OMRON

Programmable Terminal NA-series

Practices Guide
Servo IAG Library

NA5-15[]101[]
NA5-12[]101[]
NA5-9[]001[]
NA5-7[]001[]

SYSMAC
always in control

V437-E1-02

■ Introduction

This guide provides reference information for the use of Servo IAG library. It does not provide safety information.
Be sure to obtain the NA-series Programmable Terminal User's Manuals, read and understand the safety points and other information required for use, and test sufficiently before actually using the equipment.

Terms and Conditions Agreement

Warranty, Limitations of Liability

Warranties

- Exclusive Warranty

Omron's exclusive warranty is that the Products will be free from defects in materials and workmanship for a period of twelve months from the date of sale by Omron (or such other period expressed in writing by Omron). Omron disclaims all other warranties, express or implied.

- Limitations

OMRON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCTS. BUYER ACKNOWLEDGES THAT IT ALONE HAS DETERMINED THAT THE PRODUCTS WILL SUITABLY MEET THE REQUIREMENTS OF THEIR INTENDED USE.

Omron further disclaims all warranties and responsibility of any type for claims or expenses based on infringement by the Products or otherwise of any intellectual property right.

- Buyer Remedy

Omron's sole obligation hereunder shall be, at Omron's election, to (i) replace (in the form originally shipped with Buyer responsible for labor charges for removal or replacement thereof) the non-complying Product, (ii) repair the non-complying Product, or (iii) repay or credit Buyer an amount equal to the purchase price of the non-complying Product; provided that in no event shall Omron be responsible for warranty, repair, indemnity or any other claims or expenses regarding the Products unless Omron's analysis confirms that the Products were properly handled, stored, installed and maintained and not subject to contamination, abuse, misuse or inappropriate modification. Return of any Products by Buyer must be approved in writing by Omron before shipment. Omron Companies shall not be liable for the suitability or unsuitability or the results from the use of Products in combination with any electrical or electronic components, circuits, system assemblies or any other materials or substances or environments. Any advice, recommendations or information given orally or in writing, are not to be construed as an amendment or addition to the above warranty.

See http: //www.omron.com/global/ or contact your Omron representative for published information.

Limitation on Liability; Etc

OMRON COMPANIES SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCTS, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE OR STRICT LIABILITY.

Further, in no event shall liability of Omron Companies exceed the individual price of the Product in which liability is asserted.

Application Considerations

Suitability of Use

Omron Companies shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the Product in the Buyer's application or use of the Product. At Buyer's request, Omron will provide applicable third party certification documents identifying ratings and limitations of use which apply to the Product. This information by itself is not sufficient for a complete determination of the suitability of the Product in combination with the end product, machine, system, or other application or use. Buyer shall be solely responsible for determining appropriateness of the particular Product with respect to Buyer's application, product or system. Buyer shall take application responsibility in all cases.

NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT(S) IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

Programmable Products

Omron Companies shall not be responsible for the user's programming of a programmable Product, or any consequence thereof.

Disclaimers

Performance Data

Data presented in Omron Company websites, catalogs and other materials is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of Omron's test conditions, and the user must correlate it to actual application requirements. Actual performance is subject to the Omron's Warranty and Limitations of Liability.

Change in Specifications

Product specifications and accessories may be changed at any time based on improvements and other reasons. It is our practice to change part numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the Product may be changed without any notice. When in doubt, special part numbers may be assigned to fix or establish key specifications for your application. Please consult with your Omron's representative at any time to confirm actual specifications of purchased Product.

Errors and Omissions

Information presented by Omron Companies has been checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical or proofreading errors or omissions.

Contents

1 Related Manuals

The following manuals are related to this guide.

Cat. No.	Model	Manual name
W500	NJ501-□□□□ NJ301-□□□□ NJ101-□□□□	NJ-series CPU Unit Hardware User's Manual
W501	NX701-□□□□ NJ501-□□□□ NJ301-□□□□ NJ101-□□□□	NJ/NX-series CPU Unit Software User's Manual
W506	NX701-□□□□ NJ501-□□□□ NJ301-□□□□ NJ101-□□□□	NJ/NX-series CPU Unit Built-in EtherNet/IP™ Port User's Manual
W505	NX701-□□□□ NJ501-□□□□ NJ301-□□□□ NJ101-□□□□	NJ/NX-series CPU Unit Built-in EtherCAT® Port User's Manual
W504	SYSMAC-SE2□□□	Sysmac Studio Version 1 Operation Manual
W502	NX701-□□□□ NJ501-□□□□ NJ301-□□□□ NJ101-□□□□	NJ/NX-series Instructions Reference Manual
0969584-7	W4S1-05□ W4S1-03B	W4S1 Switching Hub User's Manual
V117	NA5-15W□□□□ NA5-12W□□□□ NA5-9W□□□□ NA5-7W□□□□	NA-series Programmable Terminal Hardware User's Manual
V118	NA5-15W□□□□ NA5-12W□□□□ NA5-9W□□□□ NA5-7W□□□□	NA-series Programmable Terminal Software User's Manual
V119	NA5-15W□□□□ NA5-12W□□□□ NA5-9W□□□□ NA5-7W□□□□	NA-series Programmable Terminal Device Connection User's Manual
V120	NA5-15W□□□□ NA5-12W□□□□ NA5-9W□□□□ NA5-7W□□□□	NA-series Programmable Terminal Startup Guide
I586	R88M-1L□/-1M□ (AC Servomotors) R88D-1SN□-ECT (AC Servo Drives)	AC Servomotors/Servo Drives 1S –series (Built-in EtherCAT® Communications) User's Manual
W571	NX701-□□□□ NJ501-□□□□ NJ301-□□□□ NJ101-□□□□	NJ/NX-series Sysmac Library User's Manual for EtherCAT 1S Series Library

Cat. No.	Model	Manual name
I576-E1	R88M-K[] (AC Servomotors) R88D-KN[]-ECT (AC Servo drives)	AC Servomotors/Servo Drives G5 Series (Built-in EtherCAT® Communications)
W548-E1	NX701-[][][][] NJ501-[][][][] NJ301-[][][][] NJ101-[][][][]	Sysmac Library Instructions Manual EtherCAT G5 Series Library

2 Precautions

(1) When building an actual system, check the specifications of the component devices of the system, use within the ratings and specified performance, and implement safety measures such as safety circuits to minimize the possibility of an accident.
(2) For safe use of the system, obtain the manuals of the component devices of the system and check the information in each manual, including safety precautions, precautions for safe use.
(3) It is the responsibility of the customer to check all laws, regulations, and standards that the system must comply with.
(4)
(5) The information in this guide is current as of August 2016.
No patent liability is assumed with respect to the use of the information contained herein. Moreover, because OMRON is constantly striving to improve its high-quality products, the information contained in this guide is subject to change without notice.
(6) The operation of each IAG has tested using the device configuration indicated in this guide. However, the operation of screens after incorporating the IAG is not guaranteed.

Special information in this document is classified as follows:

Precautions for Safe Use

Indicates precautions on what to do and what not to do to ensure safe usage of the product.

Precautions for Correct Use

Indicates precautions on what to do and what not to do to ensure proper operation and performance.

Additional Information

Additional information to read as required.
This information is provided to increase understanding or make operation easier.

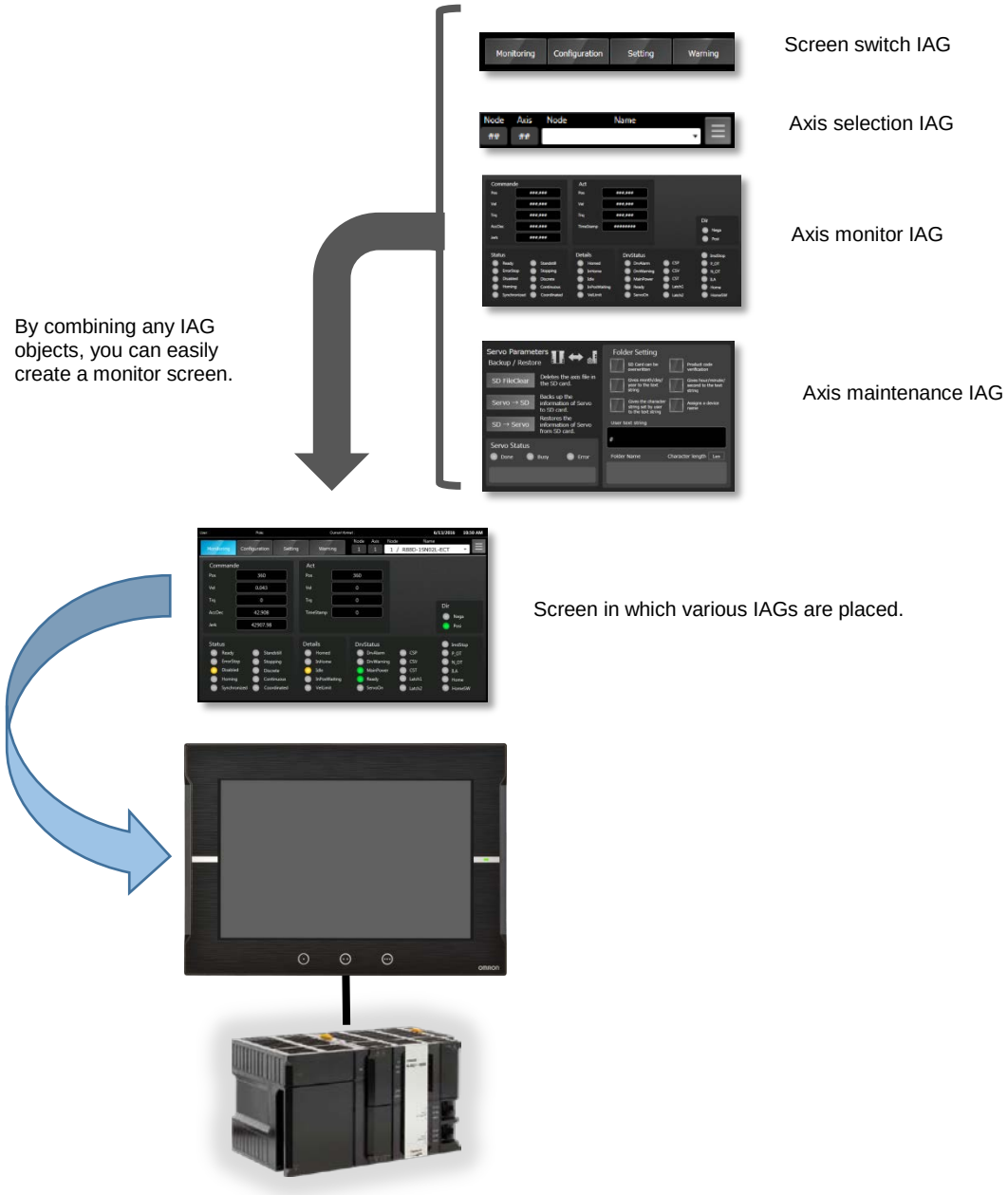
Copyrights and Trademarks

3 Introduction

The NJ user programs and HMI screens are modularized as function blocks (FB) and IAGs, which enables setting, monitoring, and changing parameters of Sysmac Studio's Servo on the HMI.

Combining the FB and IAG provides the following functions faster.

- Set the axes, monitor the status, and display the error messages
- Read, write, and change the servo parameters
- Backup/ restore between the Servo Drives and NJ's SD card
- Control the commands, including factory setting, restart, and error release, to the Servo Drives.



3-1 Compatible Models

Item	Name	Model	Version
Automation software	Sysmac Studio	SYSMAC-SE[][][][]	V1.16 or later
Device	Programmable Terminal	NA5-15W[][][][] NA5-12W[][][][] NA5-9W[][][][] NA5-7W[][][][]	V1.03 or later
	CPU Unit	NJ501-[][][][] NJ301-[][][][] NJ101-10[][]	V1.11 or later
	AC Servo Drives G5 -series (Built-in EtherCAT® Communications)	R88D-KN[]-ECT	-
	AC Servo Drives 1S -series (Built-in EtherCAT® Communications)	R88D-1SN[]-ECT	-

Monitorable scope

Function	NJ5	NJ3	NJ1
Number of nodes	1 to 192	1 to 192	1 to 64
Number of axes	0 to 64	0 to 15	0 to 6

Additional Information

The axis to be monitored can be changed from pull-down menu.

Language switching

Function	Remarks
Switches a language to display	Japanese and English are supported.

Precautions for Correct Use

Up to nine languages will be supported for the language switch IAG.

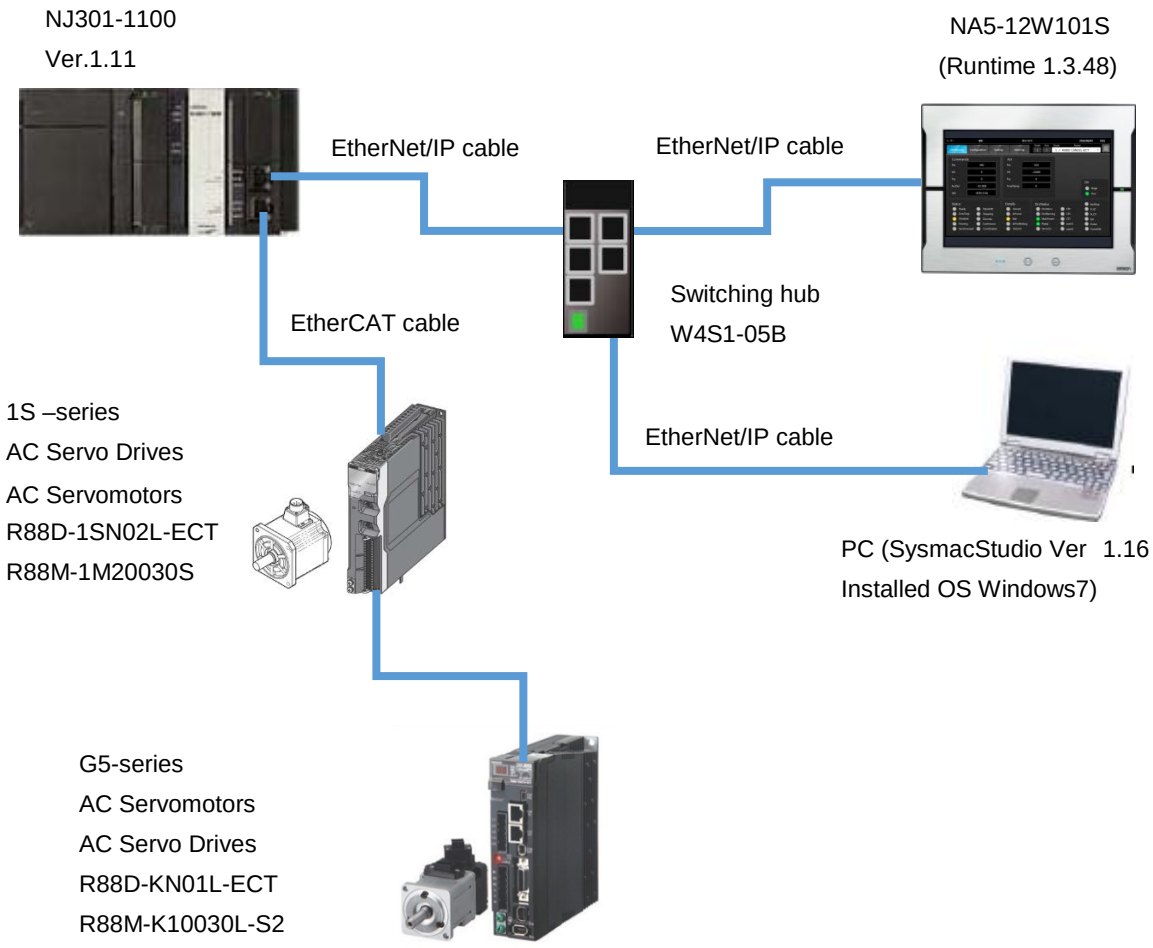
Additional Information

For details on how to monitor and set each screen, refer to Section 6 *Screen External Specifications (Use Case)*.

Part of the specifications and restrictions for each device may be given in other manuals. Refer to Section 1 *Related Manuals*.

3-2 Device Configuration

Servo IAG libraries have been tested by OMRON using the following equipment.



Manufacture	Name	Model	Version
OMRON	CPU Unit	NJ301-1100	Ver 1.11
OMRON	Power Supply Unit	PA3001	
OMRON	HMI (Programmable Terminal)	NA5-12W101S	NA Ver. 1.03 Runtime 1.3.48 OS 4.3.3
OMRON	SysmacStudio	SYSMAC-SE[][][][]	Ver. 1.16
	PC (OS Windows7)		
OMRON	1S -series AC Servo Drives	R88D-1SN02L-ECT	
OMRON	1S -series AC Servomotors	R88M-1M20030S	
OMRON	G5-series AC Servo Drives	R88D-KN01L-ECT	
OMRON	G5-series AC Servomotors	R88M-K10030L-S2	
	EtherNet/IP cable x 3		
	EtherCAT cable		
OMRON	Switching hub	W4S1-05B	

Additional Information

This guide provides the procedure of how to operate the Servo IAG library for NA on the screen.
For how to connect the NJ to NA, refer to Section 6 *Online Connections to a Controller* in the *Sysmac Studio Version 1 Operation Manual* (Cat. No. W504).

For how to connect the NJ to the 1S -series AC Servomotors/Servo Drives over EtherCAT, refer to the NJ/NX-series CPU Unit Built-in EtherCAT® Port User's Manual (Cat. No. W505) and AC Servomotors/Servo Drives 1S –series (Built-in EtherCAT® Communications) User's Manual (Cat. No. I586).

For information on how to connect the NJ to G5-series AC Servomotors/Servo drives over EtherCAT, refer to the *NJ/NX-series CPU Unit Built-in EtherCAT® Port User's Manual* (Cat. No. W505) and *AC Servomotors/Servo Drives (Built-in EtherCAT® Communications) User's Manual* (Cat.No.I576-E1).

3-3 Object Configuration

The Servo IAG and FB libraries for the NA consist of the following objects.

- IAG object for Servo IAG library screen : 28 objects (2 types: for 7/ 9 inch , 12/ 15 inch)
- IAG object for Servo IAG library resource: 9 objects (1 type: screen size not specified)
- IAG object for general-purpose IAG screen: 6 objects (2 types: for 7/ 9 inch , 12/ 15 inch)
- Function Block : 1 FBs (used in NJ/NX CPU)

Type	Description	Detail
IAG library file (for 7/ 9 inches) File name：DeviceWindowIAG_116B_E_ServoWindow_9inch.iag		IAG library files for Servo Axis Monitor screen.
IAG	Monitor_Menu	Selects various monitoring screens.
IAG	Axis_Monitoring	Displays the axis status.
IAG	Axis_Configuration	Displays the axis setting.
IAG	Axis_Setting_1S	Changes the Servo parameter. (1S)
IAG	Axis_Setting_G5	Changes the Servo parameter. (G5)
IAG	Axis_Warning	Displays the axis error status.
IAG	Backup_Restore_Servo	Displays the Backup Restore screen.
IAG	Backup_Restore_Info	Displays the backup & restore status.
IAG	Change_Axis	Displays and changes the axis.
IAG	Monitor_Status	Displays the axis status.
IAG	Function1	Various Servo control button group 1
IAG	Function2	Various Servo control button group 2
IAG	OK_CANcel_PopUp	Displays pop-up screen.
IAG	Clock_Sync	Synchronizes clock with PLC.

Type	Description	Detail
IAG library file (for 12/ 15 inches) File name：DeviceWindowIAG_116B_E_ServoWindow_12inch.iag		IAG library files for Servo Axis Monitor screen.
IAG	Monitor_Menu	Selects various monitoring screens.
IAG	Axis_Monitoring	Displays the axis status.
IAG	Axis_Configuration	Displays the axis setting.
IAG	Axis_Setting_1S	Changes the servo parameter. (1S)
IAG	Axis_Setting_G5	Changes the servo parameter. (G5)
IAG	Axis_Warning	Displays the axis error status.
IAG	Backup_Restore_Servo	Displays the Backup Restore screen.
IAG	Backup_Restore_Info	Displays the backup & restore status.
IAG	Change_Axis	Displays and changes the axis.
IAG	Monitor_Status	Displays the axis status.
IAG	Function1	Various Servo control button group 1
IAG	Function2	Various Servo control button group 2
IAG	OK_CANcel_PopUp	Displays pop-up screen.
IAG	Clock_Sync	Synchronizes clock with PLC.

Type	Description	Detail
IAG library file (for 7/ 9 inches) File name：GeneralIAG_116B_E_General_Parts_9inch.iag		Standard IAG library file for screen control object.
IAG	Menu_IAG	Displays the Menu pop-up screen.
IAG	Language_IAG	Displays the Language Switching screen.
IAG	Title_Bar_IAG	Displays the Title Bar screen.

Type	Description	Detail
IAG library file (for 12/ 15 inches) File name：GeneralIAG_116B_E_General_Parts_12inch.iag		Standard IAG library file for screen control object.
IAG	Menu_IAG	Displays the Menu pop-up screen.
IAG	Language_IAG	Displays the Language Switching screen.
IAG	Title_Bar_IAG	Displays the Title Bar screen.

Type	Description	Detail
IAG library file File name：DeviceWindowIAG_116B_ServoResource.iag		IAG library file for various Axis information resource for 1S Servo.
IAG	ErrEventCodeText_1S	Error event code of 1S Servo.
IAG	DescriptionText_1S	Function name of 1S Servo parameter.
IAG	BitDescriptionText_1S	Sub function name for 1S Servo parameter.
IAG	Servo_ErrCodeText_1S	Error code of 1S Servo.
IAG	ErrEventCodeText_G5	Error event code of G5 Servo.
IAG	DescriptionText_G5	Function name of G5 Servo parameter.
IAG	Servo_ErrCodeText_G5	Error code of G5 Servo.
IAG	FB_ErrText	Error code for FB operation.
IAG	Motion_ErrEventCodeText	Error event code for motion.

Type	Description	Detail
Axis Monitor FB library file File name：IAGCont_DeviceWindow_1S_Servo_Monitor_V2_0.sir		FB library that acquires the axis status.
FunctionBlock	Servo_System_Main	Monitors the axis status and changes the parameter value.

The following Excel file is provided to facilitate the declaration of NJ variables.

Excel for variable declaration: 1 file

Type	File name	Detail
Excel for variable declaration	Servo_IAG_Variables_V2_0.xlsx	This contains NJ and NA variables to be registered to the project using the IAG libraries.

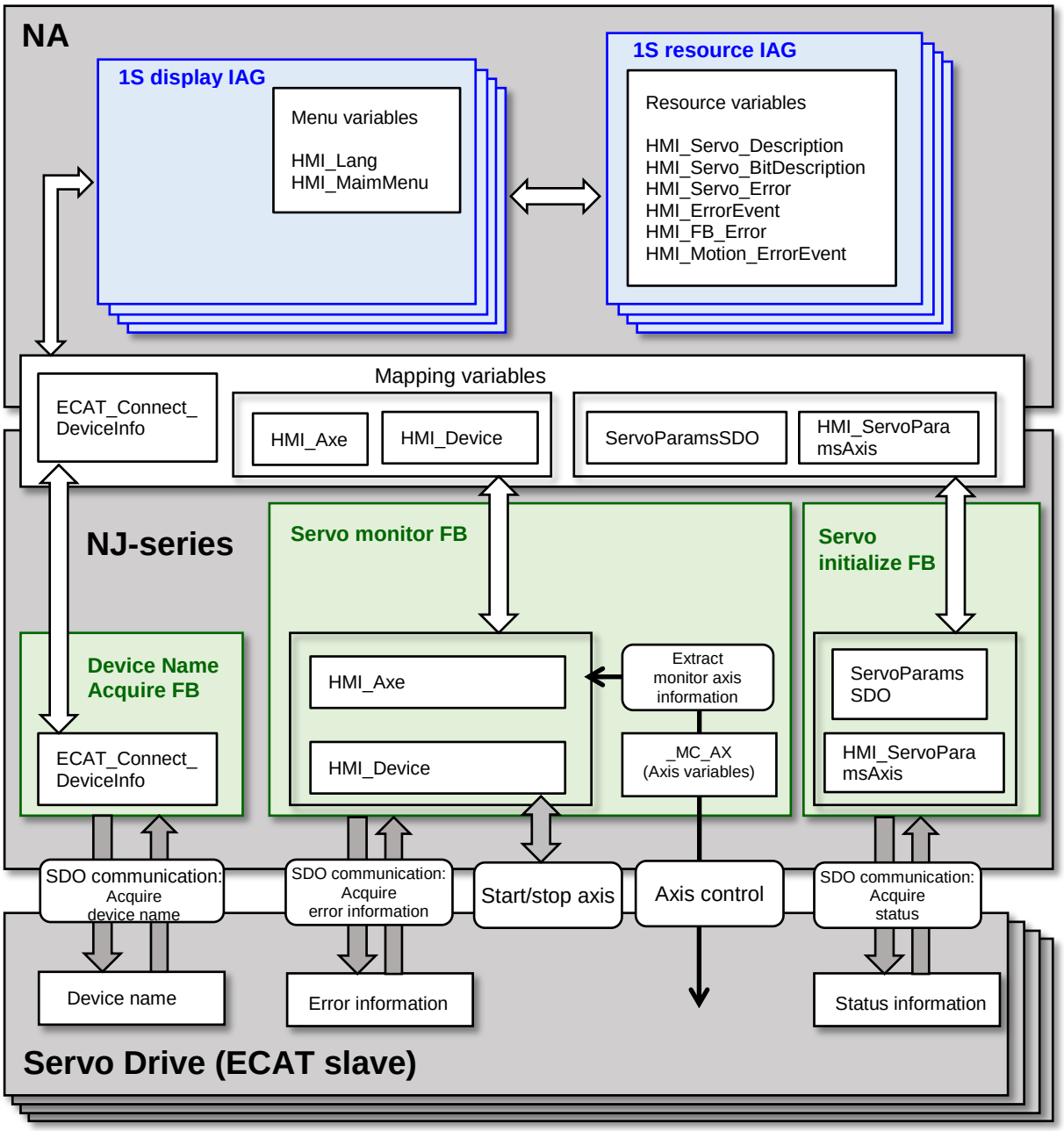
Precautions for Correct Use

The project files and this guide are samples for sales promotions.
The project files have been tested; however, the device operation after installing the file must be checked by the user. The specifications described in this guide are not guaranteed by Omron.

3-4 Outline of System Configuration

Information between the IAGs and FBs are shared via multiple mapping variables. Information between the FBs and Servo are shared via the axis variables and SDO communications.

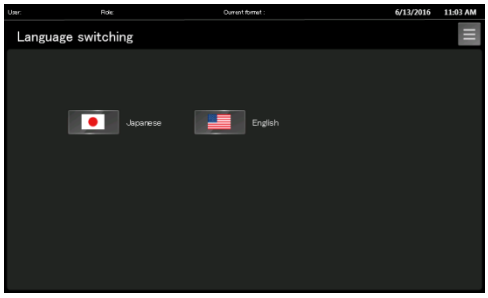
Although the type of connected servos (e.g. 1S, G5) differs, information of selected servo is acquired.



4 Use Cases

4-1 Axis Monitor and Maintenance Screens

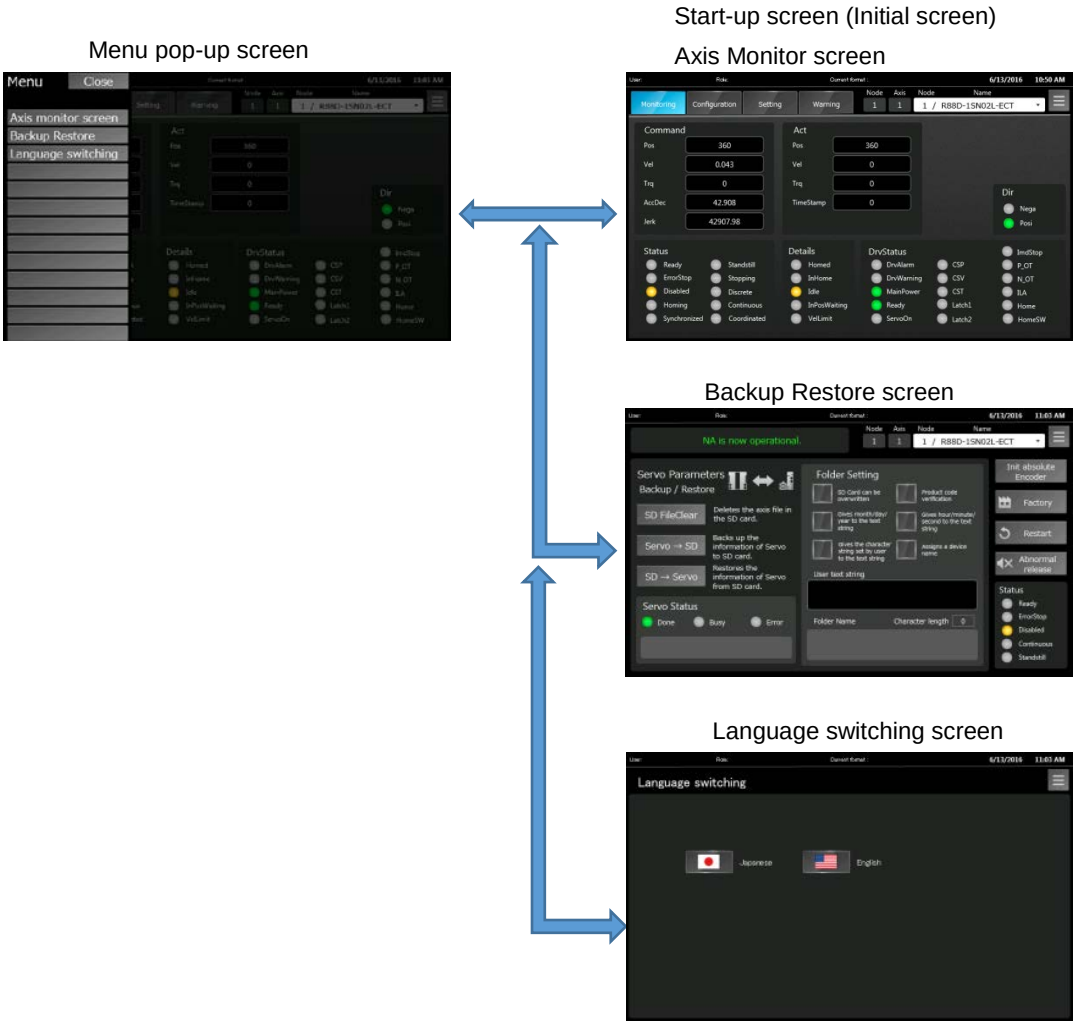
Combining Servo IAG library objects allows you to create the following screens.

Axis Monitor screen	Backup Restore screen
	
The axis status of Servomotors/ Servo Drives is displayed on this screen.	The backup & restore function of Servo can be executed on this screen.
Language Switching screen	**Menu pop-up screen**
	
A language to display can be changed on this screen.	Pressing the “Menu” button on this pop-up screen allows you to move to each screen. (In this example, the pop-up is displayed on the Axis Monitor screen)

5 Screen Transition (Use Cases)

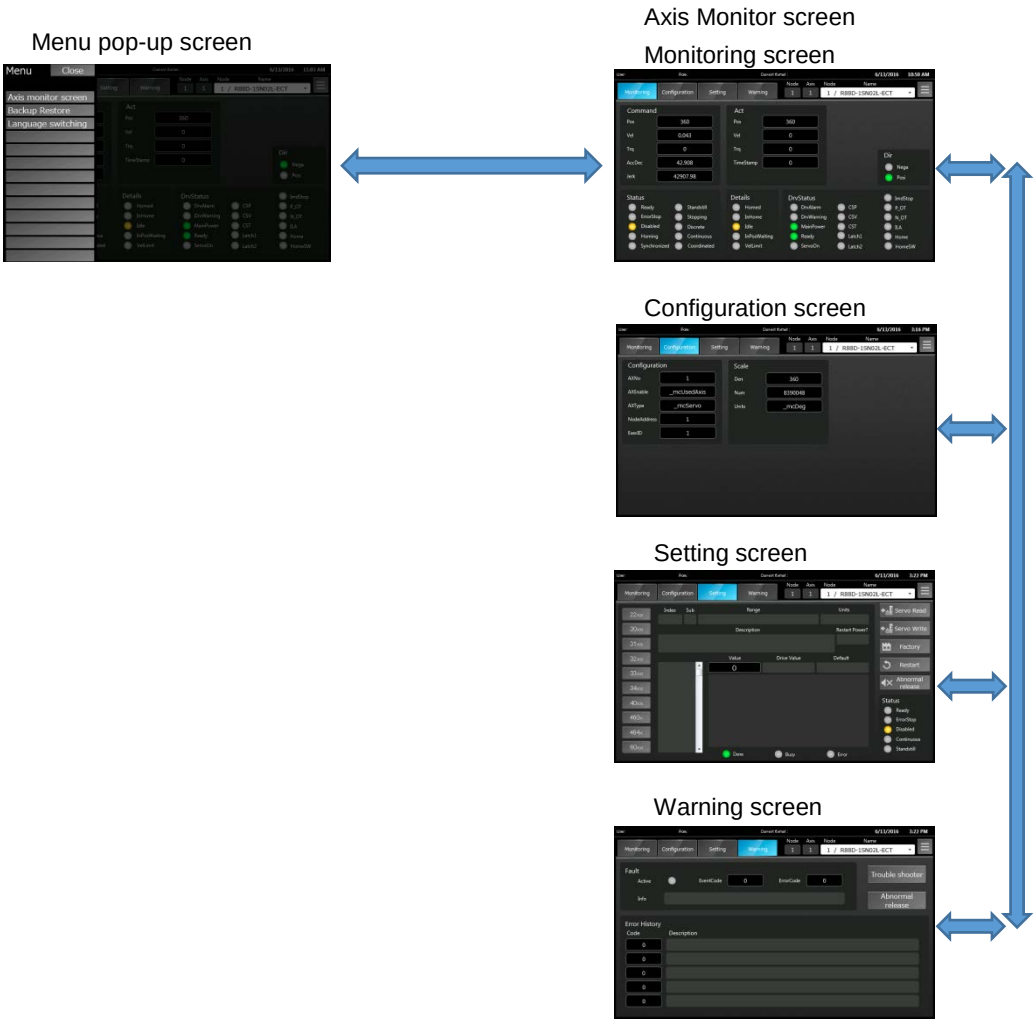
5-1 Screen Transition

Screen transition is shown below.



Additional Information

You can jump to the Menu pop-up screen from any screen.



Additional Information

You can directly move to your desired screen from the menu tab on the Axis Monitor screen. You can jump to the Menu pop-up screen from any screen.
The setting screen opens an appropriate screen according to the servo (for 1S/ G5) of the axis.

6 Screen External Specifications (Use Case)

This section describes the screens and procedures of this project.

6-1 Menu Screen

Pressing the “Menu” button on each screen displays the Menu pop-up screen.

