

CHINO

DP-G Setting Editor Software

Instruction Manual

Thank you for using [DP-G Setting Editor Software]. Understand the software properly and read this instruction manual beforehand in order to avoid any troubles.

- For the persons doing instrumentation, installation and sales -
Be sure to handover this instruction manual to the persons using the software.

- For the users of the software -
This instruction manual is necessary for maintenance. Preserve it until you scrap the software and also be sure to write down the setting contents and store it.

CHINO

Introduction

Thank you for using DP-G Setting Editor Software.

This software provides, editing of pattern and control settings, writing to a CF card, and printing of the report.

This instruction manual describes how to prepare hardware, program installation, and operation of the software.

Although described operation procedure and screen images are of Windows 7's, operation procedure is same for Windows 10. Refer to Windows operation manual for the operation of Windows.

Make sure to read this instruction manual in advance in order to understand this software thoroughly and to prevent troubles from occurring.

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1 Before Use

1-1 Checking Before Use

After opening the package of this software, be sure to check the following before use. If you have found any problems, please contact your dealer where you purchased the product or the nearest sales office of CHINO.

Request

1. Be careful not to drop the software when taking it out of the package.
2. If not used for a long time, keep the software in a CD case after installation and store it at room temperature, away from dust.
3. Keep this instruction manual carefully until the software is discarded.
4. Follow the local regulations for separating and disposal of the waste and cooperate to recycle.

Cautions for handling the CD-ROM

- Eject the CD-ROM media from the drive when it is not used.
- Be sure to keep the disk in a CD case.
- Keep the disk away from direct sunlight, high temperature and humidity.
- Keep the signal side clean from fingerprints, dirt, dust, scratches and water (and oil) drops.
- Use a clean soft cloth to clean dust or dirt such as fingerprints on the signal side. (Cleaning with paint thinner, benzine and any organic solvents is prohibited.)
- Degradation of CD-ROM caused by physical and external factor is unavoidable.

2 System Requirement

Use the software in the environment described below.

Required device	Contents and Conditions	
PC	OS	Windows 7 Japanese, Windows 10 Japanese
	CPU	Which meets system requirement of OS
	Memory	Which meets system requirement of OS
	Disc drive	Which meets system requirement of OS
	USB port	1 port or more
Required library	.Net Framework4.5 FlexGrid 5.0 manufactured by GrapeCity inc. SpreadsheetGear manufactured by XLsoft Corporation	
Display	Display available to display 1920x1080	
Printer	Printer available to print out report	
Mouse	Which supports Windows	
Keyboard	Which supports Windows	
Memory card	CF card	
Memory card reader writer	Card reader writer available to read and write to CF card	
Target instrument	DP1000G, DP2000G or DP3000G manufactured by CHINO	

Note

Note that required system and hard disc free space may depend on the system environment.

3 How to Setup

3-1 Installation

3-1-1 New Installation

Install this software from install medium to a hard disc before use.

Follow the procedures below for installation.

<Procedure>

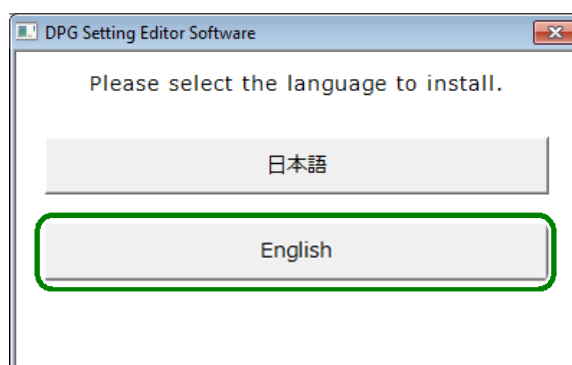
(1) Insert the CD-ROM

Start Windows, and then insert the CD-ROM drive. Start "DPGEditor.hta" in the CD-ROM.

(2) Language selection

Language selection dialog of the installer appears.

Click [English] button.

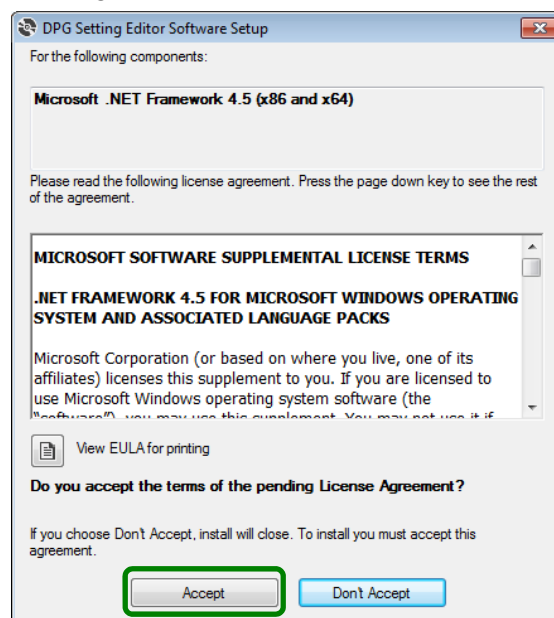


(3) Accepting license agreement (If it is already installed, go to (4))

Microsoft software supplemental license terms (.NET Framework 4.5) appears, read it thoroughly. If you agree to the contents, click [Accept] button. Installation of .NET Framework 4.5 is started (this process may take a few minutes).

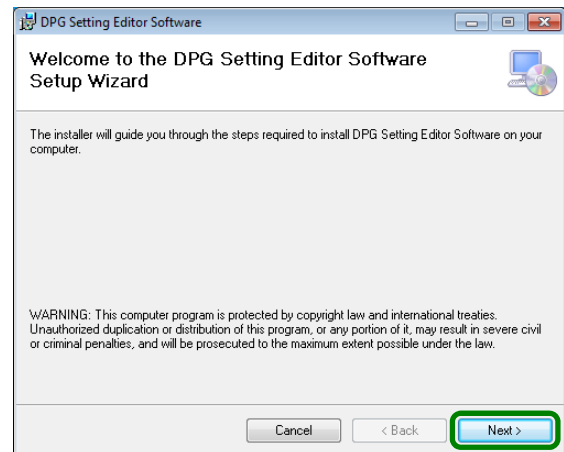
If [Don't Accept] button clicked, this software is not able to be used.

*If the .NET Framework 4.5 is already installed to the PC, this dialog may not be displayed.



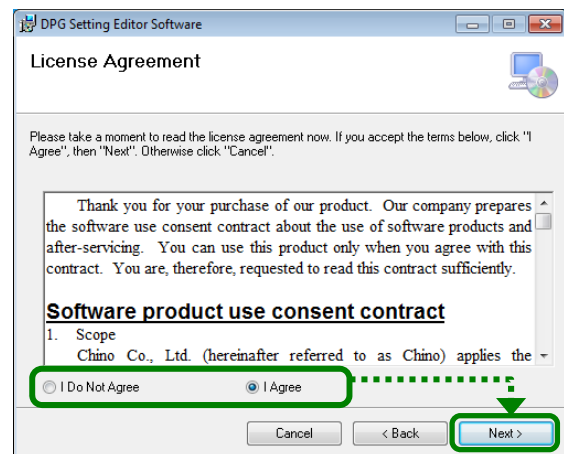
(4) Click [Next] button

"DP-G Setting Editor Software Setup Wizard" dialog is started. Click [Next] button.



(5) Consent to DP-G Setting Editor Software license agreement.

After reading license agreement, select [I Agree] and click [Next] button.

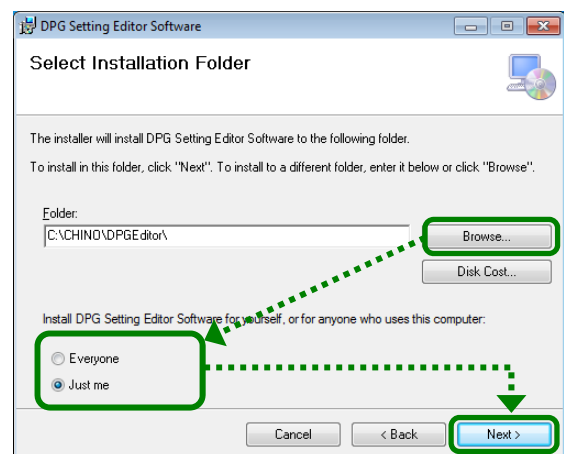


(6) Select install folder.

Select a folder to install.

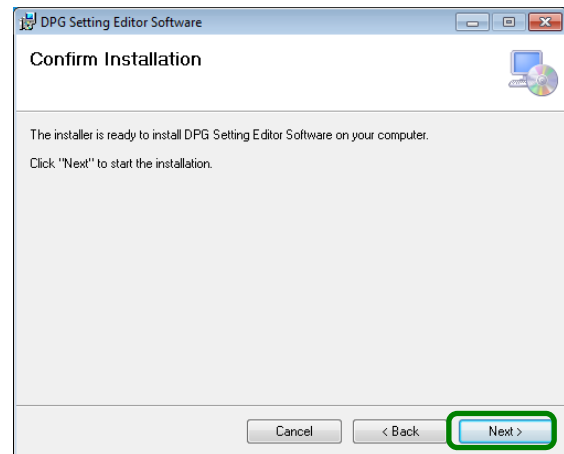
Normally, click [Next] button as it is.

If you want to specify the installation folder, click [Browse] button to select user designation.

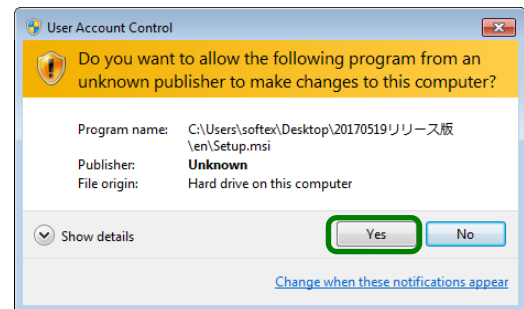


(7) Click [Next] button

Click [Next] button on [Confirm Installation] dialog.

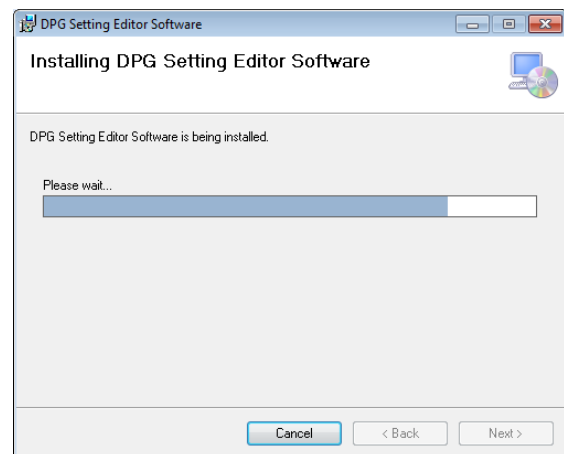


Click [Yes] if [User Account Control] dialog is displayed.



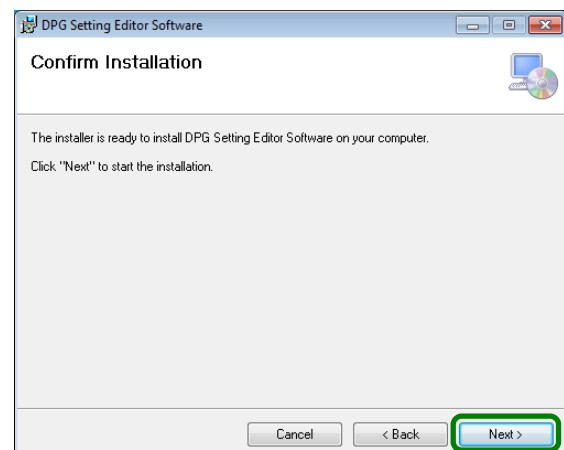
(8) Start installation

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



(9) Installation complete

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



3-1-2 Installation at Upgrade

This software may be upgraded to add newly supported functions or to fix issues.
Follow the procedures below for version up.

<Procedure>

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

Note

- Uninstall from Windows Programs and Features, which is described in "3-2 Uninstall".
You can not complete uninstalling by simply deleting the files (moving it to the "Recycle Bin").
- Do not delete the folder for uninstalling for version upgrade.

3-2 Uninstall

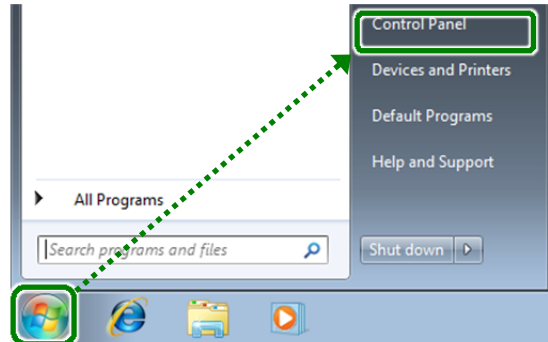
This section describes how to delete the software from the hard disk.

Before starting uninstall, exit from all the programs related to this software.

<Procedure>

(1) Open control panel

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



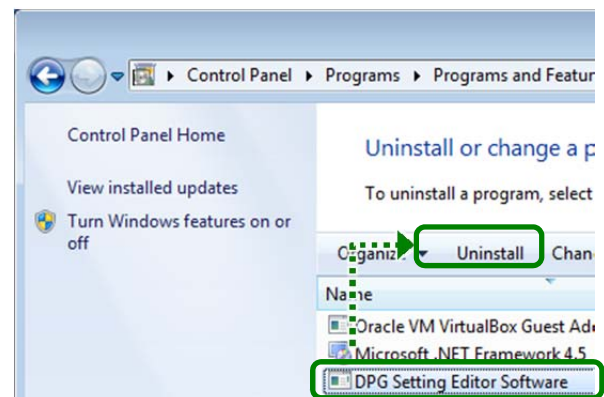
(2) Start [Uninstall a Program]

When Control Panel appears, click [Uninstall a program].



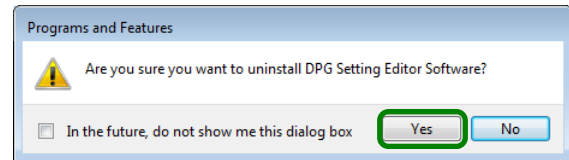
(3) Delete [DP-G Setting Editor Software]

Select [DP-G Setting Editor Software] from a list displayed in Uninstall or change a program, then click [Uninstall].

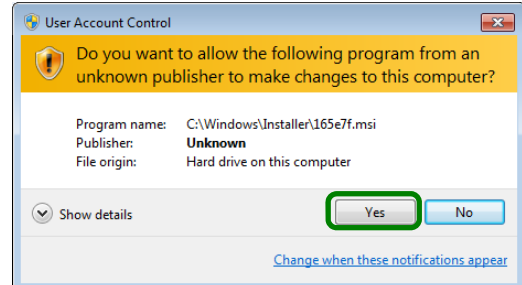


(4) Click [Yes]

Click [Yes] on [Programs and features] dialog.

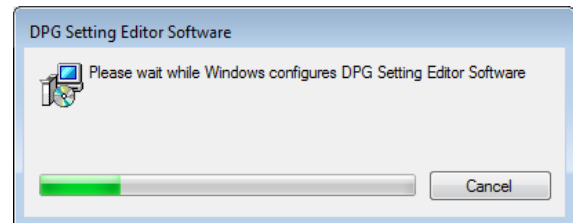


If [User Account Control] dialog is displayed, click [Yes] button.



(5) Uninstall start

Uninstall is started. Dialog indicating progress of the uninstall appears. Wait until the uninstall is completed. When the uninstall is completed, the dialog shown right is closed automatically.



Note

- You can not complete uninstalling by simply deleting the files (moving it to the "Recycle Bin").
- Do not delete the folder for uninstalling for version upgrade.

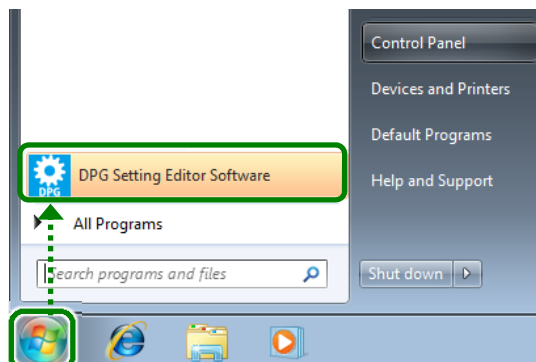
4 Startup and Exit of the Software

4-1 Startup

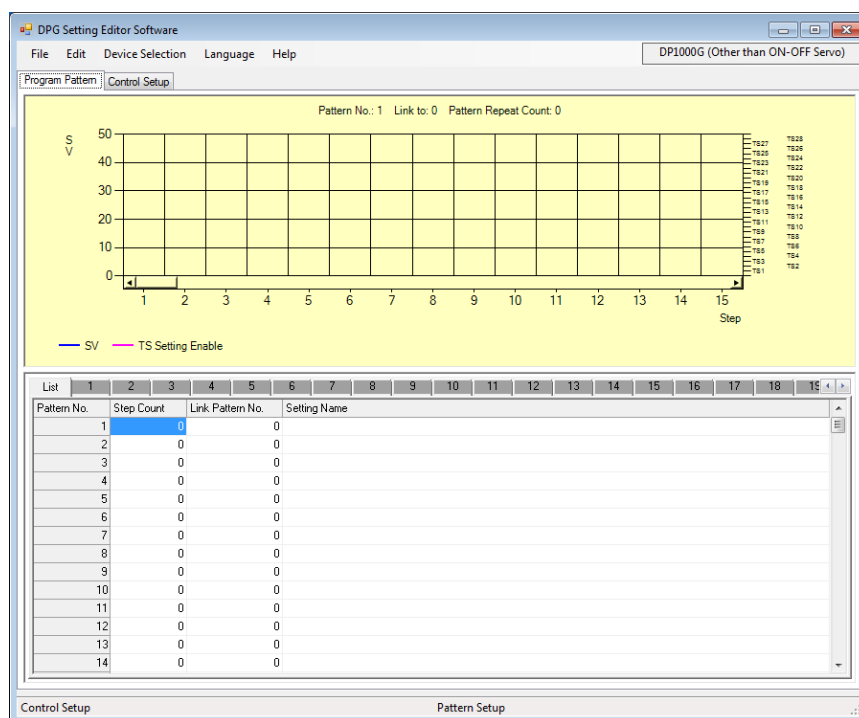
This section describes how to startup the software.

<Procedure>

(1) Click [Start]→[DP-G Setting editor software].



