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LSLV

DriveView 9

USER MANUAL

⚠ Safety Instructions

- Read this manual carefully before installing, wiring, operating, servicing or inspecting this equipment.
- keep this manual within easy reach for quick reference.

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Revision History

Version	Date	Remark	Revised Page
V1.0	`19.6.21	First Edition	
V1.1	’19.8.20	Error revised	

Table of Contents

1 Getting Started

1.1 DriveView 9 Characteristics

DriveView 9 is a software tool for engineering the LSIS inverter, referred to as drives. The tool holds the features for remote monitoring the drives connected to DriveView 9 and supports the necessary tasks needed for start-up and maintenance.

1.2 System Configuration

DriveView 9 supports various communication methods (Modbus-TCP, Modbus-RTU, LS485, USB).

1.3 System Requirements

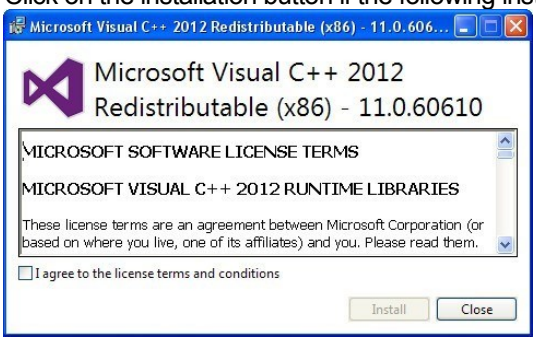
Category	Requirement
Windows	Windows 7/8/10
Processor	1 GHz or higher
RAM	1 GB (32-bit) or 2 GB (64-bit)
HDD	16 GB (32-bit) or 20 GB (64-bit)
Graphics	Graphic card supporting MS DirectX 9

1.4 Prepare Installation

[Order]

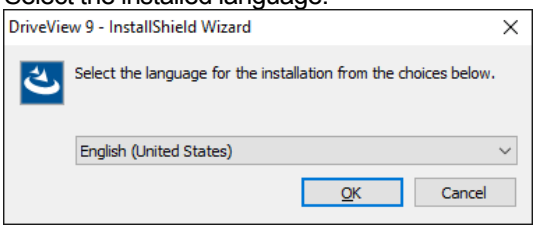
1 Run the installation file.

2 For normal operation, there may be essential redistribution packages that must be installed. Click on the installation button if the following installation screen appears.

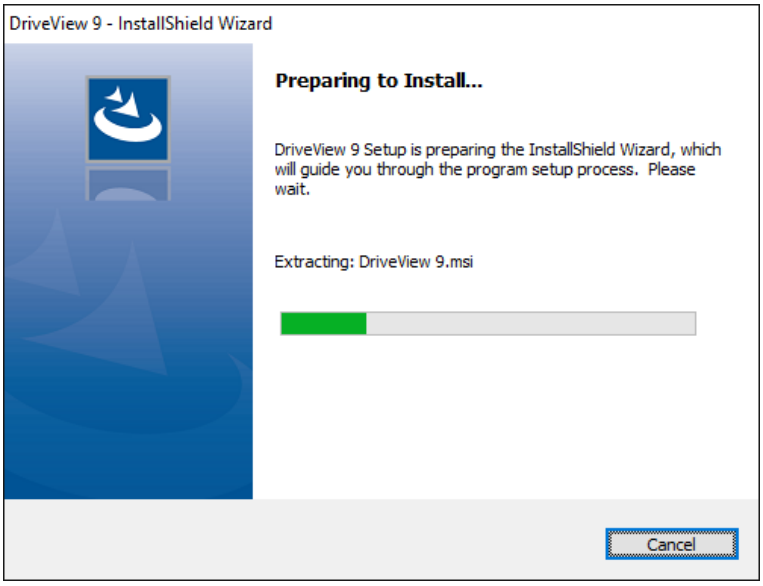


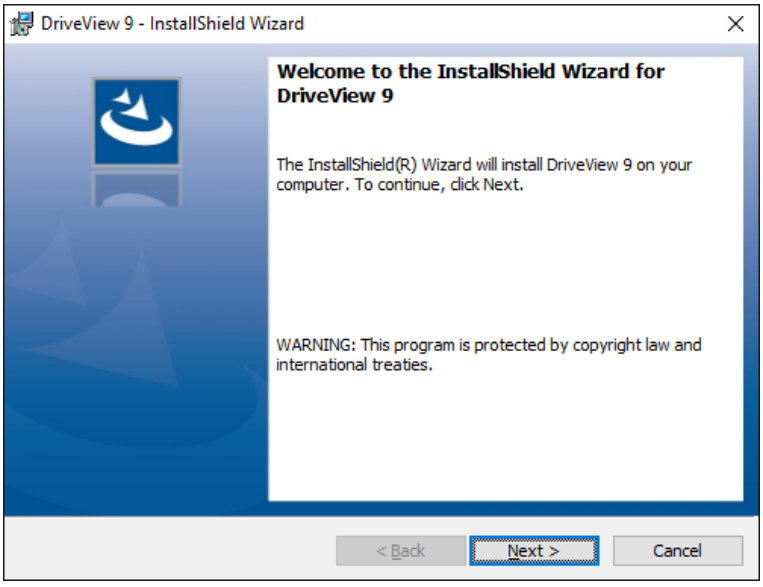
3 The time taken to install the redistribution package differs depending on the PC environment. In some cases, it may take more than 1-2 minutes. Even after it has been installed once, the installation of the redistribution package will not be requested again, even if DriveView 9 is installed again.

4 Select the installed language.

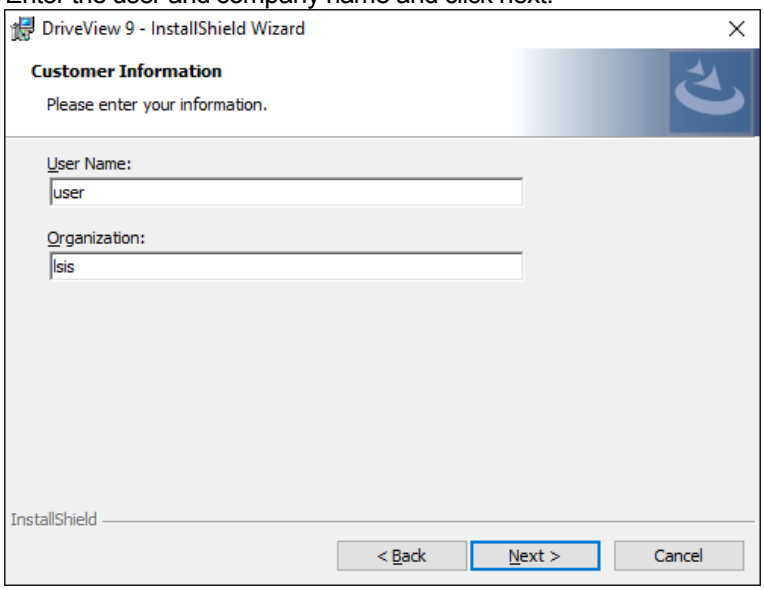


The installation wizard prepares the installation as follows.

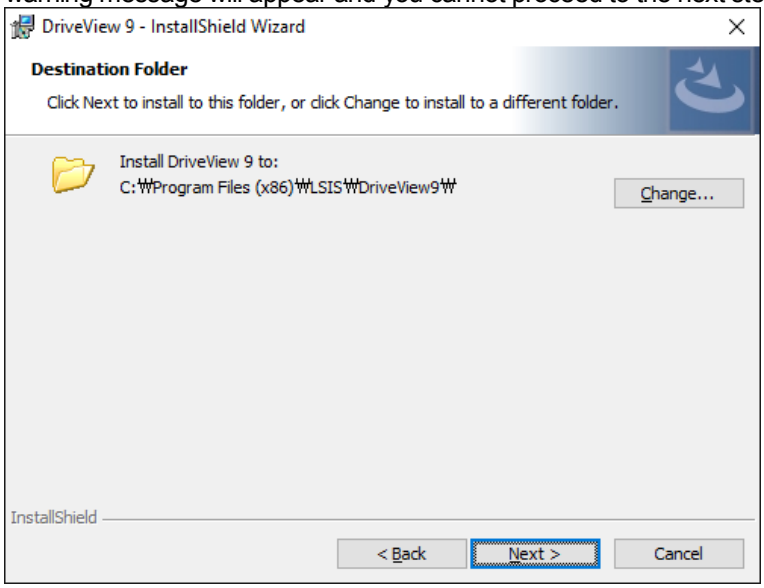




5 Enter the user and company name and click next.

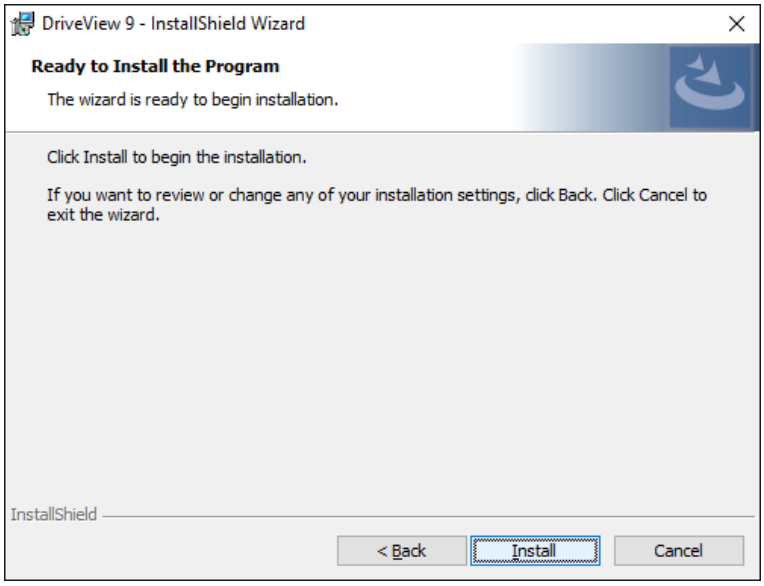


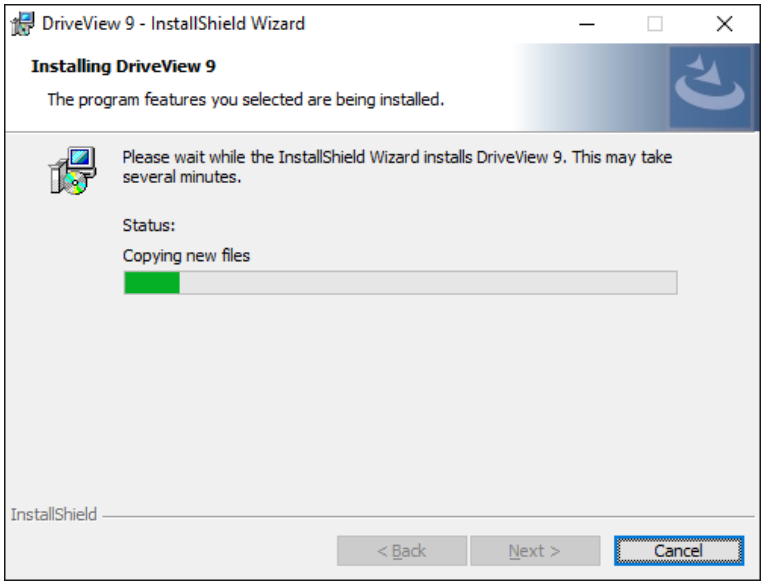
6 Specify the folder to install the files in. If you want to change the folder, click on the Browse button to enter or select a new folder. DriveView 9 needs around 120 MB of space for installation, so select a disk with sufficient space. If there is an insufficient amount of space, a warning message will appear and you cannot proceed to the next step.



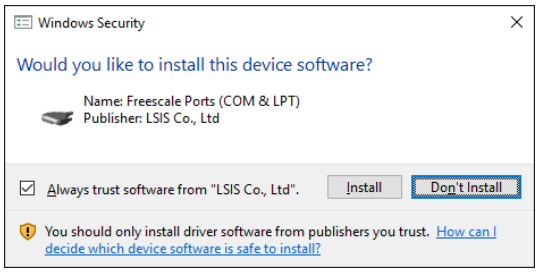
7 Once you have selected the folder, press the next button.

Check the installation information and click the Install button. Start installing as below.

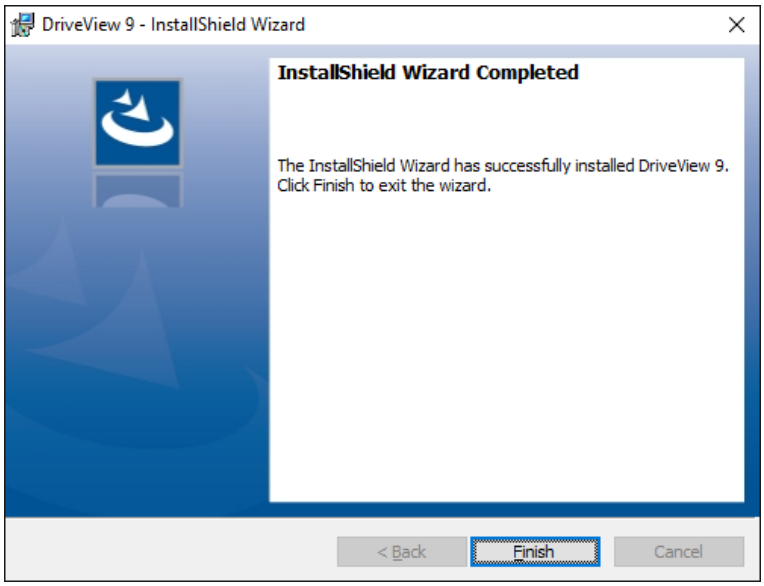




8 If you need to use the USB connection with the H100 product, you must install the relevant drive. Click on the Install button if the following installation screen appears.



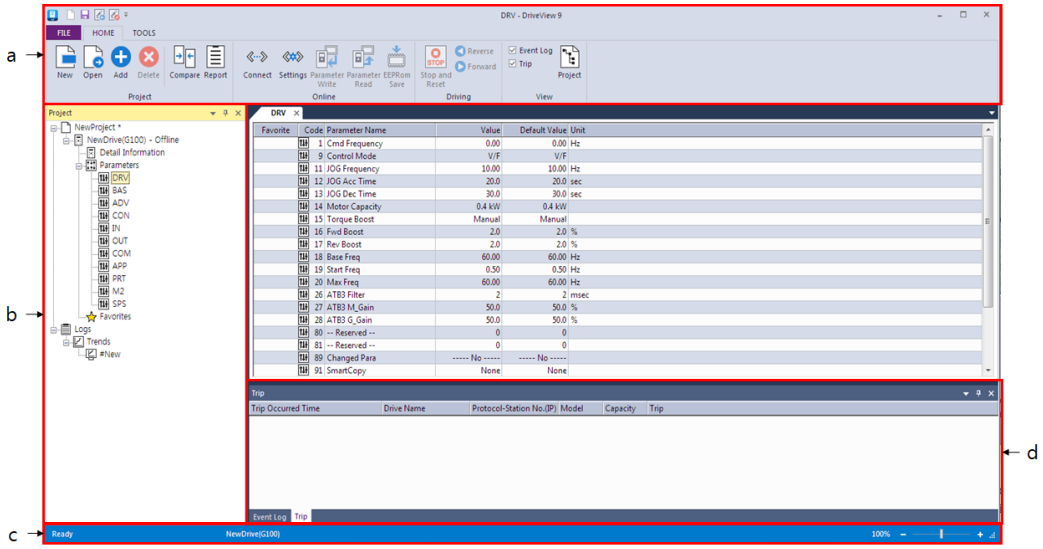
9 After a moment, the installation will complete as shown below.



2 Key Features

2.1 Main Screen

This is the screen displayed when DriveView 9 is started. The main screen consists of a title, menu, toolbar, control, search screen, parameter edit screen, result edit screen, and state screen.



[Chat Dialog Description]

a. Ribbon Bar: The basic menu for the program. This ribbon is made up of a panel with command buttons and icons. The commands are divided into tabs.

b. Project Screen: Shows the components of the current project.

c. State Bar: Shows the state of the DriveView 9, accessed drive information, and more.

d. Status Display Screen: Shows information of events and trips.

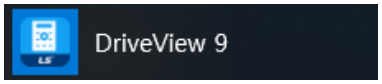
2.2 Starting

DriveView 9 is installed in the system.

