

PLC HMI Web setting

DENSO

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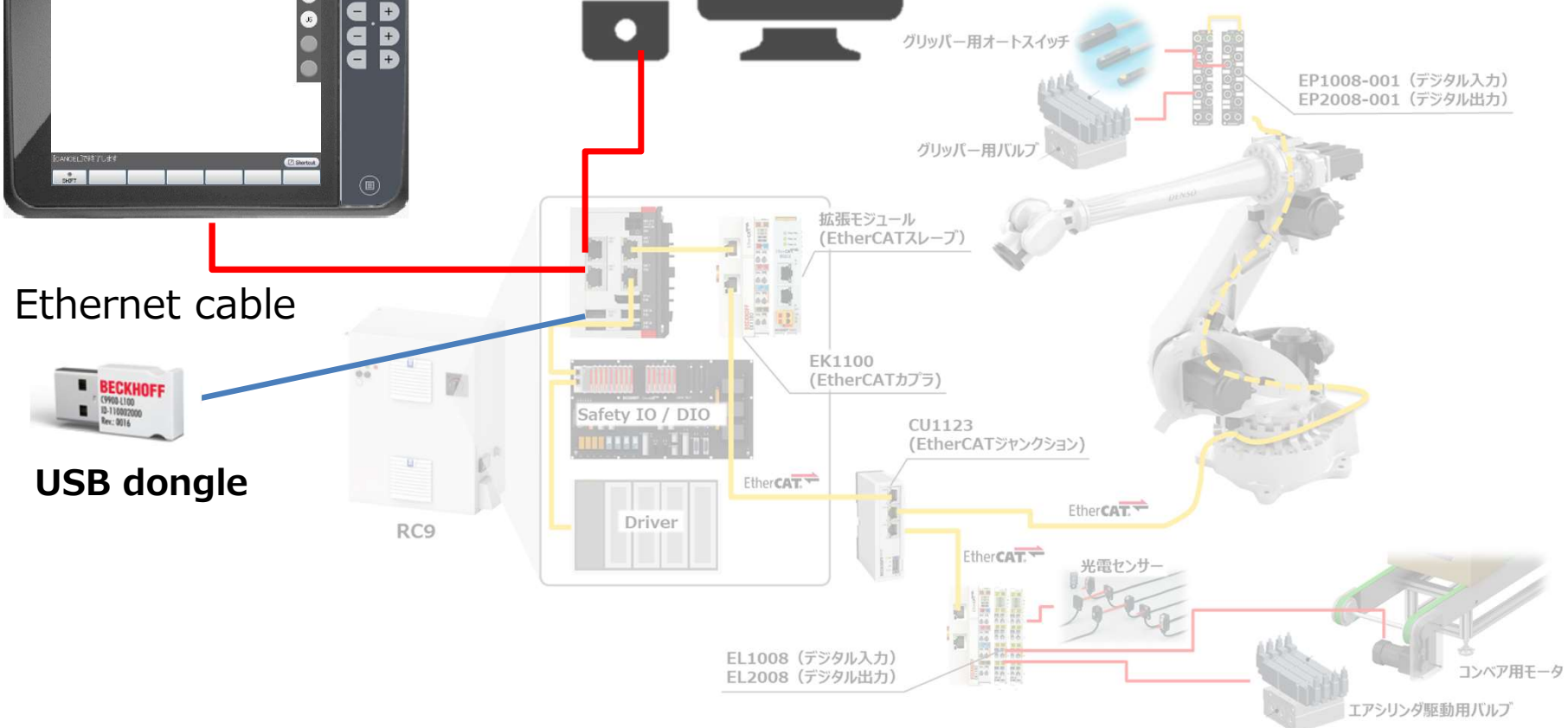
PLC HMI Web configuration



