

21 | Enhancing Security

This chapter provides a basic explanation for "Enhancing security", and how to change settings in GP-Pro EX.

Read "21.1 Settings Menu" (page 21-2) first, then skip to the explanations as needed.

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21.1 Settings Menu

Creating Limited Access Screens

Level 0 Menu Screen (containing Line Manager Screen) → Password Input → Level 1 Line Manager Screen

Beep → Screen Change → Beep → Password matches → Display the destination screen

Touch "ESC" to return to the menu screen (previous screen).

☞ Setup Procedure (page 21-4)

Limiting Screen Access by Authority

Level 1 Line Manager Screen (containing Factory Length Screen) → Password Input → Level 5 Plant Manager Screen

Change again to the Plant Manager Screen

Beep → Screen Change → Beep → Password matches → Display the destination screen

☞ Setup Procedure (page 21-7)

Disable All Touch Operations for the Timing

Bit Address that disables touch. (Interlock Address) is ON

M100:ON

ON	OFF
X	Touch

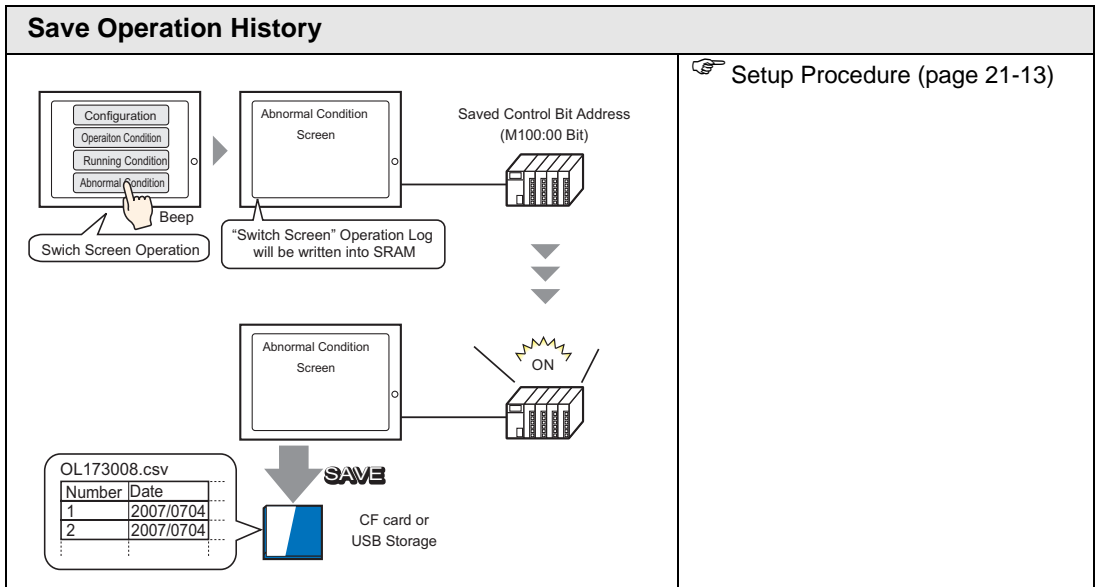
Following the condition

Touch operation is disabled.

☞ Setup Procedure (page 21-11)

GP-Pro EX Reference Manual

21-2



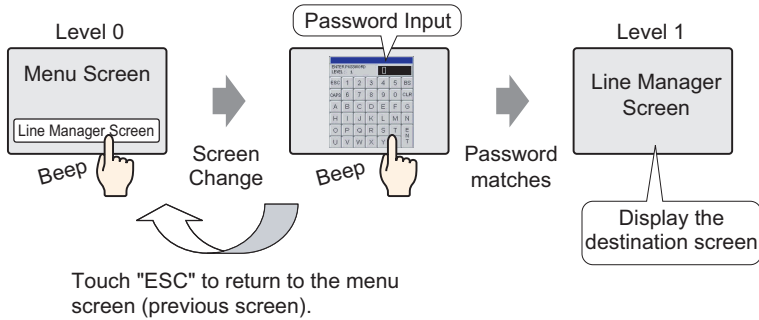
21.2 Creating Limited Access Screens

21.2.1 Setup Procedure

NOTE


- Please refer to the settings guide for details.
 ☞ "21.7.1 Common (Security Settings) Settings Guide" (page 21-19)

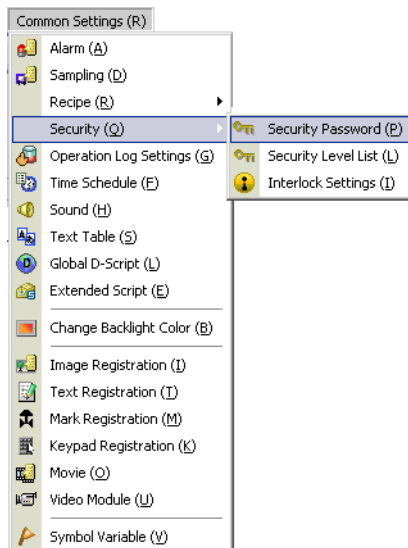
Sets a Line Manager screen with a security level and password. This example uses Sampled Data B2, security level 1 and password 1111.



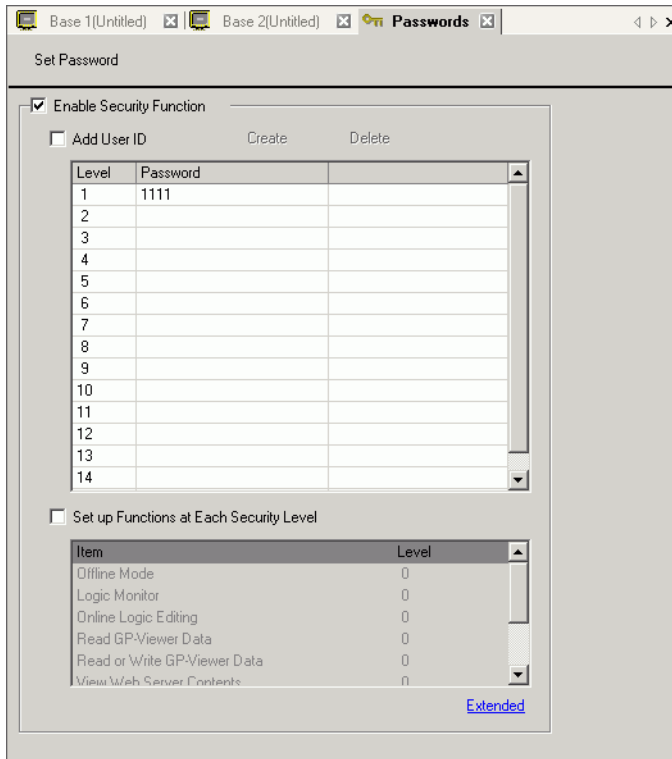
NOTE

- Security level 0 means no security is set.

1 From the [Common Settings (R)] menu, point to [Security (Q)] and select [Security Password (P)] or click  on the toolbar.

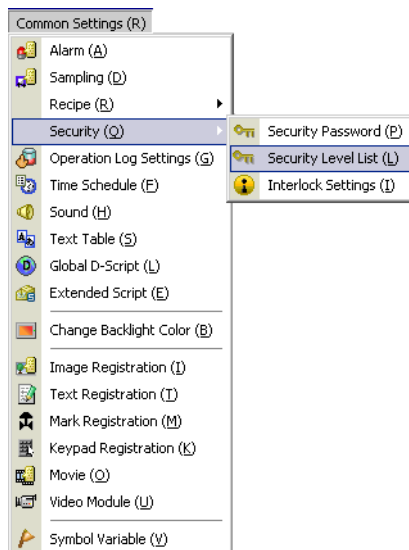


2 The Passwords window opens. Select the [Enable Security Function] check box, and type the password "1111" in [Level 01].

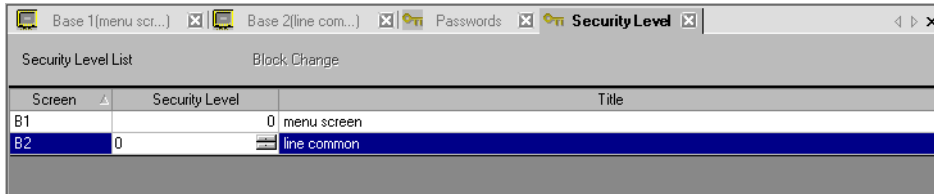


- NOTE**
- Set a password up to eight single-byte characters long.
 - Select the [Add User ID] check box to add the User ID to the Password. As with the password, User IDs can be up to eight single-byte characters long.

3 From the [Common Settings (R)] menu, point to [Security (Q)] and select [Security Level List (L)].



4 For [Sampled Data] B2, set the [Security Level] to 1. The security settings are complete.



Screen	Security Level	Title
B1	0	menu screen
B2	0	line common

NOTE

- Once you log in, the security level you logged in at is enabled until you turn off the power.
If you logged in with high security, and you leave your desk, we recommend clearing the security level first to enhance security.
☞ "21.7.1 Common (Security Settings) Settings Guide ◆ Extended Settings" (page 21-22)

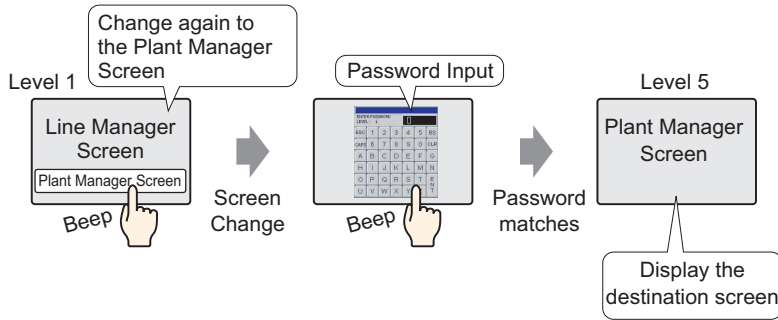
21.3 Limiting Screen Access by Authority


21.3.1 Setup Procedure

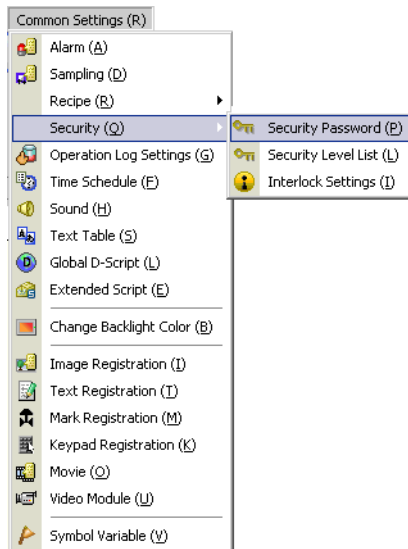
NOTE

- Please refer to the settings guide for details.
 ☞ "21.7.1 Common (Security Settings) Settings Guide" (page 21-19)

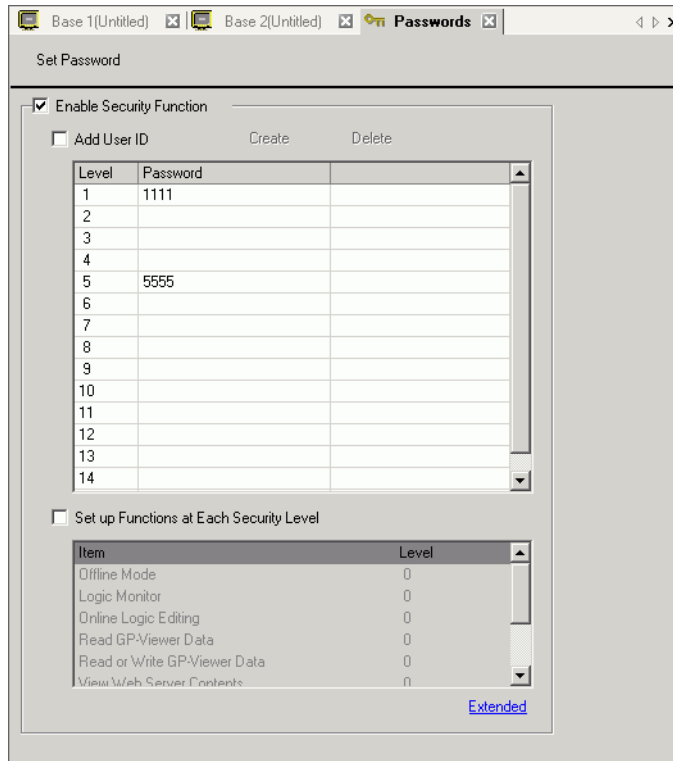
Sets a Plant Manager Screen with a security level and a password. This example uses Sampled Data B3, security level 5 and password 5555.



