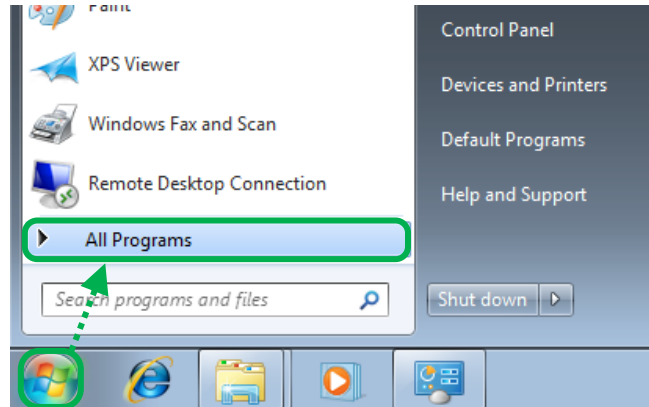
**(2)  Startup DB600 Setting Software.**

Next, click

[CHINO] → [DB600 Setting Software]

to start up the software.
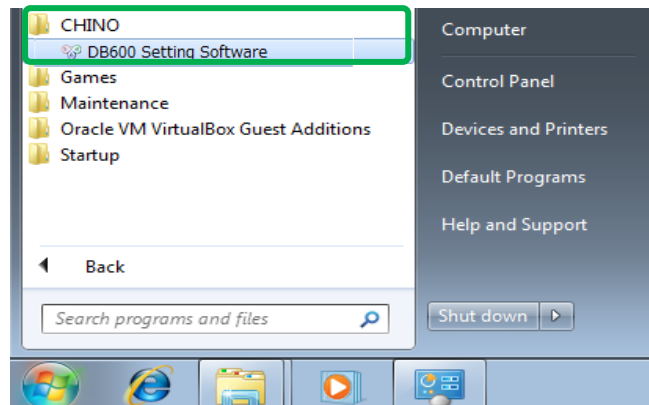
## 4-2. Exit

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.
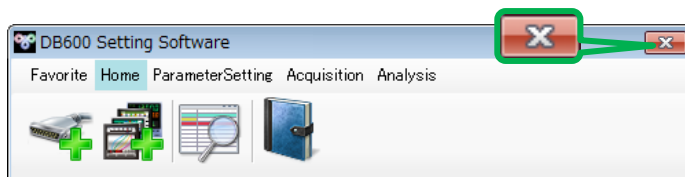
# 5. How to Operate

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.
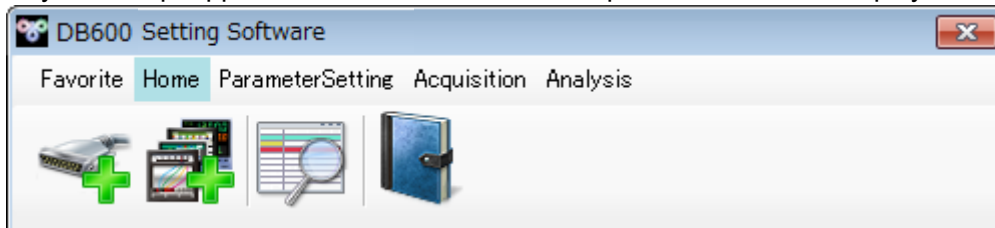


### (2) Select a function.

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.



Click [Acquisition] button.

A list of data acquisition function tool buttons is displayed.
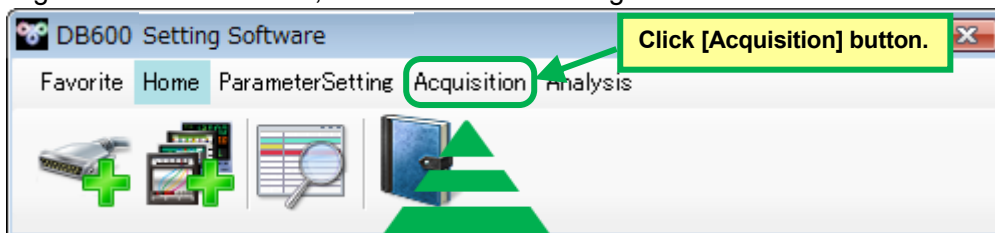
## (3) Startup of each function.

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"**
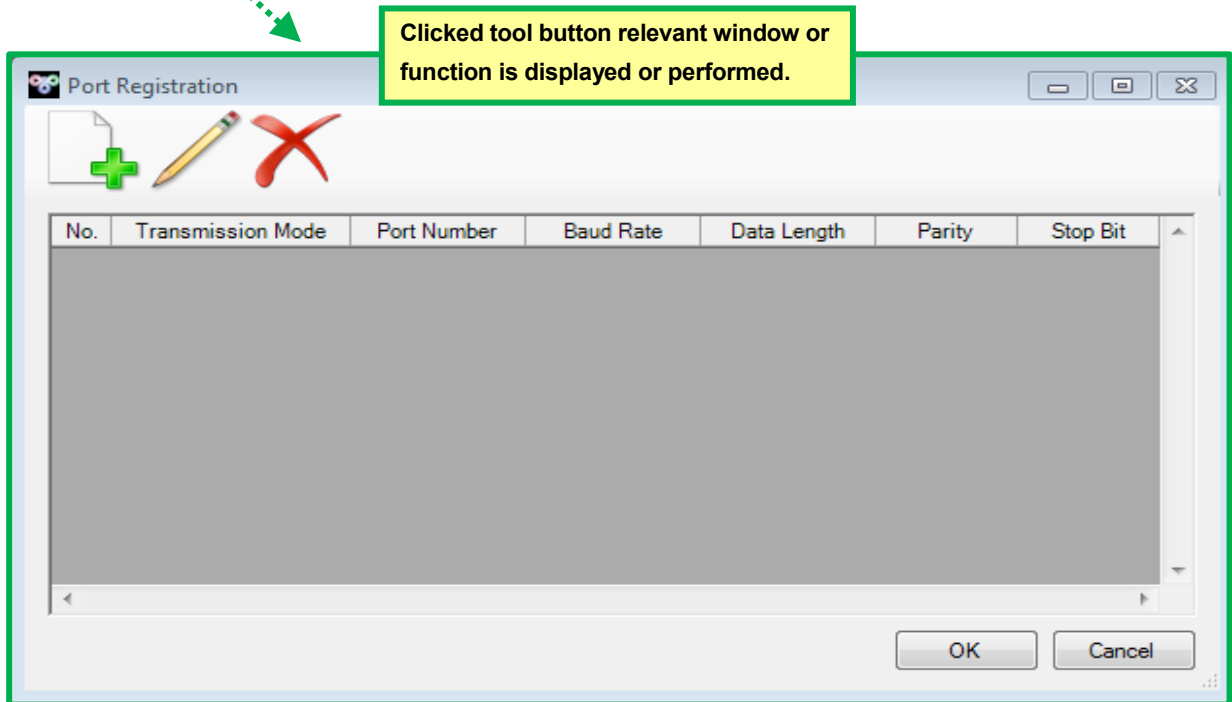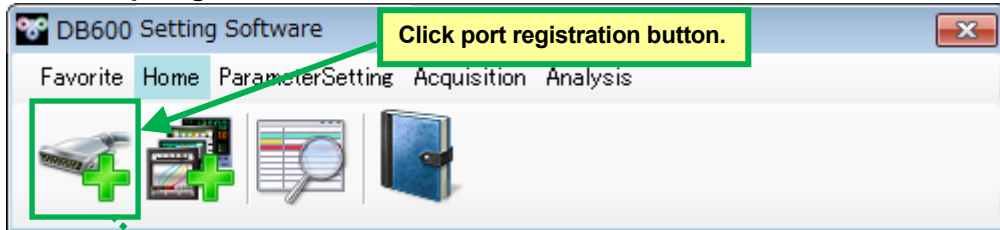


## (4) Exit this software.

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.
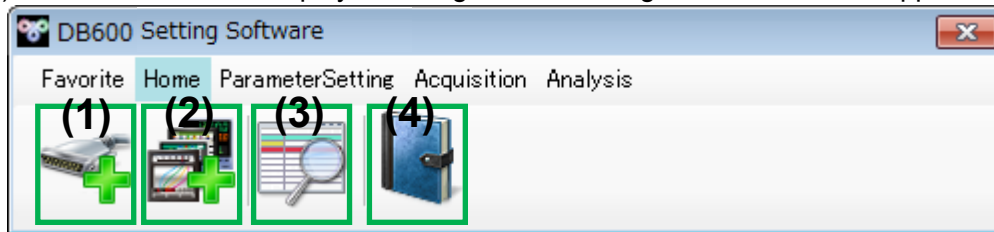


| No. | Name | Description | Reference |
|---|---|---|---|
| (1) | Port Registration | Displays port registration window. It provides registration, editing and delete function of port setting. | 5-2-1 |
| (2) | Device Registration | Displays device registration window. It provides registration, editing 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.
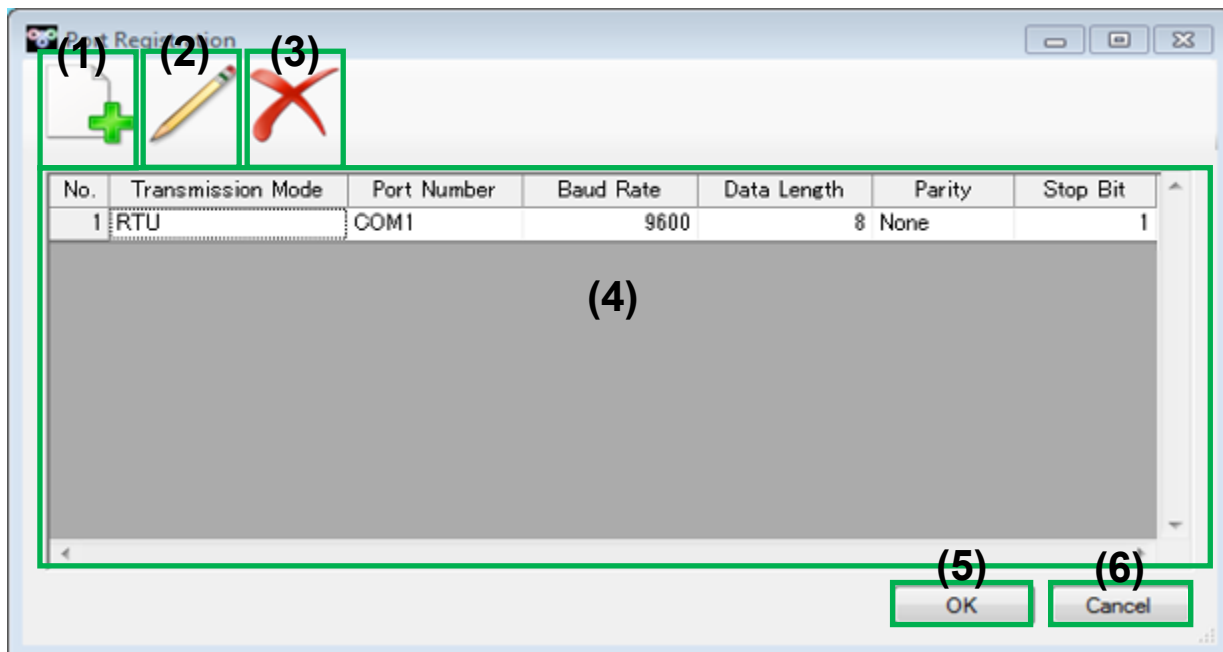


| No. | Name | Description | Reference |
|---|---|---|---|
| (1) | New Registration | Displays port editing dialog. Adds new port to list of port information. <br>*Only one port can be registered. | 5-2-1-1 |
| (2) | Edit | From registered port setting information, displays port editing dialog. <br>*Only 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. <br>*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. <br> *Icon shown below is displayed for the available port number. <br>  |
| (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.
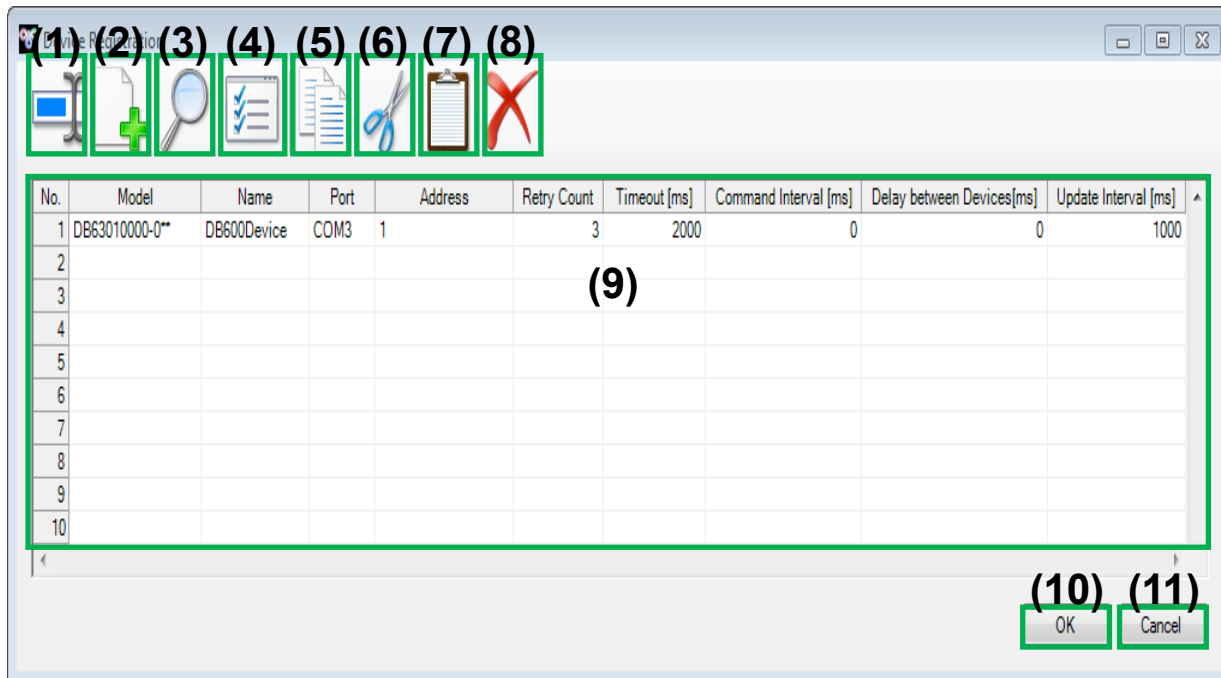


| No. | Name | Description | Reference |
|-----|------|-------------|-----------|
| (1) | Model Code Direct Entry | Displays model code entry dialog. Enter model code of desired device directly. | 5-2-2-1 |
| (2) | Wizard Registration | Starts device registration wizard. Specify desired device and each 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.
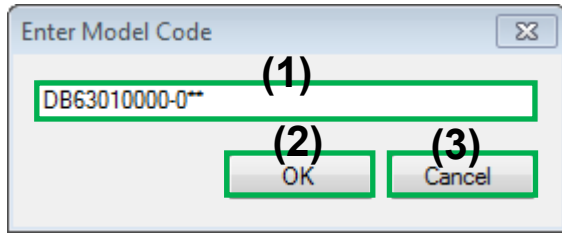


| No. | Name | Description |
|-----|------|-------------|
| (1) | Model Code Entry Block | Enter desired model code directly. |
| (2) | OK | Creates and register device information from entered model code. |
|     |    | *If entered model code is not included in registerable model code, message of invalid 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.
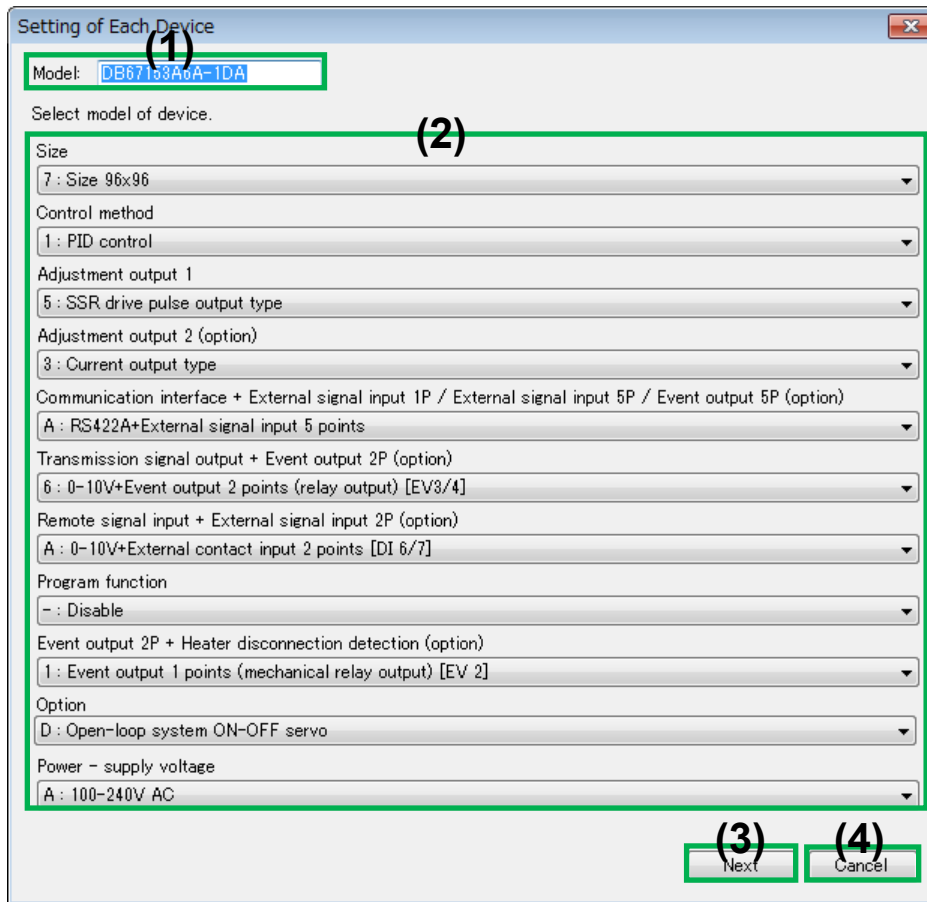


| No. | Name | Description |
|-----|------|-------------|
| (1) | Model | Displays current model code. By selecting (2) Model Selection, contents also changes. *Direct editing cannot be done. |
| (2) | Model Selection | Determines model by selecting each selection. By selecting each selection, (1) Model 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.
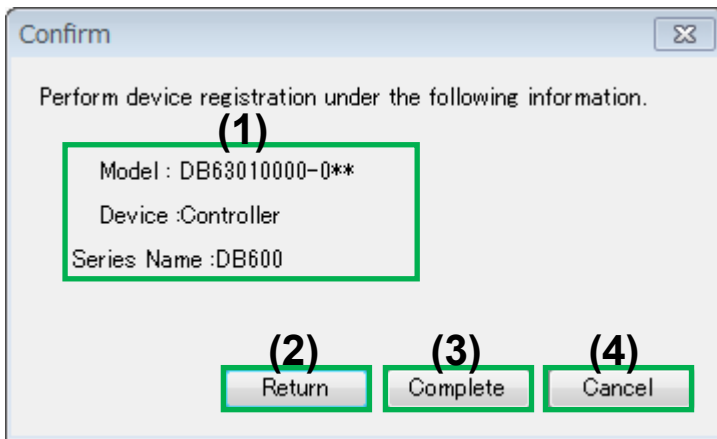


| No. | Name | Description |
|-----|------|-------------|
| (1) | Confirmation Contents | Registering model, device and series name are displayed. |
| (2) | Return | Returns to 2. Device registration wizard (setting of each device). |
| (3) | Complete | Registers the device as confirmed contents. |
| (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 >**
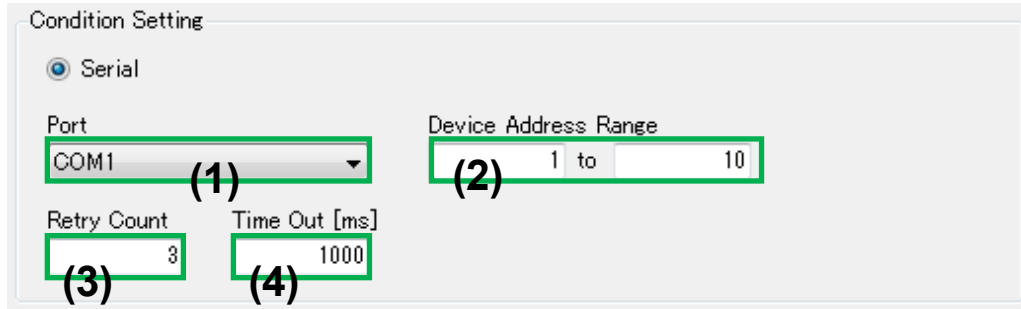
Utilizing followings (1) Communication Method, (2) Communication Condition Setting and (3) Scan, it performs device scan.
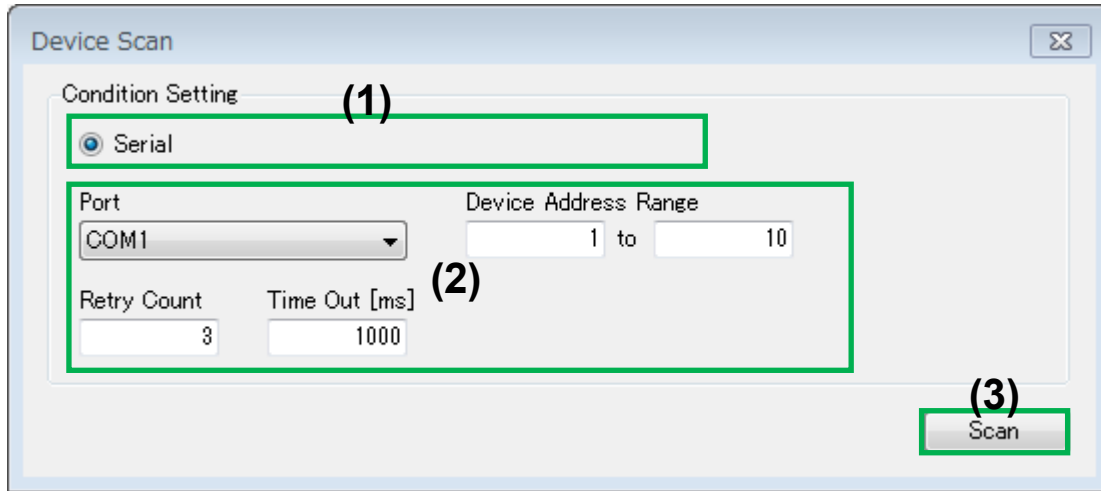


| No. | Name | Description | Reference |
|-----|------|-------------|-----------|
| (1) | Communication Method | Select communication methods to the connecting device from serial communication, USB communication or Ethernet communication. | - |
| (2) | Communication Condition Setting | Set specifics 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.
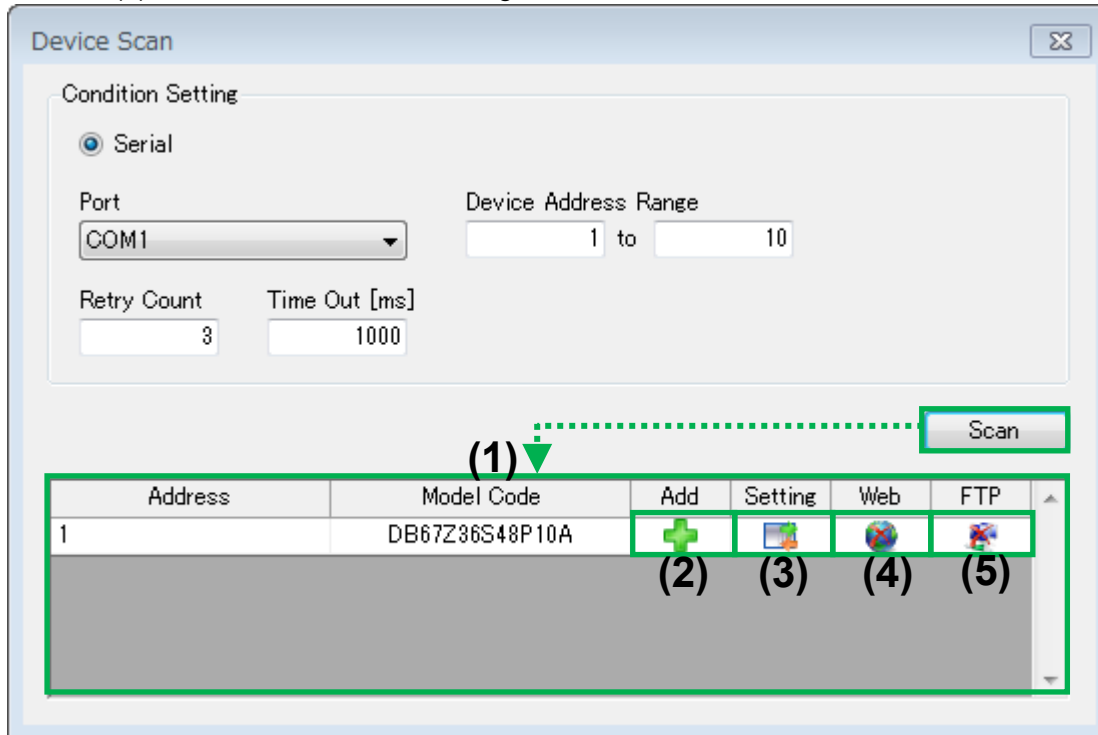


| No. | Name | Description |
|---|---|---|
| (1) | List of Scan Result | After scan of connecting device, displays address which model code has been read and list of device model code.<br>*Display is blank before the scan. |
| (2) | Add Button | Adds device information to the list of device registration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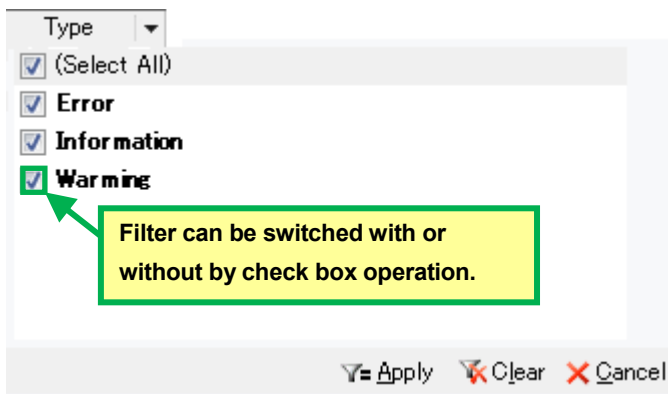
## 5-2-3. Summary Display Window