Browser

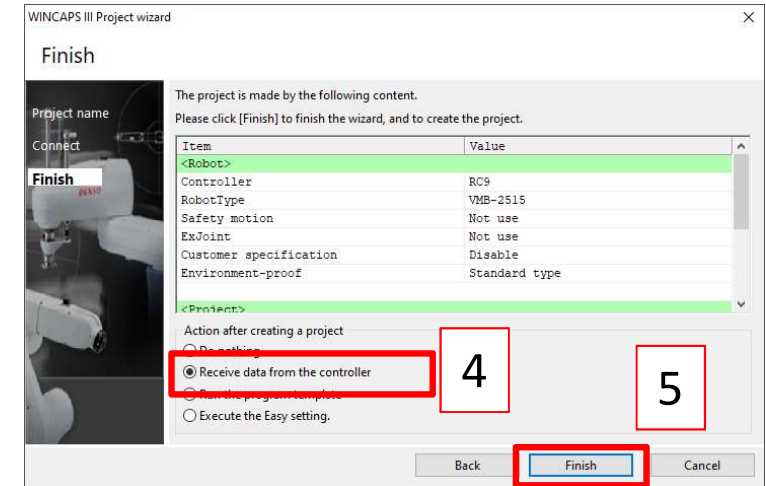
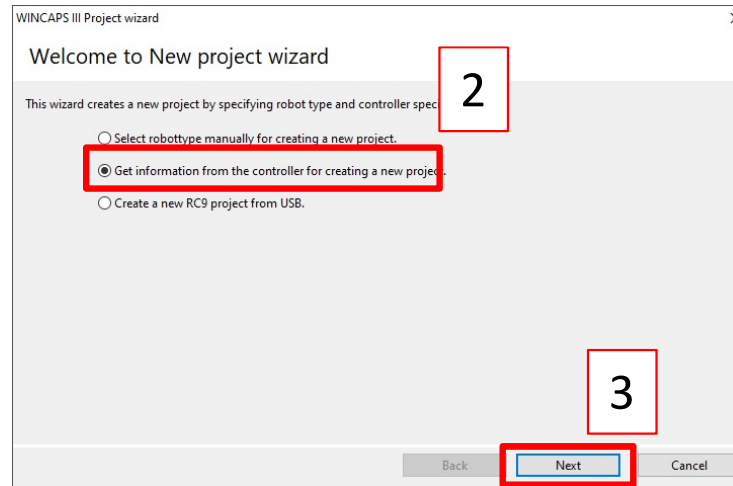
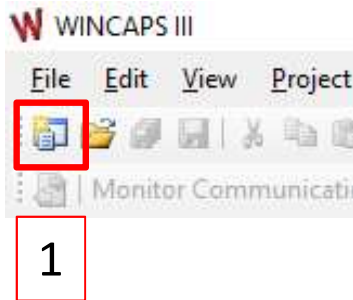


TF1810 TC3 PLC HMI Web



Get TwinCATData

Get TwinCATData using WINCAPSIII.