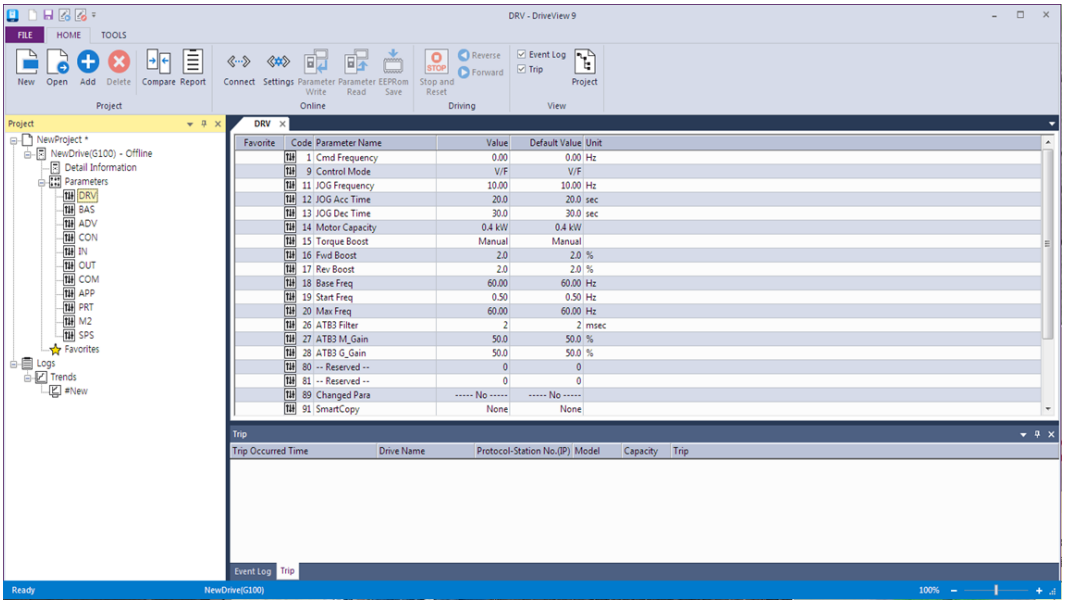
You can run it using two methods.

- Click the Fun icon on the desktop

- Windows Start button – Run DriveView 9



Start DriveView 9.exe. The start screen of DriveView 9 is displayed.



2.3 Communication

This explains the communication settings required for the drive connection and the deletion of the drive.

DriveView 9 supports Ethernet and Serial communication.

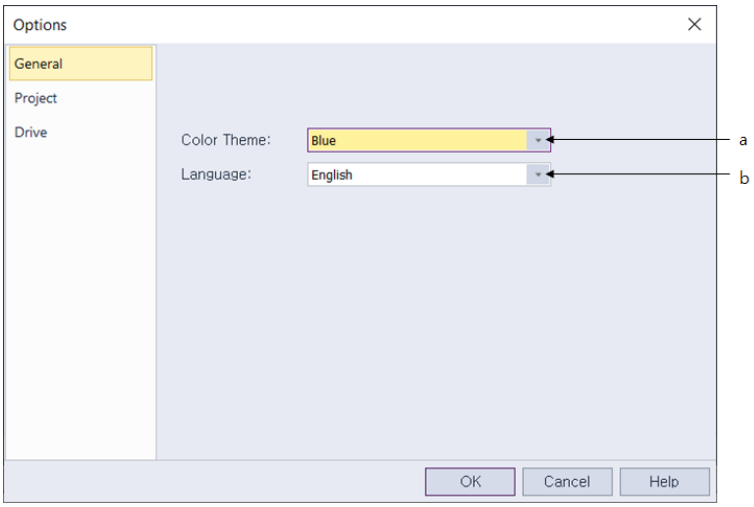
- Modbus-TCP, an Ethernet communications protocol, is supported automatically without any additional settings.
- The serial communication is connected with the drive by using Modbus-RTU, LS485.

(Refer to the manual guide of each drive for the maximum number of drives that can be connected.)

2.4 Options

1 General

You can set the general features of DriveView 9.



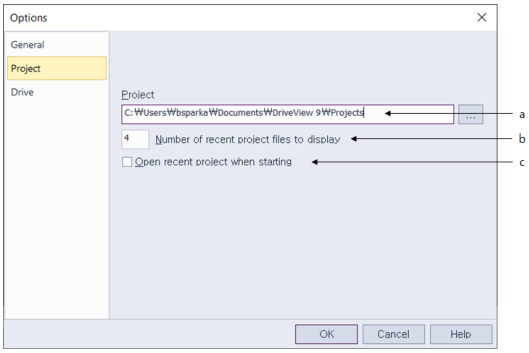
[Chat Dialog Description]

a. Theme color: Colors the theme of three colors (bold, dark, and bright).

b. Language: Supports English and Korean. Initially, the language is set to the language installed on the PC. Changes to the language selection will be reflected after restarting.

2 Project

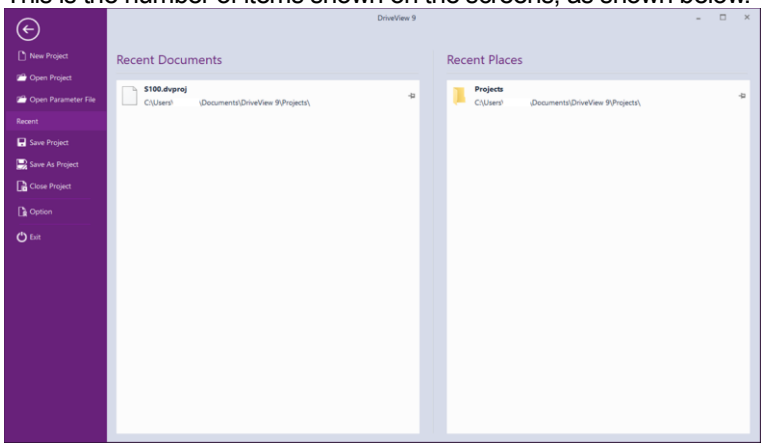
You can set the project features of DriveView 9.



[Chat Dialog Description]

a. Project Path: Set the folder where the generated projects are saved.

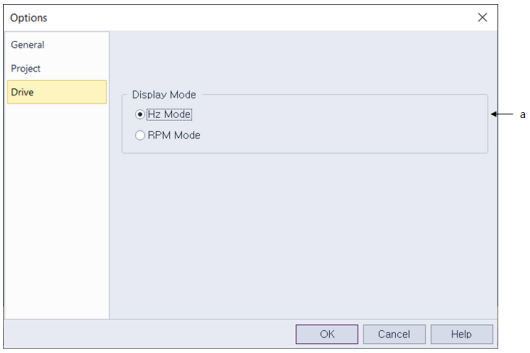
b. Display Recent Projects: Sets the maximum number of items displayed in recent projects. This is the number of items shown on the screens, as shown below.



c. Opening the Previous Project when Starting: Opens the previously opened project when DriveView 9 launches.

3 Drive

If speed-related values are displayed from the parameter items of DriveView 9, it is displayed in the selected Hz and RPM.



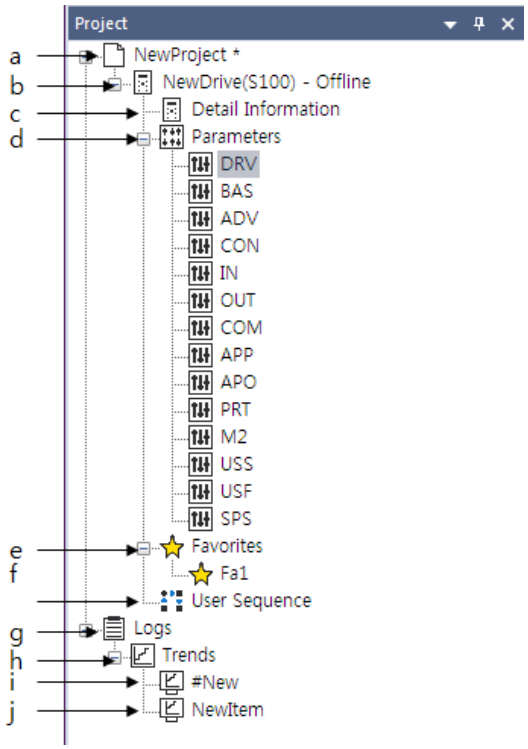
[Chat Dialog Description]

a. Display Mode: Select the display mode of Hz and RPM.

3 Project

3.1 Project Configuration

The project configuration items are as follows.



[Chat Dialog Description]

a. Project: Defines the entire system. Many related drives can be included in a single project.

b. Drive: Shows the system for a single drive.

c. Detailed Information: Shows the detailed information of the drive and the monitoring parameters.

d. Parameter: Shows the information of the drive parameters.

e. Favorites: Shows the information of the parameters registered as favorites.

f. User Sequence, Scheduling: Shows the additional features provided for each drive.

g. Log: Shows the information saved as logs.

h. Trend: Shows the information saved as trends.

i. #New Item: Double-click and a dialog box will appear for adding a new item.

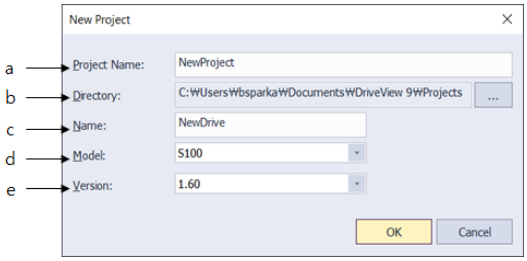
j. New Item: Shows trends

3.2 Project Management

3.2.1 Creating a New Project

Creates a new project.

Select the menu [FILE] – [New Project].



[Chat Dialog Description]

a. Project Name: Enter the project name of your choice. This becomes the name of the project file, using the “dvproj” file extension.

b. Path: The project file is created in the path as the name input by the user.

c. Name: Input the drive name.

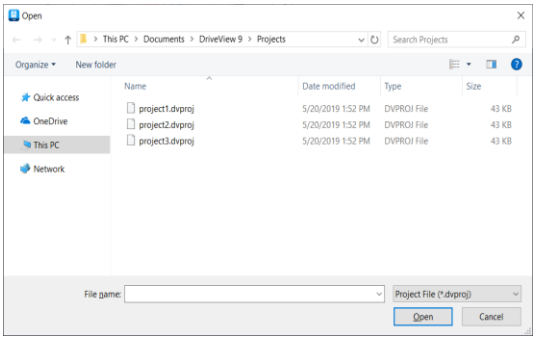
d. Model: Select the model name of the drive.

e. Version: Select the drive version.

3.2.2 Open Project

Open a previously saved project file.

Select the menu [FILE] – [Open Project].

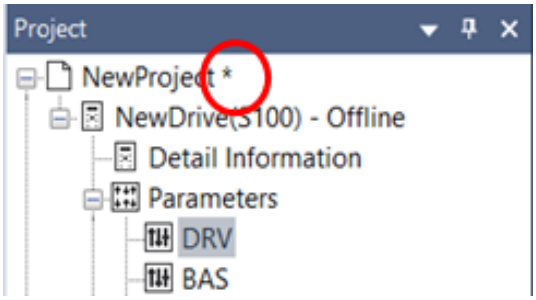


3.2.3 Save Project

Save changed project.

Select the menu [FILE] – [Save Project].

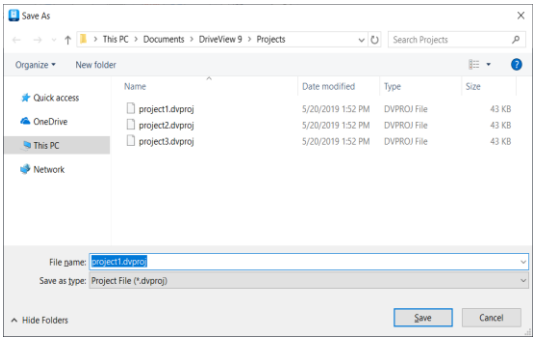
If there are edits in the project and it needs to be saved, an asterisk "*" will appear next to the project name in the project window.



3.2.4 Save As

Save the project as a different file.

Select the menu [FILE] – [Save As].

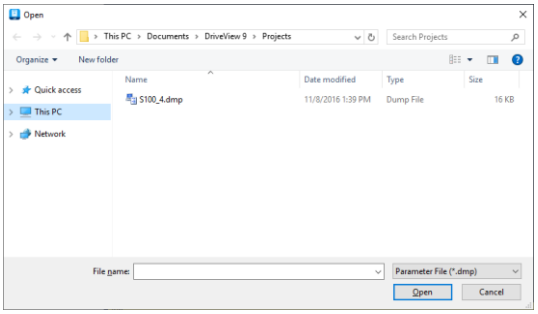


3.2.5 Opening the DriveView 7 Parameter File

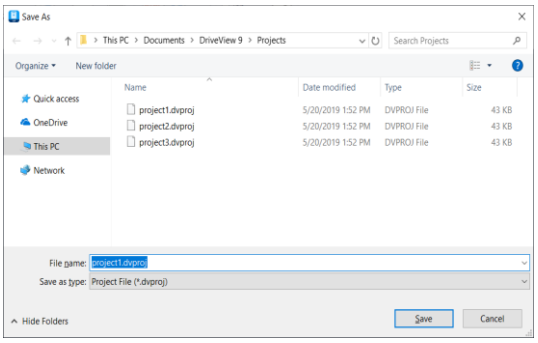
You can open the parameter file created in DriveView 7.

1 Select the menu [FILE] – [Open Parameter File].

2 Select the DriveView 7 parameter and select Open.



3 A new project is made and a dialog box appears for saving the project.



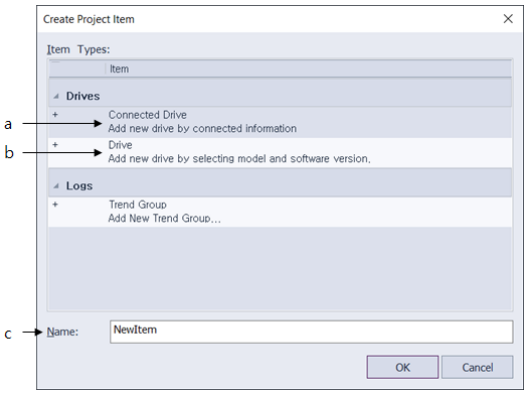
3.3 Project Item

Explains the items displayed in the project.

3.3.1 Drive

1 Add

Select the project name item and click [Add].



[Chat Dialog Description]

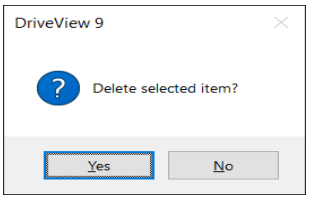
a. Connected Drive: Use the connected drive information to add a drive.

b. Drive: Select a model to add a new drive.

c. Name: Input the drive name.

2 Delete Drive

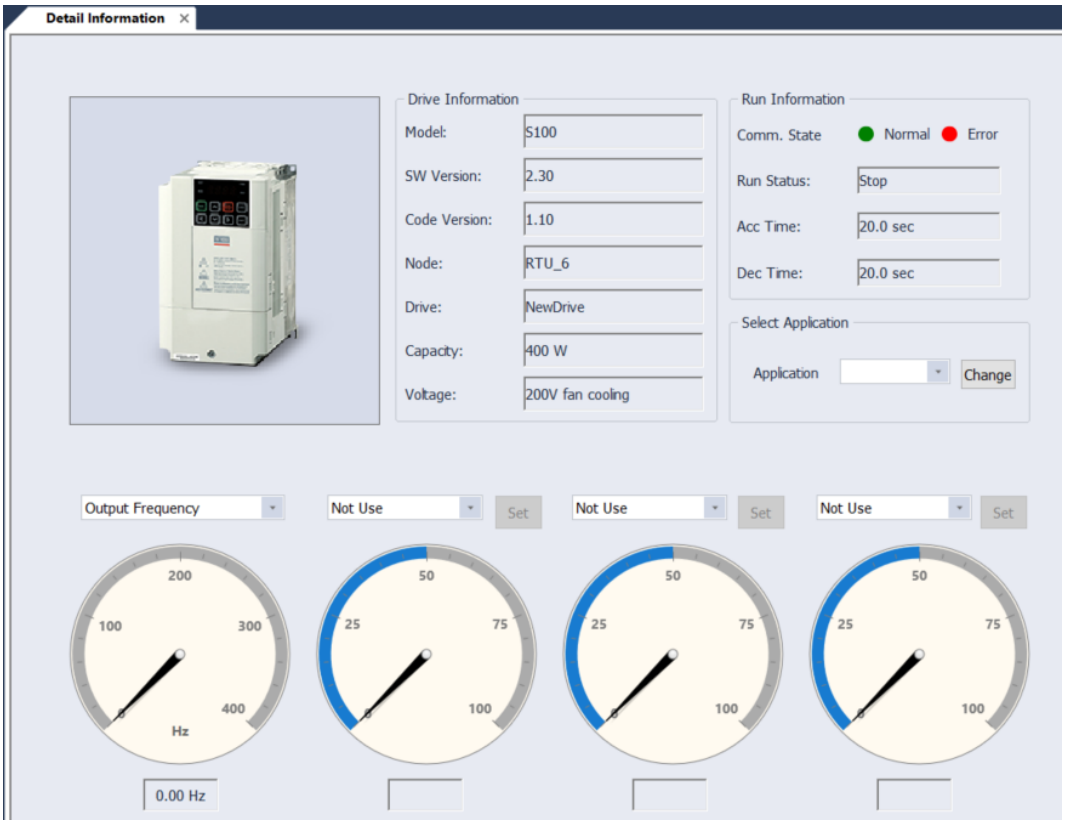
Select a drive item to delete from the project tree and click [Delete].