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.<br>*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.<br>*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.<br>Sort filter function is at header of each column. By utilizing filter window shown below, specify desired event type to display.<br><br><br><br>*With check mark: Displays/Without check mark: Hidden<br>*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.
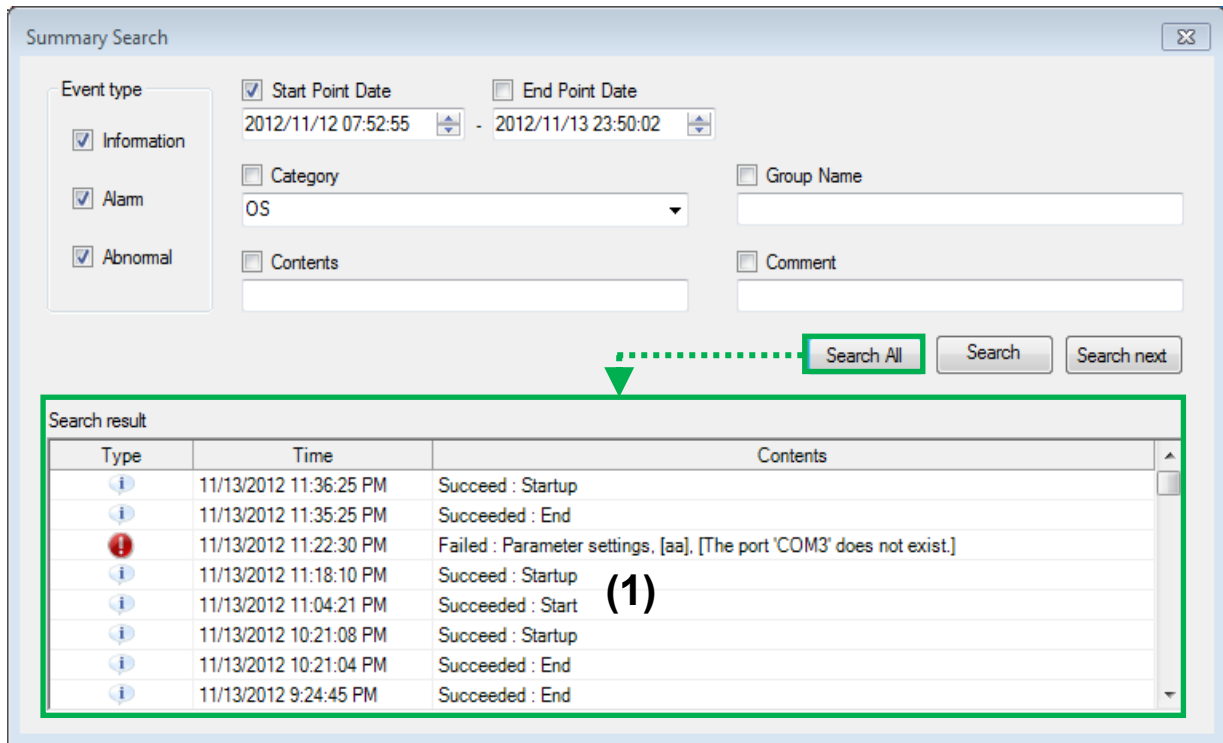


| No. | Name | Description |
|---|---|---|
| (1) | List of Summary Result Display | Displays all the search result matches to the search condition. Double clicking summary information on the list of search result highlights target summary information on the summary display window. <br> *Before clicking 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.
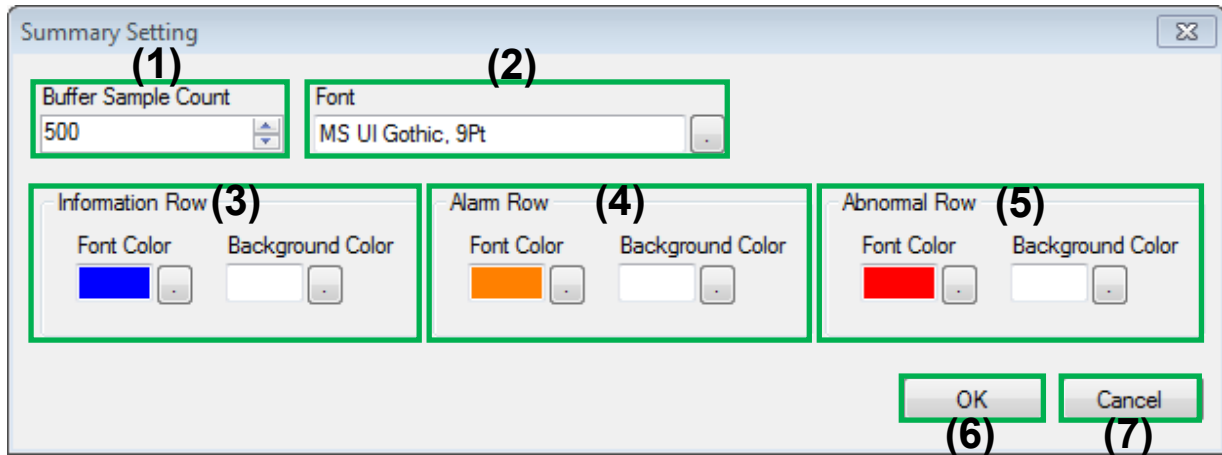


| No. | Name | Description |
|-----|------|-------------|
| (1) | Buffer Sample Count | Specify summary information count which this application retains in a range of 50 to 5000. Summary information in the range of specified count is kept although application exit and the information can be browsed at 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.
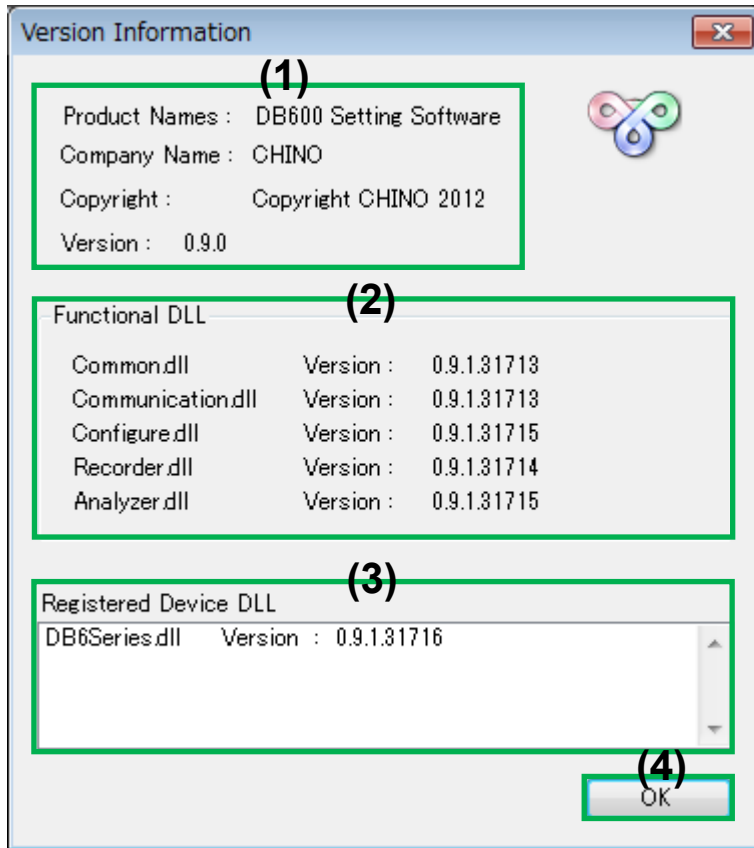


| No. | Name | Description |
|-----|------|-------------|
| (1) | Basic Application Information | Displays main EXE version information of this application. |
| (2) | DLL Information for Each Function | Displays DLL version information for each function used in this application. |
| (3) | Registered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

## 5-3. Operation of Parameter Setting
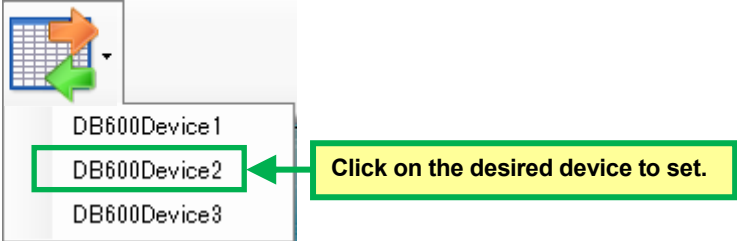
It provides function of parameter setting for the device registered at 6-2-2.
Device Registration Window.


### < 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.

**\*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) | Registered Device Setting | · List of registered device is displayed by clicking on the dropdown button.<br>· Select desired registered device to set from the list of registered device.<br><br><br><br>· Displays parameter setting window.<br>\*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.<br>· Display parameter setting window (off-line) by using specified parameter file.<br>\*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.<br>· Display parameter setting window (off-line) by using specified device model specified on selection method.<br>\*Contents of setting item differ depending on the specified device.<br>\*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.<br>*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.<br>*Confirmation message asking whether or not to rewrite registered device model is displayed when setting file which have different model code is read.<br>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 (*.passconf ) format. | - |
| (5) | Copy | Copy selected cell information on the (12) Setting Value Input.<br>*Shortcut is available with Ctrl + C key. | - |
| (6) | Cut | Cut selected cell information on the (12) Setting Value Input.<br>*Shortcut is available with Ctrl + X key. | - |

| (7) | Paste | Paste retained cell information by (5) Copy or (6) Cut after the selected cell.<br>*If data type of the cell is different, it cannot be pasted.<br>*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.<br>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.<br>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.<br>*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 >**



At the startup of the window, it starts obtaining setting value of connecting target device.
*If the Cancel is clicked, initial value is displayed.
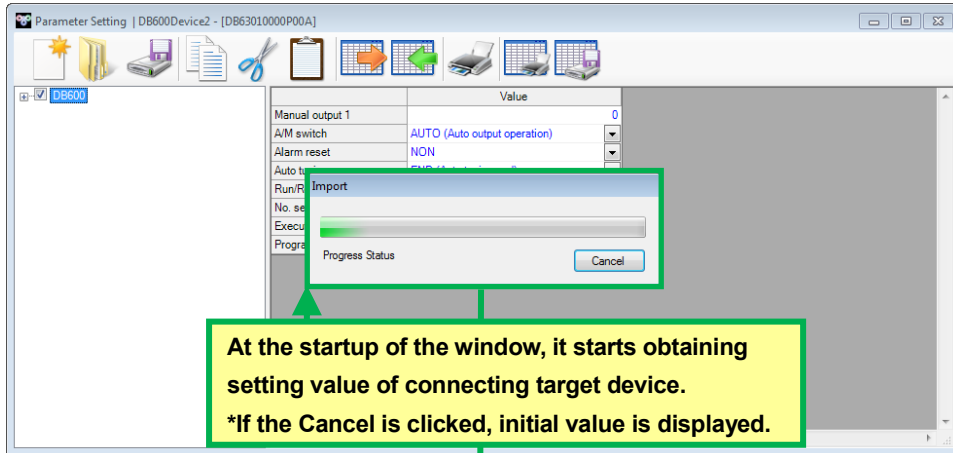
For writing settings for the connecting device, to prevent unexpected setting change, make sure to read the setting of the device first and write only changed contents.

Reading is succeeded



When expand read setting value, font color changes to blue → black.
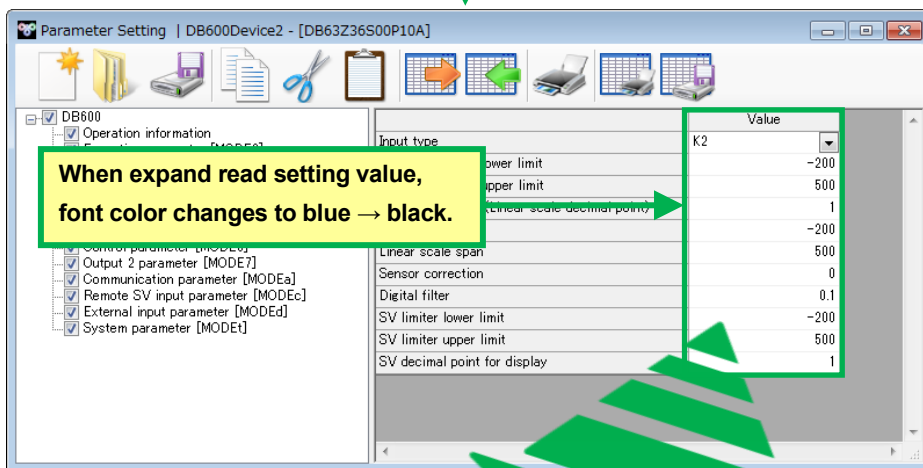
Change input type K2 → R.
Changing the setting value changes font color black → blue.

| | Value |
|---|---|
| | R |
| | −200 |
| | 500 |
| SV decimal point (Linear scale decimal point) | 1 |
| Linear scale zero | −200 |
| Linear scale span | 500 |
| Sensor correction | 0 |
| Digital filter | 0.1 |
| SV limiter lower limit | −200 |
| SV limiter upper limit | 500 |
| SV decimal point for display | 1 |

For writing operation.

Click Write Settings icon.

**DB600 Setting Software**

Reflect present setting to the instrument.
Operation information will be also sent.

Are you sure?

[ Yes ]　[ No ]

Click Yes.

**Export**

Input parameter [MODE5] Writing...　[ Cancel ]

Writing progress bar is displayed.

**DB600 Setting Software**

Writing is completed.

[ OK ]

Writing process complete
message is displayed.
Click OK.

Set input type R for connecting device.
Writing succeeded setting value changes
font color blue → black.

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### 5-3-1-2. List of Setting Value Category (DB600)

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) Execution Parameter [MODE0], (3) Constant value Operation Parameter [MODE1], (4) Program Parameter [MODE2], (5) Group Parameter [MODE3], (6) Event Paramete r[MODE4], (7) Input Parameter [MODE5], (8) Control Parameter [MODE6], (9) Output 2 Parameter [MODE7], (10) Communication Parameter [MODEa], (11) Transmission Output Parameter [MODEb], (12) Remote SV Input Parameter [MODEc], (13) External Input Parameter [MODEd] and (14) System Parameter [MODEt], it sets for category.
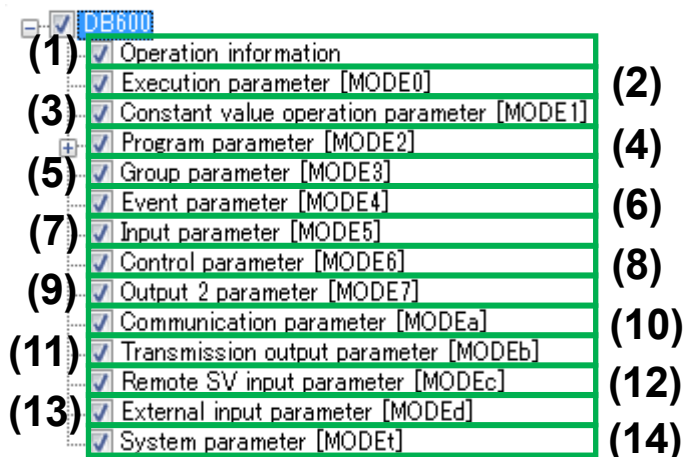


| No. | Name | Description | Reference |
|-----|------|-------------|-----------|
| (1) | Operation Information | Displays operation information category. When specified, expand setting parameter at the setting value input. | This section (a) |
| (2) | Execution Parameter [MODE0] | Displays execution parameter category. When specified, expand setting parameter at the setting value input. | This section (b) |
| (3) | Constant Value Operation Parameter [MODE1] | Displays constant value operation parameter category. When specified, expand setting parameter at the setting value input. | This section (c) |
| (4) | Program Parameter [MODE2] | Displays program parameter category. When specified, expand setting parameter at the setting value input. | This section (d) |
| (5) | Group Parameter [MODE3] | Displays group parameter category. When specified, expand setting parameter at the setting value input. | This section (e) |
| (6) | Event Parameter [MODE4] | Displays event parameter category. When specified, expand setting parameter at the setting value input | This section (f) |
| (7) | Input Parameter [MODE5] | Displays input parameter category. When specified, expand setting parameter at the setting value input. | This section (g) |
| (8) | Control Parameter [MODE6] | Displays control parameter category. When specified, expand setting parameter at the setting value input. | This section (h) |

| (9) | Output 2 Parameter [MODE7] | Displays output 2 parameter category. When specified, expand setting parameter at the setting value input | This section (i) |
|---|---|---|---|
| (10) | Communication Parameter [MODEa] | Displays communication parameter category. When specified, expand setting parameter at the setting value input | This section (j) |
| (11) | Transmission Output Parameter [MODEd] | Displays transmission parameter category. When specified, expand setting parameter at the setting value input | This section (k) |
| (12) | Remote SV Input Parameter [MODEc] | Displays remote SV input parameter category. When specified, expand setting parameter at the setting value input | This section (l) |
| (13) | External Input Parameter [MODEd] | Displays external input parameter category. When specified, expand setting parameter at the setting value input | This section (m) |
| (14) | System Parameter [MODEt] | Displays system category. When specified, expand setting parameter at the setting value input. | This section (n) |

## (a) Operation Information

It provides function of editing operation information.

### < Name of operation information each setting value >

Utilizing following various setting values (1) Manual Output, (2) Manual Output [Second], (3) A/M Switch (4) Alarm Reset, (5) Auot Tuning, (6) FB Tuning, (7) Run/Ready Switch, (8) Constant Value Operation Execution No., (9) Execution Pattern No. and (10) Program Drive, it edits operation information.



| No. | Name | Description |
|-----|------|-------------|
| (1) | Manual Output | Specify manual output value in the rage of -5 to 105. <br> *Writing is available only if MANUAL (manual output operation) is specified at (3) A/M Switch |
| (2) | Manual Output [Second] | Specify manual output value [second] in the range of -5 to 105. <br> *Writing is available only if MANUAL (manual output operation) is specified at (3) A/M Switch <br> *Writing is available only if output 2 specification is with the connecting device. |
| (3) | A/M Switch | Select and specify Auto/Manual switch from AUTO (auto output operation) or MANUAL (manual output operation). <br> *It is available for both output 1 and output 2. |
| (4) | Alarm Reset | Select and specify alarm reset setting form NON or RESET (alarm reset). <br> *Immediately after writing of RESET (alarm reset), it is switched to NON. |
| (5) | Auto Tuning | Select and specify auto tuning form END (auto tuning end) or START (auto tuning start). <br> *If auto tuning of the connecting device is other than END (auto tuning end), writing of START (auto tuning start) is not available. <br> * Write END (auto tuning end), if force quitting during auto tuning. <br> *If Program operation RESET is specified at 810) Program Drive, writing is not available (except for constant value operation). |
| (6) | FB Tuning | Select and specify FB tuning setting from END (FB tuning end) or START (FB tuning start). <br> *Writing START (FB tuning) is available, only if program operation RESET is specified in (10) Program Drive. <br> *If auto tuning or FB tuning of connecting device is executing, writing START (auto tuning start) is not available. <br> *Writing is available only if ON-OFF servo output type specification is with the connecting device. |
| (7) | Run/Ready Switch | Select and specify Run/Ready switch from RUN status or READY status. <br> *If READY (constant value operation RUN/READY switch) is specified at the section (m) External Input Parameter- External Signal Input Assignment, writing is not available. |

| (8) | Constant Value Operation execution No. | Select and specify constant value operation execution No. from execution No.1, execution No.2, execution No.3, execution No.4, execution No.5, execution No.6, execution No.7 or execution No.8.<br>*If SEL1 (Execution No. Selection 1_bit0), SEL2 (Execution No.Selection2_bit1), SEL4 (Execution No. Selection 3_bit2) or SEL8 (Execution No. Selection 8_bit3) is specified at the section (m) External Input Parameter- External Signal Input Assignment, writing is not available. |
|---|---|---|
| (9) | Execution Pattern No. | Select and Specify execution No. from Pattern 1, Pattern 2, Pattern 3 or Pattern 4.<br>*If specified value in the (10) Program Drive is other than program operation RESET, writing is not available.<br>*If specified value in the section (d) Program Parameter – general program/constant value operation switch is constant value operation, writing is not available. |
| (10) | Program Drive | Select and specify program drive setting from RESET (program operation RESET), RUN (program operation RUN), STOP (program operation STOP) or ADV (program operation ADVANCE).<br>*If specified value in the section (d) Program Parameter - general, program/constant value operation switch is constant value operation, writing is not available.<br>*If RESET (program operation RESET) of connecting device is executing, writing of STOP (program operation STOP) and ADV (program operation ADVANCE) is not available.<br>*If END (program operation END) of connecting device is executing, writing of RUN (program operation RUN), STOP (program operation STOP) and ADV (program operation ADVANCE) is not available. |

## (b) Execution Parameter [MODE0]

It provides function of editing execution parameter setting.

### < Name of execution parameter each setting value >

Utilizing following various setting values (1) SV, (2) Step Time "hh" or "mm", (3) Step Time "mm" or "ss", (4) Event 1 (5) Event 2, (6) Event 3, (7) Event 4, (8) P, (9) I, (10) D, (11) Output Limiter Lower Limit, (12) Output Limiter Upper Limit and (13) Guaranty Soak, it edits execution parameter.



| No. | Name | Description |
|-----|------|-------------|
| (1) | SV | Specify SV value in the range of Input Parameter SV limiter upper/lower limit in the section (g).<br>*Decimal point position interlocks with SV decimal point in the section (g) Input Parameter. |
| (2) | Step Time "hh" or "mm" | Specify step time "hh" or "mm" in the range of 0 to 999.<br>*Time unit "hh" or "mm" interlocks with time unit of the section (d) Program Parameter – general.<br>*If specified value in the section (d) Program Parameter - status, program/constant value operation switch is constant value operation, writing is not available. |
| (3) | Step Time "mm" or "ss" | Specify step time "mm" or "ss" in the range of 0 to 59.<br>*Time unit "hh" or "mm" interlocks with time unit of the section (d) Program Parameter – general.<br>*If specified value in the section (d) Program Parameter - status, program/constant value operation switch is constant value operation, writing is not available. |

| (4) | Event 1 | Specify event value 1 to 4 in the range of -19999 to 30000. |
|---|---|---|
| (5) | Event 2 | *Decimal point position is specified as the section (f) Event Parameter each event mode as follows. |
| (6) | Event 3 | 【 |
| (7) | Event 4 | PV.H(Absolute value higher limit alarm)/PV.L(Absolute value lower limit alarm)/ DV.H(Deviation higher limit alarm)/DV.L(Deviation lower limit alarm)/ ADV.H(Absolute value deviation higher limit alarm)/ADV.L(Absolute value deviation lower limit alarm)/ SV.H(Setting value higher limit alarm)/SV.L(Setting value lower limit alarm) 】 ・ Interlocks with SV decimal point. 【 MV.H(Output value higher limit alarm)/MV.L(Output value lower limit alarm)/ CT.H(Heater higher limit alarm)/CT.L(Heater lower limit alarm) 】 ・ Specifies 1 digit. 【TIME1(Timer 1 alarm)/TIME2(Timer 2 alarm)】 ・ No decimal point. *If the section (f) Event Parameter event mode is FAIL (FAIL alarm) or status event, writing is not available. |
| (8) | P | Specify PID "P" in the range of 0 to 999.9. *0=Two position control |
| (9) | I | Specify PID "I" in the range of 0 to 9999. *0=∞ |
| (10) | D | Specify PID "D" in the range of 0 to 9999. *0=Calculation OFF |
| (11) | Output Limiter Lower Limit | Specify output limiter lower limit in the range of -5 to 100. *If specified value is not in the proper relation with (12) Output Limiter Upper Limit, writing is not available. |
| (12) | Output Limiter Upper Limit | Specify output limiter upper limit in the range of 0 to 105. *If specified value is not in the proper relation with (11) Output Limiter Lower Limit, writing is not available. |
| (13) | Guaranty Soak | Specify guaranty soak value in the range of 0 to 30000. *0=Function OFF *Decimal point position interlocks with SV decimal point in the section (g) Input Parameter. *If specified value in the section (d) Execution Parameter - general, program/constant value operation switch is constant value operation, writing is not available. |

## (c) Constant Value Operation Parameter [MODE1]

It provides function of editing constant value operation parameter setting.

### < Name of constant value operation parameter each setting value >

Utilizing following various setting values (1) Constant Value Operation Execution No, (2) Auto Tuning, (3) A/M Switch, (4) Manual Output, (5) Manual Output [Second], (6) PV Start, (7) Program/Constant Value Operation Switch, (8) Run/Ready Switch, (9) Alarm Output at Ready and (10) Alarm Reset, it edits constant value operation parameter status.

|  | Value |
| --- | --- |
| (1) SV rate-of-change fall | 0 |
| SV rate-of-change rise | 0 (2) |
| (3) SV rate-of-change time unit | M (minute) |
| PV start | SV start (4) |
| (5) Alarm output at Ready | OFF (Alarm event calculation enable) |

| No. | Name | Description |
| --- | --- | --- |
| (1) | SV Rate-of-Change Fall | Specify SV rate-of-change fall in the range of -1999.9 to 0.<br>*Decimal point position interlocks with the section (g) Input Parameter SV decimal point. |
| (2) | SV Rate-of-Change Rise | Specify SV rate-of-change rise in the range of 0 to 2000.<br>*Decimal point position interlocks with the section (g) Input Parameter SV decimal point. |
| (3) | SV Rate-of-Change Time Unit | Specify SV rate-of-change time unit from S (second), M (minute) and H (hour). |
| (4) | PV Start | Select and specify PV start setting from SV start or PV start. |
| (5) | Alarm Output at Ready | Select and specify alarm output at Ready setting from OFF (alarm event calculation disable) or ON (alarm event calculation enable). |

## (d) Program Parameter [MODE2]

It provides function of editing constant value operation parameter setting.