(2) DP-G Setting Editor Software starts



Note

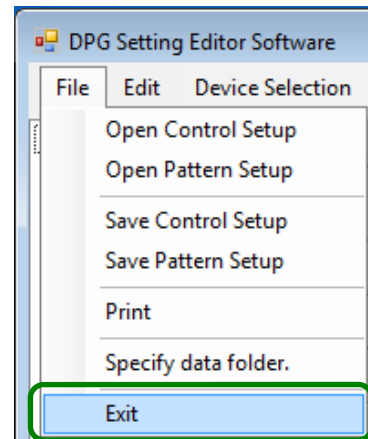
- Do not perform Windows Update while this software is running.
- Depending on the PC, warning message concerning security may appear while starting up the software. In this case, click [Unblock].

4-2 Exit

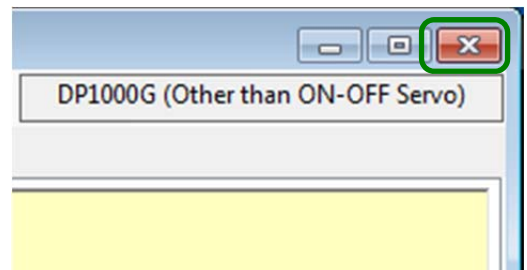
This section describes how to exit the software.

<Procedure>

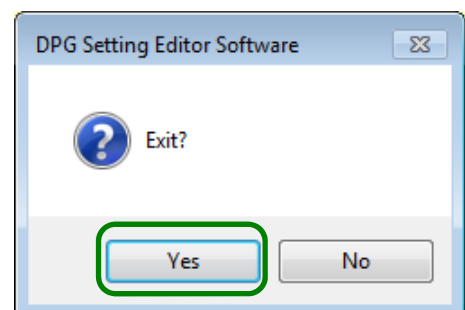
(1) Click the order of [File]→[Exit].



Or, click [×] button on the right side of the title bar.



(2) Click [Yes] button to close the dialog.



5 How to Operate

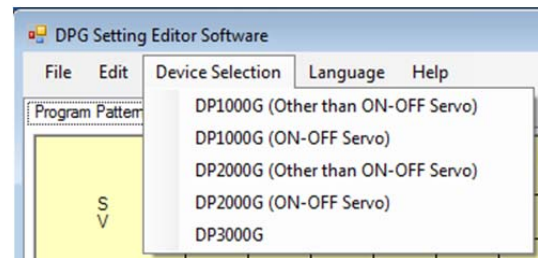
5-1 Operation Flow

<Procedure>

(1) Start this software (refer to the section 4-1)

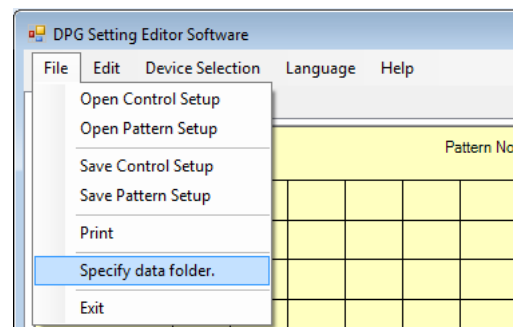
(2) Device selection (refer to the section 5-2)

Select a device of DP-G series to set and edit data.



(3) Specify a data folder (refer to the section 5-3)

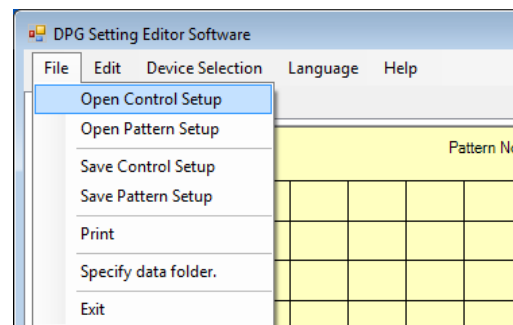
Indicate a folder for data reading and data saving.



(4) Read a existing file (refer to the section 5-7)

Read existing control setup file or pattern setup file from a data folder or a CF card appointed at (3).

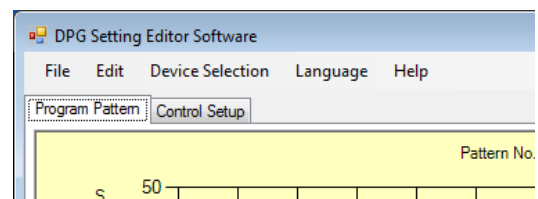
*This procedure is unnecessary for creating a new file.



(5) Setting·Editing the set value (refer to the section 5-4 and 5-5)

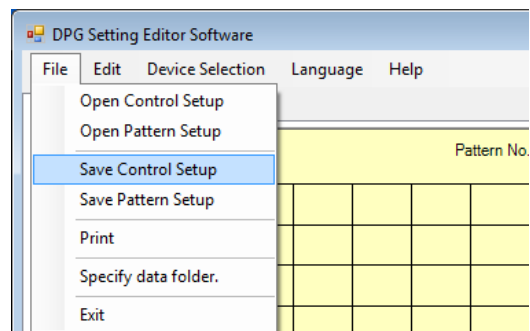
Switch tabs to edit control setup and pattern setup.

*For creating new, perform initial setup (refer to the section 5-5-1) of the pattern to edit pattern.



(6) Save a file (refer to the section 5-6)

Save control setup file and pattern setup file.



(7) Exit the software (refer to the section 4-2)

Note

"Save the file" as necessary when you edit set value and then exit the software.
If you exit the software after editing the file without "saving the file", set editor data is lost.

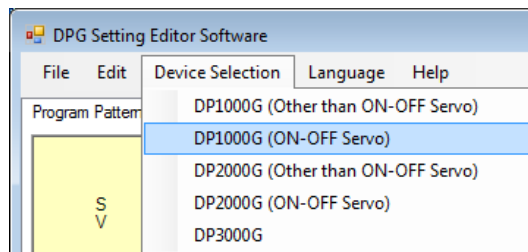
5-2 Device Selection

By device selection, parameters that are available to be edited can be switched according to the device. Only the control setup file corresponding to the device can be read. Check your DP-G series and select device, then start parameter editing.

<Procedure>

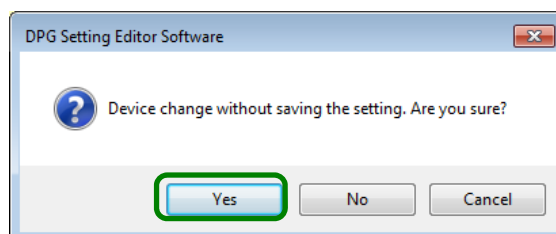
(1) Device selection

Click [Device Selection] on the menu bar to select the type of device to set and edit from the list.



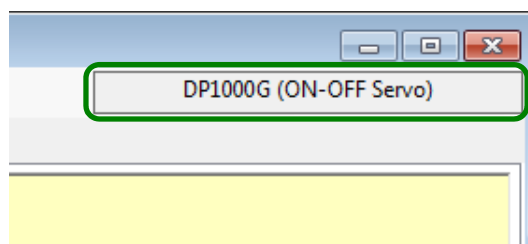
(2) Click [Yes]

Confirmation message is displayed. Click [Yes] button. When device is changed, control setup and program pattern data are lost. To save the setting and then switch the device, click [No] button.



(3) Check

Check on the menu bar if device name is changed to that of selected device.



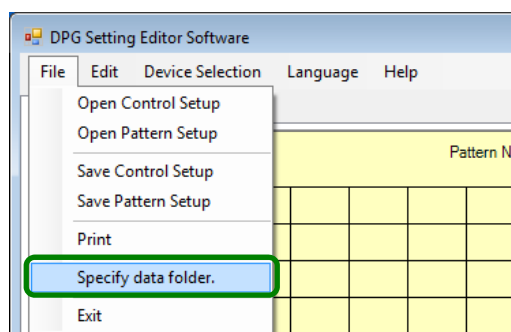
5-3 Specify Data Folder

Specify data folder for saving and reading setup files of control setup parameter and program pattern.

<Procedure>

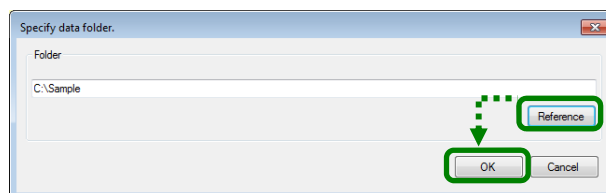
(1) Click [Specify data folder]

Click [File] on the menu bar and then [Specify data folder].



(2) Specify data folder

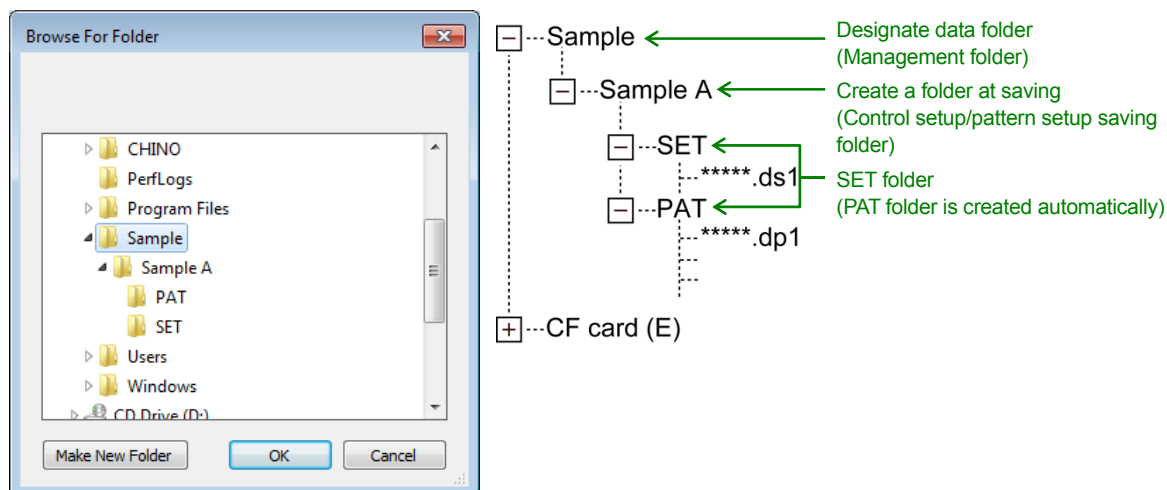
Click [Reference] button and select a folder on Brows For Folder dialog.



Data folder manages the folder that stores control setup and pattern setup.

SET folder and PAT folder are automatically created at saving control setup and pattern setup.

If CF card is recognized, CF card is displayed on file reading and saving dialog automatically.



Note

Control setup and pattern setup can be read or saved only if a folder is designated by [Specify data folder].

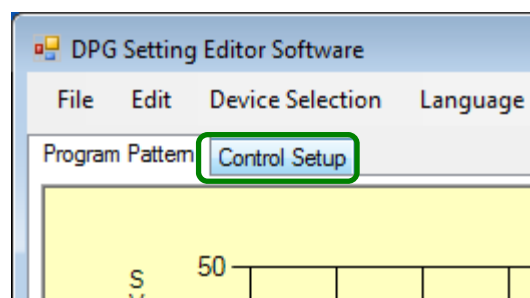
5-4 Setting and Editing Setup Parameter

Control setup parameter can be set and edit.

<Procedure>

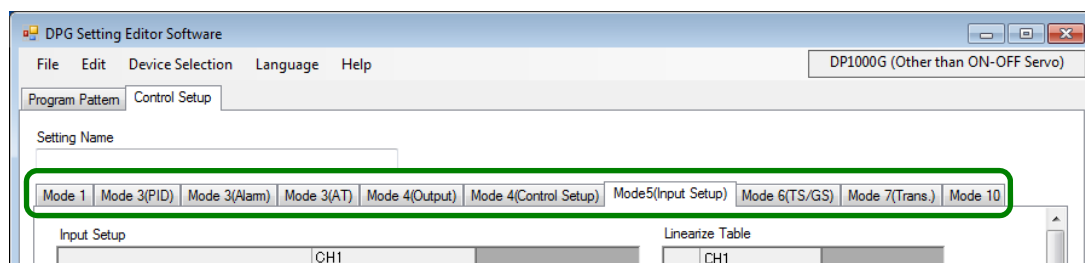
(1) Click [Control Setup] tab

Switch window display by clicking [Control Setup].



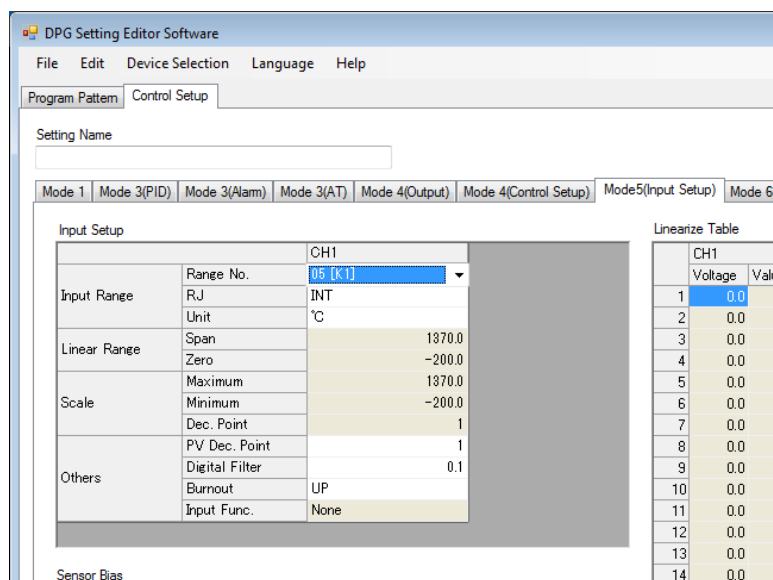
(2) Click [Mode] tab

Click [Mode] tab to switch window display to set and edit.



(3) Setting and editing set value

Select or input parameter set value to perform control setup.



5-5 Setting and Editing Program Pattern

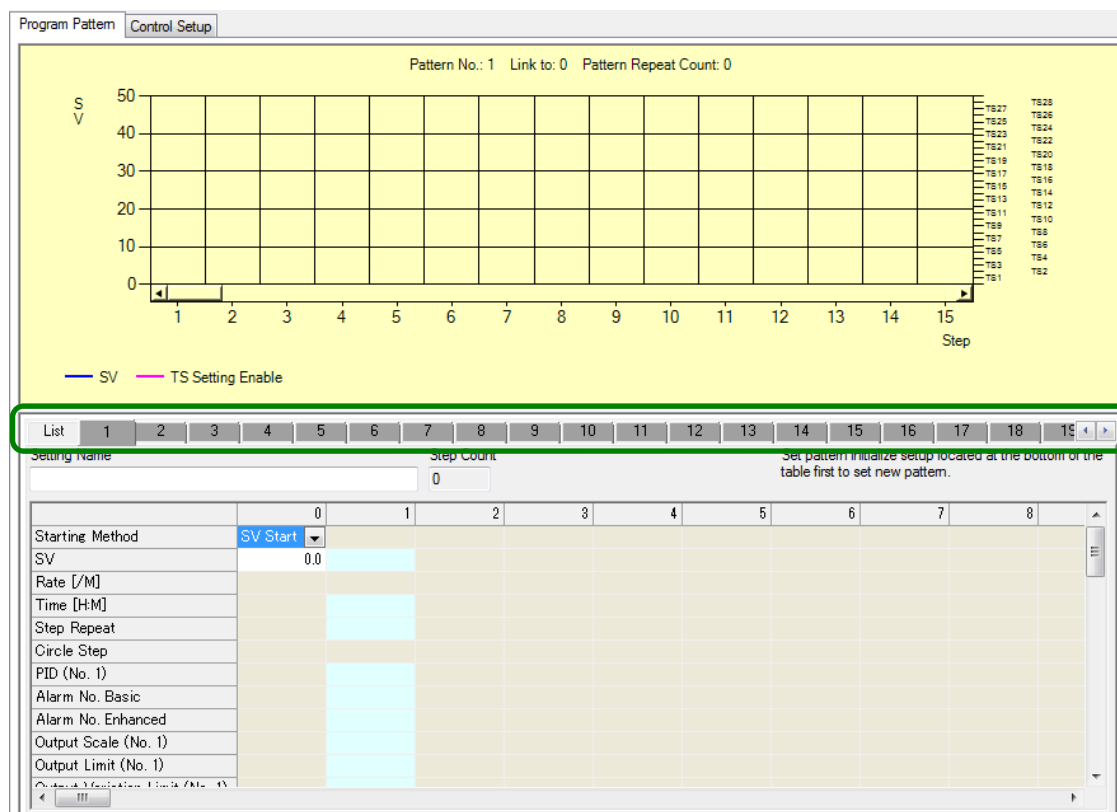
Program pattern can be set and edit.

5-5-1 Initial Setup of Pattern

<Procedure>

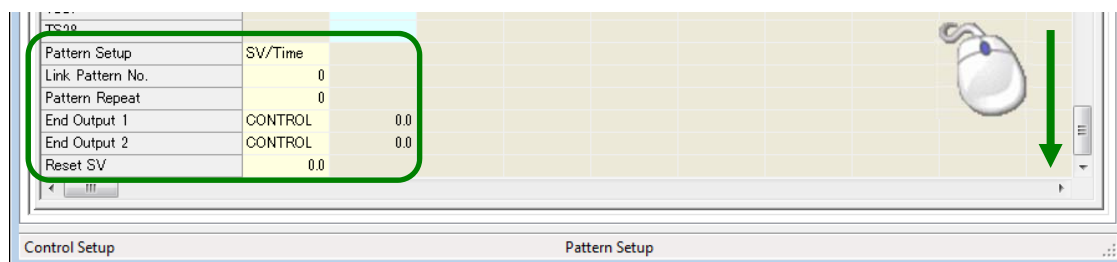
(1) Click [Program Pattern Number] tab

Click tab of program pattern number to set and edit.



(2) Initial setup of pattern

Scroll the window until [Pattern Setup] shows up, then set and edit set value.



5-5-2 Step Setup

<Procedure>

(1) Add step

Select or input parameter set value of light blue cells

	0	1	2
Starting Method	SV Start		
SV	0.0		
Rate [/M]			
Time [H:M]			
Step Repeat			
Circle Step			
PID (No. 1)			
Alarm No. Basic			
Alarm No. Enhanced			
Output Scale (No. 1)			
Output Limit (No. 1)			

(2) Input set value

Column of input cell changes color to white and step is added. Set and edit parameter set value of white cells.