- 1 From the [Common Settings (R)] menu, point to [Security (Q)] and select [Security Password (P)] or click  on the toolbar.



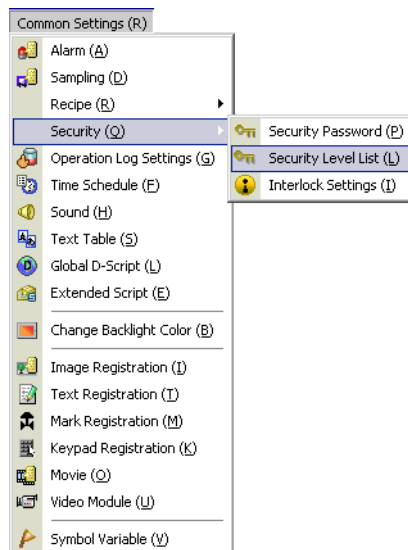
2 The Passwords window opens. Select the [Enable Security Function] check box, and type the password "1111" in [Level 0] and the password "5555" in [Level 5].



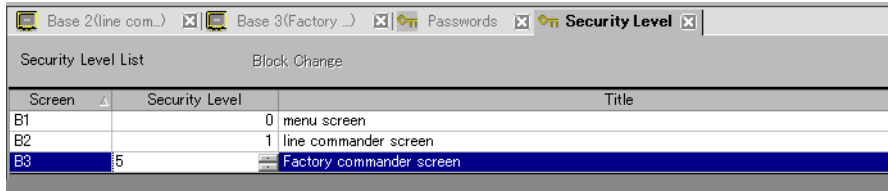
NOTE

- Set a password up to eight single-byte characters long.
- Select the [Add User ID] check box to add the User ID to the Password. As with the password, User IDs can be up to eight single-byte characters long.

3 From the [Common Settings (R)] menu, point to [Security (Q)] and select [Security Level List (L)].




4 For [Sampled Data] B2, set the [Security Level] to 1. For [Sampled Data] B3, set the [Security Level] to 5. The security settings are complete.



Screen	Security Level	Title
B1	0	menu screen
B2	1	line commander screen
B3	5	Factory commander screen

NOTE

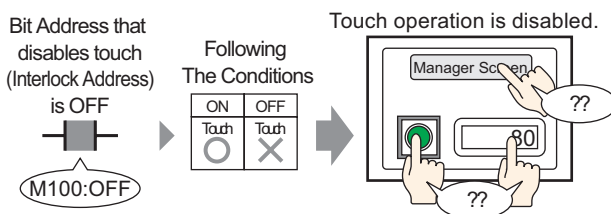
- Once you log in, the security level you logged in at is enabled until you turn off the power.
If you logged in with high security, and you leave your desk, we recommend clearing the security level first to enhance security.
 "21.7.1 Common (Security Settings) Settings Guide ◆ Extended Settings" (page 21-22)
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21.4 Disable All Touch Operations for the Timing

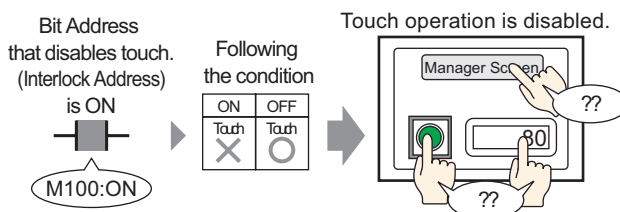
21.4.1 Detail

You can restrict screen touch operations by using the Global Interlock Address. Touch operation is enabled only when the bit address that is set for the Interlock Address meets the Touch Enable Condition.

- When the Touch Enable Condition is "Bit ON".
The touch action will only work when the set Interlock Address is ON.



- When the Touch Enable Condition is "Bit OFF".
The touch action will only work when the set Interlock Address is OFF.

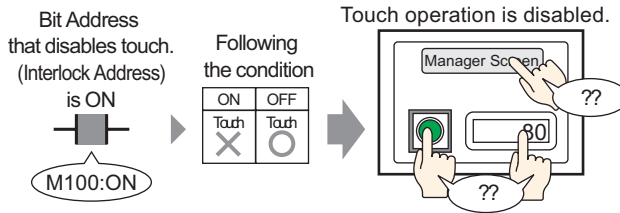


21.4.2 Procedure

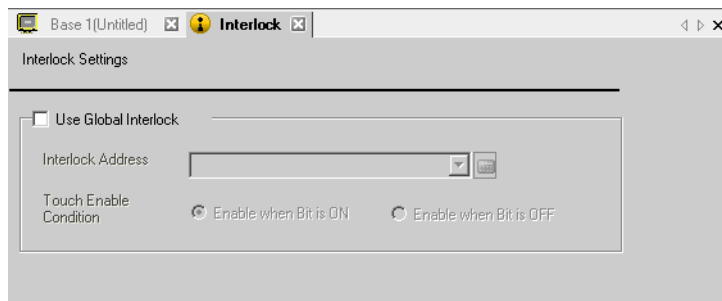
NOTE

- Please refer to the settings guide for details.
 ☞ "21.7.1 Common (Security Settings) Settings Guide ■ Interlock Settings" (page 21-24)

In the Touch Enable Condition, select Enable when Bit is OFF to set the touch operation to be disabled when Bit (M100) designated by the Interlock Address is ON.



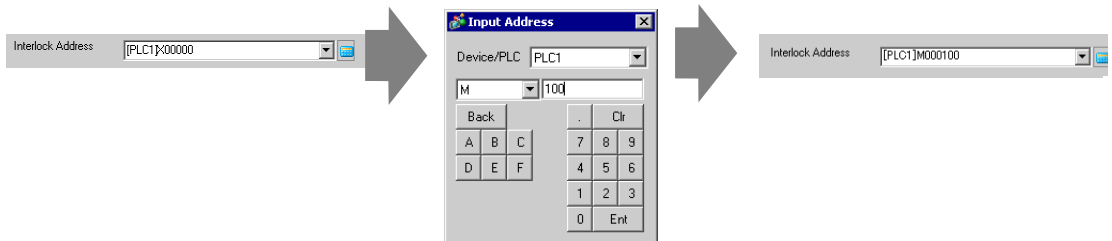
- 1 From the [Common Settings(R)] menu, point to [Security (Q)] and select [Interlock Settings(I)] or click on the toolbar to display the following screen.



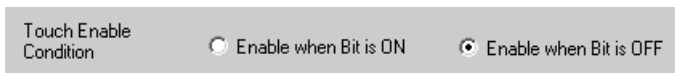
- 2 Check [Use Global Interlock], and set the Bit Address (for example, M100) that sets the Touch Enable Condition in [Interlock Address].

Click the icon to display an address input keypad.

Enter "M" and "100".



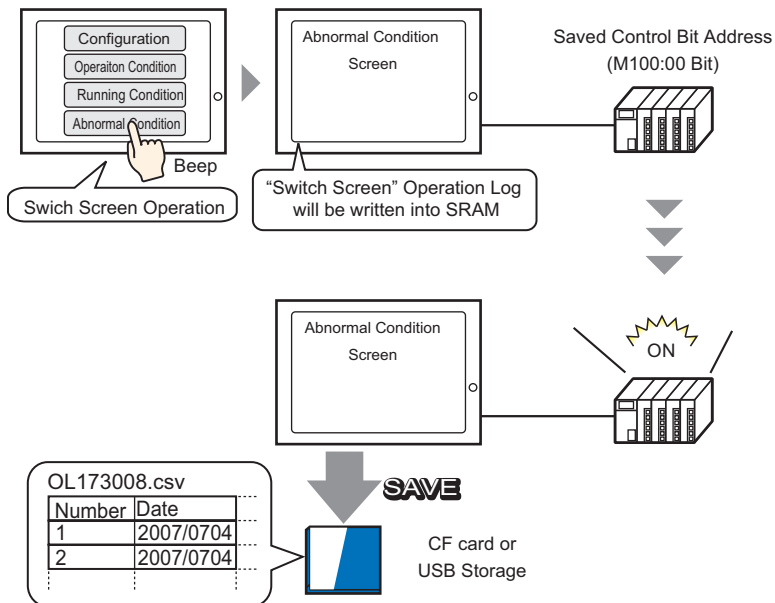
- 3 Use the [Touch Enable Condition] field to set up a condition that enables touch operations. (For example, select "Enable When Bit is Off" to enable touch operations when the bit is off.)



21.5 Save Operation History

21.5.1 Detail

Maintaining a history (log) of operations on the GP screen is useful in analyzing causes of problems, such as what operations were run before the error occurred. Also, by setting [User ID] in the Password Settings, you can identify the person operating the system. Normally, the Operation Log, which is stored in SRAM on the GP, is automatically saved for a designated number of entries. You can also save to a designated CF Card or USB Storage by setting the 0 Bit in the control address to ON. When saving, the log is converted to CSV format, so you can view it by using [Show CSV] on the GP screen or on a PC.



NOTE

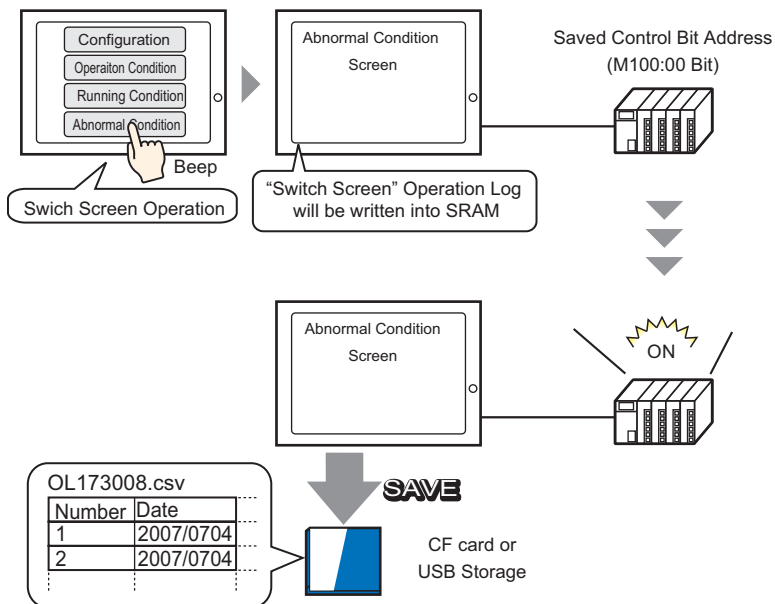
- To set the User ID, enable [Add User ID] in the [Password Settings] and you will be able to register a User ID.
 - ☞ "21.7.1 Common (Security Settings) Settings Guide ■ Password Settings" (page 21-19)
- Operation Logs that are saved on the CF Card or USB Storage can be displayed on the GP screen by using Special Data Display[File Manager] and [CSV Display].
 - ☞ "24.6 Displaying/Editing CSV data on the Screen" (page 24-31)

21.5.2 Procedure

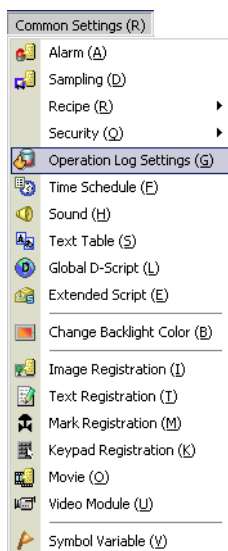
NOTE

- Please refer to the settings guide for details.
 ☞ "21.7.2 Common Settings (Operation Log Settings) Guide" (page 21-29)

If Retain Control Bit Address is set to ON, the accumulated Operation Log in the SRAM on the GP is converted to the CSV format, and saved to a CF Card (or USB Storage).