3.3.2 Detailed Information

Shows the detailed information of the drive and the monitoring parameters.

Double-click the "Detail information" item under the drive item in the project window.



1 Model Image: Shows the main image of the drive.

2 Device Information: Shows the information of the drive device.

- Model Name: Shows the model name of the drive.
- Version: Shows the version.
- Note: Shows the node name made up of the communication method, IP address, or telephone number.
- Device Name: The name can be changed to the device name chosen by the user.
- Change Button: Change the device name and click on the Change button to apply the changes.
- Capacity: Shows the capacity of the drive.
- Voltage: Shows the drive voltage.

3 Operating Information

- Communication State: Shows whether the communication state of the drive is normal or experiencing an error.
- Operation State: Shows the operation of the drive as Trip, Stop, or Operation.
- Acc Time: Shows the Acc Time.
- Dec Time: Shows the Dec Time.

4 Select Application

- Shows the applications supported on the application combo list.
- By default, “Not Use” is selected.
- Select the application to apply to and click on the Change button.
- The diagrams provided for the selected applications are added below the application, which is a sub menu of the drive in the navigation window.

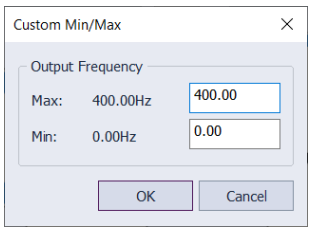
5 Select Monitoring

The user can select the monitoring parameters for monitoring, and information is provided in the gauge format.

> ⓘ Caution
>
> If the frequency reference is an analog source, the operation frequency must be set to Command Freq in the combo box and the parameter value must be changed. (The content of the combo box may differ for each model.)

6 Output Gauge**:** Select from Output Frequency or Output Speed for monitoring.

- Use the combo and select Output Frequency and Output Speed.
- Custom Min / Max: If monitoring is difficult to the size of the maximum or minimum width, the maximum and the minimum value of the gauge can be adjusted.
- Double-click on the gauge to display the maximum and minimum setting screen.



- Enter the maximum and minimum and click Apply.
- The gauge that is applied with the maximum and minimum values is output.

7 Select Monitoring Gauge: Seven gauges are provided. The user can select a gauge from the monitoring parameters.

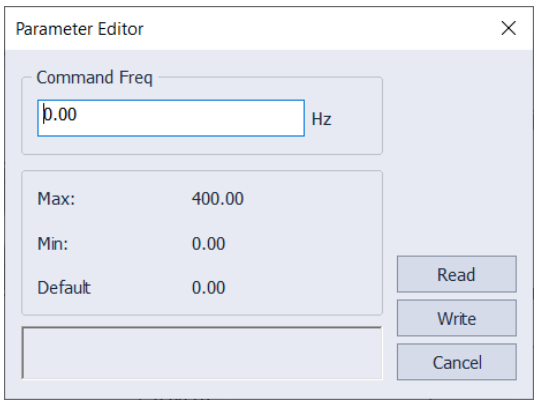
- The monitoring parameters can be selected from combo.

- Minimum and Maximum Settings: If monitoring is difficult to the size of the maximum or minimum width, the maximum and the minimum value of the gauge can be adjusted.
- Double-click on the gauge to display the maximum and minimum setting screen.
- Input the maximum and minimum and click Apply.
- The gauge that is applied with the maximum and minimum values is output.

8 Change Parameter Value

If the selected type of the monitoring parameter is a changeable parameter, then a control button for changing the parameter value is activated.

- Click the Control button.
- The Parameter Edit window will be shown.

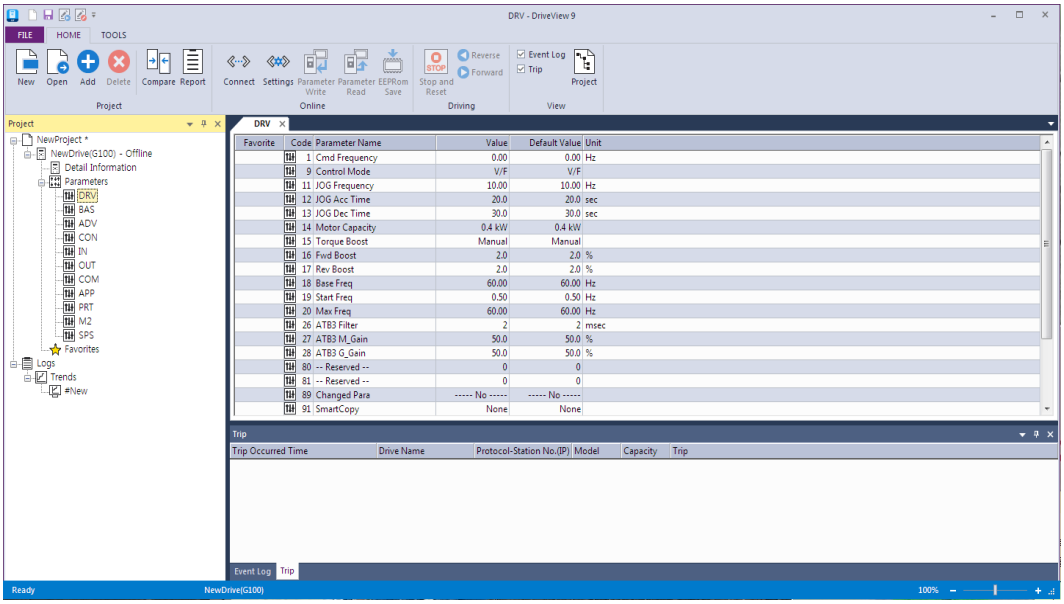


- Enter the value within the minimum and the maximum value range, and click the Write button to apply it to the drive.
- The result after writing will be output on the Status Display window.
- The Read button is used to read the parameter value again from the drive.

3.3.3 Parameter

Parameters that can be viewed and changed from the drive are classified into a group and provided as a list. If you select the parameter group, all parameters will be displayed. If you select a group, then only the parameters in that group will be displayed.

> ⓘ Caution
>
> The parameter group may vary by model and version. The group name is identical to the name shown on the keypad.



The display items per parameter are as below.

Favorite	Code	Parameter Name	Value	Default Value	Unit
	1	Cmd Frequency	30.00	0.00	Hz
	2	Cmd Torque	0.0	0.0	%
	3	Acc Time	10.0	20.0	sec
	4	Dec Time	30.0	30.0	sec

It is displayed in blue if it is different than the default value. If it exceeds the minimum and the minimum value, it will be displayed in red.

1 View Parameter

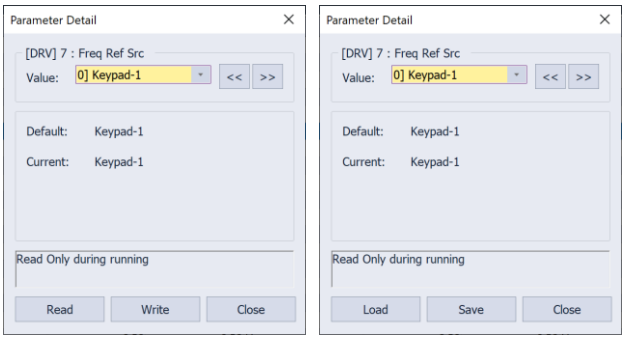
If connected with the drive, you can use the “read” feature to look up the parameter values.

2 Edit Parameter

A. Input from the Edit Screen

It is saved in the project. If you want to save the drive later, you can use the “write” feature to send the parameter value.

B. Edit from the Parameter Edit Window



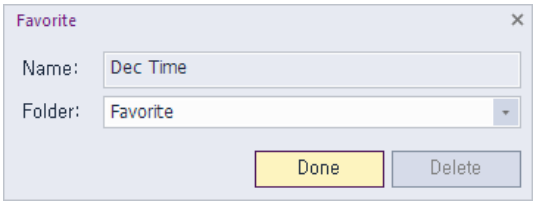
You can change and save the parameter value. If online, click the Write button from the dialog box, then the parameter value can be sent to the drive.

3.3.4 Favorites

You can make a separate favorites group for the parameters that you use frequently. You can only collect groups in favorites to view or read and write the favorites group only on the drive.

1 Add

Select the favorites area from the Parameter Edit window. The following dialog box will be displayed. Click the Complete button in the dialog box.

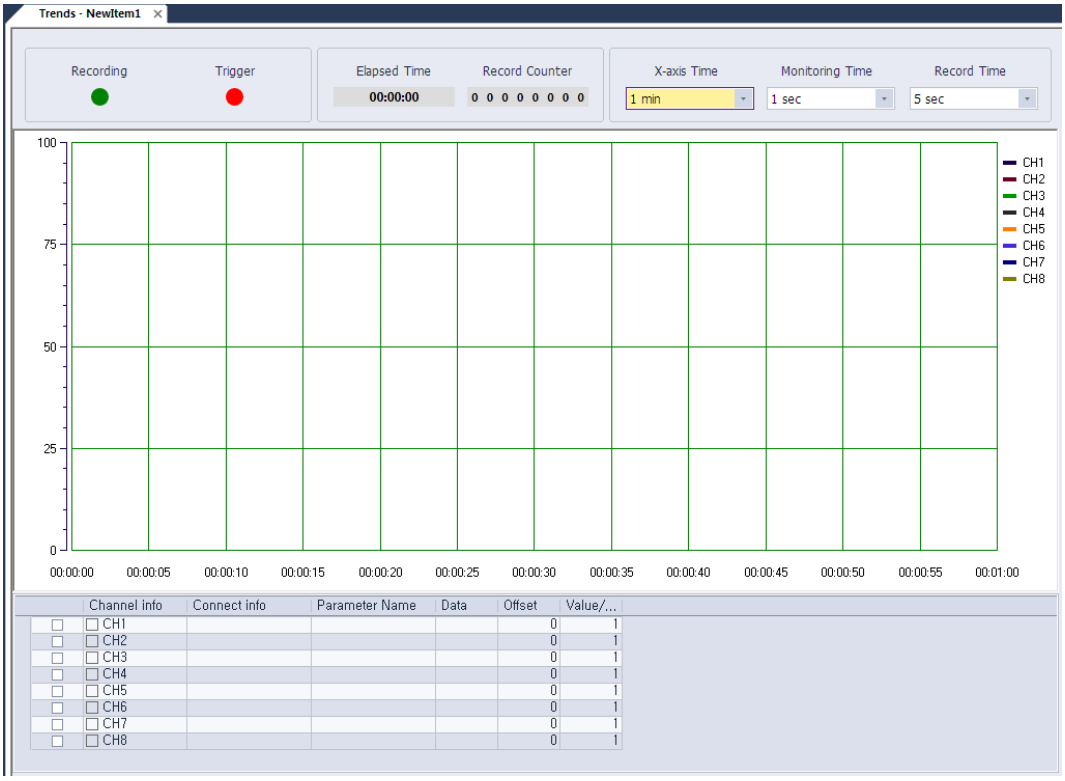


2 Delete

Select the registered parameter area from the parameter edit window. Click the Delete button in the dialog box. You can also delete items from the favorites group.

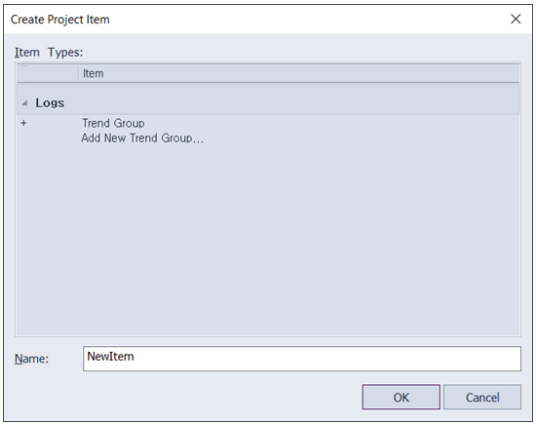
3.3.5 Trend

This is a feature for monitoring parameters as graphs. The monitoring graphs show 8 channels. These 8 channels can be shown on one graph or each channel can be shown on each graph. Also, up to 8 graphs can be shown.



1 Add

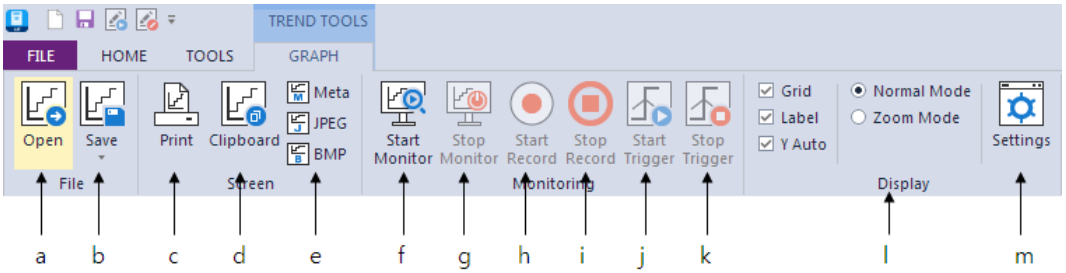
On the project tree, double-click on the “#New Item” below the trend item. Enter the name and click the Confirm button.



2 Delete

Select the trend item to delete from the project tree and select [Delete] from the menu.

3 Menu



a. Open

- Select the menu at [Graph] – [Open].
- This is a feature for importing the saved scope file.
- Click and select a file to open. The file extension is *.sco.
- This feature is enabled when monitoring is stopped.

b. Save

- Select [Graph] – [Save].
- This is a feature for saving the currently monitored graph.
- Save all the settings information of the graph.
- The extension of the saved file is *.sco.

c. Print

- Select the menu at [Graph] – [Print].
- Print the current graph screen.

d. Clipboard

- Select the menu at [Graph] – [Clipboard].
- Copies the current graph screen.

e. Image

- Select the menu [Graph] – [Image].
- Meta File: Save the graph screen in the meta file format.
- JPEG File: Save the graph screen in the JPEG file format.
- BITMAP File: Save the graph screen in the BITMAP file format.

f. Start Monitoring

- Select the menu at [Graph] – [Start Monitoring].
- Start monitoring. If you start monitoring, the recording icon and the triggering icon is enabled so you can start the recording and triggering.

g. Stop Monitoring

- Select the menu at [Graph] – [Stop Monitoring].
- Stop the monitoring in operation. When you stop monitoring, the recording icon and the triggering icon will be disabled. Also a marker is enabled so you can check each channel value.

h. Start Recording

- Select the menu at [Graph] – [Start Recording].
- When you start recording, the channels and values are recorded at every set recording time. The recordings are stored in the file specified in the recording file path. When recording, the signal blinks on the screen. Also, the recording counter shows the number of currently recorded items.

i. Stop Recording

- Select the menu at [Graph] – [Stop Recording].
- Stop Recording.

j. Start Trigger Observation

- Select the menu at [Graph] – [Start Trigger].
- Start trigger observation. When you start triggering, the screen will be stored if the channel value is higher or lower than the set value set on the trigger settings. The triggers are stored in the file specified in the screen save path.

k. Stop Trigger Observation

- Select the menu at [Graph] – [Stop Trigger].
- Stop the trigger observation.

l. Display

- Grid: The grid of the graph will be shown or hidden.
- Show Label: The label that shows the channel name will be shown or hidden.
- Automatic Y-Axis Scaling: This feature allows automatic movement of the Y-axis to the amount of the set channel value. Uncheck this value and the value of the Y-axis is adjusted to the specified minimum and maximum value.
- Normal Mode: The marker becomes active in the graph.
- Zoom Mode: The graph become zoom in.

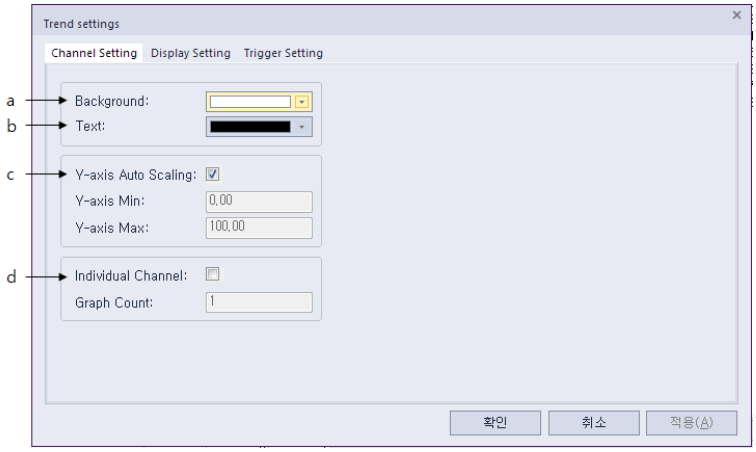
m. Settings

- Select the menu at [Graph] – [Settings].
- This shows the option setting dialog box on the graph.

3.3.5.1 Graph Setting

Select the menu [GRAPH] – [Settings].