	0	1	2
Starting Method	SV Start		
SV	0.0	10.0	
Rate [/M]			
Time [H:M]	0:00		
Step Repeat	-		
Circle Step		0.00	
PID (No. 1)		1	
Alarm No. Basic		1	
Alarm No. Enhanced		1	
Output Scale (No. 1)		1	
Output Limit (No. 1)		1	

5-5-3 Insert Step

<Procedure>

(1) Insert step

Click step number to insert step (header of the column) to make it selected status.
Right click on the mouse to display sub menu and click [Insert step].

	0	1	2	3	4
Starting Method	SV Start				
SV	0.0				
Rate [/M]					
Time [H:M]	0:00				
Step Repeat	-				
Circle Step		0.00			
PID (No. 1)		1			
Alarm No. Basic		1			
Alarm No. Enhanced		1			
Output Scale (No. 1)		1			
Output Limit (No. 1)		1			

(2) Check

New step is inserted before the selected step.

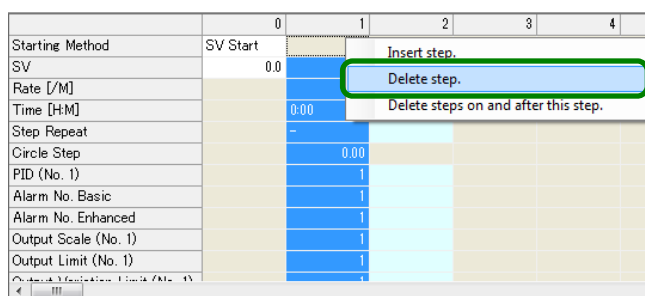
		1	2	3	4
Starting Method	SV Start				
SV	0	0.0	0.0		
Rate [/M]					
Time [H:M]	0:00	0:00			
Step Repeat	-				
Circle Step		0.00	0.00		
PID (No. 1)		1	1		
Alarm No. Basic		1	1		
Alarm No. Enhanced		1	1		
Output Scale (No. 1)		1	1		
Output Limit (No. 1)		1	1		

5-5-4 Delete Step

<Procedure>

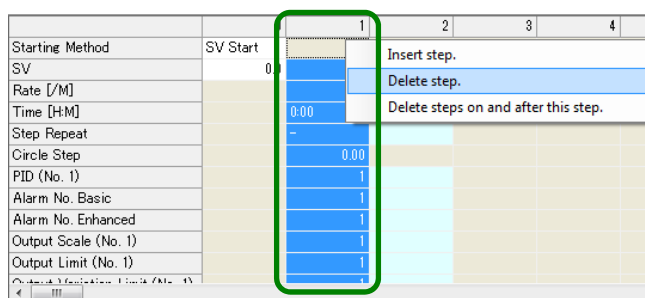
(1) Delete step

Click step number to delete step (header of the column) to make it selected status.
Right click on the mouse to display sub menu and click [Delete step].



(2) Check

Selected step is deleted.



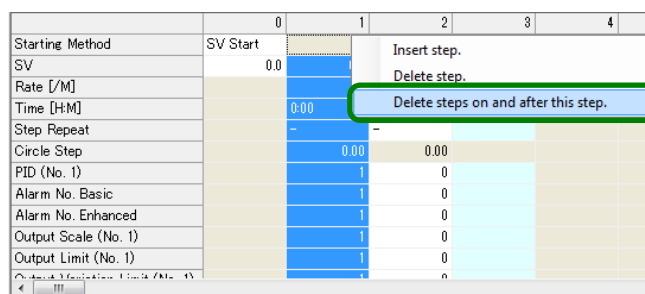
5-5-5 Delete Steps on and after This Step

<Procedure>

(1) Delete steps at once

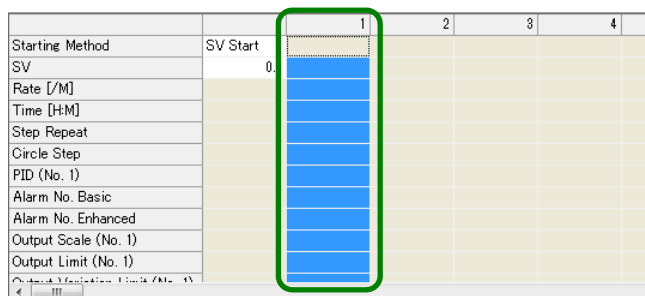
Click step number of first step to delete step (header of the column) to make it selected status.

Right click on the mouse to display sub menu and click [Delete steps on and after this step].



(2) Check

All steps on and after selected step are deleted.

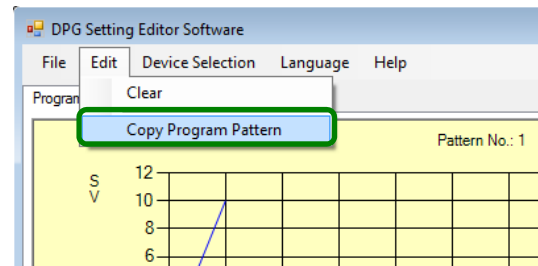


5-5-6 Copy Program Pattern

<Procedure>

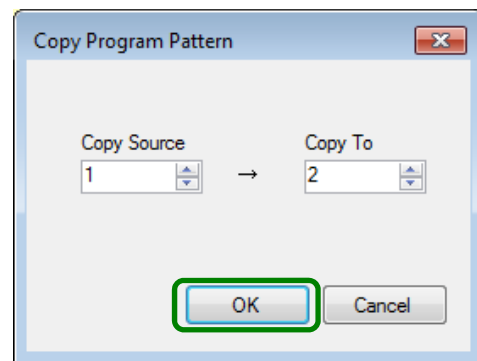
(1) Click [Copy program pattern]

Click [Edit] on the menu bar and then [Copy program patter].



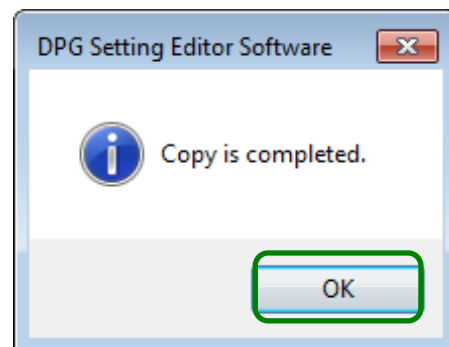
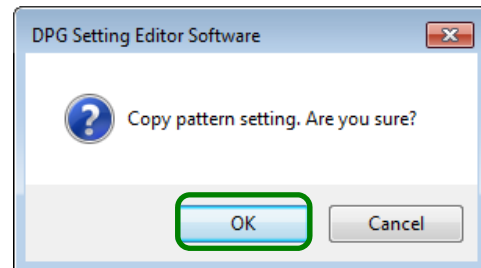
(2) Copy source and Copy to

Input pattern numbers of [Copy Source] and [Copy To] and click [OK] button.



(3) Click [OK]

Confirmation message is displayed. Click [OK] button.



(4) Check

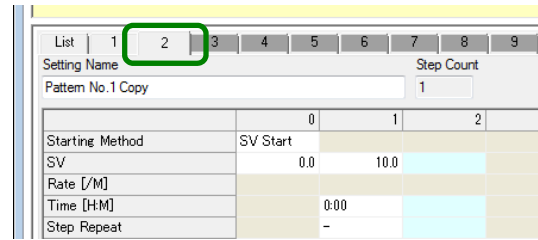
Open program pattern tab of [Copy To] to check program pattern is copied.

5-5-7 Pattern Clear

<Procedure>

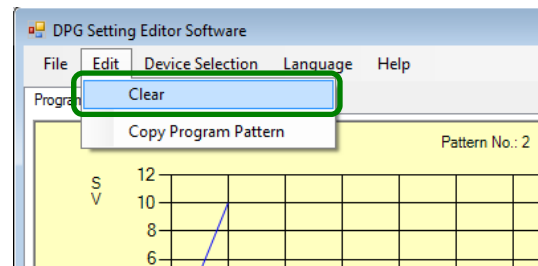
(1) Click Pattern number tab

Click program pattern number tab to clear.



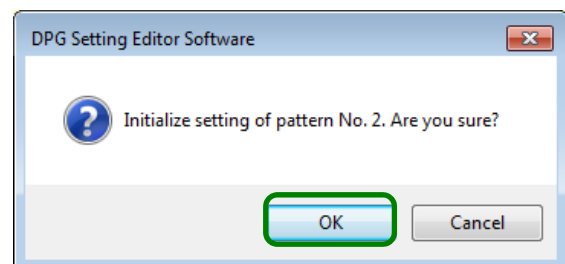
(2) Click [Clear]

Click [Edit] on the menu bar and then [Clear]



(3) Click [OK]

Confirmation message is displayed. Click [OK] button.



5-6 File Saving

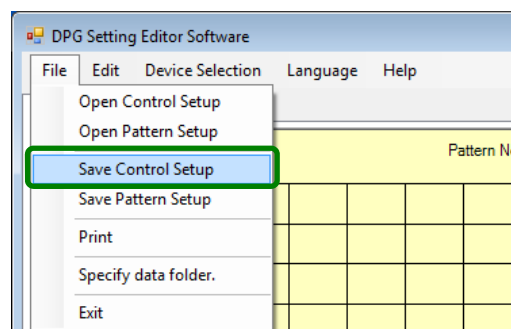
Setup files of control setup parameter and program pattern can be saved.

5-6-1 Save Control Setup

<Procedure>

(1) Click [Save Control Setup]

Click [File] on the menu bar and then [Save Control Setup].

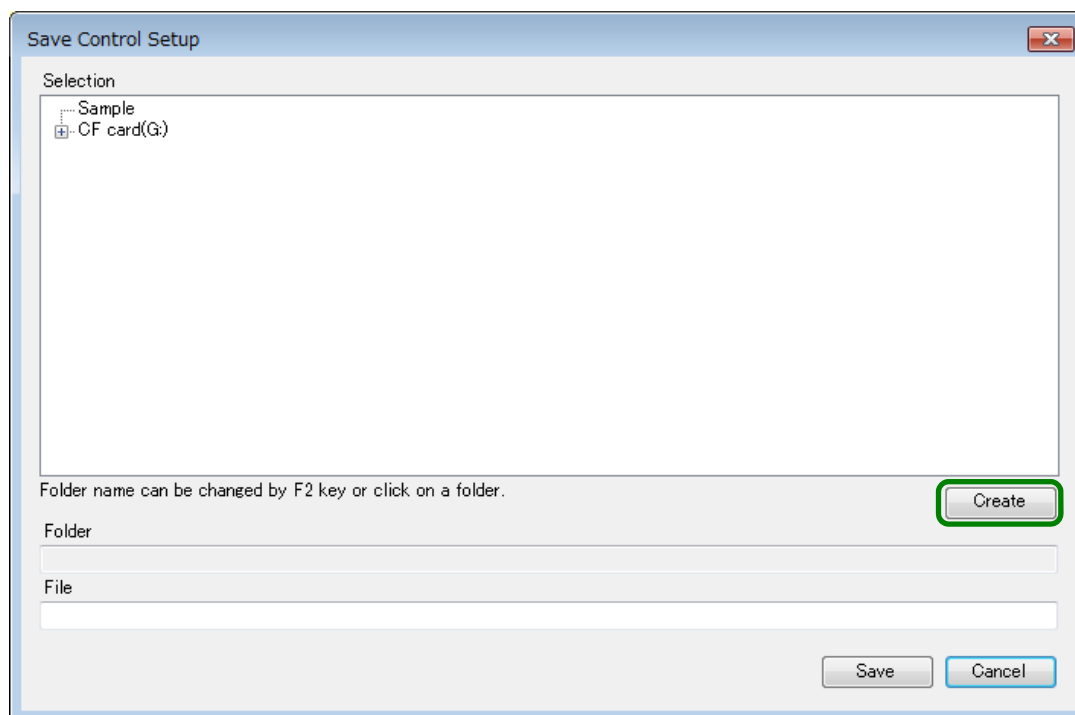


(2) Create new folder

Save Control Setup window is displayed. In the selection, folder designated at [Specify data folder] (refer to the section 5-3) and if CF card is recognized, CF card is displayed.

Click [Create] button.

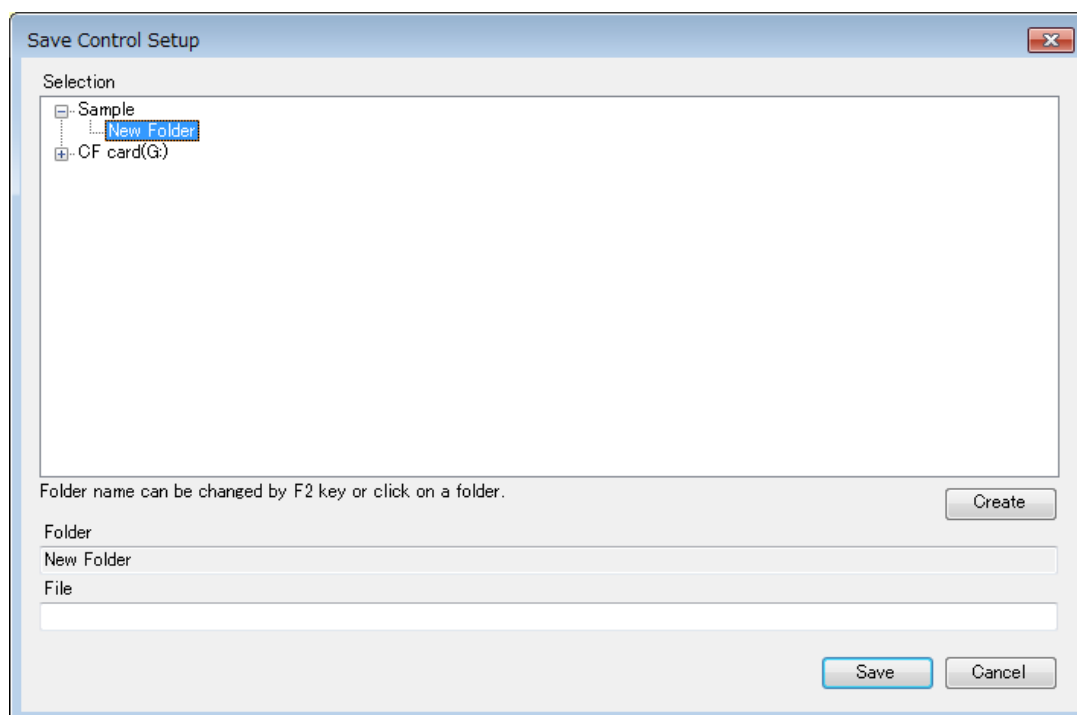
*If you are saving to the existing file, this procedure is unnecessary. Go to (4).



(3) Change folder name

New folder is created under the folder designated at [Specify data folder]. Lower levels are displayed by clicking + on the left side of a folder.

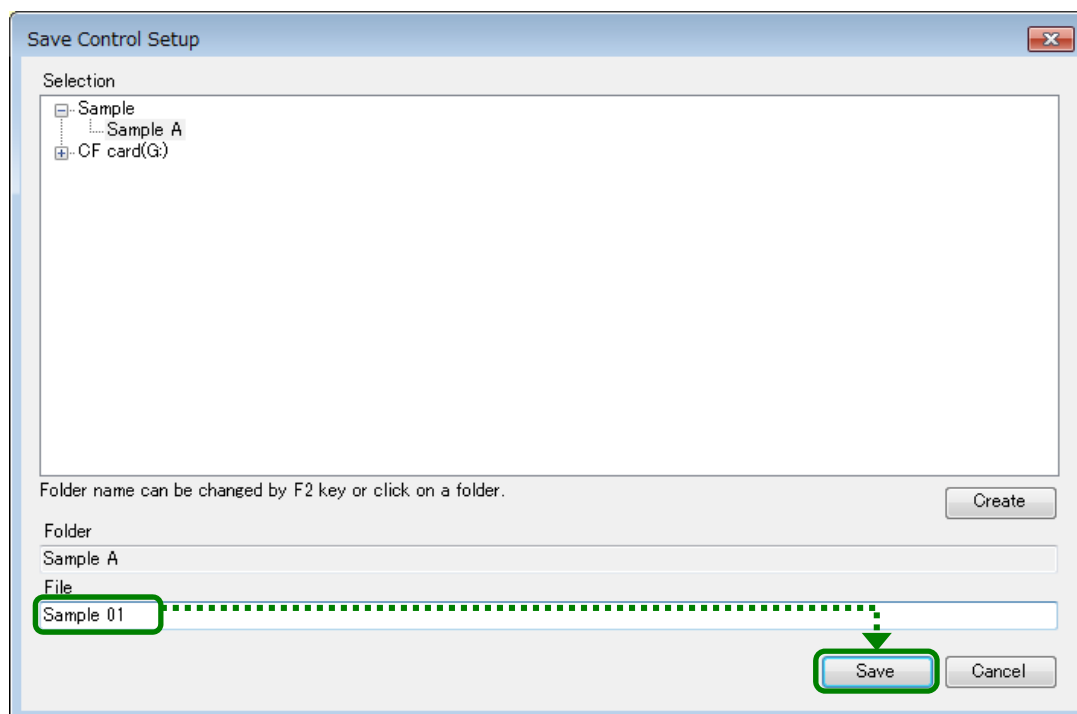
Change folder name by selecting [New Folder] and then press F2 key.



(4) File saving

Select the folder to check if folder name is displayed in the folder row.

Input file name and click [Save] button.

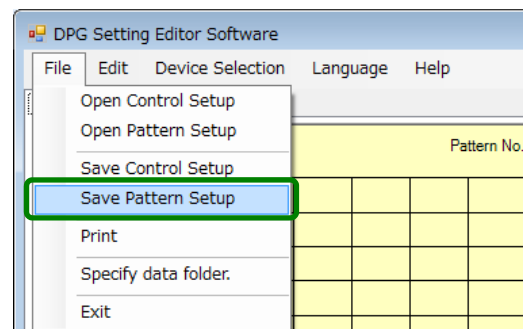


5-6-2 Save Pattern Setup

<Procedure>

(1) Click [Save Pattern Setup]

Click [File] on the menu bar and then [Save Pattern Setup].