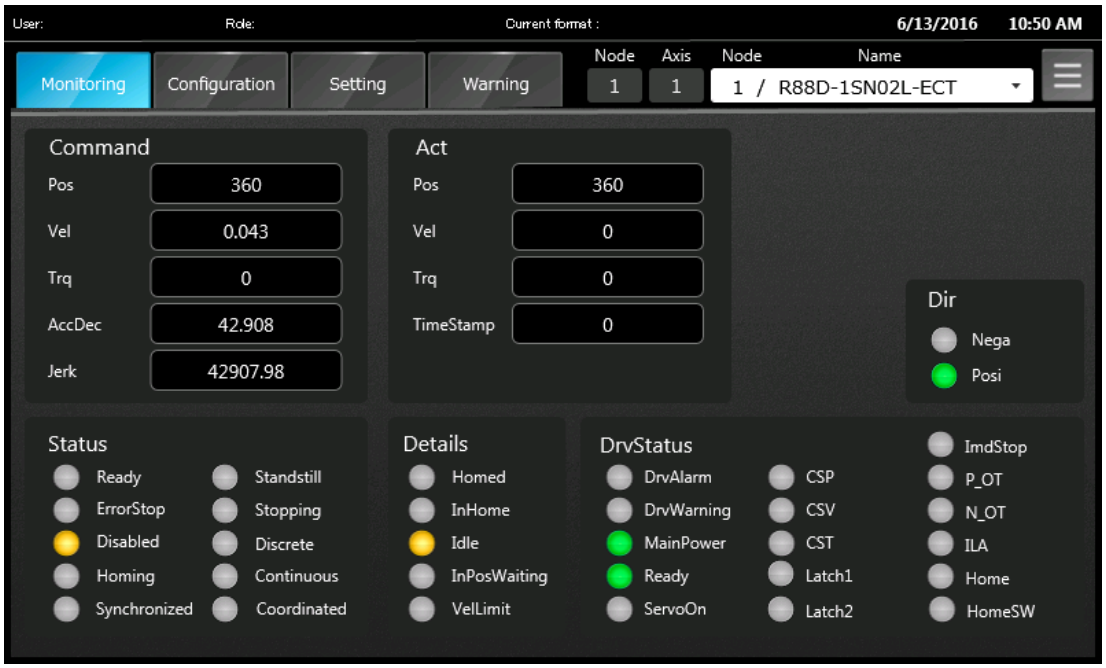
* In this example, the menu pop-up is displayed on the Axis Monitor screen.

Item	Object	Description
“Axis monitor screen” button	B	Displays a screen to show information of Servomotors/Servo Drives and to change the servo parameter.(Axis monitor screen)
“Backup Restore” button	B	Displays a screen to perform the backup restore function.(Backup Restore Screen)
“Language switching” button	B	Displays the language switching screen.

6-2 Axis Monitor Screen

After the power is turned on, the following screen appears, which shows you the axis status of Servomotors/Servo Drives.

6-2-1 Axis Monitor - Monitoring Screen



Common functions on the Axis Monitor screens

Item	Object	Description
“Monitoring” button	BL	Moves to the Monitoring screen. The button indicator comes ON for the screen currently being displayed.
“Configuration” button	BL	Moves to the Configuration screen. The button indicator comes ON for the screen currently being displayed.
“Setting” button	BL	Moves to the Setting screen. The button indicator comes ON for the screen currently being displayed.
“Warning” button	BL	Moves to the Warning screen. The button indicator comes ON for the screen currently being displayed.
“Node” number	-	Displays the node number of Servo that has been selected.
“Axis” number	-	Displays the axis number of Servo that has been selected.
Node and Name	P	Displays the node number and device name of Servo that has been selected. The displayed device can be changed.
“Menu” button	B	Displays the Menu pop-up screen.

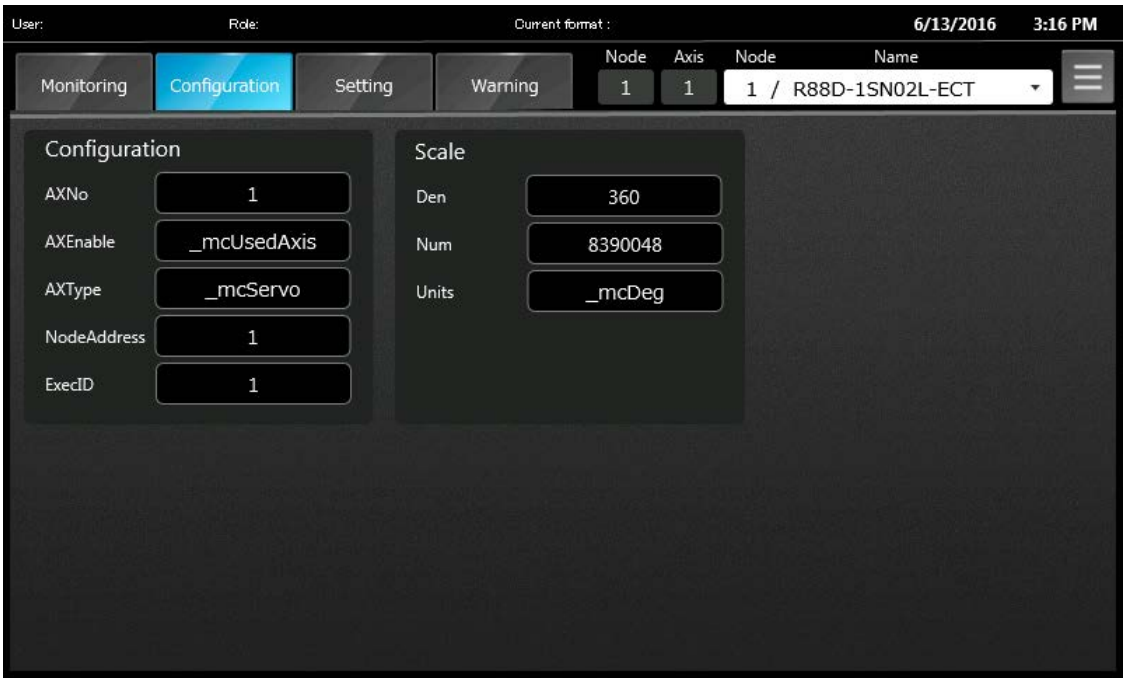
Axis monitor - Monitoring screen

Item	Object	Description
“Command” field	-	Displays the axis command value.
“Act” field	-	Displays the axis current value (feedback value).
“Status” field	L	Displays the axis status.
“Details” field	L	Displays the axis control status.
“DrvStatus”field	L	Displays the status of servo drive.
“Dir”field	L	Displays the command direction status.

Additional Information

In the “Object”column, B indicates Button, L indicates Lamp, BL indicates Button Lamp, and P indicates pull-down menu.

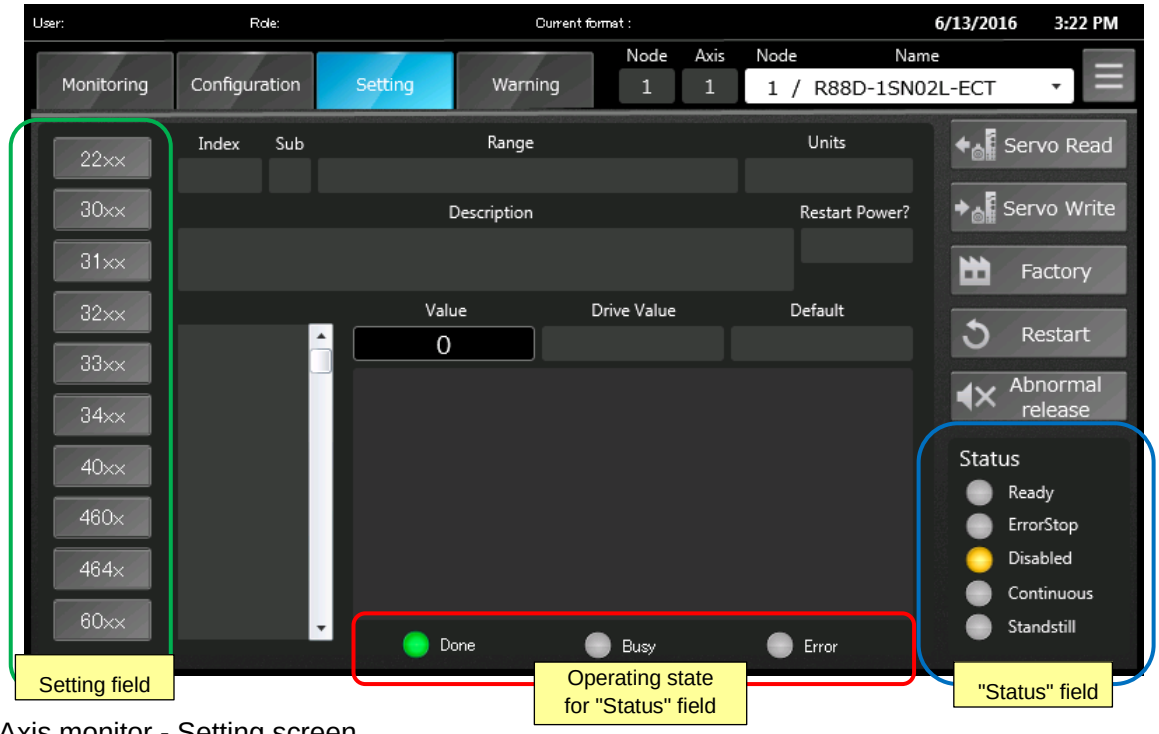
6-2-2 Axis monitor -Configuration screen



Axis monitor - Configuration screen

Item	Object	Description
“Configuration” field	-	Displays the basic setting for axes.
“Scale” field	-	Displays the set electronic gear ratio.

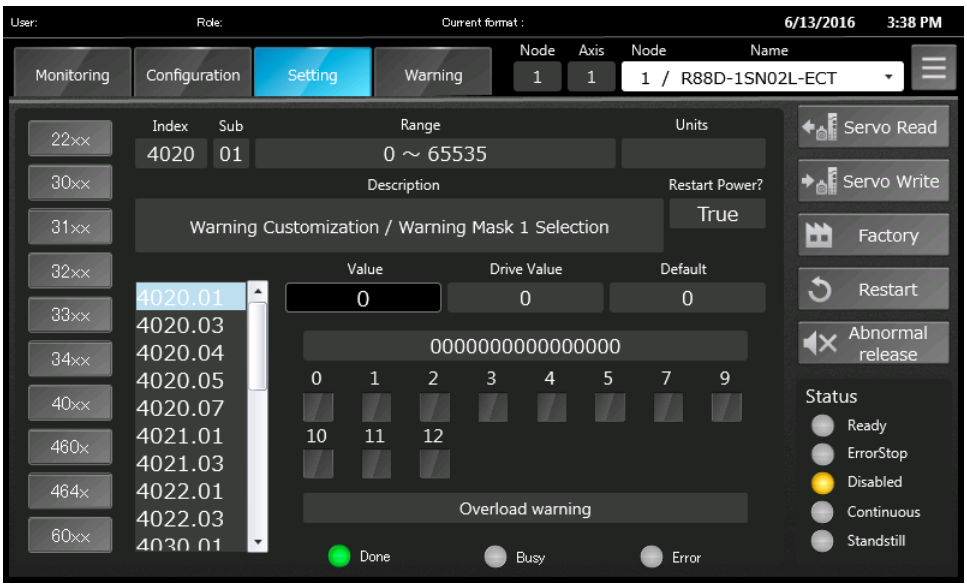
6-2-3 Axis monitor -Setting screen for 1S



Axis monitor - Setting screen

Item	Object	Description
Setting field (enclosed in green frame)	-	Select a button from the button list located on the left of the screen so that the item can be displayed in a menu list. Select an item from the menu list to display parameter. You can change the value of the displayed parameter.
“Servo Read” button	B	Displays a pop-up to read the status to the 1S -series AC Servo Drives.
“Servo Write” button	B	Displays a pop-up to write the status to the 1S -series AC Servo Drives.
“Factory” button	B	Displays a pop-up that sets the 1S -series AC Servo Drives to the factory setting.
“Restart” button	B	Displays a pop-up that restarts the 1S -series AC Servo Drives.
“Abnormal release” button	B	Displays a pop-up that releases the error.
“Status” field (enclosed in blue frame)	L	Displays the axis status.
Operating state for "Status" field (enclosed in red frame)	L	Displays the state and results of axis operation in "Status" field.

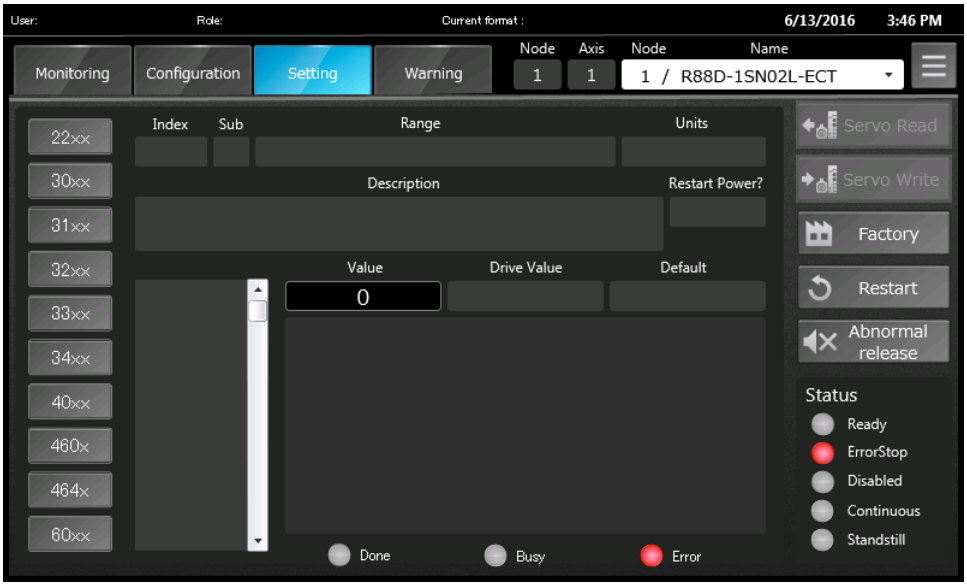
(Axis monitor - Setting screen) Example when multiple items are set



Precautions for Correct Use

Multiple values may be set for one item depending on the parameter.
As an example, all of the items are set on the above screen.

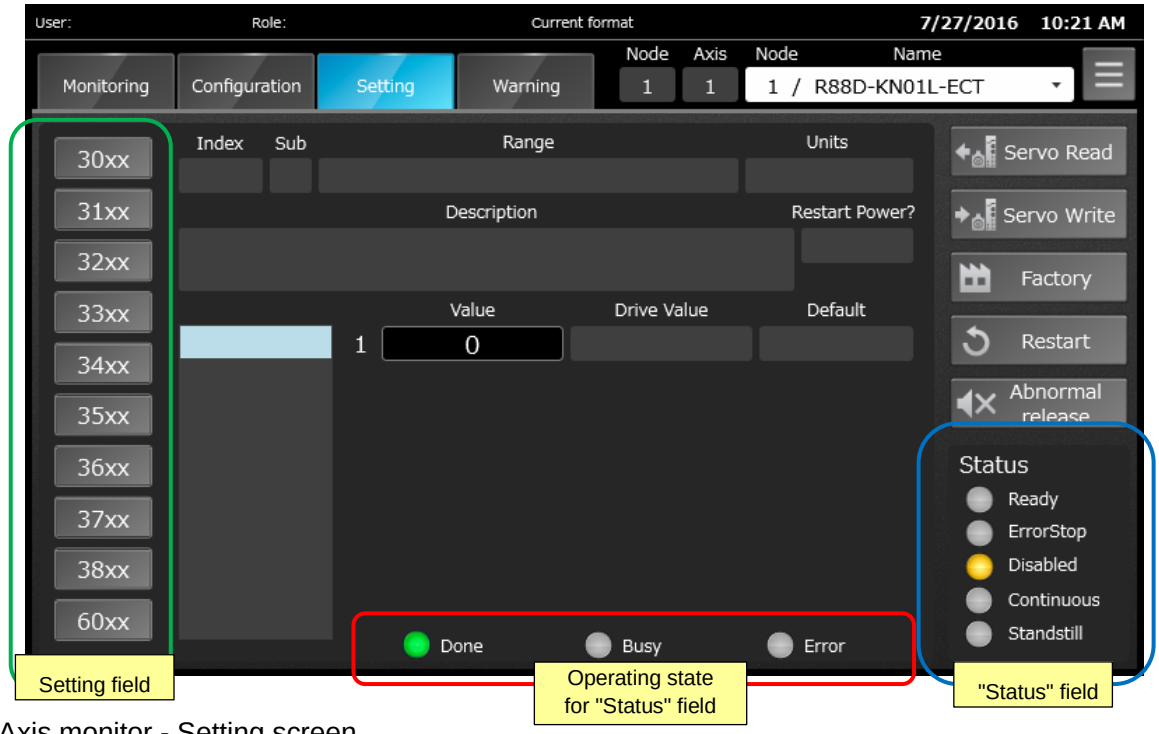
(Axis monitor - Setting screen) Example when 1S error is occurred during axis-operation



Precautions for Correct Use

The “Servo Read” and “Servo Write” buttons become disabled when an error has been occurring and during an axis-operation in the 1S -series AC Servo Drives.

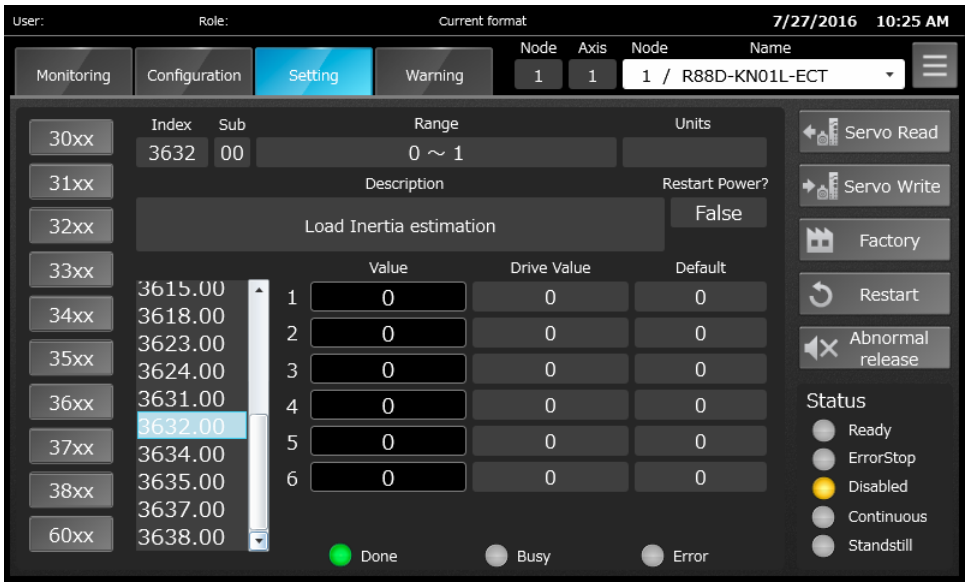
6-2-4 Axis monitor -Setting Screen for G5



Axis monitor - Setting screen

Item	Object	Description
Setting field (enclosed in green frame)	-	Select a button from the button list located on the left of the screen so that the item can be displayed in a menu list. Select an item from the menu list to display parameter. You can change the value of the displayed parameter.
“Servo Read” button	B	Displays a pop-up to read the status to the G5 -series AC Servo Drives.
“Servo Write” button	B	Displays a pop-up to write the status to the G5 -series AC Servo Drives.
“Factory” button	B	Displays a pop-up that sets the G5 -series AC Servo Drives to the factory setting.
“Restart” button	B	Displays a pop-up that restarts the G5 -series AC Servo Drives.
“Abnormal release” button	B	Displays a pop-up that releases the error.
“Status” field (enclosed in blue frame)	L	Displays the axis status.
Operating state for "Status" field (enclosed in red frame)	L	Displays the state and results of axis operation in "Status" field.

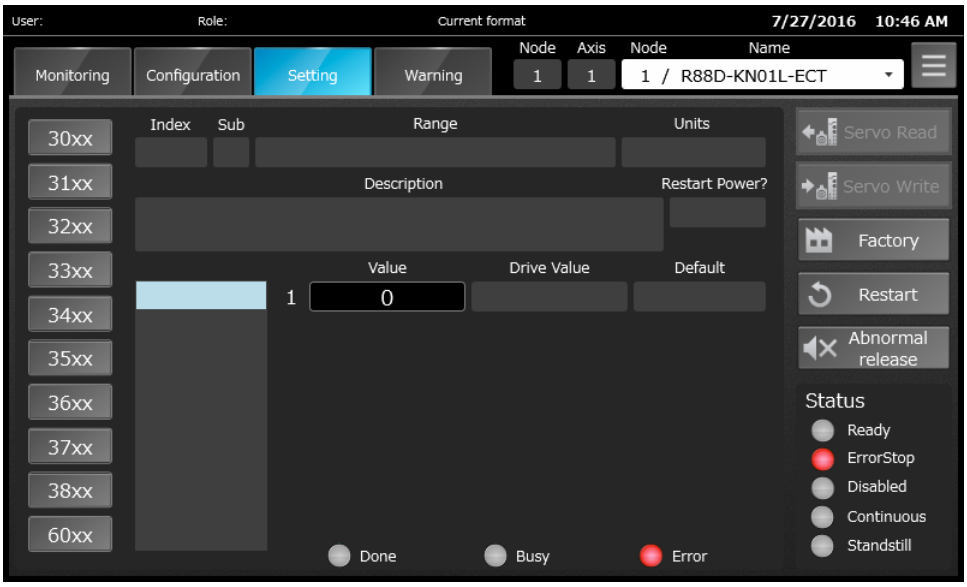
(Axis monitor - Setting screen) Example when multiple items are set



Precautions for Correct Use

Multiple values may be set for one item depending on the parameter.
As an example, all of the items are set on the above screen.

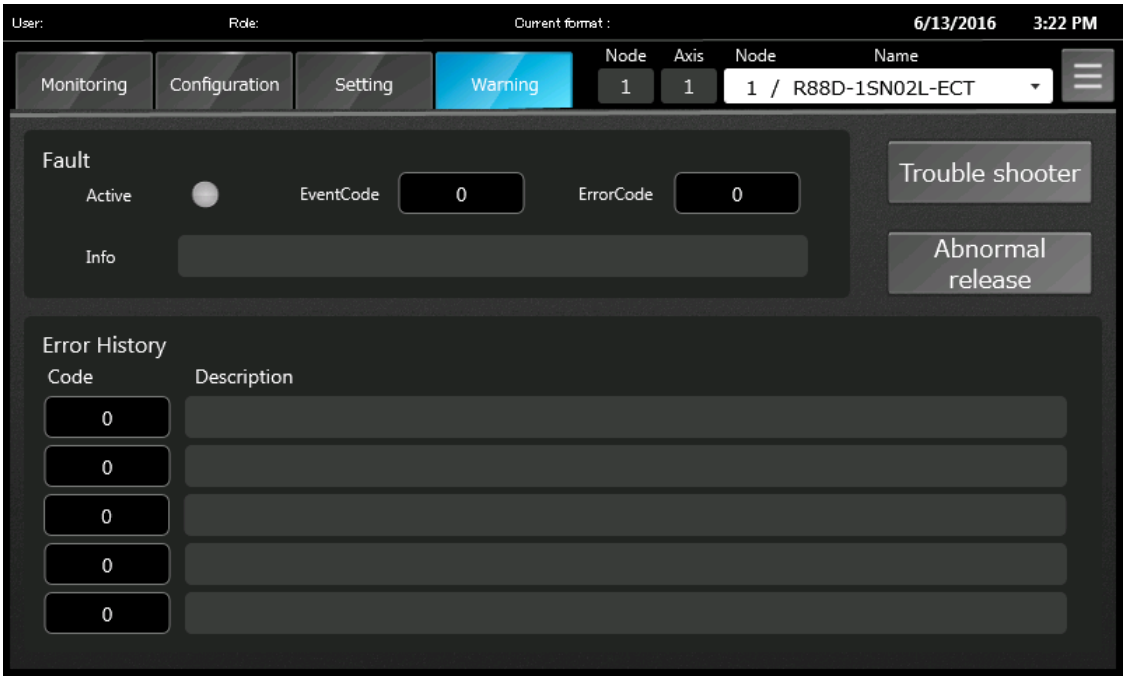
(Axis monitor - Setting screen) Example when G5 error is occurred during axis-operation



Precautions for Correct Use

The “Servo Read” and “Servo Write” buttons become disabled when an error has been occurring and during an axis-operation in the G5 -series AC Servo Drives.

6-2-5 Axis Monitor - Warning Screen



Axis monitor - Warning screen

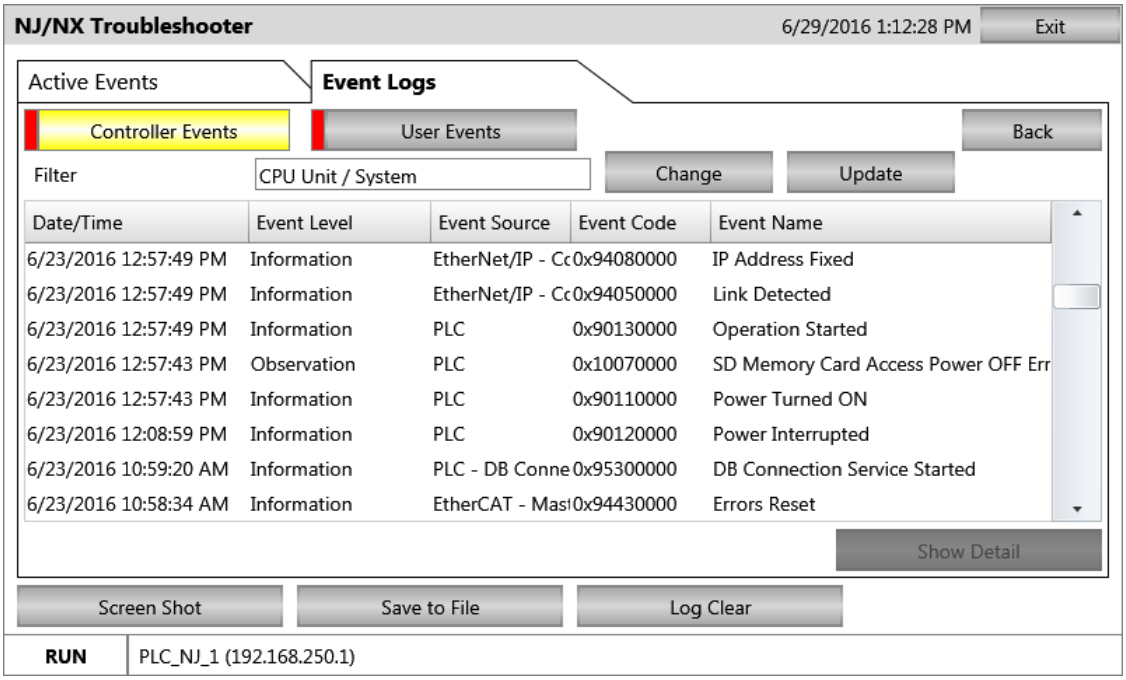
Item	Object	Description
“Fault” field	L	The “Active” indicator comes ON and the status is displayed for each item when an error has been detected.
“Error History” field	-	Displays the error log history for each item when an error has been detected.
“Trouble shooter” button	L	Displays the Trouble shooter screen.
“Abnormal release” button	B	Displays a pop-up that releases the error.

(Axis monitor - Warning screen) Example when errors occurred

Additional Information

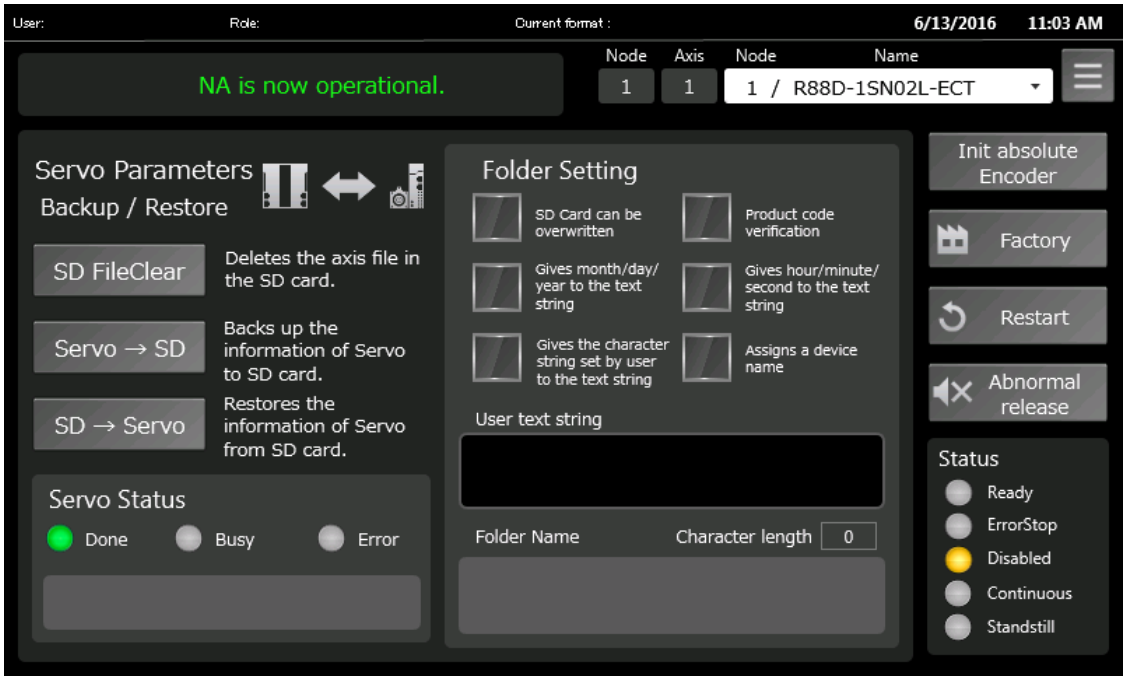
The most recent error history is displayed at the top.

Trouble shooter screen



6-3 Backup Restore Screen

This screen is used to perform the backup restore function of the Servo.



Backup Restore screen

Item	Object	Description
“Menu” button	B	Displays the Menu pop-up screen.
“Servo Parameters Backup/Restore” field	-	Reads and writes the status of Servo Drives between NJ’s SD card and Servo Drive.
“SD FileClear” button	B	Displays a pop-up to delete the axis file in the NJ's SD card.
“Servo -> SD” button	B	Displays a pop-up to read the status of the Servo Drives, and writes the status to the NJ's SD card.
SD -> Servo” button	B	Displays a pop-up to read the status of the Servo Drives stored in the NJ's SD card, and writes the status to the Servo.
“Servo Status” field	L	Displays the operational status and results of backup/restore processing.
“Folder Setting” field	BL	Registers options for setting folder name and the user text string. (A folder name for the destination folder in the NJ's SD card can be set up to 39 single-byte alphanumeric characters) For the details of folder setting, refer to the next page.
“Status” field	L	Displays the axis status.
“Factory” button	B	Displays a pop-up that sets the Servo Drives to the factory setting.
“Restart” button	B	Displays a pop-up that restarts the Servo Drives.
“Abnormal release” button	B	Displays a pop-up that releases the error.

<”Folder Setting” field>

Item	Object	Description
SD Card can be overwritten	BL	Selects whether to back up the folder to the SD card, if a folder with the same name exists in the SD card. TRUE: Back up the folder FALSE: Not back up the folder. (an error “same file name exist “ occurs if executed)
Product code verification	BL	Selects whether to restore the SD card, if the product code that is stored in the backup data and the one in the restore destination are different. TRUE: Restore FALSE: Not restored
Gives month/day/year to the text string	BL	Gives month/day/year to the name of backup folder. This information is added in the 3rd position separated by under scores “_”.
Gives hour/minute/second to the text string	BL	Gives hour/minute/second to the name of backup folder. This information is added in the 4th position separated by under scores “_”.
Gives the character string set by user to the text string	BL	Gives the user text string to the name of backup folder. This information is added in the 2nd position separated by under scores “_”.
Assigns a device name	BL	Gives the user text string to the name of backup folder. This information is added in the 1st position separated by under scores “_”.

<Example of setting folder name>
A node No. is always added in a folder name. An under score “_” is displayed between each optional information in a folder name. If no optional information is added, no underscore is given in a folder name.

The following is the order of optional information that will be added in a folder name.
1) Device name
2) User text string
3) Month/day/year
4) Hour/minute/second

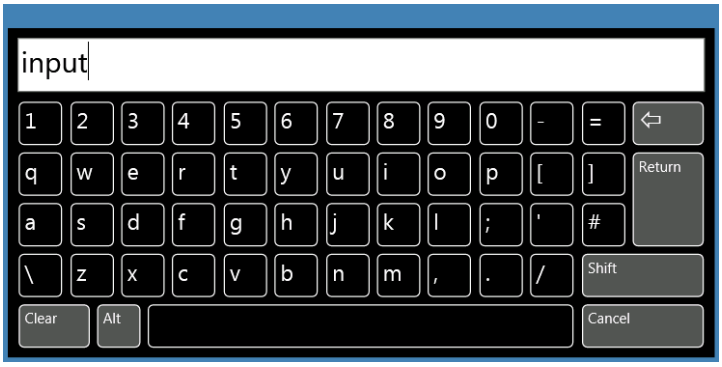
Example) If the node No. is 2 and “Device name” is only added.
Folder name: 002_R88D-1SN02L-ECT

Example) If the node No. is 2 and “Hour/minute/second" (15 o’clock 23 minutes 45 seconds) is only added.
Folder name: 002_152345

Example) If the node No. is 2 and “Month/day/year” (December. 24, 2015) and “Hour/minute/second” (15 o’clock 23 minutes 45 seconds) are only added.
Folder name: 002_20151224_152345

Example) If the node No. is 2 and all the optional information are added. (User text string is “ABC”).
Folder name: 002_ABC_ R88D-1SN02L-ECT_20151224_152345

You can set any text for the user text string.
Enter a folder name in the ”User text string” field using the displayed keypad.



(Backup Restore screen) Example when the user text string is used

Additional Information

The Sysmac Library EtherCAT 1S –series is used for the backup restore function.
For the details of function, refer to NJ/NX-series Sysmac Library User's Manual for EtherCAT 1S Series Library (Cat. No. W571).

Precautions for Correct Use

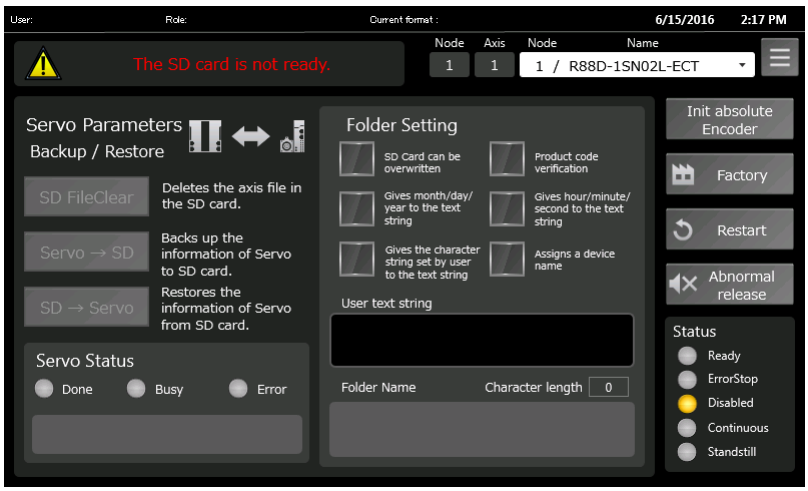
Up to 39 bytes-equivalent characters (i.e. single-byte 39 digit-characters) can be set for a folder name. A double-byte character uses three to four bytes. Set the characters within the range while checking the number of digits shown in the character length field for the folder name.

・The following messages appear in the message boxes when each type of error has occurred.