1 Channel Setting



[Chat Dialog Description]

a. Background Color

Select the color of the graph.

b. Text Color

Select the text color of the graph.

c. Auto Adjust Y-Axis

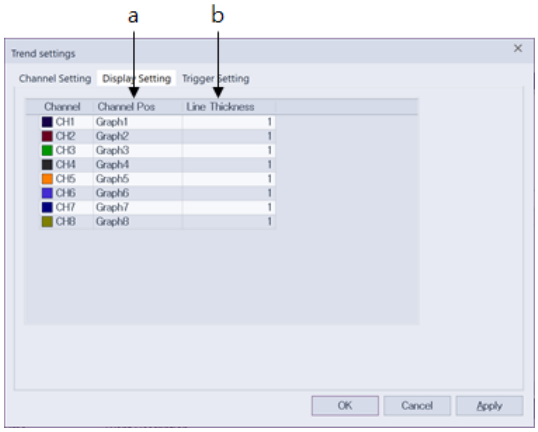
This feature allows automatic movement of the Y-axis to the amount of the set channel value. Uncheck this value and the value of the Y-axis is adjusted to the specified minimum and maximum value. If the channel value is lower or higher than the minimum or maximum values respectively, the Y-axis still will not change.

d. Separate View of Channels

This feature provides each channel as a separate graph. First select the separate channel view, enter the number of graphs (1-8), and click the Change button to see the monitoring

graphs, depending on the set number. By default, all channels are allocated as graph 1. If you do not select separate view of channels, only 1 graph is shown again and all channels are shown in that one graph.

2 Monitor Screen Settings



[Chat Dialog Description]

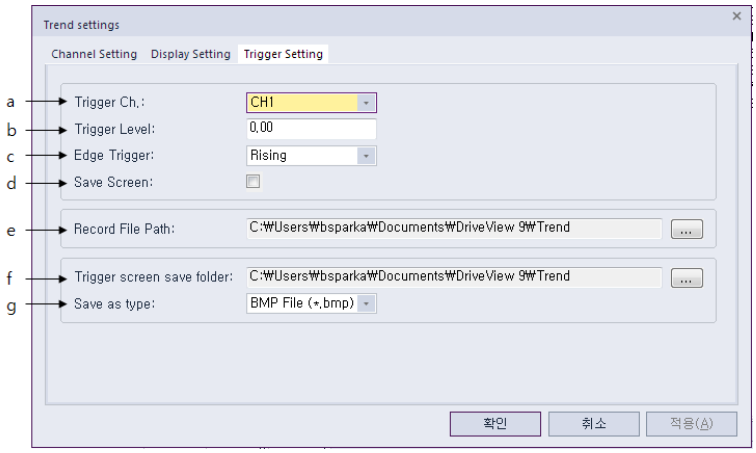
a. Channel Location

You can select the channel location for each channel.

b. Line Width

Select the line width of the channel.

3 Trigger and Record Settings



[Chat Dialog Description]

a. Trigger Channel

To use the triggering feature, you must have saved the 1 trigger setting. The number of

channels that can be triggered is limited to 1.

b. Trigger Level

Set the reference value for triggering.

c. Condition

Select whether to save the screen if the channel value is rising in reference to the triggering value, or if the channel value is falling.

d. Save Screen

Select whether to save the screen if the channel value matches the condition.

e. Record Save Folder

Select a folder to save to when recording. You can select the folder after recording has stopped. While recording, it is disabled and cannot be selected.

f. Trigger Screen Save Folder

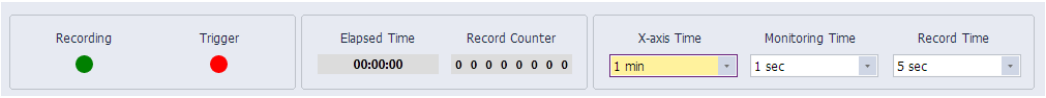
Select the folder you want to save the screen in when conducting triggering. You can select the folder after triggering has stopped. While triggering, it is disabled and cannot be selected.

g. Save Method

Select a method folder you want to save the screen in when conducting triggering.

3.3.5.2 Feature

[Show Graph]



1 Recording

- If you start recording during a monitoring operation, the light will flash to indicate that is is recording. This action can be used to indicate whether you are currently recording or not.

2 Trigger Generation

- When you start trigger observation and a trigger occurs, this light will flash.

3 Elapsed Time

- This shows the elapsed time since monitoring started. The time is output in the 00:00:00 format.

4 Record Counter

- Shows how many recordings were after recording started.

5 Adjust X-Axis Time

- Select the time scope of the X-axis. You can select from 10 seconds to 1 hour.

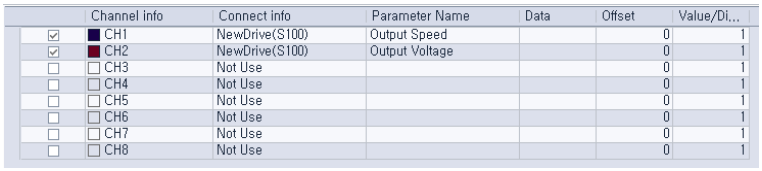
6 Adjust Monitoring Time

- Select the monitoring time interval of the channel. You can select between 0.1 - 5 seconds and a graph will be shown depending on the selected time period.

7 Adjust Record Time

- Select the interval of record time. You can select between 1 second to 1 hour, and recording will be performed based on the selected interval.

[Parameter Settings]



	Channel info	Connect info	Parameter Name	Data	Offset	Value/Di...
☑	CH1	NewDrive(S100)	Output Speed		0	1
☑	CH2	NewDrive(S100)	Output Voltage		0	1
☐	CH3	Not Use			0	1
☐	CH4	Not Use			0	1
☐	CH5	Not Use			0	1
☐	CH6	Not Use			0	1
☐	CH7	Not Use			0	1
☐	CH8	Not Use			0	1

1 Parameter

For monitoring, you must enable the channel. If disabled, it is excluded from the monitoring item. You can select the connection information from the enabled channel. The connected information can select the drive included in the current project. You can select the parameter that can be monitoring in the drive.

2 Data

Shows the current value. This is the original value that is not offset or applied with a ratio. If there is an error with communication, it will be displayed as a communication error.

3 Offset

This is applying offset to the current value. The applied value is shown in the graph.

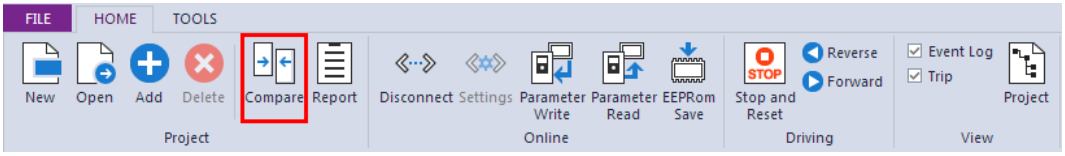
4 Ratio

This is applying a ratio to the current value. The applied value is shown in the graph.

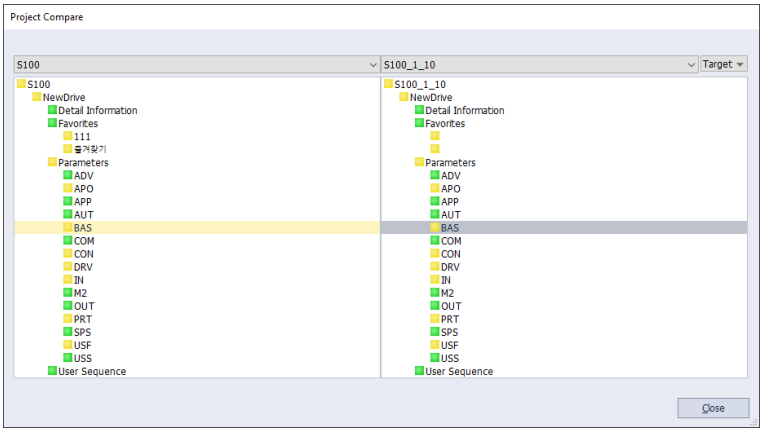
3.3.6 by business site

This is a feature for showing the wrong parameter value in the results window by comparing drive-drive, drive-file, file-file, drive-default value (null device), and file-default parameter file.

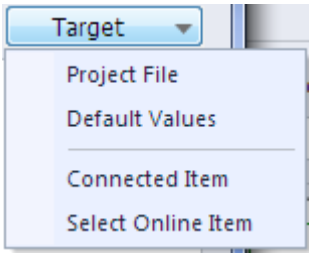
Select the menu at [HOME] – [Compare].



It will be displayed as below.

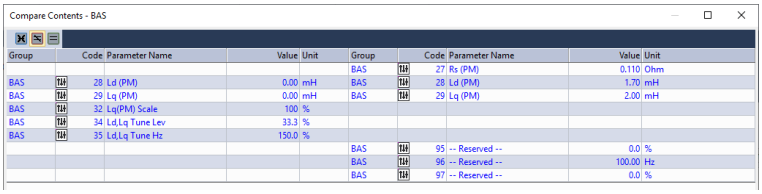


In Compare with, select the items to compare.



is shown if the content is the same and is shown if the content is different.

For more information, double-click on the group and the following dialog box is shown.



1  : Shows all parameters on the screen.

2  : Shows only different parameters on the screen.

3  : Shows only the same parameters on the screen.

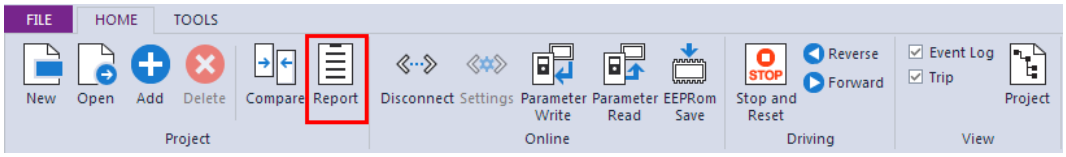
3.3.7 Report

This is a feature for outputting the parameter values as a report format.

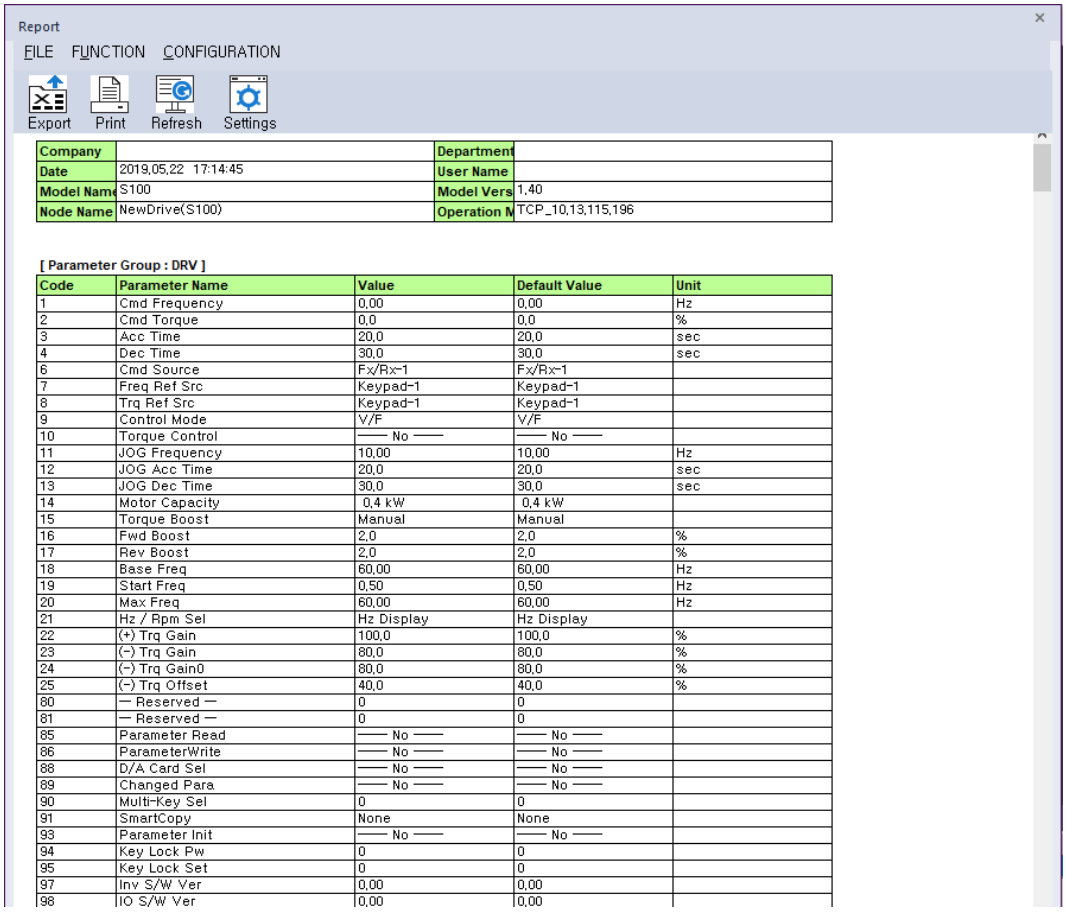
This explains the report edit and output features.

3.3.7.1 Run

Select the menu [HOME] – [Report].



The currently selected parameter content of the drive on the project window. This is shown on the dialog box of the report.



Company		Department	
Date	2019,05,22 17:14:45	User Name	
Model Name	S100	Model Vers	1.40
Node Name	NewDrive(S100)	Operation M	TCP_10,13,115,196

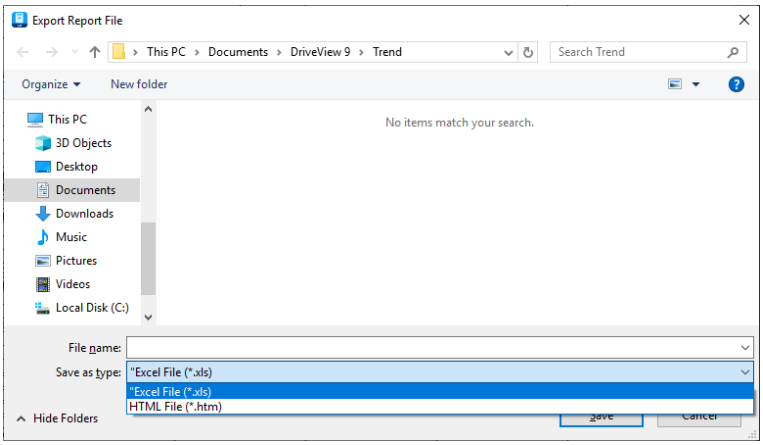
[Parameter Group : DRV]

Code	Parameter Name	Value	Default Value	Unit
1	Cmd Frequency	0,00	0,00	Hz
2	Cmd Torque	0,0	0,0	%
3	Acc Time	20,0	20,0	sec
4	Dec Time	30,0	30,0	sec
6	Cmd Source	Fx/Rx-1	Fx/Rx-1	
7	Freq Ref Src	Keypad-1	Keypad-1	
8	Trq Ref Src	Keypad-1	Keypad-1	
9	Control Mode	V/F	V/F	
10	Torque Control	—— No ——	—— No ——	
11	JOG Frequency	10,00	10,00	Hz
12	JOG Acc Time	20,0	20,0	sec
13	JOG Dec Time	30,0	30,0	sec
14	Motor Capacity	0.4 kW	0.4 kW	
15	Torque Boost	Manual	Manual	
16	Fwd Boost	2,0	2,0	%
17	Rev Boost	2,0	2,0	%
18	Base Freq	60,00	60,00	Hz
19	Start Freq	0,50	0,50	Hz
20	Max Freq	60,00	60,00	Hz
21	Hz / Rpm Sel	Hz Display	Hz Display	
22	(+) Trq Gain	100,0	100,0	%
23	(-) Trq Gain	80,0	80,0	%
24	(-) Trq Gain0	80,0	80,0	%
25	(-) Trq Offset	40,0	40,0	%
80	— Reserved —	0	0	
81	— Reserved —	0	0	
85	Parameter Read	—— No ——	—— No ——	
86	ParameterWrite	—— No ——	—— No ——	
88	D/A Card Sel	—— No ——	—— No ——	
89	Changed Para	—— No ——	—— No ——	
90	Multi-Key Sel	0	0	
91	SmartCopy	None	None	
93	Parameter Init	—— No ——	—— No ——	
94	Key Lock Pw	0	0	
95	Key Lock Set	0	0	
97	Inv S/W Ver	0,00	0,00	
98	IO S/W Ver	0,00	0,00	

3.3.7.2 Export File

This is a feature to save the report information as an Excel or web file.

Select the menu at [FILE] – [Export File].



1 Output in Excel Format

It is saved as an Excel file with the extension .xls.