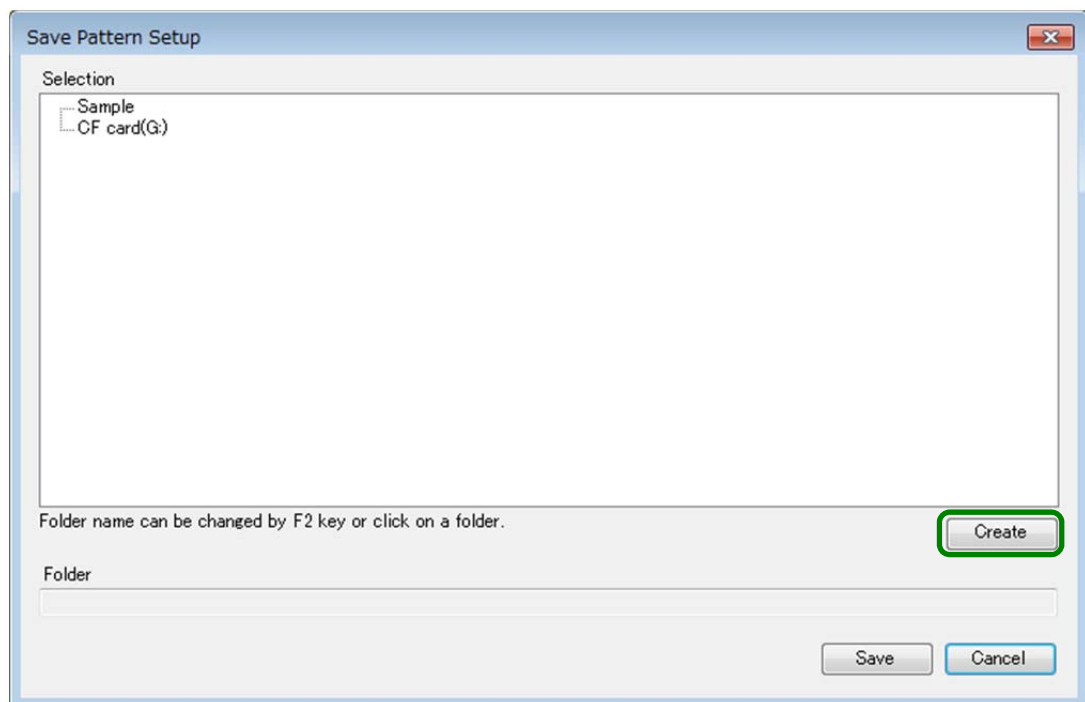


(2) Create new folder

Save Pattern Setup window is displayed. In the selection, folder designated at [Specify data folder] (refer to the section 5-3) and if CF card is recognized, CF card is displayed.

Click [Create] button.

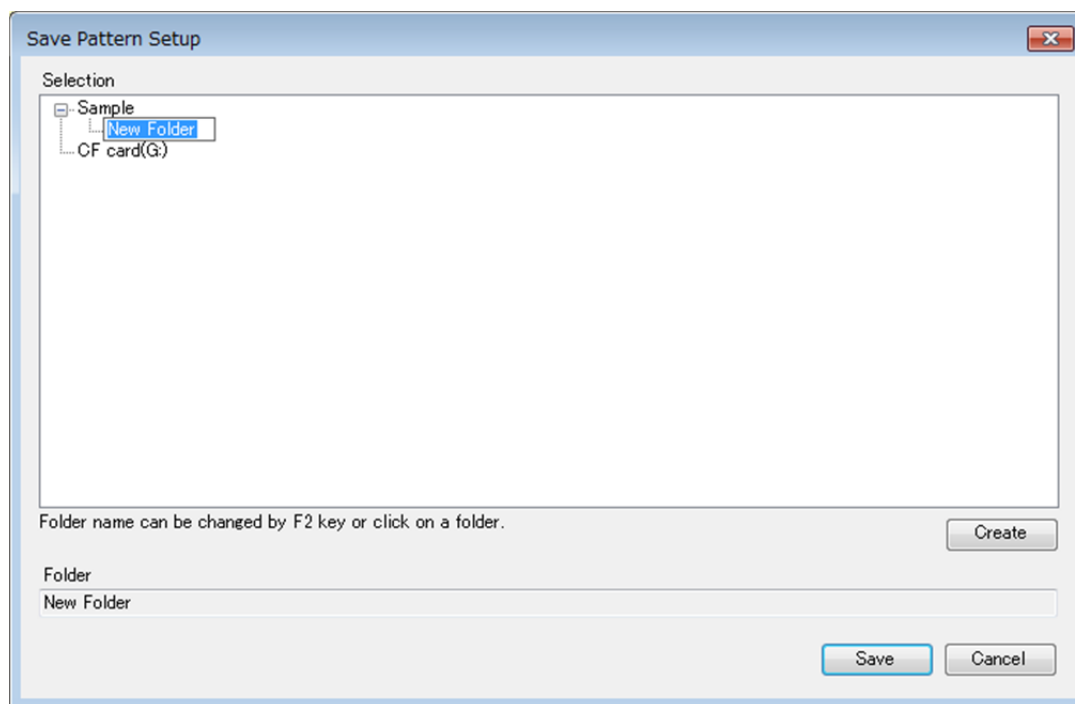
*If you are saving to the existing file, this procedure is unnecessary. Go to (4).



(3) Change folder name

New folder is created under the folder designated at [Specify data folder]. Lower levels are displayed by clicking + on the left side of a folder.

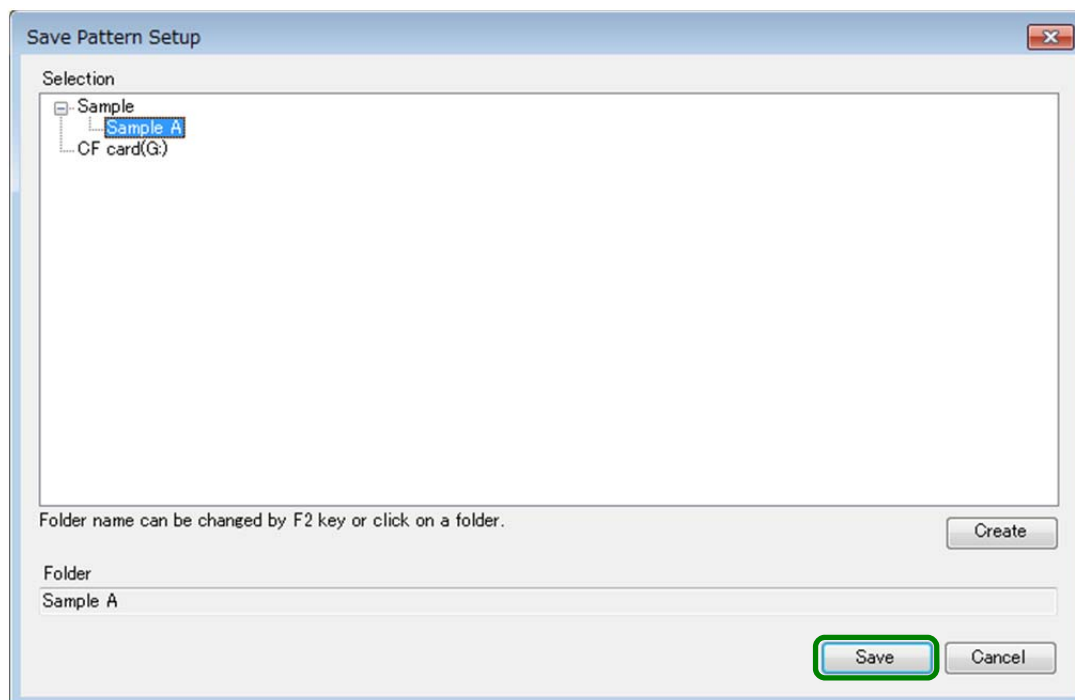
Change folder name by selecting [New Folder] and then press F2 key.



(4) File saving

Select the folder to check if folder name is displayed in the folder row.

Click [Save] button.



Note

File name can not be indicated for parameter data and saved. PAT folder is created automatically and saved. To save in different file, create new folder and save.

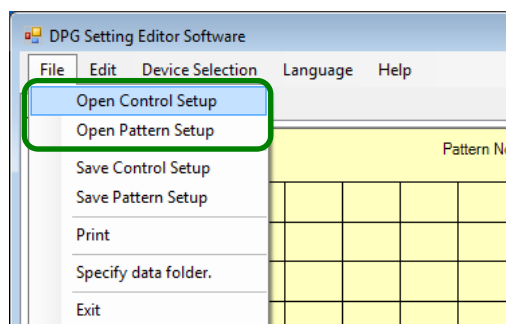
5-7 Read Existing File

Setup files of control setup parameter and program pattern can be read.

<Procedure>

(1) Device selection

Click [File] on the menu bar and then [Open Control Setup] or [Open Pattern Setup].

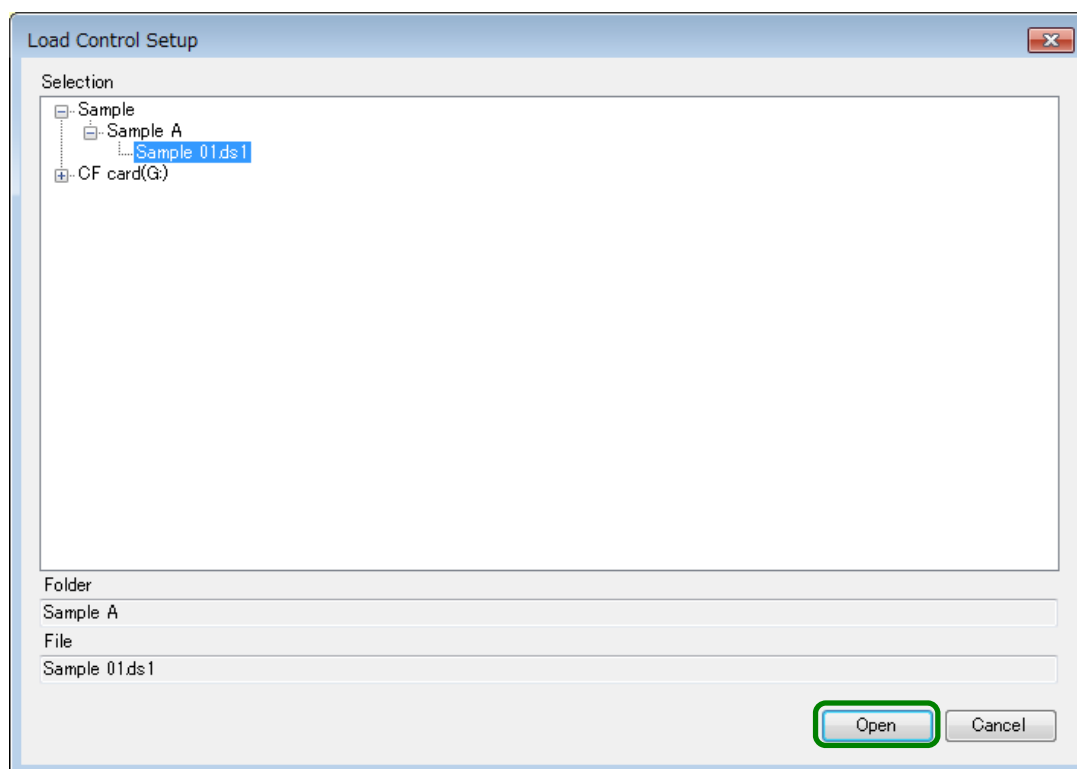


(2) Read setup file

Folder designated at [Specify data folder] and if CF card is recognized, CF card is displayed. Lower levels are displayed by clicking + on the left side of a folder.

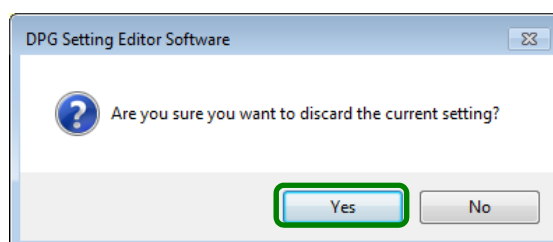
For control setup file, select file name and click [Open] button.

For pattern setup file, select folder name and click [Open] button.



(3) Click [Yes]

Confirmation message is displayed. Click [Yes] button.



5-8 Print Out

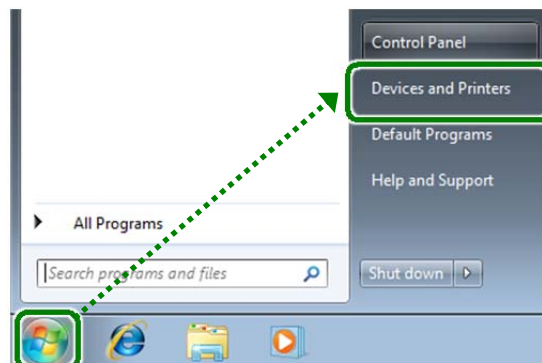
Control setup parameter, pattern list, and program pattern can be printed out or output as Excel file as report.

5-8-1 Set printer to use

<Procedure>

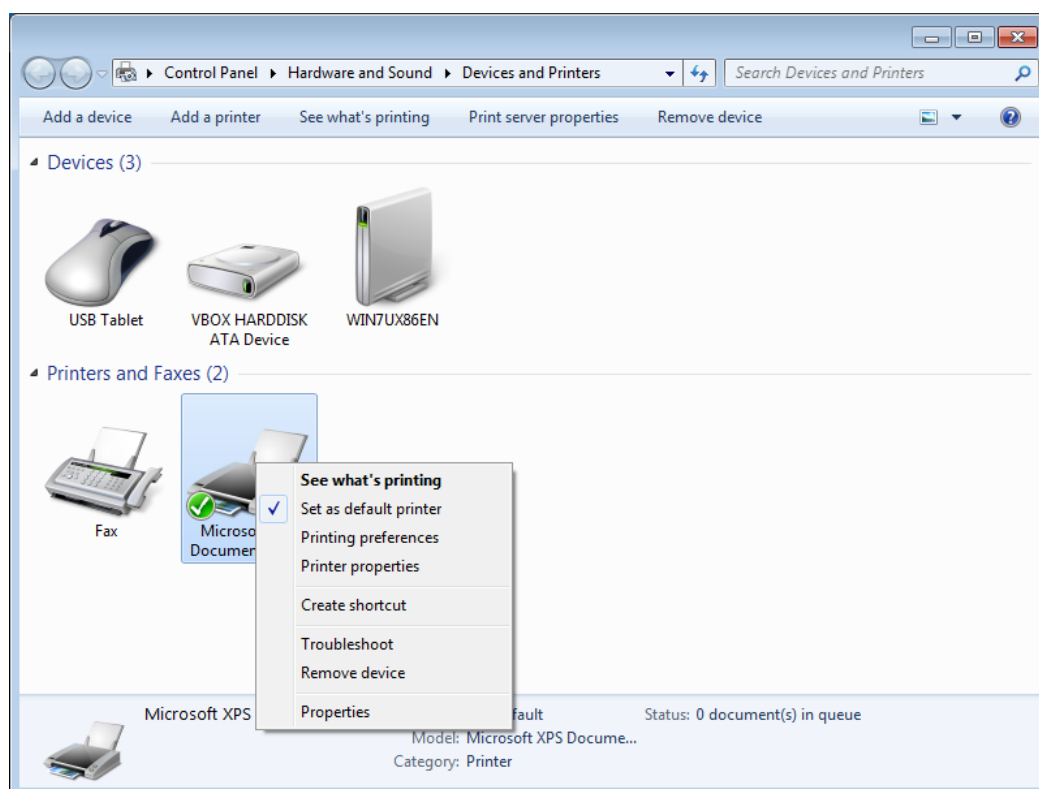
(1) Open Device and Printers

Click [Start]→[Device and Printers].



(2) Set as default printer

Right click on the printer to be used and click and mark check [Set as default printer].

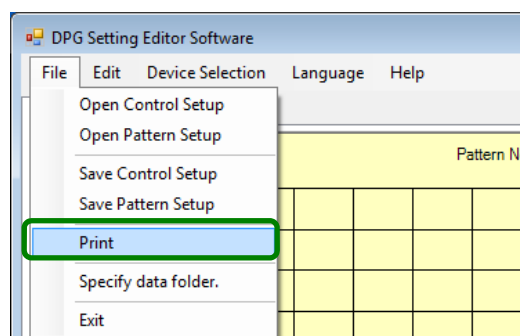


5-8-2 Check Printing Contents

<Procedure>

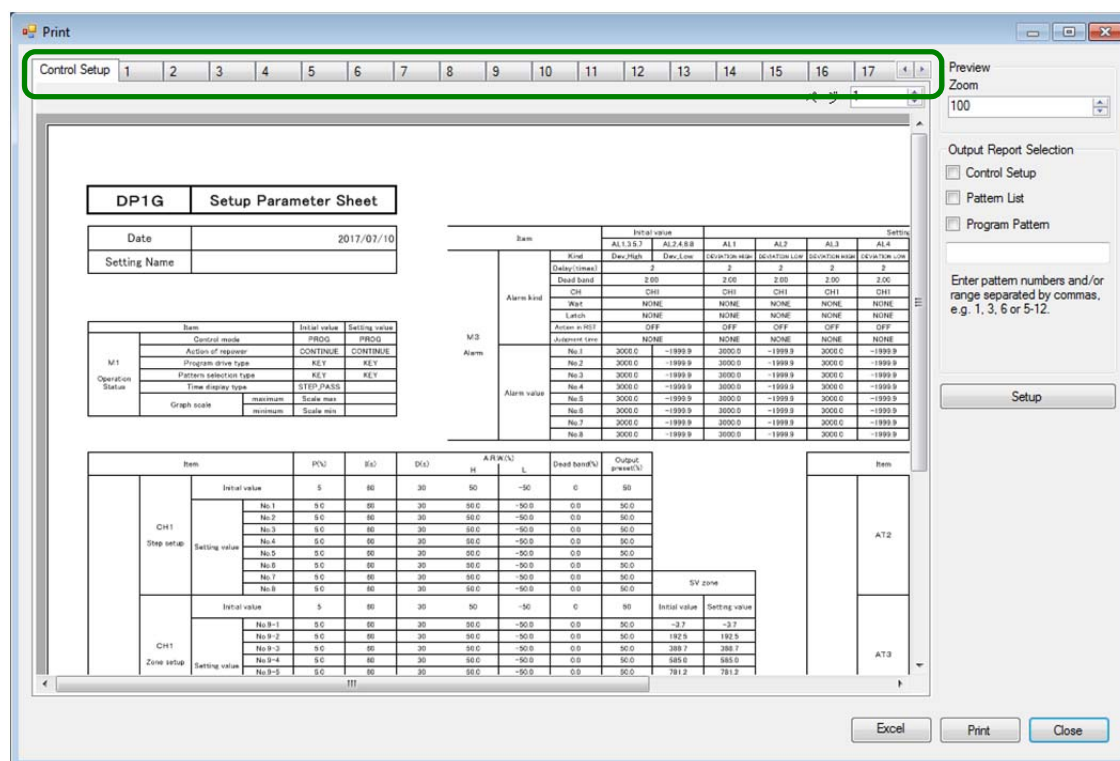
(1) Click [Print]

Click [File] on the menu bar and then [Print].