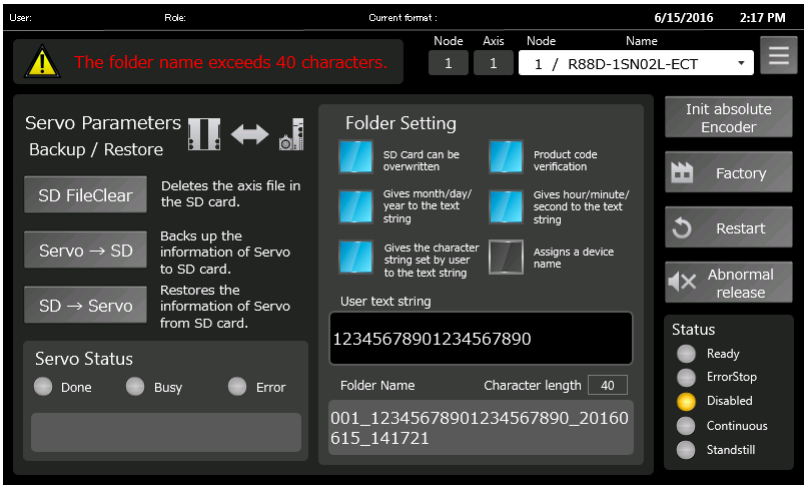
(Backup restore screen) Example during axis-operation

(Backup restore screen) Example when axis error occurred

(Backup restore screen) Example when the SD card is disconnected



(Backup restore screen) Example when the folder name exceeds the limit.

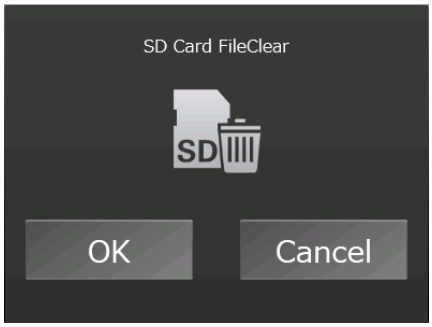


6-4 Operation Check Pop-up Screen

A confirmation pop-up appears when performing a specific parameter operation to servo motor/ driver.

6-4-1 Pop-up Screen of SD Card FileClear

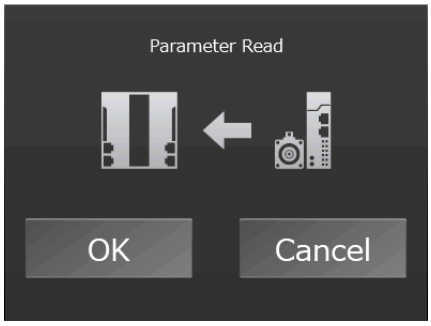
Pressing the “SD FileClear” button on the [Backup Restore screen] displays this screen.



Item	Object	Description
“OK” button	B	Deletes the axis information in the SD card and closes the pop-up screen.
“Cancel” button	B	Closes the pop-up screen.

6-4-2 Pop-up Screen of Parameter Read

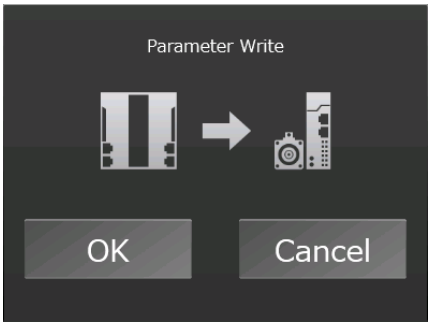
Pressing the “Servo Read” button on the [Axis monitor - Setting screen] or pressing the “Servo -> SD” button on the [Backup Restore screen] displays this screen.



Item	Object	Description
“OK” button	B	Reads the parameter from the Servo, writes it to the SD card, and closes the pop-up screen.
“Cancel” button	B	Closes the pop-up screen.

6-4-3 Pop-up Screen of Parameter Write

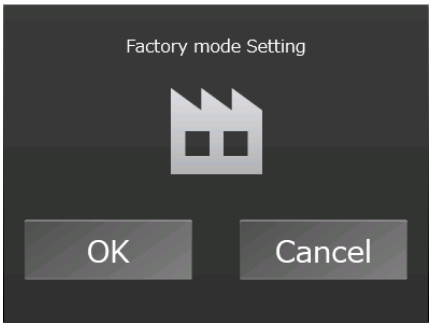
Pressing the “Servo Write” button on the [Axis monitor - Setting screen] or pressing the “SD ->Servo” button on the [Backup Restore screen] displays this screen.



Item	Object	Description
“OK” button	B	Reads the parameter from the SD card, writes it to the Servo, and closes the pop-up screen.
“Cancel” button	B	Closes the pop-up screen.

6-4-4 Pop-up Screen of Factory Setting

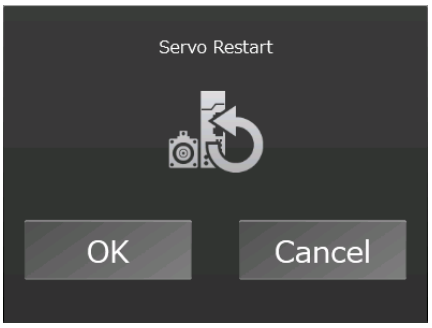
Pressing the “Factory” button on the [Axis monitor - Setting screen] or the [Backup Restore screen] displays this screen.



Item	Object	Description
“OK” button	B	Returns the Servo to the factory setting and closes the pop-up screen.
“Cancel” button	B	Closes the pop-up screen.

6-4-5 Pop-up Screen of Servo Restart

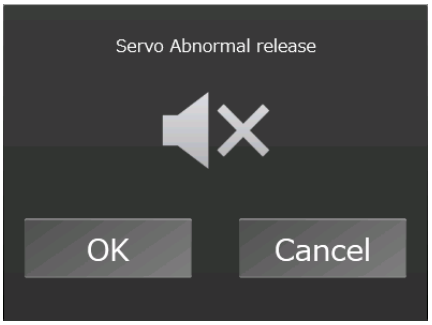
Pressing the “Restart” button on the [Axis monitor - Setting screen] or the [Backup Restore screen] displays this screen.



Item	Object	Description
“OK” button	B	Restarts the Servo and closes the pop-up screen.
“Cancel” button	B	Closes the pop-up screen.

6-4-6 Pop-up Screen of Servo Abnormal Release

Pressing the “Abnormal release” button on the [Axis monitor - Setting screen], [Axis monitor - Warning screen], or [Backup Restore screen] displays this screen.



Item	Object	Description
“OK” button	B	Releases the Servo error and closes the pop-up screen.
“Cancel” button	B	Closes the pop-up screen.

Additional Information

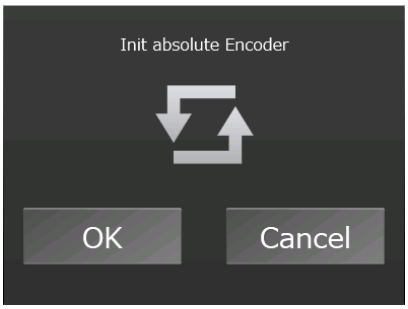
The errors detected with the PLC Function Module, Motion Control Function Module, and EtherCAT Master Function Module can be cleared.
For the details of the PLC Function Module and Motion Control Function Module, refer to the NJ/NX-series CPU Unit Software User’s Manual (Cat. No. W501).
For the details of the EtherCAT Master Function Module, refer to the NJ/NX-series CPU Unit Built-in EtherCAT® Port User’s Manual (Cat. No. W505).

Additional Information

To execute the abnormal release, first you must remove the cause of error.
If the cause of error persists, the error occurs repeatedly.

6-4-7 Pop-up Screen of Init Absolute Encoder

Pressing the “Init absolute Encoder” button on the [Backup Restore screen] displays this screen.



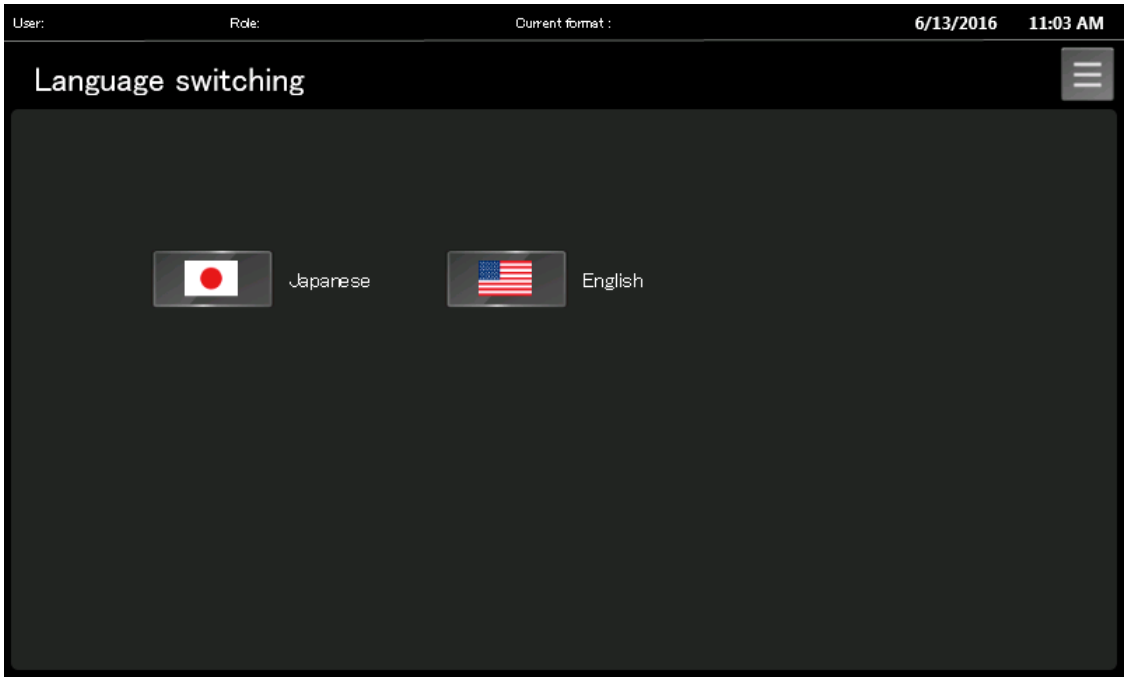
Item	Object	Description
“OK” button	B	Initializes the absolute encoder and closes the pop-up screen.
“Cancel” button	B	Closes the pop-up screen.

Additional Information

This function is enabled only when the axis connected to the Servo Drives is an ABS-type. This button is disabled when the axis is set to an INC-type.

6-5 Language Switching Screen

This screen is used to switch a language.



Item	Object	Description
“Japanese” button	B	Changes the language displayed on the buttons and labels to Japanese.
“English” button	B	Changes the language displayed on the buttons and labels to English.
“Menu” button	B	Displays the Menu pop-up screen.

Additional Information

Select a national flag-button to switch a language.

7 Details of IAG Specifications

7-1 Axis Monitor Menu IAG

7-1-1 External Specification

Object name	Monitor_Menu
Category	Servo_Window_Parts
Function	Moves to the specified screen.

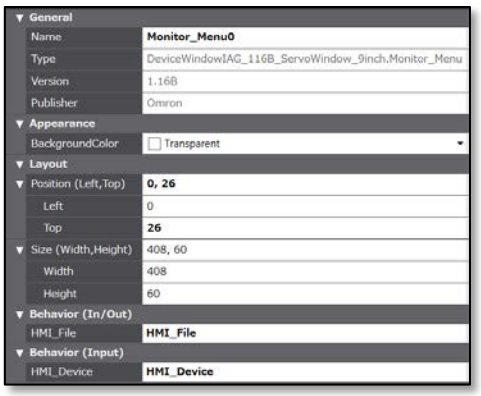
7-1-2 GUI

Name	Description
“Monitoring” button	• Pressing this button issues an event that assigns the function for displaying the Monitoring screen.
“Configuration” button	• Issues an event that assigns the function for displaying the Configuration screen.
“Setting” button	• Issues an event that assigns the function for displaying the Setting screen.
“Warning” button	• Issues an event that assigns the function for displaying the Warning screen.

7-1-3 Properties

Property name	Description	Input method	Range	Default
▼General				
Name	Specifies the object name. The name must be unique in that screen.	Direct input	String (1 to 127 characters)	Monitor_Menu0 *2)
Type	Specifies the object type. This item cannot be changed.	-	-	IAG
Version	Specifies the version of the IAG.	-	-	1.16B
Publisher	Specifies the IAG publisher.	-	-	Omron
Appearance				
BackgroundColor	Specifies the background color of the page.	Item selection Direct input	Color palette String	Transparent *1)
Layout				
▼Position (Left,Top)	Specifies the position of the object on the page.	Direct input Spin button	Numerical Numerical	For 9 inches:(0,25) For 12 inches:(0,40) *3)
Left	Specifies the horizontal page coordinate (x-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches: 0 For 12 inches: 0
Top	Specifies the vertical page coordinate (y-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches: 25 For 12 inches: 40
▼Size (Width,Height)	Specifies the size of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:(408,60) For 12 inches:(652,100) *3)
Width	Specifies the object width.	Direct input Spin button	Numerical Numerical	For 9 inches: 408 For 12 inches: 652
Height	Specifies the object height.	Direct input Spin button	Numerical Numerical	For 9 inches: 60 For 12 inches: 100
▼Behavior (In/Out)				
HMI_File	Specifies the variable for HMI display.	Direct input	Structures (ns_HMI¥File)	(Blank)
▼Behavior (Input)				
HMI_Device	Specifies the device variable for HMI display.	Direct input	Structures (ns_Folder¥Device)	(Blank)

Properties screen

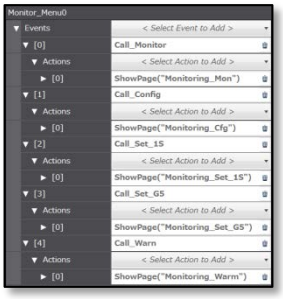


*1) ”Transparent” indicates that the color is transparent.
*2) This is automatically created when the IAG object has been placed.
*3) In units of pixels

● Event and Action

You can set the event and action.

Event name	Description	Input method	Range	Default
▼Events				
▼[0]	Call_Monitor (This event is issued by pressing the “Monitoring” button)			
▼Actions				
▼[0]	Showpage			
Page name	Specifies the screen name ”Monitoring_Axe1” on the Servo IAG library screen.	Direct input	Text	
Left	Specifies the left edge of display position.	Direct input Spin button	Numerical Numerical	-
Top	Specifies the top edge of display position.	Direct input Spin button	Numerical Numerical	-
▼[1]	Call_Config (This event is issued by pressing the “Configuration” button)			
▼Actions				
▼[0]	Showpage			
Page name	Specifies the screen name ”Monitoring_Axe2” on the Servo IAG library screen.	Direct input	Text	
Left	Specifies the left edge of display position.	Direct input Spin button	Numerical Numerical	-
Top	Specifies the top edge of display position.	Direct input Spin button	Numerical Numerical	-
▼[2]	Call_Set_1S (An event that is issued by pressing the setting button if the specified axis is 1S servo.)			
▼Actions				
▼[0]	Showpage			
Page name	Specifies the screen name ”Monitoring_Axe3_1S” on the Servo IAG library screen.	Direct input	Text	
Left	Specifies the left edge of display position.	Direct input Spin button	Numerical Numerical	-
Top	Specifies the top edge of display position.	Direct input Spin button	Numerical Numerical	-
▼[3]	Call_Set_G5 (An event that is issued by pressing the setting button if the specified axis is G5 servo.)			
▼Actions				
▼[0]	Showpage			
Page name	Specifies the screen name ”Monitoring_Axe3_G5” on the Servo IAG library screen.	Direct input	Text	
Left	Specifies the left edge of display position.	Direct input Spin button	Numerical Numerical	-
Top	Specifies the top edge of display position.	Direct input Spin button	Numerical Numerical	-
▼[4]	Call_Warn (This event is issued by pressing the “Warning” button)			
▼Actions				
▼[0]	Showpage			
Page name	Specifies the screen name ”Monitoring_Axe4” on the Servo IAG library screen.	Direct input	Text	
Left	Specifies the left edge of display position.	Direct input Spin button	Numerical Numerical	-
Top	Specifies the top edge of display position.	Direct input Spin button	Numerical Numerical	-

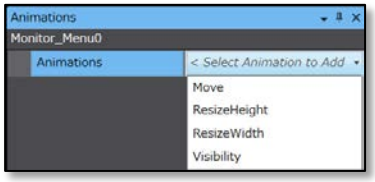
Event screen


∗ As for the factory setting of Servo IAG library screen, set only “ShowPage” for Actions.

● Animation

You can define the basic animation action.

Animation name	Description
Move	Changes the coordinates of the object according to specified condition expressions.
ResizeHeight	Changes the height of the object according to a specified condition expression.
ResizeWidth	Changes the width of the object according to a specified condition expression.
Visibility	Displays the object when a condition expression is met.

Animations screen


As for the factory setting of Servo IAG library screen, you don’t need to set Animations.

● I/O variable timing

Variable	Timing for loading input data	Timing for outputting data
HMI_File	When each button on the screen has been pressed.	Constantly

● Input variable timing

Variable	Timing for loading input data
HMI_Device	When each button on the screen has been pressed.

7-1-4 Features

- Pressing each button on the screen displays a screen that you associated in Events.
- The background color-button corresponding to the displayed screen turns on.
- This object commonly is operated over each screen. Therefore, place the object on its background screen.

Additional Information

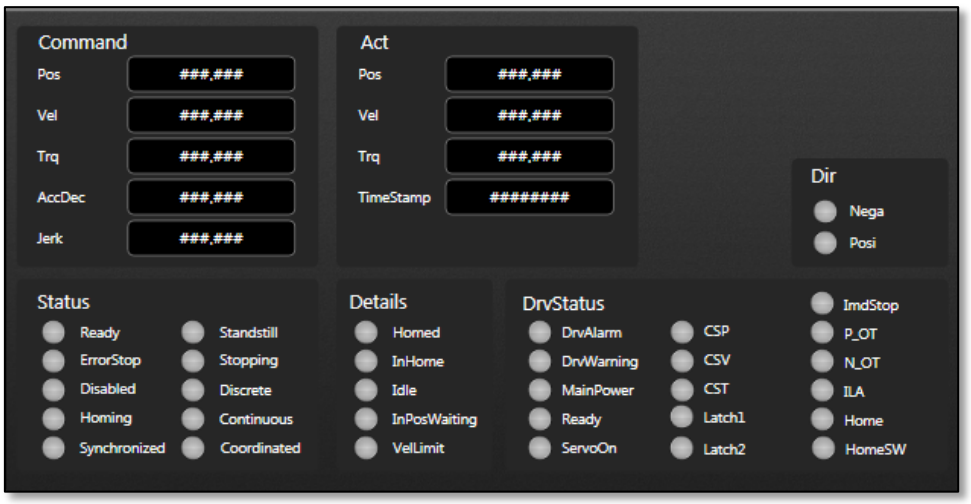
For the entire image of the screen using this object, refer to Section 6 *Screen External Specifications (Use Case)*.

7-2 Axis Monitor Screen1 IAG

7-2-1 External Specification

Object name	Axis_Monitoring
Category	Servo_Window_Parts
Function	Screen that monitors the status of the specified axis.

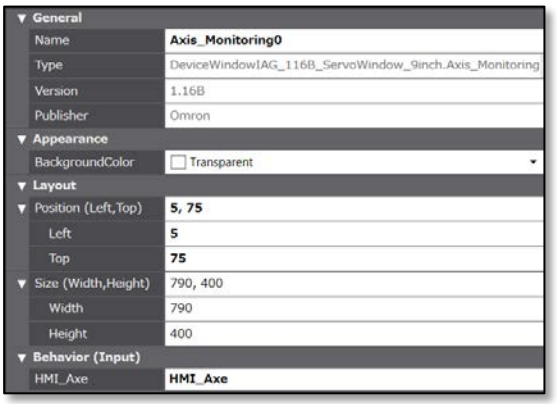
7-2-2 GUI



Name	Description
Monitoring screen	Displays the status of axis operation.

7-2-3 Properties

Property name	Description	Input method	Range	Default
▼General				
Name	Specifies the object name. The name must be unique in that screen.	Direct input	String (1 to 127 characters)	Axis_Monitoring0 *2)
Type	Specifies the object type. This item cannot be changed.	-	-	IAG
Version	Specifies the version of the IAG.	-	-	1.16B
Publisher	Specifies the IAG publisher.	-	-	Omron
Appearance				
BackgroundColor	Specifies the background color of the page.	Item selection Direct input	Color palette String	Transparent *1)
Layout				
▼Position (Left,Top)	Specifies the position of the object on the page.	Direct input Spin button	Numerical Numerical	For 9 inches:(5,75) For 12 inches:(8,120) *3)
Left	Specifies the horizontal page coordinate (x-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:5 For 12 inches:8
Top	Specifies the vertical page coordinate (y-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches: 25 For 12 inches:120
▼Size (Width,Height)	Specifies the size of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:(790,400) For 12 inches:(1264,665) *3)
Width	Specifies the object width.	Direct input Spin button	Numerical Numerical	For 9 inches:790 For 12 inches:1264
Height	Specifies the object height.	Direct input Spin button	Numerical Numerical	For 9 inches:400 For 12 inches:665
▼Behavior (Input)				
HMI_Axe	Specifies the axis status variable for HMI display.	Direct input	Structures (ns_AxisMon¥st_AxisMon)	(Blank)
Properties screen				



*1) ”Transparent” indicates that the color is transparent.
*2) This is automatically created when the IAG object has been placed.
*3) In units of pixels

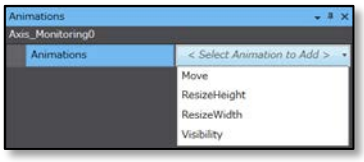
● Event and Action

There are no event and action functions.

● Animation

You can define the basic animation action.

Animation name	Description
Move	Changes the coordinates of the object according to specified condition expressions.
ResizeHeight	Changes the height of the object according to a specified condition expression.
ResizeWidth	Changes the width of the object according to a specified condition expression.
Visibility	Displays the object when a condition expression is met.
Animations screen	



As for the factory setting of Servo IAG library screen, you don't need to set Animations.

● Input variable timing

Variable	Timing for loading input data
HMI_Axe	Constantly

7-2-4 Features

- Displaying the status of the selected axis on the screen.
- Place this object on the Axis Monitor Screen 1.

Additional Information

For the entire image of the screen using this object, refer to Section 6 *Screen External Specifications (Use Case)*.

7-3 Axis Monitor Screen2 IAG

7-3-1 External Specification

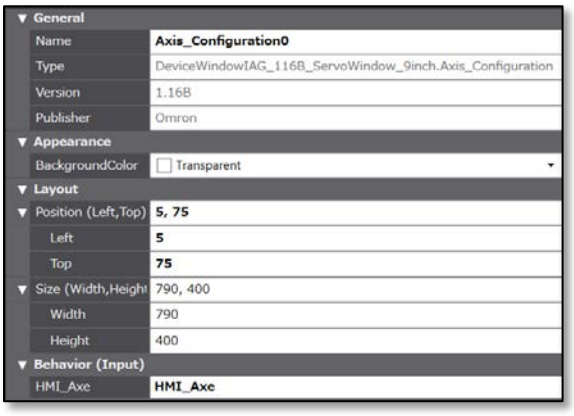
Object name	Axis_Configuration
Category	Servo_Window_Parts
Function	Screen that monitors the setting of the specified axis.

7-3-2 GUI

Name	Description
Configuration screen	Displays the axis setting.

7-3-3 Properties

Property name	Description	Input method	Range	Default
▼General				
Name	Specifies the object name. The name must be unique in that screen.	Direct input	String (1 to 127 characters)	Axis_Configuration0 *2)
Type	Specifies the object type. This item cannot be changed.	-	-	IAG
Version	Specifies the version of the IAG.	-	-	1.16B
Publisher	Specifies the IAG publisher.	-	-	Omron
Appearance				
BackgroundColor	Specifies the background color of the page.	Item selection Direct input	Color palette String	Transparent *1)
Layout				
▼Position (Left,Top)	Specifies the position of the object on the page.	Direct input Spin button	Numerical Numerical	For 9 inches:(5,75) For 12 inches:(8,120) *3)
Left	Specifies the horizontal page coordinate (x-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:5 For 12 inches:8
Top	Specifies the vertical page coordinate (y-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches: 25 For 12 inches:120
▼Size (Width,Height)	Specifies the size of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:(790,400) For 12 inches:(1264,665) *3)
Width	Specifies the object width.	Direct input Spin button	Numerical Numerical	For 9 inches:790 For 12 inches:1264
Height	Specifies the object height.	Direct input Spin button	Numerical Numerical	For 9 inches:400 For 12 inches:665
▼Behavior (Input)				
HMI_Axe	Specifies the axis status variable for HMI display.	Direct input	Structures (ns_AxisMon¥st_AxisMon)	(Blank)
Properties screen				



*1) ”Transparent” indicates that the color is transparent.
*2) This is automatically created when the IAG object has been placed.
*3) In units of pixels

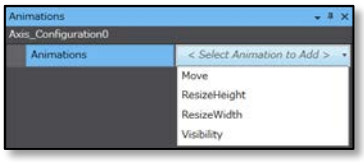
● Event and Action

There are no event and action functions.

● Animation

You can define the basic animation action.

Animation name	Description
Move	Changes the coordinates of the object according to specified condition expressions.
ResizeHeight	Changes the height of the object according to a specified condition expression.
ResizeWidth	Changes the width of the object according to a specified condition expression.
Visibility	Displays the object when a condition expression is met.
Animations screen	



As for the factory setting of Servo IAG library screen, you don't need to set Animations.

● Input variable timing

Variable	Timing for loading input data
HMI_Axe	Constantly

7-3-4 Features

- Display various parameter settings of the selected axis on the screen.
- Place this object on the Axis Monitor Screen 2.

Additional Information

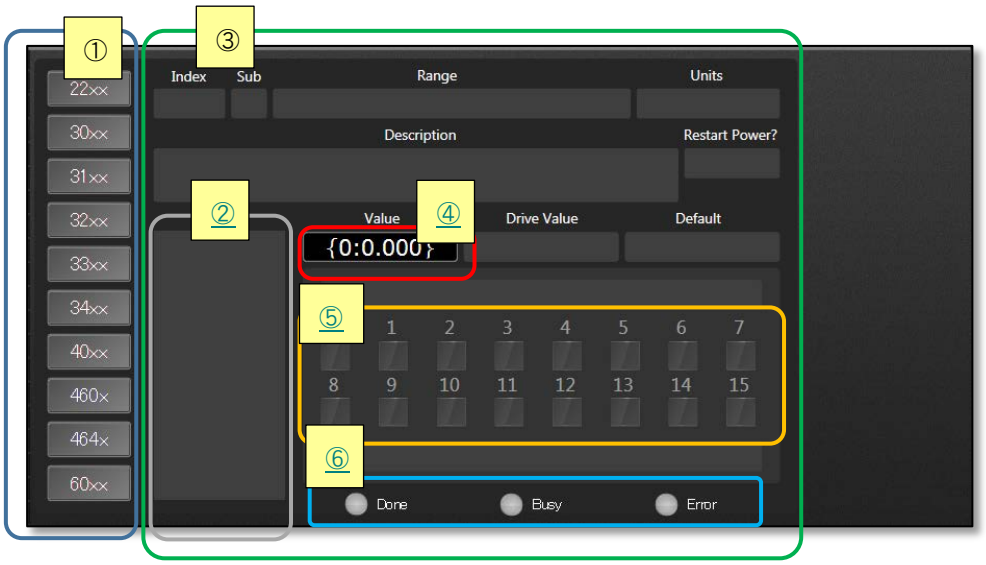
For the entire image of the screen using this object, refer to Section 6 *Screen External Specifications (Use Case)*.

7-4 Axis Monitor Screen3 IAG for 1S Servo

7-4-1 External Specification

Object name	Axis_Setting_1S
Category	Servo_Window_Parts
Function	Screen that reads/writes the axis parameter.

7-4-2 GUI



No	Name	Description
1	Parameter display button	Displays various parameter values that were read from the Servo as index No.
2	Selected parameter	Displays the parameter that you selected with a parameter display button.
3	Detail of parameter	Displays information of the parameters that you selected in the “selected parameter” field.
4	Parameter value	Displays the value of selected parameter. Press this field to change the value.
5	Parameter bit selection	If the selected parameter can set the value in units of Bit, these buttons become enabled, allowing you to change the value with button ON/OFF.
6	SDO command status	Displays the status when executing the SDO command.

7-4-3 Properties

Property name	Description	Input method	Range	Default
▼General				
Name	Specifies the object name. The name must be unique in that screen.	Direct input	String (1 to 127 characters)	Axis_Setting_1S0 *2)
Type	Specifies the object type. This item cannot be changed.	-	-	IAG
Version	Specifies the version of the IAG.	-	-	1.16B
Publisher	Specifies the IAG publisher.	-	-	Omron
Appearance				
BackgroundColor	Specifies the background color of the page.	Item selection Direct input	Color palette String	Transparent *1)
Layout				
▼Position (Left,Top)	Specifies the position of the object on the page.	Direct input Spin button	Numerical Numerical	For 9 inches:(5,75) For 12 inches:(8,120) *3)
Left	Specifies the horizontal page coordinate (x-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:5 For 12 inches:8
Top	Specifies the vertical page coordinate (y-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:75 For 12 inches:120
▼Size (Width,Height)	Specifies the size of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:(790,400) For 12 inches:(1264,665) *3)
Width	Specifies the object width.	Direct input Spin button	Numerical Numerical	For 9 inches:790 For 12 inches:1264
Height	Specifies the object height.	Direct input Spin button	Numerical Numerical	For 9 inches:400 For 12 inches:665
▼Behavior (In/Out)				
HMI_Device	Specifies the connected device variable for HMI display	Direct input	Structures (ns_Folder¥Device)	(Blank)
HMI_File	Specifies the variable for HMI display.	Direct input	Structures (ns_HMI¥File)	(Blank)
HMI_ServoParamsAxis	Specifies the Servo parameter for HMI display.	Direct input	Structures (ns_SDO_Management¥Sarvo_Params_Data(1))	(Blank)
▼Behavior (Input)				
ServoParamsSDO	Specifies the parameter variable for HMI display	Direct input	Structures (ns_SDO_Management¥st_Table_Servo(1))	(Blank)
HMI_Servo_Description	Specifies the function resource variable for HMI display	Direct input	Structures (Description_Res_1S)	(Blank)
HMI_Servo_BitDescription	Specifies the function sub-resource variable for HMI display	Direct input	Structures (BitDescription_Res_1S)	(Blank)

Properties screen

*1) ”Transparent” indicates that the color is transparent.
*2) This is automatically created when the IAG object has been placed.
*3) In units of pixels

● Event and Action

There are no event and action functions.

● Animation

You can define the basic animation action.

Animation name	Description
Move	Changes the coordinates of the object according to specified condition expressions.
ResizeHeight	Changes the height of the object according to a specified condition expression.
ResizeWidth	Changes the width of the object according to a specified condition expression.
Visibility	Displays the object when a condition expression is met.

Animations screen

As for the factory setting of Servo IAG library screen, you don’t need to set Animations.

- I/O variable timing

Variable	Timing for loading input data	Timing for outputting data
HMI_File	When parameter has been selected.	Data writing.
HMI_Device	When parameter has been selected.	When the value has been changed
HMI_ServoParamsAxis	When parameter has been selected.	When the value has been changed

- Input variable timing

Variable	Timing for loading input data
ServoParamsSDO_1S	The parameter information that was read at system-startup is referenced when the parameter has been selected.
HMI_Servo_Description_1S	The resource information that was read at system-startup is referenced when the parameter has been selected.
HMI_Servo_BitDescription_1S	The resource information that was read at system-startup is referenced when the parameter has been selected.

7-4-4 Features

- Pressing the “Parameter display button” on the screen shows the index information of the target scope.
- Displaying the parameter, which you selected from the list, on the screen.
- You can change the displayed values by entering values or button ON/OFF.

Additional Information

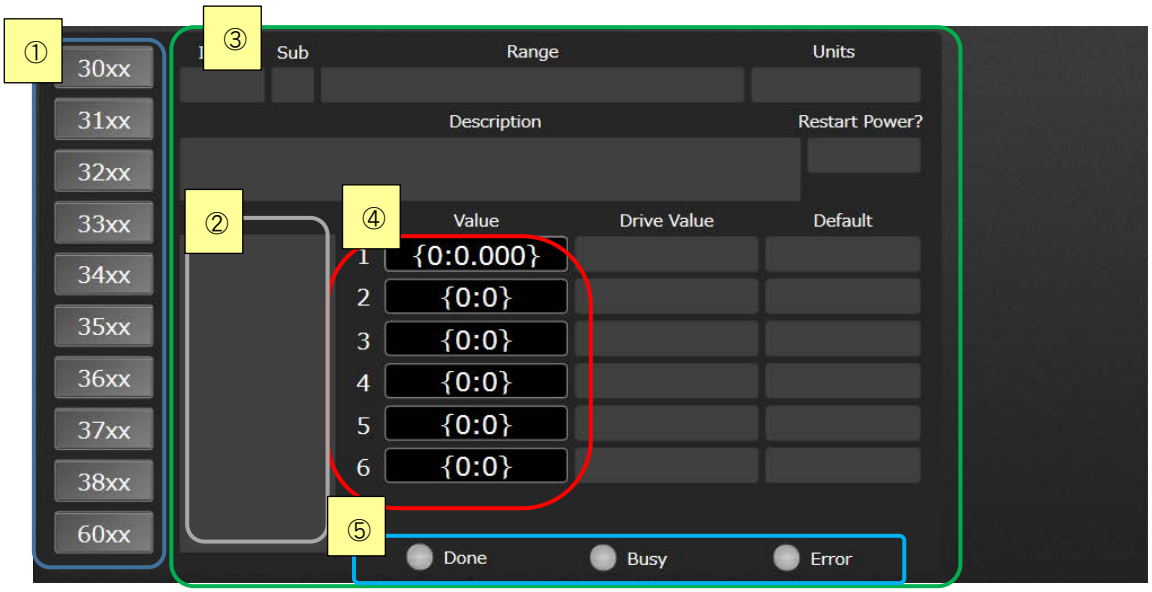
For the entire image of the screen using this object, refer to Section 6 *Screen External Specifications (Use Case)*.

7-5 Axis Monitor Screen3 IAG for G5 Servo

7-5-1 External Specification

Object name	Axis_Setting_G5
Category	Servo_Window_Parts_G5
Function	Screen that reads/writes the axis parameter.

7-5-2 GUI



No.	Name	Description
①	Parameter display button	Displays various parameter values that were read from the Servo as index No..
②	Selected parameter	Displays the parameter that you selected with a parameter display button.
③	Detail of parameter	Displays information of the parameters that you selected in the “selected parameter” field.
④	Parameter value	Displays the value of selected parameter. Press this field to change the value.
⑤	SDO command status	Displays the status when executing the SDO command.