1 Select [Operation Log Settings (G)] in the [Common Settings(R)] menu or click the  on the Toolbar.

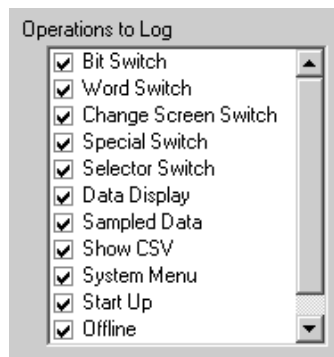


- The Operation Log setting screen opens. Check [Enable Operation Log Function] and select the number of [SRAM Records] to save.

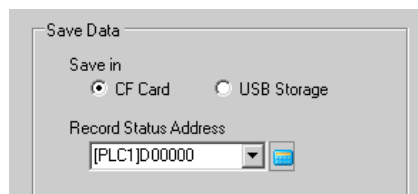
**NOTE**

- The size of SRAM is determined by the selected [SRAM Records]. If the selected number of SRAM records is exceeded, it will be saved to the CF Card (or USB Storage) automatically.

- In [Operations to Log], check the functions that you wish to record in the Operation Log.



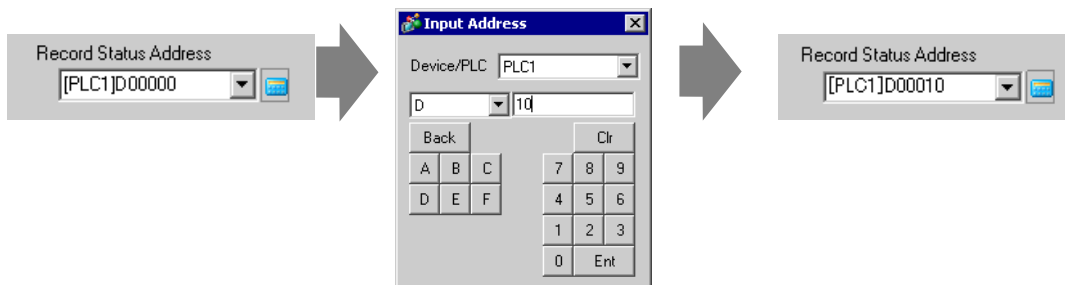
- Select [CF Card] in [Save in].



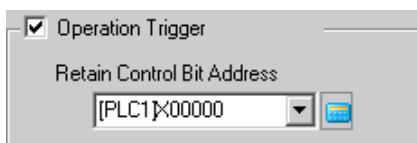
5 Set an address that allows writing to the CF Card (for example, D10) in [Record Status Address].

Click the icon to display an address input keypad.

Select the device "D" and enter "10" in the address, then press the "Ent" key.



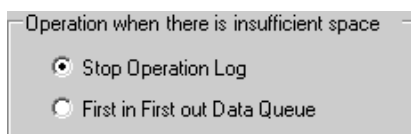
6 Check [Operation Trigger].



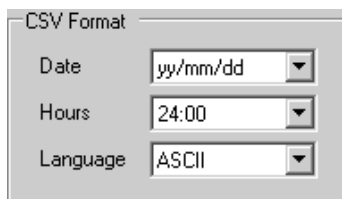
7 In the [Retain Control Bit Address] box, specify the bit address to start saving from (for example, M100).

NOTE • If Bit 1 (Transfer Complete Flag) in the designated Status Address is not set to ON, the Operation Log cannot be saved even if Retain Control Address is ON.

8 Select [Operation when there is insufficient space].



9 In [CSV Format], set [Date], [Time], and Display Style when converting to the CSV Format in [Language].



NOTE • "Item Name" in the saved CSV File is displayed in English no matter which language is selected in [Language].

21.6 Password/User ID Input Window

21.6.1 Introduction to "Level Mode" and "User ID Mode"

The password input window /user ID and password input window appears when you access a screen with a higher security level than the one that is currently displayed.

According to the "Password Settings", either "Level Mode" (set password) or "User ID Mode" (set user ID and password) is displayed.

The entered password is displayed as * symbols.

☞ "21.7.1 Common (Security Settings) Settings Guide ■ Password Settings" (page 21-19)

■ Password/User ID Input Windows

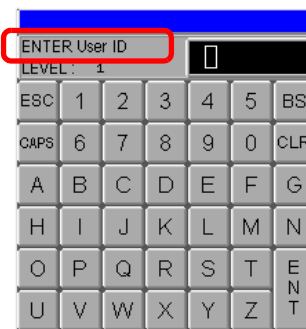
For "Level Mode", only the password input window is displayed.

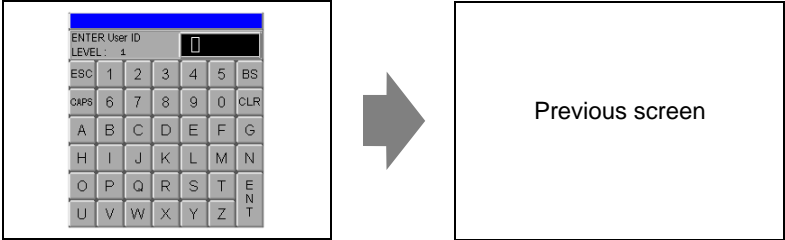
For "User ID Mode", each window is displayed by touching the input area in the user ID and password input window.

Password input window

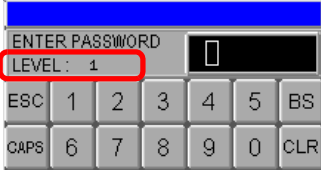


User ID input window

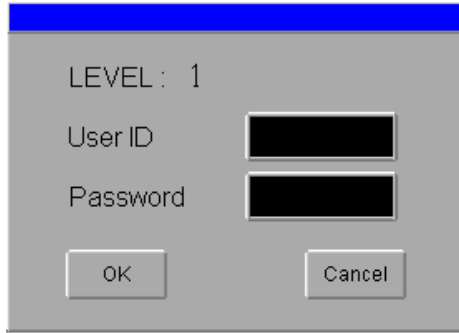


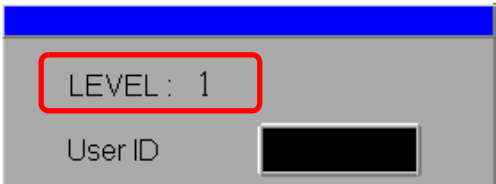
Display.	Description
ESC	<p>Cancel the password/user ID input, and close the input window.</p> <div style="display: flex; align-items: center; justify-content: center;">  </div> <p>NOTE</p> <ul style="list-style-type: none"> When you use both Change Screens by Touch and Change Screens from the device/PLC, confirm that the [Reflect in Device/PLC] option is selected from the System Settings window [Display Unit]-[Display]. If not selected, you cannot perform cancel even by pressing the [ESC] key when Change Screens from the device/PLC is performed. <p>☞ "5.15.6 [System Settings] Setting Guide ■ [Display Unit] Settings Guide ◆ Display • Screen Settings" (page 5-131)</p>

Continued

Display.	Description						
CAPS	<p>Changes between uppercase and lowercase letters. When the [CAPS] key is displayed in the reverse color (black), it will input lowercase letters.</p> <p>NOTE</p> <ul style="list-style-type: none"> • Even if you change between uppercase and lowercase letters, the keypad will only display in uppercase letters. 						
ENT	Secure the input password /user ID.						
LEVEL (Request Level Display)	<p>Shows the security level of the screen you are accessing.</p>  <p>NOTE</p> <ul style="list-style-type: none"> • The current level and the request level can be seen from the internal device addresses. The values are stored in the following internal device addresses. <table data-bbox="450 817 930 879"> <tr> <td>LS9301</td> <td><input type="text"/></td> <td>—Current Level</td> </tr> <tr> <td>LS9302</td> <td><input type="text"/></td> <td>—Request Level</td> </tr> </table> <p>LS9301 and LS9302 are read-only. When there is a password request in LS9302, the security level is stored and the value returns to 0 when the password input is complete.</p>	LS9301	<input type="text"/>	—Current Level	LS9302	<input type="text"/>	—Request Level
LS9301	<input type="text"/>	—Current Level					
LS9302	<input type="text"/>	—Request Level					

■ User ID & Password input window



Display.	Description						
<p>LEVEL (Request Level Display)</p>	<p>Shows the security level of the screen you are accessing.</p>  <p>NOTE</p> <ul style="list-style-type: none"> The current level and the request level can be seen from the internal device addresses. The values are stored in the following internal device addresses. <table border="0" data-bbox="448 1031 930 1097"> <tr> <td>LS9301</td> <td><input type="text"/></td> <td>Current Level</td> </tr> <tr> <td>LS9302</td> <td><input type="text"/></td> <td>Request Level</td> </tr> </table> <p>LS9301 and LS9302 are read only. In LS9302, if there is a request for the user ID and password, the security level is saved and it will return to 0 when the user ID and password input is completed.</p>	LS9301	<input type="text"/>	Current Level	LS9302	<input type="text"/>	Request Level
LS9301	<input type="text"/>	Current Level					
LS9302	<input type="text"/>	Request Level					
<p>User ID (User ID Input)</p>	<p>Display the User ID Input window by touching the input area. Also, display the User ID input in the User ID Input window.</p>						
<p>Password (Password Input)</p>	<p>Display the password input window by touching the input area. Also, the password entered in the password input window is displayed as * symbols.</p>						
<p>OK</p>	<p>The input User ID and Password are compared with internal records, and if the security level (required level) is satisfied, the screen is displayed.</p> <p>NOTE</p> <p>Error messages will be displayed in the following situation.</p> <ul style="list-style-type: none"> - Inputting User ID that is not registered - Inputting User ID that does not satisfy the required level - Inputting password that does not match the User ID. 						
<p>Cancel</p>	<p>Close the User ID & Password input window to return to the original screen.</p>						

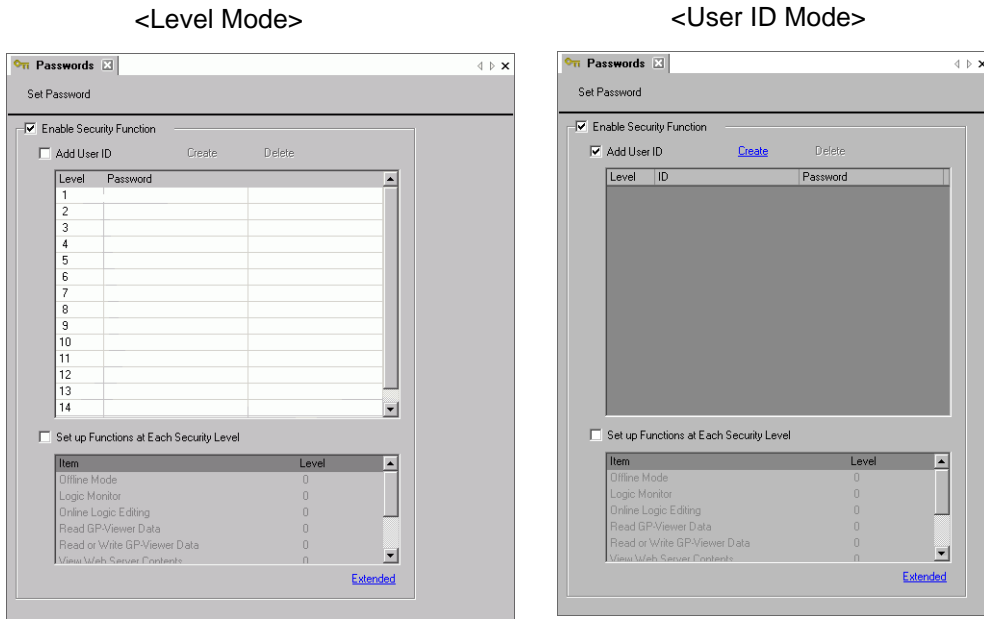
21.7 Settings Guide

21.7.1 Common (Security Settings) Settings Guide

■ Password Settings

Sets the password and user ID for the 15 security levels.