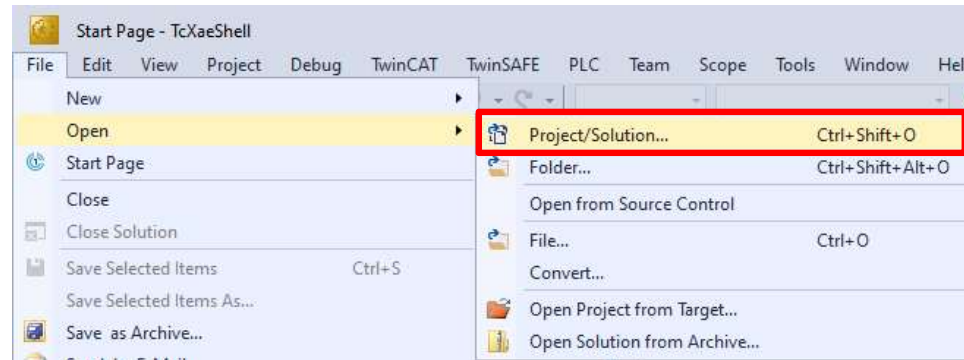


Read TwinCATData

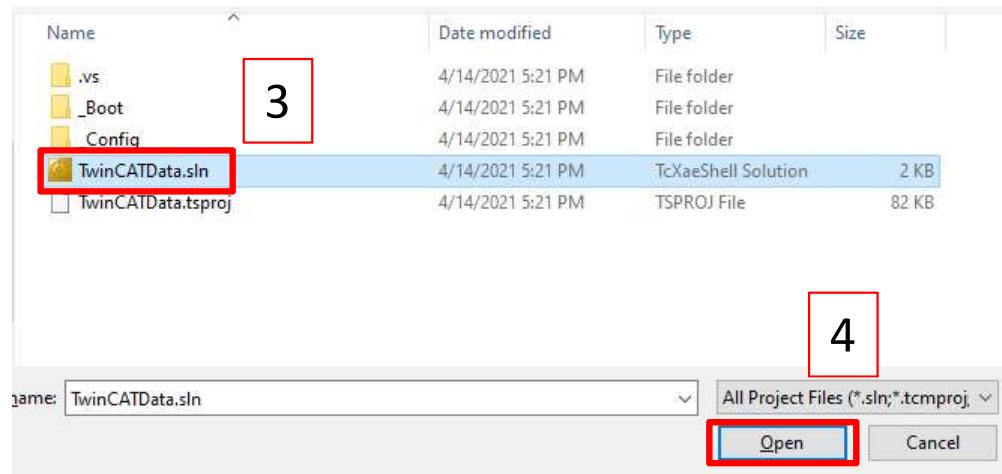
Read the acquired TwinCATData with XAE.