**< Program parameter setting image >**
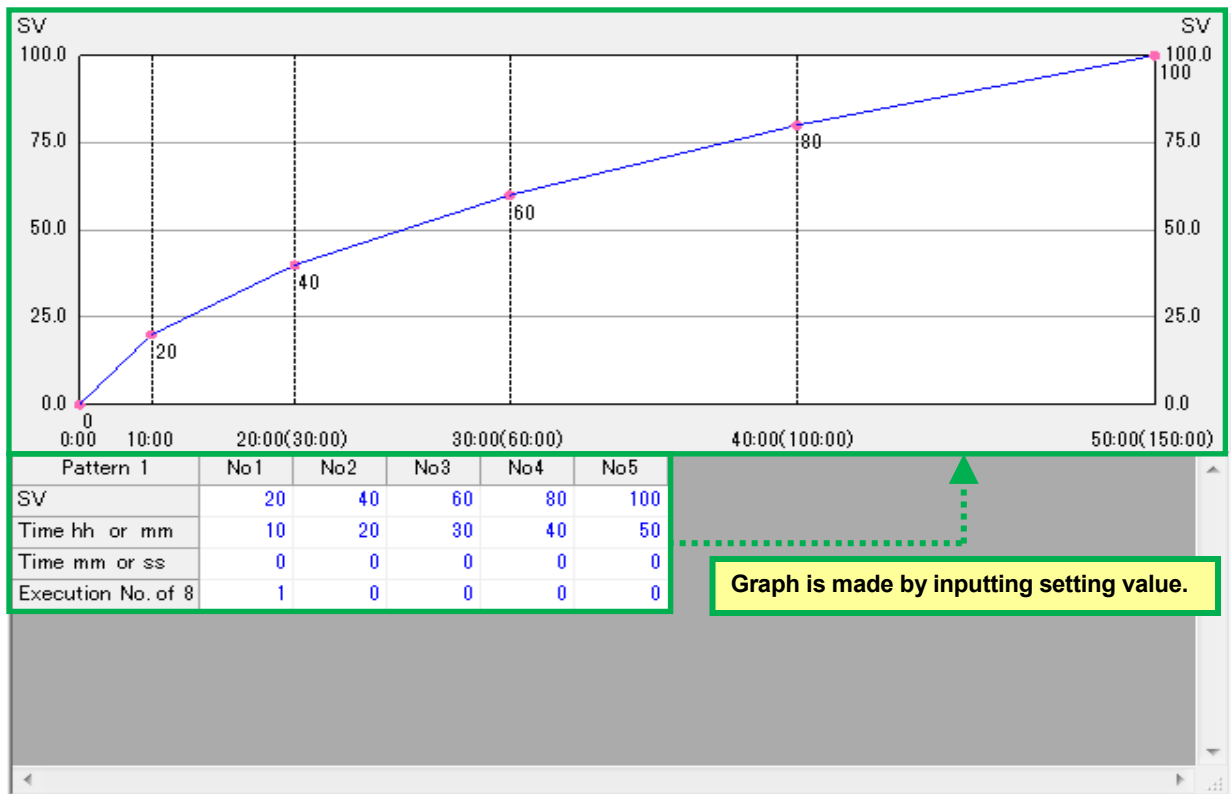


**Graph is made by inputting setting value.**

| Pattern 1 | No1 | No2 | No3 | No4 | No5 |
|---|---|---|---|---|---|
| SV | 20 | 40 | 60 | 80 | 100 |
| Time hh or mm | 10 | 20 | 30 | 40 | 50 |
| Time mm or ss | 0 | 0 | 0 | 0 | 0 |
| Execution No. of 8 | 1 | 0 | 0 | 0 | 0 |

**< Name of program parameter – general, each setting value >**

Utilizing following various setting values (1) Program/Constant Value Operation Switch, (2) Time Unit, (3) Pattern Repeat, (4) Operation Screen Time Display, (5) Pattern Clear, (6) Pattern Copy Source, and (7) Pattern Copy Destination, it edits program parameter - general.

|  | Value |
|---|---|
| (1) Program/Constant value operation switch | Program operation |
| (2) Time unit | H:M (hour: minute) |
| (3) Pattern repeat | 0 |
| (4) Operation screen time display | Step elapsed time |
| (5) Pattern clear | – |
| (6) Pattern copy source | – |
| (7) Pattern copy destination | – |

| No. | Name | Description |
|---|---|---|
| (1) | Program /Constant Value Operation Switch | Select and specify program/constant value operation switch form program operation or constant value operation.<br>*Writing is available only if program specification is with the connecting device. |
| (2) | Time Unit | Select and specify time unit setting from H:M (hour: minute) or M:S (minute: second).<br>*If specified value in the (a) Operation Information, Program Drive is other than program operation RESET, writing is not available. |
| (3) | Pattern Repeat | Specify pattern repeat setting in the range of 0 to 9999. |

| (4) | Operation Screen Time Display | Select and specify operation screen time display setting from Step elapsed time or Step remaining time.<br>*Writing is available only if program function specification is with the connecting device. |
|---|---|---|
| (5) | Pattern Clear | Select and specify pattern clear setting from Pattern 1, Pattern 2, Pattern 3, Pattern 4 or All patterns.<br>*If specified value in the (a) Operation Information, Program Drive is other than program operation RESET, writing is not available.<br>*If writing for this parameter, make sure not to write pattern 1 to 4. |
| (6) | Pattern Copy Source | Select and Specify pattern copy source from Pattern 1, Pattern 2, Pattern 3 or Pattern 4.<br>*If copy source pattern is not set (number of steps is 0), writing is not available.<br>*If copy destination is not cleared (number of steps is other than 0), writing is not available<br>*If the pattern of copy source and pattern of copy destination is the same, writing is not available.<br>*Clear the copy destination pattern by (5) Pattern Clear then execute pattern copy.<br>*If writing for this parameter, make sure not to write pattern 1 to 4.<br>*If specified value in the (a) Operation information, Program Drive is other than program operation RESET, writing is not available. |
| (7) | Pattern Copy Destination | Select and specify pattern clear setting from Pattern 1, Pattern 2, Pattern 3, Pattern 4 or All patterns.<br>*If copy source pattern is not set (number of steps is 0), writing is not available.<br>*If copy destination is not cleared (number of steps is other than 0), writing is not available<br>*If the pattern of copy source and pattern of copy destination is the same, writing is not available.<br>*Clear the copy destination pattern by (5) Pattern Clear then execute pattern copy.<br>*If writing for this parameter, make sure not to write pattern 1 to 4.<br>*If specified value in the (a) Operation information, Program Drive is other than program operation RESET, writing is not available. |

**< Name of program parameter, pattern 1 to 4 setting – general each setting value>**

Utilizing following various setting values (1) Number of Steps, (2) PV Start, (3) Start SV, (4) Output 1 at END, (5) Output 2 at END and (6) Linked to Pattern, it edits program parameter setting - general.

| Pattern 1 | Value |
|---|---|
| (1) Number of steps | 0 |
| (2) PV start | SV start |
| (3) Start SV | 0 |
| (4) Output 1 at END | CONTROL |
| (5) Output 2 at END | CONTROL |
| (6) Linked to pattern | No pattern link |

| No. | Name | Description |
|---|---|---|
| (1) | Number of Steps | Specify number of steps in the range of 0 to 12.<br>*Specifying number of steps 1 or more enables step setting. |
| (2) | PV Start | Select and specify PV start setting from SV start or PV start. |
| (3) | Start SV | Specify start SV setting value in the range of the section (g) Input Parameter SV limit.<br>*Decimal point position interlocks with SV decimal point in the section (g) Input Parameter. |
| (4) | Output 1 at End | Specify output 1 at End setting to CONTROL or in the range of -5 to 105. |
| (5) | Output 2 at End | Specify output 2 at End setting to CONTROL or in the range of -5 to 105.<br>*Writing is available only if output 2 specification is with the connecting device. |
| (6) | Linked to Pattern | Select and specify link to pattern setting from No pattern link, Link to pattern 1, Link to pattern 2, Link to pattern 3 or Link to pattern 4. |

**< Name of program parameter, pattern 1 to 4 setting – step setting each setting value >**

Utilizing following various setting values (1) SV., (2) Time "hour" or "minute", (3) Time "minute" or "second" and (4) Execution No. of 8 Types, it edits program parameter setting - step setting of each No.

| Pattern 1 | No1 | No2 | No3 | No4 | No5 |
|---|---|---|---|---|---|
| (1) SV | 20 | 40 | 60 | 80 | 100 |
| (2) Time hh or mm | 10 | 20 | 30 | 40 | 50 |
| (3) Time mm or ss | 0 | 0 | 0 | 0 | 0 |
| (4) Execution No. of 8 types | 1 | 0 | 0 | 0 | 0 |

| No. | Name | Description |
|---|---|---|
| (1) | SV | Specify SV setting value of target No. in the range of 5-3-1-2-1. Input parameter SV limit. |
| (2) | Time "hour" or "minute" | Specify time "hour" or "minute" of target No.in the range of 0 to 999. |
| (3) | Time "minute" or "second" | Specify time "minute" or "second" of target No.in the range of 0 to 59. |
| (4) | Execution No. of 8 Types | Specify execution No. of 8 types in the range of 0 to 8.<br>*If 0 is specified, it becomes continuous No. of previous step. |

## (e) Group Parameter [MODE3]

It provides function of editing group parameter setting.

### < Name of group parameter each setting value >

Utilizing following various setting values (1) SV Value, (2) Event 1, (3) Event 2, (4) Event 3, (5) Event 4, (6) P, (7) I, (8) D, (9) Output Limiter Lower Limit (10) Output Limiter Upper Limit (11) Guaranty Soak, it edits 8 types of parameter.

| | | No.1 | No.2 | No.3 | No.4 | No.5 | No.6 | No.7 | No.8 |
|---|---|---|---|---|---|---|---|---|---|
| SV value | (1) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Event 1 | (2) | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Event 2 | (3) | -1999.9 | -1999.9 | -1999.9 | -1999.9 | -1999.9 | -1999.9 | -1999.9 | -1999.9 |
| Event 3 | (4) | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Event 4 | (5) | -1999.9 | -1999.9 | -1999.9 | -1999.9 | -1999.9 | -1999.9 | -1999.9 | -1999.9 |
| P | (6) | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| I | (7) | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| D | (8) | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| Output limiter lower limit | (9) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Output limitter upper limit | (10) | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Guaranty soak | (11) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| No. | Name | Description |
|---|---|---|
| (1) | SV Value | Specify SV value in the range of (g) Input Parameter SV limiter upper/lower limit. <br> *Decimal point position interlocks with SV decimal point in the section (g) Input Parameter. |
| (2) | Event 1 | Specify event value 1 to 4 in the range of -19999 to 30000. |
| (3) | Event 2 | *Decimal point position is specified as the section (f) Event Parameter each event mode |
| (4) | Event 3 | as follows. |
| (5) | Event 4 | 【<br> PV.H(Absolute value higher limit alarm)/PV.L(Absolute value lower limit alarm)/<br> DV.H(Deviation higher limit alarm)/DV.L(Deviation lower limit alarm)/<br> ADV.H(Absolute value deviation higher limit alarm)/ADV.L(Absolute value deviation lower limit alarm)/<br> SV.H(Setting value higher limit alarm)/SV.L(Setting value lower limit alarm)<br> 】<br> · Interlocks with SV decimal point.<br> 【<br> MV.H(Output value higher limit alarm)/MV.L(Output value lower limit alarm)/<br> CT.H(Heater higher limit alarm)/CT.L(Heater lower limit alarm)<br> 】<br> · Specifies 1 digit.<br> 【TIME1(Timer 1 alarm)/TIME2(Timer 2 alarm)】<br> · No decimal point.<br> *If the section (f) Event Parameter event mode is FAIL (FAIL alarm) or status event, writing is not available. |
| (6) | P | Specify PID "P" in the range of 0 to 999.9. <br> *0=Two position control |
| (7) | I | Specify PID "I" in the range of 0 to 9999. <br> *0=∞ |
| (8) | D | Specify PID "D" in the range of 0 to 9999. <br> *0=Calculation OFF |

| (9) | Output Limiter Lower Limit | Specify output limiter lower limit in the range of -5 to 100. <br> *If specified value is not in the proper relation with (10) Output Limiter Upper Limit, writing is not available. |
|-----|------------------|--------------------------------------------------------------------|
| (10) | Output Limiter Upper Limit, | Specify output limiter upper limit in the range of 0 to 105. <br> *If specified value is not in the proper relation with (9) Output Limiter Lower Limit, writing is not available. |
| (11) | Guaranty Soak | Specify guaranty soak value in the range of 0 to 30000. <br> *0=Function OFF <br> *Decimal point position interlocks with SV decimal point in the section (g) Input Parameter. <br> *If specified value in the section (d) Program Parameter - general, program/constant value operation switch is constant value operation, writing is not available. |

## (f) Event Parameter [MODE4]

It provides function of editing event parameter.

### < Name of event parameter each setting value >

Utilizing following various setting values (1) Event No., (2) Expansion Function, (3) Event Mode, (4) Event Output Phase and (5) Event Deadband, it edits event parameter.

| | Expansion function | Event mode | Event output phase | Event deadband |
|---|---|---|---|---|
| EV.1 | None **(2)** ▼ | Deviation upper limit alarm ▼ | Output of normal phase ▼ | **(5)** 2 |
| E **(1)** | None ▼ | Deviation upper lim **(3)** m ▼ | Output of n **(4)** phase ▼ | 2 |
| EV.3 | None ▼ | Deviation upper limit alarm ▼ | Output of normal phase ▼ | 2 |
| EV.4 | None ▼ | Deviation upper limit alarm ▼ | Output of normal phase ▼ | 2 |
| EV.5 | | No event ▼ | Output of normal phase ▼ | |
| EV.6 | | No event ▼ | Output of normal phase ▼ | |
| EV.7 | | No event ▼ | Output of normal phase ▼ | |
| EV.8 | | No event ▼ | Output of normal phase ▼ | |
| EV.9 | | No event ▼ | Output of normal phase ▼ | |

| No. | Name | Description |
|---|---|---|
| (1) | Event No. | Displays EV.1 to EV.9 setting header. Changing is not available. |
| (2) | Expansion Function | Select and specify event expansion function from none, with standby, with keep or with keep+standby.<br>*Setting is only available for EV.1 to EV.4. |
| (3) | Event Mode | Select and specify from<br>NON (No event),<br>PV.H (Absolute value upper limit alarm), PV.L (Absolute value lower limit alarm),<br>DV.H (Deviation upper limit alarm), DV.L (Deviation lower limit alarm),<br>ADV.H (Absolute value deviation upper limit alarm),<br>ADV.L (Absolute value deviation lower limit alarm),<br>SV.H (Setting value upper limit alarm), SV.L (Setting value lower limit alarm),<br>MV.H (Output value upper limit alarm), MV.L (Output value lower limit alarm),<br>CT.H (Heater upper limit alarm), CT.L (Heater lower limit alarm),<br>TIME1 (Timer 1 alarm), TIME2 (Timer 2 alarm),<br>FAIL (FAIL alarm), C.RUN (Constant value operation RUN),<br>PRST.M (Preset manual status), REM (Remote input status),<br>SV.UP (SV rising status), SV.DW (SV falling status),<br>STEP (Step switch of program operation),<br>STEP1 (Step 1 of Program operation),<br>STEP2 (Step 2 of Program operation),<br>STEP3 (Step 3 of Program operation),<br>STEP4 (Step 4 of Program operation),<br>STEP5 (Step 5 of Program operation),<br>STEP6 (Step 6 of Program operation),<br>STEP7 (Step 7 of Program operation),<br>STEP8 (Step 8 of Program operation),<br>STEP9 (Step 9 of Program operation),<br>STEP10 (Step 10 of Program operation),<br>STEP11 (Step 11 of Program operation),<br>STEP12 (Step 12 of Program operation),<br>P.RUN (Program operation RUN),<br>STOP (Program operation STOP),<br>ADV (Program operation ADVANCE),<br>RESET (Program operation RESET),<br>END (Program operation END) or<br>CONST (SV keep status of program operation).<br>*For EV.5 to EV.9selection other than alarm even are able to be specified. |

| | | |
|---|---|---|
| | | *For CT.H (Heater upper limit alarm) and CT.L (Heater lower limit alarm), writing is available only if CT specification is with the connecting device. |
| | | *For TIME1 (Timer 1 alarm) and TIME2 (Timer 2 alarm), writing is available only if DI specification is with the connecting device. |
| | | For<br>STEP (Step switch of program operation),<br>STEP1 (Step 1 of Program operation),<br>STEP2 (Step 2 of Program operation),<br>STEP3 (Step 3 of Program operation),<br>STEP4 (Step 4 of Program operation),<br>STEP5 (Step 5 of Program operation),<br>STEP6 (Step 6 of Program operation),<br>STEP7 (Step 7 of Program operation),<br>STEP8 (Step 8 of Program operation),<br>STEP9 (Step 9 of Program operation),<br>STEP10 (Step 10 of Program operation),<br>STEP11 (Step 11 of Program operation),<br>STEP12 (Step 12 of Program operation),<br>P.RUN (Program operation RUN),<br>STOP (Program operation STOP),<br>ADV (Program operation ADVANCE),<br>RESET (Program operation RESET),<br>END (Program operation END) or<br>CONST (SV keep status of program operation), writing is available only if program function is with the connecting device. |
| (4) | Event Output Phase | Select and specify event output phase from output of normal phase or output of reverse phase. |
| | | * For EV.1 to EV.2, if connecting device is with no event output specification, writing is not available (output of normal phase is fixed). |
| | | *For EV.3 to EV.4, if connecting device is with no transmission signal output, 4-20mA, 0-1V, 0-10V specification, writing is not available (output of normal phase is fixed). |
| | | *For EV.5 to EV.9, if connecting device is with communication interface RS-422A+Event output 5 points (open corrector output), Event output 5 points (open corrector output) specifications, writing is not available (output of normal phase is fixed). |
| (5) | Event Deadband | Specify event deadband in the range of 0 to 200 (0 to 20000) |
| | | *Decimal point position is specified as (3) Event Mode as follows. |
| | | 【<br>PV.H (Absolute value upper limit alarm), PV.L (Absolute value lower limit alarm),<br>DV.H (Deviation upper limit alarm), DV.L (Deviation lower limit alarm),<br>ADV.H (Absolute value deviation upper limit alarm),<br>ADV.L (Absolute value deviation lower limit alarm),<br>SV.H (Setting value upper limit alarm), SV.L (Setting value lower limit alarm)<br>】 |
| | | ・ SV decimal point (maximum 3 digits)+1. |
| | | 【<br>MV.H (Output value upper limit alarm), MV.L (Output value lower limit alarm),<br>CT.H (Heater upper limit alarm), CT.L (Heater lower limit alarm)<br>】 |
| | | ・ Specify 1 digit. |
| | | *If event parameter (3) Event Mode is TIME1 (Timer 1 alarm), TIME2 (Timer 2 alarm), FAIL (FAIL alarm) or Status Event, writing is not available. |

## (g) Input Parameter [MODE5]

It provides function of editing input parameter.

### < Name of input parameter each setting value >

Utilizing following various setting values (1) Input Type, (2) Measuring Range Lower Limit, (3) Measuring Range Upper Limit (4) SV Decimal Point (Linear Scale Decimal Point), (5) Linear Scale Zero, (6) Linear Scale Span, (7) Sensor Correction, (8) Digital Filter, (9) SV Limiter Lower Limit, (10) SV Limiter Upper Limit and (11) SV Decimal Point for Display, it edits input parameter.

| | Value |
|---|---|
| (1) Input type | K1 |
| Measuring range lower limit | −200 (2) |
| (3) Measuring range upper limit | 1370 |
| SV decimal point (Linear scale decimal point) | 1 (4) |
| (5) Linear scale zero | 0 |
| Linear scale span | 2000 (6) |
| (7) Sensor correction | 0 |
| Digital filter | 0.1 (8) |
| (9) SV limiter lower limit | −200 |
| SV limiter upper limit | 1370 (10) |
| SV decimal point for display | 1 |

| No. | Name | Description |
|---|---|---|
| (1) | Input Type | Select and specify device input type from B, R, S, N, K1, K2, E, J, T, U, L, W-WRe5-26, W-WRe26, Platinel II, PtRh40-20, Au-Pt, 20mV, 100mV, 5V, 10V, Pt100Ω1, Pt100Ω2, JPt100Ω1, JPt100Ω2 or Pt50Ω.<br>*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) | Measuring Range Lower Limit | Specify measuring range lower limit in the measuring range of (1) Input Type.<br>*If specified value is not in the proper relation with (3) Measuring Range Upper Limit, writing is not available. |
| (3) | Measuring Range Upper Limit | Specify measuring range Upper limit in the measuring range of (1) Input Type.<br>*If specified value is not in the proper relation with (2) Measuring Range Lower Limit, writing is not available. |
| (4) | SV Decimal Point *Linear Scale Decimal Point | Specify SV decimal point and linear scale decimal point.<br>*If (1) Input Type is belonging to thermocouple or resistance thermometer, this setting value is fixed value and specifying arbitrarily is no available.<br>*Writing SV 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 SV decimal point. |
| (5) | Linear Scale Zero | Specify linear scale zero position.<br>*Decimal point position is interlocking with (4) SV decimal point.<br>*If (1) Input Type is other than ±20mV, ±100mV, ±5V or ±10V, writing is not available. |
| (6) | Linear Scale Span | Specify linear scale span.<br>*Decimal point position is interlocking with (4) SV decimal point.<br>*If (1) Input Type is other than ±20mV, ±100mV, ±5V or ±10V, writing is not available. |
| (7) | Sensor Correction | Specify sensor correction in the range of -19999 to 20000.<br>*Decimal point position is PV decimal point (fixed value of each (1) Input Type)+1 |
| (8) | Digital Filter | Specify digital filter in the range of 0 to 99.9.<br>*0=OFF |

| (9) | SV Limiter Lower Limit | Specify SV limiter lower limit. <br> *Decimal point position interlocks with (4) SV Decimal Point. <br> *If specified value is not in the proper relation with (10) SV Limiter Upper Limit, writing is not available. |
|-----|------------------------|--------------------------------------------------------------------------------------------------|
| (10) | SV Limiter Upper Limit | Specify SV limiter Upper limit. <br> *Decimal point position interlocks with (4) SV Decimal Point. <br> *If specified value is not in the proper relation with (9) SV Limiter Lower Limit, writing is not available. |
| (11) | SV Decimal Point for Display | Specify PV and/or SV decimal point position for operation window from the range of 0 to 4. |

## (h) Control Parameter [MODE6]
It provides function of editing control parameter.

**< Name of control parameter each setting value >**
Utilizing following various setting values (1) Pulse Cycle., (2) FB Zero, (3) FB Span, (4) FB Deadband,(5) Event Deadband/Output Deadband, (6) Control Operation Direct/Reverse, (7) Output Preset, (8) Output Variation Limiter Fall, (9) Output Variation Limiter Rise, (10) PV Abnormal Output, (11) Preset Manual, (12) Operation at power On, (13) FF Control Switch and (14)Control Algorithm, it edits control parameter.

| | Value |
|---|---|
| **(1)** Pulse cycle | 30 |
| FB zero | 0 **(2)** |
| **(3)** FB span | 100 |
| FB deadband | 2 **(4)** |
| **(5)** PID deadband/Output deadband | 0 |
| Control operation Direct/Reverse | REVERSE (Heating control) ▼ **(6)** |
| **(7)** Output preset | 50 |
| Output variation limiter Fall | −100 **(8)** |
| **(9)** Output variation limiter Rise | 100 |
| PV abnormal output | 0 **(10)** |
| **(11)** Preset manual | 0 |
| Operation at power ON | Status just before the previous power-OFF ▼ **(12)** |
| **(13)** FF control switch | OFF ▼ |
| Control algorithm | Position type PID ▼ **(14)** |

| No. | Name | Description |
|---|---|---|
| (1) | Pulse Cycle | Specify pulse cycle in the range of 1 to 180. <br>*Writing is available only if output 1 of the connecting device is ONE-OFF pulse/SSR drive pulse output type. |
| (2) | FB Zero | Specify FB zero position in the range of -5 to 104.9. <br>*If specified value is not in the proper relation with (3) FB Span, writing is not available. <br>*Writing is available only if ON-OFF servo output type specification is with the connecting device. |
| (3) | FB Span | Specify FB span in the range of -4.9 to 105. <br>*If specified value is not in the proper relation with (2) FB Zero, writing is not available. <br>*Writing is available only if ON-OFF servo output type specification is with the connecting device. |
| (4) | FB Deadband | Specify FB deadband in the range of1 to 20. <br>*Writing is available only if ON-OFF servo output type specification is with the connecting device. |
| (5) | PID Deadband/Output Deadband | Specify PID deadband/output deadband in the range of 0.0 to 9.9. |
| (6) | Control Operation Direct/Reverse | Select and specify control operation form DIRECT(cooling control)/REVERSE(heating control). |
| (7) | Output Preset | Specify output preset value in the range of -100 to 100. |
| (8) | Output Variation Limiter Fall | Specify output variation limiter fall in the range of -100 to -0.1. |

| (9) | Output Variation Limiter Rise | Specify output variation limiter rise in the range of 0.1 to 100. |
|---|---|---|
| (10) | PV Abnormal Output | Specify PV abnormal output value in the range of -5 to 105. |
| (11) | Preset Manual | Specify preset manual value in the range of -5 to 105.<br>- 52 - |
| (12) | Operation at Power ON | Select and specify operation at power ON from Action just before the previous power OFF status, Constant value operation READY status or Program operation RESET status. |
| (13) | FF Control Switch | Select and specify FF control switch from OFF or ON.<br>*Writing is available only if Z control specification is with the connecting device. |
| (14) | Control Algorithm | Select and specify control algorithm setting from position type PID or velocity type PID.<br>*Writing is available only if PID control specification is with the connecting device. |

## (i) Output 2 Parameter [MODE7]

It provides function of editing output 2 parameter.