Depending on the [Add User ID] Settings, either "Level Mode" or "User ID Mode" is displayed.




Setting	Description
Enable Security Function	Select to use the security function.
Add User ID	Specifies whether the User ID is added to the level settings.
Level/Password	<p>For Level Mode</p> <p>Sets password for level 1 to 15. A password can be inputted by using up to eight single-byte characters. Passwords are case-sensitive. Set passwords only for the security levels you want to use.</p> <p>NOTE</p> <ul style="list-style-type: none"> • When Level Mode is selected, you cannot set the same password for multiple security levels. • By setting a password in security level 15, you can change all security level passwords on the GP (offline mode).

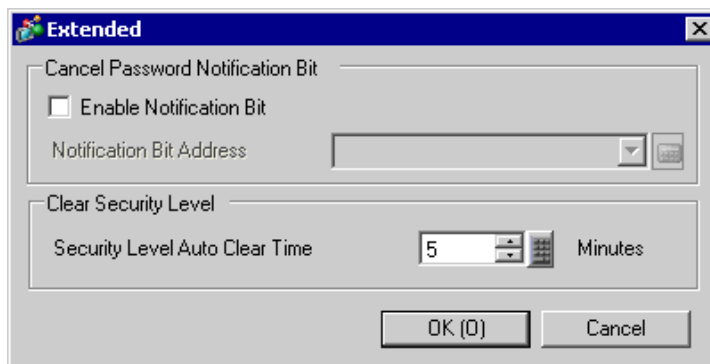
Continued

Setting		Description																						
Add User ID	Level/ Password/ User ID	<p>For User ID Mode</p> <p>Up to 64 passwords can be registered. You can set the level between 1 to 15 optionally. Up to eight single-byte characters can be used for Password and User ID input. Passwords and User ID are case-sensitive.</p> <p>NOTE</p> <ul style="list-style-type: none"> For User ID Mode, you can set the same password for multiple security levels, but you cannot set the same User ID for multiple security levels. When Level Mode is changed to User ID Mode, only lines that already have passwords can be registered with User ID Mode. <p>IMPORTANT</p> <ul style="list-style-type: none"> If you disable [Add User ID] when it has already been enabled, a message box appears warning that all registered content in the password settings will be deleted if you continue. Selecting "Yes" deletes all the registered content. 																						
	Create New/ Delete	Once [Add User ID] is checked, display of [Create New] and [Delete] is enabled. Select [Create New] to add one line to the registration lines of Password and User ID. Select [Delete] to delete the line you have selected.																						
Set up function at each security level	<p>Sets whether or not to set functional security settings. Functions that can be set are as follows.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Function</th> <th>Feature</th> </tr> </thead> <tbody> <tr> <td>Export error</td> <td>Offline Feature</td> </tr> <tr> <td>Logic monitor</td> <td>Logic Feature</td> </tr> <tr> <td>Online Logic Editing</td> <td>Logic Feature</td> </tr> <tr> <td>Read in GP-Viewer Data Values</td> <td>GP-Viewer Function</td> </tr> <tr> <td>Read in/Write out GP-Viewer Data Values</td> <td>GP-Viewer Function</td> </tr> <tr> <td>Browsing Web Server Contents</td> <td>Web Server Function</td> </tr> <tr> <td>Read in Web Server Data Values</td> <td>Web Server Function</td> </tr> <tr> <td>Read in/Write out Web Server Data</td> <td>Web Server Function</td> </tr> <tr> <td>Browsing files in the FTP folder</td> <td>FTP Function</td> </tr> <tr> <td>Registering and deleting files in the FTP folder</td> <td>FTP Function</td> </tr> </tbody> </table>		Function	Feature	Export error	Offline Feature	Logic monitor	Logic Feature	Online Logic Editing	Logic Feature	Read in GP-Viewer Data Values	GP-Viewer Function	Read in/Write out GP-Viewer Data Values	GP-Viewer Function	Browsing Web Server Contents	Web Server Function	Read in Web Server Data Values	Web Server Function	Read in/Write out Web Server Data	Web Server Function	Browsing files in the FTP folder	FTP Function	Registering and deleting files in the FTP folder	FTP Function
Function	Feature																							
Export error	Offline Feature																							
Logic monitor	Logic Feature																							
Online Logic Editing	Logic Feature																							
Read in GP-Viewer Data Values	GP-Viewer Function																							
Read in/Write out GP-Viewer Data Values	GP-Viewer Function																							
Browsing Web Server Contents	Web Server Function																							
Read in Web Server Data Values	Web Server Function																							
Read in/Write out Web Server Data	Web Server Function																							
Browsing files in the FTP folder	FTP Function																							
Registering and deleting files in the FTP folder	FTP Function																							

Continued

Setting	Description
Set up function at each security level	<p>Level</p> <p>Sets the level for the security settings function.</p> <p>NOTE</p> <ul style="list-style-type: none"> • Security level 0 means no security is set. <p>Level 0 or Level 15 Select either Level 0 or Level 15 for "Export error". Level 15 in the password settings is required to set Level 15. If Level 15 is not set, the following error message appears</p> 
	<p>Level</p> <p>Level 0 to Level 15</p> <p>For Logic Function, GP-Viewer Function, Web Server Function, and FTP Function, you can set the security level between 0 to 15. However, the following standards for the level settings apply depending on each function.</p> <ul style="list-style-type: none"> •Logic Monitor and Online Logic Editing Only a constant level, or a high Online Logic Editing level, can be set. •Read in GP-Viewer Data Values and Read in/Write out GP-Viewer Data Values A high level can only be set for a constant level, or for Read in/Write out GP-Viewer Data Values. •Browsing Web Server Contents, Read in Web Server Data Value and Read in/Write out Web Server A high level can only be set for a constant level, or for Read in/Write out Web Server. •Browsing files in the FTP folder and Register and Delete files in the FTP folder A high level can only be set for a constant level, or for Register and Delete files in the FTP folder.
<p>Extended</p>	<p>Displays the [Extended] dialog box.</p> <p>☞ " ◆ Extended Settings" (page 21-22)</p>

◆ Extended Settings

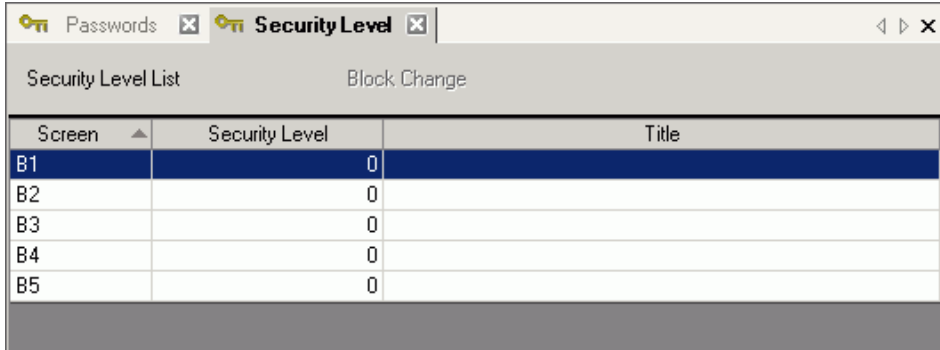


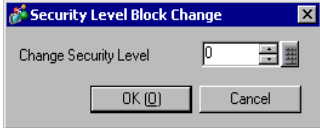
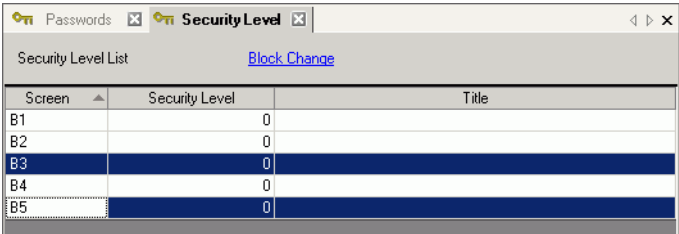
Setting	Description												
Enable Notification Bit	Select this check box to send a notification when the ESC key is used to exit the password input window after a change screen operation initiated by the device/PLC. This will not work when changing screens by touch.												
Notification Bit Address	When you cancel a password input window displayed via the Device/PLC control with the [ESC] key, the designated Notification Bit Address turns ON. In the System Settings workspace, [Display Unit] screen's [Display] tab, if the [Reflect in Device/PLC] check box is not selected, monitor the notification bit and when it turns ON, on the device/PLC reset the [Change-To Screen No.]* ¹ to the same number as the [Current Sampled No.]. When screen numbers match, the password input window closes.												
Security Level Auto Clear Time	This feature sets the length of time required before the security level status returns to "0", assuming no GP unit operations/ screen changes are performed. The time can be set from 1 to 60 minutes. <div style="border: 1px solid black; padding: 2px; width: fit-content;">NOTE</div> <ul style="list-style-type: none"> • If "0" is entered for the min. value, the security level status is not be automatically cleared. • Clear by performing the internal device address's bit action When the LS9300's 0 bit goes from OFF → ON, the security level is cleared and the current security level stored in LS9301 changes to 0. After the Security Level Clear occurs, return LS9300's 0 bit to OFF. (LS9301 is read-only.) <div style="margin-top: 10px;"> <table style="border-collapse: collapse; margin-left: 20px;"> <tr> <td style="border: none;"></td> <td style="border: none; text-align: center;">0</td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> <tr> <td style="border: none; padding-right: 5px;">LS9300</td> <td style="border: 1px solid black; padding: 2px;">Reserved (0)</td> <td style="border: none; padding: 0 5px;">}</td> <td style="border: none; padding-left: 5px;">Security Level Clear Bit</td> </tr> <tr> <td style="border: none; padding-right: 5px;">LS9301</td> <td style="border: 1px solid black; padding: 2px;"></td> <td style="border: none; padding: 0 5px;">}</td> <td style="border: none; padding-left: 5px;">Stores the current security level</td> </tr> </table> </div>		0			LS9300	Reserved (0)	}	Security Level Clear Bit	LS9301		}	Stores the current security level
	0												
LS9300	Reserved (0)	}	Security Level Clear Bit										
LS9301		}	Stores the current security level										

*1 To operate [Change-To Screen Number] via a Device/PLC, please configure the System Data Area.