(2) Check printing contents

Print window is displayed. Click Control Setup tab or Program Pattern Number tab to switch windows and check printing contents.

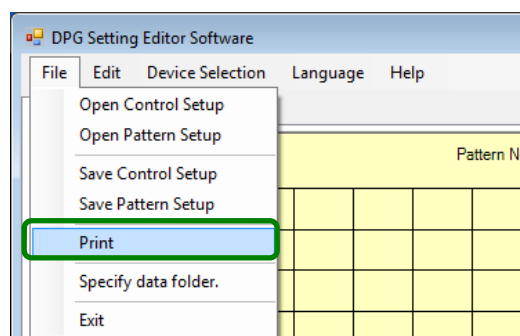


5-8-3 Print Out

<Procedure>

(1) Click [Print]

Click [File] on the menu bar and then [Print].



(2) Output report selection

Select report to print out by clicking and marking check.

By selecting control setup, all parameter setups are printed out as a list.

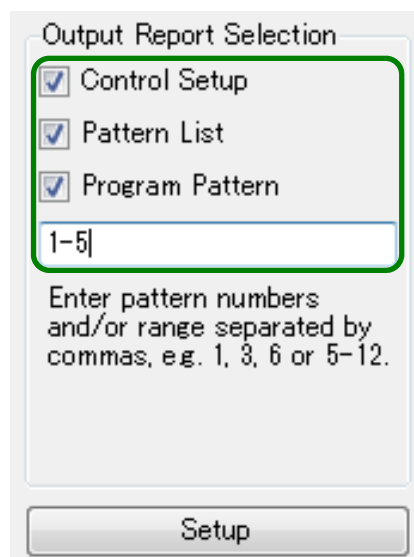
By selecting pattern list, contents of pattern list tab (pattern No., step count, link pattern No., and setting name) on the main window is printed out.

By selecting program pattern, contents of each program pattern number tab on the main window is printed out.

For program pattern print out, specify printing contents by entering program pattern number separated by commas or by specifying range. If not specifying anything, contents of all program pattern No. other than step count 0 are printed out.

If used step count 0, program pattern No. is specified, confirmation message is displayed.

By clicking [Setup] button, pattern graph scale of report to print out common to all program patterns can be set.

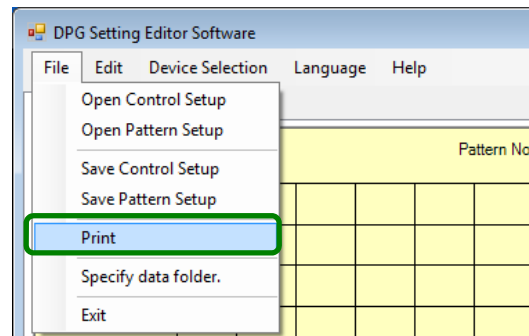


5-8-4 Excel Output

<Procedure>

(1) Click [Print]

Click [File] on the menu bar and then [Print].



(2) Output report selection

Select report to print out by clicking and marking check.

By selecting control setup, all parameter setups are output in EXCEL as a list.

By selecting pattern list, contents of pattern list tab (pattern No., step count, link pattern No., and setting name) on the main window is output in EXCEL.

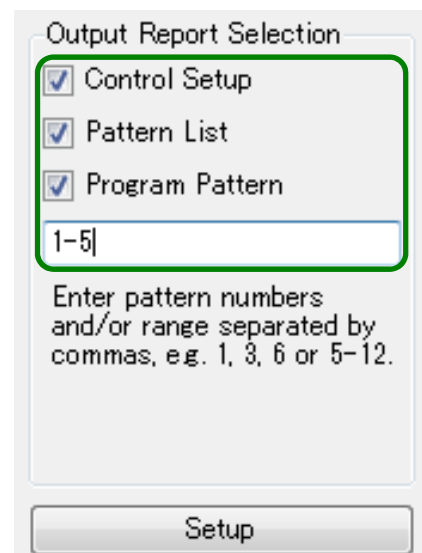
By selecting program pattern, contents of each program pattern number tab on the main window is output in EXCEL.

For program pattern output in EXCEL, specify printing contents by entering program pattern number separated by commas or by specifying range. If not specifying anything, contents of all program pattern No. other than step count 0 are output.

If used step count 0, program pattern No. is specified, confirmation message is displayed.

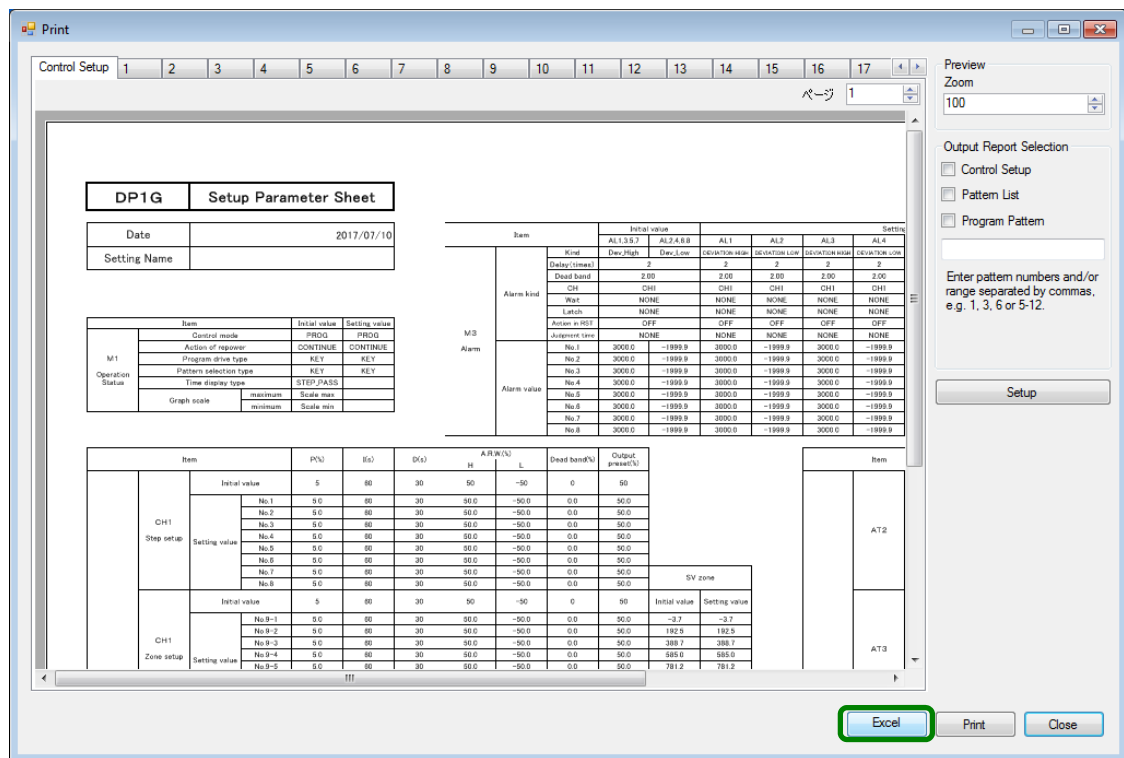
By clicking [Setup] button, pattern graph scale of report to print out common to all program patterns can be set.

EXCEL file is created by every program pattern number and output in one sheet by every 19 steps.



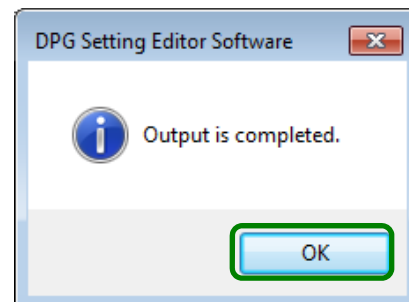
(3) Excel output

Click [Excel] button.



(4) Click [OK]

Browse For Folder window is displayed, so specify output designation and click [OK] button. Confirmation message is displayed. Click [OK] button.



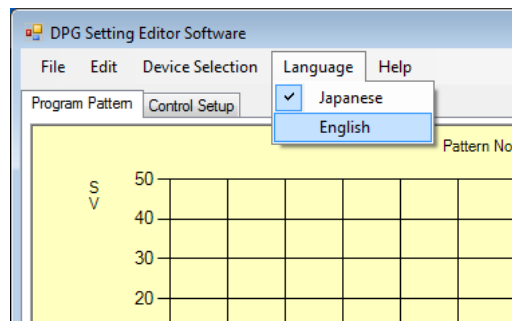
5-9 Others

5-9-1 Switch Language

<Procedure>

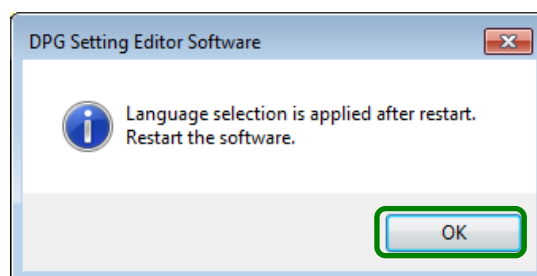
(1) Language selection

Click [Language] on the menu bar and then select a language from the list.



(2) Click [OK]

Confirmation message is displayed. Click [OK] button.



(3) Restart this software

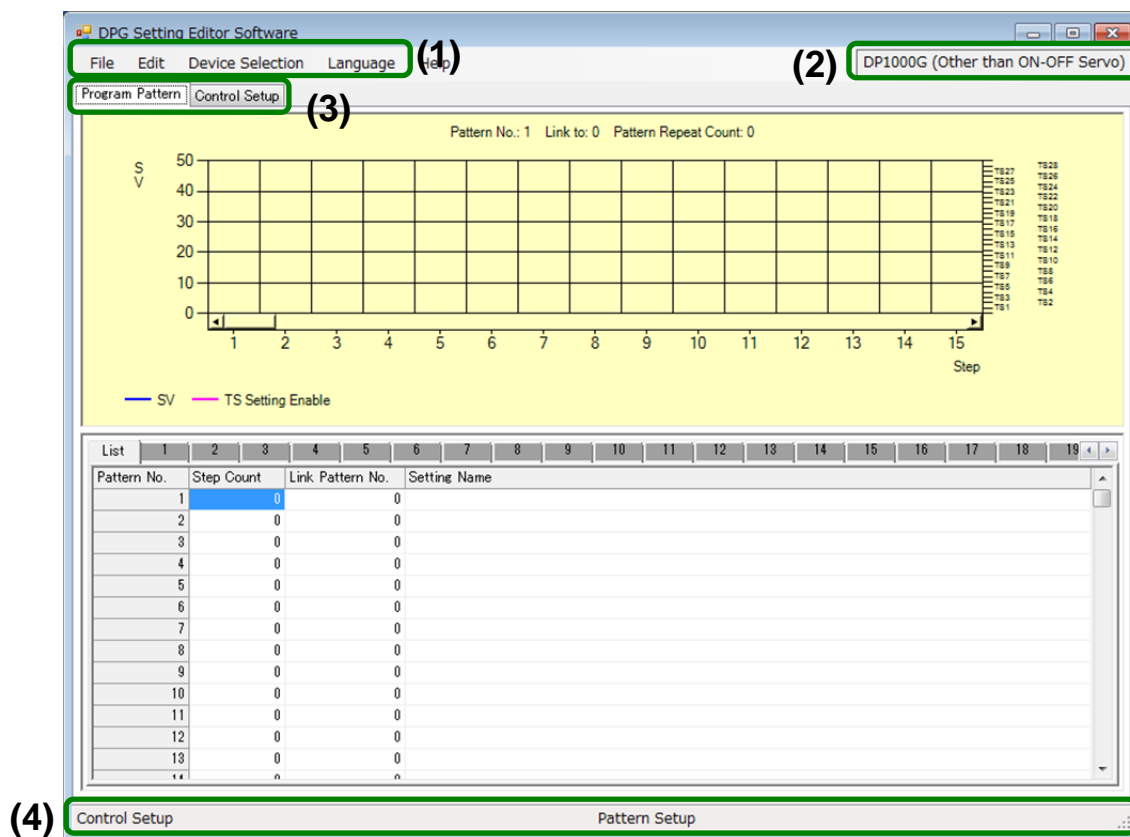
Restart this software. Changed language is applied after the restart.

6 Window Details

This section describes each window and those are only for windows of this software. Refer to DP-G series general instruction manual for function descriptions of parameters and set values.

6-1 Main Window

Window to edit control setup and pattern setup.



No.	Name	Descriptions
(1)	Menu bar	Menu bar is structured by following menus. <ul style="list-style-type: none"> ● File ● Edit ● Device Selection ● Language ● Help
(2)	Selected device display	Displays a name of selected device at the moment.
(3)	Editing tab	Switches program pattern and control setup windows.
(4)	Status bar	Displays read path name of control setup, pattern setup.

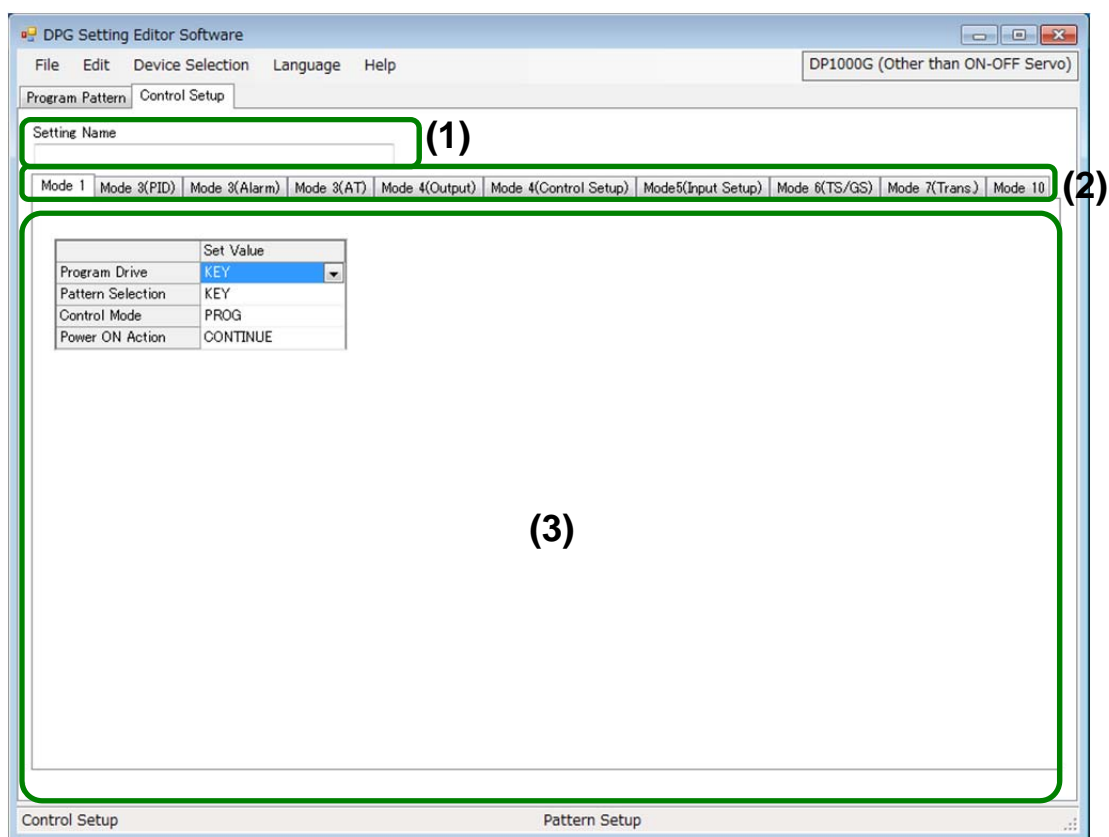
6-1-1 Menu Bar Operation

[Menu bar]

Menu	Sub menu	Descriptions
File	Open Control Setup	Displays control setup reading window.
	Open Pattern Setup	Displays pattern setup reading window.
	Save Control Setup	Displays control setup saving window.
	Save Pattern Setup	Displays pattern saving window.
	Print	Displays print window.
	Specify data folder	Displays data folder specify window.
	Exit	Exits this software.
Edit	Clear	If control setup tab is selected, contents of control setup tab are initialized. If program pattern tab is selected, contents of program pattern number are initialized.
	Copy Program Pattern	Displays program pattern copy window.
Device Selection	DP1000G (Other than ON-OFF Servo)	Select DP1000G (control mode is other than ON-OFF Servo).
	DP1000G (ON-OFF Servo)	Select DP1000G (control mode is ON-OFF Servo).
	DP2000G (Other than ON-OFF Servo)	Select DP2000G (control mode is other than ON-OFF Servo).
	DP2000G (ON-OFF Servo)	Select DP2000G (control mode is ON-OFF Servo).
	DP3000G	Select DP3000G.
Language	Japanese	Select Japanese.
	English	Select English.
Help	Version Information	Displays version information window.

6-2 Control Setup Tab

Window to set and edit control setup. Switches parameter setup window by Mode tab.



No.	Name	Descriptions
(1)	Setting Name	Edit setting name of control setup. Available numbers of characters to input is 24.
(2)	Mode tab	Tabs to classify control setup by Modes. Following modes are not displayed. <ul style="list-style-type: none"> ● Mode 2 ● Mode 8 ● Mode 9 ● Mode 11 ● Mode 12 *Parameter of Mode 2 is displayed at program pattern tab.
(3)	Parameter setup contents display window	Displays contents of parameter setup switched by tab.