### < Name of communication/transmission parameter each setting value >

Utilizing following various setting values (1) Control Method, (2) P, (3) I, (4) D, (5) Output Gap, (6) PID Deadband/Output Deadband, (7) Control Operation Direct/Reverse, (8) Output Preset, (9) Split Direct, (10) Split Reverse, (11) Pulse Cycle, (12) Output Limiter Lower Limit, (13) Output Limiter Upper Limit, (14) Output Variation Limiter Fall, (15) Output Variation Limiter Rise and (16) Preset Manual, it edits output 2 parameter.

| | Value |
|---|---|
| (1) Control method | PID control calculation ▼ |
| P | 5 (2) |
| (3) I | 60 |
| D | 30 (4) |
| (5) Output gap | 0 |
| PID deadband/Output deadband | 0 (6) |
| (7) Control operation Direct/Reverse | DIRECT (Cooling control) ▼ |
| Output preset | 0 (8) |
| (9) Split Direct | 0 |
| Split Reverse | 100 (10) |
| (11) Pulse cycle | 30 |
| Output limiter lower limit | 0 (12) |
| (13) Output limitter upper limit | 100 |
| Output variation limiter Fall | −100 (14) |
| (15) Output variation limiter Rise | 100 |
| Preset manual | 0 (16) |

| No. | Name | Description |
|---|---|---|
| (1) | Control Method | Select and specify control method from PID control or split control.<br>*Writing is available only if output 2 specification is with the connecting device. |
| (2) | P | Specify PID "P" in the range of 0 to 999.9.<br>*0=Two position control<br>*Writing is available only if output 2 specification is with the connecting device. |
| (3) | I | Specify PID "I" in the range of 0 to 9999.<br>*0=∞<br>*Writing is available only if output 2 specification is with the connecting device. |
| (4) | D | Specify PID "D" in the range of 0 to 9999.<br>*0=Calculation OFF<br>*Writing is available only if output 2 specification is with the connecting device. |
| (5) | Output Gap | Specify output gap in the range of -100.0 to 100.0.<br>*Writing is available only if output 2 specification is with the connecting device. |
| (6) | PID Deadband/Output Deadband | Specify PID deadband/output deadband in the range of 0.0 to 9.9.<br>*Writing is available only if output 2 specification is with the connecting device. |
| (7) | Control Operation Direct/Reverse | Select and specify control operation form DIRECT (cooling control)/REVERSE (heating control).<br>*Writing is available only if output 2 specification is with the connecting device. |
| (8) | Output Preset | Specify output preset value in the range of -100 to 100.<br>*Writing is available only if output 2 specification is with the connecting device. |
| (9) | Split Direct | Specify split direct in the range of 0 to 60.<br>*Writing is available only if output 2 specification is with the connecting device. |

| (10) | Split Reverse | Specify split reverse in the range of 40 to 100. |
|------|---------------|---------------------------------------------------|
|      |               | *Writing is available only if output 2 specification is with the connecting device. |
| (11) | Pulse Cycle | Specify pulse cycle in the range of 1 to 180. |
|      |             | *Writing is available only if output 2 of the connecting device is ONE-OFF pulse/SSR drive pulse output type. |
| (12) | Output Limiter Lower Limit | Specify the output limiter lower limit in the range of -5 to 100. |
|      |                            | *Writing is available only if output 2 specification is with the connecting device. |
|      |                            | *If specified value is not in the proper relation with (13) Output Limiter Upper Limit, writing is not available. |
| (13) | Output Limiter Upper Limit | Specify output limiter upper limit in the range of 0 to 105. |
|      |                            | *Writing is available only if output 2 specification is with the connecting device. |
|      |                            | *If specified value is not in the proper relation with (12) Output Limiter Lower Limit, writing is not available. |
| (14) | Output Variation Limiter Fall | Specify output variation limiter fall in the range of -100 to -0.1. |
|      |                               | *Writing is available only if output 2 specification is with the connecting device. |
| (15) | Output Variation Limiter Rise | Specify output variation limiter rise in the range of 0.1 to 100. |
|      |                               | *Writing is available only if output 2 specification is with the connecting device. |
| (16) | Preset Manual | Specify preset manual value in the range of -5 to 105. |
|      |               | *Writing is available only if output 2 specification is with the connecting device. |

## (j) Communication Parameter [MODEa]
It provides function of editing communication parameter.

### < Name of 8 types of parameter each setting value >
Utilizing following setting value (1) Digital Transmission Type, (2) [COM1] Communication protocol, (3) [COM1] Communication Function, (4) [COM1] Instrument No., (5) [COM1] Communication Transmission Rate, (6) [COM1] Communication Character, (7) [COM1] Digital Transmission Type, (8) [COM1] Digital Transmission cycle, and (9) [COM1] Communication Display, it edits transmission output parameter.
*(2) to (9) parameters are reading only.

| | Value |
|---|---|
| (1) Digital transmission type | PV (measured value) |
| (2) [COM1] Communication protocol | MODBUS RTU mode |
| (3) [COM1] Communication function | Host communication |
| (4) [COM1] Instrument No. | 1 |
| (5) [COM1] Communication transmission rate | 9600bps |
| (6) [COM1] Communication character | 8-bit/ None/ Stop 1 |
| (7) [COM1] Digital transmission type | PV (measured value) |
| (8) [COM1] Digital transmission cycle | 1000msec cycle |
| (9) [COM1] Digital communication display | Hide |

| No. | Name | Description |
|---|---|---|
| (1) | Digital Transmission Type | Select and specify digital transmission type setting form SV (setting value), PV (measured value), MV (output value), MV2 (output value 2) or MFB (analog FB transmission). <br> *For MV2 (output value 2), writing is available only if output 2specification is with the connection device. <br> *For MFB (analog FB transmission), writing is available only if ON-OFF servo output type specification is with the connecting device. <br> *Writing is available only if communication interface specification is with the connecting device. |
| (2) | [COM1] Communication Protocol | Select and specify [COM1] communication protocol setting from MODBUS RTU mode, MODBUS ASCII mode, or Private mode. <br> *This parameter is reading only. It reads and displays setting above from connection device. |
| (3) | [COM1] Communication Function | Select and specify [COM1] communication function setting from host communication, digital transmission, or digital remote. <br> *This parameter is reading only. It reads and displays setting above from connection device. |
| (4) | [COM1] Instrument No. | Specify [COM1] instrument No. in the range of 1 to 99. <br> *This parameter is reading only. It reads and displays setting above from connection device. |
| (5) | [COM1] Communication Transmission Rate | Select and specify [COM1] communication transmission rate setting from 2400bps, 4800bps, 9600bps, 19200bps, or 38400bps. <br> *This parameter is reading only. It reads and displays setting above from connection device. |
| (6) | [COM1] Communication Character | Select and specify [COM1] communication character setting from 7-bit/ even/ stop 1, 7-bit/ even/ stop 2, 7-bit/ odd/ stop 1, 7-bit/ odd/ stop 2, 8-bit/ none/ stop 1, 8-bit/ none/ stop 2, 8-bit/even/ stop 1, 8-bit/ even/ stop 2, 8-bit/odd/stop 1, or 8-bit/ odd/ stop 2. <br> *This parameter is reading only. It reads and displays setting above from connection device. |
| (7) | [COM1] Digital Transmission Type | Select and specify [COM1] digital transmission type setting from SV (setting value), PV (measured value), MV (output value), MV2 (output value 2), or MFB (analog FB transmission). <br> *This parameter is reading only. It reads and displays setting above from connection device. |

| (8) | [COM1] Digital Transmission cycle | Select and specify [COM1] digital transmission setting from 100msec interval, 200msec interval, or 1000msec interval. <br> *This parameter is reading only. It reads and displays setting above from connection device. |
|---|---|---|
| (9) | [COM1] Communication Display | Select and specify [COM1] digital communication display setting from Hide, or Display. <br> *This parameter is reading only. It reads and displays setting above from connection device. |

## (k) Transmission Output Parameter [MODEb]

It provides function of editing transmission output parameter.

### < Name of feedback each setting value >

Utilizing following various setting values (1) Transmission Type, (2) Transmission Scale Zero and (4) Transmission Scale Span, it edits communication and transmission output parameter.

|   | Value |   |
|---|---|---|
| **(1)** Transmission type | PV (measured value) | ▾ |
| Transmission scale zero | −200 | **(2)** |
| **(3)** Transmission scale span | 1370 |   |

| No. | Name | Description |
|---|---|---|
| (1) | Transmission Type | Select and specify transmission type setting form SV (setting value), PV (measured value), MV (output value) or MV2 (output value 2). |
|   |   | *For MV2 (output value 2), writing is available only if output 2specification is with the connection device. |
|   |   | *For MFB (analog FB transmission), writing is available only if ON-OFF servo output type specification is with the connecting device. |
|   |   | *Writing is available only if transmission signal output specification is with the connecting device. |
| (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. |
|   |   | *If (1) Transmission Type is SV (setting value) or PV (measured value), decimal point position is SV decimal point and MV (output value), MV2 (output value 2) or MFB (analog FB transmission), decimal point position is decimal point 1 digit. |
| (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. |
|   |   | *If (1) Transmission Type is SV (setting value) or PV (measured value), decimal point position is SV decimal point and MV (output value) or MV2 (output value 2), decimal point position is decimal point 1 digit. |

## (I) Remote SV Input Parameter [MODEc]

It provides function of editing remote SV input parameter.

### < Names of program parameter – general each setting value >

Utilizing following various setting values (1) Remote/Local, (2) Remote Shift, (3) Remote SV Filter, (4) Tracking Switch to Local, (5) Remote SV Scale Zero, (6) Remote SV Scale Span, and (7) Cascade Input γ (ratio) and (8) Cascade Input β (bias), it edits remote SV input parameter.

|  | Value |
|---|---|
| (1) Remote/Local | LOCAL (Local SV) |
| Remote SV shift | 0 (2) |
| (3) Remote SV filter | 0 |
| Tracking in switching to local | Tracking function disable (4) |
| (5) Remote SV scale zero | 0 |
| Remote SV scale span | 2000 (6) |
| (7) Cascade input gamma(ratio) | 1 |
| Cascade input beta(bias) | 0 (8) |

| No. | Name | Description |
|---|---|---|
| (1) | Remote/Local | Select and specify remote/local setting from LOCAL (local SV) or REMORT (remote SV).<br>*Writing is available only if remote signal input or communication interface specification is with the connecting device. |
| (2) | Remote SV Shift | Specify remote SV shift value in the range of -19999 to 20000.<br>*Decimal point is the section (g) Input Parameter SV decimal point (maximum 3 digits)+1.<br>*Writing is available only if remote signal input or communication interface specification is with the connecting device. |
| (3) | Remote SV Filter | Specify remote SV filter value in the range of 0 to 99.9.<br>*Writing is available only if remote signal input or communication interface specification is with the connecting device. |
| (4) | Tracking at Switching to Local | Select and specify tracking setting value at local switching form tracking function disable or tracking function enable.<br>*Writing is available only if remote signal input or communication interface specification is with the connecting device. |
| (5) | Remote SV Scale Zero | Specify remote SV scale zero position in the range of -19999 to 30000.<br>*Decimal point position interlocks with the section (g) Input Parameter SV decimal point.<br>*Writing is available only if remote signal input specification is with the connecting device. |
| (6) | Remote SV Scale Span | Specify remote SV scale span in the range of -19999 to 30000.<br>*Decimal point position interlocks with the section (g) Input Parameter SV decimal point.<br>*Writing is available only if remote signal input specification is with the connecting device. |
| (7) | Cascade Input γ (ratio) | Specify cascade input value γ in the range of 0.00 to 1.00.<br>*Writing is available only if remote signal input specification is with the connecting device. |
| (8) | Cascade Input β (bias) | Specify cascade input value β in the range of -99.9 to 100.0.<br>*Writing is available only if remote signal input specification is with the connecting device. |

## (m) External Input Parameter [MODEd]

It provides function of editing external input parameter.


### < Name of system - external signal input each setting value >

Utilizing following various setting values (1) External Signal Input Assignment No.1 to 7, it edit system.

| | Value |
|---|---|
| **(1)** External signal input assignment No. 1 | NON (No assignment) ▼ |
| External signal input assignment No. 2 | NON (No assignment) ▼ |
| External signal input assignment No. 3 | NON (No assignment) ▼ |
| External signal input assignment No. 4 | NON (No assignment) ▼ |
| External signal input assignment No. 5 | NON (No assignment) ▼ |
| External signal input assignment No. 6 | NON (No assignment) ▼ |
| External signal input assignment No. 7 | NON (No assignment) ▼ |


| No. | Name | Description |
|---|---|---|
| (1) | External Signal Input Assignment No.1 to 7 | Select and specify external signal input assignment No.1 to 7 from NON (No assignment), READY (Constant value operation RUN/READY switch), MANUA (AUTO/Manual output switch), PRAT.M (Preset manual), TIMER1 (Timer 1), TIMER2 (Timer 2), AL.RST (Alarm event reset), SEL1 (Execution No. Selection 1_bit0), SEL2 (Execution No. Selection 2_bit1), SEL4 (Execution No. Selection 4_bit2), SEL8 (Execution No. Selection 8_bit3), PROGR (Program/Constant value operation switch), P.RUN (Program operation RUN/STOP), P.ADV (Program operation ADVANCE), P.REST (Program operation RESET), PTRN1 (Program pattern 1_bit0), PTRN2 (Program pattern 2_bit1) or PTRN4 (Program pattern 4_bit2) *Writing is available only if external signal input specification is with the connecting device. *Writing of PROGR (Program/Constant value operation switch), P.RUN (Program operation RUN/STOP), P.ADV (Program operation ADVANCE), P.REST (Program operation RESET), PTRN1 (Program pattern 1_bit0), PTRN2 (Program pattern 2_bit1) and PTRN4 (Program pattern 4_bit2) is available, only if program function specification is with the connecting device. |

## (n) System Parameter [MODEt]

It provides function of editing system parameter.

### < Name of system - external signal input each setting value >

Utilizing following various setting values (1) Key Lock, (2) Operation Initial Screen, (3) Operation Screen SV Display, (4) Parameter Storage, (5) Port switch, (6) Multi-output switch, (7) Calculation RESET at READY, (8) ARW lower limit, and (9) ARW upper limit, it edits system parameter.
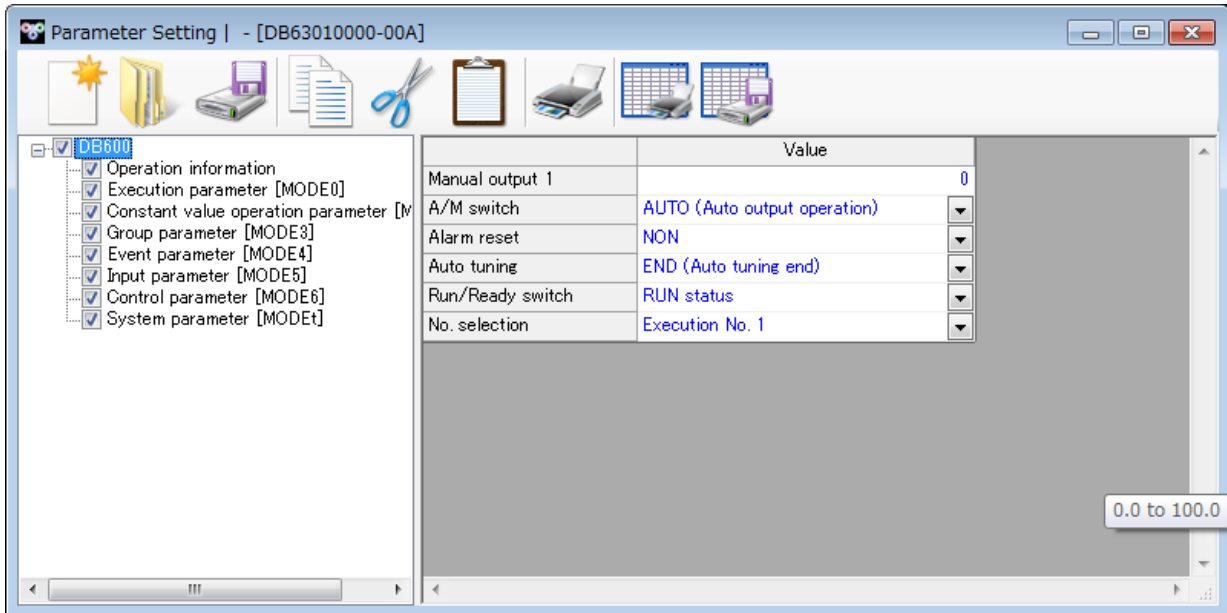
| | | Value | |
|---|---|---|---|
| (1) | Key Lock | NON (Without key lock) | ▼ |
| | Operation initial screen | PV/SV display | ▼ (2) |
| (3) | Operation screen SV display | Multi display | ▼ |
| | Parameter | ON (With setting parameter storage) | ▼ (4) |
| (5) | Port switch | Engineering port | |
| | Multi-output switch | SSR drive pulse output | ▼ (6) |
| (7) | RESET calculation at Ready | Keep calculation PID while Ready | ▼ |
| | ARW lower limit | −100 | (8) |
| (9) | ARW upper limit | 100 | |

| No. | Name | Description |
|---|---|---|
| (1) | Key Lock | Select and specify key lock setting form without key lock, key lock of operation parameter or key lock of all parameter. |
| (2) | Operation Initial Screen | Select and specify operation initial screen setting from PV/SV display, PV/Step time display, PV/Output 1 display or PV/Output 2 display.<br>*Writing of PV/Output 2 display is available only if output 2 specification is with the connecting device. |
| (3) | Operation Screen SV Display | Select and specify operation screen SV display setting from SV display, Blank display or Multi display. |
| (4) | Parameter Storage | Select and specify parameter storage setting form ON (With Setting parameter storage) or OFF (Without Setting parameter storage).<br>*If specified value in the (d) Program Parameter – general, program /constant value operation switch is program operation and (a) Operation Information, program drive, program operation is specified, writing is not available. |
| (5) | Port switch | Select and specify port switch setting from engineering port or IR port.<br>*This parameter is reading only. It reads and displays setting above from connection device. |
| (6) | Multi-output switch | Select and specify multi-output switch setting from normal output, ON-OFF pulse output, analog output, or SSR drive pulse output.<br>*Writing is available if connection device is combination of following models.<br>・Adjustment output 1···SSR drive pulse output type<br>・Adjustment output 2···Current output type or Voltage output type<br>・Event output 2 points···With EV2 |
| (7) | Calculation RESET at READY | Select and specify calculation RESET at Ready setting from continues PID calculation while Ready status, or RESET PID calculation while Ready. |
| (8) | ARW lower limit | Specify ARW lower limit in the range of -100.0 to 0.0. |
| (9) | ARW upper limit | Specify ARW upper limit in the range of 0.0 to 100.0. |

## 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.
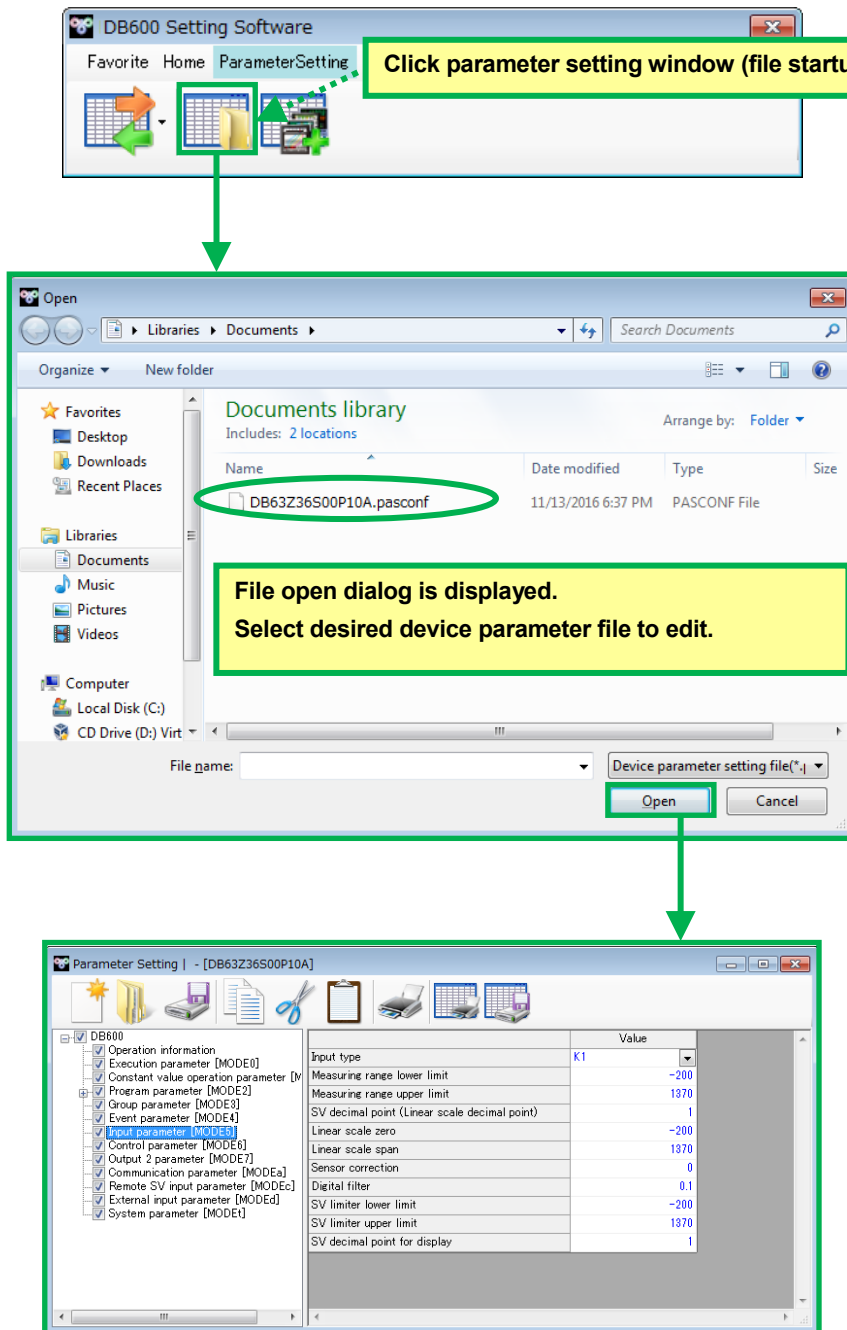Refer to 5-3-1-2. List of Setting Value Category (DB600) for how to edit.