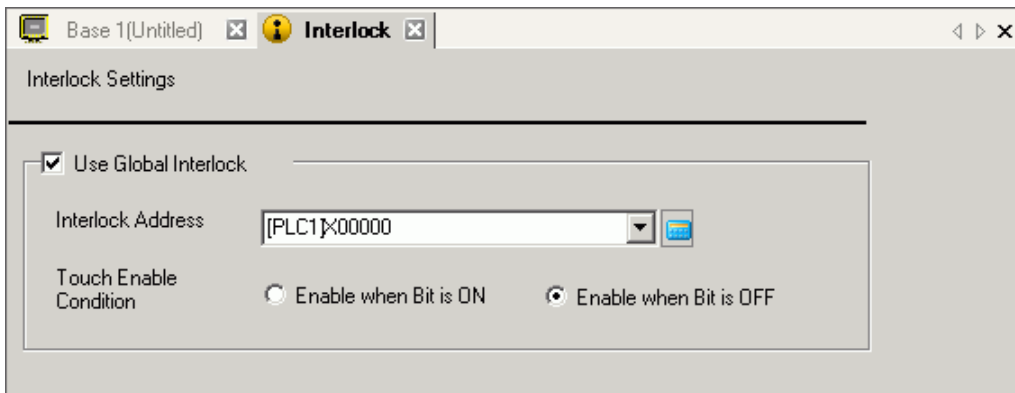
☞ "5.15.6 [System Settings] Setting Guide ◆ System Area Settings" (page 5-155)

■ Security Level List



Setting	Description
Screen	Displays the screen number.
Security Level	Set each screen's security level. <div style="border: 1px solid black; padding: 2px; width: fit-content;">NOTE</div> <ul style="list-style-type: none"> When setting multiple screens to the same security level, please use [Block Change].
Title	Displays each screen's title.
Block Change	Updates the selected security levels for multiple screens at one time. Select the screens to change and click [Block Change]. The Security Level Block Change dialog box appears and allows you to change the level. <div style="text-align: center;">  </div> <div style="border: 1px solid black; padding: 2px; width: fit-content;">NOTE</div> <ul style="list-style-type: none"> To select multiple screens, drag the cursor or select rows while holding down the CTRL key. <div style="text-align: center;">  </div>

■ Interlock Settings



Setting	Description													
Use Global Interlock	<p>Sets whether to use Global Interlock or not</p> <p>NOTE</p> <ul style="list-style-type: none"> This function only allows touch operation when a bit designated via [Interlock Address] is in a state that has been specified by [Touch Enable Condition]. 													
Interlock Address	<p>Specifies the bit address (all bit addresses can be set) that represents an Enable condition for allowing touch input. Touch is enabled (disabled) depending on the state of this address.</p>													
Touch Enable Condition	<p>Select the condition that will enable the part to be touched, to allow input to be entered.</p> <table border="1"> <thead> <tr> <th>Touch Enable Condition</th> <th>Interlock Address Status</th> <th>Touch Enabled/ Disabled</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Enable when Bit is ON</td> <td>ON</td> <td>Touch enabled</td> </tr> <tr> <td>OFF</td> <td>Touch disabled</td> </tr> <tr> <td rowspan="2">Enable when Bit is OFF</td> <td>ON</td> <td>Touch disabled</td> </tr> <tr> <td>OFF</td> <td>Touch enabled</td> </tr> </tbody> </table>	Touch Enable Condition	Interlock Address Status	Touch Enabled/ Disabled	Enable when Bit is ON	ON	Touch enabled	OFF	Touch disabled	Enable when Bit is OFF	ON	Touch disabled	OFF	Touch enabled
Touch Enable Condition	Interlock Address Status	Touch Enabled/ Disabled												
Enable when Bit is ON	ON	Touch enabled												
	OFF	Touch disabled												
Enable when Bit is OFF	ON	Touch disabled												
	OFF	Touch enabled												

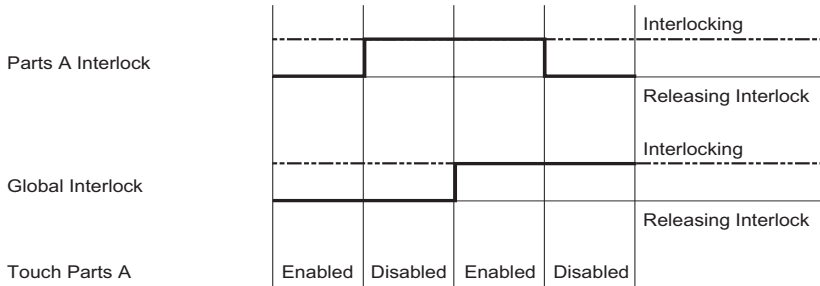
■ **Global Interlock's Touch Enable Condition**

Enable / Disable of touch varies depending on the state of the settings of parts used in the same project or the state of the connection with the external Device/PLC. This section explains Enable / Disable of touch for each setting.

◆ **Simultaneous use of parts with interlock**

The Interlock installed on individual parts and global interlock can be used simultaneously, but when simultaneously used, the global interlock will take priority.

For example, even if the interlock for the individual parts is released, touch is disabled for that part if it is in a state of global interlock.



◆ **Specifies the address of the external Device/PLC**

When the address of the external Device/PLC is designated as the global interlock address, Touch Enable Condition cannot be determined until the connection with that Device/PLC is established. Therefore, regardless of [Enable when Bit is ON]/[Enable when Bit is OFF], the global interlock will be enabled.

However, if disconnected once a connection is established, the status will be the same as prior to disconnection.

- Touch Enable Condition: Enable when Bit is ON

Communication Status of Devices/PLC	Not Connected	Connected	Not Connected	Connected	Connected	Not Connected	Connected	Bit ON
Interlock Address								
Touch propriety	Disabled	Enabled	Enabled	Enabled	Disabled	Disabled	Disabled	Bit OFF

Communication Status of Devices/PLC	Not Connected	Connected	Not Connected	Connected	Connected	Not Connected	Connected	Bit ON
Interlock Address								
Touch propriety	Disabled	Disabled	Disabled	Disabled	Enabled	Enabled	Enabled	Bit OFF

- Touch Enable Condition: Enable when Bit is OFF

Communication Status of Devices/PLC	Not Connected	Connected	Not Connected	Connected	Connected	Not Connected	Connected	Bit ON
Interlock Address								
Touch propriety	Disabled	Disabled	Disabled	Disabled	Enabled	Enabled	Enabled	Bit OFF

Communication Status of Devices/PLC	Not Connected	Connected	Not Connected	Connected	Connected	Not Connected	Connected	Bit ON
Interlock Address								
Touch propriety	Disabled	Enabled	Enabled	Enabled	Disabled	Disabled	Disabled	Bit OFF

NOTE

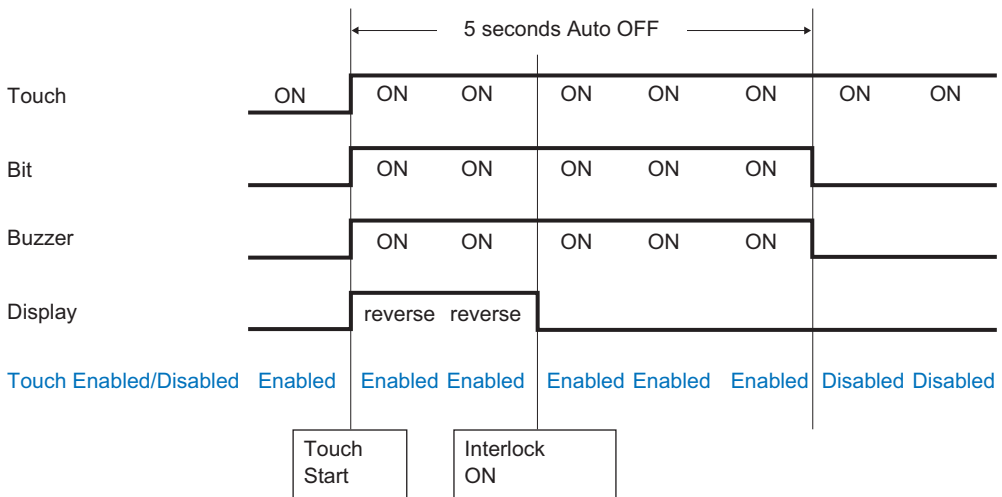
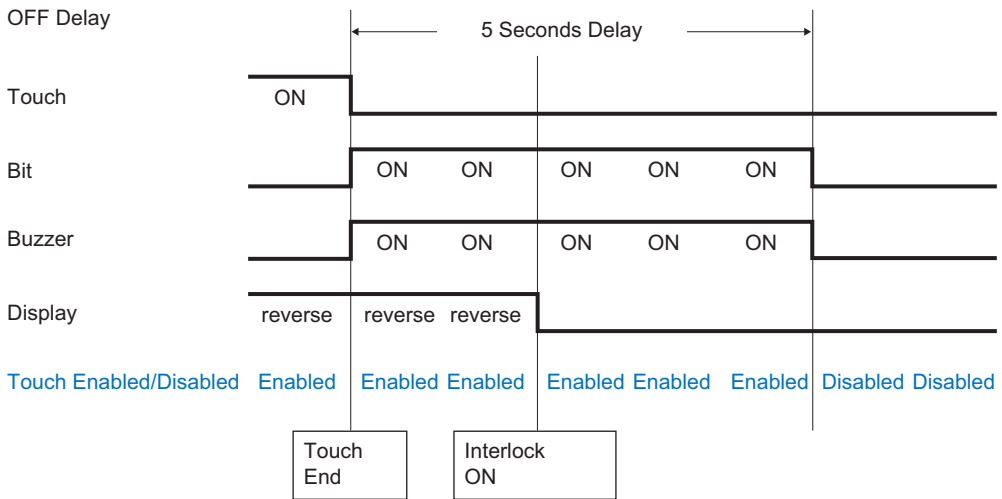
- Even in the case of multiple PLC Connections, as long as a connection is established with a PLC where an address is allocated in the global interlock, the global interlock operates regardless of whether the connection with other PLCs has been established or not.
- Display settings for each part that indicates the state of the Interlock can be applied to the interlock condition for that part. It cannot be applied to the state of global interlock.

◆ **Parts settings that allow group function with Delay or Auto OFF**

When entering a state of global interlock (touch is disabled) during the operation of the parts, touch can be enabled until the operation of the parts is completed or touch can be disabled throughout operation.