1



2

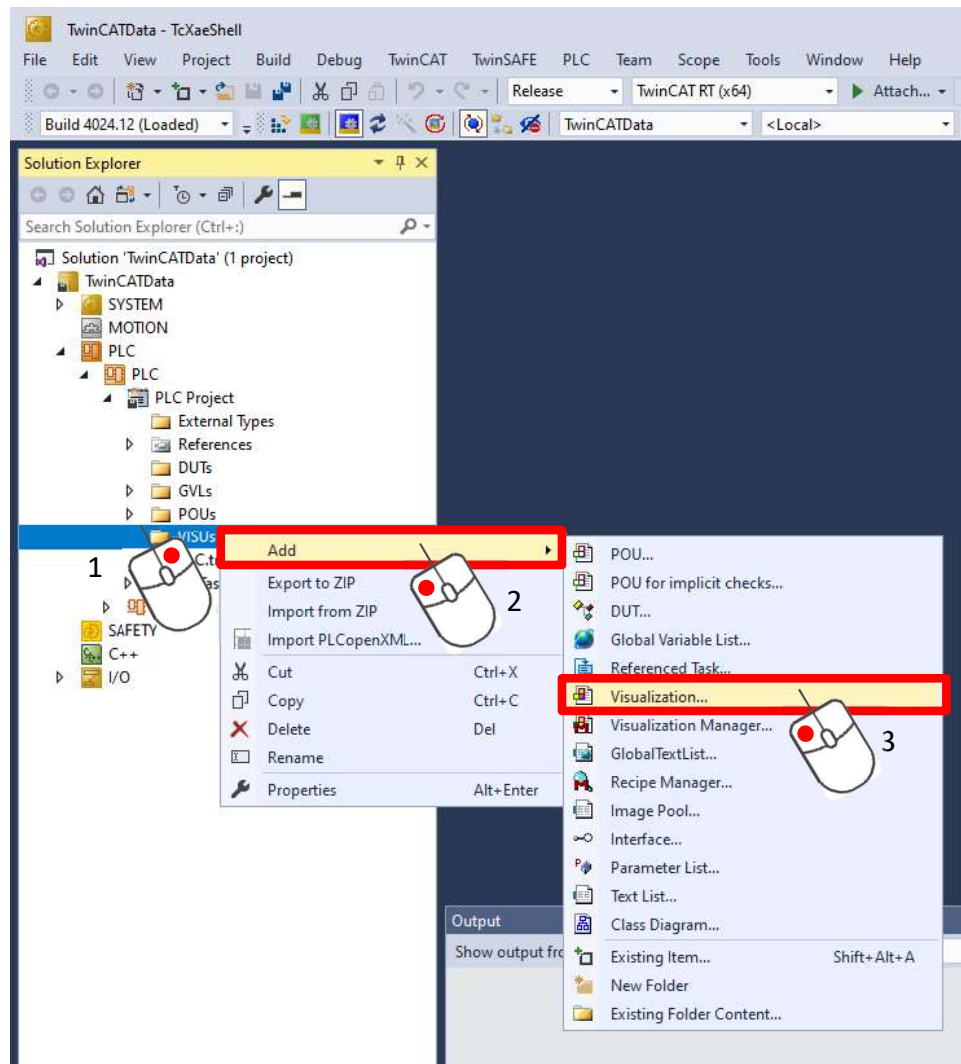


3

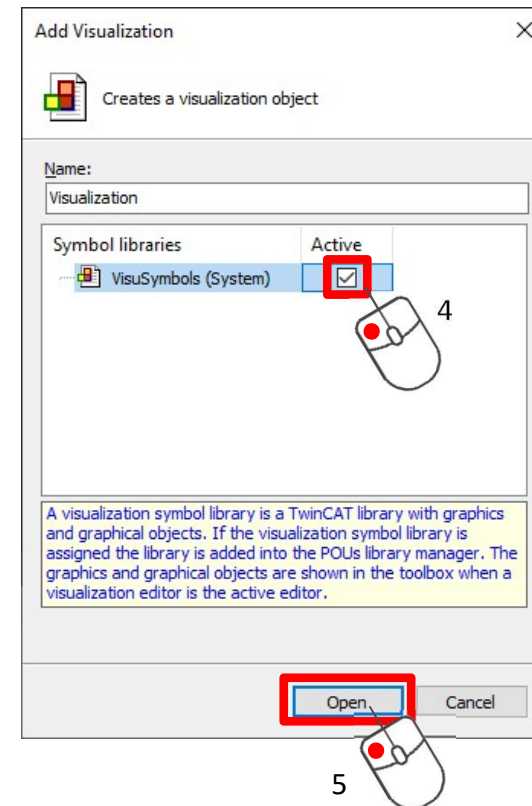
4

Select [Project name]¥[Project name]¥TwincatData¥TwinCATData.sln.