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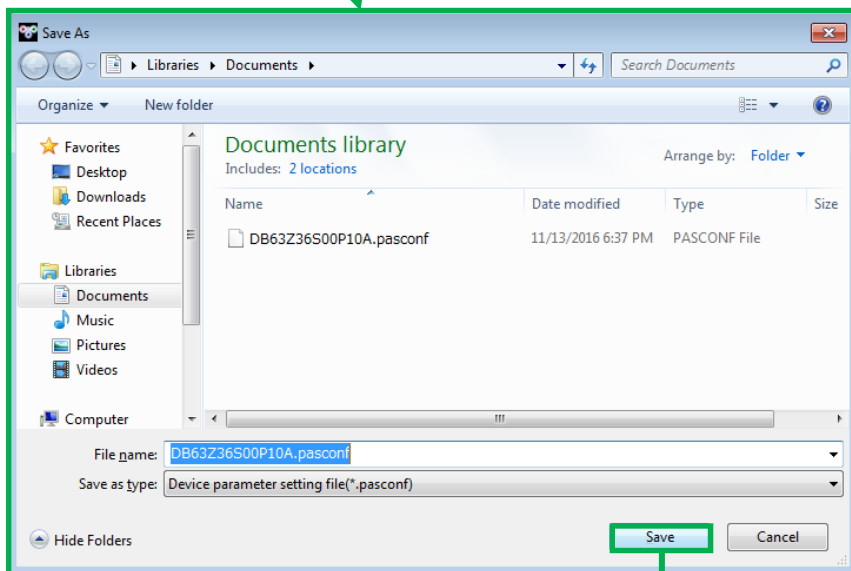
### < Operation image of parameter setting window (off-line) >

**(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.**
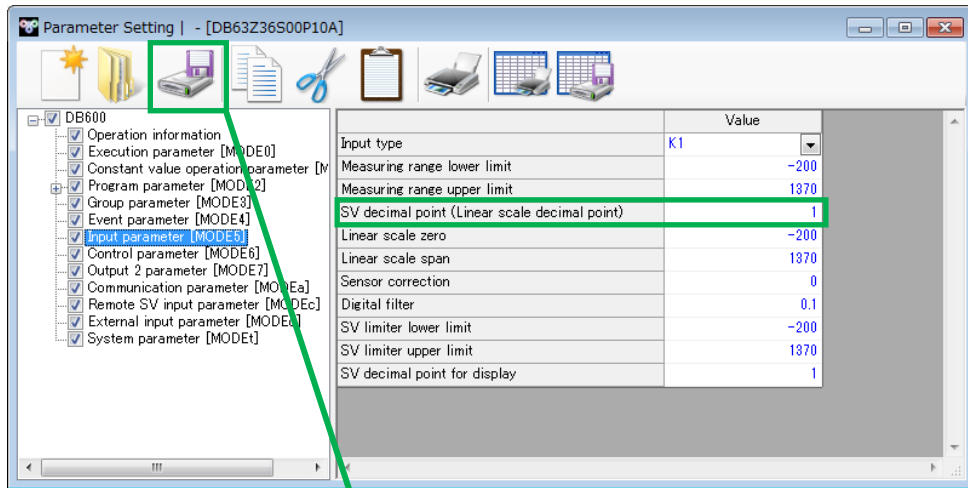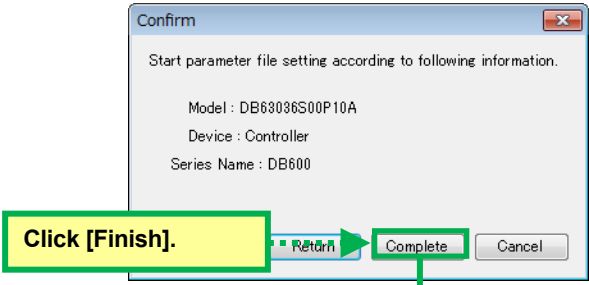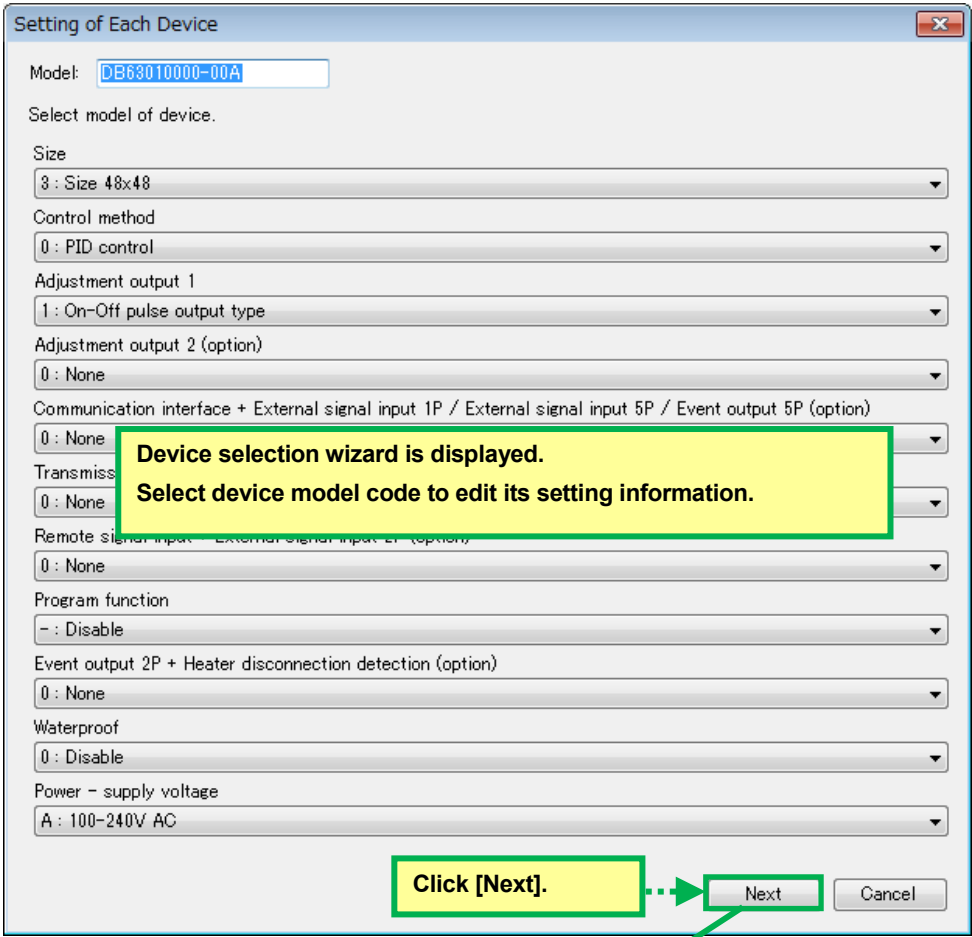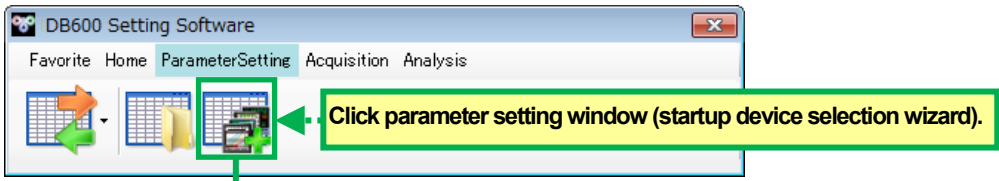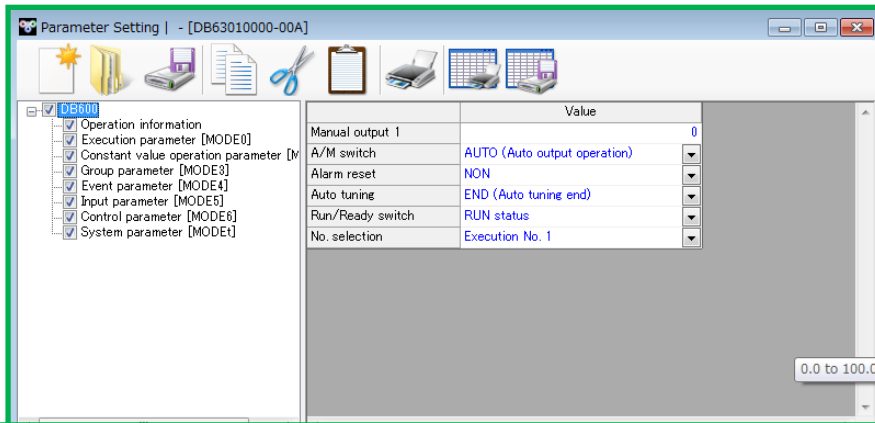
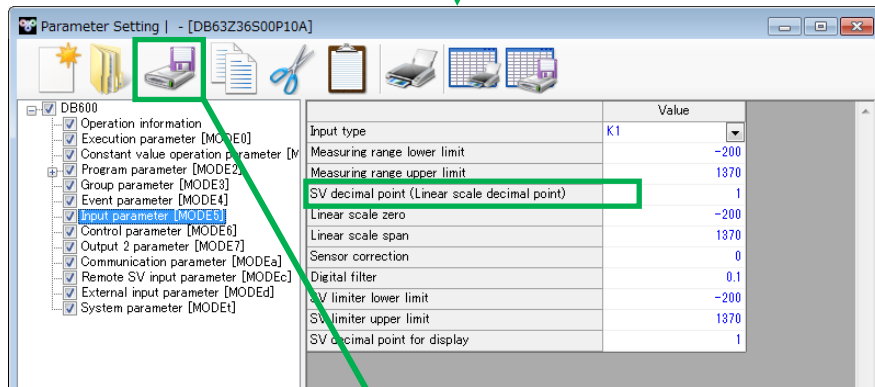**Select and change parameter and rewrite and save edited contents.**



**Device parameter file is saved.**

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

DB600 Setting Software

Favorite  Home  ParameterSetting  Acquisition  Analysis

**Click parameter setting window (startup device selection wizard).**

Setting of Each Device

Model:  DB63010000-00A

Select model of device.

Size
3 : Size 48x48

Control method
0 : PID control

Adjustment output 1
1 : On-Off pulse output type

Adjustment output 2 (option)
0 : None

Communication interface + External signal input 1P / External signal input 5P / Event output 5P (option)
0 : None

**Device selection wizard is displayed.**
**Select device model code to edit its setting information.**

Transmiss
0 : None

Remote signal input + External signal input 2P (option)
0 : None

Program function
- : Disable

Event output 2P + Heater disconnection detection (option)
0 : None

Waterproof
0 : Disable

Power - supply voltage
A : 100-240V AC

**Click [Next].**    Next    Cancel

Confirm

Start parameter file setting according to following information.

Model : DB63036S00P10A

Device : Controller

Series Name : DB600

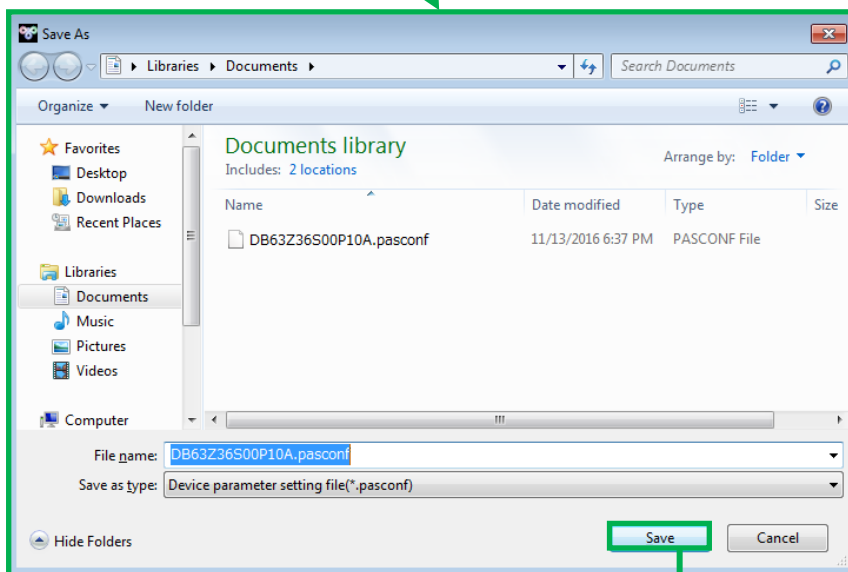**Click [Finish].**    Return    Complete    Cancel

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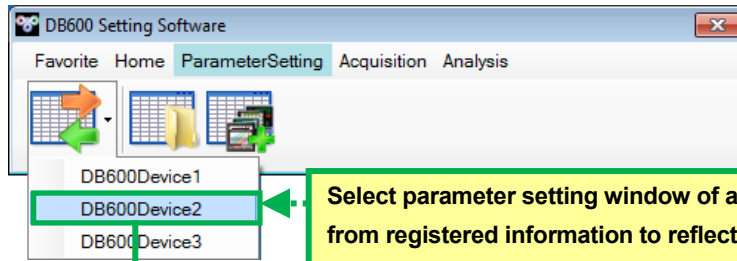


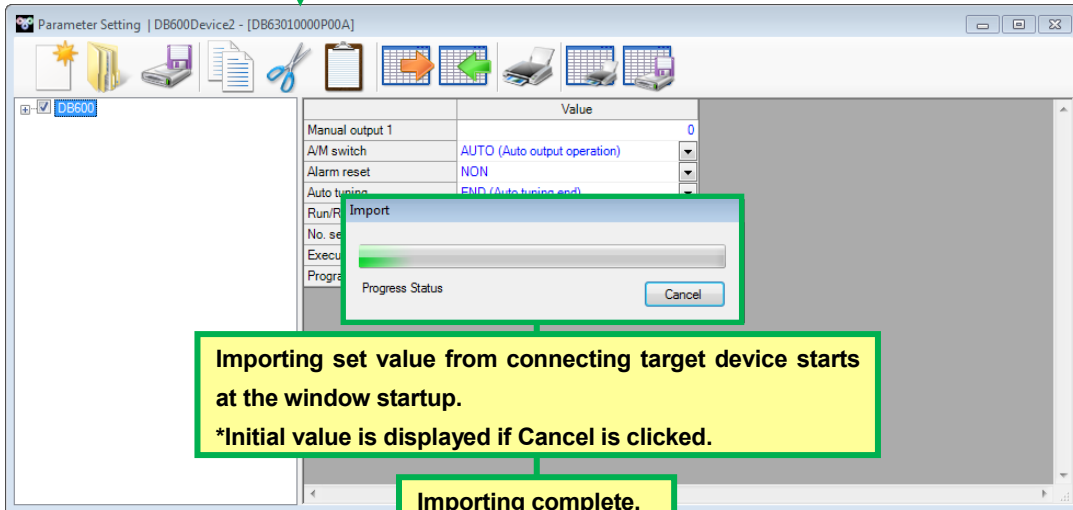**Select and change parameter and save edited contents as a device parameter file.**



**Device parameter file is saved.**

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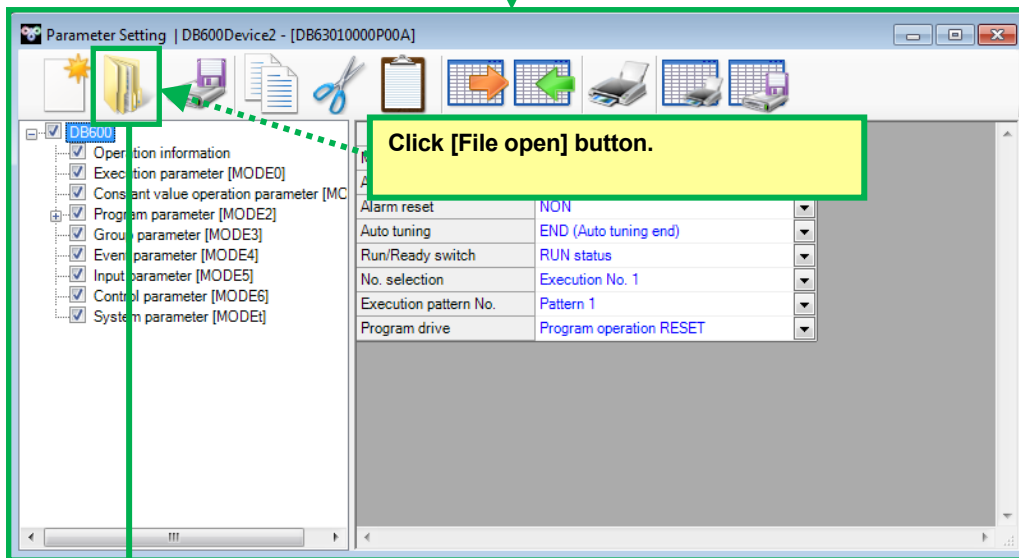


Select parameter setting window of a desired device from registered information to reflect contents of device parameter file.
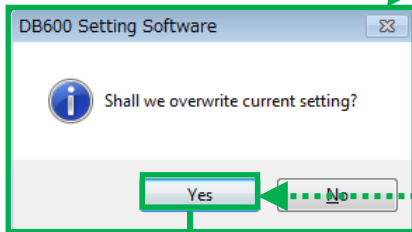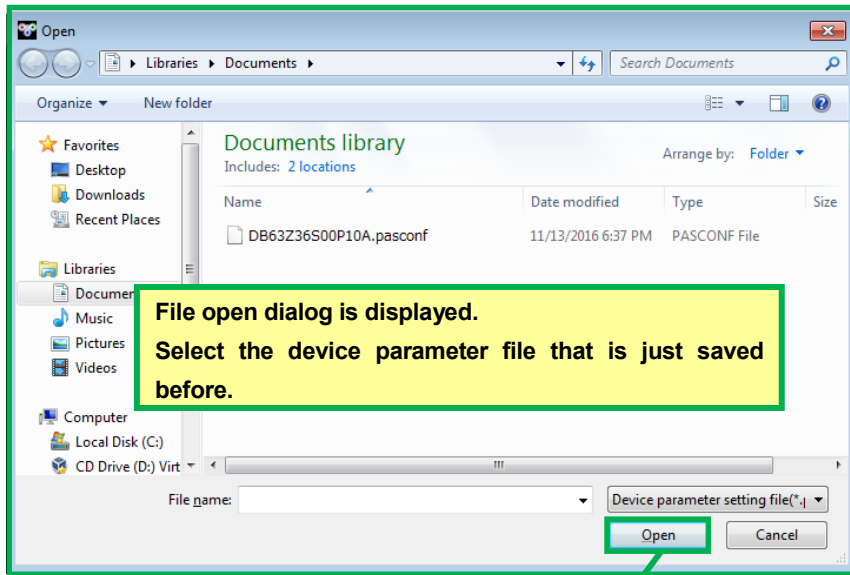
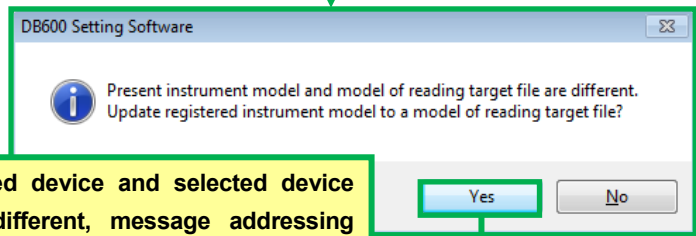Importing set value from connecting target device starts at the window startup.
*Initial value is displayed if Cancel is clicked.

Importing complete.

Click [File open] button.

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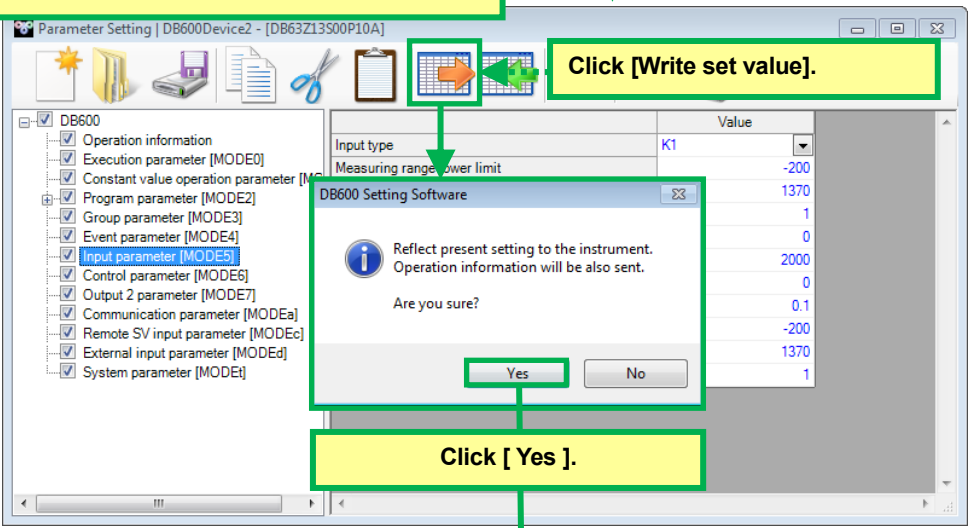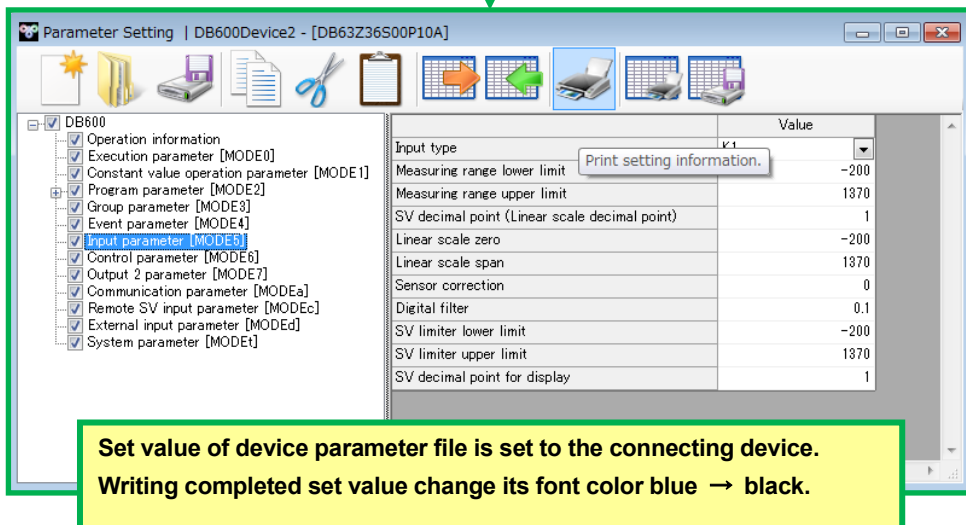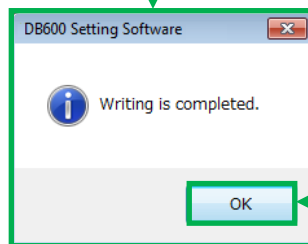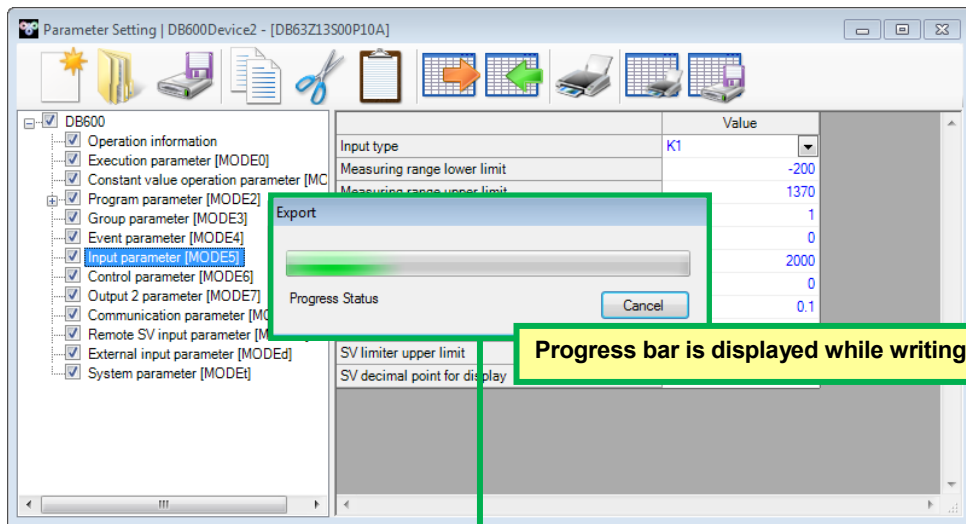Select the device parameter file that is just saved before.

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

DB600 Setting Software

Shall we overwrite current setting?

Yes    No

DB600 Setting Software

Present instrument model and model of reading target file are different.
Update registered instrument model to a model of reading target file?

Yes    No

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.

Parameter Setting | DB600Device2 - [DB63Z13S00P10A]

Click [Write set value].

DB600
  Operation information
  Execution parameter [MODE0]
  Constant value operation parameter [M
  Program parameter [MODE2]
  Group parameter [MODE3]
  Event parameter [MODE4]
  Input parameter [MODE5]
  Control parameter [MODE6]
  Output 2 parameter [MODE7]
  Communication parameter [MODEa]
  Remote SV input parameter [MODEc]
  External input parameter [MODEd]
  System parameter [MODEt]

| | Value |
|---|---|
| Input type | K1 |
| Measuring range lower limit | -200 |
| | 1370 |
| | 1 |
| | 0 |
| | 2000 |
| | 0 |
| | 0.1 |
| | -200 |
| | 1370 |
| | 1 |

DB600 Setting Software

Reflect present setting to the instrument.
Operation information will be also sent.

Are you sure?

Yes    No

Click [ Yes ].

Progress bar is displayed while writing.

**DB600 Setting Software**

ⓘ Writing is completed.