Company		Department	
Date	2019.05.22 17:14:45	User Name	
Model Nam	S100	Model Versi	1.40
Node Name	NewDrive(S100)	Operation M	TCP_10.13.115.196

[Parameter Group : DRV]

Code	Parameter Name	Value	Default Value	Unit
1	Cmd Frequency	0.00	0.00	Hz
2	Cmd Torque	0.0	0.0	%
3	Acc Time	20.0	20.0	sec
4	Dec Time	30.0	30.0	sec
6	Cmd Source	Fx/Rx-1	Fx/Rx-1	
7	Freq Ref Src	Keypad-1	Keypad-1	
8	Trq Ref Src	Keypad-1	Keypad-1	
9	Control Mode	V/F	V/F	
10	Torque Control	----- No -----	----- No -----	
11	JOG Frequency	10.00	10.00	Hz
12	JOG Acc Time	20.0	20.0	sec
13	JOG Dec Time	30.0	30.0	sec
14	Motor Capacity	0.4 kW	0.4 kW	
15	Torque Boost	Manual	Manual	

2 Output as a Web File

It is saved as a web file with the extension .htm.

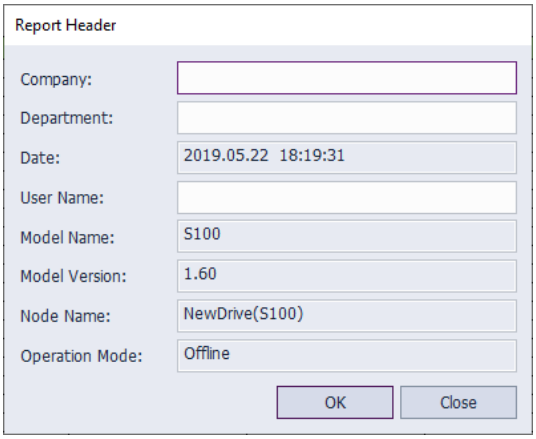
Company		**Department**	
Date	2019.05.22 17:14:45	**User Name**	
Model Name	S100	**Model Version**	1.40
Node Name	NewDrive(S100)	**Operation Mode**	TCP_10.13.115.196

[Parameter Group : DRV]

Code	Parameter Name	Value	Default Value	Unit
1	Cmd Frequency	0.00	0.00	Hz
2	Cmd Torque	0.0	0.0	%
3	Acc Time	20.0	20.0	sec
4	Dec Time	30.0	30.0	sec
6	Cmd Source	Fx/Rx-1	Fx/Rx-1	
7	Freq Ref Src	Keypad-1	Keypad-1	
8	Trq Ref Src	Keypad-1	Keypad-1	
9	Control Mode	V/F	V/F	
10	Torque Control	----- No -----	----- No -----	
11	JOG Frequency	10.00	10.00	Hz
12	JOG Acc Time	20.0	20.0	sec
13	JOG Dec Time	30.0	30.0	sec
14	Motor Capacity	0.4 kW	0.4 kW	
15	Torque Boost	Manual	Manual	
16	Fwd Boost	2.0	2.0	%
17	Rev Boost	2.0	2.0	%
18	Base Freq	60.00	60.00	Hz
19	Start Freq	0.50	0.50	Hz
20	Max Freq	60.00	60.00	Hz
21	Hz / Rpm Sel	Hz Display	Hz Display	
22	(+) Trq Gain	100.0	100.0	%
23	(-) Trq Gain	80.0	80.0	%
24	(-) Trq Gain0	80.0	80.0	%
25	(-) Trq Offset	40.0	40.0	%

3.3.7.3 Header Settings

This is a feature to edit the text shown in the report header. Select the menu at [CONFIGURATION] – [Header Settings]. The edit window of the report header is output.



The items that can be edited are company name, department name, and writer. The rest are automatically input.

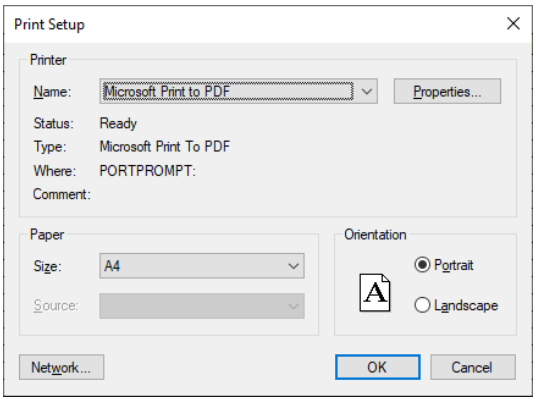
Click on the Confirm button and all setting information are saved. The changed content are applied to the report.

3.3.7.4 Refresh

This is a feature for updating the report content to the latest information. Select the menu at [FUNCTION] – [Refresh]. This newly reads information and displays as a report.

3.3.7.5 Output

This is a feature to print the report with the printer. Select the menu at [FILE] – [Print]. The print settings window will be output.



Click the Confirm button to print the report with the selected printer.

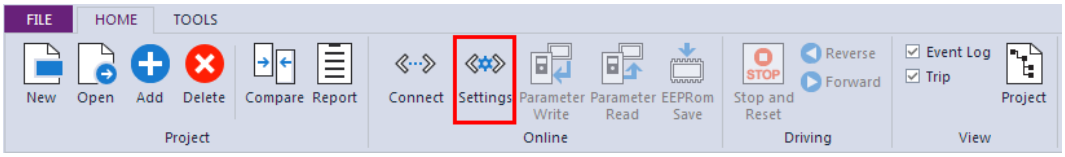
4 Online

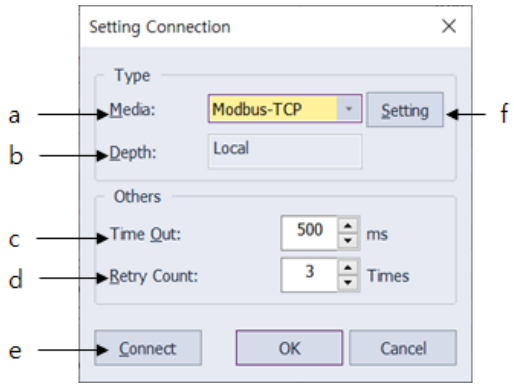
4.1 Connection Option

Set the network to connect with the drive.

The connection method can be both Ethernet and Serial, and supports all three protocols (Modbus-TCP, Modbus-RTU, LS485).

Select the menu [HOME] – [Settings].





[Chat Dialog Description]

a. Method: Set the communication media to be used when there is a connection with the drive. You can set to Modbus-TCP, Modbus-RTU, LS485.

b. Steps: Set the structure of connection with the drive. You can select from local, 1-step remote, and 2-step remote connection settings.

c. Timeout: Enter the communication timeout with the drive to one thousandth of a second.

d. Retry Attempt: Enter the number of communication attempts to try after communication failure.

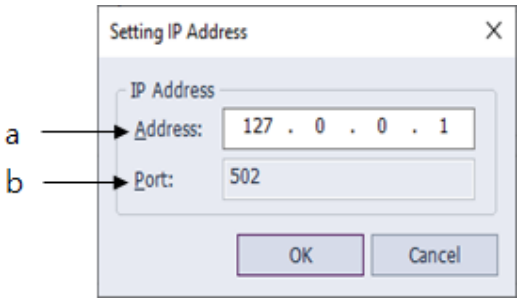
e. Connect: This is a set access option that tries to establish a connection with the drive.

f. Setting: Displays a dialog to set the IP address.

[Ethernet]

1 Connection Method - Set the method to Modbus-TCP and click the Set button.

2 Enter the IP address.



[Chat Dialog Description]

a. Address: Enter the address assigned to the drive.

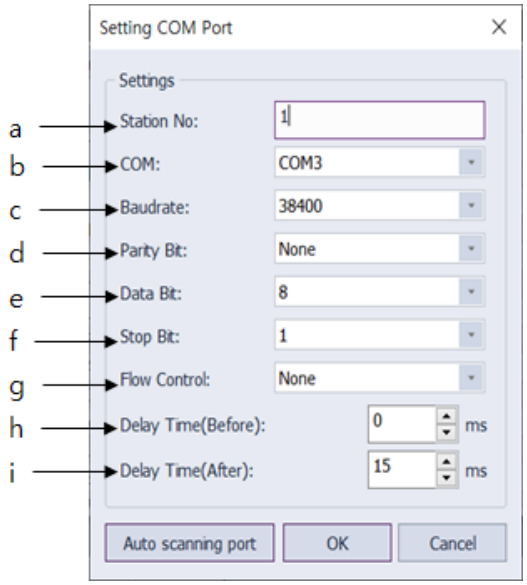
b. Port: Shows the port information used after connecting to the drive.

> ⓘ Caution
>
> For an Ethernet connection, the PC must have an Ethernet connection.
> The IP setting is the IP of the Ethernet communications model. You can check whether normal access if possible with the set IP address using Ping under [Run] in the Windows starts menu.

[Serial]

1 Connection Method - Set the method to Modbus-RTU, LS485 and click the Set button.

2 Set the communications port.



[Chat Dialog Description]

a. Phone Number: Input the phone number assigned to the drive.

b. Communication Port: Select the COM Port connected to the drive. Only the COM Port installed in the system will be displayed. You cannot use the same COM Port for each Modbus-RTU and LS485.

c. Communication Speed: Input the communication speed.

d. Parity Bit: Input the parity bit.

e. Data Bit: Input the data bit.

f. Stop Bit: Input the stop bit.

g. Flow Control: Select the flow control.

h. Wait time (Before): Delay time used for RTS control (before transmission)

i. Wait time (After): Delay time used for RTS control (after transmission)

4.2 Connect/End Connection

This tries to establish a connection with the drive, depending on the access option you set.

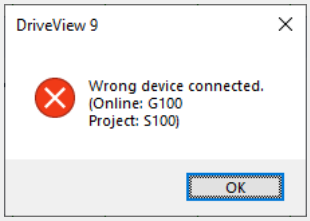
Select the menu [HOME] – [Connect].

A dialog box appears during connection.

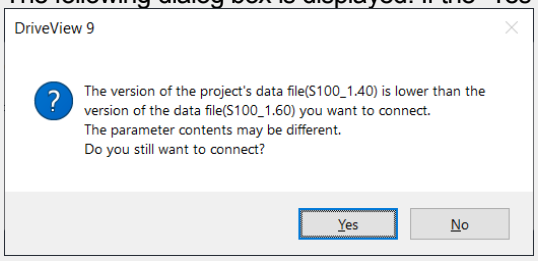
Caution

If a normal connection cannot be achieved

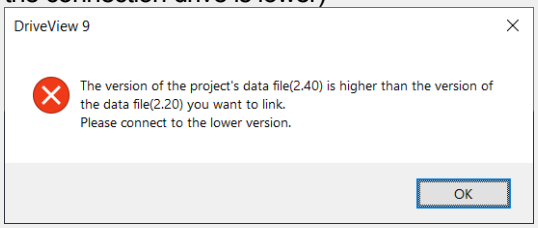
1) If the project drive and the connection drive are different models
   A normal connection will not be made and the following dialog box will be displayed.



2) If the project drive and the connection drive have a different code version (If the version of the connection drive is higher)
   The following dialog box is displayed. If the “Yes” button is clicked

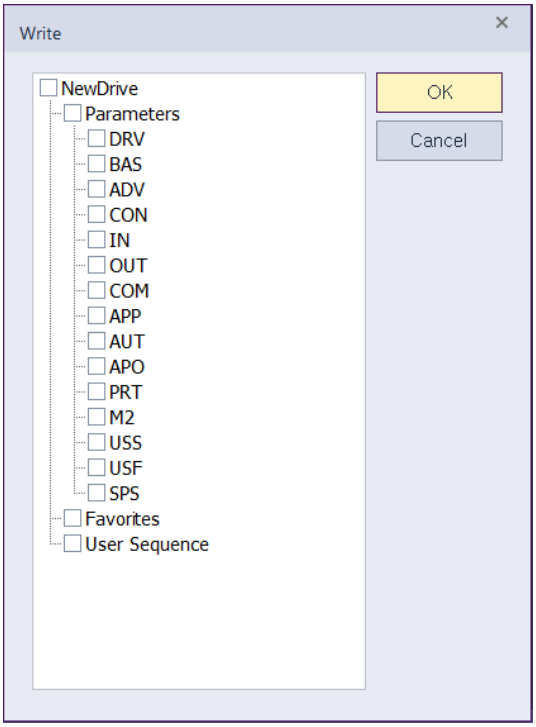


3) If the project drive and the connection drive have different code versions (If the version of the connection drive is lower)



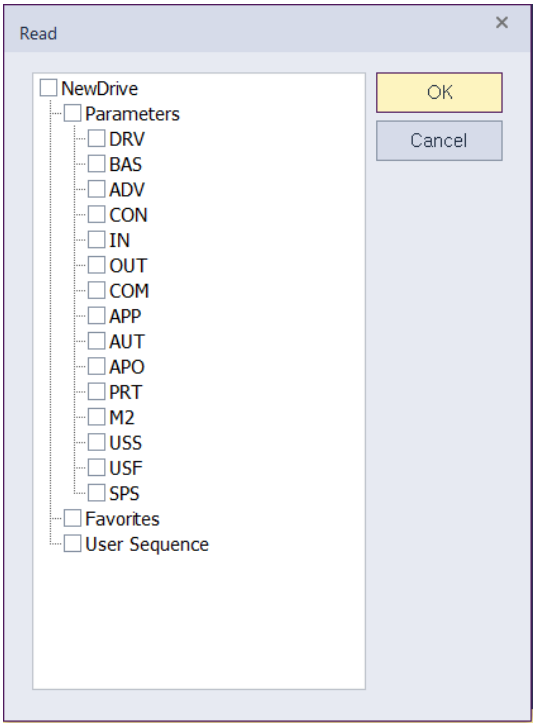
4.3 Write

Select the menu at [HOME] – [Write]. You can select the parameters to send to the drive, favorites, and features for each product.



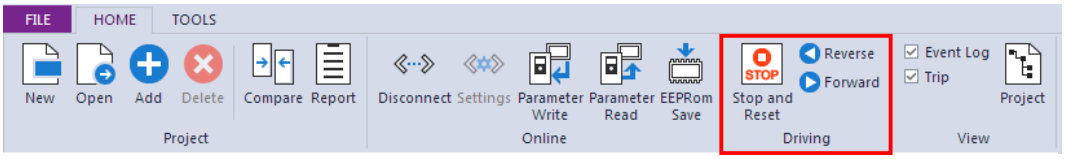
4.4 Read

Select the menu at [HOME] – [Read]. You can select the parameters to receive from the drive, favorites, and features for each product.



4.5 Drive Control

This feature acts as a keypad that gives a control command to the drive. This is located in the menu [HOME] - [Driving] group and is enabled only when the drive is connected.



1 Reverse direction (Reverse direction operation)

If you select the reverse drive and click the Reverse icon, the reverse operation will be applied to the drive and the result can be checked through the operation status.

2 Reset/Stop

If you select a drive and click the Reset/Stop icon, a reset command is issued if a trip occurs or a command is given to stop the drive if it is operating.

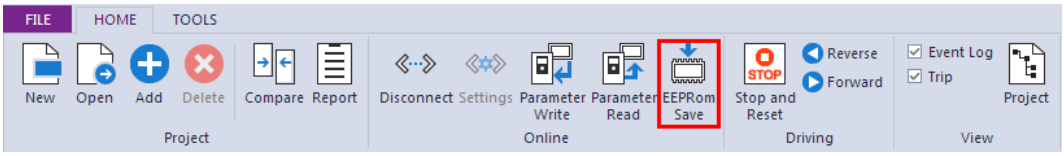
3 Forward direction (Forward direction operation)

If you select the reverse drive and click the forward icon, the forward operation will be applied to the drive and the result can be checked through the operation status.

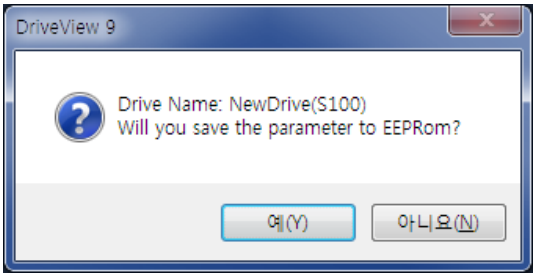
4.6 EEPRom Save

When changing parameter values of the drive with communication, the original drive value is displayed instead of the changed one at the next time you turn on the system because the changed value by such communication applies only to the drive's RAM. To solve this problem, this function is to remain the changed value by saving it to the drive's EEPRom.

In the Project window, select the drive you want to save, select the menu [HOME] – [EEPRom save].



Select the Yes button to save the EEPRom.



The saved result is displayed in the event window.