6-2-1 Mode 1

Mode 1	Mode 3(PID)	Mode 3(Alarm)	Mode 3(AT)	Mode 4(Output)	Mode 4(Control Setup)	Mode5(Input Setup)	M
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	Set Value
(1) Program Drive	KEY
(2) Pattern Selection	KEY
(3) Control Mode	PROG
(4) Power ON Action	CONTINUE

High Region Input CH Switching Setup

	Set Value
(5) Change SV	1370.0
(6) Deadband	0.00
(7) Input Change Type	AUTO1
(8) PV Start	ON
(9) Bumpless	BMPLESS2
(10) PV Variation Limit	99.99
(11) Action in Error	RUN
(12) Range of Error	0.00

[Mode1 parameter]

No.	Parameter	Default value	Set range
(1)	Program Drive Method	KEY	KEY, EXT, COM, SLAVE
(2)	Pattern Selection Method	KEY	KEY, EXT, COM
(3)	Control Mode	PROG	PROG, CONST
(4)	Power ON action	CONTINUE	RESET, CONTINUE
(5)	Change SV	1370.0	Setting is available in the range of high region input scale minimum value to low region input scale maximum value. (Set range varies by scale decimal point)
(6)	Deadband	0.00	0.0 to 999.9 (Set range varies by scale decimal point)
(7)	Input Change Type	AUTO1	AUTO1, AUTO2, EXT, COM, AUTO3
(8)	PV Start	ON	OFF, ON
(9)	Bumpless	BMPLESS2	BMP, BMPLESS1, BMPLESS2
(10)	PV Variation Limit	99.99	0.1 to 999.9 (Set range varies by scale decimal point)
(11)	Action in Error	RUN	RUN, STOP
(12)	Range of Error	0.00	0.0 to 9999.9 (Set range varies by scale decimal point)

*Display varies by device selected at device selection (refer to the section 5-2).

(1) to (4) :DP1000G (other than ON-OFF Servo) and DP1000G (ON-OFF Servo)

(1) to (12) :DP2000G (other than ON-OFF Servo) and DP2000G (ON-OFF Servo)

(1) to (2) :DP3000G

6-2-2 Mode 3 (PID)

Mode 1 Mode 3(PID) Mode 3(Alarm) Mode 3(AT) Mode 4(Output) Mode 4(Control Setup) Mode5(Input Setup) Mode 6(TS/GS) Mode 7(Trans.) Mode 10

(1) Step

		CH1								CH2				
		1	2	3	4	5	6	7	8	1	2	3	4	
(1) Step	P [%]	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
	I [s]	60	60	60	60	60	60	60	60	60	60	60	60	
	D [s]	30	30	30	30	30	30	30	30	30	30	30	30	
	A.R.W H [%]	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	
	A.R.W L [%]	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0	
	Deadband [%]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Output Preset [%]	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	0.0	0.0	0.0	0.0	

(2) Zone

		9-1	9-2	9-3	9-4	9-5	9-6	9-7	9-8	9-1	9-2	9-3	9-4	9-5
(2) Zone	Zone SV	-3.7	192.5	388.7	585.0	781.2	977.5	1173.7	1370.0	-3.7	192.5	388.7	585.0	
	P [%]	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
	I [s]	60	60	60	60	60	60	60	60	60	60	60	60	
	D [s]	30	30	30	30	30	30	30	30	30	30	30	30	
	A.R.W H [%]	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	
	A.R.W L [%]	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0	
	Deadband [%]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Output Preset [%]	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	0.0	0.0	0.0	0.0		

(3) Output 2 Gap 0.0

[Mode3 (PID) parameter]

No.	Parameter	Default value	Set range
(1)	Step PID No.1 to No.8	P [%]	5.0
		I [s]	60
		D [s]	30
		A.R.W H [%]	50.0
		A.R.W L [%]	-50.0
		Deadband [%]	0.0
		Output Preset [%]	CH1=50.0 CH2=0.0
(2)	Zone PID No.9-1 to No.9-8	DP1000G DP2000G	
		9-1	-3.7 75.0
		9-2	192.5 350.0
		9-3	388.7 625.0
		9-4	585.0 900.0
		9-5	781.2 1175.0
		9-6	977.5 1450.0
		9-7	1173.7 1725.0
		9-8	1370.0 2000.0
		P [%]	5.0
		I [s]	60
		D [s]	30
		A.R.W H [%]	50.0
		A.R.W L [%]	-50.0
		Deadband [%]	0.0
		Output Preset [%]	CH1=50.0 CH2=0.0
(3)	Output 2 Gap	0.0	-100.0 to 100.0 (Set value of HC. gap is changed accordingly)

*If DP3000G is selected at device selection (refer to the section 5-2), parameter of Mode3 (PID) tab is not displayed. If DP1000G (ON-OFF Servo) is selected, CH2 is not displayed.

6-2-3 Mode 3 (Alarm)

Mode 1		Mode 3(PID)		Mode 3(Alarm)		Mode 3(AT)		Mode 4(Output)		Mode 4(Control Setup)		Mode 5(Input Setup)		Mode 6(TS/GS)		Mode 7	
		Basics								Extension							
		AL1		AL2		AL3		AL4		AL5		AL6					
(1) Kind		DEVIATION HIGH		DEVIATION LOW		DEVIATION HIGH		DEVIATION LOW		DEVIATION HIGH		DEVIATION LOW					
(2) Delay		2		2		2		2		2		2					
(3) Deadband		2.00		2.00		2.00		2.00		2.00		2.00					
(4) Judging CH		CH1		CH1		CH1		CH1		CH1		CH1					
(5) Wait		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>					
(6) Latch		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>					
(7) Action in Reset		OFF		OFF		OFF		OFF		OFF		OFF					
(8) Judging Time [S]																	
(9) Set value 1		3000.0		-1999.9		3000.0		-1999.9		3000.0		-1999.9					
Set value 2		3000.0		-1999.9		3000.0		-1999.9		3000.0		-1999.9					
Set value 3		3000.0		-1999.9		3000.0		-1999.9		3000.0		-1999.9					
Set value 4		3000.0		-1999.9		3000.0		-1999.9		3000.0		-1999.9					
Set value 5		3000.0		-1999.9		3000.0		-1999.9		3000.0		-1999.9					
Set value 6		3000.0		-1999.9		3000.0		-1999.9		3000.0		-1999.9					
Set value 7		3000.0		-1999.9		3000.0		-1999.9		3000.0		-1999.9					
Set value 8		3000.0		-1999.9		3000.0		-1999.9		3000.0		-1999.9					

[Mode 3 (Alarm) parameter]

No.	Parameter	Default value	Set range
(1)	Kind	AL1,3,5,7= DEVIATION LOW AL2,4,6,8= DEVIATION HIGH	ABS HIGH, ABS LOW, DEVIATION HIGH, DEVIATION LOW, DEVIATION BAND HIGH, DEVIATION BAND LOW, PV VARIATION HIGH, PV VARIATION LOW, SV HIGH, SV LOW, OUTPUT HIGH, OUTPUT LOW, Control LOOP ERROR, FAIL, WAIT TIME, END SIGNAL
(2)	Delay	2	1 to 10
(3)	Deadband	2.00	0.0 to 999.99 (Set range varies by scale decimal point)
(4)	Judging CH	CH1	CH1, CH2
(5)	Wait	None	<input type="checkbox"/> → No wait <input checked="" type="checkbox"/> → Wait enabled
(6)	Latch	None	<input type="checkbox"/> → No latch <input checked="" type="checkbox"/> → Latch enabled
(7)	Action in Reset	OFF	OFF, Calculation
(8)	Judging Time [S]	At control loop error 20000	0 to 20000
(9)	Set value 1 to 8	AL1,3,5,7=30000.0 AL2,4,6,8=-19999.9	-9999.9 to 9999.9 (Set range varies by scale decimal point)

*If DP3000G is selected at device selection (refer to the section 5-2), parameter of Mode3 (Alarm) tab is not displayed.

6-2-4 Mode 3 (AT)

Mode 1 Mode 3(PID) Mode 3(Alarm) Mode 3(AT) Mode 4(Output) Mode 4(Control Setup) Mode 5(Input Setup) Mode 6(TS/GS) Mode 7(Trans.) Mode 10									
		1	2	3	4	5	6	7	8
(1) AT2	AT Start Direction	UP							
	ON/OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
	Execution SV	-43.0	114.0	271.0	428.0	585.0	742.0	899.0	1056.0
(2) AT3	AT Start Direction	UP							
	ON/OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
	Execution SV	-101.0	94.0	290.0	486.0	683.0	879.0	1075.0	1271.0
(3) AT5	AT Start Direction	UP							
	ON/OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
	Execution SV	-43.0	114.0	271.0	428.0	585.0	742.0	899.0	1056.0
(4) AT6	AT Start Direction	UP							
	ON/OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
	Execution SV	-101.0	94.0	290.0	486.0	683.0	879.0	1075.0	1271.0

[Mode 3 (AT) parameter]

No.	Parameter	Default value	Set range
(1) AT2 No.1 to 8	AT Start Direction	UP	UP, DOWN
	ON/OFF	No.1=ON No.2 to 8=OFF	OFF, ON
	Execution SV	Table below	· Input scale minimum value ^{*1} to maximum value ^{*2} *1: For DP2000G, it is low region input scale minimum value. *2: For DP2000G, it is high region input scale maximum value.
(2) AT3 No.1 to 8	AT Start Direction	UP	UP, DOWN
	ON/OFF	OFF	OFF, ON
	Execution SV	Table below	· Setting is available in the range of CH1 zone SV ● Input scale minimum value ^{*1} ≤ No.1 ≤ Zone SV (9-1) ● Zone SV(9-1) ≤ No.2 ≤ Zone SV(9-2) ● Zone SV(9-2) ≤ No.3 ≤ Zone SV(9-3) ● Zone SV(9-3) ≤ No.4 ≤ Zone SV(9-4) ● Zone SV(9-4) ≤ No.5 ≤ Zone SV(9-5) ● Zone SV(9-5) ≤ No.6 ≤ Zone SV(9-6) ● Zone SV(9-6) ≤ No.7 ≤ Zone SV(9-7) ● Zone SV(9-7) ≤ No.8 ≤ Zone SV(9-8) *1: For DP2000G, it is low region input scale minimum value.
(3) AT5 No.1 to 8	AT Start Direction	UP	UP, DOWN
	ON/OFF	OFF	OFF, ON
	Execution SV	Table below	· Same as AT2
(4) AT6 No.1 to 8	AT Start Direction	UP	UP, DOWN
	ON/OFF	OFF	OFF, ON
	Execution SV	Table below	· Setting is available in the range of CH2 zone SV · Same as AT3

*If DP3000G is selected at device selection (refer to the section 5-2), parameter of Mode 3 (AT) tab is not displayed. If DP1000G (ON-OFF Servo) is selected, AT5 and AT6 are not displayed.

[DP1000G Execution SV initial value]

	1	2	3	4	5	6	7	8
AT2, AT5	-43.0	114.0	271.0	428.0	585.0	742.0	899.0	1056.0
AT3, AT6	-101.0	94.0	290.0	486.0	683.0	879.0	1075.0	1271.0

[DP2000G Execution SV initial value]

	1	2	3	4	5	6	7	8
AT2, AT3, AT5, AT6	-43.0	114.0	271.0	428.0	585.0	742.0	899.0	1056.0

6-2-6 Mode 4 (Control Setup)

Mode 1 Mode 3(PID) Mode 3(Alarm) Mode 3(AT) Mode 4(Output) Mode 4(Control Setup) Mode 5(Input Setup) Mode 6(TS/GS) Mode 7(Trans.) Mode 10

(1)

	CH1	CH2
Control	Control Direction: Direct	Direct
	Algorism: Position	Position
	Control Interval [ms]: 100	100
Error Out	PV Error MAX [%]: 0.0	0.0
	PV Error MIN [%]: 0.0	0.0
	CPU Error [%]: 0.0	0.0
Pulse	Pulse Interval [S]: 30	30
	Update Type: Control Cycle	Control Cycle

(2)

	Set Value
Heating&Cooling Sel	None
SPLIT Direct [%]	0.0
SPLIT Reverse [%]	40.0
Cool P CONST	0.00
HC. Gap [%]	0.0
Deadband [%]	0.0

(3)

	Set Value
Cascade Primary Controller Output	None
Cascade Const a	1.00
Cascade Const b [%]	0.0
Cascade Const c	0.00

Cascade operation

Output signal = a x control calculation value (MV1) + b + c x target value (SV)

[Mode 4 (Control Setup) parameter]

No.	Parameter	Default value	Set range
(1)	Control setup	Control Direction	CH1=Direct CH2=Reverse
		Algorism	Position
		Control interval [ms]	100, 200, 300, 500
	Error output	PV Error MAX [%]	0.0
		PV Error MIN [%]	0.0
		CPU Error [%]	0.0
	Pulse setup	Pulse Interval [S]	30
		Update Type	Control Cycle
(2)	Heating & Cooling setup	Heating & Cooling Selection	None
		SPLIT Direct [%]	0.0
		SPLIT Reverse [%]	40.0
		Cool P CONST	0.00
		HC. Gap [%]	-100.0 to 100.0 (Set value of output 2 gap is changed accordingly)
		Deadband [%]	0.0 to 9.9 (Set value of PID step deadband, CH2 No.1 is changed accordingly)
(3)	Cascade primary controller	Cascade Primary Controller Output	None
		Cascade const a	1.00
		Cascade const b [%]	0.0
		Cascade const c	0.00

*If DP3000G is selected at device selection (refer to the section 5-2), parameter of Mode 4 (Output) tab is not displayed. If DP1000G (ON-OFF Servo) is selected, CH2 of (1), and (4) and (5) are not displayed.

6-2-7 Mode 5 (Input Setup) tab

- In the case of DP1000G, DP2000G

Mode 1	Mode 3(PID)	Mode 3(Alarm)	Mode 3(AT)	Mode 4(Output)	Mode 4(Control Setup)	Mode5(Input Setup)	Mode 6(TS/GS)	Mode 7(Trans.)
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Input Setup (1)

		CH1 (Range H)	CH2 (Range L)
Input Range	Range No.	31 [10mV]	05 [K1]
	RJ	INT	INT
	Unit	°C	°C
Linear Range	Span	10.00	1370.0
	Zero	0.00	-200.0
Scale	Maximum	2000.0	1370.0
	Minimum	0.0	-200.0
	Dec. Point	1	1
Others	PV Dec. Point	1	1
	Digital Filter	0.1	0.1
	Burnout	UP	UP
	Input Func.	None	None

Linearize Table (3)

	CH1 (Range H)		CH2 (Range L)	
	Voltage	Value	Voltage	Value
1	0.00	0.0	0.0	0.0
2	0.00	0.0	0.0	0.0
3	0.00	0.0	0.0	0.0
4	0.00	0.0	0.0	0.0
5	0.00	0.0	0.0	0.0
6	0.00	0.0	0.0	0.0
7	0.00	0.0	0.0	0.0
8	0.00	0.0	0.0	0.0
9	0.00	0.0	0.0	0.0
10	0.00	0.0	0.0	0.0
11	0.00	0.0	0.0	0.0
12	0.00	0.0	0.0	0.0
13	0.00	0.0	0.0	0.0
14	0.00	0.0	0.0	0.0
15	0.00	0.0	0.0	0.0
16	0.00	0.0	0.0	0.0
17	0.00	0.0	0.0	0.0
18	0.00	0.0	0.0	0.0
19	0.00	0.0	0.0	0.0
20	0.00	0.0	0.0	0.0

Sensor Bias (2)

	CH1 (Range H)		CH2 (Range L)	
	Sensor Bias SV	Sensor Bias SV Value	Sensor Bias SV	Sensor Bias SV Value
1		0.00		0.00
2				-3.7
3				192.5
4				388.7
5				585.0
6				781.2
7				977.5
8				1173.7
9				0.00

- In the case of DP3000G

Mode 1	Mode 3(PID)	Mode 3(Alarm)	Mode 3(AT)
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(4)

Setting Output

	Set Value
Scale Maximum	2000.0
Scale Minimum	0.0
Scale Decimal Point	1
Unit	°C

[Mode 5 (Input Setup) parameter]

No.	Parameter		Default value	Set range
(1)	Input Range	Range No.	CH1=31[10mV] CH2=05[K1]	01[B], 02[R1], 03[R2], 04[S], 05[K1], 06[K2], 07[K3], 08[E1], 09[E2], 10[E3], 11[E4], 12[J1], 13[J2], 14[J3], 15[J4], 16[T1], 17[T2], 18[WWRe5-26], 19[WWRe0-26], 20[NiMo-Ni], 23[PR5-20], 24[PR20-40], 25[Platinel1], 26[Platinel2], 27[U], 28[L], 29[N], 31[10mV], 32[20mV], 33[50mV], 34[100mV], 35[5V], 36[mA], 37[10V], 41[JPt100 1]3W, 42[JPt100 2]3W, 43[JPt100 3]3W, 44[JPt100 4]3W, 45[JPt100 5]3W, 46[QPt100 1]3W, 47[QPt100 2]3W, 48[QPt100 3]3W, 49[QPt100 4]3W, 50[QPt100 5]3W, 51[Pt50]3W, 52[Pt-Co]3W, 53[Pt100 1]3W, 54[Pt100 2]3W, 55[Pt100 3]3W, 56[Pt100 4]3W, 57[Pt100 5]3W, 61[WRe5-WRe26], 62[W-WRe26], 63[NiMo-Ni], 64[Platinel II -1], 65[Platinel II -2], 66[CR-AuFe], 67[PtRh40-PtRh20], USER1[10mV], USER1[20mV], USER1[50mV], USER1[100mV], USER1[5V], USER1[20mA], USER1[10V], 141[JPt100 1]4W, 142[JPt100 2]4W, 143[JPt100 3]4W, 144[JPt100 4]4W, 145[JPt100 5]4W, 146[QPt100 1]4W, 147[QPt100 2]4W, 148[QPt100 3]4W, 149[QPt100 4]4W, 150[QPt100 5]4W, 151[Pt50]4W, 152[Pt-Co]4W, 153[Pt100 1]4W, 154[Pt100 2]4W, 155[Pt100 3]4W, 156[Pt100 4]4W, 157[Pt100 5]4W, USER2[10mV], USER2[20mV], USER2[50mV], USER2[100mV], USER2[5V], USER2[20mA], USER2[10V]
		RJ	CH1=NONE CH2=INT	INT, EXT
		Unit	°C	°C, K, %, BLK, mV, V, mA
	Linear Range	Span	CH1=10.0 CH2=1370.0	Differs by the range.
		Zero	CH1=0.0 CH2=-200.0	Differs by the range.
	Scale	Maximum	CH1=2000.0 CH2=1370.0	-99999 to 99999 (Set range varies by scale decimal point)
		Minimum	CH1=0.0 CH2=-200.0	-99999 to 99999 (Set range varies by scale decimal point)
		Decimal point	1	0 to 4
	Others	PV Decimal point	1	0 to 4 (CH1 and CH2 are changed accordingly)
		Digital Filter	0.1	0.0 to 99.9
		Burnout Action	UP	UP, DOWN, NONE
		Input Function	None	None, Square Roots Calculation, Log10 Computation
(2)	Sensor Bias	CH1 correction value No.1	0.00	-9999.9 to 9999.9 (Set range varies by scale decimal point)
		CH 2 Correction point	No.2	-3.7
			No.3	192.5
			No.4	388.7
			No.5	585.0
			No.6	781.2
			No.7	977.5
			No.8	1173.7
		CH2 correction value No.1 to 9	0.00	-9999.9 to 9999.9 (Set range varies by scale decimal point)
(3)	Linearize Table	Voltage	0.00	Linear range zero value to span value
		Value	0.0	Input scale minimum value to maximum value
(4)	Scale Maximum		2000.0	-19999 to 99999 (Set range varies by scale decimal point)
	Scale Minimum		0.0	-19999 to 99999 (Set range varies by scale decimal point)
	Scale Decimal Point		1	0 to 4
	Unit		°C	°C, K, %, BLK, mV, V, mA

*Only if DP2000G is selected at device selection (refer to the section 5-2), CH2 is displayed in input setup linearize table.