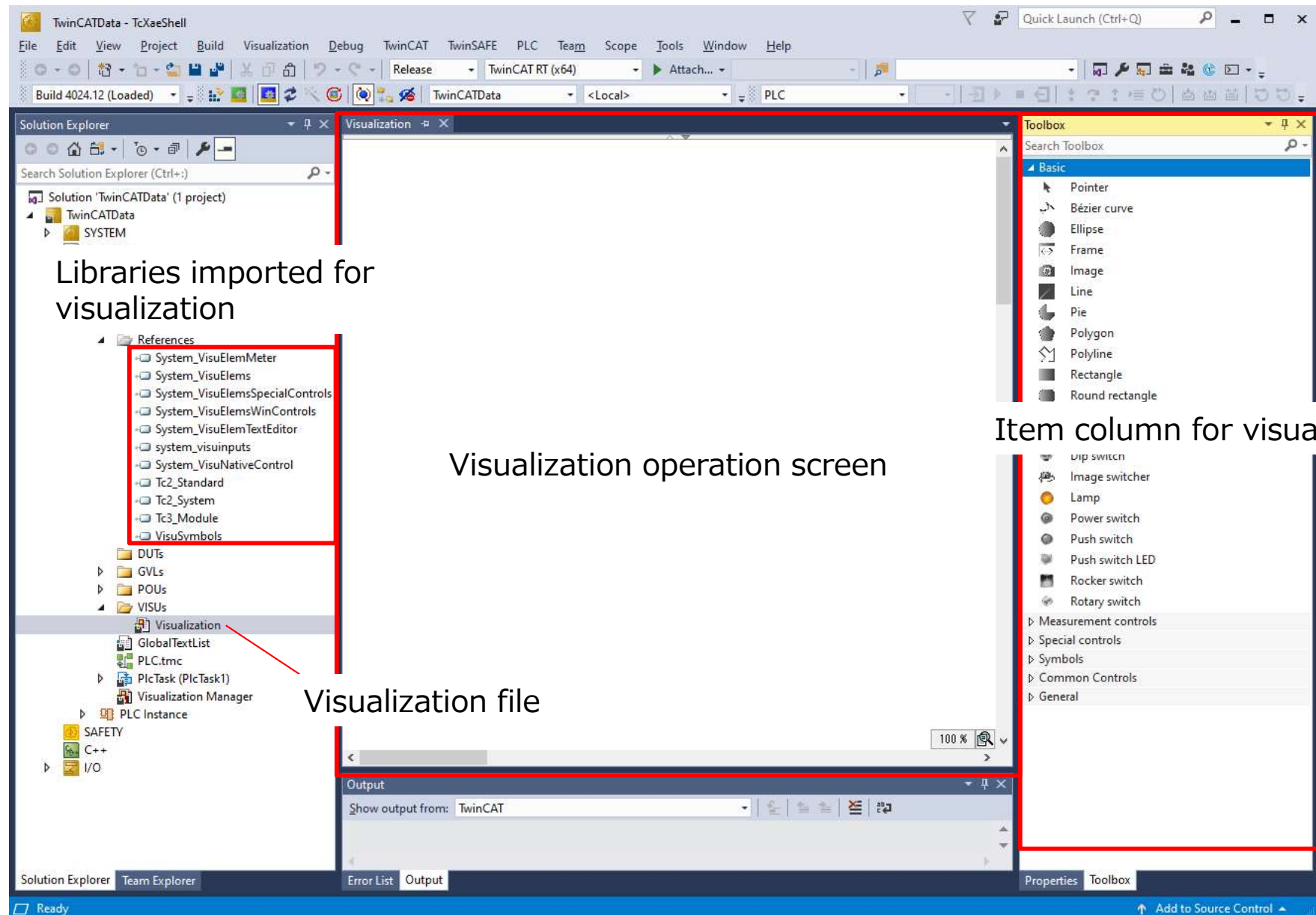
Visualization File generation



Check the [Active] to import the necessary libraries for visualization.