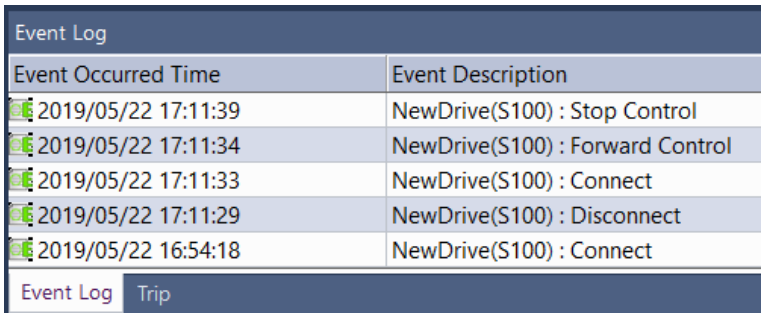
Caution

This is a feature that only works on certain models. Available models(iS7, S100, H100, G100)

5 Other Screens

5.1 Event

The adding, deleting, and controlling type of events of the drive are shown on the event screen. The events are collected from the activation of DriveView 9. Upon ending, the existing events will be deleted.

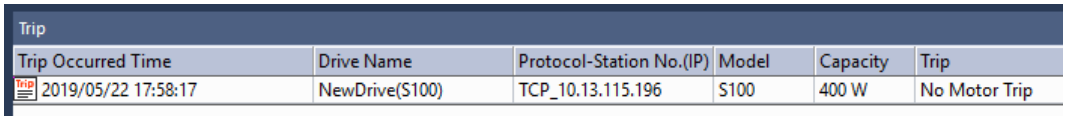


5.2 Trip

If a trip occurs on the connected drive, the information will be shown on the trip screen.

1 View Trip

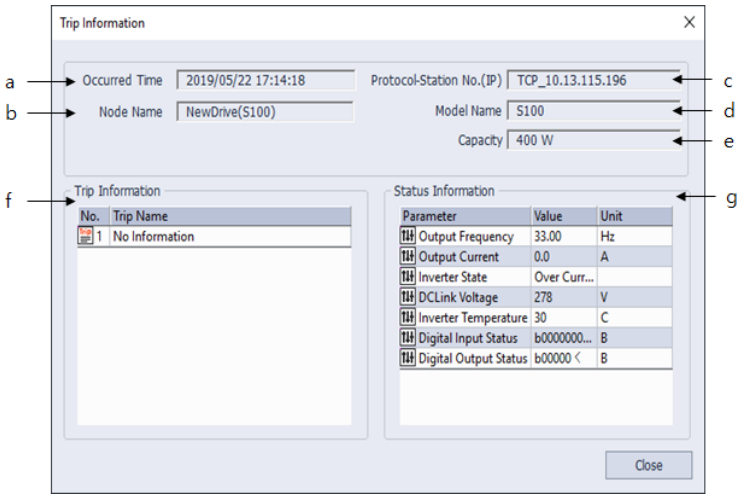
To view a trip, click on a trip on the navigation window or click the Trip tab in the Result Information window and it will be shown in the results information window.



2 View Detailed Trip

This is a feature for viewing the status and additional trip information when trip occurs.

Select the trip to view the detailed information from the trip list and double-click on it. As shown below, the dialog box will appear with detailed information of the trip.



[Chat Dialog Description]

a. Occurrence Time: Shows the time of the trip occurrence.

b. Device Name: Shows the drive name.

c. Communication method-Phone number (IP): Shows communication method of the drive and the phone number (IP).

d. Model Name: Shows the model name.

e. Capacity: Shows the capacity.

f. Detailed trip information: Shows the detailed trip information upon trip occurrence.

g. Detailed Status Information: Shows the main parameter values upon trip occurrence.

6 Specialized Features

6.1 User Sequence

This is used to implement a simple sequence using a combination of various functional blocks. It can be composed of up to 18 steps using 29 function blocks and 30 void parameters.

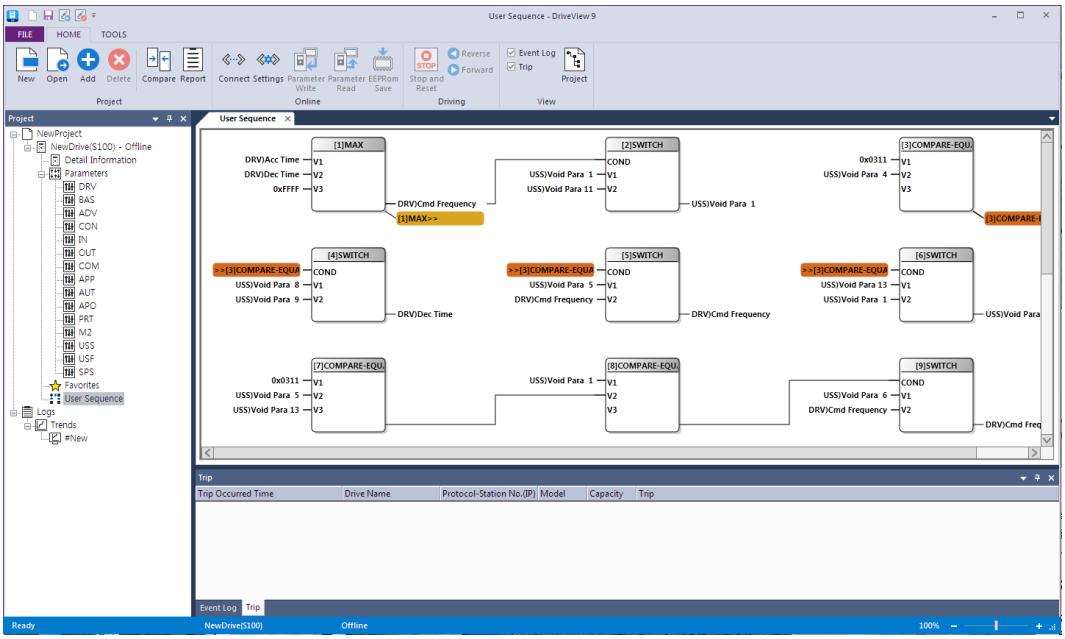
1 loop means that a maximum of 18 user-defined sequences are performed once. 1 Loop Time can be selected by the user between 10 and 1,000 ms.

User-sequence-related groups include the USS group responsible for setting up the user sequences and the USF group responsible for setting up the function blocks.

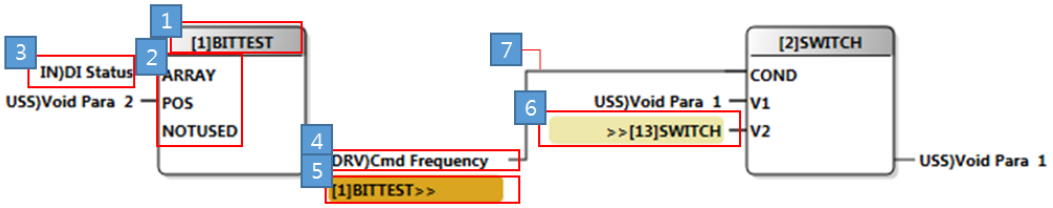
> ⓘ Caution
>
> This is a feature that only operates on S100 models and can be used in Code Ver. 1.00, IO S/W Ver. 0.11 or later.

6.1.1 Diagram

Double-click "User Sequence" in the project. Then, the parameter information (USS and USF group parameter) will be read and displayed on the screen.



6.1.2 Block Description



1 This displays the feature name that is used by the function bloc. ([Number] shows the block number)

2 Shows the input information depending on the function

3 Shows the name of the input parameter

4 Shows the name of the output parameter

5 Shows if the output parameter of the block is set as the input parameter of another block (If it is not a nearby block)

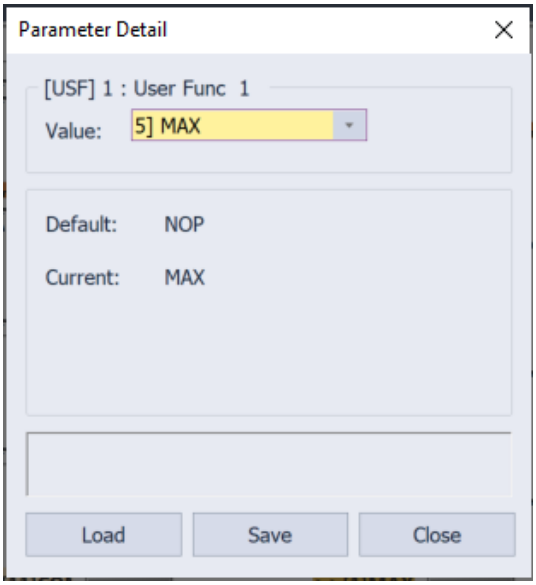
6 Shows if the input parameter of the block is set as the output parameter of another block (If it is not a nearby block)

7 Shows if the input parameter of the block is set as the output parameter of another block (If it is a nearby block)

6.1.3 Block Settings

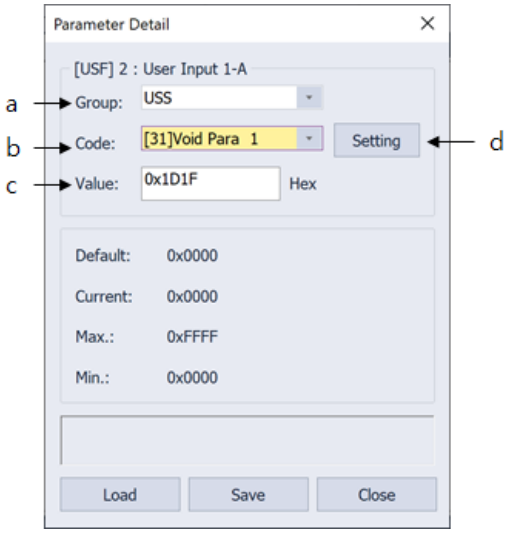
1 Feature Settings

Click on the block and the feature can be changed. Select NOP if a function block is not being used.



2 Input/Output Parameter Settings

Select the parameter area to change and the parameter edit window will appear as shown below. The parameter can be changed from the window.



[Chat Dialog Description]

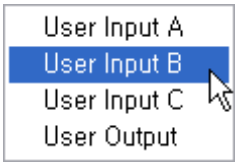
a. Select Group: Select the parameter groups.

b. Select Group: Select the parameters of the selected group.

c. Input Value: Directly enter the communication address. This is changed when the group and the group code are changed.

d. Settings: Settings is enabled for parameters where its value can be set and a dialog box for setting the value is displayed.

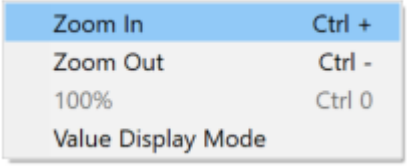
If the parameter being changed is not in the area, select the block and right-click it. Then, the following context menu will be displayed. Select the parameter to change from the menu and select the parameter. Then, the following parameter edit window will be displayed.



6.1.4 Screen Settings

6.1.4.1 Screen Mode

You can change the screen mode by right-clicking on the diagram screen.



1 Expand

Shows the diagram displayed on the screen bigger in 10% increments. (Maximum 200%)

2 Reduce

Shows the diagram displayed on the screen bigger in 10% decrements. (Minimum 10%)

3 100%

Changes the diagram displayed on the screen to its original size.

4 Value Display Mode

Changes the parameter information displayed on the screen by the parameter name and value expression.

6.2 Time Event Scheduling

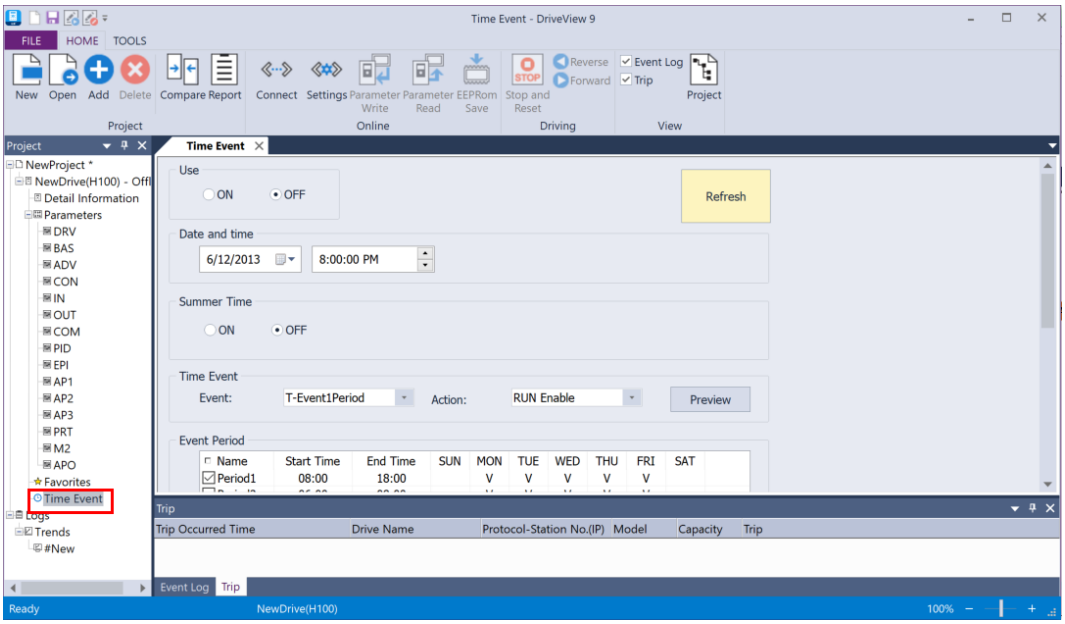
This is a feature used to start the desired operation at the specified time by using an RTC (Real Time Clock), First, you need to set the current date and time. Then, you need to set Time Period Module (the time to start the operation), Time Event (what operation to perform), Exception Date (specific date and time that affects priority of operation execution).

It is made up of 4 event intervals and 8 event exceptions. The scheduling operation is started with the settings.

> **Caution**
>
> This is a feature that only operates in **H100** models.

6.2.1 Start Operation

Select “Scheduling Operation” from the project window and the relevant information screen will be displayed.



6.2.2 Function Description

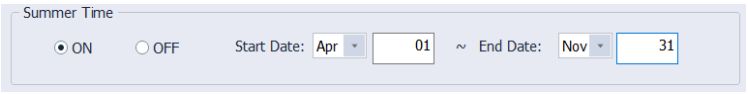
1 Date and Time

Provides a feature to set the date and time.

2 Summer Time

This provides a feature to set summer operation.

- ON: The summer time schedule can be set. Set the start date and the end date to operate in summer time mode during that period.

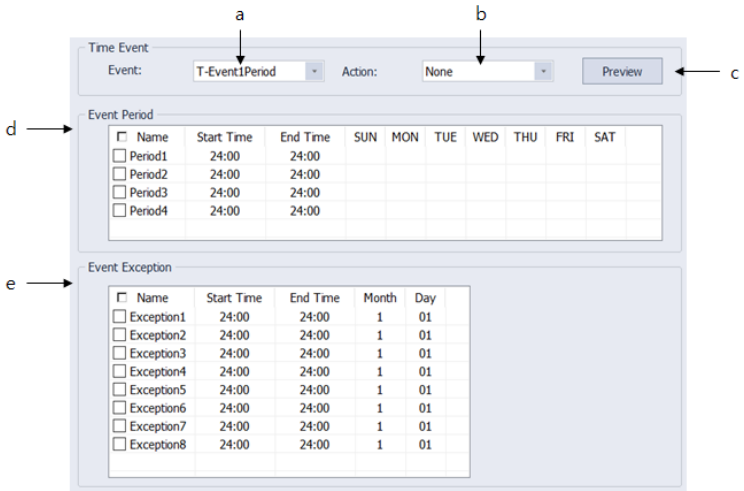


- OFF: Select to not use summer time.

> **Caution**
>
> If even ON is selected, summer time mode will not start if the start date and the end date is the same.

3 Event Settings

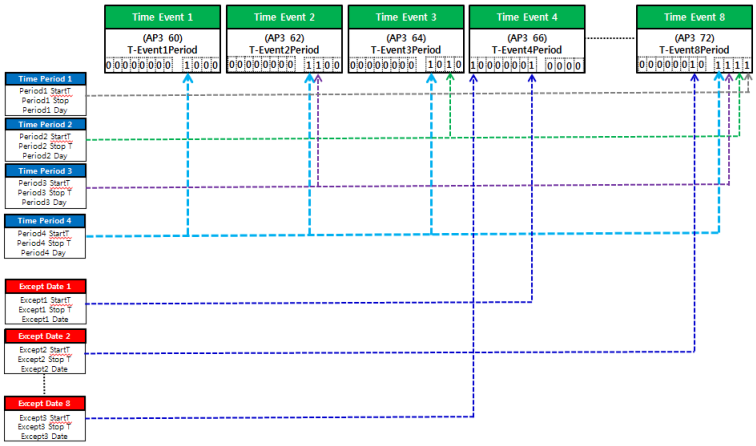
This provides the features related to registering, changing, and deleting an event.