- Group function with OFF Delay and Auto OFF

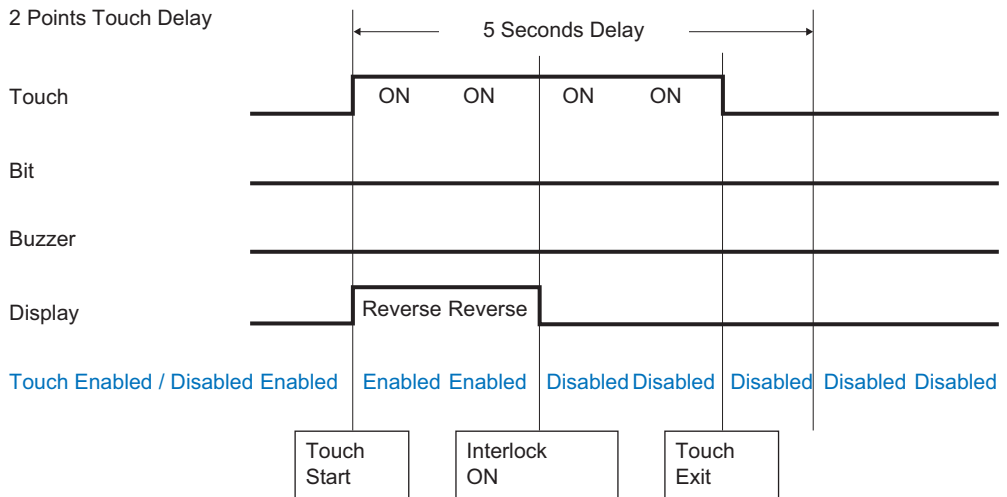
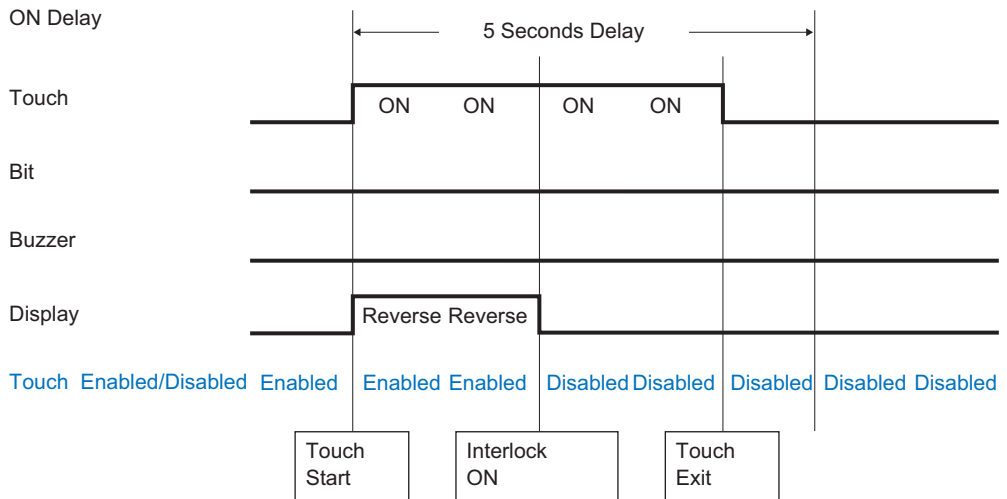
When the parts that allow the group function with OFF Delay and Auto OFF is changed to a Global Interlock Condition (touch is disabled) during a momentary operation, the momentary operation takes priority during Delay or Auto OFF. It will not enter the state of global interlock (touch is disabled) until the Delay is completed or the auto OFF setting period has elapsed.



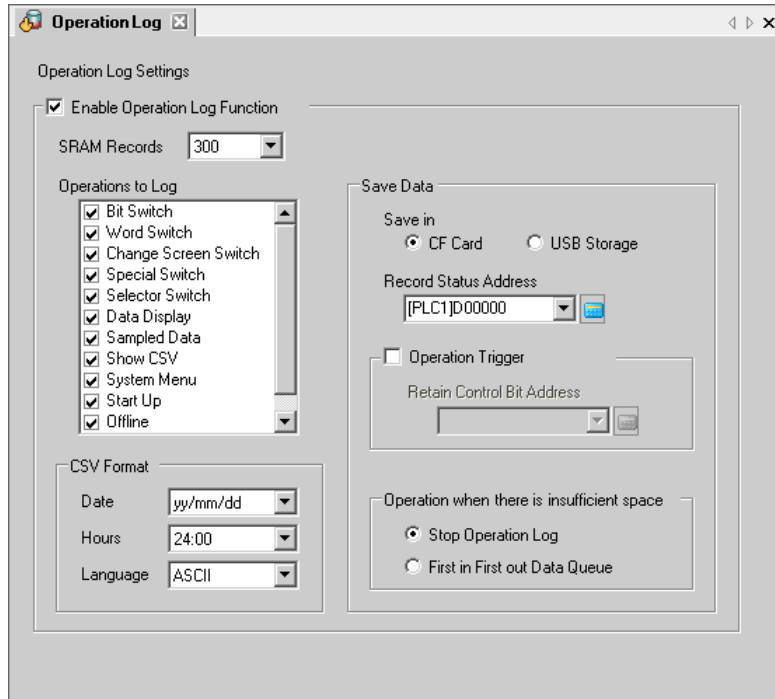
Before Auto-Off elapses, and you release the touch, touch becomes Disabled from that point.

- ON Delay, 2 Points Pressing Delay Function

For ON Delay and 2 Points Pressing Delay Function, if the condition is changed to the Global Interlock Condition (touch is disabled) during the Delay, the delay is canceled, and the Global Interlock Condition (touch is disabled) is activated.

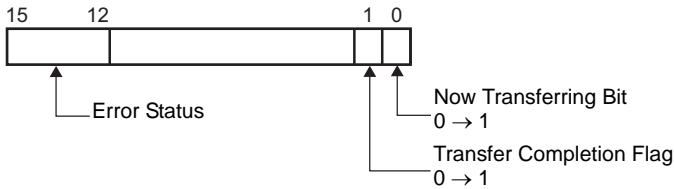


21.7.2 Common Settings (Operation Log Settings) Guide



Setting	Description
Enable Operation Log Function	Specifies whether to use the Operation Log feature or not
SRAM Records	Select a number to save to SRAM from 100, 200, 300, 400 and 500. NOTE <ul style="list-style-type: none"> The capacity of the SRAM in GP is determined by the number of entries selected.
Operations to Log	Select the functions for Operations to Log from [Bit Switch], [Word Switch], [Change Screen Switch], [Special Switch], [Selector Switch], [Data Display], [Sampling Data Display], [Show CSV], [System Menu], [Start], [Offline], and [Change Language]. NOTE <ul style="list-style-type: none"> In Initialization Settings, all of the functions are targeted as Operations to Log.
Save Data	Save in Select [CF Card] or [USB Storage] as the "Save in" location when outputting the Operation Log by converting to CSV format, or when exceeding the number of entries to save in the SRAM

Continued

Setting		Description												
Save Data	Record Status Address	<p>Specifies the address for confirming the condition of writing in to CF Card or USB Storage.</p> <ul style="list-style-type: none"> • Status Once Bit 0 in the [Control] Address is set to ON, Bit 0 in the [Status] Address is turned ON. After confirming the condition of the [Control]Address, Bit should be turned ON in the [Status]Address to write in.  <p>The error status indicates the following conditions. (Error Code)</p> <table border="1" data-bbox="399 749 1249 1052"> <thead> <tr> <th>Bit 12 to 15</th> <th>Description</th> <th>Detail</th> </tr> </thead> <tbody> <tr> <td>0000</td> <td>Completed Successfully</td> <td>When the backup process is completed successfully.</td> </tr> <tr> <td>0100</td> <td>CF Card/No USB storage</td> <td>Occurs during backup if the CF Card/ <F>USB storage is not inserted or if the CF Card hatch is open.</td> </tr> <tr> <td>0101</td> <td>CF Card/USB storage write error</td> <td>There is not enough storage capacity in the CF Card/USB storage during backup, or CF Card/USB storage is removed during writing.</td> </tr> </tbody> </table>	Bit 12 to 15	Description	Detail	0000	Completed Successfully	When the backup process is completed successfully.	0100	CF Card/No USB storage	Occurs during backup if the CF Card/ <F>USB storage is not inserted or if the CF Card hatch is open.	0101	CF Card/USB storage write error	There is not enough storage capacity in the CF Card/USB storage during backup, or CF Card/USB storage is removed during writing.
	Bit 12 to 15	Description	Detail											
	0000	Completed Successfully	When the backup process is completed successfully.											
	0100	CF Card/No USB storage	Occurs during backup if the CF Card/ <F>USB storage is not inserted or if the CF Card hatch is open.											
0101	CF Card/USB storage write error	There is not enough storage capacity in the CF Card/USB storage during backup, or CF Card/USB storage is removed during writing.												
Operation Trigger	Specifies whether or not to save at a specified timing when you want to save the operation log at a given timing.													
Retain Control Bit Address	Turn ON the designated Bit to start writing in the CF Card or USB storage.													
Operation when there is insufficient space	<p>Specifies the operation when there is not enough space in the CF Card or USB storage.</p> <ul style="list-style-type: none"> • Stop Operation Log Stop outputting to the file of the operation log at the "Save in" location. When the next operation is conducted, recording of the operation log completely stops, and nothing is recorded. • First in First out Data Queue Delete the oldest file that is saved in the CF Card or USB storage, and save the data in the SRAM. 													
CSV File Format Settings		Set the Display Format when saving in CSV format.												
	Date	Select the display format for dates, from mm/dd/yy (month/day/year), mm/dd (month/day), yy/mm/dd (year/month/day/), dd/mm/yy (day/month/year).												
	Sampling	Select the display format for time, from 12:00 or 24:00.												
	Language	Select the language format from Japanese, languages that support ASCII, Chinese (Traditional), Chinese (Simplified), Korean, Cyrillic, and Thai.												

■ Operation Log

◆ Type and content of obtained data

The functions that are recorded in the log as information about touch operation are as follows.

Feature	Operation	Action
Bit Switch	Bit Set	Bit Set
	Bit Reset	Bit Rst
	Bit Momentary	Bit Mom
	Bit Invert	Bit Rvs
	Comparison	Bit Comp
Word Switch	Word Write in	Word Write
	Word Add	Word Add
	Word Continuous Add	Word Add++
	Word Sub	Word Sub
	Word Continuous Sub	Word Sub--
	Digit Addition	Digit Add
	Digit Continuous Add	Digit Add++
	Digit Subtraction	Digit Sub
	Digit Continuous Sub	Digit Sub--
	Operation	Word Ope
Change Screen Switch	Previous Screen	Scrn Prev
	Screen Change	Scrn Chg

Continued

Feature	Operation	Action	
Special Switch	Alarm History Switch	Acknowledge	Alm Ack
		Clear	Alm Clr
	File Item Switch	Transfer SRAM -> Device/PLC	SRAM->PLC
		SRAM->Transfer to Internal Address	SRAM->ADDR
		Transfer Device/PLC -> SRAM	PLC->SRAM
		Device/PLC->Transfer to Internal Address	PLC->ADDR
		Internal Address->Transfer to SRAM	ADDR->SRAM
		Internal Address->Transfer to Device/PLC	ADDR->PLC
	Data Transfer Switch	External storage->Transfer to Device/PLC	Ex Mem -> PLC
		Device/PLC->Transfer to External storage	PLC -> Ex Mem

Continued

Feature	Operation	Action	
Special Switch	Start monitor switch	Ladder monitor	Bit set
		Ladder monitor (Cache)	
		Device monitor	Bit set
		Start application	App ON
		Exit WinGP	Win End
		Reset	Reset
		Offline	OFF Line
Selector Switch		Bit Slct	
Data Display	Touch, Input Barcode (Edit Data)	Data Input	
Sampling Data Display	Sampling Data Display (Edit Data)	Samp Input	
Show CSV	Show CSV (Edit Data)	CSV Input	
System Menu	Offline	Offline	
	Reset	Reset	
	Address Monitor	Addr Mon	
	Logic monitor	Logi Mon	
	Ladder monitor	Lad Mon	
	Device monitor	Dev Mon	
	CF Start	CF Start	
	USB Start	USB Start	
Start	Main body Start	Power ON	
	Trans Ret	Trans Ret	
Offline	Off Chg	OFF Chg	
	Off Ret	OFF Ret	
Change Language	Change Language	Lang Chg	

Example of CSV file outputting

Number	Date	Time	User ID	LEVEL	Screen	Parts ID	Comment	Action	Address
1	07/12/22	13:54		0	b1	SL_0001		Bit Set	[PLC1]M0000
2	07/12/22	13:54		0	b1	SL_0002		Bit Rst	[PLC1]M0001
3	07/12/22	13:55	YAMADA	3	b1	SL_0003	Level 3 Switch	Bit Mom	

Item and Summary

Function	Description
Number	Log number
Date	Operation data is displayed in the format that is set in [Operation Log Settings].
Time	Operation time is displayed in the format that is set in [Operation Log Settings].
User ID	User ID that is registered in "User ID Mode" (Add User ID) is displayed. For "Level Mode" (Do not add User ID), this will be blank.
LEVEL	Display the level between 0 to 15 at the time of operation.
Screen	Displays the Screen Number in B** for the Base Screen, and in W** for the Window Screen.
Parts ID	Displays Parts ID.
Comment	Displays comments in Parts. If nothing is registered, this will be blank.
Action	Displays Action ☞ " ◆ Type and content of obtained data" (page 21-31)
Address	Displays a target address
Sub Info	This will be displayed when supplemental remarks are needed regarding Address or Action.
Prev Value	Displays the previous value.
Chg Value	Displays the changed value. Bit Address displays ON or OFF and Word Address displays a numeric value. The display format of the numeric value differs depends on the display attributes of the parts being used.