*(3) Linearize Table becomes available to set, when "USER" is set at Range No.

6-2-8 Mode 6 (TS/GS)

Mode 1 Mode 3(PID) Mode 3(Alarm) Mode 3(AT) Mode 4(Output) Mode 4(Control Setup) Mode5(Input Setup) Mode 6(TS/GS) Mode 7(Trans.) Mode 10									
(1) Time Signal [H:M]		(2) Guarantee Soak		(3) Mass Flow					
	ON Time	OFF Time		Guarantee Soak	Alarm wait [H:M]		Mass Flow SV [%]		
1	0:00	1:00	1	2000.0	1:00	1	0.0		
2	0:00	1:00	2	2000.0	1:00	2	10.0		
3	0:00	1:00	3	2000.0	1:00	3	20.0		
4	0:00	1:00	4	2000.0	1:00	4	30.0		
5	0:00	1:00	5	2000.0	1:00	5	40.0		
6	0:00	1:00	6	2000.0	1:00	6	50.0		
7	0:00	1:00	7	2000.0	1:00	7	60.0		
8	0:00	1:00	8	2000.0	1:00	8	70.0		
9	0:00	1:00							
10	0:00	1:00							
11	0:00	1:00							
12	0:00	1:00							
13	0:00	1:00							
14	0:00	1:00							
15	0:00	1:00							
16	0:00	1:00							
17	0:00	1:00							
18	0:00	1:00							
19	0:00	1:00							
20	0:00	1:00							
21	0:00	1:00							
22	0:00	1:00							
23	0:00	1:00							
24	0:00	1:00							
25	0:00	1:00							
26	0:00	1:00							
27	0:00	1:00							
28	0:00	1:00							

[Mode 6 (TS/GS) parameter]

No.	Parameter		Default value	Set range
(1)	Time Signal No.1 to 30	ON Time	0:00	0:00 to 999:59
		OFF Time	1:00	0:00 to 999:59
(2)	Guarantee Soak No.1 to 8	Guarantee Soak	2000.0	0.1 to 9999.9 (Set range varies by scale decimal point)
		Alarm Wait [H:M]	1:00	0:00 to 999:59
(3)	Mass Flow SV [%]	No.1	0.0	-5.0 to 105.0
		No.2	10.0	
		No.3	20.0	
		No.4	30.0	
		No.5	40.0	
		No.6	50.0	
		No.7	60.0	
		No.8	70.0	

*If DP3000G is selected at device selection (refer to the section 5-2), (2) and (3) are not displayed.

6-2-9 Mode 7 (Trans)

Mode 1	Mode 3(PID)	Mode 3(Alarm)	Mode 3(AT)	Mode 4(Output)	Mode 4(Control Setup)
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	CH1	CH2
(1) Trans. Type	PV	PV
(2) Scale Maximum	1370.0	1370.0
(3) Scale Minimum	-200.0	-200.0

[Mode7 (Trans) parameter]

No.	Parameter	Default value	Set range
(1)	Trans. Type	PV	NONE, PV, SV, DEV, MV1, MV2, MFB, MFSV
(2)	Scale Maximum	1370.0	-99999 to 99999 (Set range varies by trans. type)
(3)	Scale Minimum	-200.0	-99999 to 99999 (Set range varies by trans. type)

*If DP3000G is selected at device selection (refer to the section 5-2), parameter of Mode7 (Trans) tab is not displayed.

*If DP2000G is selected, initial values of scale maximum are "2000.0" for CH1, and "1370.0" for CH2.

6-2-10 Mode 10

Mode 1 Mode 3(PID) Mode 3(Alarm) Mode 3(AT) Mode 4(Output) Mode 4(Control Setup) Mode 5(Input Setup) Mode 6(TS/GS) Mode 7(Trans.) Mode 10

DI Assignment
Program External Drive Selection (1) TYPE1

DO Assignment
DO Status during FAST (3) TS=OFF / AL=Keep

Output Setup Method (5) Output Limit

Time Unit (6) H : M

Assignment (2)

DI
4B RUN
4C ADV
4D RESET
4E WAIT
4F FAST
4G NONE
4H PTN SEL BCD100
4I PTN SEL BCD200
5B PTN SEL BCD1
5C PTN SEL BCD2
5D PTN SEL BCD4
5E PTN SEL BCD8
5F PTN SEL BCD10

Assignment (4)

DO
1B TS1
1C TS2
1D TS3
1E TS4
1F TS5
1G TS6
1H TS7
1I TS8
1J TS9
2B TS10
2C TS11
2D TS12
2E TS13

[Mode 10 parameter]

No.	Parameter	Default value	Set range
(1)	Program External Drive Selection	TYPE1	TYPE1, TYPE2
(2)	DI Assignment	4B to 4F	By program external drive selection
		4G to 5I	Table below
(3)	DO Status during FAST	TS=OFF/AL=Keep	TS=OFF/AL=OFF, TS=Keep/AL=OFF, TS=OFF/AL=Keep, TS=Keep/AL=Keep · For DP3000G, it becomes "TS=OFF" and "TS=Keep".
(4)	DO Assignment	Table below	NONE, RUN, ADV, RESET, WAIT, FAST, END, ALARM WAIT, ERROR, SV UP, SV DOWN, KEY LOCK, MODE LOCK, PV HOLD, SV HOLD, MANUAL1, MANUAL2, RANGE-H, DEV ERROR, FAIL, HEALTH, RUN(DP-I), STOP, CONST, BURN OUT, PTN No BCD1, PTN No BCD2, PTN No BCD4, PTN No BCD8, PTN No BCD10, PTN No BCD20, PTN No BCD40, PTN No BCD80, PTN No BCD100, PTN No BCD200, STP No BCD1, STP No BCD2, STP No BCD4, STP No BCD8, STP No BCD10, STP No BCD20, STP No BCD40, STP No BCD80, STP No BCD100, TS1 to TS28, AL1 to AL8
(5)	Output Setup Method	Output Limit	Output Limit, Output Scale
(6)	Time Unit	H:M	H:M, M:S

*If DP3000G is selected at device selection (refer to the section 5-2), (5) is not displayed.

[DI Assignment Initial Value]

4G	4H	4I	5B	5C	5D	5E	5F	5G	5H	5I
NONE	PTN SEL BCD100	PTN SEL BCD200	PTN SEL BCD1	PTN SEL BCD2	PTN SEL BCD4	PTN SEL BCD8	PTN SEL BCD10	PTN SEL BCD20	PTN SEL BCD40	PTN SEL BCD80

[DO Assignment Initial Value]

1B	1C	1D	1E	1F	1G	1H	1I	1J	2B	2C	2D	2E	2F
TS1	TS2	TS3	TS4	TS5	TS6	TS7	TS8	TS9	TS10	TS11	TS12	TS13	TS14
2G	2H	2I	2J	3B	3C ^{*1}	3D ^{*1}	3E ^{*1}	3F ^{*1}	3G ^{*1}	3H ^{*2}	3I	3J	4J
TS15	TS16	TS17	TS18	RUN	ADV RESET	RESET FAST	WAIT END	FAST DEV ERR	END RANGE H	ALM WAIT NONE	ERR	SV UP	SV DOWN

*1 For initial value of 3C to 3G, upper row is DP1000G or DP3000G, and lower row is DP2000G.

*2 For initial value of 3H, upper row is DP1000G or DP2000G, and lower row is DP3000G.

6-2-11 Parameters can not be edited

Since following parameters are not saved in a CF card, they are not subject of editing in this software. Set them individually in the DP-G unit itself.

Mode0 : Execution step setup change ...All parameters (Parameter to be used only at the operation)

Mode1 : Operating status selectionTime display type, graph scale

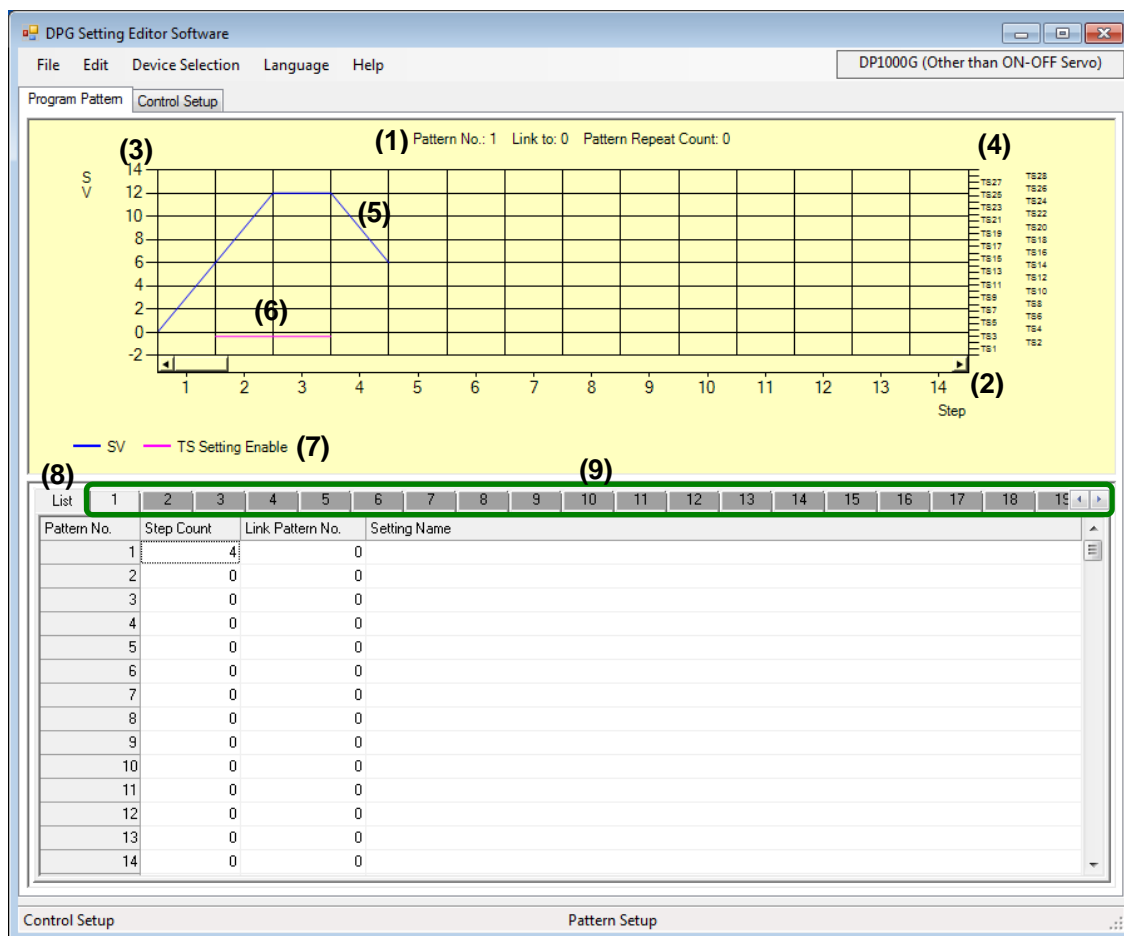
Mode7 : Communication setupAll parameters

Mode10 : Expansion setupTag setup, display setup

6-3 Program Pattern Tab

Window to set and edit program pattern. Switches parameter setup window by pattern No. tab.

6-3-1 Pattern Graph



No.	Name	Descriptions
(1)	Graph title	Displays pattern No., Link Pattern No., and Pattern Repeat Count.
(2)	Step axis (X-axis)	Displays step number (0 to 199). Steps available to display on one window is 14 to 15 steps.
(3)	SV axis (left side Y-axis)	Displays SV value scale (automatic scale).
(4)	TS axis (right side Y-axis)	Displays time signal No.(TS1 to TS28).
(5)	SV line	Displays SV value set to each step of program pattern. · Let starting point of the line step 0. Place SV value of start SV on the step 0 axis. Place SV value of step 1 on the step 1 axis. As this, place SV value of step N on the step N axis. · If pattern setup is "Rate/Time", let time x rate value be SV value.
(6)	TS line	Displays enable or disable time signal setting on each step of program pattern. · No setting if time signal is "OFF". Other than this, it is regarded that setting is available. · Draw horizontal straight line in the section of Setting Enable. If time signal is set to step 1, draw a line on the axis from the step 0 to step 1.
(7)	Legend	Displays explanation of SV line and TS line.
(8)	Pattern List Tab	Displays a list of step count etc. of program pattern.
(9)	Pattern No. Tab	Select program pattern No. to edit. If used step is 0, pattern No. tab is displayed in dark gray.

6-3-2 Pattern List Tab

List	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Pattern No.	Step Count		Link Pattern No.		Setting Name									
(1)	1	(2)	0	(3)	0	(4)								
	2		0		0									
	3		0		0									
	4		0		0									
	5		0		0									
	6		0		0									
	7		0		0									
	8		0		0									
	9		0		0									
	10		0		0									
	11		0		0									
	12		0		0									
	13		0		0									
	14		0		0									

No.	Name	Descriptions
(1)	Pattern No.	Displays program pattern number.
(2)	Step Count	Displays used step count of program pattern.
(3)	Link Pattern No.	Displays pattern number of link destination.
(4)	Setting Name	Displays setting name of program pattern.

6-3-3 Pattern Number Tab

No.	Name	Descriptions
(1)	Setting Name	Edit setting name of program pattern contents. Available numbers of characters to input is 24.
(2)	Step Count	Displays used step count of program pattern. Setting and editing of parameter set value is available up to displayed step number +1.
(3)	Starting Method	· Set range: SV start, PV start
	SV	· Step 0 sets start SV value and step 1 to 199 set SV value of each step. · Editing is available for step 1 to 199, if pattern setup method is "SV/ Time". · Set range: input scale minimum value ^{*1} to input scale maximum value ^{*1} (Set range varies by scale decimal point) ^{*1} : For DP2000G, it is low region input scale minimum value to high region input scale maximum value.
	Rate [/M]	· Step 0 is unavailable to edit. · Editing is available, if pattern setup method is "Rate/ Time". · Set range: -999.99 to 999.99 (Set range varies by scale decimal point)
	Time [H:M]	· Step 0 is unavailable to edit. · Set range: "CIRCLE", 000:00 to 999:59 (If "Rate/ Time" is selected for pattern setup method, "CIRCLE" is unavailable to set.)
	Step Repeat	· Step 0 is unavailable to edit. · Set range: 0 to 99, 255, or "-"
	Circle step	· Step 0 is unavailable to edit. · Set range: 0.00 to 999.99
	PID (No.1)	· Step 0 is unavailable to edit. · Set range: 0 to 9
	Alarm No. Basic	· Step 0 is unavailable to edit. · Set range: 0 to 8
	Alarm No. Enhanced	· Step 0 is unavailable to edit. · Set range: 0 to 8
	Output Scale (No.1)	· Step 0 is unavailable to edit. · Set range: 0 to 9
	Output Limit (No.1)	· Step 0 is unavailable to edit. · Set range: 0 to 9
	Output Variation Limit (No.1)	· Step 0 is unavailable to edit. · Set range: 0 to 9
	Sensor Bias (No.1)	· Step 0 is unavailable to edit. · Set range: 0 to 8
	Guarantee Soak	· Step 0 is unavailable to edit. · Set range: 0 to 8
	Wait Time Alarm	· Step 0 is unavailable to edit. · Set range: 0 to 8

No.	Name	Descriptions
	Mass Flow SV	<ul style="list-style-type: none"> Step 0 is unavailable to edit. Set range: 0 to 8
	PID (No.2)	<ul style="list-style-type: none"> Step 0 is unavailable to edit. Editing is available for types other than 2 outputs type. Set range: 0 to 9
	Output Scale (No.2)	<ul style="list-style-type: none"> Step 0 is unavailable to edit. Editing is available for types other than 2 outputs type. Set range: 0 to 9
	Output Limit (No.2)	<ul style="list-style-type: none"> Step 0 is unavailable to edit. Editing is available for types other than 2 outputs type. Set range: 0 to 9
	Output Variation Limit (No.2)	<ul style="list-style-type: none"> Step 0 is unavailable to edit. Editing is available for types other than 2 outputs type. Set range: 0 to 9
	Sensor Bias (No.2)	<ul style="list-style-type: none"> Step 0 is unavailable to edit. Editing is available for types other than 2 outputs type. Set range: 0 to 8
	TS1 to TS28 (Time Signal)	<ul style="list-style-type: none"> Step 0 is unavailable to edit. For details of set range, refer to the section 6-3-4.
	Pattern Setup	<ul style="list-style-type: none"> Editing is available only if used step count is 0. *To edit, it is necessary to make step count 0 by deleting or pattern clear. Set range: SV/Tim, Rate/Time
	Link Pattern No.	<ul style="list-style-type: none"> Set range: 0 to 200
	Pattern Repeat	<ul style="list-style-type: none"> Set range: 0 to 9999 Change is applied to all patterns.
	End Output 1	<ul style="list-style-type: none"> Step 0 column displays end mode and step 1 column displays output value. End mode set range: CONTROL, CONST Output value set range: -5.0 to 105.0 (Setting is available if end mode is "CONST")
	End Output 2	<ul style="list-style-type: none"> Step 0 column displays end mode and step 1 column displays output value. End mode set range: CONTROL, CONST Output value set range: -5.0 to 105.0 (Setting is available if end mode is "CONST")
	Reset SV	<ul style="list-style-type: none"> Set range: input scale minimum value^{*1} to input scale maximum value^{*1} (Set range varies by scale decimal point) ^{*1}: For DP2000G, it is low region input scale minimum value to high region input scale maximum value.