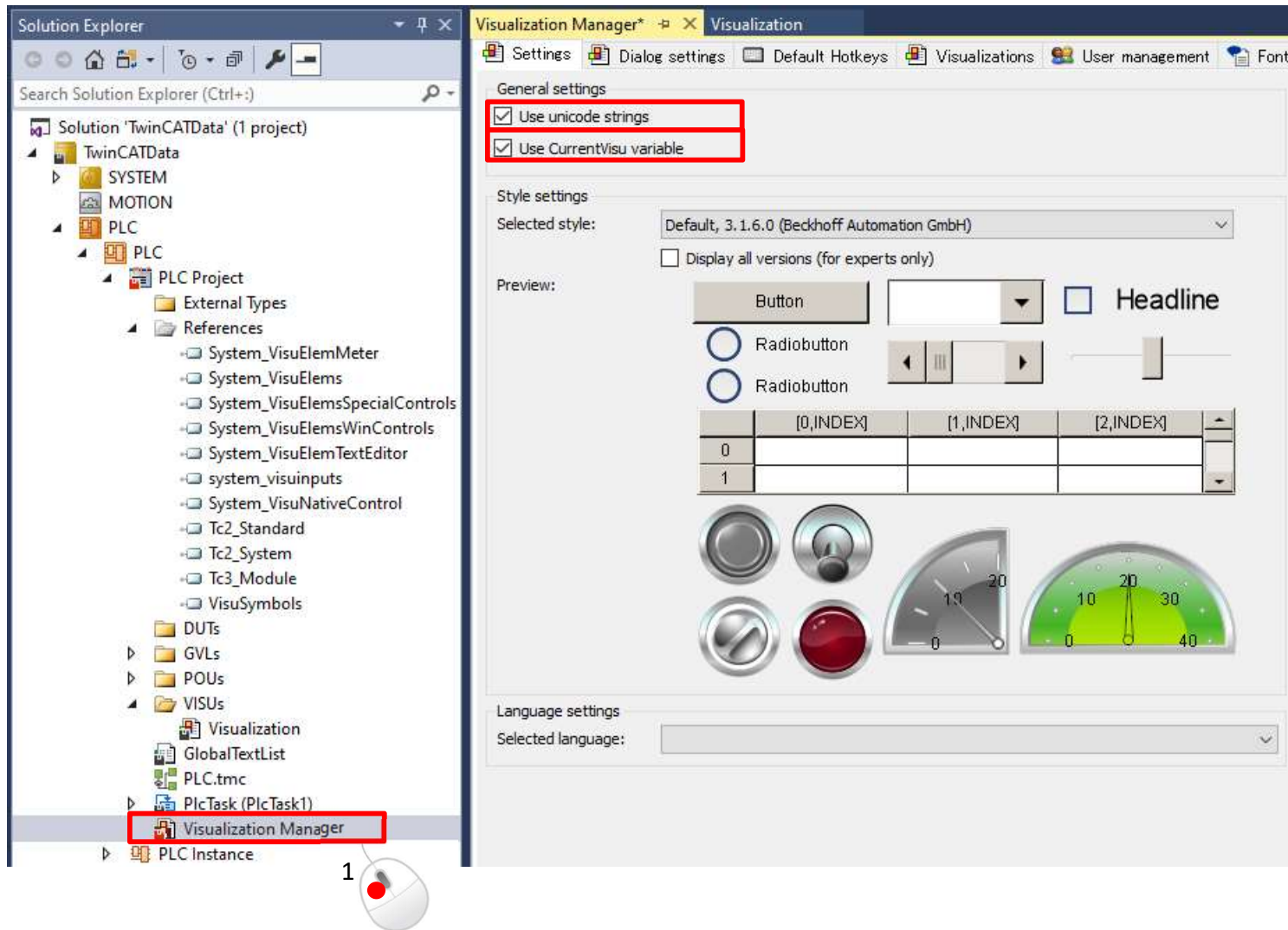


Visualization screen layout



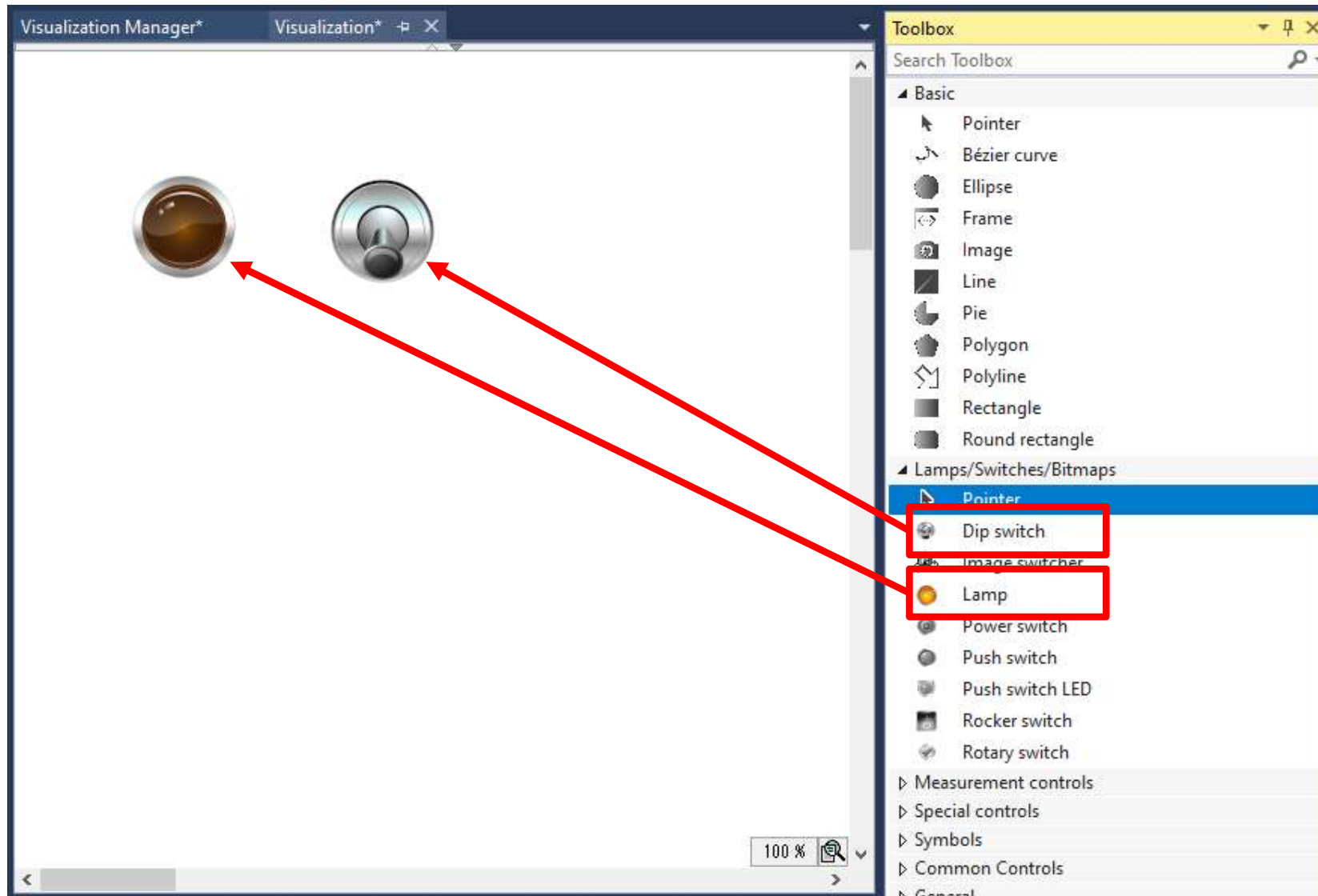
Visualization setting

Select items enclosed by red boxes.