OK

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.**
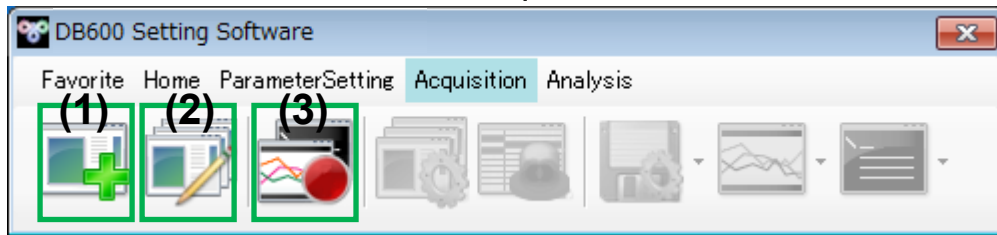


| No. | Name | Description | Reference |
|-----|------|-------------|-----------|
| (1) | Data Registration | Displays data acquisition window. It provides function of registration, editing and deleting of data value for acquisition. | 5-4-1 |
| (2) | Group Registration | Displays group registration 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) >**
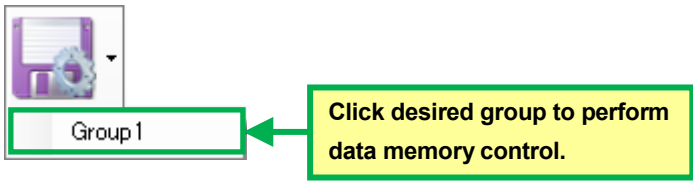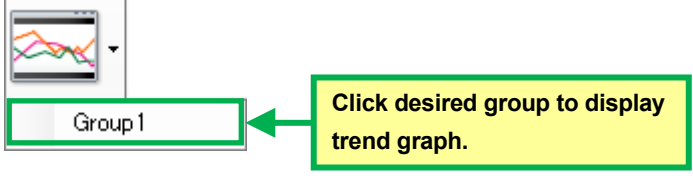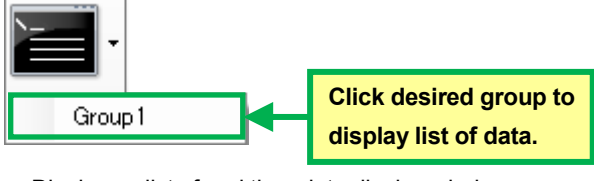Utilizing following functions (1) Stop Acquisition, (2) Acquisition Group Management, (3) Display List of Alarm, (4) Data Memory Control, (5) Display Trend and (6) Display List of Data, it processes stopping acquisition and monitoring acquisition etc.
**\*During acquisition, data registration, group registration and port registration and device registration of home function tool buttons become disabled.**
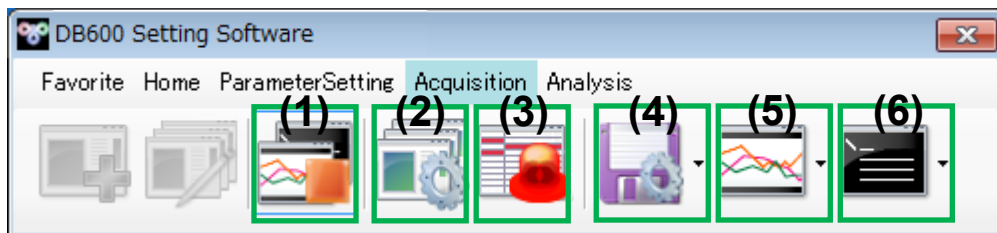


| No. | Name | Description | Reference |
|-----|------|-------------|-----------|
| (1) | Stop Acquisition | Stops data acquisition and periodical communication. | - |
| (2) | Acquisition Group Management | It provides functions of recording (data memory) start, stop and control of acquisition group 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. <br> · Select and click a group desired to data memory control from the list of acquisition group. | 5-4-5 |

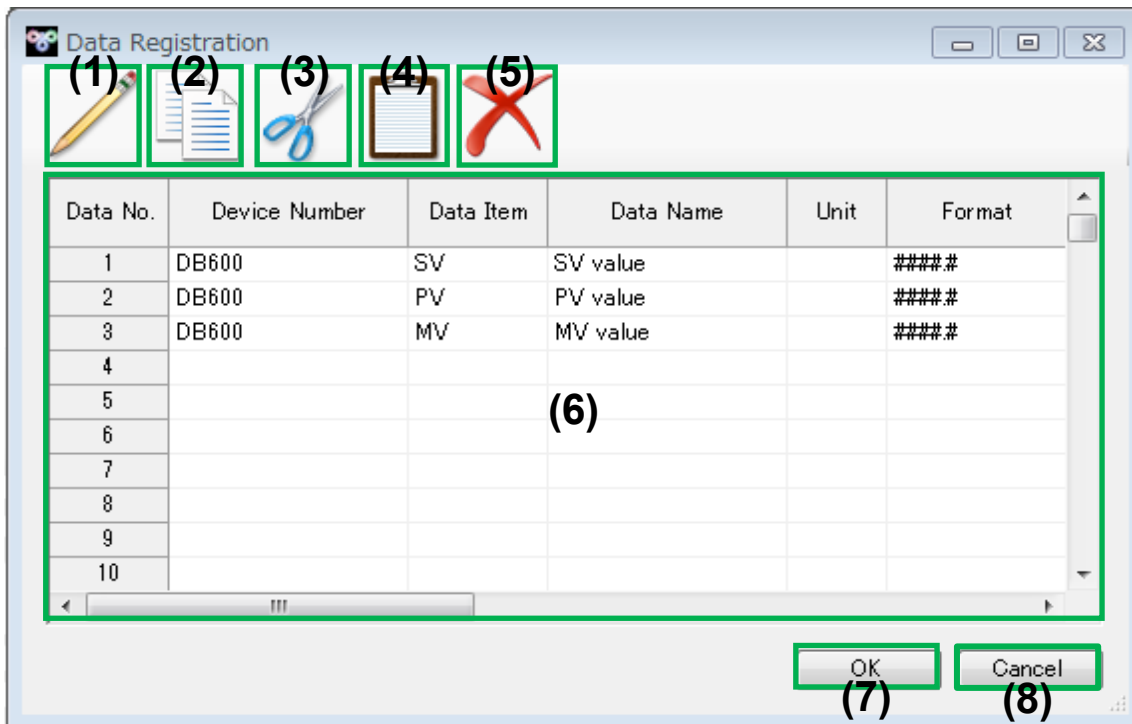| | | | |
|---|---|---|---|
| | |  **Click desired group to perform data memory control.** <br> · Displays data memory control window. | |
| (5) | Display Trend | · Clicking the drop down button displays list of acquisition group. <br> · Select and click a group desired to display trend graph from the list of acquisition group. <br><br>  **Click desired group to display trend graph.** <br> · Displays trend graph display window. | 5-4-6 |
| (6) | Display List of Data | · Clicking the drop down button displays list of acquisition group. <br> · Select and click a group desired to display a list of data from the list of acquisition group. <br><br>  **Click desired group to display list of data.** <br> · 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.<br>*Shortcut is available with Ctrl + C key.<br>*Belonging group is initialized. | - |
| (3) | Cut | Cuts setting information of select area in the list of data for acquisition setting information.<br>*Shortcut is available with Ctrl +X key.<br>*Belonging group is initialized. | - |
| (4) | Paste | Pastes holding device information obtained by (2) Copy or (3) Cut after the selected row.<br>*Shortcut is available with Ctrl +V key. | - |
| (5) | Delete | From registered data for acquisition setting information, deletes selecting data.<br>*Deleting multiples is available. | - |
| (6) | Data for Acquisition Setting Information Display | Displays list of currently registered data for acquisition setting information.<br>*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.
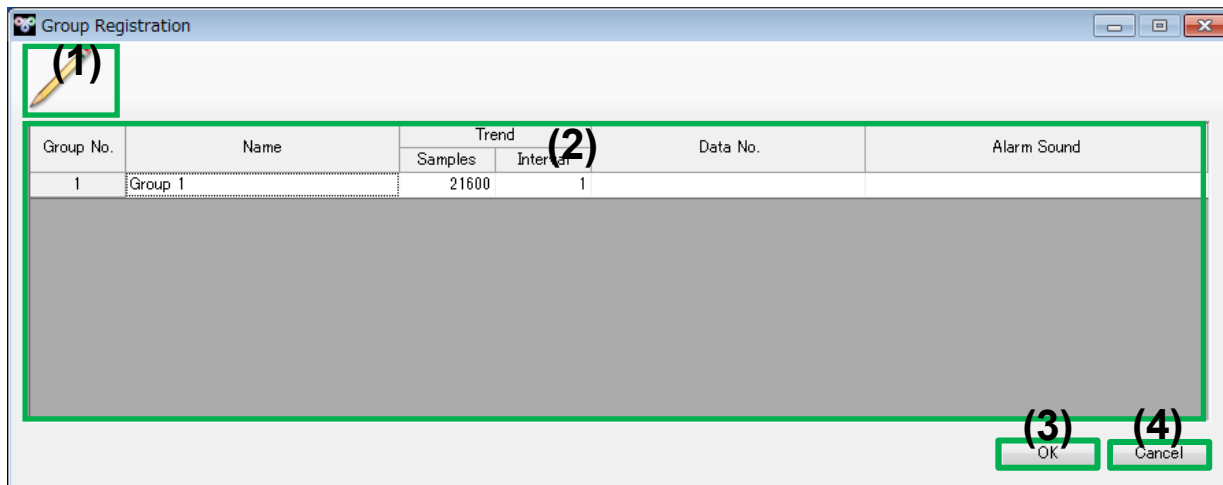


| No. | Name | Description |
|-----|------|-------------|
| (1) | Device | Select a device to perform data acquisition. *Device registered at the section 6-2-2. Device Registration Window which has data for acquisition can only be selected. |
| (2) | Data | Select an acquisition data type of device specified 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.
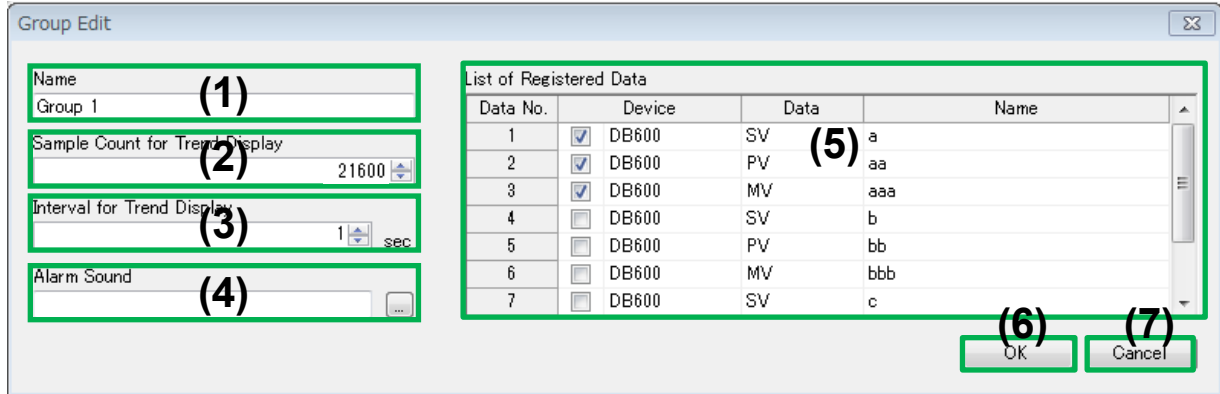


| No. | Name | Description | Reference |
|---|---|---|---|
| (1) | Edit | Displays group edit dialog from selected acquisition group setting information. | 5-4-2-1 |
| (2) | Group Setting Information Display | Displays list of acquisition group setting information. *Double clicking a cell enables setting 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.
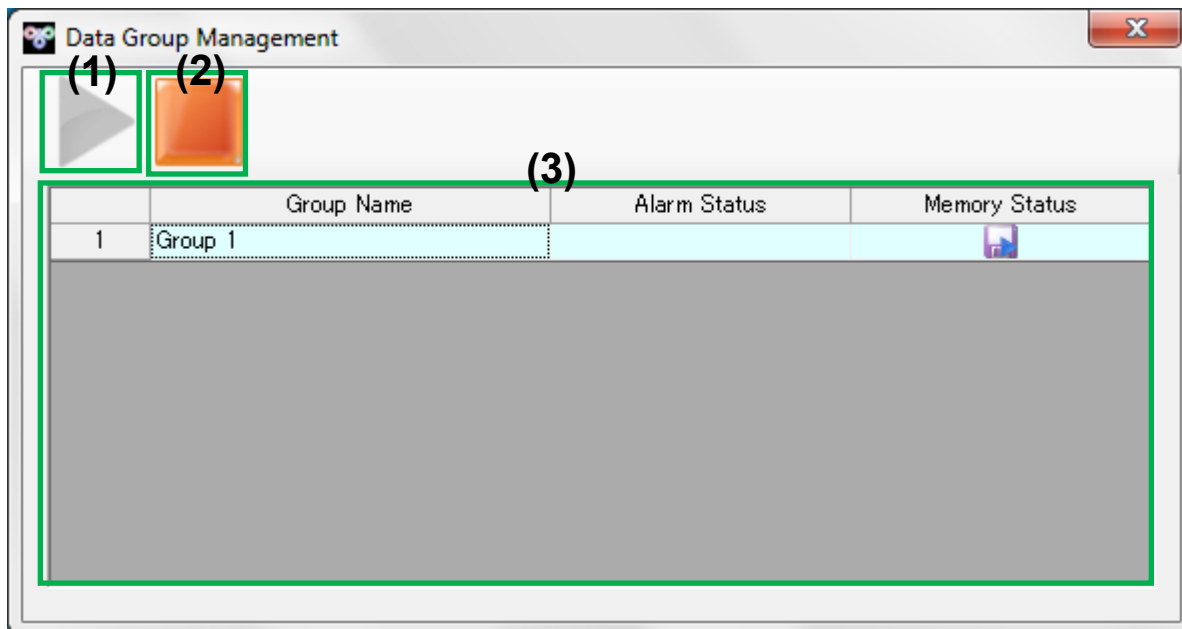


| No. | Name | Description |
|-----|------|-------------|
| (1) | Name | Specify acquisition group name for display. Up to 30 characters are able to be entered. |
| (2) | Sample Count for Trend Display | Specify trend buffer sample number at the acquisition in the range of 1 to 21600. |
| (3) | Interval 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. <br> *With check mark: Include in the group. Without check mark: exclude from the group. <br> *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.
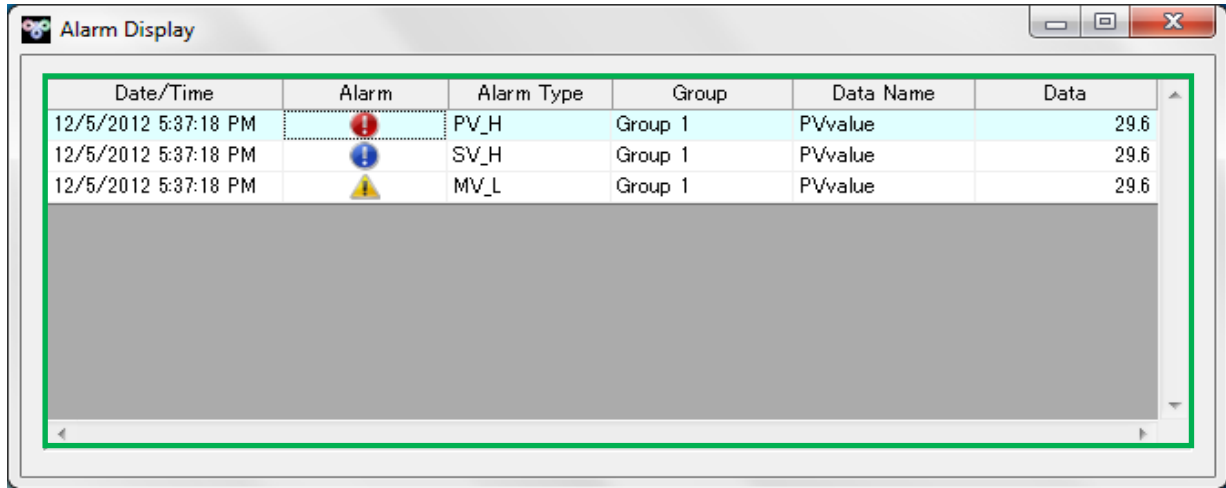


| No. | Name | Description |
|---|---|---|
| (1) | Data Memory Start | Start data memory of selected row acquisition group.<br>*Enable/disable of the button switches at start/stop.<br>*Refer to 5-4-5 Data Memory Operation Window for more details. |
| (2) | Data Memory Stop | Stop data memory of selected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

## 5-4-5. Data Memory Operation Window

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

### < 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.
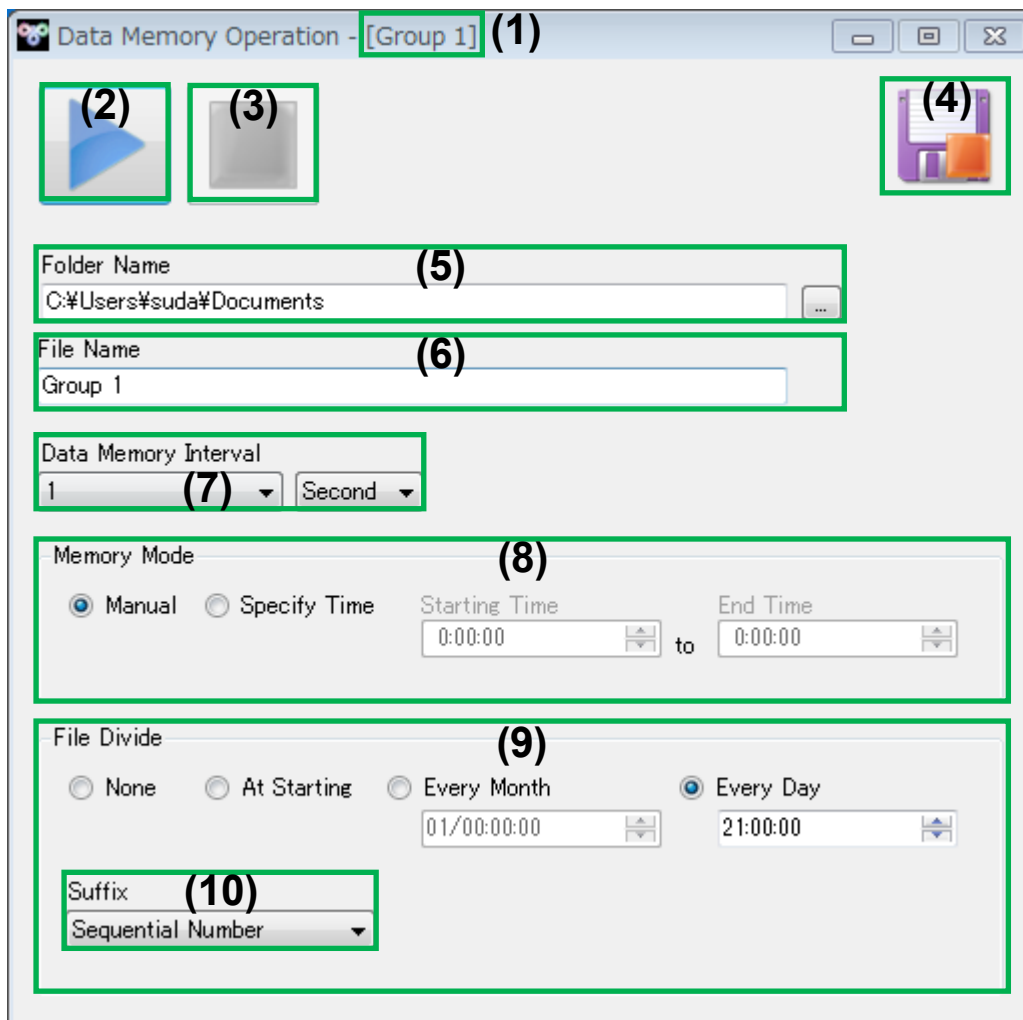


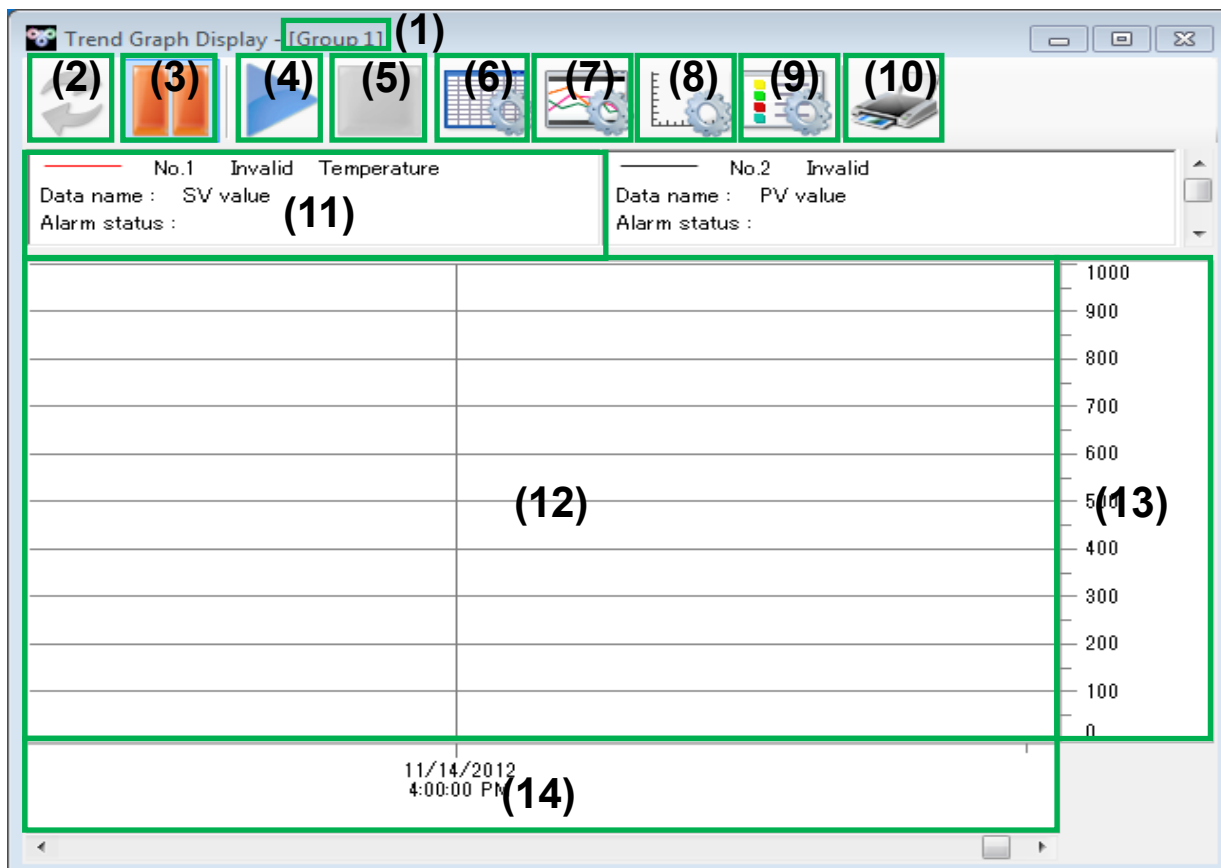| No. | Name | Description |
|-----|------|-------------|
| (1) | Acquisition Group Name | Displays selected acquisition group name. |
| (2) | Data Memory Start | Start data memory.<br>*Enable/disable of the button switches at start/stop. |
| (3) | Data Memory Stop | Stop data memory.<br>*Enable/disable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

| (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.<br>*If select Specify Time, specify Starting Time and End Time.<br>*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.<br>According to the specified condition, it performs file divide at data memory.<br>*This setting specify file divide (not divide) timing with suffix at data memory file saving.<br>*If select None, set (10) Suffix.<br>*If select Every Month, specify date and time of file divide.<br>*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.<br>*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. <br> *Enable/disable of the button switches at Updata/Pause. | - |
| (3) | Update Pause | During updating trend graph, pause data update. <br> *Enable/disable of the button switches at Updata/Pause. | - |
| (4) | Data Memory Start | Start data memory. <br> *Enable/disable of the button switches at Start/Stop. | - |
| (5) | Data Memory Stop | Stop data memory. <br> *Enable/disable of the button switches at Start/Stop. | - |
| (6) | Data Setting | Displays Data Setting dialog. <br> *Setting information differs depending on the each group. | 5-4-6-1 |
| (7) | Graph Area Setting | Displays Graph Area Setting dialog. <br> *Setting information differs depending on the each group. | 5-4-6-2 |
| (8) | Scale Plate Setting | Displays Scale Plate Setting dialog. <br> *Setting information differs depending on the each group. | 5-4-6-3 |

| (9) | Numeric Value Data Setting | Displays Numeric Value Data Setting dialog. <br> *Setting information differs depending on the each group. | 5-4-6-4 |
|---|---|---|---|
| (10) | Print | Prints screen image. <br> *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. <br> *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.
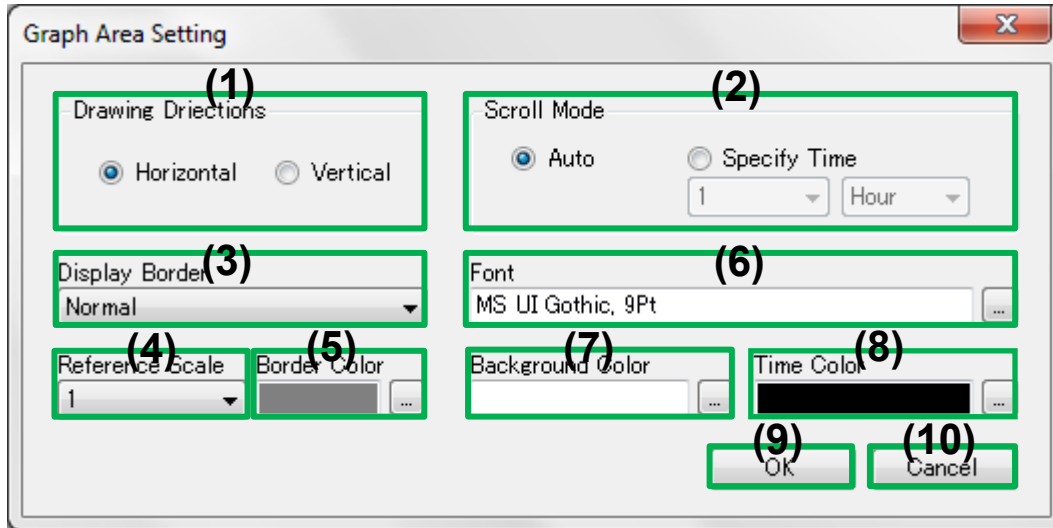


| No. | Name | Description |
|-----|------|-------------|
| (1) | Data No. | Displays data No. It cannot be changed. |
| (2) | Data Name | Displays data name. It cannot be changed. |
| (3) | Display | Specify display or hide display.<br>*With check mark: Displays/Without check mark: Hidden |
| (4) | 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.<br>**[Type]**<br> Select and specify from None, □, ■ , ◇, ◆, △, ▲, ×, ＊○ , ● or +.<br>**[Color]**<br> Specify from color dialog.<br>**[Size]**<br> Select and specify from Small, Normal or Large. |
| (6) | Line Setting | Specify types, colors or width of the line to display.<br>**[Type]**<br> Select and specify from None, Solid line, Chain dash line, Wave line, Dash dotted line or Dash double dotted line.<br>**[Color]**<br>Specify from color dialog.<br>**[Width]**<br>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.
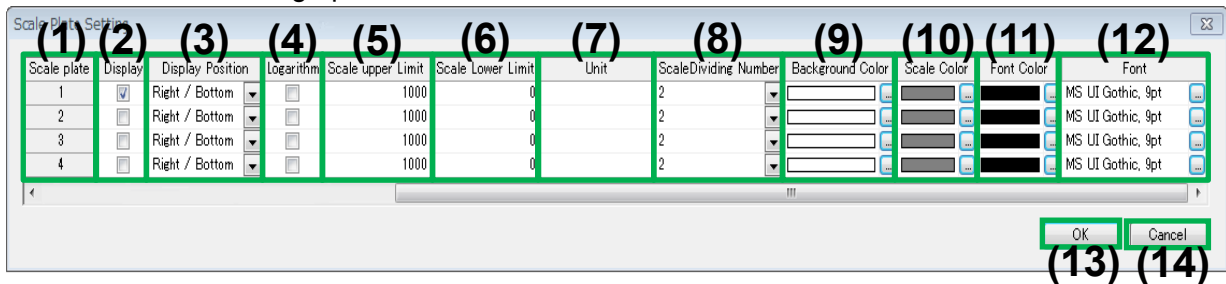


| No. | Name | Description |
|-----|------|-------------|
| (1) | Drawing Directions | Select and specify scroll method of the graph from Horizontal or Vertical. |
| (2) | Scroll Mode | Select and specify scroll method from Auto or Specify Time. <br> *If select Specify Time, select and specify displaying 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.
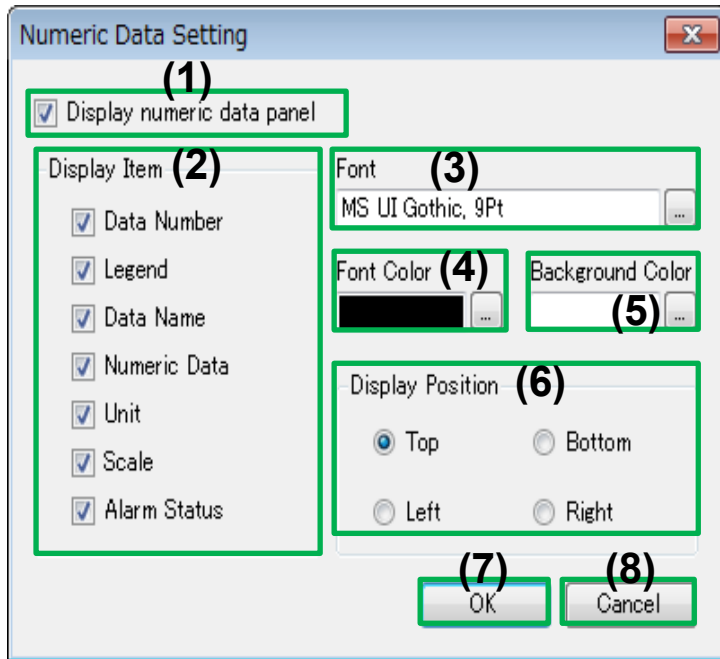