7-5-3 Properties

Property name	Description	Input method	Range	Default
▼General				
Name	Specifies the object name. The name must be unique in that screen.	Direct input	String (1 to 127 characters)	Axis_Setting_G50 *2)
Type	Specifies the object type. This item cannot be changed.	-	-	IAG
Version	Specifies the version of the IAG.	-	-	1.16B
Publisher	Specifies the IAG publisher.	-	-	Omron
Appearance				
BackgroundColor	Specifies the background color of the page.	Item selection Direct input	Color palette String	Transparent *1)
Layout				
▼Position (Left,Top)	Specifies the position of the object on the page.	Direct input Spin button	Numerical Numerical	For 9 inches:(5,75) For 12 inches:(8,120) *3)
Left	Specifies the horizontal page coordinate (x-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:5 For 12 inches:8
Top	Specifies the vertical page coordinate (y-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:75 For 12 inches:120
▼Size (Width,Height)	Specifies the size of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:(790,400) For 12 inches:(1264,665) *3)
Width	Specifies the object width.	Direct input Spin button	Numerical Numerical	For 9 inches:790 For 12 inches:1264
Height	Specifies the object height.	Direct input Spin button	Numerical Numerical	For 9 inches:400 For 12 inches:665
▼Behavior (In/Out)				
HMI_Device	Specifies the connected device variable for HMI display	Direct input	Structures (ns_Folder¥Device)	(Blank)
HMI_File	Specifies the variable for HMI display.	Direct input	Structures (ns_HMI¥File)	(Blank)
HMI_ServoParamsAxis	Specifies the Servo parameter for HMI display.	Direct input	Structures (ns_SDO_Management¥Sarvo_Params_Data(1))	(Blank)
▼Behavior (Input)				
ServoParamsSDO	Specifies the parameter variable for HMI display	Direct input	Structures (ns_SDO_Management¥st_Table_Servo(1))	(Blank)
HMI_Servo_Description_G5	Specifies the function resource variable for HMI display	Direct input	Structures (Description_Res_G5)	(Blank)

Properties screen

*1) ”Transparent” indicates that the color is transparent.
*2) This is automatically created when the IAG object has been placed.
*3) In units of pixels

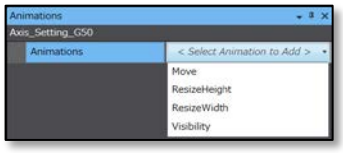
● Event and Action

There are no event and action functions.

● Animation

You can define the basic animation action.

Animation name	Description
Move	Changes the coordinates of the object according to specified condition expressions.
ResizeHeight	Changes the height of the object according to a specified condition expression.
ResizeWidth	Changes the width of the object according to a specified condition expression.
Visibility	Displays the object when a condition expression is met.
Animations screen	



As for the factory setting of Servo IAG library screen, you don’t need to set Animations.

- I/O variable timing

Variable	Timing for loading input data	Timing for outputting data
HMI_File	When parameter has been selected.	Data writing.
HMI_Device	When parameter has been selected.	When the value has been changed
HMI_ServoParamsAxis	When parameter has been selected.	When the value has been changed

- Input variable timing

Variable	Timing for loading input data
ServoParamsSDO_G5	The parameter information that was read at system-startup is referenced when the parameter has been selected.
HMI_Servo_Description_G5	The resource information that was read at system-startup is referenced when the parameter has been selected.

7-5-4 Features

- Pressing the “Parameter display button” on the screen shows the index information of the target scope.
- Displaying the parameter, which you selected from the list, on the screen.
- You can change the displayed values by entering values.

Additional Information

For the entire image of the screen using this object, refer to Section 6 *Screen External Specifications (Use Case)*.

7-6 Axis Monitor Screen4 IAG

7-6-1 External Specification

Object name	Axis_Warning
Category	Servo_Window_Parts
Function	Screen that displays the axis error status.

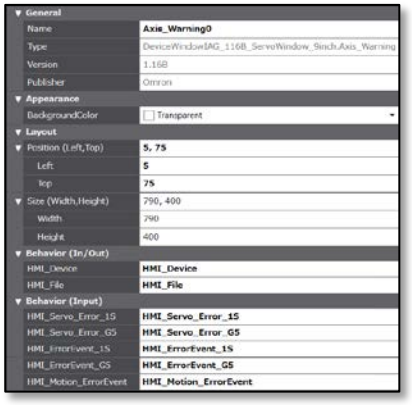
7-6-2 GUI

No	Name	Description
①	Fault	Displays the Servo error status.
②	Error History	Displays the current minor faults.
③	Operation button	Displays the trouble shooter / executes the abnormal release.

7-6-3 Properties

Property name	Description	Input method	Range	Default
▼General				
Name	Specifies the object name. The name must be unique in that screen.	Direct input	String (1 to 127 characters)	Axis_Warning0 *2)
Type	Specifies the object type. This item cannot be changed.	-	-	IAG
Version	Specifies the version of the IAG.	-	-	1.16B
Publisher	Specifies the IAG publisher.	-	-	Omron
Appearance				
BackgroundColor	Specifies the background color of the page.	Item selection Direct input	Color palette String	Transparent *1)
Layout				
▼Position (Left,Top)	Specifies the position of the object on the page.	Direct input Spin button	Numerical Numerical	For 9 inches:(5,75) For 12 inches:(8,120) *3)
Left	Specifies the horizontal page coordinate (x-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:5 For 12 inches:8
Top	Specifies the vertical page coordinate (y-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:75 For 12 inches:120
▼Size (Width,Height)	Specifies the size of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:(790,400) For 12 inches:(1264,665) *3)
Width	Specifies the object width.	Direct input Spin button	Numerical Numerical	For 9 inches:790 For 12 inches:1264
Height	Specifies the object height.	Direct input Spin button	Numerical Numerical	For 9 inches:400 For 12 inches:665
▼Behavior (In/Out)				
HMI_Device	Specifies the connected device variable for HMI display.	Direct input	Structures (ns_Folder¥Device)	(Blank)
HMI_File	Specifies the variable for HMI display.	Direct input	Structures (ns_HMI¥File)	(Blank)
▼Behavior (Input)				
HMI_Servo_Error_1S	Specifies the error resource variable of HMI display for 1S	Direct input	Structures (Servo_Error_Res)	(Blank)
HMI_Servo_Error_G5	Specifies the error resource variable of HMI display for G5	Direct input	Structures (Servo_Error_Res)	(Blank)
HMI_ErrorEvent_1S	Specifies the error resource variable of HMI display for 1S	Direct input	Structures (ErrorEvent_Res_1S)	(Blank)
HMI_ErrorEvent_G5	Specifies the error resource variable of HMI display for G5	Direct input	Structures (ErrorEvent_Res_G5)	(Blank)
HMI_Motion_ErrorEvent	Specifies the error resource variable of HMI display.	Direct input	Structures (Motion_ErrorEvent_Res)	(Blank)

Properties screen



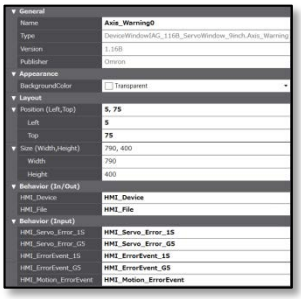
*1)"Transparent" indicates that the color is transparent.
*2) This is automatically created when the IAG object has been placed.
*3) In units of pixels

● Event and Action

You can set the event and action.

Event name	Description	Input method	Range	Default
▼Events				
▼[0]	Call_Popup (This event is issued by pressing the "Abnormal release" button)			
▼Actions				
▼[0]	Showpage			
Page name	Specifies the screen name " Validation_Pop" on the Servo IAG library screen.	Direct input	Text	
Left	Specifies the left edge of display position.	Direct input Spin button	Numerical Numerical	-
Top	Specifies the top edge of display position.	Direct input Spin button	Numerical Numerical	-
▼[1]	Call_Troubleshooter (This event is issued by pressing the "Trouble shooter" button)			
▼Actions				
▼[0]	ShowTroubleshooter			
Controller	Specifies PLC name "CPU1" on the Servo IAG library screen.	Direct input	Text	-
StartPage	Specifies the current controller error.	Item selection	-	-

Event screen

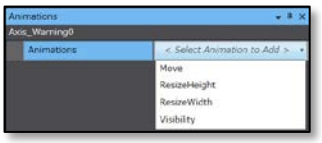


* As for the factory setting of Servo IAG library screen, set only "ShowPage" and "ShowTroubleshooter" for Actions.

● Animation

You can define the basic animation action.

Animation name	Description
Move	Changes the coordinates of the object according to specified condition expressions.
ResizeHeight	Changes the height of the object according to a specified condition expression.
ResizeWidth	Changes the width of the object according to a specified condition expression.
Visibility	Displays the object when a condition expression is met.
Animations screen	



As for the factory setting of Servo IAG library screen, you don't need to set Animations.

● I/O variable timing

Variable	Timing for loading input data	Timing for outputting data
HMI_File	When an error occurs	When an error occurs
HMI_Device	When an error occurs	When an error occurs

● Input variable timing

Variable	Timing for loading input data
HMI_Servo_Error	The parameter information that was read at system-startup is referenced when an error occurs.
HMI_Servo_ErrorEvent_1S	The resource information that was read at system-startup is referenced when an error occurs.
HMI_Servo_ErrorEvent_G5	The resource information that was read at system-startup is referenced when an error occurs.
HMI_Motion_ErrorEvent_1S	The resource information that was read at system-startup is referenced when an error occurs.
HMI_Motion_ErrorEvent_G5	The resource information that was read at system-startup is referenced when an error occurs.

7-6-4 Features

- Displaying the information when the error has occurred in the axis.
- You can execute the abnormal release after removing the cause of error.
- You can display the trouble shooter screen to see the errors.

Additional Information

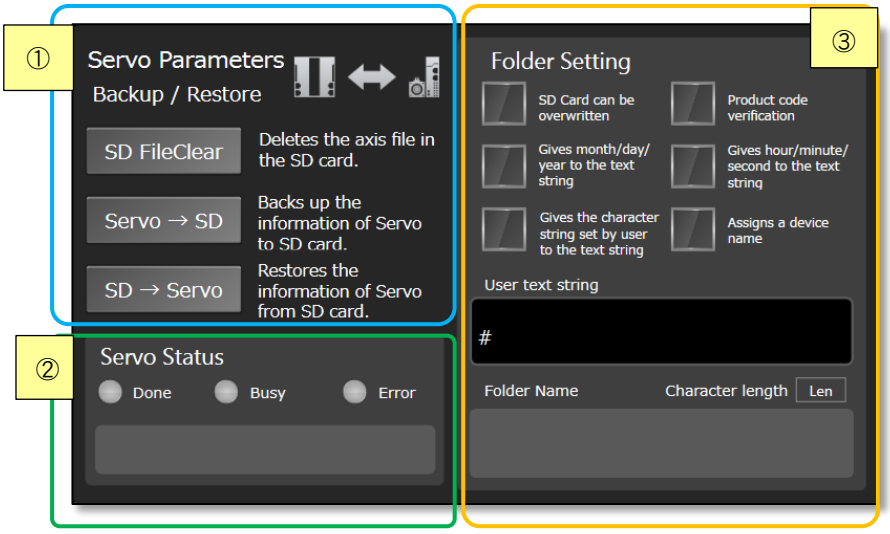
For the entire image of the screen using this object, refer to Section 6 *Screen External Specifications (Use Case)*.

7-7 Axis Maintenance Screen IAG

7-7-1 External Specification

Object name	Backup_Restore_Servo
Category	Servo_Window_Parts
Function	Servo maintenance screen

7-7-2 GUI



No	Name	Description
①	Servo Parameters Backup/ Restore	Backup & restores the servo parameter on the SD card.
②	Servo Status	Displays the status during the SDO command execution by lamp indicators and messages.
③	Folder Setting	Creates a file name to be stored in the SD card.

7-7-3 Properties

Property name	Description	Input method	Range	Default
▼General				
Name	Specifies the object name. The name must be unique in that screen.	Direct input	String (1 to 127 characters)	Backup_Restore_Servo0*2)
Type	Specifies the object type. This item cannot be changed.	-	-	IAG
Version	Specifies the version of the IAG.	-	-	1.16B
Publisher	Specifies the IAG publisher.	-	-	Omron
Appearance				
BackgroundColor	Specifies the background color of the page.	Item selection Direct input	Color palette String	Transparent *1)
Layout				
▼Position (Left,Top)	Specifies the position of the object on the page.	Direct input Spin button	Numerical Numerical	For 9 inches:(10,90) For 12 inches:(15,140) *3)
Left	Specifies the horizontal page coordinate (x-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:10 For 12 inches:15
Top	Specifies the vertical page coordinate (y-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:90 For 12 inches:140
▼Size (Width,Height)	Specifies the size of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:(640,380) For 12 inches:(1024,630) *3)
Width	Specifies the object width.	Direct input Spin button	Numerical Numerical	For 9 inches:640 For 12 inches:1024
Height	Specifies the object height.	Direct input Spin button	Numerical Numerical	For 9 inches:380 For 12 inches:630
▼Behavior (In/Out)				
HMI_Device	Specifies the connected device variable for HMI display	Direct input	Structures (ns_Folder¥Device)	(Blank)
HMI_File	Specifies the variable for HMI display.	Direct input	Structures (ns_HMI¥File)	(Blank)
▼Behavior (Input)				
HMI_FB_Error	Specifies the error resource variable of HMI display.	Direct input	Structures (FB_Error_Res)	(Blank)
ECAT_Connect_DeviceInfo	Specifies the ECAT connection variable for HMI display.	Direct input	Structures (ECAT_Device_Info)	(Blank)

Properties screen

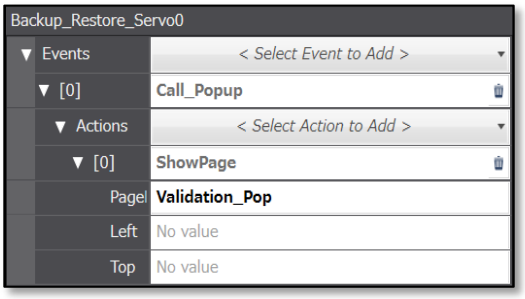
*1)"Transparent" indicates that the color is transparent.
*2) This is automatically created when the IAG object has been placed.
*3) In units of pixels

● Event and Action

You can set the event and action.

Event name	Description	Input method	Range	Default
▼Events				
▼[0]	Call_Popup (This event is issued by pressing the "Abnormal release" button)			
▼Actions				
▼[0]	Showpage			
Page name	Specifies the screen name " Validation_Pop" on the Servo IAG library screen.	Direct input	Text	
Left	Specifies the left edge of display position.	Direct input Spin button	Numerical Numerical	-
Top	Specifies the top edge of display position.	Direct input Spin button	Numerical Numerical	-

Event screen

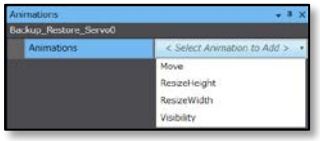


∗ As for the factory setting of Servo IAG library screen, set only "ShowPage" for Actions.

● Animation

You can define the basic animation action.

Animation name	Description
Move	Changes the coordinates of the object according to specified condition expressions.
ResizeHeight	Changes the height of the object according to a specified condition expression.
ResizeWidth	Changes the width of the object according to a specified condition expression.
Visibility	Displays the object when a condition expression is met.
Animations screen	



As for the factory setting of Servo IAG library screen, you don't need to set Animations.

● I/O variable timing

Variable	Timing for loading input data	Timing for outputting data
HMI_File	When a button operation has been used	When a button operation has been used
HMI_Device	When a button operation has been used	When a button operation has been used

● Input variable timing

Variable	Timing for loading input data
HMI_FB_Error	The parameter information that was read at system-startup is referenced when an error occurs.
ECAT_Connect_DeviceInfo	The device information that was read at system-startup is referenced.

7-7-4 Features

- Performing the backup & restore function of Servo parameter.
- Creating a file name for backup of SD card.
- Displaying the status during the SDO command execution.

Additional Information

For the entire image of the screen using this object, refer to Section 6 *Screen External Specifications (Use Case)*.

7-8 Status Display IAG for Axis Maintenance Screen

7-8-1 External Specification

Object name	Backup_Restore_Servo
Category	Servo_Window_Parts
Function	Displays the status for Servo maintenance.

7-8-2 GUI

7-8-3 Properties

Property name	Description	Input method	Range	Default
▼General				
Name	Specifies the object name. The name must be unique in that screen.	Direct input	String (1 to 127 characters)	Backup_Restore_Info0 *2)
Type	Specifies the object type. This item cannot be changed.	-	-	IAG
Version	Specifies the version of the IAG.	-	-	1.16B
Publisher	Specifies the IAG publisher.	-	-	Omron
Appearance				
BackgroundColor	Specifies the background color of the page.	Item selection Direct input	Color palette String	Transparent *1)
Layout				
▼Position (Left,Top)	Specifies the position of the object on the page.	Direct input Spin button	Numerical Numerical	For 9 inches:(0,25) For 12 inches:(0,40) *3)
Left	Specifies the horizontal page coordinate (x-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches: 0 For 12 inches: 0
Top	Specifies the vertical page coordinate (y-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches: 25 For 12 inches: 40
▼Size (Width,Height)	Specifies the size of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:(400,55) For 12 inches:(640,92) *3)
Width	Specifies the object width.	Direct input Spin button	Numerical Numerical	For 9 inches:400 For 12 inches:640
Height	Specifies the object height.	Direct input Spin button	Numerical Numerical	For 9 inches:55 For 12 inches:92
▼Behavior (Input)				
HMI_File	Specifies the variable for HMI display.	Direct input	Structures (ns_HMI¥File)	(Blank)

Properties screen

*1) ”Transparent” indicates that the color is transparent.
*2) This is automatically created when the IAG object has been placed.
*3) In units of pixels

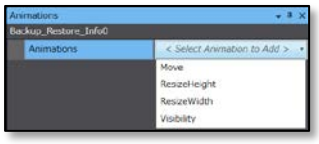
● Event and Action

There are no event and action functions.

● Animation

You can define the basic animation action.

Animation name	Description
Move	Changes the coordinates of the object according to specified condition expressions.
ResizeHeight	Changes the height of the object according to a specified condition expression.
ResizeWidth	Changes the width of the object according to a specified condition expression.
Visibility	Displays the object when a condition expression is met.
Animations screen	



As for the factory setting of Servo IAG library screen, you don't need to set Animations.

● Input variable timing

Variable	Timing for loading input data
HMI_File	The display contents are updated depending on the status of referenced Servo and CUP.

7-8-4 Features

- Updating the display contents depending on the status of referenced Servo and CUP.

Additional Information

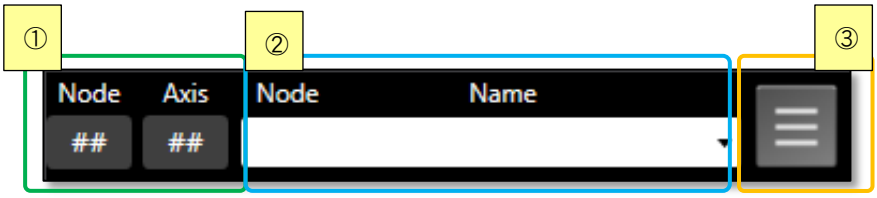
For the entire image of the screen using this object, refer to Section 6 *Screen External Specifications (Use Case)*.

7-9 Servo Change Screen IAG

7-9-1 External Specification

Object name	Change_Axis
Category	Servo_Window_Parts
Function	Changes and displays the referenced Servo.

7-9-2 GUI



No	Name	Description
①	Node and Axis	Displays the selected node No. and axis.
②	Node and Name	• Displays the selected device name and node No. You can change the selected axis from menu.
③	“Menu” button	• Displays the Menu pop-up screen.

7-9-3 Properties

Property name	Description	Input method	Range	Default
▼General				
Name	Specifies the object name. The name must be unique in that screen.	Direct input	String (1 to 127 characters)	Change_Axis0 *2)
Type	Specifies the object type. This item cannot be changed.	-	-	IAG
Version	Specifies the version of the IAG.	-	-	1.16A
Publisher	Specifies the IAG publisher.	-	-	Omron
Appearance				
BackgroundColor	Specifies the background color of the page.	Item selection Direct input	Color palette String	Transparent *1)
Layout				
▼Position (Left,Top)	Specifies the position of the object on the page.	Direct input Spin button	Numerical Numerical	For 9 inches:(425,25) For 12 inches:(680,40) *3)
Left	Specifies the horizontal page coordinate (x-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:425 For 12 inches:680
Top	Specifies the vertical page coordinate (y-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches: 25 For 12 inches: 40
▼Size (Width,Height)	Specifies the size of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:(375,50) For 12 inches:(600,83) *3)
Width	Specifies the object width.	Direct input Spin button	Numerical Numerical	For 9 inches:375 For 12 inches:600
Height	Specifies the object height.	Direct input Spin button	Numerical Numerical	For 9 inches:50 For 12 inches:83
▼Behavior (In/Out)				
HMI_Device	Specifies the connected device variable for HMI display	Direct input	Structures (ns_Folder¥Device)	(Blank)
▼Behavior (Input)				
HMI_File	Specifies the variable for HMI display	Direct input	Structures (ns_HMI¥File)	(Blank)
ECAT_Connect_ DeviceInfo	Specifies the ECAT connection variable for HMI display.	Direct input	Structures (ECAT_Device_Inf o)	(Blank)

Properties screen

*1) ”Transparent” indicates that the color is transparent.
*2) This is automatically created when the IAG object has been placed.
*3) In units of pixels

● Event and Action

You can set the event and action.

Event name	Description	Input method	Range	Default
▼Events				
▼[0]	Call_Menu (This event is issued by pressing the “Menu” button.)			
▼Actions				
▼[0]	Showpage			
Page name	Specifies the screen name ” Menu_Popup” on the Servo IAG library screen.	Direct input	Text	
Left	Specifies the left edge of display position.	Direct input Spin button	Numerical Numerical	-
Top	Specifies the top edge of display position.	Direct input Spin button	Numerical Numerical	-
▼[0]	Call_Set_1S (An event that is issued by pressing the setting button if the specified axis is 1S servo.)			
▼Actions				
▼[0]	Showpage			
Page name	Specifies the screen name ” Monitoring_Set_1S” on the Servo IAG library screen.	Direct input	Text	
Left	Specifies the left edge of display position.	Direct input Spin button	Numerical Numerical	-
Top	Specifies the top edge of display position.	Direct input Spin button	Numerical Numerical	-
▼[0]	Call_Set_G5 (An event that is issued by pressing the setting button if the specified axis is G5 servo.)			
▼Actions				
▼[0]	Showpage			
Page name	Specifies the screen name ” Monitoring_Set_G5” on the Servo IAG library screen.	Direct input	Text	
Left	Specifies the left edge of display position.	Direct input Spin button	Numerical Numerical	-
Top	Specifies the top edge of display position.	Direct input Spin button	Numerical Numerical	-

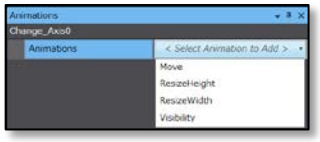
Event screen

∗ As for the factory setting of 1S Servo IAG library screen, set only “ShowPage” for Actions.

● Animation

You can define the basic animation action.

Animation name	Description
Move	Changes the coordinates of the object according to specified condition expressions.
ResizeHeight	Changes the height of the object according to a specified condition expression.
ResizeWidth	Changes the width of the object according to a specified condition expression.
Visibility	Displays the object when a condition expression is met.
Animations screen	



As for the factory setting of Servo IAG library screen, you don't need to set Animations.

● I/O variable timing

Variable	Timing for loading input data	Timing for outputting data
HMI_Device	Drop-down action.	Drop-down action.

● Input variable timing

Variable	Timing for loading input data
HMI_File	When each button on the screen has been pressed.
ECAT_Connect_DeviceInfo	Reads the name of the connected device at system-startup and displays it in the drop-down list.

7-9-4 Features

- Changing the referenced axis from the drop-down list.
- Displaying the Menu pop-up screen by pressing the "Menu" button.

Additional Information

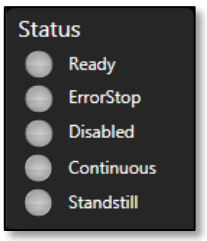
For the entire image of the screen using this object, refer to Section 6 *Screen External Specifications (Use Case)*.

7-10 Axis Status Monitor Screen IAG

7-10-1 External Specification

Object name	Monitor_Status
Category	Servo_Window_Parts
Function	Screen that only displays the status of the specified axis.

7-10-2 GUI



Name	Description
Status	Displays the status of axis.

7-10-3 Properties

Property name	Description	Input method	Range	Default
▼General				
Name	Specifies the object name. The name must be unique in that screen.	Direct input	String (1 to 127 characters)	Monitor_Status0 *2)
Type	Specifies the object type. This item cannot be changed.	-	-	IAG
Version	Specifies the version of the IAG.	-	-	1.16B
Publisher	Specifies the IAG publisher.	-	-	Omron
Appearance				
BackgroundColor	Specifies the background color of the page.	Item selection Direct input	Color palette String	Transparent *1)
Layout				
▼Position (Left,Top)	Specifies the position of the object on the page.	Direct input Spin button	Numerical Numerical	For 9 inches:(660,310) For 12 inches:(1056,509) *3)
Left	Specifies the horizontal page coordinate (x-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:660 For 12 inches:1056
Top	Specifies the vertical page coordinate (y-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:310 For 12 inches:509
▼Size (Width,Height)	Specifies the size of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:(130,155) For 12 inches:(208,255) *3)
Width	Specifies the object width.	Direct input Spin button	Numerical Numerical	For 9 inches:130 For 12 inches:208
Height	Specifies the object height.	Direct input Spin button	Numerical Numerical	For 9 inches:155 For 12 inches:255
▼Behavior (Input)				
HMI_Axe	Specifies the axis status variable for HMI display.	Direct input	Structures (ns_AxisMon¥st_AxisMon)	(Blank)
Properties screen				

*1) ”Transparent” indicates that the color is transparent.
*2) This is automatically created when the IAG object has been placed.
*3) In units of pixels

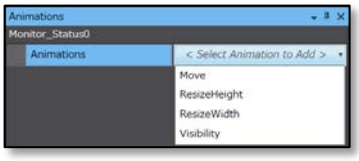
● Event and Action

There are no event and action functions.

● Animation

You can define the basic animation action.

Animation name	Description
Move	Changes the coordinates of the object according to specified condition expressions.
ResizeHeight	Changes the height of the object according to a specified condition expression.
ResizeWidth	Changes the width of the object according to a specified condition expression.
Visibility	Displays the object when a condition expression is met.
Animations screen	



As for the factory setting of Servo IAG library screen, you don't need to set Animations.

● Input variable timing

Variable	Timing for loading input data
HMI_Axe	Constantly

7-10-4 Features

- Displaying the status of the selected axis on the screen.
- Place this object on the Axis Monitor Screen 3 and the Axis Maintenance Screen.

Additional Information

For the entire image of the screen using this object, refer to Section 6 *Screen External Specifications (Use Case)*.

7-11 Servo Button Screen 1 IAG

7-11-1 External Specification

Object name	Function1
Category	Servo_Window_Parts
Function	Servo operation button 1

7-11-2 GUI

Name	Description
“Servo Read” button	Reads the parameter from the selected Servo.
“Servo Write” button	Writes the parameter to the selected Servo.
“Factory” button	Sets the selected servo parameter to the factory set values.
“Restart” button	Restarts the selected servo parameter.
“Abnormal release” button	Issues an abnormal release command to the selected servo. ∗If the cause of error persists, the error cannot be released.

7-11-3 Properties

Property name	Description	Input method	Range	Default
▼General				
Name	Specifies the object name. The name must be unique in that screen.	Direct input	String (1 to 127 characters)	Function10 *2)
Type	Specifies the object type. This item cannot be changed.	-	-	IAG
Version	Specifies the version of the IAG.	-	-	1.16B
Publisher	Specifies the IAG publisher.	-	-	Omron
Appearance				
BackgroundColor	Specifies the background color of the page.	Item selection Direct input	Color palette String	Transparent *1)
Layout				
▼Position (Left,Top)	Specifies the position of the object on the page.	Direct input Spin button	Numerical Numerical	For 9 inches:(660,80) For 12 inches:(1051,125) *3)
Left	Specifies the horizontal page coordinate (x-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:660 For 12 inches:1051
Top	Specifies the vertical page coordinate (y-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:80 For 12 inches:125
▼Size (Width,Height)	Specifies the size of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:(130,220) For 12 inches:(208,365) *3)
Width	Specifies the object width.	Direct input Spin button	Numerical Numerical	For 9 inches:130 For 12 inches:208
Height	Specifies the object height.	Direct input Spin button	Numerical Numerical	For 9 inches:220 For 12 inches:365
▼Behavior (In/Out)				
HMI_FIle	Specifies the variable for HMI display.	Direct input	Structures (ns_HMI¥File)	(Blank)

Properties screen

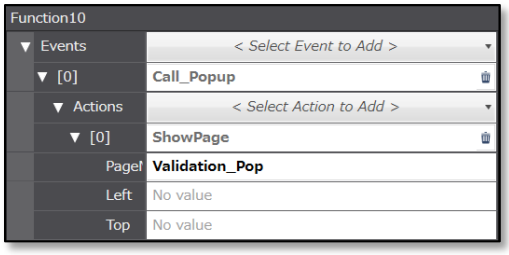
*1) ”Transparent” indicates that the color is transparent.
*2) This is automatically created when the IAG object has been placed.
*3) In units of pixels

● Event and Action

You can set the event and action.

Event name	Description	Input method	Range	Default
▼Events				
▼[0]	Call_Popup (This event is issued by pressing each function button.)			
▼Actions				
▼[0]	Showpage			
Page name	Specifies the screen name ” Validation_Pop” on the Servo IAG library screen.	Direct input	Text	
Left	Specifies the left edge of display position.	Direct input Spin button	Numerical Numerical	-
Top	Specifies the top edge of display position.	Direct input Spin button	Numerical Numerical	-

Event screen



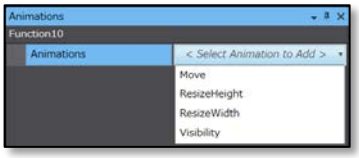
∗ As for the factory setting of Servo IAG library screen, set only “ShowPage” for Actions.

● Animation

You can define the basic animation action.

Animation name	Description
Move	Changes the coordinates of the object according to specified condition expressions.
ResizeHeight	Changes the height of the object according to a specified condition expression.
ResizeWidth	Changes the width of the object according to a specified condition expression.
Visibility	Displays the object when a condition expression is met.

Animations screen



As for the factory setting of Servo IAG library screen, you don’t need to set Animations.

- I/O variable timing

Variable	Timing for loading input data	Timing for outputting data
HMI_File	Constantly	When each button on the screen has been pressed.

7-11-4 Features

- Performing each function to the selected Servo.
- Place this object on the Axis Monitor Screen 3.

Additional Information

For the entire image of the screen using this object, refer to Section 6 *Screen External Specifications (Use Case)*.

7-12 Servo Button Screen 2 IAG

7-12-1 External Specification

Object name	Function2
Category	Servo_Window_Parts
Function	Servo operation button 2

7-12-2 GUI

Name	Description
“Init absolute Encoder” button	Initializes the value of absolute encoder connected to the selected Servo.
“Factory” button	Sets the selected servo parameter to the factory set values.
“Restart” button	Restarts the selected servo parameter.
“Abnormal release” button	Issues an abnormal release command to the selected servo. ∗If the cause of error persists, the error cannot be released.

7-12-3 Properties

Property name	Description	Input method	Range	Default
▼General				
Name	Specifies the object name. The name must be unique in that screen.	Direct input	String (1 to 127 characters)	Function20 *2)
Type	Specifies the object type. This item cannot be changed.	-	-	IAG
Version	Specifies the version of the IAG.	-	-	1.16B
Publisher	Specifies the IAG publisher.	-	-	Omron
Appearance				
BackgroundColor	Specifies the background color of the page.	Item selection Direct input	Color palette String	Transparent *1)
Layout				
▼Position (Left,Top)	Specifies the position of the object on the page.	Direct input Spin button	Numerical Numerical	For 9 inches:(660,90) For 12 inches:(1053,133) *3)
Left	Specifies the horizontal page coordinate (x-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:660 For 12 inches:1053
Top	Specifies the vertical page coordinate (y-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:90 For 12 inches:133
▼Size (Width,Height)	Specifies the size of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:(130,210) For 12 inches:(208,345) *3)
Width	Specifies the object width.	Direct input Spin button	Numerical Numerical	For 9 inches:130 For 12 inches:208
Height	Specifies the object height.	Direct input Spin button	Numerical Numerical	For 9 inches:210 For 12 inches:345
▼Behavior (In/Out)				
HMI_FIle	Specifies the variable for HMI display.	Direct input	Structures (ns_HMI¥File)	(Blank)

Properties screen

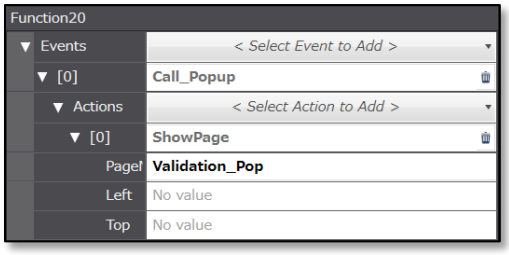
*1) ”Transparent” indicates that the color is transparent.
*2) This is automatically created when the IAG object has been placed.
*3) In units of pixels

● Event and Action

You can set the event and action.

Event name	Description	Input method	Range	Default
▼Events				
▼[0]	Call_Popup (This event is issued by pressing each function button.)			
▼Actions				
▼[0]	Showpage			
Page name	Specifies the screen name ” Validation_Pop” on the Servo IAG library screen.	Direct input	Text	
Left	Specifies the left edge of display position.	Direct input Spin button	Numerical Numerical	-
Top	Specifies the top edge of display position.	Direct input Spin button	Numerical Numerical	-

Event screen



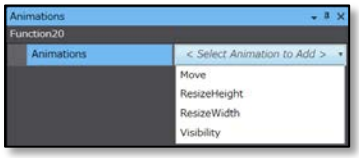
∗ As for the factory setting of Servo IAG library screen, set only “ShowPage” for Actions.

● Animation

You can define the basic animation action.

Animation name	Description
Move	Changes the coordinates of the object according to specified condition expressions.
ResizeHeight	Changes the height of the object according to a specified condition expression.
ResizeWidth	Changes the width of the object according to a specified condition expression.
Visibility	Displays the object when a condition expression is met.

Animations screen



As for the factory setting of Servo IAG library screen, you don’t need to set Animations.

- I/O variable timing

Variable	Timing for loading input data	Timing for outputting data
HMI_File	Constantly	When each button on the screen has been pressed.

7-12-4 Features

- Performing each function to the selected Servo.
- Place this object on the Axis Maintenance Screen.

Additional Information

For the entire image of the screen using this object, refer to Section 6 *Screen External Specifications (Use Case)*.

7-13 Operation Check Pop-up IAG

7-13-1 External Specification

Object name	OK_Cancel_Popup
Category	Servo_Window_Parts
Function	Operation check Pop-up

7-13-2 GUI

Name	Description
“OK” button	Executes the request and issues an event that closes the pop-up.
“Cancel” button	Issues an event that closes the pop-up without executing the request.

7-13-3 Properties

Property name	Description	Input method	Range	Default
▼General				
Name	Specifies the object name. The name must be unique in that screen.	Direct input	String (1 to 127 characters)	OK_Cancel_Popup0 *2)
Type	Specifies the object type. This item cannot be changed.	-	-	IAG
Version	Specifies the version of the IAG.	-	-	1.16B
Publisher	Specifies the IAG publisher.	-	-	Omron
Appearance				
BackgroundColor	Specifies the background color of the page.	Item selection Direct input	Color palette String	Transparent *1)
Layout				
▼Position (Left,Top)	Specifies the position of the object on the page.	Direct input Spin button	Numerical Numerical	For 9 inches:(0,0) For 12 inches:(0,0) *3)
Left	Specifies the horizontal page coordinate (x-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches: 0 For 12 inches: 0
Top	Specifies the vertical page coordinate (y-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches: 0 For 12 inches: 0
▼Size (Width,Height)	Specifies the size of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:(400,300) For 12 inches:(640,480) *3)
Width	Specifies the object width.	Direct input Spin button	Numerical Numerical	For 9 inches:400 For 12 inches:640
Height	Specifies the object height.	Direct input Spin button	Numerical Numerical	For 9 inches:300 For 12 inches:480
▼Behavior (In/Out)				
HMI_FIle	Specifies the variable for HMI display.	Direct input	Structures (ns_HMI¥File)	(Blank)
HMI_Device	Specifies the connected device variable for HMI display	Direct input	Structures (ns_Folder¥Device)	(Blank)

Properties screen

*1) "Transparent" indicates that the color is transparent.
*2) This is automatically created when the IAG object has been placed.
*3) In units of pixels

● Event and Action

You can set the event and action.