6-3-4 Time Signal

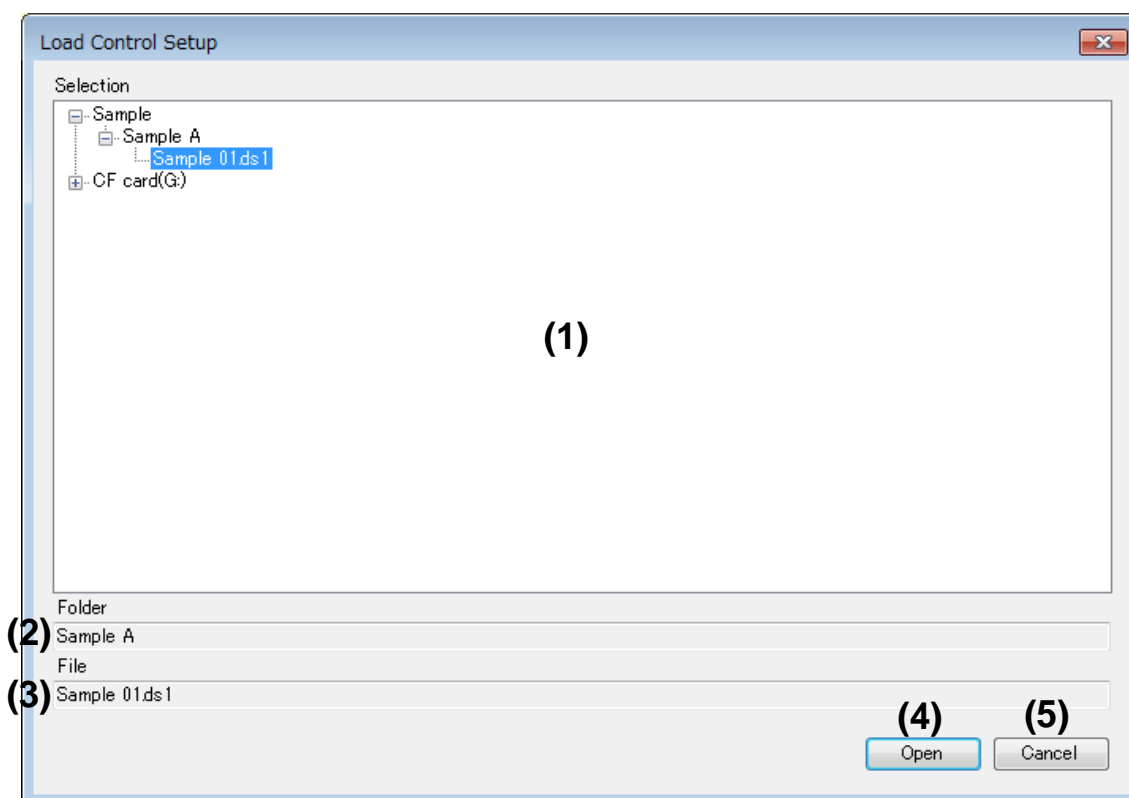
Specify time signal (TS1 to TS28) set value by following dialog.

[Set value display]

Display	Descriptions
OFF	ALL_OFF
ON	ALL_ON
N+	Number=N, Phase=Direct, Repeat=None
N+R	Number=N, Phase=Direct, Repeat=Enable
N-	Number=N, Phase=Reverse, Repeat=None
N-R	Number=N, Phase= Reverse, Repeat=Enable

*N is types of time signal 1 to 30

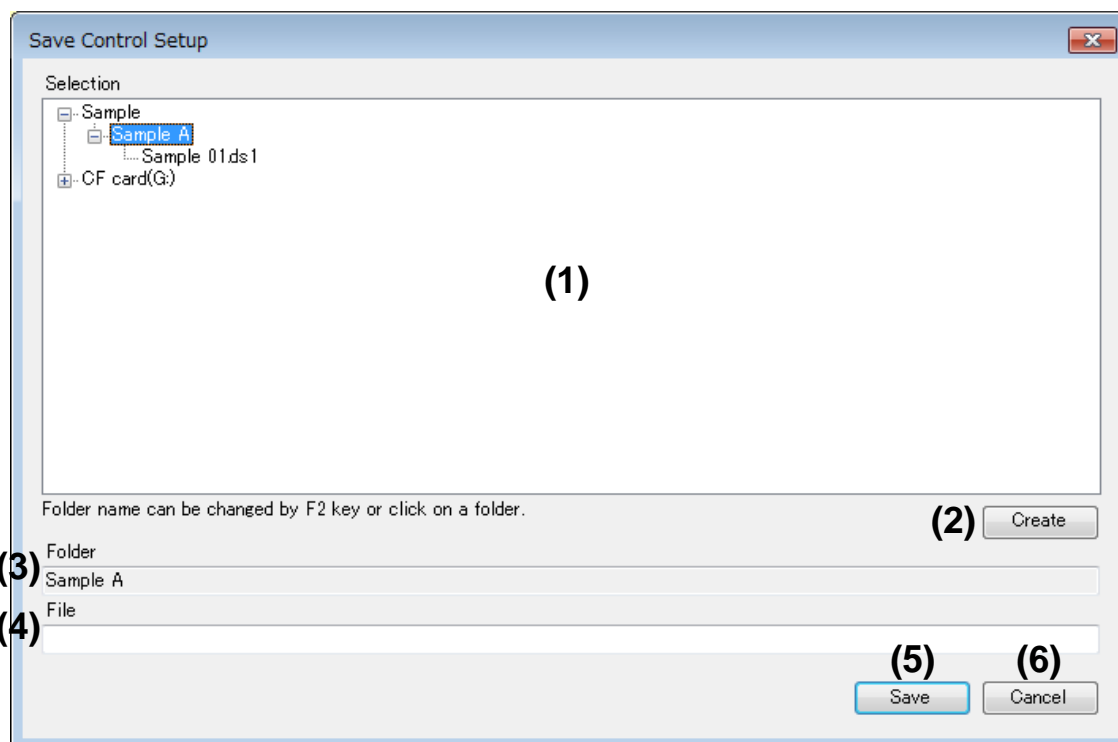
6-4 Load Control Setup and Pattern Setup Window



No.	Name	Descriptions
(1)	Selection	<p>Selectable files are display in a tree view.</p> <ul style="list-style-type: none"> Nodes of the tree are a folder specified in Specify data folder dialog, folders which storing control setup or pattern setup files related to the selected device, and CF card. CF card is displayed in the following format. CF card ([Drive name]) Bottom layer of the tree node displays names of the control setup file and the setting. They are displayed in the following format. [File name]([Setting name])
(2)	Folder	<p>A field to display folder name.</p> <ul style="list-style-type: none"> If a file is selected at the Selection, folder name (or a CF card) of its parent node is displayed. If a folder (or a CF card) is selected at the Selection, its folder name (or CF card) is displayed.
(3)	File	File name selected by the user is displayed.
(4)	[Open] button	The window is closed by a click and load the selected control setup or pattern setup file.
(5)	[Cancel] button	The window is closed by a click.

*(3) is not displayed for Load Pattern Setup window.

6-5 Save Control Setup and Pattern Setup Window

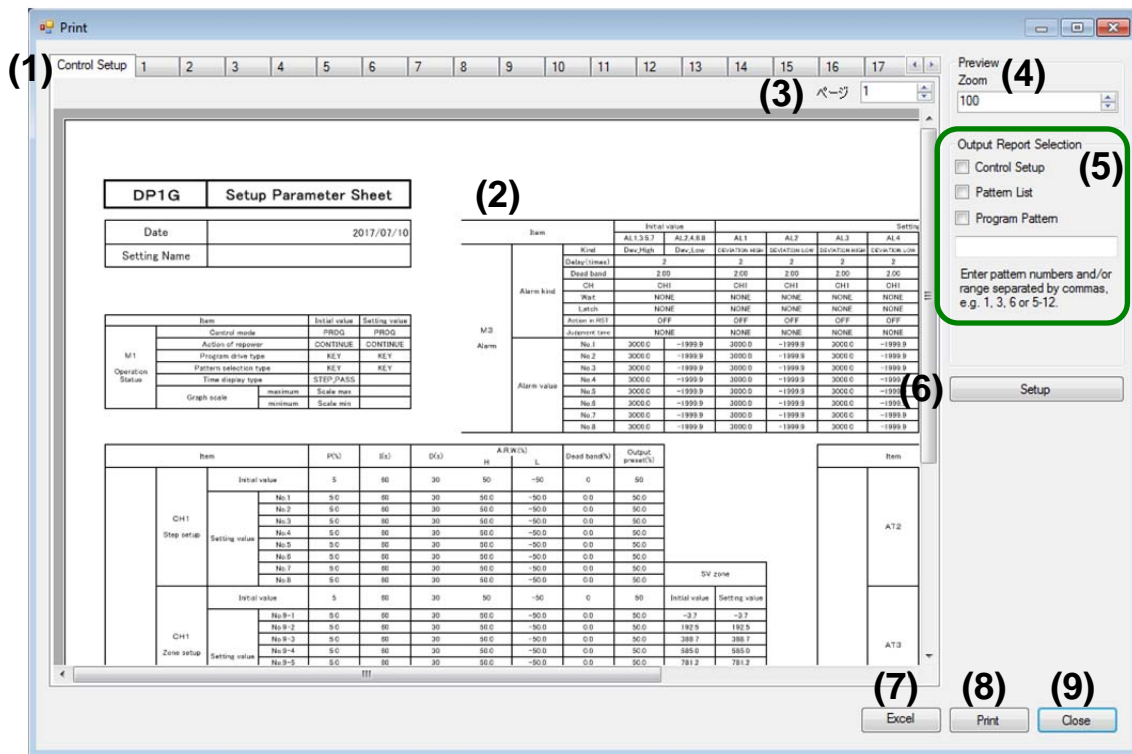


No.	Name	Descriptions
(1)	Selection	<p>Selectable files are display in a tree view.</p> <ul style="list-style-type: none"> Nodes of the tree are a folder specified in Specify data folder dialog, folders which storing control setup or pattern setup files related to the selected device, and CF card. CF card is displayed in the following format. CF card ([Drive name]) Bottom layer of the tree node displays names of the control setup file and the setting. They are displayed in the following format. [File name]([Setting name])
(2)	[Create] button	New folder is created by a click. "New folder" node is added in the Selection field.
(3)	Folder	<p>A field to display folder name.</p> <ul style="list-style-type: none"> If a file is selected at the Selection, folder name (or a CF card) of its parent node is displayed. If a folder (or a CF card) is selected at the Selection, its folder name (or CF card) is displayed.
(4)	File	<p>A field to specify file name.</p> <ul style="list-style-type: none"> If a file is selected at the Selection, its file name is displayed. A file name can be entered as desired.
(5)	[Save] button	The window is closed by a click and create (or overwrite) a control setup or pattern setup file under the name specified in file field.
(6)	[Cancel] button	The window is closed by a click.

*(4) is not displayed for Load Pattern Setup window.

6-6 Print Window

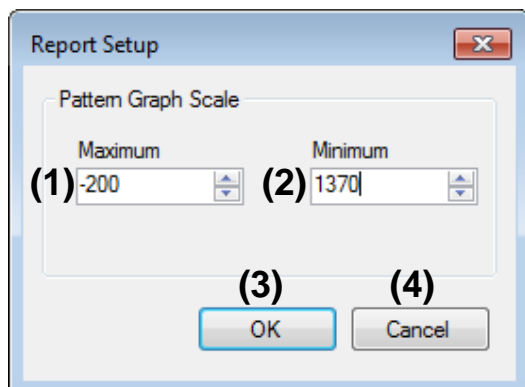
Window to display print preview of report of control setup or pattern setup and print out or output to Excel. Report is created by a template according to the selected device.



No.	Name	Descriptions
(1)	Preview Tab	Tab to select a report to preview. · Report of control setup is previewed by clicking [Control Setup] tab. · Report of each program pattern number is previewed by clicking [1] to [200] tabs.
(2)	Preview Display	Image of a report is displayed as preview.
(3)	Page Indication	Specify the page to preview. · Set range:1 to 100
(4)	Zoom	Specify the scaling of the preview to display. · Scaling is common to all report preview. · Set range:1 to 200
(5)	Output Report Selection	Set whether or not to output the control setup report. · <input checked="" type="checkbox"/> →Output <input type="checkbox"/> →Do not output
	Pattern List	Set whether or not to output the pattern list. · <input checked="" type="checkbox"/> →Output <input type="checkbox"/> →Do not output
	Program Pattern	Set whether or not to output the program pattern report. · <input checked="" type="checkbox"/> →Output <input type="checkbox"/> →Do not output
	Specify Program Pattern	Specify the report of the program pattern to output. · Specifying program pattern by separating the number by comma, or range are available. · Program pattern number of which used step count 0 is not output. · If the field is left blank, report of all program pattern except used step count 0 is output.
(6)	[Setup] button	Displays report setup dialog. · For details of set range, refer to the section 6-6-1.
(7)	[Excel] button	Output Excel file to the specified folder.
(8)	[Print] button	Output to a default printer.
(9)	[Close] button	The window is closed by a click.

6-6-1 Report Setup Window

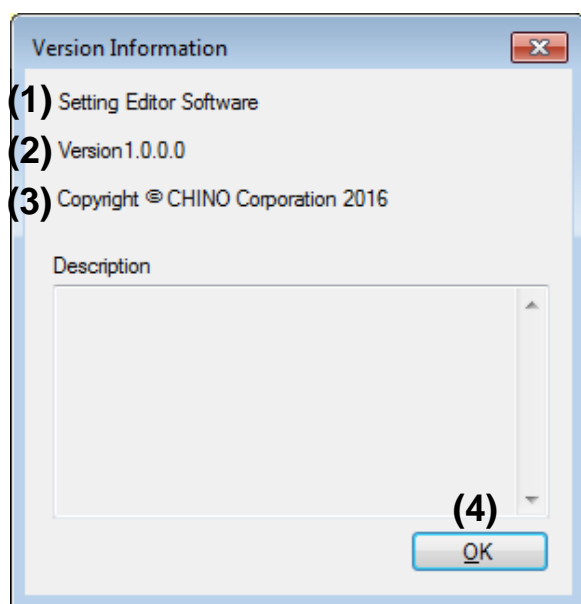
Dialog to set scale of the pattern graph for program pattern report. This is displayed by clicking [Setup] button in the print window.



No.	Name	Descriptions
(1)	Maximum	Displays pattern graph scale minimum value. · Set range: -99999 to 99999
(2)	Minimum	Displays pattern graph scale maximum value. · Set range: -99999 to 99999
(3)	[OK] button	Edited contents are applied and exit the dialog.
(4)	[Cancel] button	Edited contents are not applied and exit the dialog.

6-7 Version Information

Dialog to display version information.



No.	Name	Descriptions
(1)	Software name	Name of this software is displayed.
(2)	Software version	Version of this software is displayed.
(3)	Copyright	Displays copyright.
(4)	[OK] button	Exit the dialog by click.

7 Troubleshooting

This section describes symptom, cause, and countermeasure when there are abnormalities in operation and function of this software.

No.	Symptom	Cause and Countermeasure
1	Install is not completed normally.	Check if there is enough free space in hard disk (refer to the section 2).
2	The software does not start up.	Install may not completed normally. Uninstall first and install again to check if it starts up normally.
3	The software was working normally, but malfunction occurred suddenly.	Exit this software and start it again. *If the software is ended by unforeseen error, backup of unsaved data is not done, so set them again.
4	Report is not printed out.	Check if setting of the printer is correct.
5	CF card is not displayed on load and save control setup and pattern setup.	Check if CF card is inserted to a card reader properly or recognized correctly.

7-1 Message List

Message	Contents
Already started.	Check if DP-G setting editor software has been started. More than one software can not be started. Multiple start can not be done.
Scale decimal point can not be changed since input range on the other side is thermocouple.	Check that input range, CH1 and CH2 are both linear range.
Low \geq High is not able to set.	Check the setting is not "lower limit \geq higher limit" and input to fit "lower limit<higher limit".
Zero \geq Span is not able to set.	Check the setting is not "Zero \geq Span" and input to fit "Zero<Span".
Error in scale setting. Set "Range L Minimum \leq Range H Minimum \leq Range L Maximum \leq Range H Maximum".	Check the scale setting is "low region minimum \leq high region minimum \leq low region maximum \leq high region maximum".
Wrong step repeat setting.	Check if step repeat is set properly. Correct setting means fulfilling following conditions. · Step repeat value of the step to start repeat is 0. · Step repeat value of the step to end repeat is 1 to 99. · Above two conditions are paired.
Select a file.	Check if loading file is selected at load control setup window.
Failed to load the control setting file.	Control setup file can not be loaded since the software detects abnormal file. For example, character strings are entered in a space where normally numeric value is supposed to be.
Select a folder.	Check if loading folder is selected at load pattern setup window.
PAT folder does not exist.	Check if PAT folder to load pattern setup exist.
Failed to load the pattern setting file.	Pattern setup file can not be loaded since the software detects abnormal file. For example, character strings are entered in a space where normally numeric value is supposed to be.
Enter file name.	Check if file name to save is entered at save control setup window.
Select a folder or a file.	Check if a folder or a file to save is selected at save control setup window.
Folder name contains invalid character is not able to set.	Check that prohibited characters (¥ / : * ? " < >) are not used in the folder name.
There is already a folder of same name.	Check if a folder of same name exists in save control setup/pattern setup window.
There is no program pattern using step.	Check if it is about to print out or output in Excel a program pattern with no step used.
Wrong number.	(At report output) Check if program pattern number is specified correctly.

Message	Contents
Select a report to output.	Check that report to output is selected (marked).
Printing is failed.	<p>Failure occurred during report printing. Check following information and contact us.</p> <ul style="list-style-type: none"> · What operation did you do? · Software version information <p>Provide us with Log when the error occurred.</p>
Output is failed.	<p>Failure occurred during output to Excel. Check following information and contact us.</p> <ul style="list-style-type: none"> · What operation did you do? · Software version information <p>Provide us with Log when the error occurred.</p>
Setting is failed.	Error occurred while setting specified data folder. Check if it is set properly.
Encountered a non-continuable error. Exit application.	<p>Check following information and contact us.</p> <ul style="list-style-type: none"> · What operation did you do? · Software version information <p>Provide us with Log when the error occurred.</p>

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