| No. | Name | Description |
|---|---|---|
| (1) | Scale Plate | Displays 1 to 4 scale plate No. It cannot be changed. |
| (2) | Display | Specify display or hide display. <br> *With check mark: Displays/Without check mark: Hidden |
| (3) | Display Position | Select and Specify scale plate display position from Right (horizontal)/Down (vertical). <br> *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. <br> *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. <br> *For logarithm scale, it becomes exponential format. |
| (6) | Scale Lower Limit | Specify scale plate lower limit in the range of -99999.999 to99999.999. <br> *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. <br> *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 windo; 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.
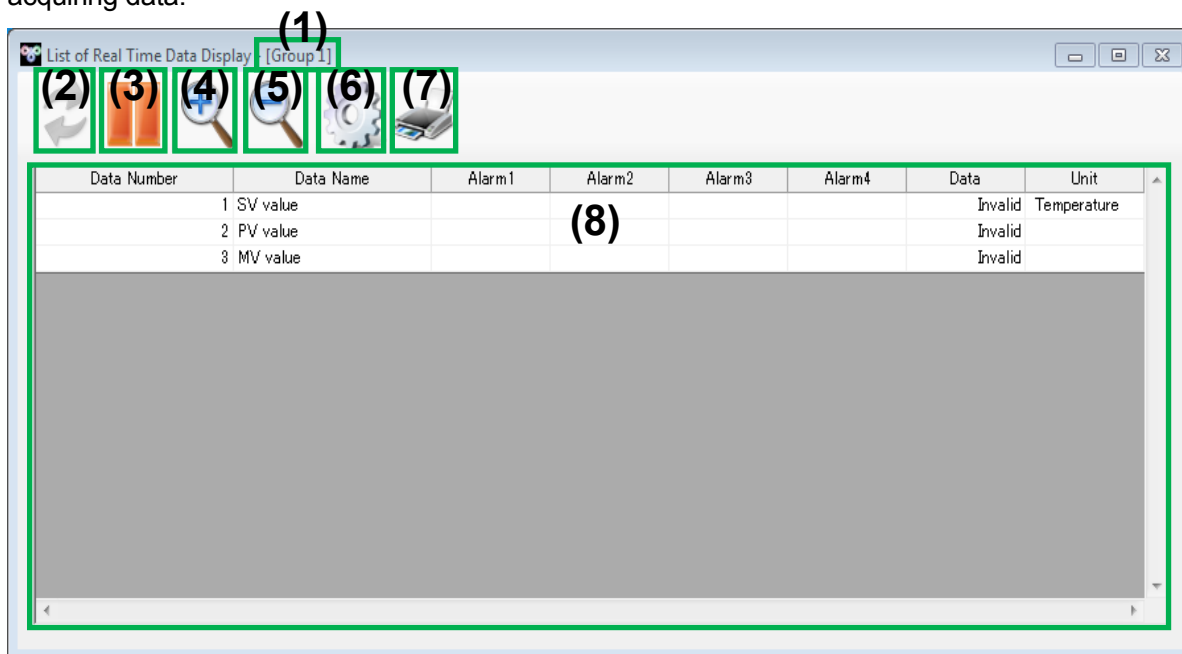


| No. | Name | Description |
|-----|------|-------------|
| (1) | Display Numeric Data | Specify display or hide numeric data. <br>*With check mark: Displays/Without check mark: Hidden |
| (2) | Display Item | Specify items for displaying of numeric data. <br>*With check mark: Displays/Without check 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.

**&lt;Name of list of real time data display window parts&gt;**

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.
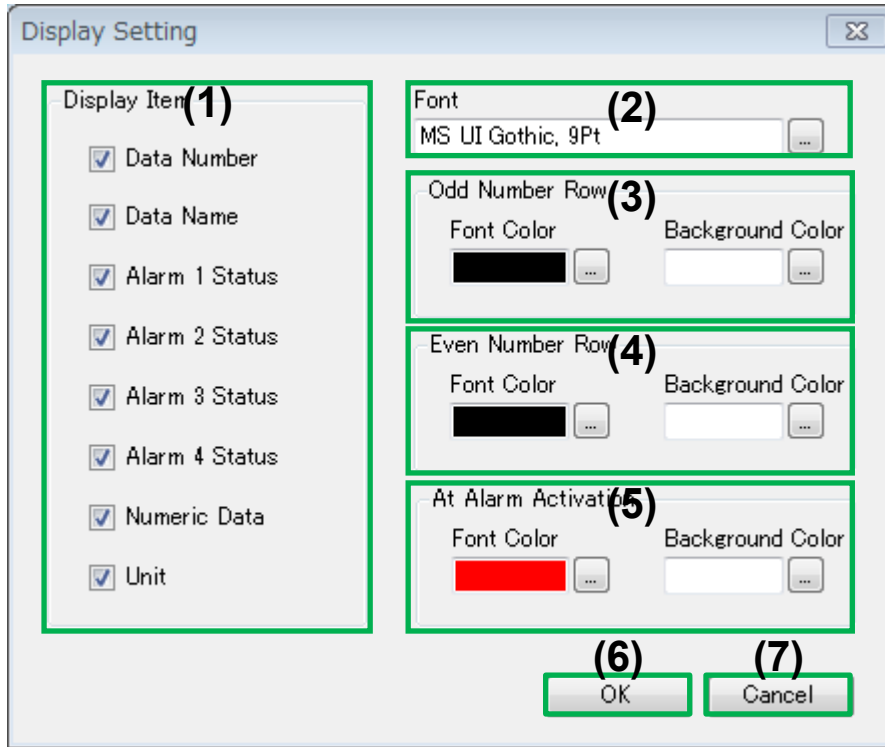


| No. | Name | Description | Reference |
|-----|------|-------------|-----------|
| (1) | Acquisition Data Name | Displays selected acquisition group display name. | - |
| (2) | Update Resume | When update of list of data is at pause, resume update. <br> *Enable/disable of the button switches at Pause/Update. | - |
| (3) | Update Pause | During updating the list of data, pause data update. <br> *Enable/disable of the button switches at Pause/Update. | - |
| (4) | Magnify | Magnifies font size of displayed list. <br> *Magnify twice as much as standard value in maximum. | - |
| (5) | Reduce | Reduces font size of displayed list. <br> *Reduce 0.5 times of standard value in maximum. | - |
| (6) | Display Setting | Displays display setting of list of real time data. <br> *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. <br> *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.
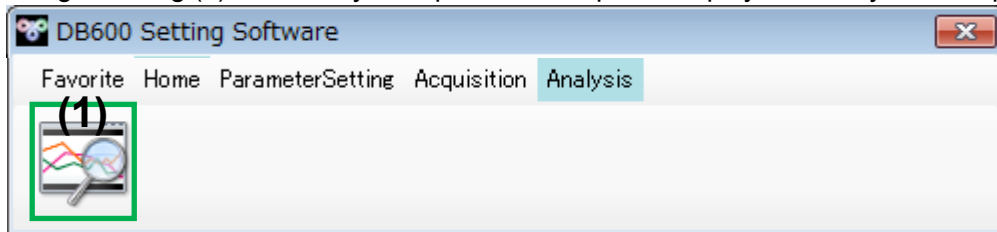


| No. | Name | Description |
|-----|------|-------------|
| (1) | Display Item | Specify display or hide for each column of list of real time data.<br>*With check mark: Displays/Without check mark: Hidden |
| (2) | Font | Specify the font information of list of real time data display window. |
| (3) | 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.<br>· Displays data analysis window by using specified data file.<br>· 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.
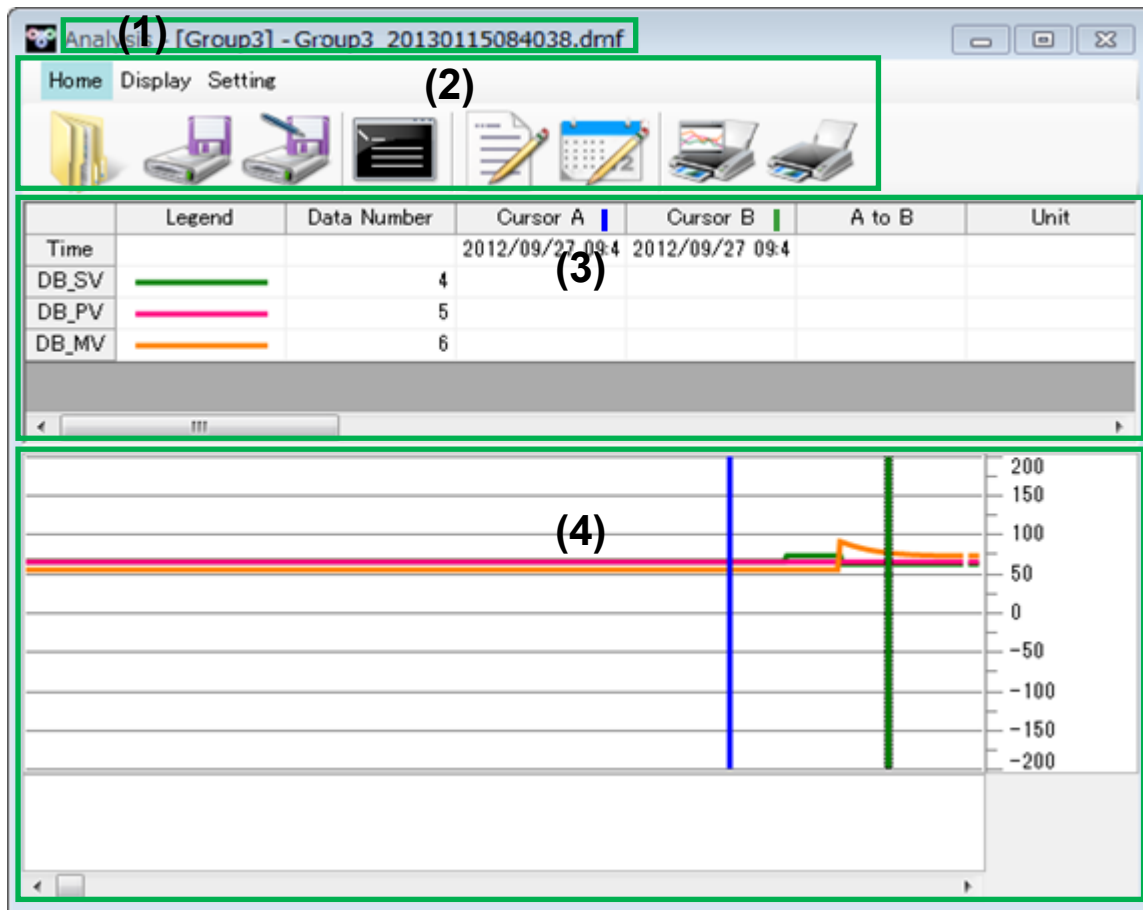


| No. | Name | Description | Reference |
|-----|------|-------------|-----------|
| (1) | Data Analysis Window Title | Displays in order of Analysis – [analysis file title property of analysis file] – name of analysis file.<br>*Default of analysis data file name is group name of currently open data. | - |
| (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 >**
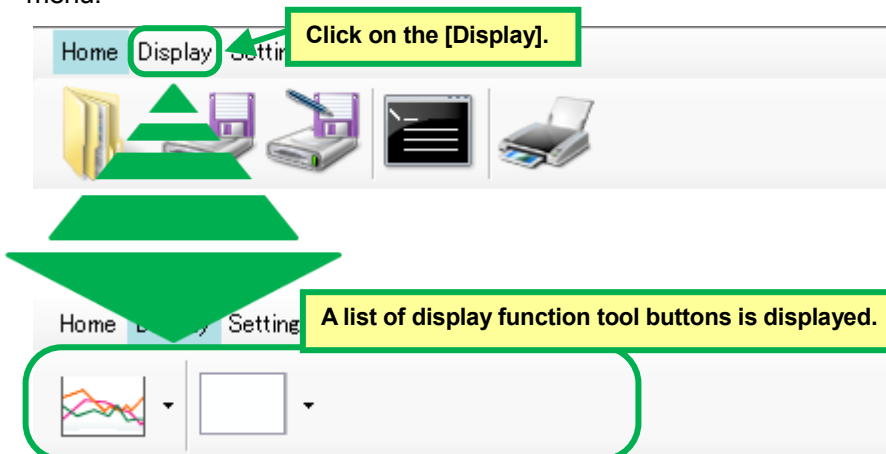
**(1) Startup data analysis window.**

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



**(2) Select a function.**
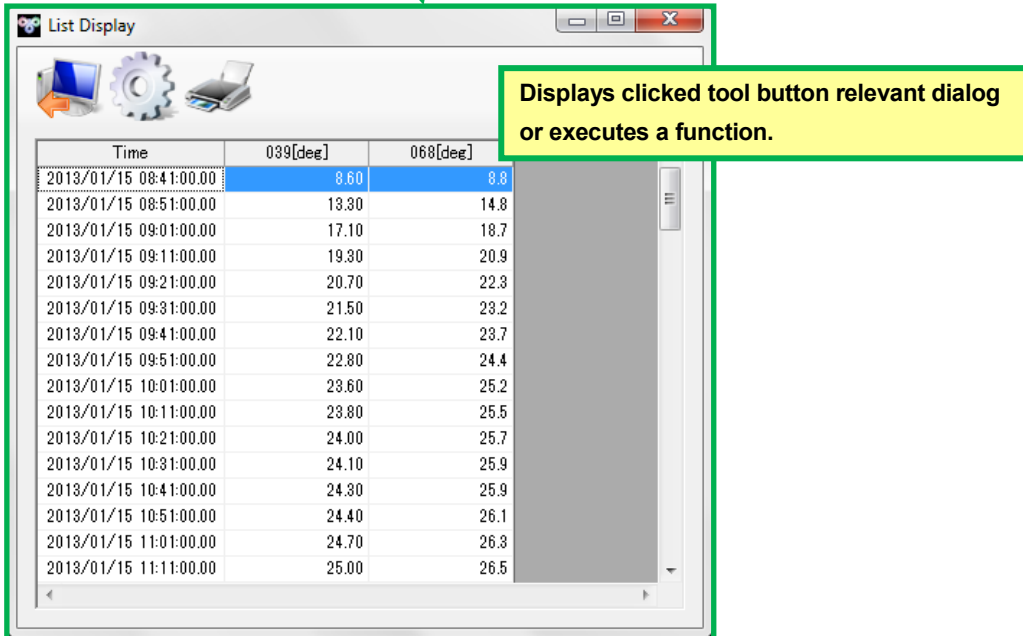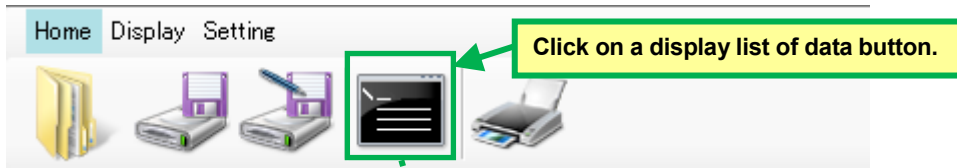
Broadly three functions are available to select.

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



Click on the [Display].

A list of display function tool buttons is displayed.

**(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.



Click on a display list of data button.

Displays clicked tool button relevant dialog or executes a function.

| Time | 039[deg] | 068[deg] |
|------|----------|----------|
| 2013/01/15 08:41:00.00 | 8.60 | 8.8 |
| 2013/01/15 08:51:00.00 | 13.30 | 14.8 |
| 2013/01/15 09:01:00.00 | 17.10 | 18.7 |
| 2013/01/15 09:11:00.00 | 19.30 | 20.9 |
| 2013/01/15 09:21:00.00 | 20.70 | 22.3 |
| 2013/01/15 09:31:00.00 | 21.50 | 23.2 |
| 2013/01/15 09:41:00.00 | 22.10 | 23.7 |
| 2013/01/15 09:51:00.00 | 22.80 | 24.4 |
| 2013/01/15 10:01:00.00 | 23.60 | 25.2 |
| 2013/01/15 10:11:00.00 | 23.80 | 25.5 |
| 2013/01/15 10:21:00.00 | 24.00 | 25.7 |
| 2013/01/15 10:31:00.00 | 24.10 | 25.9 |
| 2013/01/15 10:41:00.00 | 24.30 | 25.9 |
| 2013/01/15 10:51:00.00 | 24.40 | 26.1 |
| 2013/01/15 11:01:00.00 | 24.70 | 26.3 |
| 2013/01/15 11:11:00.00 | 25.00 | 26.5 |

## (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.
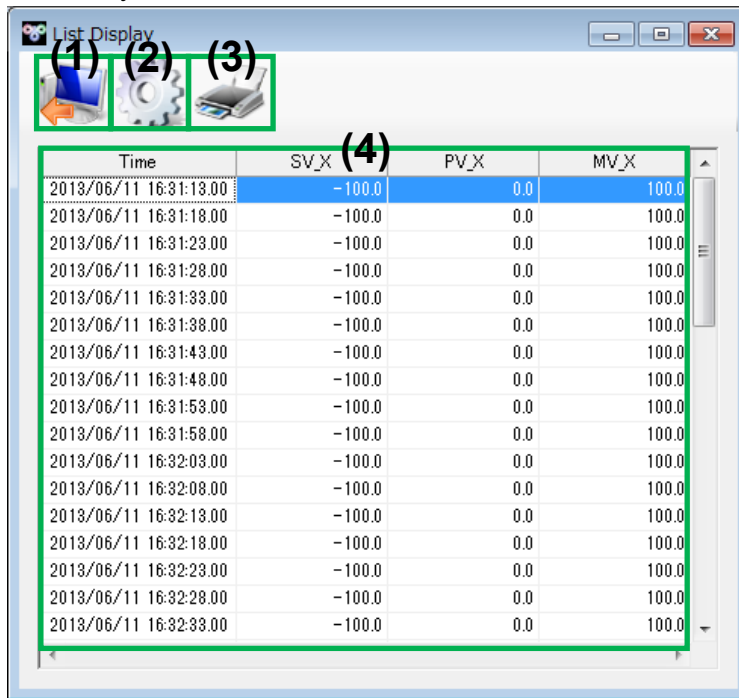


| No. | Name | Description | Reference |
|-----|------|-------------|-----------|
| (1) | Open File | · Displays file open dialog.<br>· Specify data file, expands and displays data analysis window.<br>*1 *.dmf file or *.zil file can be selected.<br>*2 Data values which are able to combine is combined to original data then expanded and displayed. For other case, another window startup then expanded and displayed.<br>*3 If the number of the windows exceeds prescribed displayable number, it cannot be startup. | - |
| (2) | Save | Saves analysis data file.<br>*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.<br>*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.
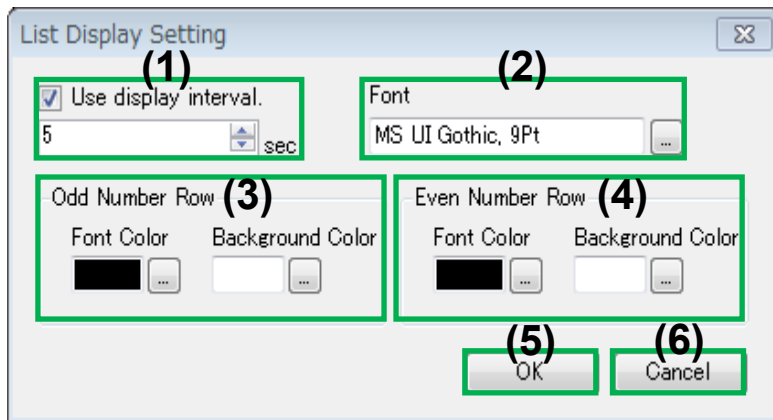


| No. | Name | Description | Reference |
|-----|------|-------------|-----------|
| (1) | Export | Select a file format from<br>· CSV (Comma delimited)<br>· Text (Tab delimited)<br>· Excel (xlsx)<br>and specify output destination then output a file.<br>*A graph is added only for Excel (xlsx) format. | - |
| (2) | Display Setting | Displays display setting dialog. | (a)-1-1. |
| (3) | Print | Prints displayed data list.<br>*Displays print preview. | - |
| (4) | Data List Display | Displays list of acquisition time and a list of acquisition value.<br>*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.
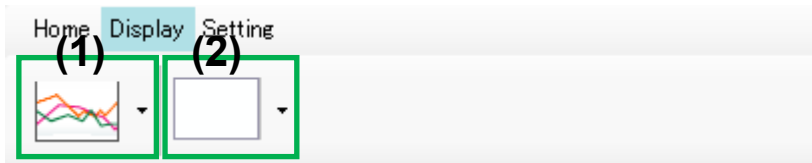


| No. | Name | Description |
|-----|------|-------------|
| (1) | Display Interval Setting | Specify usage of display interval and setting for display interval of time for data value to list display from the range of 1 to 86400 [sec]. <br>*Display data list by the specified interval on the data list 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.



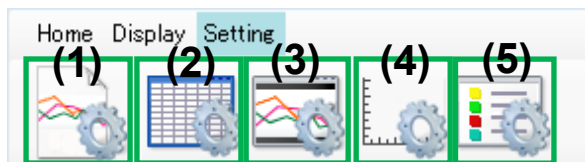| No. | Name | Description |
|---|---|---|
| (1) | Display Period Switching | Select and specify display period on the trend graph from All period, Standard or Between AB cursor.<br>Click on the dropdown button then specify one of the icons below by clicking.<br>*While selecting Between AB cursor, clicking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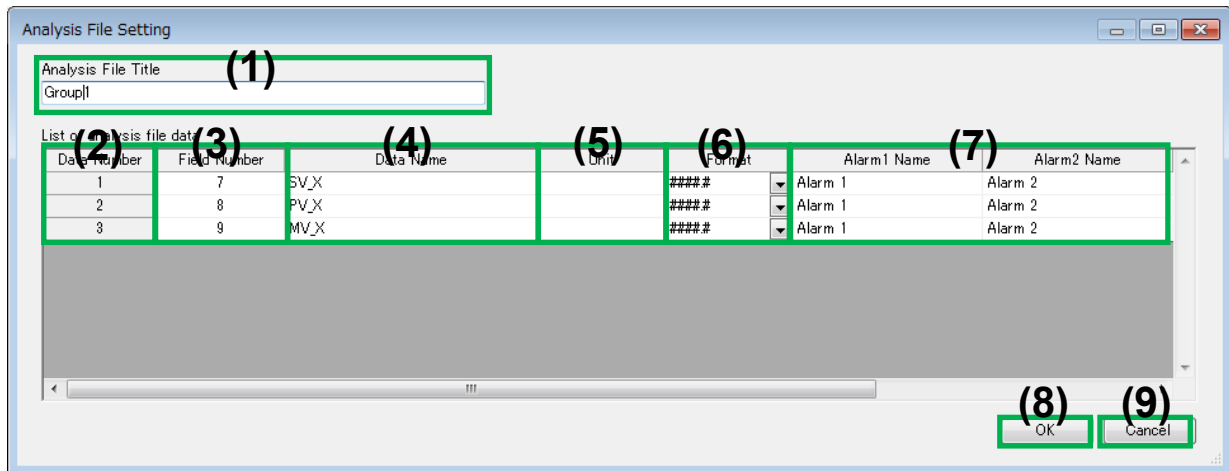


| No. | Name | Description | Reference |
|-----|------|-------------|-----------|
| (1) | Analysis File Setting | Displays analysis file setting dialog. | (c)-1. |
| (2) | Data Setting | Displays data setting dialog. | (c)-2. |
| (3) | Graph Area Setting | Displays graph area setting dialog. | (c)-3. |
| (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.
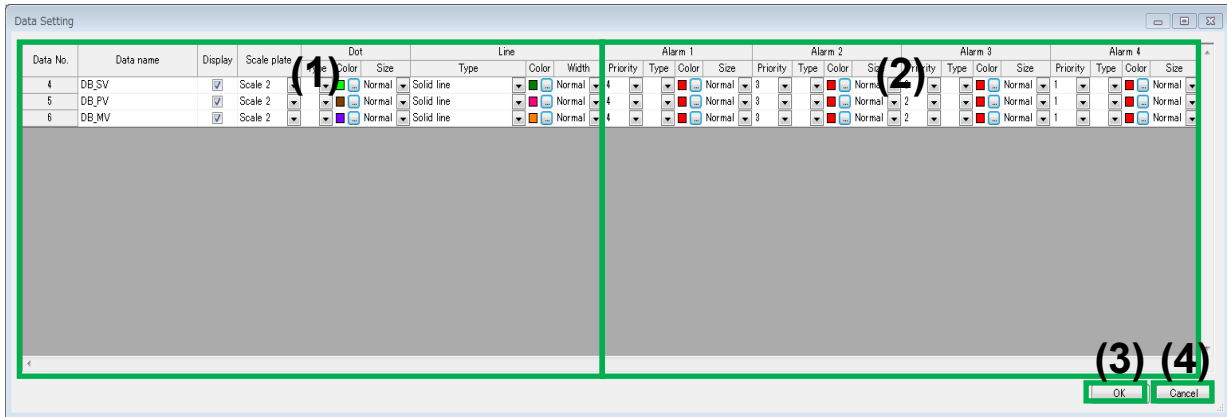


| No. | Name | Description |
|-----|------|-------------|
| (1) | Analysis File Title | Specify analysis file title which is expanded on the data analysis window. Up to 30 characters are able to be entered. *Specified analysis file title is reflected on the data analysis window header text string. |
| (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.<br>*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.<br>**[Type]**<br>　Select and specify from None/ □ / ■ / ◇ / ◆ / △ / ▲ / ✕ / ✻ / ○ / ● / +<br>**[Color]**<br>　Specify from color dialog.<br>**[Size]**<br>　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.
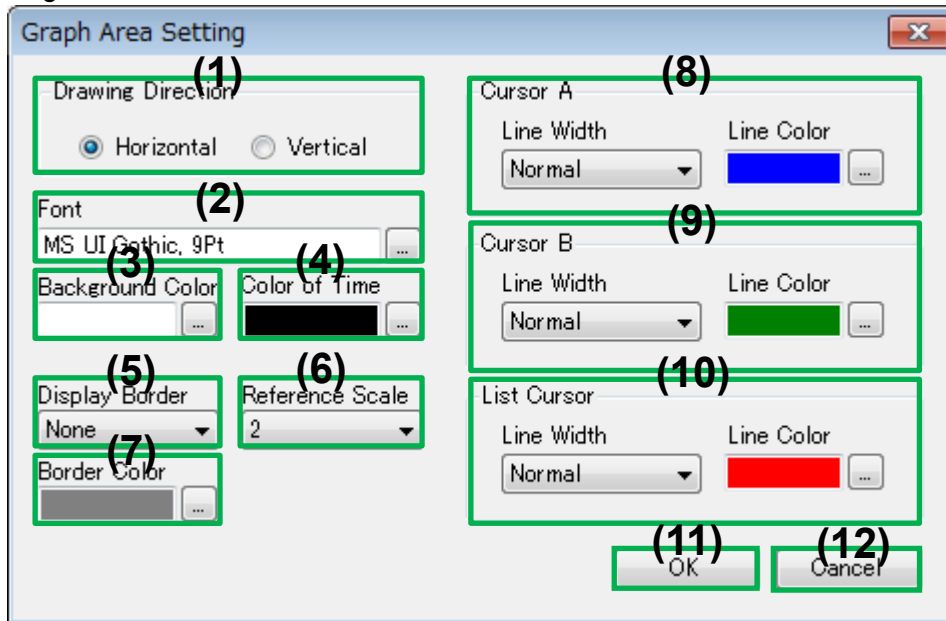