NOTE


- "Number" is addressed sequentially in the file.
- The item names are fixed in English.


◆ Contents of the functional operation log

Bit Switch

Target: Bit Set, Bit Reset, Bit Momentary, Bit Invert, Comparison

NOTE


- Please refer to the settings guide for details.
 "10.14.1 Bit Switch" (page 10-45)


Function	Description
Number	Common items  "Item and Summary" (page 21-34)
Date	
Time	
User ID	
LEVEL	
Screen	
Parts ID	
Comment	
Action	
Address	
Sub Info	Bit Set : Hidden Bit Reset : Hidden Bit Momentary : Hidden Bit Invert : Hidden Comparison : Displays a Comparison Word Address and a Constant of Comparison Condition Example [PLC1]D0001 (space) < (space) 10 (Comparison Word Address Comparison Condition Constant)
Prev Value	Hidden
Chg Value	Bit Set : ON Bit Reset : OFF Bit Momentary : (When pressing) ON (When releasing) OFF * As for Bit Momentary, the log is obtained separately for ON and for OFF. Bit Invert : Hidden Comparison : ON or OFF

Word Switch


Target: Word Write, Word Add, Word Continuous Add, Word Subtract, Word Continuous Subtract, Digit Addition, Digit Continuous Add, Digit Subtraction, Digit Continuous Subtraction, Operation

NOTE

- Please refer to the settings guide for details.
 "10.14.2 Word Switch" (page 10-59)

Function	Description
Number	Common items  " Item and Summary" (page 21-34)
Date	
Time	
User ID	
LEVEL	
Screen	
Parts ID	
Comment	
Action	
Address	


Continued


Function	Description
Sub Info	<p>Word Write in : Hidden</p> <p>Word Add : Displays the base Word Address for Add + Constant</p> <p>Word Sub : Displays the base Word Address for Sub - Constant</p> <p>Digit Addition : Displays the Digit Position</p> <p>Digit Subtraction : Displays the Digit Position</p> <p>Operation : Displays the base Word Address for Operation and the Constant</p> <p>Example [PLC1]D0001 (space) AND (space) 10 (Operation Base Word Address Operator Constant)</p> <p>Word Continuous Add : Displays the base Word Address for Add, the Constant, and ON/OFF.</p> <p>Word Continuous Sub : Displays the base Word Address for Sub, the Constant, and ON/OFF.</p> <p>Digit Continuous Add : When pressed Digit Position ON When released Digit Position OFF</p> <p>Digit Continuous Sub : When pressed Digit Position ON When released Digit Position OFF</p> <p> "10.14.2 Word Switch ◆ Operation" (page 10-62)</p>
Prev Value	Hidden
Chg Value	<p>Word Write in, Digit Addition, Digit Continuous Add, Digit Subtraction, Digit Continuous Sub: Displays Write in value</p> <p>Word Add, Word Continuous Add, Word Sub, Word Continuous Sub, Operation: Hidden</p>

Change Screen Switch

Target: Previous Screen, Screen Change

NOTE


- Please refer to the settings guide for details.
 "10.14.3 Change Screen Switch" (page 10-63)


Function	Description
Number	Common items  "Item and Summary" (page 21-34)
Date	
Time	
User ID	
LEVEL	
Screen	
Parts ID	
Comment	
Action	
Address	
Sub Info	Hidden
Prev Value	Previous Screen: Displays the screen number before changing Screen Change: Displays the screen number before changing
Chg Value	Previous Screen: Displays the changed screen number (if there is no previous screen, 0 will be displayed) Screen Change: Displays the changed screen number

Special Switch (Alarm)

Target: Acknowledged, Clear

NOTE


- Please refer to the settings guide for details.
 "10.14.4 Special Switch ◆ Alarm History Switch" (page 10-66)


Function	Description
Number	Common items  "Item and Summary" (page 21-34)
Date	
Time	
User ID	
LEVEL	
Screen	
Parts ID	
Comment	
Action	
Address	
Sub Info	Displayed depending on the Action. Alarm History Acknowledged (Acknowledged) : Ack Alarm History Acknowledged (Ack All) : Ack All Alarm History Clear (Clear) : Clr Alarm History Clear (Clear All) : Clr All Alarm History Clear (Clear Recovery Alarm) : Clr Rcv Alarm History Clear (Clear Acknowledged Alarm): Clr Ack Alarm History Clear (Clear All Recovery Alarm): Clr All Rcv Alarm History Clear (Clear All Acknowledged Alarm): Clr All Ack Alarm History Clear (Clear All Count) : Clr All Cnt Alarm History Clear (Clear One Count) : Clr One Cnt Alarm History Clear (Clear All Time) : Clr All Time Alarm History Clear (Clear One Time) : Clr One Time
Prev Value	Hidden
Chg Value	Hidden

Special Switch (File Item Switch)

Target: Transfer SRAM -> Device/PLC, Transfer SRAM -> Internal Address, Transfer Device/PLC -> SRAM, Transfer Device/PLC -> Internal Address, Transfer Internal Address -> SRAM, Transfer Internal Address -> Device/PLC

NOTE


- Please refer to the settings guide for details.
 "10.14.4 Special Switch ◆ File Item Switch" (page 10-68)


Function	Description
Number	Common items  "Item and Summary" (page 21-34)
Date	
Time	
User ID	
LEVEL	
Screen	
Parts ID	
Comment	
Action	
Address	
Sub Info	Transfer SRAM -> Device/PLC: Example File Number (space) Item Name (space) Storage Start Address Transfer SRAM -> Internal Address: Example File Number (space) Item Name (space) Storage Start Address Transfer Device/PLC -> SRAM: Example File Number (space) Item Name (space) Storage Start Address Transfer Device/PLC -> Internal Address: Example File Number (space) Item Name (space) Storage Start Address Transfer Internal Address -> SRAM: Example File Number (space) Item Name (space) Storage Start Address Transfer Internal Address -> Device/PLC: Example File Number (space) Item Name (space) Storage Start Address
Prev Value	Hidden
Chg Value	Hidden

Special Switch (Data Transfer Switch)

Target: Transfer CF -> Device/PLC, Transfer Device/PLC -> CF, Transfer USB -> Device/PLC, Transfer Device/PLC -> USB

NOTE


- Please refer to the settings guide for details.
 "10.14.4 Special Switch ◆ Data Transfer Switch" (page 10-69)


Function	Description
Number	Common items  " Item and Summary" (page 21-34)
Date	
Time	
User ID	
LEVEL	
Screen	
Parts ID	
Comment	
Action	
Address	
Sub Info	CF Card->CF USB Storage -> USB
Prev Value	Hidden
Chg Value	Hidden

Special Switch (Start monitor switch)

Target: Ladder Monitor, Ladder Monitor (cache), Device Monitor

NOTE


- Please refer to the settings guide for details.
 "10.14.4 Special Switch ◆ Start Monitor Switch" (page 10-72)


Function	Description
Number	Common items  "Item and Summary" (page 21-34)
Date	
Time	
User ID	
LEVEL	
Screen	
Parts ID	
Comment	
Action	
Address	
Sub Info	Hidden
Prev Value	Hidden
Chg Value	ON

Special Switch (Others)

Target: Start Application, Exit WinGP, Reset, Offline


NOTE


- Please refer to the settings guide for details.
 "10.14.4 Special Switch ■ Switch Feature" (page 10-64)

Function	Description
Number	Common items  " Item and Summary" (page 21-34)
Date	
Time	
User ID	
LEVEL	
Screen	
Parts ID	
Comment	
Action	
Address	
Sub Info	Start Application: Displays the name of the EXE executed. End of the EXE path\the following text is displayed. Exit WinGP : Hidden Reset : Hidden Offline : Hidden
Prev Value	Hidden
Chg Value	Hidden

Selector Switch

NOTE

- Please refer to the settings guide for details.
 "10.14.5 Selector Switch" (page 10-74)

Function	Description
Number	Common items  "Item and Summary" (page 21-34)
Date	
Time	
User ID	
LEVEL	
Screen	
Parts ID	
Comment	
Action	
Address	
Sub Info	Hidden
Prev Value	Hidden
Chg Value	ON

Data Display

Target: Input of numeric values or characters, and Barcode Input, when using the Data Display with a Touch Input or Barcode Input function

Function	Description
Number	Common items ☞ " Item and Summary" (page 21-34)
Date	
Time	
User ID	
LEVEL	
Screen	
Parts ID	
Comment	
Action	
Address	
Sub Info	Hidden
Prev Value	Touch Input : Displays the numeric value or text before input is confirmed, using up to 100 characters. Barcode Input : Displays the previous bar code value, using up to 100 characters. NOTE • The Operation Log for the previous value only is not obtained when input confirmation has not been carried out.
Chg Value	Touch Input : Displays the numeric value or text after input is confirmed, using up to 100 characters. Input Barcode : Displays the value from bar code input, using up to 100 characters.

Sampling Data Display (Edit Data)

Target: When data is edited with the Sampling Data Display

Function	Description
Number	Common items ☞ " Item and Summary" (page 21-34)
Date	
Time	
User ID	
LEVEL	
Screen	
Parts ID	
Comment	
Action	
Address	
Sub Info	Hidden
Prev Value	Hidden
Chg Value	Hidden

CSV Display (Edit Data)

Target: When data is edited with the CSV Display

Function	Description
Number	Common items ☞ " Item and Summary" (page 21-34)
Date	
Time	
User ID	
LEVEL	
Screen	
Parts ID	
Comment	
Action	
Address	
Sub Info	Hidden
Prev Value	Hidden
Chg Value	Hidden

System Menu

Target: Offline, Reset, Address Monitor, Logic Monitor, Ladder Monitor, Device Monitor, CF Start, USB Start

Function	Description
Number	Common items ☞ " Item and Summary" (page 21-34)
Date	
Time	
User ID	
LEVEL	
Screen	Hidden
Parts ID	Hidden
Comment	Hidden
Action	Common items ☞ " Item and Summary" (page 21-34)
Address	Hidden
Sub Info	Hidden
Prev Value	Hidden
Chg Value	Hidden

Startup

Target: Startup display unit, startup via transfer

Function	Description
Number	Common items ☞ " Item and Summary" (page 21-34)
Date	
Time	
User ID	Hidden
LEVEL	Hidden
Screen	Hidden
Parts ID	Hidden
Comment	Hidden
Action	Common items ☞ " Item and Summary" (page 21-34)
Address	Hidden
Sub Info	Hidden
Prev Value	Hidden
Chg Value	Hidden

NOTE

- Not recorded in the Operation Log when data is transmitted from the transmission screen of the Project File on the offline menu.