[Chat Dialog Description]

a. Select Event Connection

You can select 8 connections. For each connection, you can register 4 event intervals and 8 exception intervals.



b. Event Operation Settings

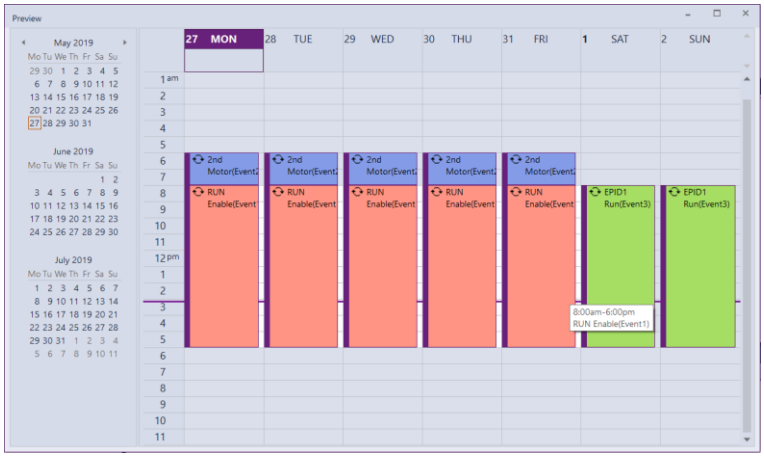
You can select the operation following the event settings.

Settings			
0	None	16	PID Openloop
1	Fx	17	PID Gain 2
2	Rx	18	PID Ref Change
3	Speed-L	19	2nd Motor
4	Speed-M	20	Timer In
5	Speed-H	21	dis Aux Ref
7	Xcel-L	22	EPID1 Run
8	Xcel-M	23	EPID1 ITermClr
9	Xcel-H	24	Pre Heat
10	Xcel Stop	25	EPID2 Run
11	Run Enable	26	EPID2 ITermClr
12	2nd Source	27	Sleep Wake Chg
13	Exchange	28	PID Step Ref L

14	Analog Hold	29	PID Step Ref M
15	I-Term Clear	30	PID Step Ref H

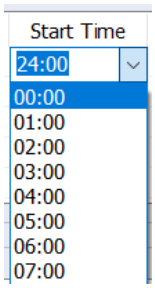
c. Event Settings Preview

Shows the event internal and exception period as a calendar and can also show the selected event action together.



d. Event Interval Settings

4 intervals can be set. You can set selection by interval, start and end time, and settings per day. The start and end time is shown as a time list to be selected.



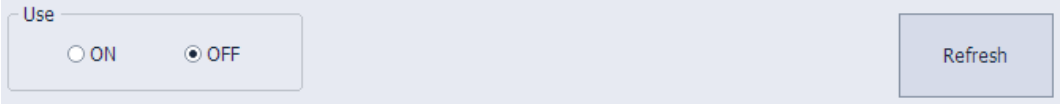
For settings per day, double-click on the days in the interval and it will be shown as “V.” To disable the setting, double-click on it again and the “V” mark will be removed.

e. Event Exception Settings

You can set the start and end time together with the event interval. The monthly or daily settings stops the operation of the event on the specified day.

4 Parameter Renewal

The parameter information is read again to display it on the screen. Any unsaved parameter information can be deleted, so take care when refreshing.

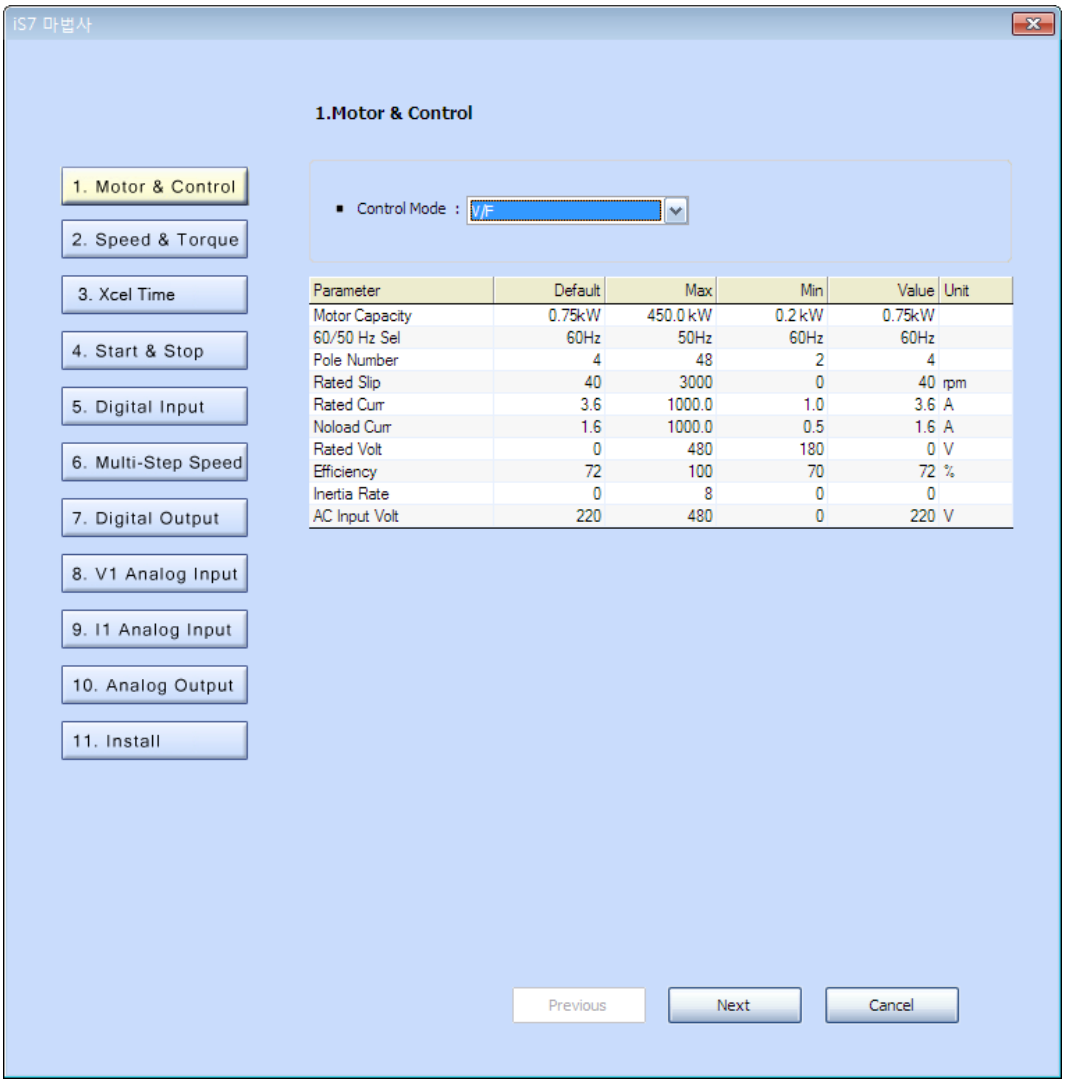


6.3 Wizard

This section describes the Wizard, which is a feature that allows you to set up important parameters step by step during initial drive installation.

6.3.1 Run

Select the menu at [Tools] – [Parameter Wizard]. The wizard screen is displayed corresponding to the selected model. (Here, the explanation is based on iS7.)



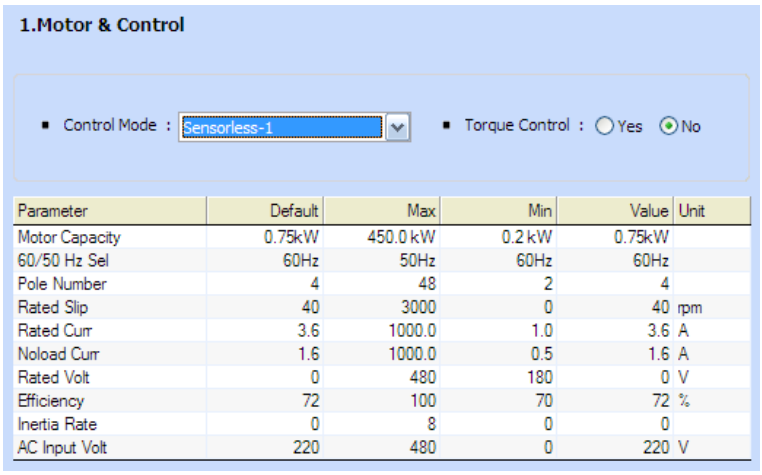
6.3.2 Step-by-step Settings

Set the parameter using the 10 steps of the wizard (excluding install). To move between steps, you can go to the previous step or the next step by clicking the button corresponding to each step or by clicking the Previous Next button.

The steps and the step-by-step parameter types may vary by model.

1 Motor & Control

Set the main parameters for motor & control.



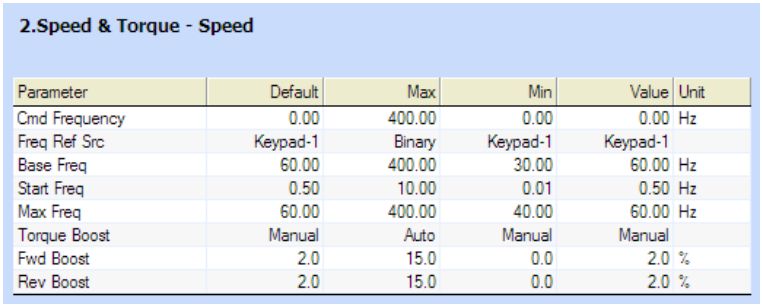
Parameter	Default	Max	Min	Value	Unit
Motor Capacity	0.75kW	450.0 kW	0.2 kW	0.75kW	
60/50 Hz Sel	60Hz	50Hz	60Hz	60Hz	
Pole Number	4	48	2	4	
Rated Slip	40	3000	0	40	rpm
Rated Curr	3.6	1000.0	1.0	3.6	A
Noload Curr	1.6	1000.0	0.5	1.6	A
Rated Volt	0	480	180	0	V
Efficiency	72	100	70	72	%
Inertia Rate	0	8	0	0	
AC Input Volt	220	480	0	220	V

Torque Control is disabled if Control Mode is V/F, V/F PG, or Slip.

You can edit each parameter by clicking the setting value column in the list.

Depending on whether Torque Control is set to Yes or No, the next step is changed to the Torque settings or the Speed settings.

2 Speed & Torque



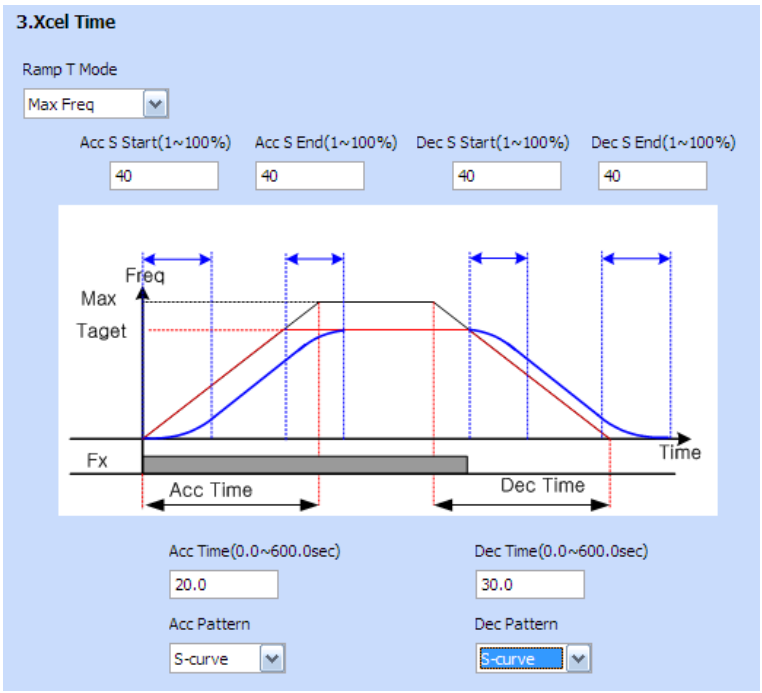
Parameter	Default	Max	Min	Value	Unit
Cmd Frequency	0.00	400.00	0.00	0.00	Hz
Freq Ref Src	Keypad-1	Binary	Keypad-1	Keypad-1	
Base Freq	60.00	400.00	30.00	60.00	Hz
Start Freq	0.50	10.00	0.01	0.50	Hz
Max Freq	60.00	400.00	40.00	60.00	Hz
Torque Boost	Manual	Auto	Manual	Manual	
Fwd Boost	2.0	15.0	0.0	2.0	%
Rev Boost	2.0	15.0	0.0	2.0	%

If Torque Boost is Manual, you can set it to Fwd Boost and Rev Boost.

2.Speed & Torque - Torque

Parameter	Default	Max	Min	Value	Unit
Cmd Torque	0.0	180.0	-180.0	0.0	%
Trq Ref Src	Keypad-1	Binary	Keypad-1	Keypad-1	
Torque Lmt Src	Keypad-1	Binary	Keypad-1	Keypad-1	
Speed Lmt Src	Keypad-1	PLC	Keypad-1	Keypad-1	
FWD Speed Lmt	60.00	400.00	0.00	60.00	Hz
REV Speed Lmt	60.00	400.00	0.00	60.00	Hz
Speed Lmt Gain	500	5000	100	500	%

3 Xcel Time



Xcel Time related parameters are output with the graph. The graph changes according to the parameter value selected in the combo. The time range can be changed in the edit window.

4 Start & Stop

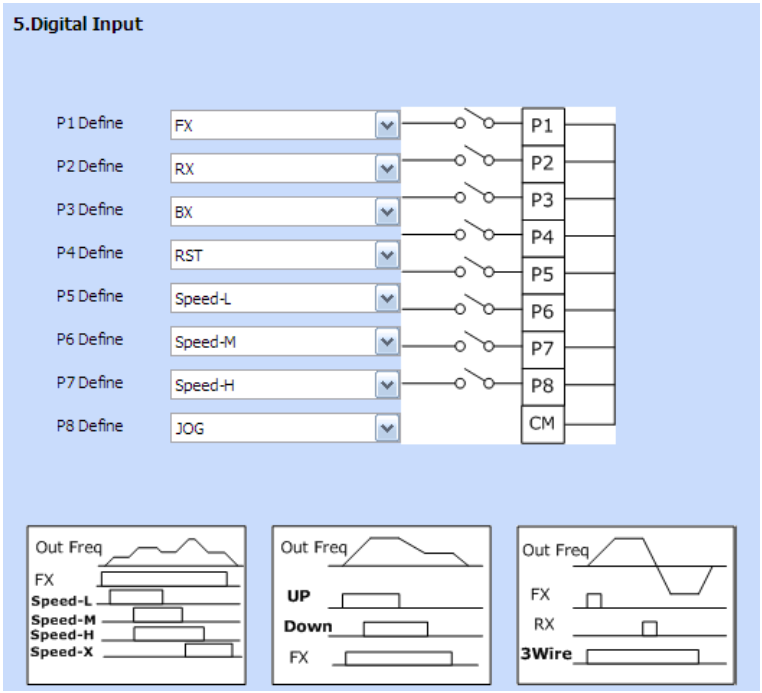
4.Start & Stop

Parameter	Default	Max	Min	Value	Unit
Cmd Source	Fx/Rx-1	PLC	Keypad	Fx/Rx-1	
Start Mode	Acc	Dc-Start	Acc	Acc	
Stop Mode	Dec	Power Braking	Dec	Dec	
Run Prevent	None	Reverse Prev	None	None	
Power-on Run	----- No -----	----- Yes ----	----- No -----	----- No -----	
Dc Inj Level	50	200	0	50	%

Set the parameters corresponding to Start & Stop. If DC-Start is selected from Start Mode, “Dc-Start Time” will be displayed. IF DC-Brake is selected in Stop Mode, the Dc-Block Time, Dc-Brake Time, and Dc-Brake Freq parameters will be displayed.

5 Digital Input

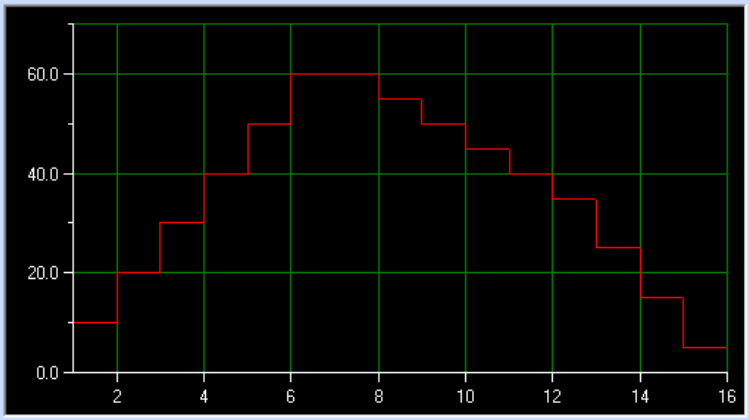
5.Digital Input



Set the parameters corresponding to Digital Input.