Event name	Description	Input method	Range	Default
▼Events				
▼[0]	Call_Close (This event is issued by pressing the “OK” or “Cancel” button)			
▼Actions				
▼[0]	Closepage			
Page name	Specifies the screen name ” Validation_Pop” on the Servo IAG library screen.	Direct input	Text	

Event screen

∗ As for the factory setting of Servo IAG library screen, set only “ClosePage” for Actions.

● Animation

You can define the basic animation action.

Animation name	Description
Move	Changes the coordinates of the object according to specified condition expressions.
ResizeHeight	Changes the height of the object according to a specified condition expression.
ResizeWidth	Changes the width of the object according to a specified condition expression.
Visibility	Displays the object when a condition expression is met.

Animations screen

As for the factory setting of Servo IAG library screen, you don’t need to set Animations.

- I/O variable timing

Variable	Timing for loading input data	Timing for outputting data
HMI_File	When pop-up has been displayed	When the “OK” or “Cancel” button is pressed
HMI_Device	When pop-up has been displayed	When the “OK” or “Cancel” button is pressed

7-13-4 Features

- Performing each function to the selected Servo.
- Issuing an event that closes the screen.
- Place this object on the Operation Check Pop-up Screen.

Additional Information

For the entire image of the screen using this object, refer to Section 6 *Screen External Specifications (Use Case)*.

7-14 Clock Synchronization IAG

7-14-1 External Specification

Object name	Clock_Sync
Category	Servo_Window_Parts
Function	Synchronizes the clock

7-14-2 GUI

No.	Name	Description
1	Clock synchronization	Synchronizes the clock between the CPU and HMI according to the occurrence condition of internal flag.

Precautions for Correct Use

Place this object outside the background screen that is commonly used for all the screens.

7-14-3 Properties

Property name	Description	Input method	Range	Default
▼General				
Name	Specifies the object name. The name must be unique in that screen.	Direct input	String (1 to 127 characters)	Clock_Sync0 *2)
Type	Specifies the object type. This item cannot be changed.	-	-	IAG
Version	Specifies the version of the IAG.	-	-	1.16B
Publisher	Specifies the IAG publisher.	-	-	Omron
Appearance				
BackgroundColor	Specifies the background color of the page.	Item selection Direct input	Color palette String	A:255 R:127 G:127 B:127 *1)
Layout				
▼Position (Left,Top)	Specifies the position of the object on the page.	Direct input Spin button	Numerical Numerical	For 9 inches:(824,369) For 12 inches:(1323,617) *3) *5)
Left	Specifies the horizontal page coordinate (x-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:824 For 12 inches:1323
Top	Specifies the vertical page coordinate (y-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:369 For 12 inches:617
▼Size (Width,Height)	Specifies the size of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:(30,30) For 12 inches:(48,48) *3)
Width	Specifies the object width.	Direct input Spin button	Numerical Numerical	For 9 inches:30 For 12 inches:48
Height	Specifies the object height.	Direct input Spin button	Numerical Numerical	For 9 inches:30 For 12 inches:48
▼Behavior (In/Out)				
HMI_FIle	Specifies the variable for HMI display.	Direct input	Structures (ns_HMI¥File)	(Blank)
HMI_Device	Specifies the connected device variable for HMI display	Direct input	Structures (ns_Folder¥Device)	(Blank)
▼Behavior (Input)				
Card1VefySta	Specifies the SD card status variable on CPU for HMI display.	Direct input	Structures (_sVEFY_STA)	(Blank)

Properties screen

*1) Place this object outside the screen. There is no color specification as long as the object placement can be identified. No-transparent and gray color is set on the Servo IAG library screen.
*2) This is automatically created when the IAG object has been placed.
*3) In units of pixels
*4) Because this object is placed outside the screen, a warning appears for build result and “Position (Left,Top)” column is indicated in red in Properties. However, this doesn’t cause any operational problem.
*5) Although a position (Left, Top) is shown, you can place the object anywhere outside the screen.
This object can be used for screens in different size.

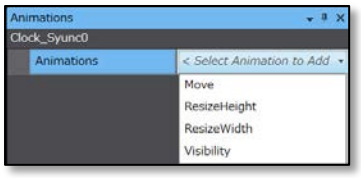
● Event and Action

There are no event and action functions.

● Animation

You can define the basic animation action.

Animation name	Description
Move	Changes the coordinates of the object according to specified condition expressions.
ResizeHeight	Changes the height of the object according to a specified condition expression.
ResizeWidth	Changes the width of the object according to a specified condition expression.
Visibility	Displays the object when a condition expression is met.
Animations screen	



As for the factory setting of Servo IAG library screen, you don't need to set Animations.

● I/O variable timing

Variable	Timing for loading input data	Timing for outputting data
HMI_File	When pop-up has been displayed	When the "OK" or "Cancel" button is pressed
HMI_Device	When pop-up has been displayed	When the "OK" or "Cancel" button is pressed

● Input variable timing

Variable	Timing for loading input data
_Card1VefySta	Constantly

7-14-4 Features

- Synchronizing the clock between the CPU and HMI.
- Place this object on the background screen that is commonly used for all the screens so that the object can be run on all the screens. Place this object outside the screen since this object does not need to be displayed inside the screen.

7-15 Function Name Resource IAG for 1S

7-15-1 External Specification

Object name	DescriptionText_1S
Category	Servo_Window_Resource
Function	Resource data of function name (multi-languages supported)

7-15-2 GUI

No.	Name	Description
1	Resource data of function name	Develops the specified language resource to the global variable according to the execution conditions for data read.

Precautions for Correct Use

Place this object on the background screen that is commonly used for all the screens so that the object can be run on all the screens. Place this object outside the screen since this object does not need to be displayed inside the screen.

7-15-3 Properties

Property name	Description	Input method	Range	Default
▼General				
Name	Specifies the object name. The name must be unique in that screen.	Direct input	String (1 to 127 characters)	DescriptionText_1S0 *2)
Type	Specifies the object type. This item cannot be changed.	-	-	IAG
Version	Specifies the version of the IAG.	-	-	1.16B
Publisher	Specifies the IAG publisher.	-	-	Omron
Appearance				
BackgroundColor	Specifies the background color of the page.	Item selection Direct input	Color palette String	A:255 R:127 G:127 B:127 *1)
Layout				
▼Position (Left,Top)	Specifies the position of the object on the page.	Direct input Spin button	Numerical Numerical	For 9 inches:(824,19) For 12 inches:(1322,321) *3) *5)
Left	Specifies the horizontal page coordinate (x-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:824 For 12 inches:1322
Top	Specifies the vertical page coordinate (y-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:19 For 12 inches:321
▼Size (Width,Height)	Specifies the size of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:(74,41) For 12 inches:(118,68) *3) *5)
Width	Specifies the object width.	Direct input Spin button	Numerical Numerical	For 9 inches:74 For 12 inches:118
Height	Specifies the object height.	Direct input Spin button	Numerical Numerical	For 9 inches:41 For 12 inches:68
▼Behavior (In/Out)				
HMI_Description_Res_1S	Specifies the variable for HMI display.	Direct input	Structures (Description_Res_1S)	(Blank)
Properties screen				

*1) Place this object outside the screen. There is no color specification as long as the object placement can be identified. No-transparent and gray color is set on the 1S Servo IAG library screen.
*2) This is automatically created when the IAG object has been placed.
*3) In units of pixels
*4) Because this object is placed outside the screen, a warning appears for build result and “Position (Left,Top)” column is indicated in red in Properties. However, this doesn’t cause any operational problem
*5) Although a position (Left, Top) is shown, you can place the object anywhere outside the screen. This object can be used for screens in different size.

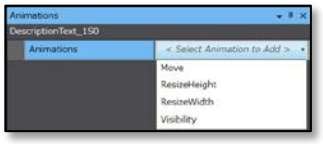
● Event and Action

There are no event and action functions.

● Animation

You can define the basic animation action.

Animation name	Description
Move	Changes the coordinates of the object according to specified condition expressions.
ResizeHeight	Changes the height of the object according to a specified condition expression.
ResizeWidth	Changes the width of the object according to a specified condition expression.
Visibility	Displays the object when a condition expression is met.
Animations screen	



As for the factory setting of Servo IAG library screen, you don't need to set Animations.

● Input variable timing

Variable	Timing for loading input data
HMI_ Description_Res_1S	When the execution conditions for data read is met (at screen startup, language switching)

7-15-4 Features

- Developing the function name resource data of the specified language (recorded in IAG object) to the global variable.
- Place this object on the background screen that is commonly used for all the screens so that the object can be run on all the screens. Place this object outside the screen since this object does not need to be displayed inside the screen.

7-16 Function Name Resource IAG for G5

7-16-1 External Specification

Object name	DescriptionText_G5
Category	Servo_Window_Resource
Function	Resource data of function name (multi-languages supported)

7-16-2 GUI

No.	Name	Description
1	Resource data of function name	Develops the specified language resource to the global variable according to the execution conditions for data read.

Precautions for Correct Use

Place this object on the background screen that is commonly used for all the screens so that the object can be run on all the screens. Place this object outside the screen since this object does not need to be displayed inside the screen.

7-16-3 Properties

Property name	Description	Input method	Range	Default
▼General				
Name	Specifies the object name. The name must be unique in that screen.	Direct input	String (1 to 127 characters)	DescriptionText_ G50 *2)
Type	Specifies the object type. This item cannot be changed.	-	-	IAG
Version	Specifies the version of the IAG.	-	-	1.16B
Publisher	Specifies the IAG publisher.	-	-	Omron
Appearance				
BackgroundColor	Specifies the background color of the page.	Item selection Direct input	Color palette String	A:255 R:127 G:127 B:127 *1)
Layout				
▼Position (Left,Top)	Specifies the position of the object on the page.	Direct input Spin button	Numerical Numerical	For 9 inches:(824,19) For 12 inches:(1322,321) *3) *5)
Left	Specifies the horizontal page coordinate (x-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:824 For 12 inches:1322
Top	Specifies the vertical page coordinate (y-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:19 For 12 inches:321
▼Size (Width,Height)	Specifies the size of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:(74,41) For 12 inches:(118,68) *3) *5)
Width	Specifies the object width.	Direct input Spin button	Numerical Numerical	For 9 inches:74 For 12 inches:118
Height	Specifies the object height.	Direct input Spin button	Numerical Numerical	For 9 inches:41 For 12 inches:68
▼Behavior (In/Out)				
HMI_G5_ Description	Specifies the variable for HMI display.	Direct input	Structures (G5_Description _Res)	(Blank)
Properties screen				

*1) Place this object outside the screen. There is no color specification as long as the object placement can be identified. No-transparent and gray color is set on the Servo IAG library screen.
*2) This is automatically created when the IAG object has been placed.
*3) In units of pixels
*4) Because this object is placed outside the screen, a warning appears for build result and “Position (Left,Top)” column is indicated in red in Properties. However, this doesn’t cause any operational problem
*5) Although a position (Left, Top) is shown, you can place the object anywhere outside the screen. This object can be used for screens in different size.

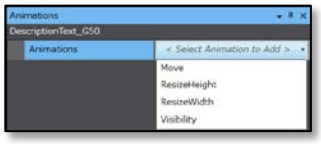
● Event and Action

There are no event and action functions.

● Animation

You can define the basic animation action.

Animation name	Description
Move	Changes the coordinates of the object according to specified condition expressions.
ResizeHeight	Changes the height of the object according to a specified condition expression.
ResizeWidth	Changes the width of the object according to a specified condition expression.
Visibility	Displays the object when a condition expression is met.
Animations screen	



As for the factory setting of Servo IAG library screen, you don't need to set Animations.

● Input variable timing

Variable	Timing for loading input data
HMI _Description_Res_G5	When the execution conditions for data read is met (at screen startup, language switching)

7-16-4 Features

- Developing the function name resource data of the specified language (recorded in IAG object) to the global variable.
- Place this object on the background screen that is commonly used for all the screens so that the object can be run on all the screens. Place this object outside the screen since this object does not need to be displayed inside the screen.

7-17 Sub Function Name Resource IAG for 1S

7-17-1 External Specification

Object name	BitDescriptionText_1S
Category	Servo_Window_Resource
Function	Resource data of sub-function name (multi-languages supported)

7-17-2 GUI

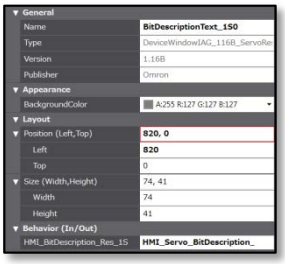
No.	Name	Description
1	Resource data of sub-function name	Develops the specified language resource to the global variable according to the execution conditions for data read.

Precautions for Correct Use

Place this object on the background screen that is commonly used for all the screens so that the object can be run on all the screens. Place this object outside the screen since this object does not need to be displayed inside the screen.

7-17-3 Properties

Property name	Description	Input method	Range	Default
▼General				
Name	Specifies the object name. The name must be unique in that screen.	Direct input	String (1 to 127 characters)	BitDescriptionText_1S0 *2)
Type	Specifies the object type. This item cannot be changed.	-	-	IAG
Version	Specifies the version of the IAG.	-	-	1.16B
Publisher	Specifies the IAG publisher.	-	-	Omron
Appearance				
BackgroundColor	Specifies the background color of the page.	Item selection Direct input	Color palette String	A:255 R:127 G:127 B:127 *1)
Layout				
▼Position (Left,Top)	Specifies the position of the object on the page.	Direct input Spin button	Numerical Numerical	For 9 inches:(824,77) For 12 inches:(1322,225) *3) *5)
Left	Specifies the horizontal page coordinate (x-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:824 For 12 inches:1322
Top	Specifies the vertical page coordinate (y-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:77 For 12 inches:225
▼Size (Width,Height)	Specifies the size of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:(74,41) For 12 inches:(118,68) *3) *5)
Width	Specifies the object width.	Direct input Spin button	Numerical Numerical	For 9 inches:74 For 12 inches:118
Height	Specifies the object height.	Direct input Spin button	Numerical Numerical	For 9 inches:41 For 12 inches:68
▼Behavior (In/Out)				
HMI_ BitDescription_Res_1S	Specifies the variable for HMI display.	Direct input	Structures (BitDescription_ Res_1S)	(Blank)
Properties screen				



*1) Place this object outside the screen. There is no color specification as long as the object placement can be identified. No-transparent and gray color is set on the 1S Servo IAG library screen.
*2) This is automatically created when the IAG object has been placed.
*3) In units of pixels
*4) Because this object is placed outside the screen, a warning appears for build result and “Position (Left,Top)” column is indicated in red in Properties. However, this doesn’t cause any operational problem.
*5) Although a position (Left, Top) is shown, you can place the object anywhere outside the screen. This object can be used for screens in different size.

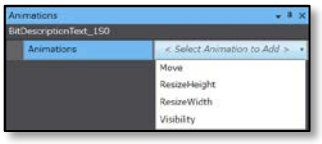
● Event and Action

There are no event and action functions.

● Animation

You can define the basic animation action.

Animation name	Description
Move	Changes the coordinates of the object according to specified condition expressions.
ResizeHeight	Changes the height of the object according to a specified condition expression.
ResizeWidth	Changes the width of the object according to a specified condition expression.
Visibility	Displays the object when a condition expression is met.
Animations screen	



As for the factory setting of Servo IAG library screen, you don't need to set Animations.

● Input variable timing

Variable	Timing for loading input data
HMI_ BitDescription_Res_1S	When the execution conditions for data read is met (at screen startup, language switching)

7-17-4 Features

- Developing the sub-function name resource data of the specified language (stored in IAG object) to the global variable.
- Place this object on the background screen that is commonly used for all the screens so that the object can be run on all the screens. Place this object outside the screen since this object does not need to be displayed inside the screen.

7-18 Servo Error Event Name Resource IAG for 1S

7-18-1 External Specification

Object name	ErrEventCodeText_1S
Category	Servo_Window_Resource
Function	Resource data of servo error event name (multi-languages supported)

7-18-2 GUI

No.	Name	Description
1	Resource data of error event name	Develops the specified language resource to the global variable according to the execution conditions for data read.

Precautions for Correct Use

Place this object on the background screen that is commonly used for all the screens so that the object can be run on all the screens. Place this object outside the screen since this object does not need to be displayed inside the screen.

7-18-3 Properties

Property name	Description	Input method	Range	Default
▼General				
Name	Specifies the object name. The name must be unique in that screen.	Direct input	String (1 to 127 characters)	ErrEventCodeText_1S 0 *2)
Type	Specifies the object type. This item cannot be changed.	-	-	IAG
Version	Specifies the version of the IAG.	-	-	1.16B
Publisher	Specifies the IAG publisher.	-	-	Omron
Appearance				
BackgroundColor	Specifies the background color of the page.	Item selection Direct input	Color palette String	A:255 R:127 G:127 B:127 *1)
Layout				
▼Position (Left,Top)	Specifies the position of the object on the page.	Direct input Spin button	Numerical Numerical	For 9 inches:(824,136) For 12 inches:(1322,417) *3) *5)
Left	Specifies the horizontal page coordinate (x-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:824 For 12 inches:1322
Top	Specifies the vertical page coordinate (y-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:136 For 12 inches:417
▼Size (Width,Height)	Specifies the size of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:(74,41) For 12 inches:(118,68) *3) *5)
Width	Specifies the object width.	Direct input Spin button	Numerical Numerical	For 9 inches:74 For 12 inches:118
Height	Specifies the object height.	Direct input Spin button	Numerical Numerical	For 9 inches:41 For 12 inches:68
▼Behavior (In/Out)				
HMI_ ErrorEvent_1S	Specifies the variable for HMI display.	Direct input	Structures (ErrorEvent_Res_1S)	(Blank)
Properties screen				

*1) Place this object outside the screen. There is no color specification as long as the object placement can be identified. No-transparent and gray color is set on the 1S Servo IAG library screen.
*2) This is automatically created when the IAG object has been placed.
*3) In units of pixels
*4) Because this object is placed outside the screen, a warning appears for build result and “Position (Left,Top)” column is indicated in red in Properties. However, this doesn’t cause any operational problem.
*5) Although a position (Left, Top) is shown, you can place the object anywhere outside the screen.
This object can be used for screens in different size.

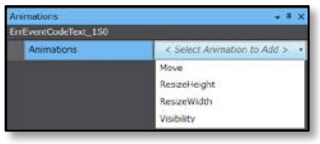
● Event and Action

There are no event and action functions.

● Animation

You can define the basic animation action.

Animation name	Description
Move	Changes the coordinates of the object according to specified condition expressions.
ResizeHeight	Changes the height of the object according to a specified condition expression.
ResizeWidth	Changes the width of the object according to a specified condition expression.
Visibility	Displays the object when a condition expression is met.
Animations screen	



As for the factory setting of Servo IAG library screen, you don't need to set Animations.

● Input variable timing

Variable	Timing for loading input data
HMI_ ErrorEvent_Res_1S	When the execution conditions for data read is met (at screen startup, language switching)

7-18-4 Features

- Developing the Servo error event resource data of the specified language (stored in IAG object) to the global variable.
- Place this object on the background screen that is commonly used for all the screens so that the object can be run on all the screens. Place this object outside the screen since this object does not need to be displayed inside the screen.

7-19 Servo Error Event Name Resource IAG for G5

7-19-1 External Specification

Object name	ErrEventCodeText_G5
Category	Servo_Window_Resource
Function	Resource data of servo error event name (multi-languages supported)

7-19-2 GUI

No.	Name	Description
1	Resource data of error event name	Develops the specified language resource to the global variable according to the execution conditions for data read.

Precautions for Correct Use

Place this object on the background screen that is commonly used for all the screens so that the object can be run on all the screens. Place this object outside the screen since this object does not need to be displayed inside the screen.

7-19-3 Properties

Property name	Description	Input method	Range	Default
▼General				
Name	Specifies the object name. The name must be unique in that screen.	Direct input	String (1 to 127 characters)	ErrEventCodeText_G50 *2)
Type	Specifies the object type. This item cannot be changed.	-	-	IAG
Version	Specifies the version of the IAG.	-	-	1.16B
Publisher	Specifies the IAG publisher.	-	-	Omron
Appearance				
BackgroundColor	Specifies the background color of the page.	Item selection Direct input	Color palette String	A:255 R:127 G:127 B:127 *1)
Layout				
▼Position (Left,Top)	Specifies the position of the object on the page.	Direct input Spin button	Numerical Numerical	For 9 inches:(824,136) For 12 inches:(1322,417) *3) *5)
Left	Specifies the horizontal page coordinate (x-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:824 For 12 inches:1322
Top	Specifies the vertical page coordinate (y-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:136 For 12 inches:417
▼Size (Width,Height)	Specifies the size of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:(74,41) For 12 inches:(118,68) *3) *5)
Width	Specifies the object width.	Direct input Spin button	Numerical Numerical	For 9 inches:74 For 12 inches:118
Height	Specifies the object height.	Direct input Spin button	Numerical Numerical	For 9 inches:41 For 12 inches:68
▼Behavior (In/Out)				
HMI_ ErrorEvent_Res_ G5	Specifies the variable for HMI display.	Direct input	Structures (ErrorEvent_Res _G5)	(Blank)

Properties screen

*1) Place this object outside the screen. There is no color specification as long as the object placement can be identified. No-transparent and gray color is set on the 1S Servo IAG library screen.
*2) This is automatically created when the IAG object has been placed.
*3) In units of pixels
*4) Because this object is placed outside the screen, a warning appears for build result and “Position (Left,Top)” column is indicated in red in Properties. However, this doesn’t cause any operational problem.
*5) Although a position (Left, Top) is shown, you can place the object anywhere outside the screen.
This object can be used for screens in different size.

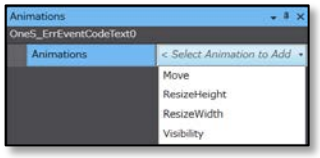
● Event and Action

There are no event and action functions.

● Animation

You can define the basic animation action.

Animation name	Description
Move	Changes the coordinates of the object according to specified condition expressions.
ResizeHeight	Changes the height of the object according to a specified condition expression.
ResizeWidth	Changes the width of the object according to a specified condition expression.
Visibility	Displays the object when a condition expression is met.
Animations screen	



As for the factory setting of Servo IAG library screen, you don't need to set Animations.

● Input variable timing

Variable	Timing for loading input data
HMI_ ErrorEvent_Res_G5	When the execution conditions for data read is met (at screen startup, language switching)

7-19-4 Features

- Developing the Servo error event resource data of the specified language (stored in IAG object) to the global variable.
- Place this object on the background screen that is commonly used for all the screens so that the object can be run on all the screens. Place this object outside the screen since this object does not need to be displayed inside the screen.

7-20 Motion Error Event Name Resource IAG

7-20-1 External Specification

Object name	Motion_ErrEventCodeText
Category	Servo_Window_Resource
Function	Resource data of motion error event name (multi-languages supported)

7-20-2 GUI

No.	Name	Description
1	Resource data of motion error event name	Develops the specified language resource to the global variable according to the execution conditions for data read.

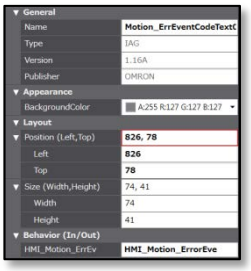
Precautions for Correct Use

Place this object on the background screen that is commonly used for all the screens so that the object can be run on all the screens. Place this object outside the screen since this object does not need to be displayed inside the screen.

7-20-3 Properties

Property name	Description	Input method	Range	Default
▼General				
Name	Specifies the object name. The name must be unique in that screen.	Direct input	String (1 to 127 characters)	Motion_ ErrEventCodeText0 *2)
Type	Specifies the object type. This item cannot be changed.	-	-	IAG
Version	Specifies the version of the IAG.	-	-	1.16B
Publisher	Specifies the IAG publisher.	-	-	Omron
Appearance				
BackgroundColor	Specifies the background color of the page.	Item selection Direct input	Color palette String	A:255 R:127 G:127 B:127 *1)
Layout				
▼Position (Left,Top)	Specifies the position of the object on the page.	Direct input Spin button	Numerical Numerical	For 9 inches:(824,194) For 12 inches:(1322,129) *3) *5)
Left	Specifies the horizontal page coordinate (x-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:824 For 12 inches:1322
Top	Specifies the vertical page coordinate (y-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:194 For 12 inches:129
▼Size (Width,Height)	Specifies the size of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:(74,41) For 12 inches:(118,68) *3) *5)
Width	Specifies the object width.	Direct input Spin button	Numerical Numerical	For 9 inches:74 For 12 inches:118
Height	Specifies the object height.	Direct input Spin button	Numerical Numerical	For 9 inches:41 For 12 inches:68
▼Behavior (In/Out)				
HMI_Motion_ ErrorEvent_Res	Specifies the variable for HMI display.	Direct input	Structures (Motion_ErrorEvent_Res)	(Blank)

Properties screen



*1) Place this object outside the screen. There is no color specification as long as the object placement can be identified. No-transparent and gray color is set on the Servo IAG library screen.
*2) This is automatically created when the IAG object has been placed.
*3) In units of pixels
*4) Because this object is placed outside the screen, a warning appears for build result and “Position (Left,Top)” column is indicated in red in Properties. However, this doesn’t cause any operational problem.
*5) Although a position (Left, Top) is shown, you can place the object anywhere outside the screen.
This object can be used for screens in different size.

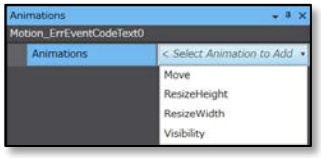
● Event and Action

There are no event and action functions.

● Animation

You can define the basic animation action.

Animation name	Description
Move	Changes the coordinates of the object according to specified condition expressions.
ResizeHeight	Changes the height of the object according to a specified condition expression.
ResizeWidth	Changes the width of the object according to a specified condition expression.
Visibility	Displays the object when a condition expression is met.
Animations screen	



As for the factory setting of Servo IAG library screen, you don't need to set Animations.

● Input variable timing

Variable	Timing for loading input data
HMI_Motion_ErrorEvent_Res	When the execution conditions for data read is met (at screen startup, language switching)

7-20-4 Features

- Developing the motion error event resource data of the specified language (stored in IAG object) to the global variable.
- Place this object on the background screen that is commonly used for all the screens so that the object can be run on all the screens. Place this object outside the screen since this object does not need to be displayed inside the screen.

7-21 Error Code Name Resource IAG for 1S

7-21-1 External Specification

Object name	Servo_ErrCodeText_1S
Category	Servo_Window_Resource
Function	Resource data of error code name (multi-languages supported)

7-21-2 GUI

No.	Name	Description
1	Resource data of error code	Develops the specified language resource to the global variable according to the execution conditions for data read.

Precautions for Correct Use

Place this object on the background screen that is commonly used for all the screens so that the object can be run on all the screens. Place this object outside the screen since this object does not need to be displayed inside the screen.

7-21-3 Properties

Property name	Description	Input method	Range	Default
▼General				
Name	Specifies the object name. The name must be unique in that screen.	Direct input	String (1 to 127 characters)	Servo_ErrCodeText_1S0 *2)
Type	Specifies the object type. This item cannot be changed.	-	-	IAG
Version	Specifies the version of the IAG.	-	-	1.16B
Publisher	Specifies the IAG publisher.	-	-	Omron
Appearance				
BackgroundColor	Specifies the background color of the page.	Item selection Direct input	Color palette String	A:255 R:127 G:127 B:127 *1)
Layout				
▼Position (Left,Top)	Specifies the position of the object on the page.	Direct input Spin button	Numerical Numerical	For 9 inches:(824,252) For 12 inches:(1322,513) *3) *5)
Left	Specifies the horizontal page coordinate (x-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:824 For 12 inches:1322
Top	Specifies the vertical page coordinate (y-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches: 252 For 12 inches:513
▼Size (Width,Height)	Specifies the size of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:(74,41) For 12 inches:(118,68) *3) *5)
Width	Specifies the object width.	Direct input Spin button	Numerical Numerical	For 9 inches:74 For 12 inches:118
Height	Specifies the object height.	Direct input Spin button	Numerical Numerical	For 9 inches:41 For 12 inches:68
▼Behavior (In/Out)				
HMI_ Servo_Error_Res_ 1S	Specifies the variable for HMI display.	Direct input	Structures (Servo_Error_Res)	(Blank)

Properties screen

*1) Place this object outside the screen. There is no color specification as long as the object placement can be identified. No-transparent and gray color is set on the Servo IAG library screen.
*2) This is automatically created when the IAG object has been placed.
*3) In units of pixels
*4) Because this object is placed outside the screen, a warning appears for build result and “Position (Left,Top)” column is indicated in red in Properties. However, this doesn’t cause any operational problem.
*5) Although a position (Left, Top) is shown, you can place the object anywhere outside the screen.
This object can be used for screens in different size.

● Event and Action

There are no event and action functions.

● Animation

You can define the basic animation action.

Animation name	Description
Move	Changes the coordinates of the object according to specified condition expressions.
ResizeHeight	Changes the height of the object according to a specified condition expression.
ResizeWidth	Changes the width of the object according to a specified condition expression.
Visibility	Displays the object when a condition expression is met.
Animations screen	

As for the factory setting of Servo IAG library screen, you don't need to set Animations.

● Input variable timing

Variable	Timing for loading input data
HMI_ Servo_Error_Res_1S	When the execution conditions for data read is met (at screen startup, language switching)

7-21-4 Features

- Developing the error code resource data of the specified language (stored in IAG object) to the global variable.
- Place this object on the background screen that is commonly used for all the screens so that the object can be run on all the screens. Place this object outside the screen since this object does not need to be displayed inside the screen.

7-22 Error Code Name Resource IAG for G5

7-22-1 External Specification

Object name	Servo_ErrCodeText_G5
Category	Servo_Window_Resource
Function	Resource data of error code name (multi-languages supported)

7-22-2 GUI

No.	Name	Description
1	Resource data of error code	Develops the specified language resource to the global variable according to the execution conditions for data read.

Precautions for Correct Use

Place this object on the background screen that is commonly used for all the screens so that the object can be run on all the screens. Place this object outside the screen since this object does not need to be displayed inside the screen.

7-22-3 Properties

Property name	Description	Input method	Range	Default
▼General				
Name	Specifies the object name. The name must be unique in that screen.	Direct input	String (1 to 127 characters)	Servo_ErrCodeText_G50 *2)
Type	Specifies the object type. This item cannot be changed.	-	-	IAG
Version	Specifies the version of the IAG.	-	-	1.16B
Publisher	Specifies the IAG publisher.	-	-	Omron
Appearance				
BackgroundColor	Specifies the background color of the page.	Item selection Direct input	Color palette String	A:255 R:127 G:127 B:127 *1)
Layout				
▼Position (Left,Top)	Specifies the position of the object on the page.	Direct input Spin button	Numerical Numerical	For 9 inches:(824,252) For 12 inches:(1322,513) *3) *5)
Left	Specifies the horizontal page coordinate (x-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:824 For 12 inches:1322
Top	Specifies the vertical page coordinate (y-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches: 252 For 12 inches:513
▼Size (Width,Height)	Specifies the size of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:(74,41) For 12 inches:(118,68) *3) *5)
Width	Specifies the object width.	Direct input Spin button	Numerical Numerical	For 9 inches:74 For 12 inches:118
Height	Specifies the object height.	Direct input Spin button	Numerical Numerical	For 9 inches:41 For 12 inches:68
▼Behavior (In/Out)				
HMI_ Servo_Error_Res_G5	Specifies the variable for HMI display.	Direct input	Structures (Servo_Error_Res)	(Blank)

Properties screen

*1) Place this object outside the screen. There is no color specification as long as the object placement can be identified. No-transparent and gray color is set on the Servo IAG library screen.
*2) This is automatically created when the IAG object has been placed.
*3) In units of pixels
*4) Because this object is placed outside the screen, a warning appears for build result and “Position (Left,Top)” column is indicated in red in Properties. However, this doesn’t cause any operational problem.
*5) Although a position (Left, Top) is shown, you can place the object anywhere outside the screen.
This object can be used for screens in different size.

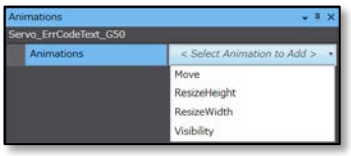
● Event and Action

There are no event and action functions.

● Animation

You can define the basic animation action.

Animation name	Description
Move	Changes the coordinates of the object according to specified condition expressions.
ResizeHeight	Changes the height of the object according to a specified condition expression.
ResizeWidth	Changes the width of the object according to a specified condition expression.
Visibility	Displays the object when a condition expression is met.
Animations screen	



As for the factory setting of Servo IAG library screen, you don't need to set Animations.

● Input variable timing

Variable	Timing for loading input data
HMI_ Servo_Err or_Res_G5	When the execution conditions for data read is met (at screen startup, language switching)

7-22-4 Features

- Developing the error code resource data of the specified language (stored in IAG object) to the global variable.
- Place this object on the background screen that is commonly used for all the screens so that the object can be run on all the screens. Place this object outside the screen since this object does not need to be displayed inside the screen.

7-23 FB Error Code Name Resource IAG

7-23-1 External Specification

Object name	FB_ErrText
Category	Servo_Window_Resource
Function	Resource data of error code name (multi-languages supported)

7-23-2 GUI

No.	Name	Description
1	Resource data of FB error name	Develops the specified language resource to the global variable according to the execution conditions for data read.

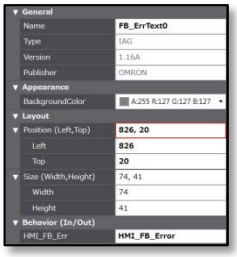
Precautions for Correct Use

Place this object on the background screen that is commonly used for all the screens so that the object can be run on all the screens. Place this object outside the screen since this object does not need to be displayed inside the screen.

7-23-3 Properties

Property name	Description	Input method	Range	Default
▼General				
Name	Specifies the object name. The name must be unique in that screen.	Direct input	String (1 to 127 characters)	FB_ErrText0 *2)
Type	Specifies the object type. This item cannot be changed.	-	-	IAG
Version	Specifies the version of the IAG.	-	-	1.16B
Publisher	Specifies the IAG publisher.	-	-	Omron
Appearance				
BackgroundColor	Specifies the background color of the page.	Item selection Direct input	Color palette String	A:255 R:127 G:127 B:127 *1)
Layout				
▼Position (Left,Top)	Specifies the position of the object on the page.	Direct input Spin button	Numerical Numerical	For 9 inches:(824,311) For 12 inches:(1322,33) *3) *5)
Left	Specifies the horizontal page coordinate (x-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:824 For 12 inches:1322
Top	Specifies the vertical page coordinate (y-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:311 For 12 inches:33
▼Size (Width,Height)	Specifies the size of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:(74,41) For 12 inches:(118,68) *3) *5)
Width	Specifies the object width.	Direct input Spin button	Numerical Numerical	For 9 inches:74 For 12 inches:118
Height	Specifies the object height.	Direct input Spin button	Numerical Numerical	For 9 inches:41 For 12 inches:68
▼Behavior (In/Out)				
HMI_FB_Err	Specifies the variable for HMI display.	Direct input	Structures (Servo_FB_Res)	(Blank)

Properties screen



*1) Place this object outside the screen. There is no color specification as long as the object placement can be identified. No-transparent and gray color is set on the Servo IAG library screen.
*2) This is automatically created when the IAG object has been placed.
*3) In units of pixels
*4) Because this object is placed outside the screen, a warning appears for build result and “Position (Left,Top)” column is indicated in red in Properties. However, this doesn’t cause any operational problem.
*5) Although a position (Left, Top) is shown, you can place the object anywhere outside the screen.
This object can be used for screens in different size.