Offline

Target: offline transition (the right click menu in the WinGP is included), recovery from offline

Function	Description
Number	Common items ☞ " Item and Summary" (page 21-34)
Date	
Time	
User ID	
LEVEL	
LEVEL	Offline transition : Displays the level during operation Recovery from offline : Displays the 0
Screen	Hidden
Parts ID	Hidden
Comment	Hidden
Action	Common items ☞ " Item and Summary" (page 21-34)
Address	Hidden
Sub Info	Table name
Prev Value	Hidden
Chg Value	Hidden

Change Language

Target: Change Language

Function	Description
Number	Common items ☞ " Item and Summary" (page 21-34)
Date	
Time	
User ID	
LEVEL	
Screen	Hidden
Parts ID	Hidden
Comment	Hidden
Action	Common items ☞ " Item and Summary" (page 21-34)
Address	Hidden
Sub Info	Displays the table name with 30 characters or less.
Prev Value	Hidden
Chg Value	Hidden

◆ Recording Timing of the Operation Log

Recording timing of the operation log differs depending on the target features to be recorded.

NOTE

- Regarding offline operation, the operation log recording starts from the time of the move to online mode. The log is not recorded when offline.
-

Basic Switch Action

The previous value is not recorded.

- Bit Switch

The operation log is recorded only for the state after the change.

Example: When "ON" is changed to "OFF", only the log for "OFF" is saved.

- Word Switch

The operation log is recorded only for the state after the change.

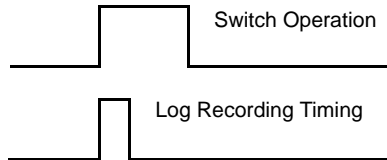
Example: When "100" is changed to "200", only the data of "200" is saved.

When [Touch Panel Detection] is [ON Detection]

NOTE

- See the settings guide for the settings details of [Touch Panel Detection].
☞ "5.15.6 [System Settings] Setting Guide ◆ Operation" (page 5-134)

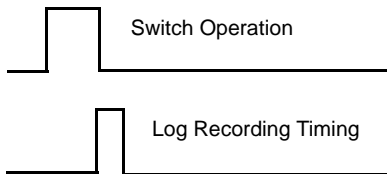
- When the switch action is normal (common for all switches)
The log recording is performed by turning the switch to ON. For Momentary, data value recording is performed when the state is either ON or OFF.



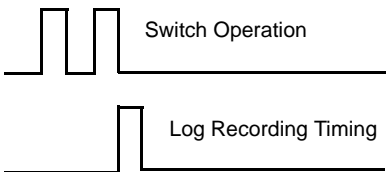
- When ON Delay or OFF Delay is set
The operation log recording starts after the delay time has passed.
- When Double Touch is set
The operation log recording starts when the double touch is enabled.

When [Touch Panel Detection] is [OFF Detection]

- When the switch action is normal (common for all switches)
Log recording is performed by turning the switch OFF. Only values after the change are saved are logged.

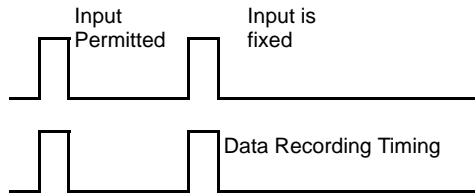


- When Double Touch is set
The operation log recording is performed when the switch is pressed for the second time.

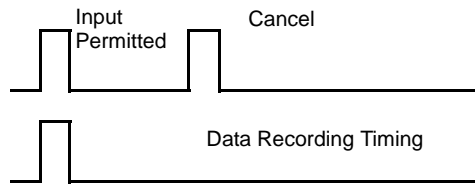


Data Display

The previous value is recorded at the time when Allow Data Input is triggered, and the data for the changed value is recorded at the time when Input is fixed.



The previous value is recorded when Input Permitted is triggered. If a cancel is performed after that, the data of the previous value is discarded without performing the operation log recording.



◆ Saving the Operation Log

The operation log recorded is converted to a file in the CSV format when it is saved in the CF Card or USB Storage.

File Name

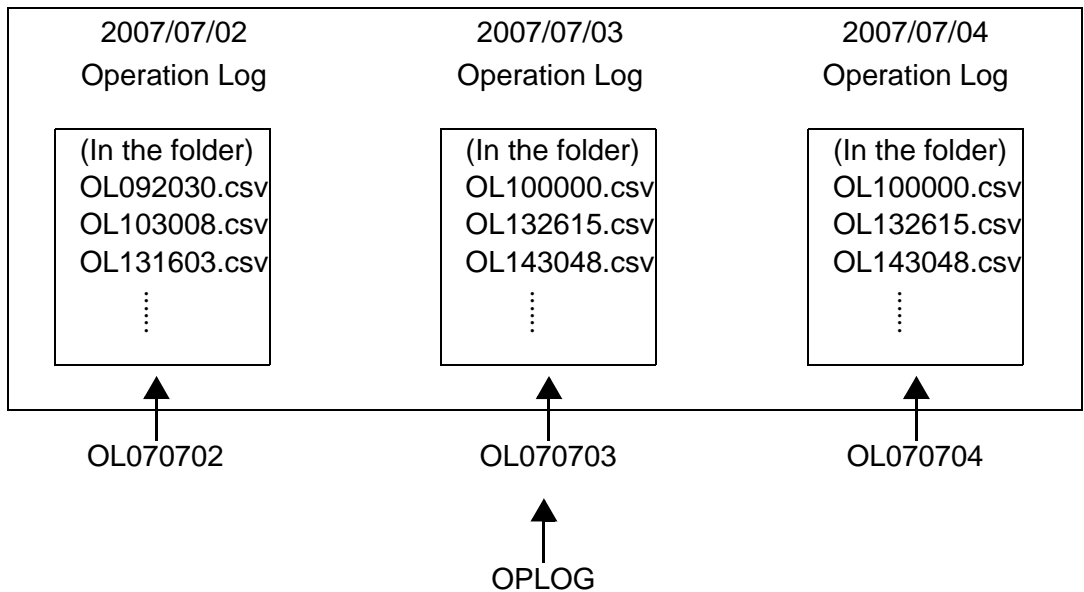
File names are saved in the following format.

OLHHMMSS.csv OL : an abbreviation of a file for an operation log
 HH : Hours
 MM: Minutes
 SS : Sec

Example: The operation log saved at 17:03:08 is named OL170308.csv

File Folder

Files are automatically saved in CSV format in the folder created. The "OPLOG" folder is created in the CF Card or USB Storage designated as a destination for the save, and a folder is created in the "OPLOG" daily.



Example: The folder to save and the file name for the operation log saved at 13:16:3 on July 2, 2007

\\OPLOG\OL070702\OL131603.csv

NOTE

- Do not save any files other than operation logs in the "OPLOG" folder.
- Operation log files can be displayed on the GP using the CSV Display.
 "24.6 Displaying/Editing CSV data on the Screen" (page 24-31)

21.8 Restrictions

21.8.1 Restrictions on Passwords and IDs

- The User ID and Password Input Window, the Password Input Window, and the User ID Input Window cannot be edited.
- A Password or a User ID cannot be entered from the Device/PLC.
- A Password or a User ID cannot be entered from the Bar Code Reader.
- When the Password Input Window (the User ID Input Window) or the User ID and Password Input Window is displayed, if the Trigger Bit of the Local Window or the Global Window is turned ON, close the Password Input Window (the User ID Input Window) or the User ID and Password Input Window and then display.
- Do not set [Continuous Read] for Window Parts to call the Window Screens setting Security Level. The Password Input Window or the User ID and Password Input Window is not displayed on the GP even if you set it, and the security feature does not run.
- When the security level registering no Password is set for the screen, the screen can not be displayed unless you input a Password or a User ID and Password with the greater security level than the screen.

When a Password or a User ID and Password with a greater security level than the screen you want to display have/has not been registered, you can not change screens.

1 When the passwords are set as follows and the screen changes to a level 4 screen

Level 1	AAAA
Level 2	BBBB
Level 3	CCCC
Level 4 to 14	None
Level 15	ZZZZ

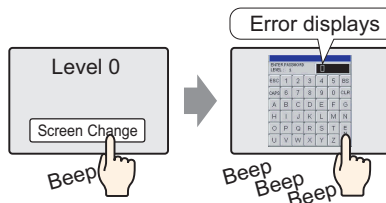


Input the level 15 password

There is a password higher than level 4, so the screen change is permitted

2 When the passwords are set as follows and the screen changes to a level 4 screen

Level 1	AAAA
Level 2	BBBB
Level 3	CCCC
Level 4 to 15	None



Even if you have inputted something, pressing the [ESC] key will return to the previous screen.

There is no password higher than level 4, so the screen change is not permitted

- In the "Level Mode" (Do Not Add a User ID), an error does not occur even though a Password has not determined. However, an error occurs when you set the same Password. In the "User ID Mode" (Add a User ID), a Password has to be set. The same Password can be set. However, when no User ID is determined or a User ID is duplicated, an error occurs and settings are not completed.
- When the security level is set for the screen displayed at the beginning after turning on the GP Power (the initial screen), the initial screen is displayed and followed by the Password Input Window or the user ID and Password Input Window. Therefore, the initial screen is running while the Password Input Window or the user ID and Password Input Window is displayed. In addition, the Password Input Window displayed here can not be canceled by the [ESC] Key, and the user ID and Password Input Window can not be canceled by [Cancel]Key. It is necessary to input the correct Password or the user ID and Password.

21.8.2 Restrictions on the global interlock

- During the global interlock, Touch Operations on the screen are disabled. However, it is possible to perform Touch Operations for the following features, in the same way as normal.
 - Displaying and operating the System Menu
 - Displaying and operating the Brightness/Contrast adjustment bar
 - Changing the Error Window (single-line <=> details) and deleting it
 - Returning from standby mode (Screen OFF)
 - Operating Offline
- If the features or parts are touched when touching them has been disabled by the global interlock, the touch buzzer sound does not sound, and AUX is not output.
- During the global interlock, do not activate the Ladder Monitor, the Device Monitor, the Logic Monitor, or the Address Monitor. If you activate them, you cannot exit any monitor feature because touch operation is disabled.

21.8.3 Restrictions on the operation log

- Do not turn off the power or remove the CF Card or USB memory during the save operation to the CF Card or USB Storage. Data may not be saved normally.
- If the file size is greater than the remaining capacity in the CF Card or USB Storage, the file can not be saved.
- An operation log which has been recorded on SRAM during Project Transfer is saved in the CF Card or USB Storage.

However, if the CF Card or USB Storage can not be found on the GP or the remaining capacity is not enough, the data of the operation log is deleted. When the project is transferred from the transfer screen for project files on the offline menu, the operation log is not saved in the CF Card or USB Storage.

- The operation log does not record the action of simulation.
- The operation log does not record data when the project is transferred from the transfer screen for project files on the offline menu.
- Even if the execution condition of the operation log is set to "When Bit is ON", when the capacity of SRAM is filled up, data is automatically output to the CF Card or USB Storage as a CSV file.
- A log operated remotely using the GP-Viewer can not be saved.
- The IPC Series do not have Backup SRAM. Therefore, the History Data is backed up periodically. Backup is performed in the designated frequency or trigger, so the operation log after the last backup is not saved if the power is turned off before backup. Recording of the operation log will be restarted after recovery.

Refer to the following for the settings of the destination to save the History Data in the IPC Series.

☞ "37.9.1 System Settings [Display Unit Settings] [IPC Settings] Settings Guide ■ Historical Data Retentive Settings" (page 37-159)