6 Multi-Step Speed

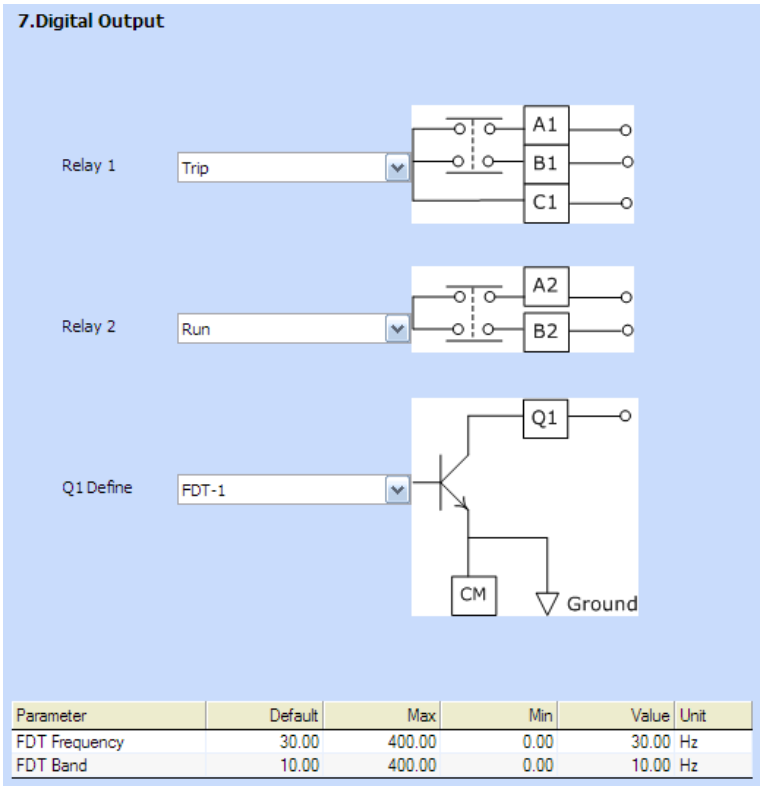
6.Multi-Step Speed



Parameter	Default	Max	Min	Value	Unit
Step Freq- 1	10.00	400.00	0.00	10.00	Hz
Step Freq- 2	20.00	400.00	0.00	20.00	Hz
Step Freq- 3	30.00	400.00	0.00	30.00	Hz
Step Freq- 4	40.00	400.00	0.00	40.00	Hz
Step Freq- 5	50.00	400.00	0.00	50.00	Hz
Step Freq- 6	60.00	400.00	0.00	60.00	Hz
Step Freq- 7	60.00	400.00	0.00	60.00	Hz
Step Freq- 8	55.00	400.00	0.00	55.00	Hz
Step Freq- 9	50.00	400.00	0.00	50.00	Hz
Step Freq-10	45.00	400.00	0.00	45.00	Hz
Step Freq-11	40.00	400.00	0.00	40.00	Hz
Step Freq-12	35.00	400.00	0.00	35.00	Hz
Step Freq-13	25.00	400.00	0.00	25.00	Hz
Step Freq-14	15.00	400.00	0.00	15.00	Hz
Step Freq-15	5.00	400.00	0.00	5.00	Hz

Set the parameters corresponding to Set Multi-Step Speed.

7 Digital Output

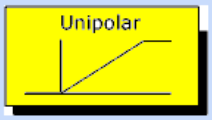


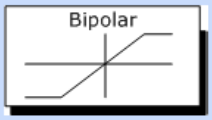
Parameter	Default	Max	Min	Value	Unit
FDT Frequency	30.00	400.00	0.00	30.00	Hz
FDT Band	10.00	400.00	0.00	10.00	Hz

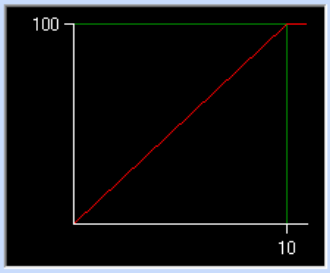
Set the parameters corresponding to Digital Output.

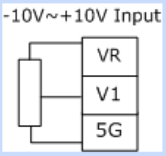
8 V1 Analog Input

8.V1 Analog Input







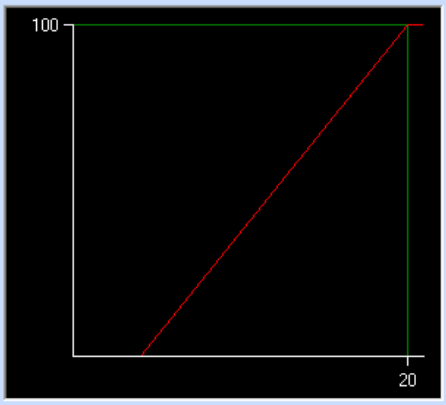


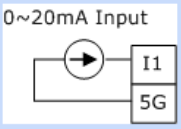
Parameter	Default	Max	Min	Value	Unit
V1 Filter	10	10000	0	10	msec
V1 Volt x1	0.00	10.00	0.00	0.00	V
V1 Perc y1	0.00	100.00	0.00	0.00	%
V1 Volt x2	10.00	10.00	0.00	10.00	V
V1 Perc y2	100.00	100.00	0.00	100.00	%
V1 -Volt x1'	0.00	0.00	-10.00	0.00	V
V1 -Perc y1'	0.00	0.00	-100.00	0.00	%
V1 -Volt x2'	-10.00	0.00	-10.00	-10.00	V
V1 -Perc y2'	-100.00	0.00	-100.00	-100.00	%
V1 Inverting	----- No -----	----- Yes ----	----- No -----	----- No -----	
V1 Quantizing	0.04	10.00	0.04	0.04	%

Set the parameters corresponding to V1 Analog Input.

9 I1 Analog Input

9.I1 Analog Input

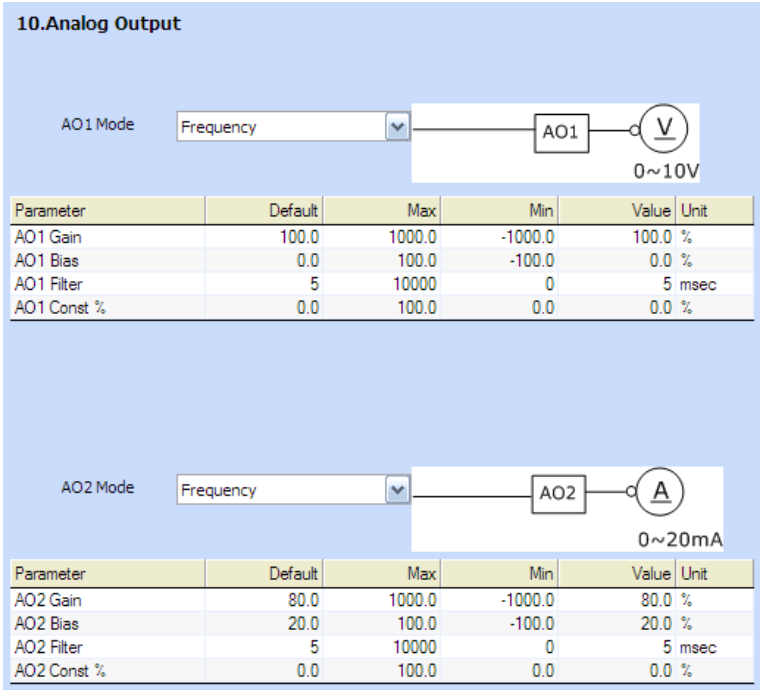




Parameter	Default	Max	Min	Value	Unit
I1 Filter	10	10000	0	10	msec
I1 Curr x1	4.00	20.00	0.00	4.00	mA
I1 Perc y1	0.00	100.00	0.00	0.00	%
I1 Curr x2	20.00	20.00	0.00	20.00	mA
I1 Perc y2	100.00	100.00	0.00	100.00	%
I1 Inverting	----- No -----	----- Yes ----	----- No -----	----- No -----	
I1 Quantizing	0.04	10.00	0.04	0.04	%

Set the parameters corresponding to I1 Analog Input.

10 Analog Output

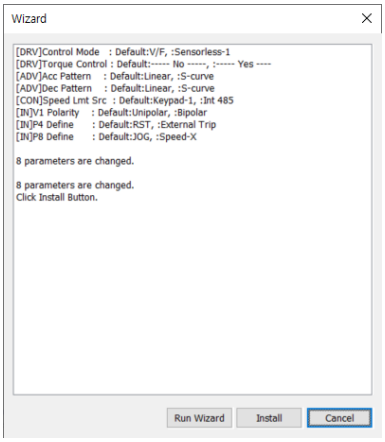


Parameter	Default	Max	Min	Value	Unit
AO1 Gain	100.0	1000.0	-1000.0	100.0	%
AO1 Bias	0.0	100.0	-100.0	0.0	%
AO1 Filter	5	10000	0	5	msec
AO1 Const %	0.0	100.0	0.0	0.0	%

Parameter	Default	Max	Min	Value	Unit
AO2 Gain	80.0	1000.0	-1000.0	80.0	%
AO2 Bias	20.0	100.0	-100.0	20.0	%
AO2 Filter	5	10000	0	5	msec
AO2 Const %	0.0	100.0	0.0	0.0	%

Set the parameters corresponding to Analog Output.

11 Install



The content of the changed parameters is displayed.

Wizard Run Button: Converts to the Wizard Settings screen. Use this button to make additional changes.

Install Button: Saves the parameters set in the wizard to the project parameters. You can use the write function if you need to apply the parameter contents to the drive.

6.4 Parameter interconversion between models / Parameter Converter

This section describes about the parameter interconversion between models. A subset of parameters may not be changed. (uneditable, unchangeable, inaccessible. etc)

> ⓘ Caution
>
> Not all models support parameter interconversion. The supported models will be expanded in the future.

6.4.1 Source Drive Configuration

For this feature, a source drive project must be configured and there are 3 methods to configure a project.

1) Open DriveView 7 parameter file

   Source drive project can be configured by using the DriveView 7 parameter files from the source drive. If the project was managed using DriveView 7 SW, this would be a useful method.

2) Create new project

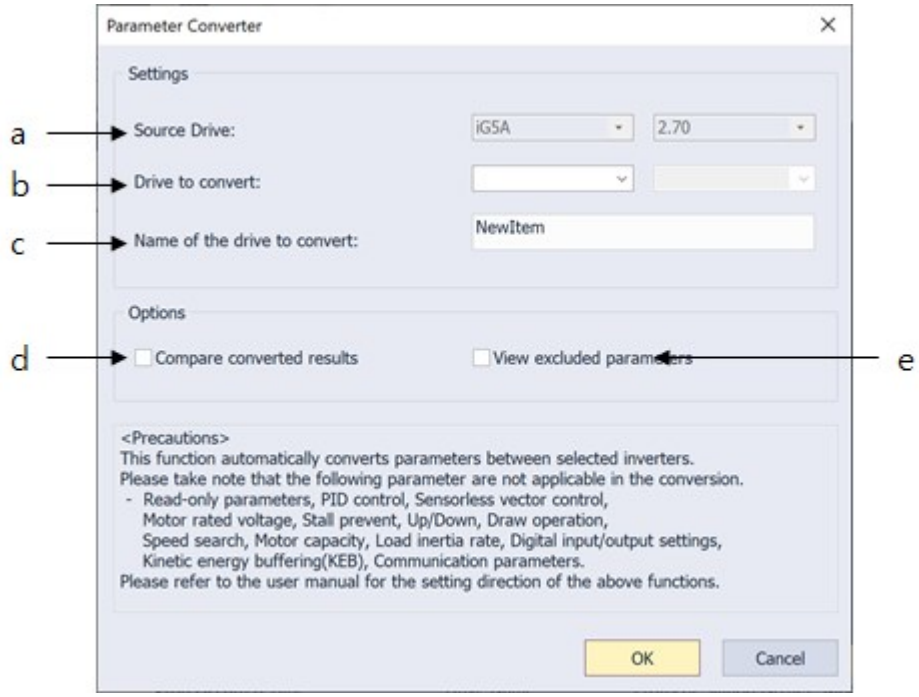
   Source drive project can be configured by creating a new project. When creating a new project, the drive model and the version must be specified.

3) Open project

   Source drive project can be opened from existing source drive.

6.4.2 Convert Parameter

Select the Menu [TOOLS] – [Converter]



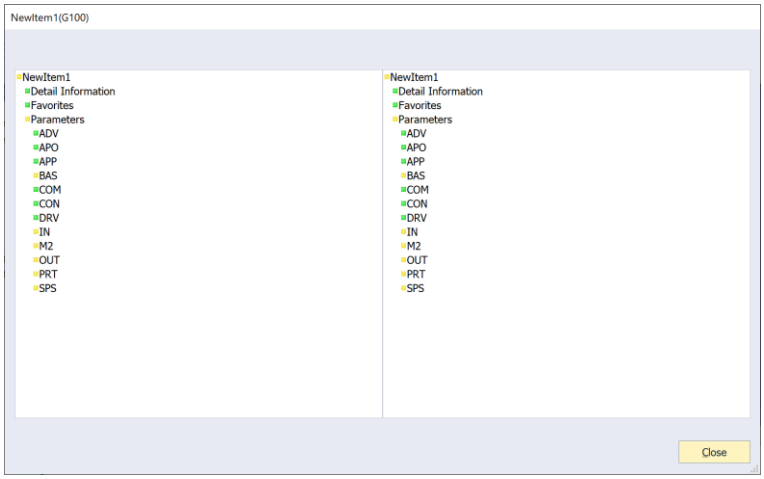
[Dialog Box Description]

a. Source Drive: Shows the source drive that needs parameter conversion.

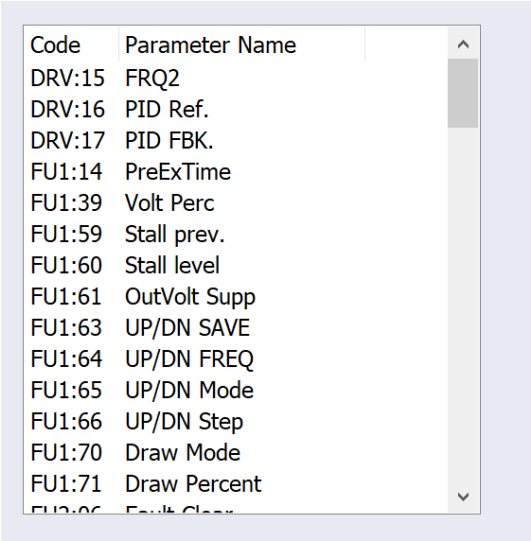
b. Drive to convert: Shows the information about the drive to convert.

c. Name of the drive to convert: Shows the name of the converted project.

d. Options – Compare convert results: You can select this check box to compare the values of converted drive and the default values in a new window.



e. Options – View convert exclude list: You can select this check box to view the excluded parameters.



Code	Parameter Name
DRV:15	FRQ2
DRV:16	PID Ref.
DRV:17	PID FBK.
FU1:14	PreExTime
FU1:39	Volt Perc
FU1:59	Stall prev.
FU1:60	Stall level
FU1:61	OutVolt Supp
FU1:63	UP/DN SAVE
FU1:64	UP/DN FREQ
FU1:65	UP/DN Mode
FU1:66	UP/DN Step
FU1:70	Draw Mode
FU1:71	Draw Percent

Warranty

Warranty Information

After purchasing and installing the product, please keep the note of the following information in detail and store in a safe location. If the product does not operate as correctly during the applicable warranty period, this information outlines the free service benefits.

Product Name	LSIS Universal Inverter		**Installation Date**	
Model Name			**Warranty Period**	
Customer	Name (Company Name)			
	Address			
	Phone Number			
Dealership	Name (Company Name)			
	Address			
	Phone Number			

Warranty Period

The warranty period of this product is 12 months from the date of installation. If the installation date is not written down, the warranty period is 18 months from the date of manufacture. (The warranty period differs depending on the contract conditions made during installation and construction.)

Information on the Free Quality Assurance Service

If a product malfunction occurs within the warranty period under normal use, you may be entitled to a free warranty repair service at our agency or designated service center.

Charged Repair Service

A charged repair service is provided for the following cases.

- If a malfunction occurs due to intentional or negligence of the consumer
- If a malfunction occurs due to a fault in the power supply or connected equipment
- If a malfunction occurs due to natural disasters (fire, flood, gas accident, earthquake, etc.)
- If the product has been remodeled or repaired at a place other than our dealer or service center
- If the product is not marked with an authentic LSIS nameplate
- If the warranty period has passed

Homepage

Go to the LSIS Homepage ***(http://www.lsis.biz)***to get useful information on products as well as service information.

UL mark

The UL mark applies to products in the United States and Canada. This mark indicates that UL has tested and evaluated the products and determined that the products satisfy the UL standards for product safety. If a product received UL certification, this means that all components inside the product have been certified to meet UL standards as well.

CE mark

The CE mark indicates that the products carrying this mark comply with European safety and environmental regulations. European standards include the Machinery Directive for machine manufacturers, the Low Voltage Directive for electronics manufacturers and the EMC guidelines for safe noise control.

Low Voltage Directive

We have confirmed that our products comply with the Low Voltage Directive (EN 61800-5-1).

EMC Directive

The Directive defines the requirements for immunity and emissions of electrical equipment used within the European Union. The EMC product standard (EN 61800-3) covers requirements stated for drives.

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