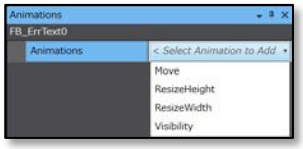
● Event and Action

There are no event and action functions.

● Animation

You can define the basic animation action.

Animation name	Description
Move	Changes the coordinates of the object according to specified condition expressions.
ResizeHeight	Changes the height of the object according to a specified condition expression.
ResizeWidth	Changes the width of the object according to a specified condition expression.
Visibility	Displays the object when a condition expression is met.
Animations screen	



As for the factory setting of Servo IAG library screen, you don't need to set Animations.

● Input variable timing

Variable	Timing for loading input data
HMI_FB_Err	When the execution conditions for data read is met (at screen startup, language switching)

7-23-4 Features

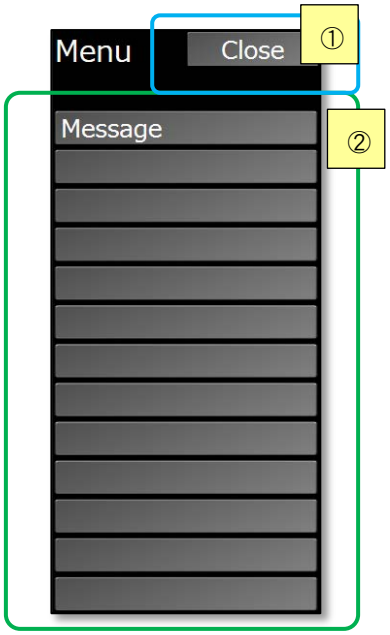
- Developing the FB error resource data of the specified language (stored in IAG object) to the global variable.
- Place this object on the background screen that is commonly used for all the screens so that the object can be run on all the screens. Place this object outside the screen since this object does not need to be displayed inside the screen.

7-24 Menu pop-up Screen IAG

7-24-1 External Specification

Object name	Menu_IAG
Category	General_IAG_Parts
Function	Menu Screen

7-24-2 GUI



No.	Name	Description
①	“Close” button	Issues an event that closes the screen where this object is placed.
②	Screen select button	Issues an event that moves to the selected screen.

7-24-3 Properties

Property name	Description	Input method	Range	Default
▼General				
Name	Specifies the object name. The name must be unique in that screen.	Direct input	String (1 to 127 characters)	Menu_IAG0 *2)
Type	Specifies the object type. This item cannot be changed.	-	-	IAG
Version	Specifies the version of the IAG.	-	-	1.16B
Publisher	Specifies the IAG publisher.	-	-	Omron
Appearance				
BackgroundColor	Specifies the background color of the page.	Item selection Direct input	Color palette String	Transparent *1)
Layout				
▼Position (Left,Top)	Specifies the position of the object on the page.	Direct input Spin button	Numerical Numerical	For 9 inches:(5,0) For 12 inches:(0,0) *3)
Left	Specifies the horizontal page coordinate (x-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:5 For 12 inches: 0
Top	Specifies the vertical page coordinate (y-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches: 0 For 12 inches: 0
▼Size (Width,Height)	Specifies the size of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:(220,480) For 12 inches:(365,800) *3)
Width	Specifies the object width.	Direct input Spin button	Numerical Numerical	For 9 inches:220 For 12 inches:365
Height	Specifies the object height.	Direct input Spin button	Numerical Numerical	For 9 inches:480 For 12 inches:800
▼Behavior (Input)				
IAG_Menu	Specifies the menu screen variable for HMI display.	Direct input	Structures (HMI_Menu)	(Blank)

Properties screen

*1) ”Transparent” indicates that the color is transparent.
*2) This is automatically created when the IAG object has been placed.
*3) In units of pixels

● Event and Action

You can set the event and action.

Event name	Description	Input method	Range	Default
▼Events				
▼[0]	Menu_Call_0 (This event is issued by pressing the “Close” button)			
▼Actions				
▼[0]	ClosePage			
Page name	Specifies the screen name ” Menu_Popup” on the Servo IAG library screen.	Direct input	Text	
▼[1]	Menu_Call_1 (This event is issued by pressing the 1st “Screen Select Button”)			
▼Actions				
▼[0]	ShowPage			
Controller	Specifies “Monitoring_Axe1” on the Servo IAG library screen.	Direct input	Text	-
Left	Specifies the left edge of display position.	Direct input Spin button	Numerical Numerical	-
Top	Specifies the top edge of display position.	Direct input Spin button	Numerical Numerical	-
▼[1]	SetVariable			
Variable	HMI_File.Pop.Disp_Select(0)	Direct input	Text	
Value	True	Direct input	Text	
▼[2]	SetVariable			
Variable	HMI_File.Pop.Disp_Select(1)	Direct input	Text	
Value	False	Direct input	Text	
▼[3]	SetVariable			
Variable	HMI_File.Pop.Disp_Select(2)	Direct input	Text	
Value	False	Direct input	Text	
▼[4]	SetVariable			
Variable	HMI_File.Pop.Disp_Select(3)	Direct input	Text	
Value	False	Direct input	Text	
▼[2]	Menu_Call_2 (This event is issued by pressing the 2nd “Screen Select Button”.)			
▼Actions				
▼[0]	ShowPage			
Controller	Specifies “Maintenance_servo” on the Servo IAG library screen.	Direct input	Text	-
Left	Specifies the left edge of display position.	Direct input Spin button	Numerical Numerical	-
Top	Specifies the top edge of display position.	Direct input Spin button	Numerical Numerical	-

Event name	Description	Input method	Range	Default
▼[3]	Menu_Call_3 (This event is issued by pressing the 3rd "screen select button".)			
▼Actions				
▼[0]	ShowPage			
Controller	Specifies "LangSelect_servo" on the Servo IAG library screen.	Direct input	Text	-
Left	Specifies the left edge of display position.	Direct input Spin button	Numerical Numerical	-
Top	Specifies the top edge of display position.	Direct input Spin button	Numerical Numerical	-

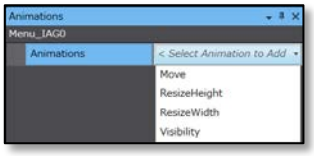
Event screen

∗As for the factory setting of Servo IAG library screen, set only "ShowPage" and "ShowTroubleshooter" for Actions.

● Animation

You can define the basic animation action.

Animation name	Description
Move	Changes the coordinates of the object according to specified condition expressions.
ResizeHeight	Changes the height of the object according to a specified condition expression.
ResizeWidth	Changes the width of the object according to a specified condition expression.
Visibility	Displays the object when a condition expression is met.
Animations screen	



As for the factory setting of Servo IAG library screen, you don't need to set Animations.

● Input variable timing

Variable	Timing for loading input data
IAG_Menu	Displays a message on each button based on the information read at system-startup.

7-24-4 Features

- Displaying a message on each button that you set in global variable or resource when the Menu Pop-up screen has been started.
- Pressing each button issues an event that moves to each screen or closes the screen, in which the IAG object has been placed.
- Place this object to the Menu Pop-up screen.

Variables for setting messages on each button:

No	Variable name	Description
1	HMI_MaimMenu.Disp_Text(0)	Sets a message on the "Close" button in STRING data.
2	HMI_MaimMenu.Disp_Text(1)	Sets a message on the 1st "Screen Select Button" in STRING data.
3	HMI_MaimMenu.Disp_Text(2)	Sets a message on the 2nd "Screen Select Button" in STRING data.
	:	:
	:	:
13	HMI_MaimMenu.Disp_Text(13)	Sets a message on the 13th "Screen Select Button" in STRING data.

Additional Information

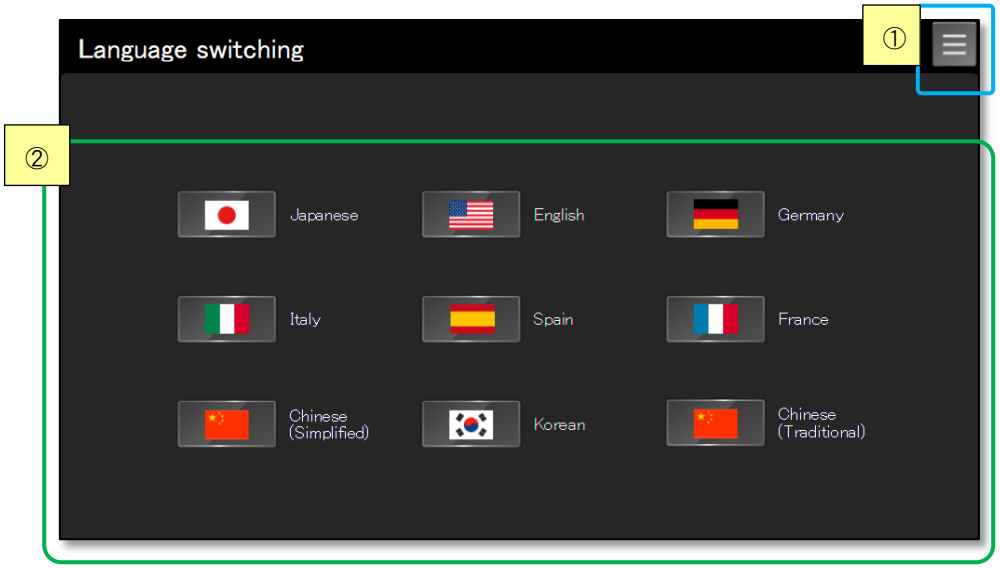
For the entire image of the screen using this object, refer to Section 6 *Screen External Specifications (Use Case)*.

7-25 Language Switch IAG

7-25-1 External Specification

Object name	Language_IAG
Category	General_IAG_Parts
Function	Switches languages.

7-25-2 GUI

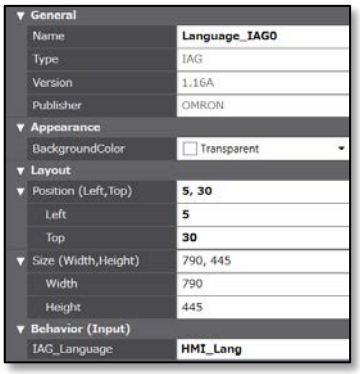


No.	Name	Description
①	“Menu” button	Issues an event that displays the menu screen.
②	Language switch button	Issues an event that switches to the selected language. Up to nine language buttons are placed on the screen. You can hide the unused language buttons by entering values to the parameter setting variable.

7-25-3 Properties

Property name	Description	Input method	Range	Default
▼General				
Name	Specifies the object name. The name must be unique in that screen.	Direct input	String (1 to 127 characters)	Menu_IAG0 *2)
Type	Specifies the object type. This item cannot be changed.	-	-	IAG
Version	Specifies the version of the IAG.	-	-	1.16B
Publisher	Specifies the IAG publisher.	-	-	Omron
Appearance				
BackgroundColor	Specifies the background color of the page.	Item selection Direct input	Color palette String	Transparent *1)
Layout				
▼Position (Left,Top)	Specifies the position of the object on the page.	Direct input Spin button	Numerical Numerical	For 9 inches:(5,30) For 12 inches:(8,50) *3)
Left	Specifies the horizontal page coordinate (x-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:5 For 12 inches:8
Top	Specifies the vertical page coordinate (y-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:30 For 12 inches:50
▼Size (Width,Height)	Specifies the size of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:(790,445) For 12 inches:(1264,740) *3)
Width	Specifies the object width.	Direct input Spin button	Numerical Numerical	For 9 inches:790 For 12 inches:480
Height	Specifies the object height.	Direct input Spin button	Numerical Numerical	For 9 inches:445 For 12 inches:293
▼Behavior (Input)				
IAG_Language	Specifies the variable that changes HMI language.	Direct input	Structures (HMI_Language)	(Blank)

Properties screen



*1) ”Transparent” indicates that the color is transparent.
*2) This is automatically created when the IAG object has been placed.
*3) In units of pixels

● Event and Action

You can set the event and action.

Event name	Description	Input method	Range	Default
▼Events				
▼[0]	Menu_Call (This event is issued by pressing the “Menu” button.)			
▼Actions				
▼[0]	ShowPage			
Controller	Specifies “Menu_Popup” on the Servo IAG library screen.	Direct input	Text	-
Left	Specifies the left edge of display position.	Direct input Spin button	Numerical Numerical	-
Top	Specifies the top edge of display position.	Direct input Spin button	Numerical Numerical	-
▼[1]	Language_Call_0 (This event is issued by pressing the Japanese flag button)			
▼Actions				
▼[0]	SetLanguage			
Language	Specifies Japanese (Japan).	Item selection	-	-
Persist	Selects whether to maintain this language when restarting the HMI.	Checkbox	Check	-
▼[2]	Language_Call_1 (This event is issued by pressing the United States flag button)			
▼Actions				
▼[0]	SetLanguage			
Language	Specifies English (United States).	Item selection	-	-
Persist	Selects whether to maintain this language when restarting the HMI.	Checkbox	Check	-

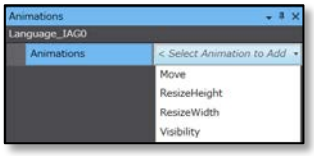
Event screen

As for the factory setting of Servo IAG library screen, set only “ShowPage“ and “ShowTroubleshooter“ for Actions.

● Animation

You can define the basic animation action.

Animation name	Description
Move	Changes the coordinates of the object according to specified condition expressions.
ResizeHeight	Changes the height of the object according to a specified condition expression.
ResizeWidth	Changes the width of the object according to a specified condition expression.
Visibility	Displays the object when a condition expression is met.
Animations screen	



As for the factory setting of Servo IAG library screen, you don't need to set Animations.

● Input variable timing

Variable	Timing for loading input data
IAG_Language	Shows/hides each button based on the information read at system-startup.

7-25-4 Features

- Displaying each button based on the variables that you set in global variable or event at the screen startup.
- Pressing each button issues an event that changes a language.
- Place this object on the Language Switching Screen.

Table of "Event name for each national flag button"

No	Event name	Description
1	Language_Call_0	Selecting the Japanese flag button issues this event name.
2	Language_Call_1	Selecting the United States flag button issues this event name.
3	Language_Call_2	Selecting the German flag button issues this event name.
4	Language_Call_3	Selecting the Italian flag button issues this event name.
5	Language_Call_4	Selecting the Spanish flag button issues this event name.
6	Language_Call_5	Selecting the French flag button issues this event name.
7	Language_Call_6	Selecting the Chinese (simplified) flag button issues this event name.
8	Language_Call_7	Selecting the Korean flag button issues this event name.
9	Language_Call_8	Selecting the Chinese (traditional) flag button issues this event name.

Table of “Screen variable for each national flag button”

No	Variable name	Description
1	HMI_Lang.Disp_Visible(0)	Setting the variable to TRUE displays the Japanese flag button on the screen.
2	HMI_Lang.Disp_Visible(1)	Setting the variable to TRUE displays the United States flag button on the screen.
3	HMI_Lang.Disp_Visible(2)	Setting the variable to TRUE displays the German flag button on the screen.
4	HMI_Lang.Disp_Visible(3)	Setting the variable to TRUE displays the Italian flag button on the screen.
5	HMI_Lang.Disp_Visible(4)	Setting the variable to TRUE displays the Spanish flag button on the screen.
6	HMI_Lang.Disp_Visible(5)	Setting the variable to TRUE displays the French flag button on the screen.
7	HMI_Lang.Disp_Visible(6)	Setting the variable to TRUE displays the Chinese (Simplified) flag button on the screen.
8	HMI_Lang.Disp_Visible(7)	Setting the variable to TRUE displays the Korean flag button on the screen.
9	HMI_Lang.Disp_Visible(8)	Setting the variable to TRUE displays the Chinese (Traditional) flag button on the screen.

Additional Information

For the entire image of the screen using this object, refer to Section 6 *Screen External Specifications (Use Case)*.

7-26 Title Bar IAG

7-26-1 External Specification

Object name	Title_Bar_IAG
Category	General_IAG_Parts
Function	Title bar

7-26-2 GUI

No	Name	Description
1	Title bar	Displays user names, roles, time information etc. at login.

Precautions for Correct Use

Place this object on the background screen that is commonly used for all the screens so that the object can be run on all the screens.

7-26-3 Properties

Property name	Description	Input method	Range	Default
▼General				
Name	Specifies the object name. The name must be unique in that screen.	Direct input	String (1 to 127 characters)	Title_Bar_IAG 0 *2)
Type	Specifies the object type. This item cannot be changed.	-	-	IAG
Version	Specifies the version of the IAG.	-	-	1.16B
Publisher	Specifies the IAG publisher.	-	-	Omron
Appearance				
BackgroundColor	Specifies the background color of the page.	Item selection Direct input	Color palette String	Transparent *1)
Layout				
▼Position (Left,Top)	Specifies the position of the object on the page.	Direct input Spin button	Numerical Numerical	For 9 inches:(0,0) For 12 inches:(0,0) *3)
Left	Specifies the horizontal page coordinate (x-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:0 For 12 inches:0
Top	Specifies the vertical page coordinate (y-axis) of the position of the top-left of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:0 For 12 inches:0
▼Size (Width,Height)	Specifies the size of the object.	Direct input Spin button	Numerical Numerical	For 9 inches:(800,26) For 12 inches:(1280,44) *3)
Width	Specifies the object width.	Direct input Spin button	Numerical Numerical	For 9 inches:800 For 12 inches:1280
Height	Specifies the object height.	Direct input Spin button	Numerical Numerical	For 9 inches:26 For 12 inches:44
▼Behavior (Input)				
HMI_ModelText	Variable to display models	Direct input	Variable (String)	(Blank)

Properties screen

*1) ”Transparent” indicates that the color is transparent.
*2) This is automatically created when the IAG object has been placed.
*3) In units of pixels

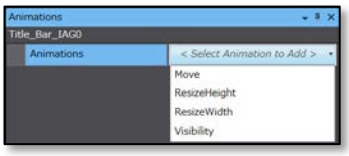
● Event and Action

There are no event and action functions.

● Animation

You can define the basic animation action.

Animation name	Description
Move	Changes the coordinates of the object according to specified condition expressions.
ResizeHeight	Changes the height of the object according to a specified condition expression.
ResizeWidth	Changes the width of the object according to a specified condition expression.
Visibility	Displays the object when a condition expression is met.
Animations screen	



As for the factory setting of Servo IAG library screen, you don't need to set Animations.

● Input variable timing

Variable	Timing for loading input data
HMI_ModelText	Displays the information read at system-startup.

7-26-4 Features

- Displaying the variable value that was set with the system-defined variable and global variable after the screen startup.
- Place this object on the background screen that is commonly used for all the screens so that the object can be run on all the screens.

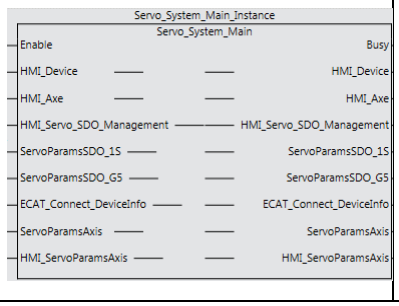
Additional Information

For the entire image of the screen using this object, refer to Section 6 *Screen External Specifications (Use Case)*.

8 Details of FB Specifications

8-1 Servo Status Monitor FB

8-1-1 External Specification

Instruction	Name	FB/ FUN	Graphic expression	ST expressions
Servo_System_Main	Servo Status Monitor	FB		Servo_SystemIitial_FB_Instance(Enable :=《Parameter》, HMI_Device :=《Parameter》, HMI_Axe :=《Parameter》, HMI_Servo_SDO_Management :=《Parameter》, ServoParamsSDO_1S :=《Parameter》, ServoParamsSDO_G5 :=《Parameter》, ECAT_Connect_DeviceInfo :=《Parameter》, ServoParamsAxis :=《Parameter》, HMI_ServoParamsAxis :=《Parameter》, Busy =>《Parameter》);

8-1-2 Input Variable

Input Variable	Name	Data type	Valid range	Default	Description
Enable	Execute	BOOL	TRUE, FALSE	FALSE	Executes FB by changing input to ON.

8-1-3 Output Variable

Input Variable	Name	Data type	Valid range	Description
Busy	During execution	BOOL	TRUE, FALSE	TRUE when the instruction is acknowledged.

● Output variable update timing

Variable	Timing for changing to TRUE	Timing for changing to FALSE
Busy	Start monitoring	In case that monitoring fails.

8-1-4 I/O Variable

I/O Variable	Name	Data type	Description
HMI_Device	Various information	ns_Folder¥Device	Servo device information
HMI_Axe	Axis information	ns_AxisMon¥st_AxisMon	The specified axis monitoring
HMI_Servo_SDO_ Management	SDO array	ns_SDO_Managment¥ st_Servo_Management	SDO command instruction for Servo control
ServoParamsSDO__1S	Servo parameter_1S	ns_SDO_Managment ¥st_Table_Servo_1S	Fixed values of servo parameter
ServoParamsSDO__G5	Servo parameter_G5	ns_SDO_Managment ¥st_Table_Servo_G5	Fixed values of servo parameter
ECAT_Connect_Device Info	ECAT connected device information	ECAT_Device_Info	ECAT connected device information
ServoParamsAxis	Servo parameter	ARRAY[0..256] OF ns_SDO_Managment ¥Sarvo_Params_Data	Variable values of servo parameter
HMI_ServoParamsAxis	Servo parameter for HMI display	ARRAY[0..1] OF ns_SDO_Managment ¥Sarvo_Params_Data	Servo parameter for HMI display

8-1-5 External Variable

External variables are not used.

8-1-6 Features

- Monitoring the status of the selected axis (i.e. setting, status, error).
- Synchronizing the clock according to the event condition of the NA.
- Executing a command to the Servo upon the control request from the screen.

9 Details of Variable Specifications

9-1 Structures Registered in NJ's FB Library and NA's IAG

This section describes the structures used by the FB that reads device names of the NJ.
The variables using this structure are used both for NJ and NA.

9-1-1 Name Space: Structures of "Fb_Status"

Variable name	Data type of NJ	Data type of NA	Name
Servo_FB_Status	STRUCT	Servo library operation check structures	
Execute	BOOL	Boolean	
Busy	BOOL	Boolean	
SDOBusy	BOOL	Boolean	
Done	BOOL	Boolean	
Error	BOOL	Boolean	
ErrorID	WORD	UShort	
ErrorIDEx	DWORD	UInteger	
NodeAdr	UINT	UShort	
DirName	STRING[40]	String	
TimeOut	UINT	UShort	
OverWrite	BOOL	Boolean	
NoProductChk	BOOL	Boolean	

Additional Information

A name space of NA is described as "CPU1¥Fb_Status".
(CPU name followed by the name space)

9-1-2 Name Space: Structures of “ns_AxisMon”

Variable name	Data type of NJ	Data type of NA	Name
st_AxisMon	STRUCT	Axis monitor structures	
Cfg	ns_AxisMon¥st_AxisCfg	CPU1¥ns_AxisMon¥st_AxisCfg	
Scale	ns_AxisMon¥st_AxisScale	CPU1¥ns_AxisMon¥st_AxisScale	
Cmd	ns_AxisMon¥st_AxisCmd	CPU1¥ns_AxisMon¥st_AxisCmd	
Status	ns_AxisMon¥st_AxisStatus	CPU1¥ns_AxisMon¥st_AxisStatus	
Details	ns_AxisMon¥st_AxisDetails	CPU1¥ns_AxisMon¥st_AxisDetails	
Dir	ns_AxisMon¥st_AxisDir	CPU1¥ns_AxisMon¥st_AxisDir	
DrvStatus	ns_AxisMon¥st_AxisDrvStatus	CPU1¥ns_AxisMon¥st_AxisDrvStatus	
Act	ns_AxisMon¥st_AxisAct	CPU1¥ns_AxisMon¥st_AxisAct	
MFaultLvl	ns_AxisMon¥st_AxisMFaultLvl	CPU1¥ns_AxisMon¥st_AxisMFaultLvl	
Obsr	ns_AxisMon¥st_AxisObsr	CPU1¥ns_AxisMon¥st_AxisObsr	

Variable name	Data type of NJ	Data type of NA	Name
st_AxisCfg	STRUCT	Axis monitor structures	
AxNo	UINT	UShort	
ExecID	UINT	UShort	
AxEnable	UINT	UShort	
AxType	UINT	UShort	
NodeAddress	UINT	UShort	

Variable name	Data type of NJ	Data type of NA	Name
st_AxisScale	STRUCT	Axis monitor structures	
Den	REAL	Single	
Num	UDINT	UInteger	
Units	UINT	UShort	
CountMode	UINT	UShort	
MaxPos	LREAL	Double	
MinPos	LREAL	Double	

Variable name	Data type of NJ	Data type of NA	Name
st_AxisCmd	STRUCT	Axis monitor structures	
Pos	REAL	Single	
Vel	REAL	Single	
Trq	REAL	Single	
AccDec	REAL	Single	
Jerk	REAL	Single	

Variable name	Data type of NJ	Data type of NA	Name
st_AxisAct	STRUCT	Axis monitor structures	
Pos	REAL	Single	
Vel	REAL	Single	
Trq	REAL	Single	
TimeStamp	ULINT	ULong	

Variable name	Data type of NJ	Data type of NA	Name
st_AxisDir	STRUCT	Axis monitor structures	
Nega	BOOL	Boolean	
Posi	BOOL	Boolean	

Variable name	Data type of NJ	Data type of NA	Name
st_AxisStatus	STRUCT	Axis monitor structures	
Continuous	BOOL	Boolean	
Coordinated	BOOL	Boolean	
Disabled	BOOL	Boolean	
Discrete	BOOL	Boolean	
ErrorStop	BOOL	Boolean	
Homing	BOOL	Boolean	
Ready	BOOL	Boolean	
StandStill	BOOL	Boolean	
Stopping	BOOL	Boolean	
Synchronized	BOOL	Boolean	

Variable name	Data type of NJ	Data type of NA	Name
st_AxisDetails	STRUCT	Axis monitor structures	
Homed	BOOL	Boolean	
Idle	BOOL	Boolean	
InHome	BOOL	Boolean	
InPosWaiting	BOOL	Boolean	
VelLimit	BOOL	Boolean	

Variable name	Data type of NJ	Data type of NA	Name
st_AxisDrvStatus	STRUCT	Axis monitor structures	
CSP	BOOL	Boolean	
CSV	BOOL	Boolean	
CST	BOOL	Boolean	
DrvAlarm	BOOL	Boolean	
DrvWarning	BOOL	Boolean	
Home	BOOL	Boolean	
HomeSw	BOOL	Boolean	
ILA	BOOL	Boolean	
ImdStop	BOOL	Boolean	
Latch1	BOOL	Boolean	
Latch2	BOOL	Boolean	
MainPower	BOOL	Boolean	
Neg_OT	BOOL	Boolean	
Pos_OT	BOOL	Boolean	
Ready	BOOL	Boolean	
ServoOn	BOOL	Boolean	

Variable name	Data type of NJ	Data type of NA	Name
st_AxisMFaultLvl	STRUCT	Axis monitor structures	
Active	BOOL	Boolean	
Code	UINT	UShort	

Variable name	Data type of NJ	Data type of NA	Name
st_AxisDir	STRUCT	Axis monitor structures	
Active	BOOL	Boolean	
Code	UINT	UShort	

Additional Information

A name space of NA is described as “CPU1¥ns_AxisMon”.
(CPU name followed by the name space)

Precautions for Correct Use

The configuration of “ns_AxisMon” is in accordance with that of ”_MC_AX” system-defined structure.
If the configuration of “_MC_AX” structure is changed due to the CPU system upgrade, you may need to change the configuration of “ns_AxisMon”.

9-1-3 Name Space: Structures of “ns_SDO_Managment”

Variable name	Data type of NJ	Data type of NA	Name
st_Table_Servo_1S	STRUCT	Axis parameter structure	
Params	ARRAY[0..280] OF ns_SDO_Managment ¥Sarvo_Params	CPU1¥ns_SDO_Managment ¥Sarvo_Params(280)	

Variable name	Data type of NJ	Data type of NA	Name
st_Table_Servo_G5	STRUCT	Axis parameter structure	
Params	ARRAY[0..165] OF ns_SDO_Managment ¥Sarvo_Params	CPU1¥ns_SDO_Managment ¥Sarvo_Params(165)	

Variable name	Data type of NJ	Data type of NA	Name
Sarvo_Params	STRUCT	Axis parameter structure	
SdoObject	_sSDO_ACCESS	CPU1¥_sSDO_ACCESS	
Init_Value	STRING[12]	String	
Size	INT	Short	
Inp_MAX	LREAL	Double	
Inp_MIN	LREAL	Double	
Unit	STRING[17]	String	
Restart	BOOL	Boolean	
Dec_Point	INT	Short	
Split_Data	INT	Short	

Variable name	Data type of NJ	Data type of NA	Name
Sarvo_Params_Data	STRUCT	Axis parameter structure	
Params_Axis_1S	ARRAY[0..280] OF ns_SDO_Managment ¥Sarvo_Params_Axis	CPU1¥ns_SDO_Managment ¥Sarvo_Params_Axis (280)	
Params_Axis_G5	ARRAY[0..165] OF ns_SDO_Managment ¥Sarvo_Params_Axis	CPU1¥ns_SDO_Managment ¥Sarvo_Params_Axis (165)	
ErrorCode	UINT	UShort	
HistryCode	ARRAY[0..5] OF DWORD	UInteger(5)	Error log
Value_Change	BOOL	Boolean	
Servo_Type	UINT	UShort	
Chg_Index	DINT	Integer	

Variable name	Data type of NJ	Data type of NA	Name
Sarvo_Params_Axis	STRUCT	Axis parameter structure	
Value	LINT	Long	Parameter value
Drive_Value	LINT	Long	Drive parameter value

Additional Information

A name space of NA is described as “CPU1¥ns_SDO_Mamagment”.
(CPU name followed by the name space)

9-1-4 Name Space: Structures of “ns_Folder”

Variable name	Data type of NJ	Data type of NA	Name
Device	STRUCT	Device information structures	
Servo_Err	ns_Folder¥Servo_Error	CPU1¥ns_Folder¥Servo_Error	
Set	ns_Folder¥Setting	CPU1¥ns_Folder¥Setting	
FB	ns_Folder¥FB_Ctrl	CPU1¥ns_Folder¥FB_Ctrl	
Axis	ns_Folder¥Ax_Mon	CPU1¥ns_Folder¥Ax_Mon	
Servo	ns_Folder¥Servo_Status	CPU1¥ns_Folder¥Servo_Status	
SD	ns_Folder¥SDCard_Status	CPU1¥ns_Folder¥SDCard_Status	
Clock	ns_Folder¥Clock_Set	CPU1¥ns_Folder¥Clock_Set	

Variable name	Data type of NJ	Data type of NA	Name
SDCard_Status	STRUCT	Device information structures	
Acc	BOOL	Boolean	
Deteriorated	BOOL	Boolean	
Err	BOOL	Boolean	
Ready	BOOL	Boolean	

Variable name	Data type of NJ	Data type of NA	Name
Setting	STRUCT	Device information structures	
Servo_NodeNo	ARRAY[0..199] OF STRING[10]	String(199)	
DispInit	BOOL	Boolean	
Read_Comp	BOOL	Boolean	
Disp_Call	BOOL	Boolean	
MCError	BOOL	Boolean	
Node_No_Select	ARRAY[0..199] OF BOOL	Boolean(199)	
Servo_Node_No	ARRAY[0..199] OF UINT	UShort(199)	
Product_Model	STRING[15]	String	
ECAT_ConnectNodeNo	ARRAY[0..512] OF USINT	Byte(512)	

Variable name	Data type of NJ	Data type of NA	Name
Servo_Error	STRUCT	Device information structures	
CodeRead	BOOL	Boolean	
ErrorCode	UINT	UShort	
AlarmCode	UINT	UShort	
HistryCode	ARRAY[0..5] OF DWORD	UInteger(5)	

Variable name	Data type of NJ	Data type of NA	Name
Servo_Status	STRUCT	Device information structures	
Execute	BOOL	Boolean	
Busy	BOOL	Boolean	
Done	BOOL	Boolean	
Error	BOOL	Boolean	
ErrorID	WORD	UShort	
ErrorIDEx	DWORD	UInteger	
FBError_Message	STRING[100]	String	
FBErrReset	BOOL	Boolean	

Variable name	Data type of NJ	Data type of NA	Name
FB_Ctrl	STRUCT	Device information structures	
Servo_Type	UINT	UShort	1 = 1S , 5 = G5
EncABSType	BOOL	Boolean	
EncMode	INT	Short	
EncSetting	INT	Short	
StatusBKUP	Fb_Status¥Servo_FB_Status	CPU1¥Fb_Status¥Servo_FB_Status	
StatusRSTR	Fb_Status¥Servo_FB_Status	CPU1¥Fb_Status¥Servo_FB_Status	
StatusENCINIT	Fb_Status¥Servo_FB_Status	CPU1¥Fb_Status¥Servo_FB_Status	
RemoveName	STRING[20]	String	
Alarm_Reset	BOOL	Boolean	
ReadParams	BOOL	Boolean	
WriteParams	BOOL	Boolean	
RestartDrive	BOOL	Boolean	
FactorySettings	BOOL	Boolean	
Remove_SD	BOOL	Boolean	

Variable name	Data type of NJ	Data type of NA	Name
Ax_Mon	STRUCT	Device information structures	
Status	ns_Folder¥Ax_Status	CPU1¥ns_Folder¥Ax_Status	
Scale	ns_Folder¥Ax_Scale	CPU1¥ns_Folder¥Ax_Scale	
Cfg	ns_Folder¥Ax_Cfg	CPU1¥ns_Folder¥Ax_Cfg	
MFaultLvl	ns_Folder¥Ax_MFaultLvl	CPU1¥ns_Folder¥Ax_MFaultLvl	
Select_Axis_No	UINT	UShort	
AxisChg	BOOL	Boolean	
AxisChg_Set	ARRAY[0..5] OF BOOL	Boolean(5)	
AxisChg_Mente	BOOL	Boolean	
Dispatch_Num_Axe	BOOL	Boolean	
Num_Axe_act	UINT	UShort	

Variable name	Data type of NJ	Data type of NA	Name
Ax_Status	STRUCT	Device information structures	
ErrorStop	BOOL	Boolean	
Disabled	BOOL	Boolean	

Variable name	Data type of NJ	Data type of NA	Name
Ax_Scale	STRUCT	Device information structures	
Units	UINT	UShort	

Variable name	Data type of NJ	Data type of NA	Name
Ax_Cfg	STRUCT	Device information structures	
AxNo	UINT	UShort	
NodeAddress	UINT	UShort	

Variable name	Data type of NJ	Data type of NA	Name
Ax_MFaultLvl	STRUCT	Device information structures	
Active	BOOL	Boolean	
Code	UINT	UShort	

Variable name	Data type of NJ	Data type of NA	Name
Clock_Set	STRUCT	Device information structures	
Top_Synchro_Clock	BOOL	Boolean	
Synchro_Clock	DATE_AND_TIME	Date	

Additional Information

A name space of NA is described as “CPU1¥ns_SDO_Mamagment”.
(CPU name followed by the name space)

Precautions for Correct Use

Since the structures described in Section 9-1 have been declared within FB, you do not need to write the structures in Data type of the NJ.