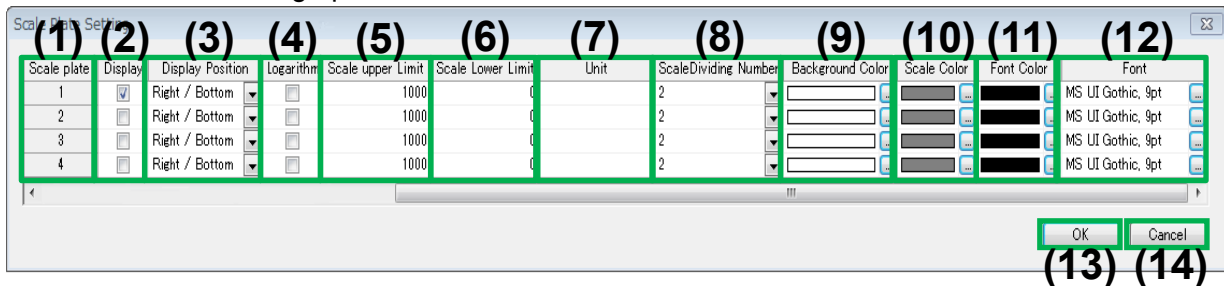| No. | Name | Description |
|-----|------|-------------|
| (1) | Drawing Direction | Select and specify scroll method of the graph from Horizontal or Vertical. |
| (2) | Font | Specify the font using at graph area and time axis. |
| (3) | Background Color | Specify the background color of graph area. |
| (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.<br>**[Line Width]**<br>    Select and specify from Thin, Normal or Thick.<br>**[Line Color]**<br>    Specify from color dialog. |
| (9) | Cursor B Setting | Specify line width and line color of cursor B.<br>**[Line Width]**<br>    Select and specify from Thin, Normal or Thick.<br>**[Line Color]**<br>    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.
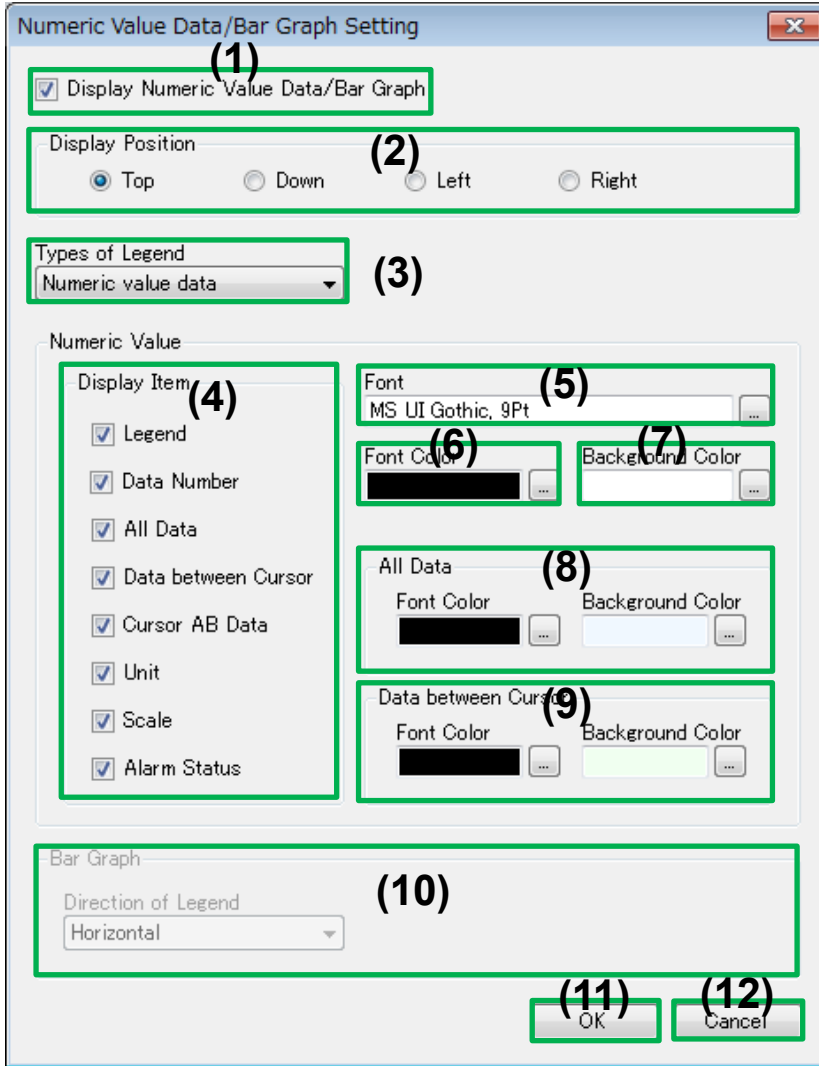


| No. | Name | Description |
|---|---|---|
| (1) | Scale Plate | Displays scale No. 1 to 4. It cannot be changed. |
| (2) | Display | Specify display or hide display of scale plate.<br>*With check mark: Displays/Without check mark: Hidden |
| (3) | Display Position | Select and Specify scale plate display position from Right (horizontal)/Down (vertical).<br>*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.<br>*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.<br>*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.<br>*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.<br>*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. <br> *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. <br> *When numeric value data is selected, numeric value data setting becomes enabled and bar graph setting becomes disabled. <br> *When bar graph or stacked bar graph is selected, bar graph setting becomes enabled and numeric value data setting becomes disabled. |

| (4) | Numeric Value Data, Display Item | Select and specify numeric value data display item. <br> *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 foregrround 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. <br> *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. <br> *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.**
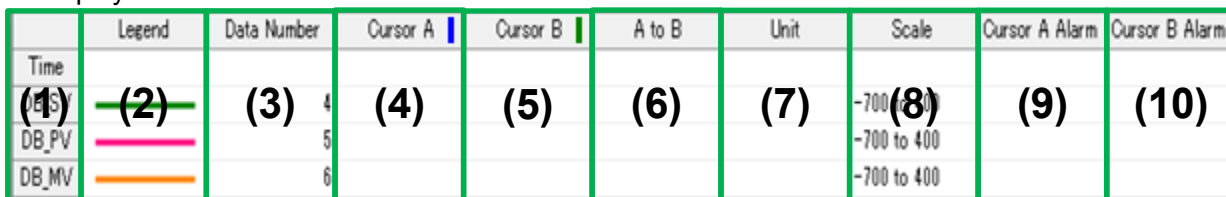
### < Name of numeric value data parts >

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.
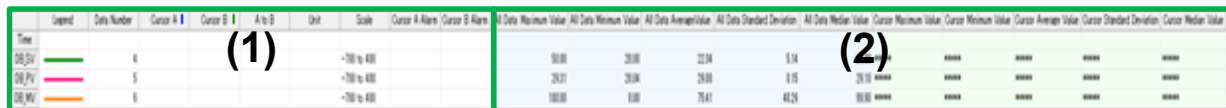


| No. | Name | Description |
|---|---|---|
| (1) | Basic Data, Cursor AB Data Display | **\*Refer to <Name of basic data, cursor AB data> below.**<br>\*Double click on the display displays (c)-5. Numeric Value Data/Bar Graph Setting Dialog. |
| (2) | All Data, Data between Cursor Display | **\*Refer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

| (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.

| All Data Maximum Value | All Data Minimum Value | All Data AverageValue | All Data Standard Deviation | All Data Median Value | Cursor Maximum Value | Cursor Minimum Value | Cursor Average Value | Cursor Standard Deviation | Cursor Median Value |
|---|---|---|---|---|---|---|---|---|---|
| **(1)** | **(2)** | **(3)** | **(4)** | **(5)** | **(6)** | **(7)** | **(8)** | **(9)** | **(10)** |
| 50.00 | 20.00 | 22.34 | 5.14 | 20.00 | ***** | ***** | ***** | ***** | ***** |
| 29.31 | 28.84 | 29.08 | 0.15 | 29.10 | ***** | ***** | ***** | ***** | ***** |
| 100.00 | 0.00 | 75.41 | 40.29 | 99.90 | ***** | ***** | ***** | ***** | ***** |

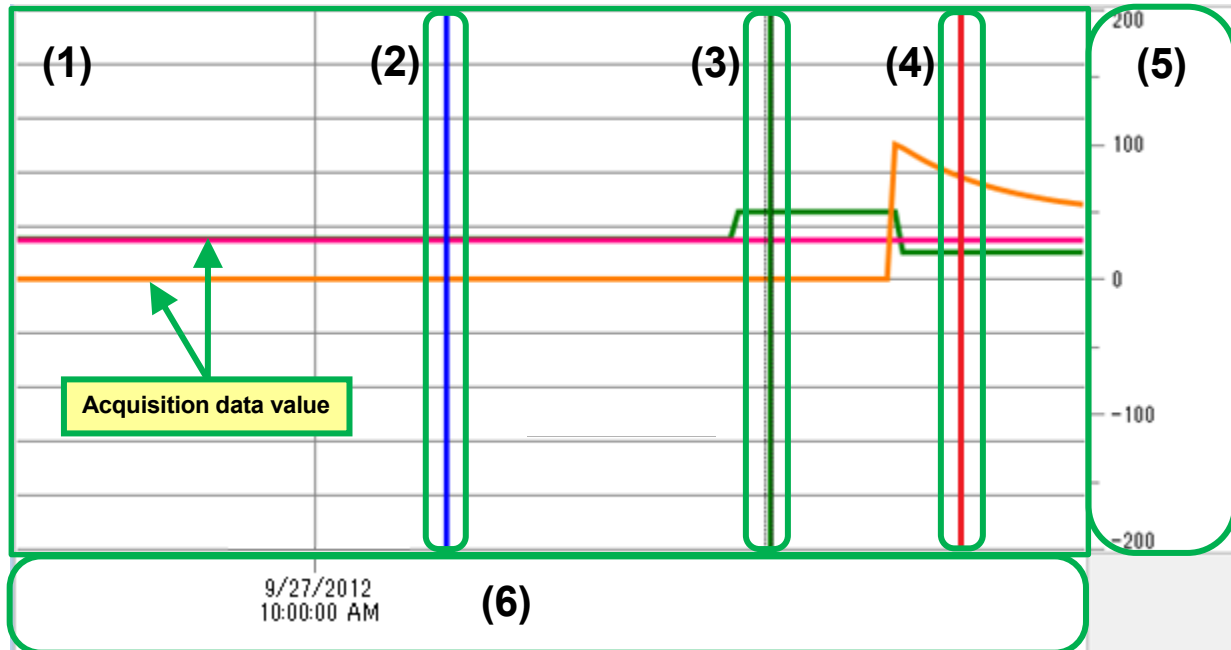| No. | Name | Description |
|---|---|---|
| (1) | All Data Maximum Value | Displays maximum value within all data values for each data value. |
| (2) | All Data Minimum Value | Displays minimum value within all data values for each data value. |
| (3) | All Data, Average Value | Displays average value 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.



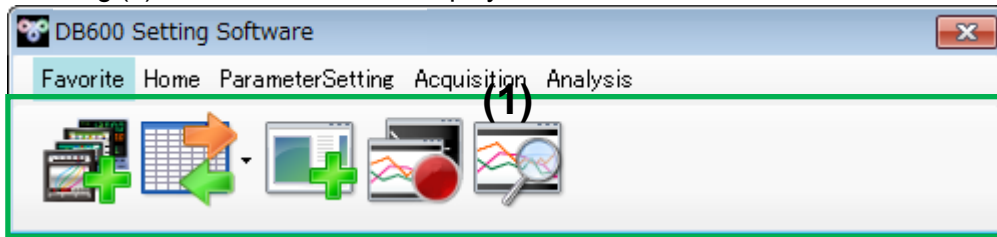| No. | Name | Description | Reference |
|-----|------|-------------|-----------|
| (1) | Graph Area | Illustrates analysis data value as graph and displays graph etc.<br>*Border line, A cursor and B cursor which conform reference scale are displayed.<br>*Right clicking on the graph area displays Add message of (5) Message. | - |
| (2) | Cursor A | Clicking on the mouse on the (1) Graph Area displays A cursor.<br>*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<br>*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.<br>*List cursor disappears when data list display is closed. | - |

| (5) | Scale Plate Area | Displays border line reference scale of (1) Graph Area.<br>*Editing scale plate upper limit/lower limit etc. setting is available at (c)-4. Scale Plate Setting Dialog.<br>*If multiple scale plates are displayed, mouse click on the desired scale plate to set border line reference scale.<br>*Attention is required for each data value reference scale since it is the setting contents of (c)-2. Data Setting Dialog.<br>*Specify the range by dragging with mouse magnifies the area. | - |
|---|---|---|---|
| (6) | Time Axis Area | Displays time axis of (1) Graph Area.<br>*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.
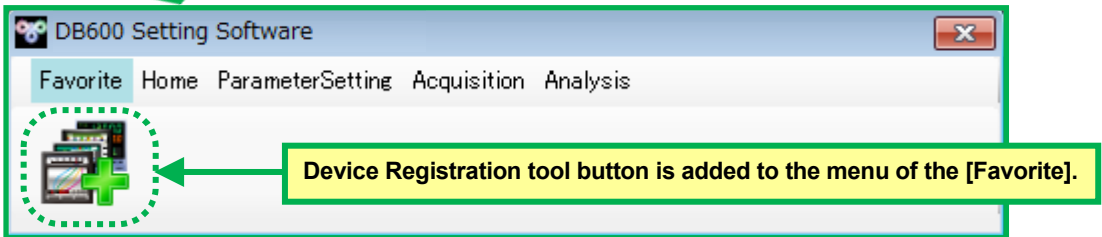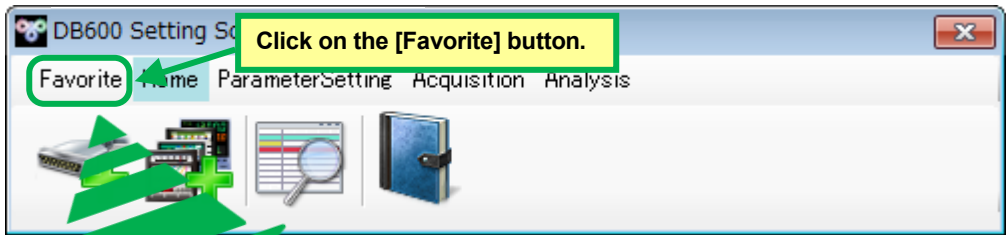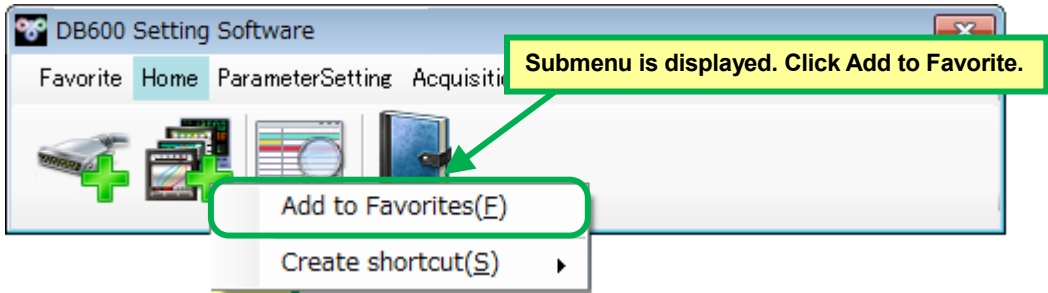
**< Name of favorite parts at application launcher >**

Processing (1) Favorite Tool Button Display.



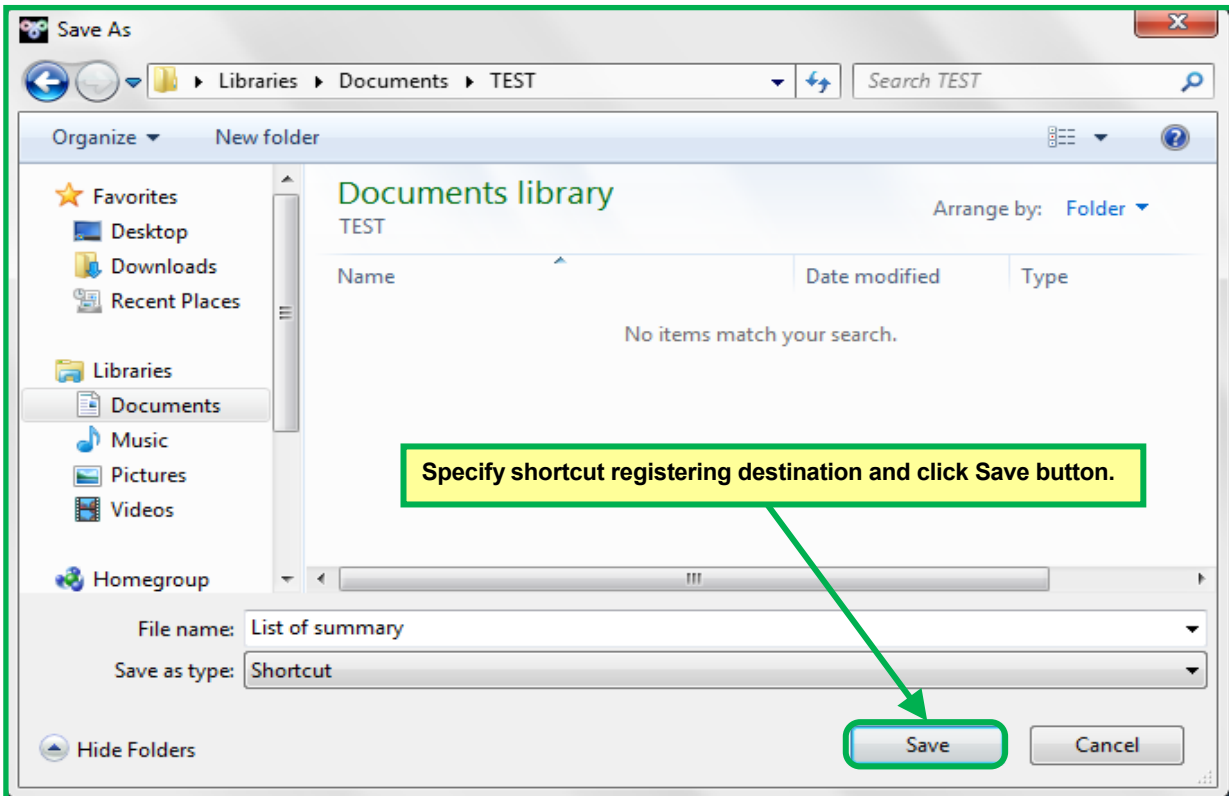| No. | Name | Description |
|-----|------|-------------|
| (1) | Favorite Tool Button Display | Displays tool button which user added or registered arbitrary.<br>**\*Refer to <Flow of adding favorite>.** |

**< Flow of adding favorite >**

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



Right click on desired tool button to add to the favorite.



Submenu is displayed. Click Add to Favorite.

Add to Favorites(F)

Create shortcut(S)



Click on the [Favorite] button.



Device Registration tool button is added to the menu of the [Favorite].
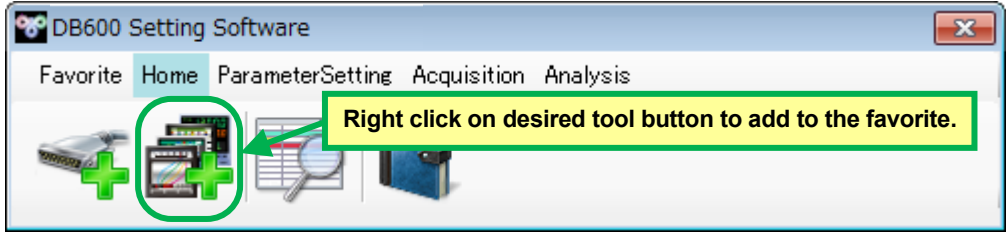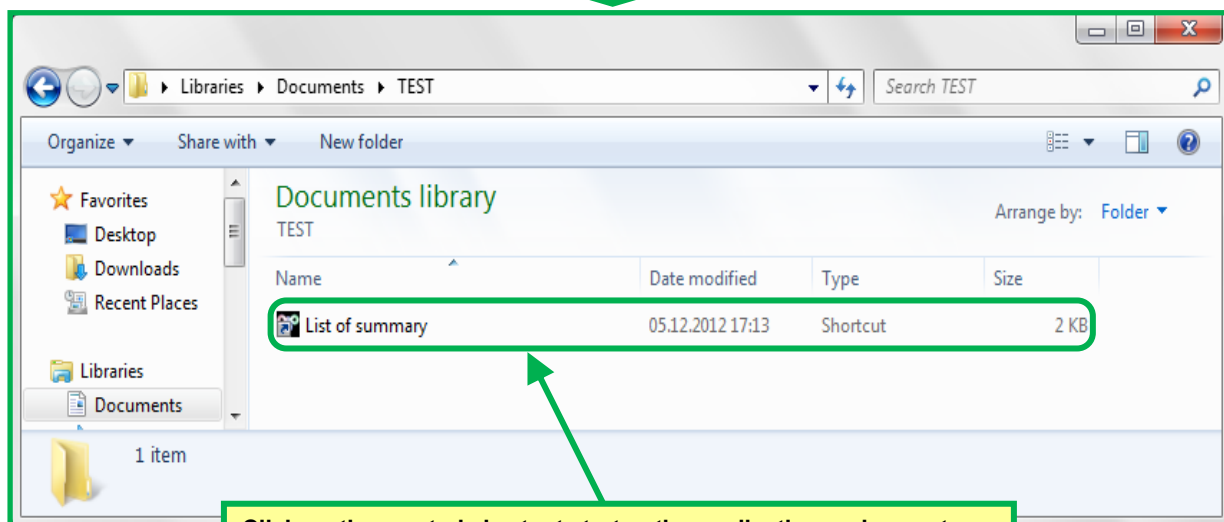
## < Flow of creating shortcut >

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.**

**DB600 Setting Software**

Favorite  Home  ParameterSetting  Acquisition  Analysis

**Right click on desired tool button to create the shortcut.**

**DB600 Setting Software**

Favorite  Home  Param

**Submenu is displayed. Click [Create shortcut] → [Specify file name].**

Add to Favorites(F)

Create shortcut(S)  ▶  Desktop(D)

Specify file name(A)...

**Save As**

◀ Libraries ▶ Documents ▶ TEST    ▾ ✦  Search TEST

Organize ▾    New folder

★ Favorites
  🖥 Desktop
  ⬇ Downloads
  📋 Recent Places

📚 Libraries
  📄 Documents
  🎵 Music
  🖼 Pictures
  🎬 Videos

👥 Homegroup

**Documents library**
TEST

Arrange by:  Folder ▾

Name    Date modified    Type

No items match your search.

**Specify shortcut registering destination and click Save button.**

File name:  List of summary

Save as type:  Shortcut

Hide Folders    Save    Cancel

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.

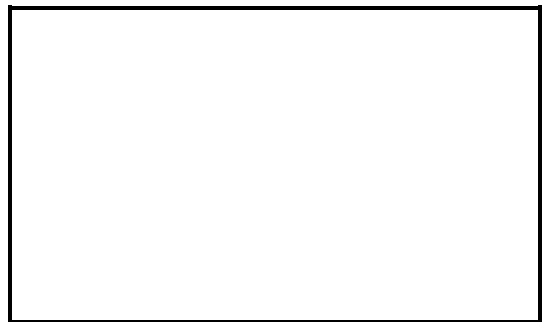| No. | Symptom | Cause and Remedy |
|-----|---------|------------------|
| 1 | Installation does not complete correctly. | Confirm that there is enough free hard disk space (refer to the section 2-1). |
| 2 | The software does not startup. | The installation might not be completed correctly. Uninstall 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.<br>*If the software exits due to an unexpected error, unsaved data would not be backed up. Please set it again. |

# CHINO