9-2 Structures Registered in NJ's FB Library

The variables in this section are used only in the NJ.

9-2-1 Name Space: Structures of "ns_SDO_Managment"

Variable name	Data type	Name	Function
st_Servo_Management	STRUCT	Axis parameter structure	
I	ns_SDO_Managment¥ st_Management_Inputs		
O	ns_SDO_Managment¥ st_Management_Outputs		

Variable name	Data type	Name	Function
st_Management_Outputs	STRUCT	Axis parameter structure	
Done	BOOL		
Busy	BOOL		
DeviceType	DWORD		
Error	BOOL		
ErrorId	WORD		
ErrorIdEx	DWORD		
ErrorState	INT		

Variable name	Data type	Name	Function
st_Management_Inputs	STRUCT	Axis parameter structure	
Adr	UINT		
Init_Structure	BOOL		
EncTypeCheck	BOOL		
Save_SD	BOOL		
Load_SD	BOOL		
AskDevice	BOOL		
ReadErrStatus	BOOL		
ClrErrStatus	BOOL		
Init_Memory	BOOL		
Reset_Alarm	BOOL		

Precautions for Correct Use

Since the structures described in Section 9-2 have been declared within FB, you do not need to write the structures in Data type of the NJ.

9-3 Structures Registered in NA's IAG Library

The variables in this section are used only in the NA.

9-3-1 Name Space: Structures of "ns_HMI"

Variable name	Data type	Name	Function
File	STRUCT	Axis parameter structure	
Folder	ns_HMI¥FolderName		
List	ns_HMI¥ListSelect		
Alarm	ns_HMI¥Alarm_Text		
pop	ns_HMI¥Pop_Ctrl		
SD	ns_HMI¥Card_Status		

Variable name	Data type	Name	Function
FolderName	STRUCT	Axis parameter structure	
Name	String		
YMD	String		
HMS	String		
Model	String		
Node	String		
User	String		
UserInput	String		
Length	Integer		
FileStatus	Integer		
CodeCheck	Boolean		
HMS_Set	Boolean		
YMD_Set	Boolean		
Model_Set	Boolean		
Node_Set	Boolean		
Overlen	Boolean		
OverWrite	Boolean		
UserSet	Boolean		
Make_Init	Boolean		

Variable name	Data type	Name	Function
Alarm_Text	STRUCT	Axis parameter structure	
FaultInfo	String		
AlarmInfo	String		
HistryText	String(5)		

Variable name	Data type	Name	Function
Pop_Ctrl	STRUCT	Axis parameter structure	
PopDispIndex	Integer		
Disp_Select	Boolean(3)		
Language_Chg	Boolean		

Variable name	Data type	Name	Function
Card_Status	STRUCT	Axis parameter structure	
VefySta	_sVEFY_STA		

Variable name	Data type	Name	Function
ListSelect	STRUCT	Axis parameter structure	
Data	Integer		
Description	String		
SubDescription	String		
Index	String		
SubIndex	String		
Initvalue	String(5)		
OD	String		
Range	String		
Restart	String		
Unit	String		
Number	Integer		
Disp	Single(5)		
Drive	String(5)		
Bit	Boolean(15)		
SelectOffset	Integer		
CallIndex	Integer		
SelectIndex	Integer		
Dispparts_Visible	Boolean(3)		
Dispparts_Top	Integer		
Dispparts_Topout	Integer		
Dispparts_MaskTop	Integer(10)		
Dispparts_MaskSize	Integer(10)		
EditActive	Boolean		

Precautions for Correct Use

You need to write the structures shown in Section 9-3-1 in Data type of the NA.
For the procedure, refer to Section 10 *Install Procedure*.

9-3-2 Name Space: Structures (No setting)

Name space: (no setting)

Variable name	Data type	Name	Function
HMI_Menu	STRUCT	Menu screen structure	
Disp_Text	String(20)		

Variable name	Data type	Name	Function
HMI_Language	STRUCT	Language select screen structure	
Disp_Visible	Boolean(20)		
Language_Change	Boolean		

Variable name	Data type	Name	Function
_sVEFY_STA	STRUCT	SD card status structure	
Done	Boolean		
Active	Boolean		
VefyRslt	Boolean		
Err	Boolean		

Variable name	Data type	Name	Function
ErrorEvent_Res	STRUCT	Resource data structure	
Execute	Boolean		
ErrCode	String(100)		
ErrText	String(100)		

Variable name	Data type	Name	Function
Description_Res	STRUCT	Resource data structure	
Execute	Boolean		
Text	String(280)		

Variable name	Data type	Name	Function
BitDescription_Res	STRUCT	Resource data structure	
Execute	Boolean		
Text	String(10,15)		

Variable name	Data type	Name	Function
ErrorEvent_Res_G5	STRUCT	Resource data structure	
Execute	Boolean		
ErrCode	String(120)		
ErrText	String(120)		

Variable name	Data type	Name	Function
Description_Res_G5	STRUCT	Resource data structure	
Execute	Boolean		
Text	String(170)		

Variable name	Data type	Name	Function
Servo_Error_Res	STRUCT	Resource data structure	
Execute	Boolean		
ErrCode	String(120)		
ErrText	String(120)		

Variable name	Data type	Name	Function
FB_Error_Res	STRUCT	Resource data structure	
Execute	Boolean		
ErrText	String(40)		

Variable name	Data type	Name	Function
Motion_ErrorEvent_Res	STRUCT	Resource data structure	
Execute	Boolean		
ErrCode	String(290)		
ErrText	String(290)		

Precautions for Correct Use

You need to write the structures shown in Section 9-3-2 in Data type of the NA.
For the procedure, refer to Section 10 *Install Procedure*.

9-3-3 Name Space: Structures of CPU1

The following tables show the structures that have been defined in the NJ.

Even though the structures are used in the NJ, the configurations of the structures are not displayed in a list. On the other hand, the configurations are automatically shown in the NA after variable mapping.

Name space: CPU1

Variable name	Data type	Name	Function
_sSDO_ACCESS	STRUCT	SDO command structures	
Index	UShort		
Subindex	Byte		
IsCompleteAccess	Boolean		

Variable name	Data type	Name	Function
_sVEFY_STA	STRUCT	SD card status structure	
Done	Boolean		
Active	Boolean		
VefyRslt	Boolean		
Err	Boolean		

Variable name	Data type	Name	Function
ECAT_Device_Info	STRUCT	Connected device information structures	
Connect_NodeNo	String(512)		
Device_Name	String(512)		
Device_Count	UShort		
Axis_Tbl_AxisNo	UShort(512)		
Axis_Tbl_NodeNo	UShort(512)		

Precautions for Correct Use

Two “_sVEFY_STA” structures will be created; one is (Name space: CPU1) that is automatically created when mapping the system-defined variable in the NA, and the other is (Name space:(no setting) that is shared between the NA and IAG.

Precautions for Correct Use

Since the structures described in Section 9-3-3 are automatically developed by mapping the variables in the NA software, you don’t need to write the structures in Data type of the NA.

9-4 Global Variables of NJ and NA

9-4-1Global Variables of NJ's FB and NA's IAG

Name	Data type	Retain	NA	Comment
ECAT_Connect_DeviceInfo	ECAT_Device_Info	--	Yes	ECAT connected device information
HMI_Servo_SDO_Management	ns_SDO_Managment¥st_Servo_Management	Yes	--	Servo FB instructions
ServoParamsSDO_1S	ns_SDO_Managment¥st_Table_Servo_1S	Yes	Yes	Servo parameter for 1S
ServoParamsSDO_G5	ns_SDO_Managment¥st_Table_Servo_G5	Yes	Yes	Servo parameter for G5
ServoParamsAxis	ARRAY[0..64] OF ns_SDO_Managment¥Sarvo_Params_Data	--	--	Servo parameter for each axis
HMI_ServoParamsAxis	ARRAY[0..1] OF ns_SDO_Managment¥Sarvo_Params_Data	--	Yes	Servo parameter for HMI display
HMI_Axe	ns_AxisMon¥st_AxisMon	--	Yes	Axis information
HMI_Device	ns_Folder¥Device	Yes	Yes	Device information

The common variables of FB and IAG used for Servo IAG library are defined in FB external variable as data type variable (structures).
To allow the NA to access the FB external variable, register the NJ variables to the NJ global variable table.
Register the NJ variables given in the table above.

Since the data types of these global variables have been defined in FB, you don't need to define them in [Data type] of the NJ editor.
Registering the variables to the global variable allows you to access to the NA.

Precautions for Correct Use

As for the variables described "Yes" in the [Retain] field in the above table, select the "*Retain"* checkbox when registering the global variable.
As for the variables described "Yes" in the [NA] filed in the above table, map the variables prior to use.

Even the 1S or G5 servo is implemented in the actual machine, make sure to register the variable for 1S or G5 servo respectively.

9-4-2 Global Variable of NA's IAG

In addition to the global variables that you mapped to the variables in Section 9-4-1, register global variables that are used only for system-variable of NJ and NA.

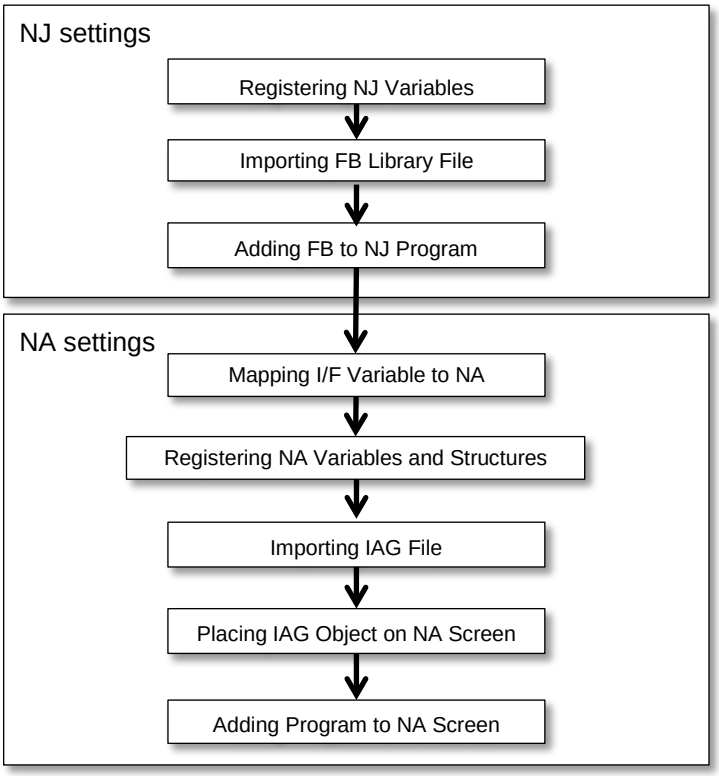
Name	Data type	Retain	MAP	Comment
HMI_ModelText	String	—	—	
HMI_Lang	HMI_Language	—	—	
HMI_MaimMenu	HMI_Menu	—	—	
HMI_Servo_Description_1S	Description_Res_1S	—	—	
HMI_Servo_BitDescription_1S	BitDescription_Res_1S	—	—	
HMI_Servo_Error_1S	Servo_Error_Res	—	—	
HMI_ErrorEvent_1S	ErrorEvent_Res_1S	—	—	
HMI_Servo_Error_G5	Servo_Error_Res	—	—	
HMI_ErrorEvent_G5	ErrorEvent_Res_G5	—	—	
HMI_FB_Error	FB_Error_Res	—	—	
HMI_Motion_ErrorEvent	Motion_ErrorEvent_Res	—	—	
HMI_File	ns_HMI¥File	—	—	
_Card1VefySta	CPU1¥_sVEFY_STA	—	Yes	

Precautions for Correct Use

As for the variable described "Yes" in the [MAP] filed in the above table, map the NJ system-defined variable in the NA.

10 Install Procedure

Import the provided IAG files and FB library files and make the following settings.



The detailed procedures are listed on the following pages.

Precautions for Correct Use

This guide assumes that parameters and axes have been set properly for the Servo Drives. Thoroughly check these settings before installation.
For how to set the Servo Drives, refer to relevant manual.

10-1 Registering NJ Variables

10-1-1 I/ F Variables for IAG and FB

To allow NJ's FB to be accessed to NA' IAG for Servo IAG library, register the following variables to the global variable table of NJ.

Name	Data type	Comment
ECAT_Connect_DeviceInfo	ECAT_Device_Info	ECAT connected device information
HMI_Servo_SDO_Management	ns_SDO_Managment¥st_Servo_Management	Servo FB instructions
ServoParamsSDO_1S	ns_SDO_Managment¥st_Table_Servo_1S	Servo parameter_1S
ServoParamsSDO_G5	ns_SDO_Managment¥st_Table_Servo_G5	Servo parameter_G5
ServoParamsAxis	ARRAY[0..64] OF ns_SDO_Managment¥Sarvo_Params_Data	All axes Servo parameter
HMI_ServoParamsAxis	ARRAY[0..1] OF ns_SDO_Managment¥Sarvo_Params_Data	HMI_display Servo parameter
HMI_Axe	ns_AxisMon¥st_AxisMon	Axis information
HMI_Device	ns_Folder¥Device	Device information

The data types of these variables are defined in FB, so you don't need to define them in [Data type] of the NJ Editor.
Registering the variable to global variable sets the variable to the NJ.

10-1-2 Variable Registration Procedure

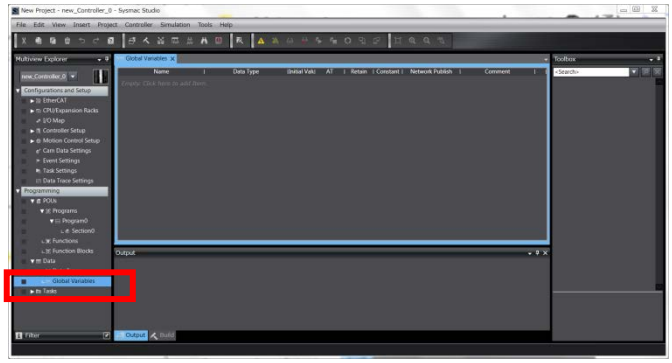
Register the NJ variables before importing the FB library file.

Additional Information

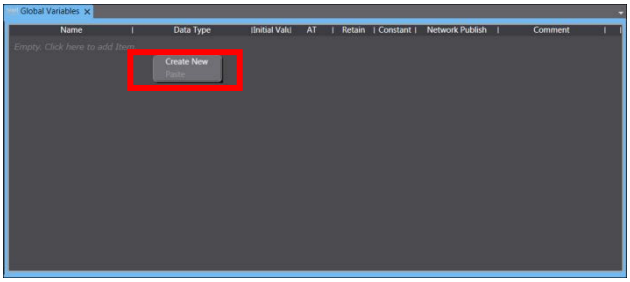
A validation error will occur at this point since the data types for the variables are invalid until the FB library file has been imported. For example, importing" ECAT device information acquire FB" clears the "ECAT_Connect_DeviceInfo" validation error.

How to register the NJ variables are listed on the following pages.

1. Select ”*Programming*” ->”*Data*” ->”*Global Variables*” from the multiview explorer of NJ project and double-click (or right-click -> Edit) to open the “Global Variables” table.



2. When the “Global Variables” table is active, right-click->”*Create New*” and register the variables given in the table shown earlier in this section.

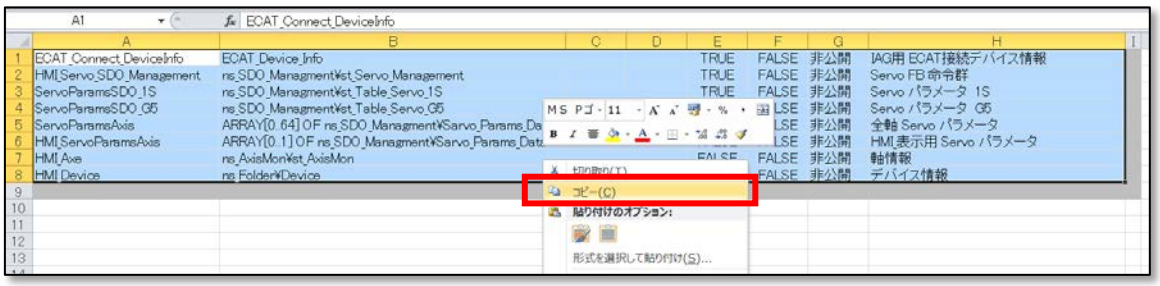


3. A validation error will occur but can be cleared after importing the FB library file in the next step.

Additional Information

Use of the provided excel file for variable declaration allows you to easily copy and paste variables.

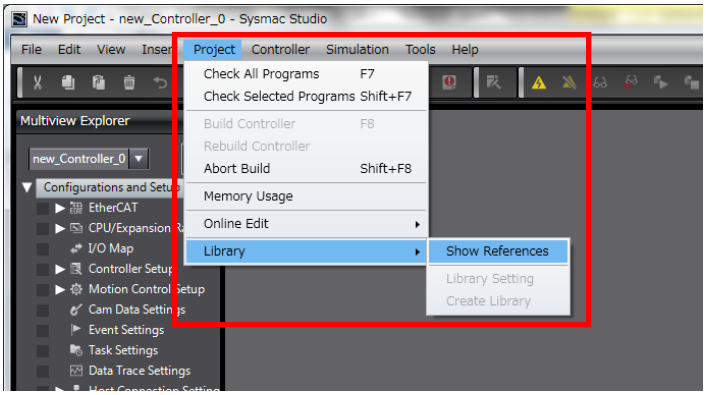
In step 2 above, copy the following data and paste them by selecting “*Paste*”.



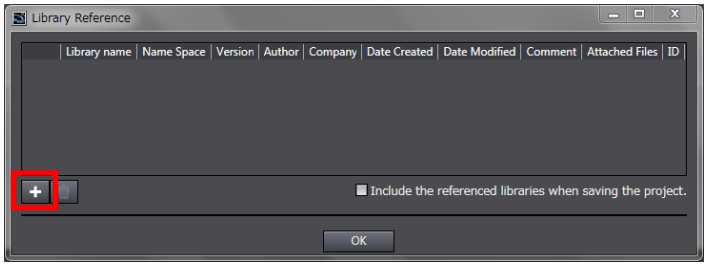
10-2 Importing FB Library File

- How to import the FB library files

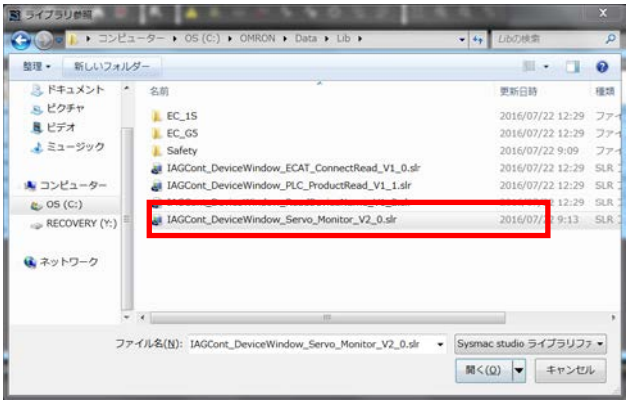
1. Select “*Project*” ->”*Library*” ->”*Show References*” from the menu of NJ project.



2. The Library Reference window opens. Click the + button.



3. The dialog on the right opens. Select a FB library file “*IAGCont_DeviceWindow_1S_Servo_Monitor_V2_0.slr*” to import.



4. The FB library file has been imported.

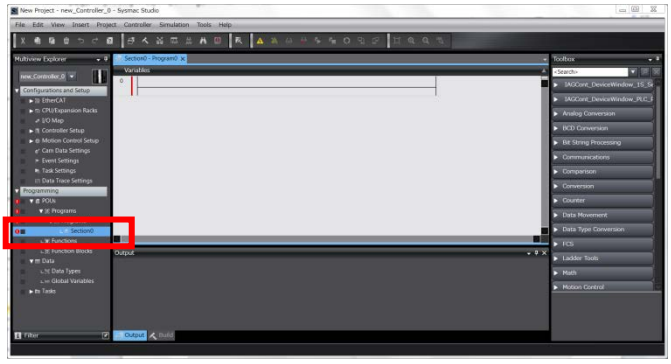
10-3 Adding FB to NJ Program

Place the specified FB to the NJ program and write the required programs.

- The following shows the procedure to add FB to “Section0” (created by default when NJ project has been created) using ladder.

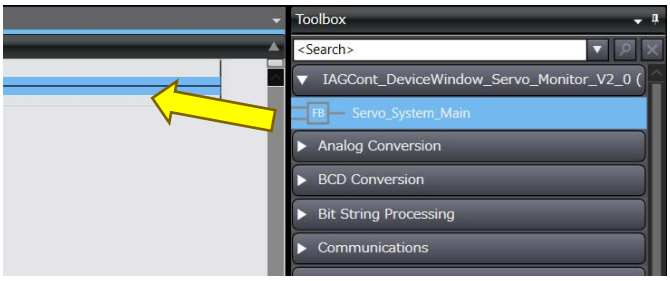
1. Select “*Programming*” ->“*POUs*” ->”*Program0*” ->”*Section0*” from the menu of NJ project.

   ∗ A validation error will occur but can be cleared after writing the ladder.

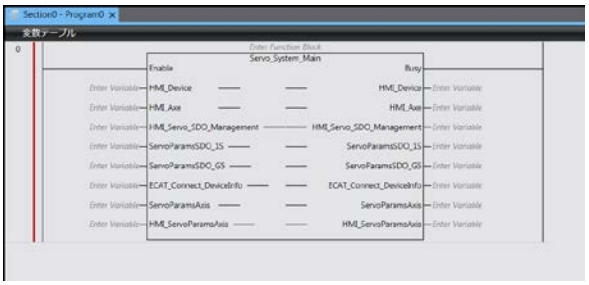


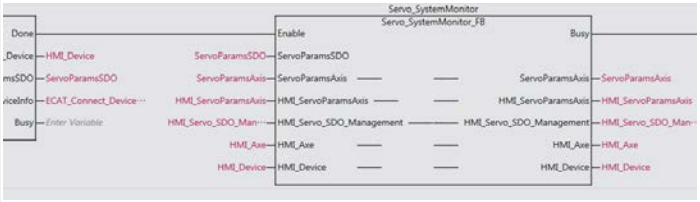
2. Select ”*IAGCont_DeviceWindow_Servo_Monitor_V2_0*” from Toolbox.

3. Drag ”Servo_System_Main” from the drop-down list to the ladder editor



4. The FB has been added.



5. Write the programs as shown on the right. In this example, [Servo_System_Main] instance is named as [Servo_System_Main_Inst].	
In case of ST structure, the above ladder diagram is written as shown on the right.	Servo_System_Main_Inst(Enable:=P_On, HMI_Device:=HMI_Device, HMI_Axe:=HMI_Axe, HMI_Servo_SDO_Management:=HMI_Servo_SDO_Management, ServoParamsSDO_1S:=ServoParamsSDO_1S, ServoParamsSDO_G5:=ServoParamsSDO_G5, ECAT_Connect_DeviceInfo:=ECAT_Connect_DeviceInfo, ServoParamsAxis:=ServoParamsAxis, HMI_ServoParamsAxis:=HMI_ServoParamsAxis);

10-4 Mapping I/F Variable to NA

Add the data type variable used for IAG to the global variable list of NA.
Use the usual mapping procedure for this registration.

Map the following NJ variables to the NA.

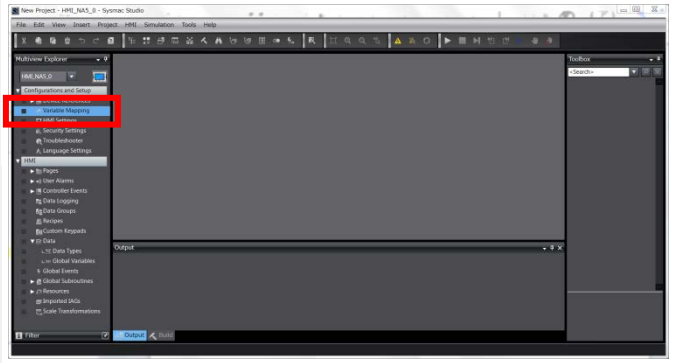
Name	Data type	Update rate	Comment
HMI_Axe	CPU1¥ns_AxisMon¥st_AxisMon	100 ms	-
HMI_Device	CPU1¥ns_Folder¥Device	100 ms	-
_Card1VefySta	CPU1¥_sVEFY_STA	500 ms	-
ECAT_Connect_DeviceInfo	CPU1¥ECAT_Device_Info	500 ms	-
ServoParamsSDO_1S	CPU1¥ns_SDO_Managment¥st_Table_Servo	500 ms	-
ServoParamsSDO_G5	CPU1¥ns_SDO_Managment¥st_Table_Servo	500 ms	-
HMI_ServoParamsAxis	CPU1¥ns_SDO_Managment¥Sarvo_Params_Data(1)	500 ms	-

10-4-1 Variable Mapping Procedure

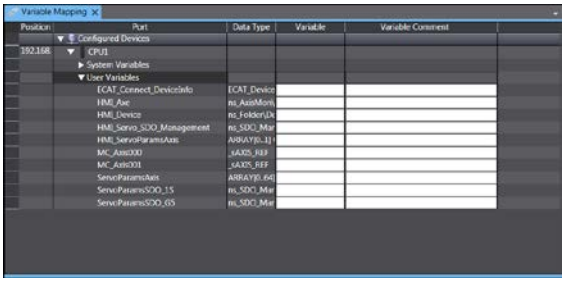
The NJ variables have been registered to the NJ global variable in Section 10-1.
Use the usual mapping procedure in this section.

- How to map the NA variables

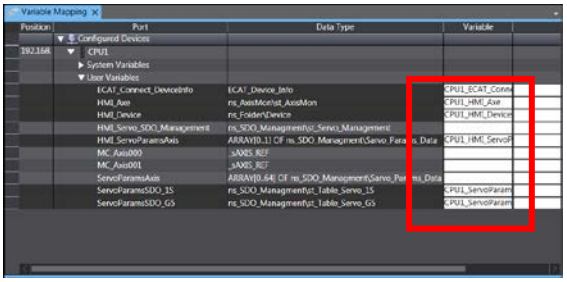
1. Select "*Configurations and Setup*" ->"*Variable Mapping*" from the multiview explorer of NA project and double-click (or right-click -> Edit) to open the "Variable Mapping" table.



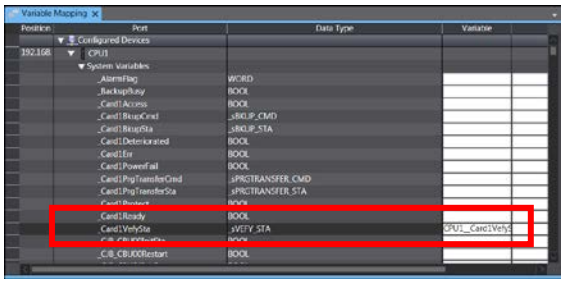
2. Select the user variables for the Controller in the "Variable Mapping" table and display the NJ global variables.



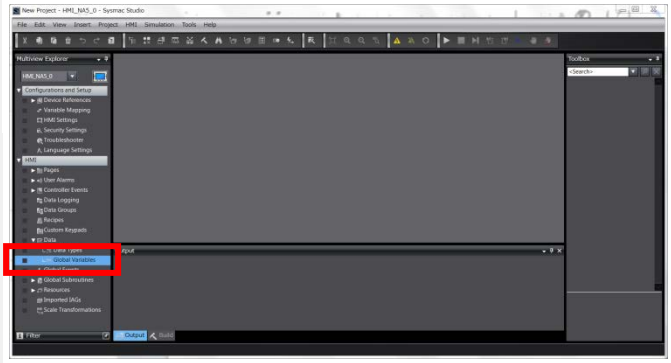
3. Enter the NA variable names in the "Variable" column.
(In this example, the NJ variable names are also used for the NA variable names)



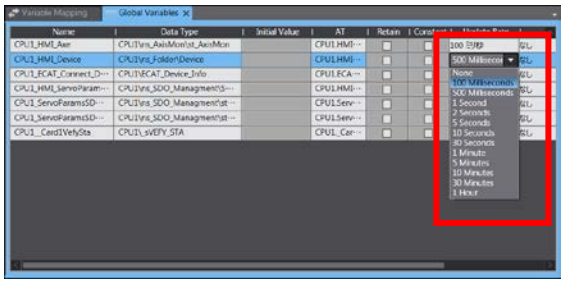
4. As "_Card1VefySta" is a controller system variable, select "System variable" of the Controller and perform the same procedure.



5. Select ”*HMI*” ->”*Data*” ->”*Global Variables*” from the multiview explorer and double-click (or right-click -> Edit) to open the ”Global Variables” table.



6. Make sure that the NA variables are set as you entered in step 3. Set the update rates given in the table shown earlier in this section.



10-5 Registering NA Variables and Structures

10-5-1 Registering NA Variables

Add the global variable used for IAG to the global variable list of NA.

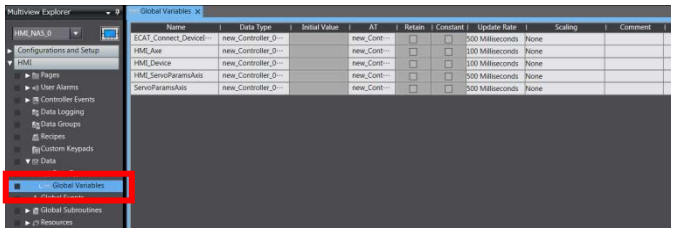
Register the following variables.

Name	Data type	Update rate	Comment
HMI_ModelText	String	Invalid	-
HMI_Lang	HMI_Language	Invalid	-
HMI_MaimMenu	HMI_Menu	Invalid	-
HMI_Servo_Description_1S	Description_Res_1S	Invalid	-
HMI_Servo_BitDescription_1S	BitDescription_Res_1S	Invalid	-
HMI_Error_Event_1S	ErrorEvent_Res_1S	Invalid	
HMI_Servo_Error_1S	Servo_Error_Res	Invalid	-
HMI_Servo_Description_G5	Description_Res_G5	Invalid	
HMI_ ErrorEvent_G5	ErrorEvent_Res_G5	Invalid	-
HMI_Servo_Error_G5	Servo_Error_Res	Invalid	
HMI_FB_Error	FB_Error_Res	Invalid	-
HMI_Motion_ErrorEvent	Motion_ErrorEvent_Res	Invalid	-
HMI_File	ns_HMI¥File	Invalid	-

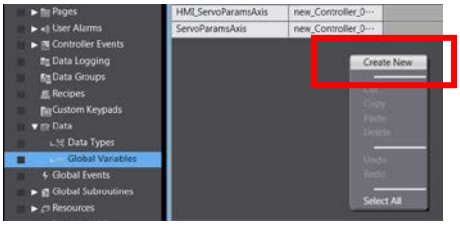
- How to register the NA variables

1. Select ”*HMI*” ->”*Data*” ->”*Global Variables*” from the multiview explorer of NA project and double-click (or right-click -> Edit) to open the ”Global Variables” table.

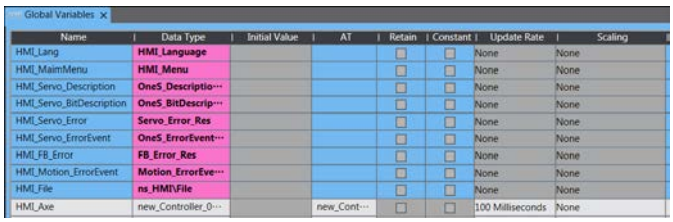
   The mapped variables have been displayed.



2. When the “Global Variables” table is active, right-click->”*Create New*” and register the NA variables given in the table shown earlier in this section.



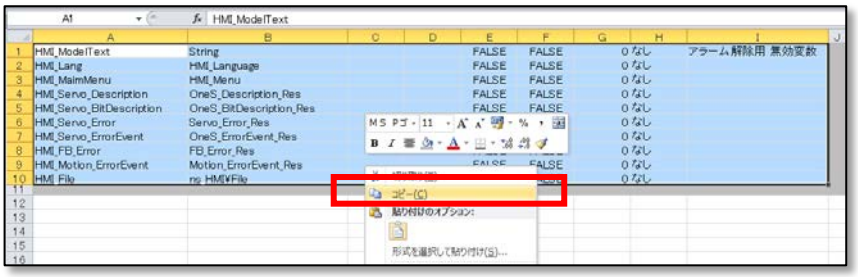
3. Validation errors will occur but can be cleared after importing the structures and FB library file in the next step.



Additional Information

Use of the provided excel file for variable declaration allows you to easily copy and paste variables.

In step 2 above, copy the following data and paste them by selecting "*Paste*".



10-5-1 Registering NA Structures

Add the structures used for IAG to the data type of NA.

Register the following structures.

Name space: (no setting)

Variable name	Data type	Name	Function
HMI_Menu	STRUCT	Menu screen structure	
Disp_Text	String(20)		

Variable name	Data type	Name	Function
HMI_Language	STRUCT	Language select screen structure	
Disp_Visible	Boolean(20)		
Language_Change	Boolean		

Variable name	Data type	Name	Function
_sVEFY_STA	STRUCT	SD card status structure	
Done	Boolean		
Active	Boolean		
VefyRslt	Boolean		
Err	Boolean		

Variable name	Data type	Name	Function
ErrorEvent_Res_1S	STRUCT	Resource data structure	
Execute	Boolean		
ErrCode	String(100)		
ErrText	String(100)		

Variable name	Data type	Name	Function
Description_Res_1S	STRUCT	Resource data structure	
Execute	Boolean		
Text	String(280)		

Variable name	Data type	Name	Function
BitDescription_Res_1S	STRUCT	Resource data structure	
Execute	Boolean		
Text	String(10,15)		

Variable name	Data type	Name	Function
ErrorEvent_Res_G5	STRUCT	Resource data structure	
Execute	Boolean		
ErrCode	String(100)		
ErrText	String(100)		

Variable name	Data type	Name	Function
Description_Res_G5	STRUCT	Resource data structure	
Execute	Boolean		
Text	String(280)		

Variable name	Data type	Name	Function
Servo_Error_Res	STRUCT	Resource data structure	
Execute	Boolean		
ErrCode	String(120)		
ErrText	String(120)		

Variable name	Data type	Name	Function
FB_Error_Res	STRUCT	Resource data structure	
Execute	Boolean		
ErrText	String(40)		

Variable name	Data type	Name	Function
Motion_ErrorEvent_Res	STRUCT	Resource data structure	
Execute	Boolean		
ErrCode	String(290)		
ErrText	String(290)		

Name space: (ns_HMI)

Variable name	Data type	Name	Function
File	STRUCT	Axis parameter structure	
Folder	ns_HMI¥FolderName		
List	ns_HMI¥ListSelect		
Alarm	ns_HMI¥Alarm_Text		
pop	ns_HMI¥Pop_Ctrl		
SD	ns_HMI¥Card_Status		

Variable name	Data type	Name	Function
FolderName	STRUCT	Axis parameter structure	
Name	String		
YMD	String		
HMS	String		
Model	String		
Node	String		
User	String		
UserInput	String		
Length	Integer		
FileStatus	Integer		
CodeCheck	Boolean		
HMS_Set	Boolean		
YMD_Set	Boolean		
Model_Set	Boolean		
Node_Set	Boolean		
Overlen	Boolean		
OverWrite	Boolean		
UserSet	Boolean		
Make_Init	Boolean		

Variable name	Data type	Name	Function
Alarm_Text	STRUCT	Axis parameter structure	
FaultInfo	String		
AlarmInfo	String		
HistryText	String(5)		

Variable name	Data type	Name	Function
Pop_Ctrl	STRUCT	Axis parameter structure	
PopDispIndex	Integer		
Disp_Select	Boolean(3)		
Language_Chg	Boolean		

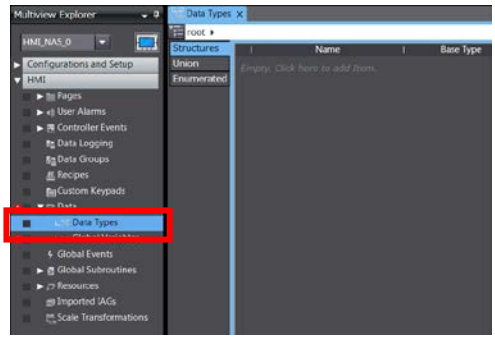
Variable name	Data type	Name	Function
Card_Status	STRUCT	Axis parameter structure	
VefySta	_sVEFY_STA		

Variable name	Data type	Name	Function
ListSelect	STRUCT	Axis parameter structure	
Data	Integer		
Description	String		
SubDescription	String		
Index	String		
SubIndex	String		
Initvalue	String(5)		
OD	String		
Range	String		
Restart	String		
Unit	String		
Number	Integer		
Disp	Single(5)		
Drive	String(5)		
Bit	Boolean(15)		
SelectOffset	Integer		
CallIndex	Integer		
SelectIndex	Integer		
Dispparts_Visible	Boolean(3)		
Dispparts_Top	Integer		
Dispparts_Topout	Integer		
Dispparts_MaskTop	Integer(10)		
Dispparts_MaskSize	Integer(10)		
EditActive	Boolean		

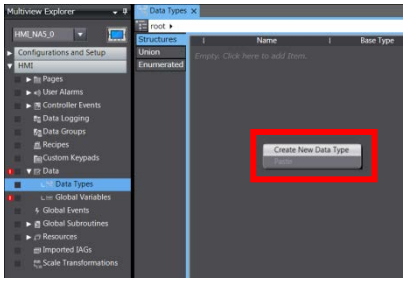
How to register NA structures are listed on the following pages.

- How to add the structures that have no setting of name space.

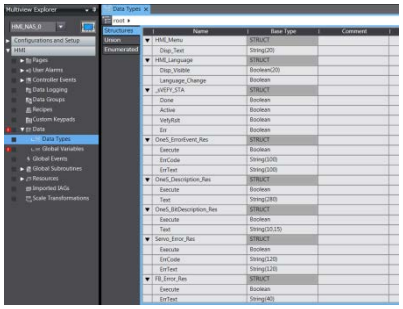
1. Select ”*HMI*” ->”*Data*” ->“*Data Types*” from the multiview explorer of NA project and double-click (or right-click -> Edit) to open the “ Data Types ” table.



2. When the “ Data Types ” table is active, right-click->”*Create New Data Type*” and register the variables given in the table above.



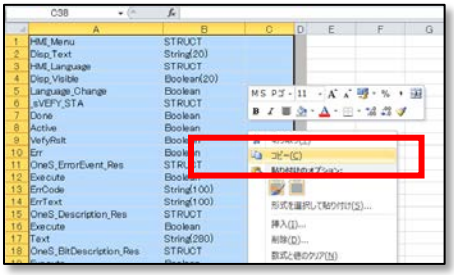
3. Validation errors will occur but can be cleared after importing the FB library file in the next step.



Additional Information

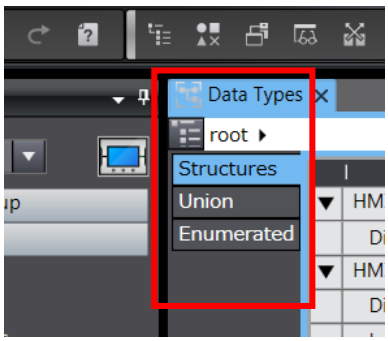
Use of the provided excel file for variable declaration allows you to easily copy and paste variables.

In step 2 above, copy the following data and paste them by selecting “*Paste*”.

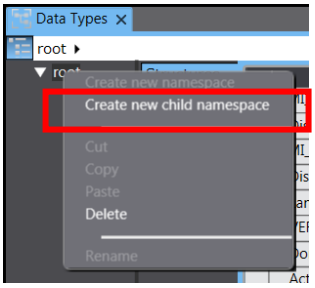


- How to add structure whose Name space is “ns_HMI”

1. Select ”*HMI*” ->”*Data*” ->“Data Types” from the multiview explorer of NA project and double-click (or right-click -> Edit) to open the “ Data Types ” table. Click the tree-structured icon next to ”root”.

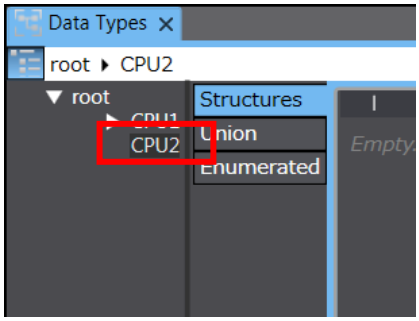


2. Select “*root*” and right-click to select” *Create new child namespace*”.

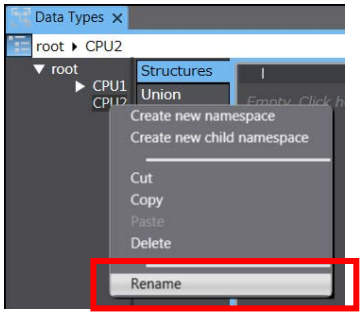


3. A new name space has been created.

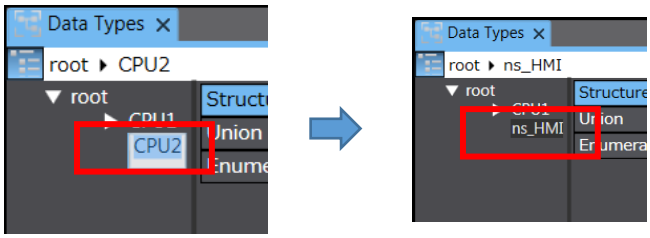
Since the name space “CPU1” already exists in this example, ”CPU2 ” (subsequent name space) has been created. If you create a name space when no name space has been set, “Namespace1” will be created.

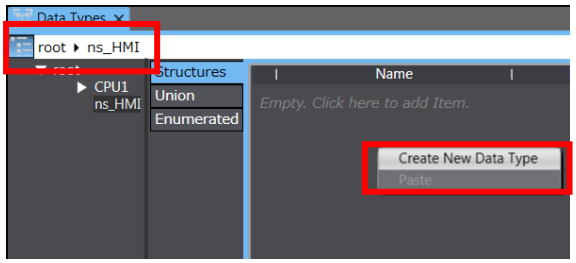
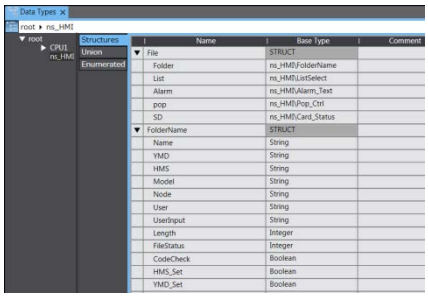


4. To rename the automatically created name space, select *CPU2*, right-click to select “*Rename*”.



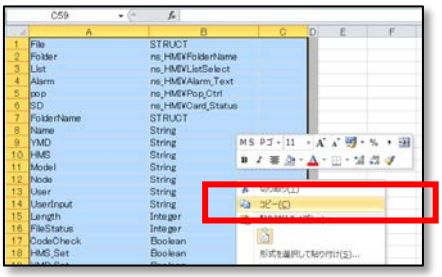
5. Rename the name space to [ns_HMI].



6. Make sure that [root > ns_HMI >] is shown. Right-click and select "*Create New Data Type*" and register the variables given in the table above.	
7. Validation errors will occur but can be cleared after importing the FB library file in the next step.	

Additional Information

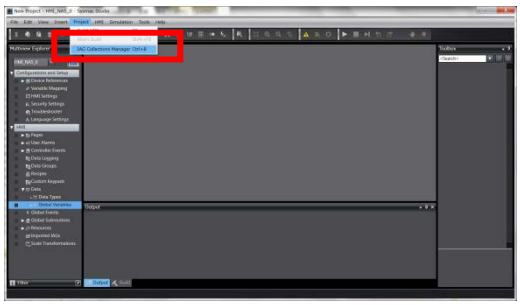
Use of the provided excel file for variable declaration allows you to easily copy and paste variables. In step 6 above, copy the following data and paste them by selecting "*Paste*".



10-6 Importing IAG File

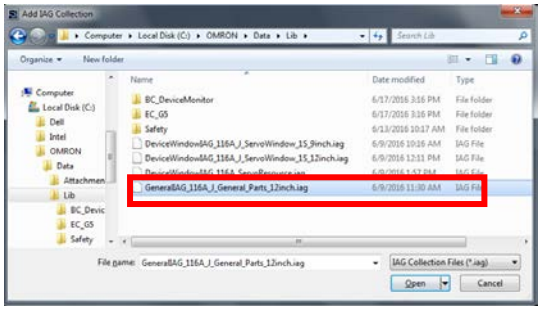
- How to import the IAG file to the HMI project

1. Select "*Project*" -> "*IAG Collections Manager*" to open IAG Collections Manager.

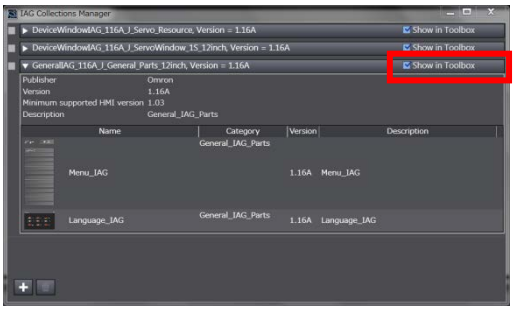


2. After the IAG Collections Manager window opens, select the + button.

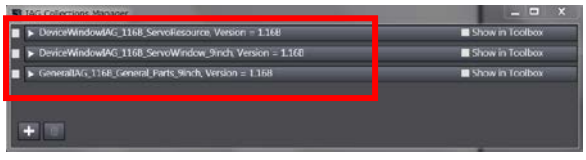
3. The dialog on the right opens. Select "*GeneralIAG_116B _General_Parts_12inch.iag*".



4. After the IAG file has been imported, select the "*Show in Toolbox*" checkbox and close the dialog box.
(Selecting the checkbox enables to use IAG objects on the HMI)



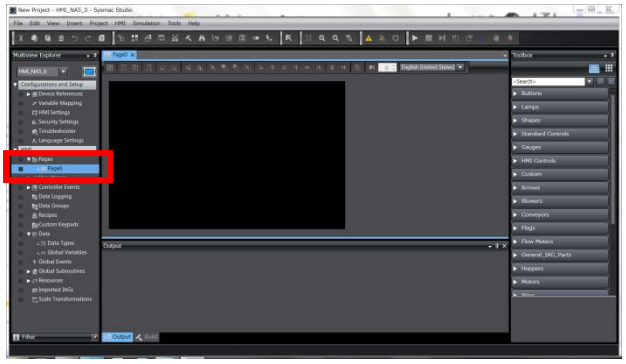
5. In the same way, import "DeviceWindowIAG_116B _ServoResource.iag", and "DeviceWindowIAG_116B _ServoWindow_1S_9inch", or "DeviceWindowIAG_116B _ServoWindow_1S_12inch.iag".



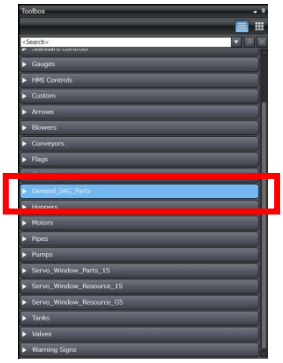
10-7 Placing IAG Object on NA Screen

- How to use the imported IAG objects on the HMI screen

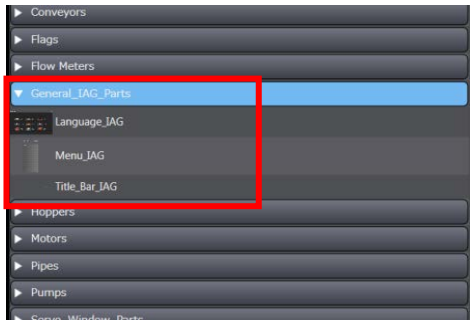
1. Select "*HMI*" ->"*Pages*" from the multiview explorer of NA project and select the page, in which you want to place the IAG, and double-click(or right-click -> Edit) to open the page editor.



2. Select "*General_IAG_Parts*" in Toolbox.

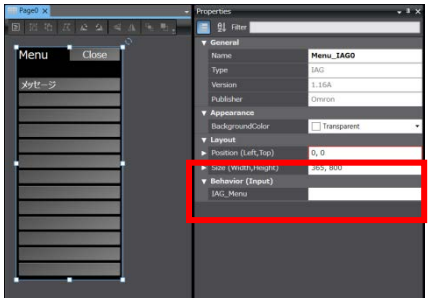


3. The IAG objects have been expanded (Two IAG objects in this example). Place them to the page editor in the same way as you place usual objects.



4. The IAG object has been placed. (pop-up menu IAG is placed on the Menu pop-up screen in this example)

5. Open the Properties of IAG objects and set input variables and I/O variables.
To register each variable in Behaviour (In/Out) and set events and actions in Properties, refer to Section 7 “*Details of IAG Specifications*”.



10-8 Adding Subroutine/ Event and Action to Page

You need to write the subroutines as well as events and actions on the following NA screens.

Screen	Required/ Not required	Required extra step
Screen in which pop-up menu IAG is placed	Required	Event and Action Subroutine
Screen in which monitoring IAG is placed	Required	Event and Action
Screen in which setting IAG is placed	Required	Event and Action
Screen in which maintenance IAG is placed	Required	Event and Action
Screen in which language selection IAG is placed	Required	Event and Action
Screen in which message resource IAG is placed In this guide, placed on the background screen.	Required	Event and Action

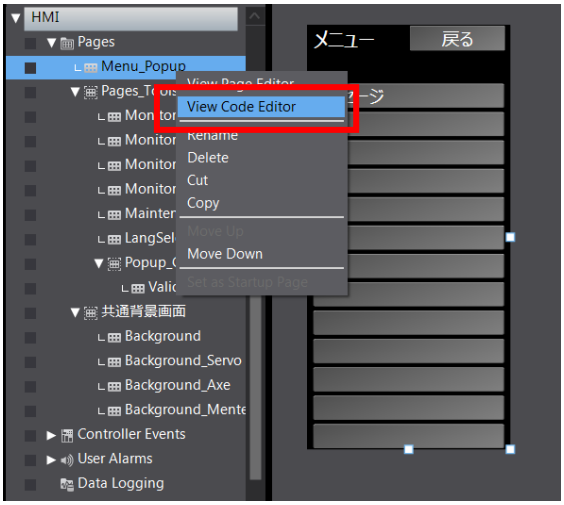
The detailed procedure and sample program are described in the following section.

10-8-1 Extra Steps Required to Use Menu IAG Object

You can display any message, which is registered in the resources, on each button of the menu screen. The message is displayed on the screen when the page has been displayed.

- How to set subroutines of events and actions

1. From the multiview explorer of NA project, select the page, in which you placed IAG, and right-click->select "*View Code Editor*" to display the code editor of page subroutine.



2. Write the sample program shown on the right to the page subroutine.
(In this example, display “Servo_String10” registered in the resources to [HMI_MaimMenu.Disp_Text(0)], “Servo_String11” to [HMI_MaimMenu.Disp_Text(1)], “Servo_String12” to [HMI_MaimMenu.Disp_Text(2)], “Servo_String13” to [HMI_MaimMenu.Disp_Text(3)])
(The green letters indicate lines for comments)

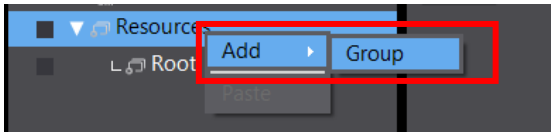
```
Sub Text_Disp_set

    HMI_MaimMenu.Disp_Text(0) = GetResourceString("Servo_String10")

    HMI_MaimMenu.Disp_Text(1) = GetResourceString("Servo_String11")
    HMI_MaimMenu.Disp_Text(2) = GetResourceString("Servo_String12")
    HMI_MaimMenu.Disp_Text(3) = GetResourceString("Servo_String13")
'   HMI_MaimMenu.Disp_Text(4) = GetResourceString("Servo_String14")
'   HMI_MaimMenu.Disp_Text(5) = GetResourceString("Servo_String15")
'   HMI_MaimMenu.Disp_Text(6) = GetResourceString("Servo_String16")

End Sub
```

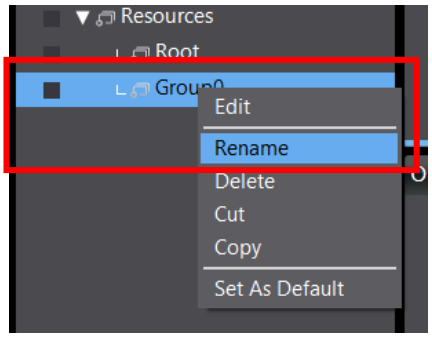
3. In this step, add the servo items to the resource.

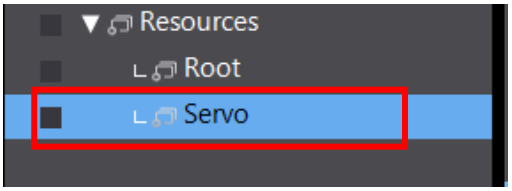
To create a new resource group, select “*Resources*” and right-click and select “*Add*” -> “*Group*”.

To rename the new resource group, right-click the new resource group and select ”*Rename*”.

The new resource group is renamed as “Servo” in this example.

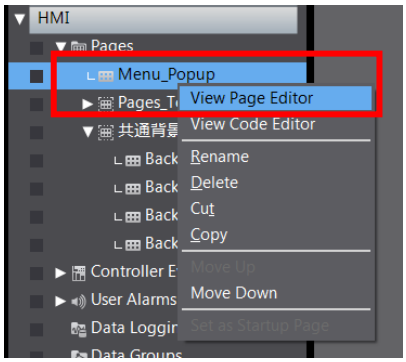




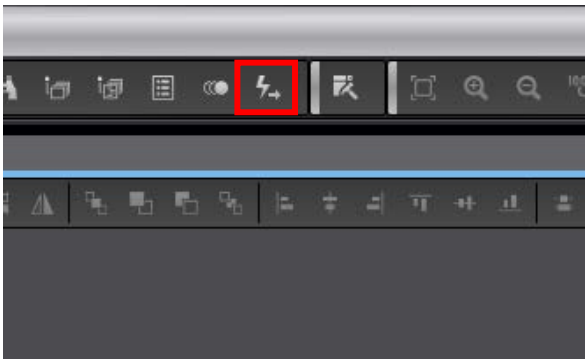


4. Set the strings as shown on the right for the resources of the NA project.

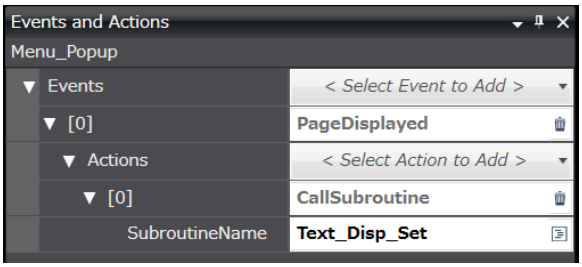
5. From the multiview explorer of NA project, select the page, in which you placed IAG, and double-click (or right-click) ->select ”View *Page Editor*” to display the page editor.



6. Select the ”Event and Action” icon from Toolbar.



7. Select ”*PageDisplayed*” for Events and ”*CallSubrutine*” for Actions. Enter [*Text_Disp_Set]* that you set in step 2 for Subroutine.



The above procedure allows you to display messages, which are registered in resource, on the menu button when starting the Menu screen.

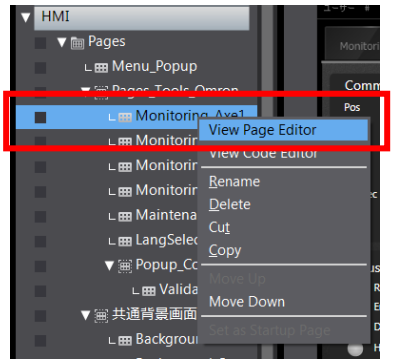
10-8-2 Extra Steps Required to Use Monitoring IAG Object

The screen that displays the monitoring IAG objects can be displayed from the Menu Screen. To move to this screen from other screen using menu operation, you need to initialize the button status of axis monitor menu.

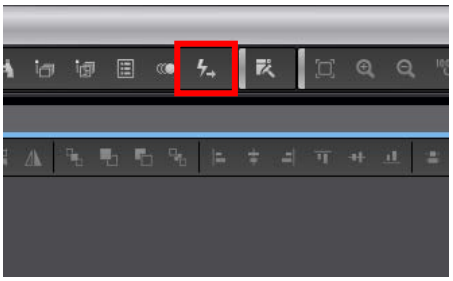
When the screen that shows the monitoring IAG objects is displayed, set the Flag for “PageDisplayed” in Events so that the button status is initialized.

- How to make the above setting

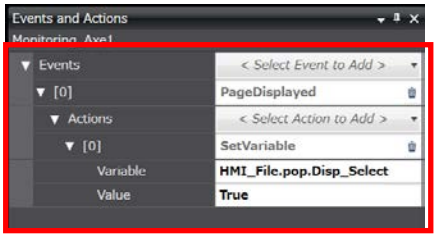
1. From the multiview explorer of NA project, select the page, in which you placed the monitoring IAG object, and right-click->select ”*View Page Editor*” to display the page editor.



2. Select the ”*Event and Action*” icon from Toolbar.

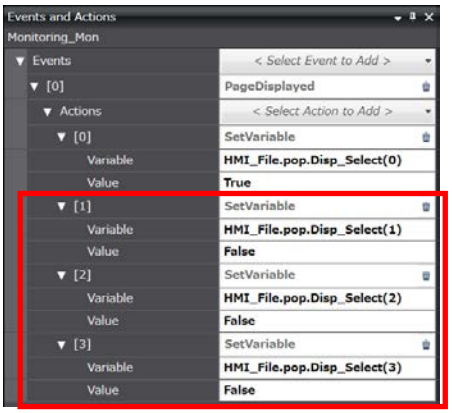


3. Select ”*PageDisplayed*” for Events and ” *SetVariable*” for Actions. Set “*HMI_File.pop.Disp_Select(0)*” for Variable and enter *True* for Value.



4. In the same way, assign values to the following variables, and then enter False for Value.

・HMI_File.pop.Disp_Select(1)
・HMI_File.pop.Disp_Select(2)
・HMI_File.pop.Disp_Select(3)



10-8-3 Extra Steps Required to Use Setting IAG Object

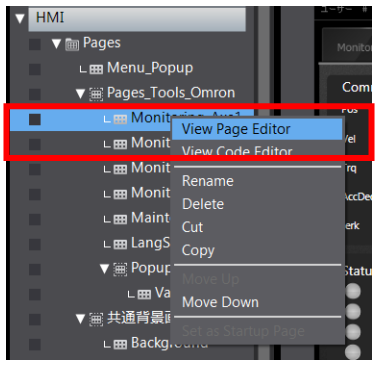
The status of the screen, which displays the setting IAG objects, will be initialized when the screen opens.

The program that initializes the status is written in the IAG object.
In this section, set the value of flag that executes the program.

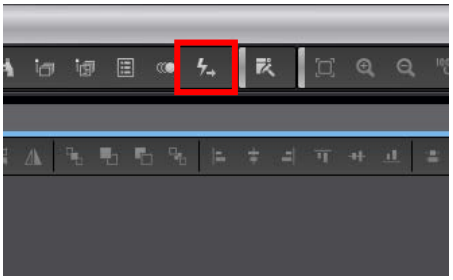
When the screen that shows the setting IAG objects is displayed, change the Flag to TRUE for “PageDisplayed” in Events.

- How to make the above setting

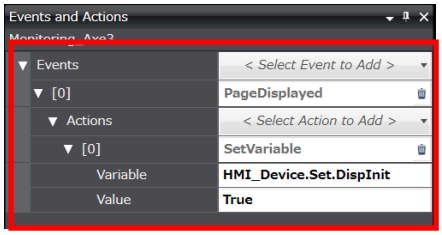
1. From the multiview explorer of NA project, select the page, in which you placed the setting IAG object, and right-click->select ”*View Page Editor*” to display the page editor.



2. Select the ”Event and Action” icon from Toolbar.



3. Select ”*PageDisplayed*” for Events and ” *SetVariable*” for Actions.
Set “ *HMI_Device.Set.DispInit* ” for Variable, and enter *True* for Value.



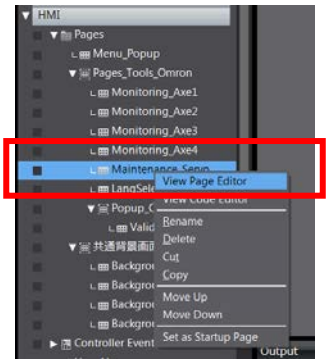
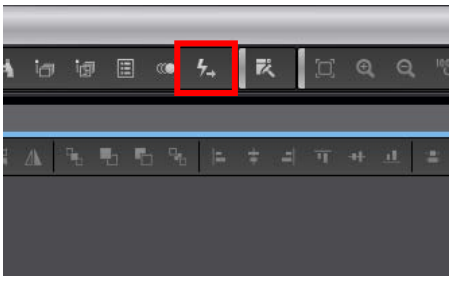
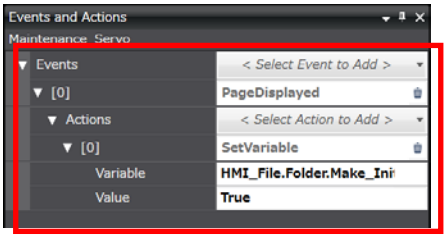
10-8-4 Extra Steps Required to Use Backup & Restore IAG Object

The variables will be initialized when opening the screen that displays the backup & restore IAG object.

The program that initializes variables is written in the IAG object.
In this section, set the value of flag that executes the program.

When the screen that displays the backup & restore IAG objects is displayed, change the Flag to TRUE for “PageDisplayed” in Events.

- How to make the above setting

1. From the multiview explorer of NA project, select the page, in which you placed the backup & restore IAG object, and right-click->select ”*View Page Editor*” to display the page editor.	
2. Select the ”Event and Action” icon from Toolbar.	
3. Select ”*PageDisplayed*” for Events, and ” *SetVariable*” for Actions. Set “*HMI_File.Folder.Make_Init* ” for Variable, and enter *True* for Value.	

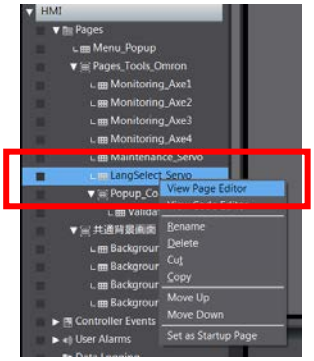
10-8-5 Extra Steps Required to Use Language Selection IAG Object

You can show/hide the language switching buttons in the language selection IAG object.

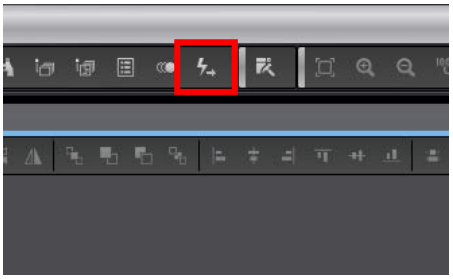
When the screen that displays the language selection IAG objects is displayed, change the Flag to TRUE for “PageDisplayed” in Events.

- How to make the above setting

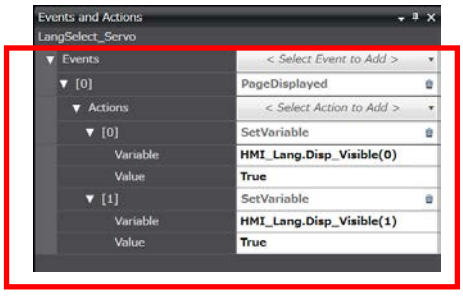
1. From the multiview explorer of NA project, select the page, in which you placed the language selection IAG object, and right-click->select ”*View Page Editor*” to display the page editor.



2. Select the ”*Event and Action*” icon from Toolbar.



3. Select ”*PageDisplayed*” for Events, and ” *SetVariable*” for Actions.
Set “ *HMI_Lang.Disp_Visible(0)* ” for Variable, and enter *True* for Value.



Precautions for Correct Use

For description of the variables to be set and country flags to show/ hide,
refer to *Table of “Event name for each national flag button”* given in Section 7-25-4.

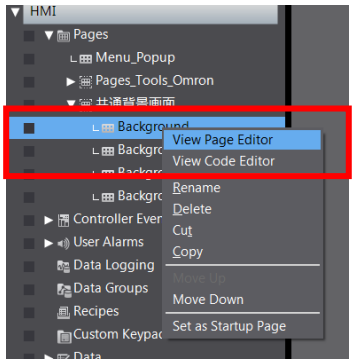
10-8-6 Extra Steps Required to Use Message Resource IAG Object

Each type of message resource IAG object corresponds to all the screens, therefore, you need to place this IAG to the background screen that is commonly used for all the screens.
Place this object outside the screen since this object does not need to be displayed inside the screen. (Even though a warning appears during build, this doesn't cause any operational problem)

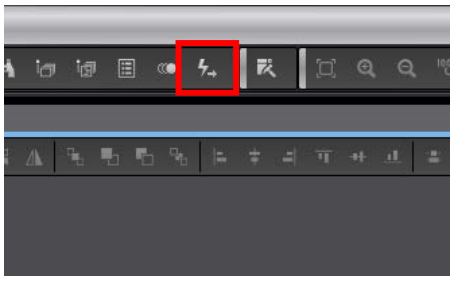
When the screen that shows the message resource IAG objects is displayed, change the Flag to TRUE for "PageDisplayed" in Events.

- How to make the above setting

1. From the multiview explorer of NA project, select the page, in which you placed the message resource IAG object, and right-click->select "*View Page Editor*" to display the page editor.

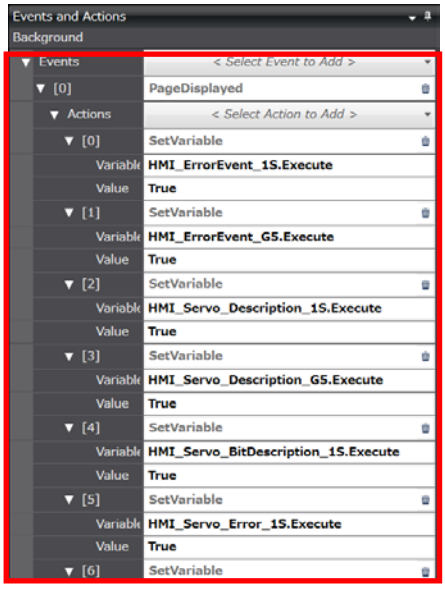


2. Select the "*Event and Action*" icon from Toolbar.



3. Select [*PageDisplayed*] for Events, and [*SetVariable*] for Actions.
Set [HMI_ ErrorEvent_1S.Execute] for Variable, and enter *True* for Value.

   In the same way, enter True for "Value" for the following variable.
   ·HMI_ ErrorEvent_G5.Execute
   ·HMI_Servo_Description_1S.Execute
   ·HMI_Servo_Description_G5.Execute
   ·HMI_Servo_BitDescription_1S.Execute
   ·HMI_Servo_Error_1S.Execute
   ·HMI_Servo_Error_G5.Execute
   ·HMI_Motion_ErrorEvent.Execute
   ·HMI_FB_Error.Execute



11 Confirmation Before Use

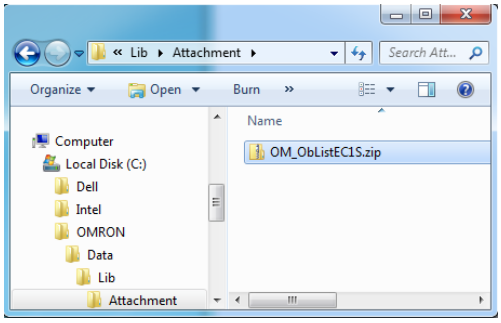
11-1 Preparing the SD Card

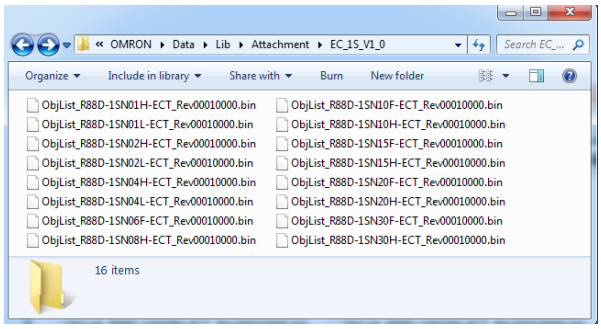
The EtherCAT 1S -series Sysmac Library is used in this program.
To backup the data, the FB using this program refers to the object list.

You need to create a directory “ OM_ObjList¥Drive” in the root directory of SD card and store the object list provided by OMRON.

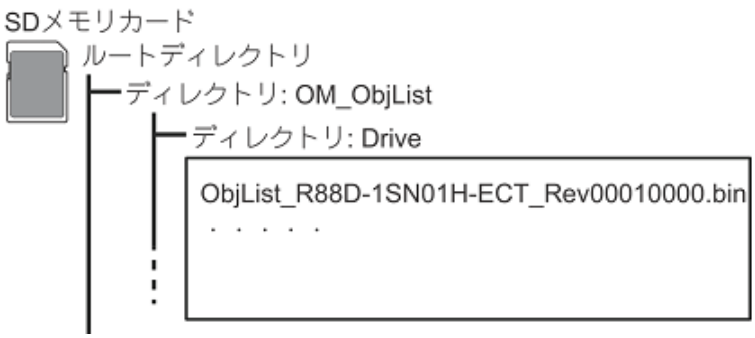
The object list will be stored as Zip file in the following folder if the library is installed without changing the location to save the library.

C:¥OMRON¥Data¥Attachment





After extracting the Zip file, store all the extracted object lists to the SD card.



Revision History

Revision code	Date	Revised content
01	July, 2016	Original production
02	August, 2016	G5 Servo supported

Note: Do not use this document to operate the Unit.

OMRON Corporation **Industrial Automation Company**

Tokyo, JAPAN

Contact: www.ia.omron.com

Regional Headquarters

OMRON EUROPE B.V.
Wegalaan 67-69, 2132 JD Hoofddorp
The Netherlands
Tel: (31)2356-81-300/Fax: (31)2356-81-388

OMRON ELECTRONICS LLC
2895 Greenspoint Parkway, Suite 200
Hoffman Estates, IL 60169 U.S.A
Tel: (1) 847-843-7900/Fax: (1) 847-843-7787

OMRON ASIA PACIFIC PTE. LTD.
No. 438A Alexandra Road # 05-05/08 (Lobby 2),
Alexandra Technopark,
Singapore 119967
Tel: (65) 6835-3011/Fax: (65) 6835-2711

OMRON (CHINA) CO., LTD.
Room 2211, Bank of China Tower,
200 Yin Cheng Zhong Road,
PuDong New Area, Shanghai, 200120, China
Tel: (86) 21-5037-2222/Fax: (86) 21-5037-2200

Authorized Distributor:

Cat. No. V437-E1-02 0816 (0716)