Visualization Tool placement

Paste the tool from the toolbox into visualization.



Visualization I/O allocation

- 1) Select the [Dip switch] and 2) click on the right side of the [Variable] in the Properties window.
- 3) Select the [Irobot_OUT] imported by [TwinCAT PLC and VRC connection setting].
- 4) Allocate the [IRobot_OUT] bit to the [Variable].

Example: [6].0 -> 6Bytes 0bit = $6 * 8 + 0 = 48$ th bit (0 bit start)

1

2

3

4

Variable

Element behavior

Image toggler

Height 70

Variable IRobot_OUT[6].0

Element behavior Image toggler

Input Assistant

Name	Type	Address	Origin
PLC	Application		
GVLs			
GVL	VAR_GLOBAL		
Irobot_OUT	ARRAY [0..31] OF BYTE	%I*	
IRobot_OUT	ARRAY [0..31] OF BYTE	%Q*	
VisuElems	VAR_GLOBAL		
Tc2_Standard	Library		Tc2_Standard, 3.3.3....
Tc2_System	Library		Tc2_System, 3.4.24....
Tc3_Module	Library		Tc3_Module, 3.3.21....
TwinCAT_SystemInfoVa...	VAR_GLOBAL		

Documentation:

IRobot_OUT AT %Q*: ARRAY [0..31] OF BYTE;
(VAR_GLOBAL)

OK Cancel

Visualization I/O allocation

- 1) Select the [Lamp]
- 2) click on the right side of the [Variable] in the Properties window.
- 3) Select the [Irobot_IN] imported by [TwinCAT PLC and VRC connection setting].
- 4) Allocate the [IRobot_IN] bit to the [Variable].

Example: [6].4 -> 6Bytes 4bit = $6 * 8 + 4 = 52$ th bit (0 bit start)

The image shows a sequence of steps for I/O allocation in the TwinCAT environment:

- Step 1:** Selecting the [Lamp] element in the Visualization Manager.
- Step 2:** Clicking on the right side of the [Variable] property in the Properties window.
- Step 3:** Selecting the [Irobot_IN] variable in the Input Assistant window.
- Step 4:** Allocating the [Irobot_IN] bit to the [Variable] in the Properties window.

The Properties window shows the following table:

Property	Value
Element name	GenElemInst_2
Type of element	Lamp
Position	
X	78
Y	82
Width	70
Height	70
Variable	I
Texts	
Tooltip	
State variables	

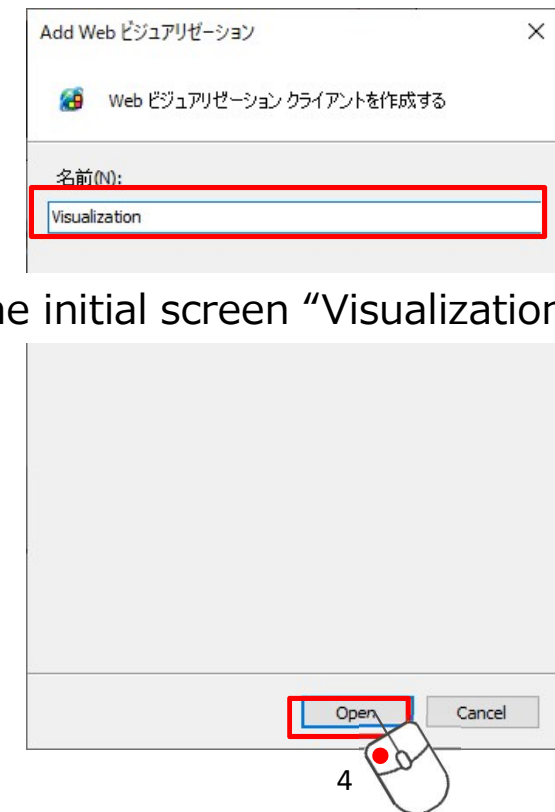
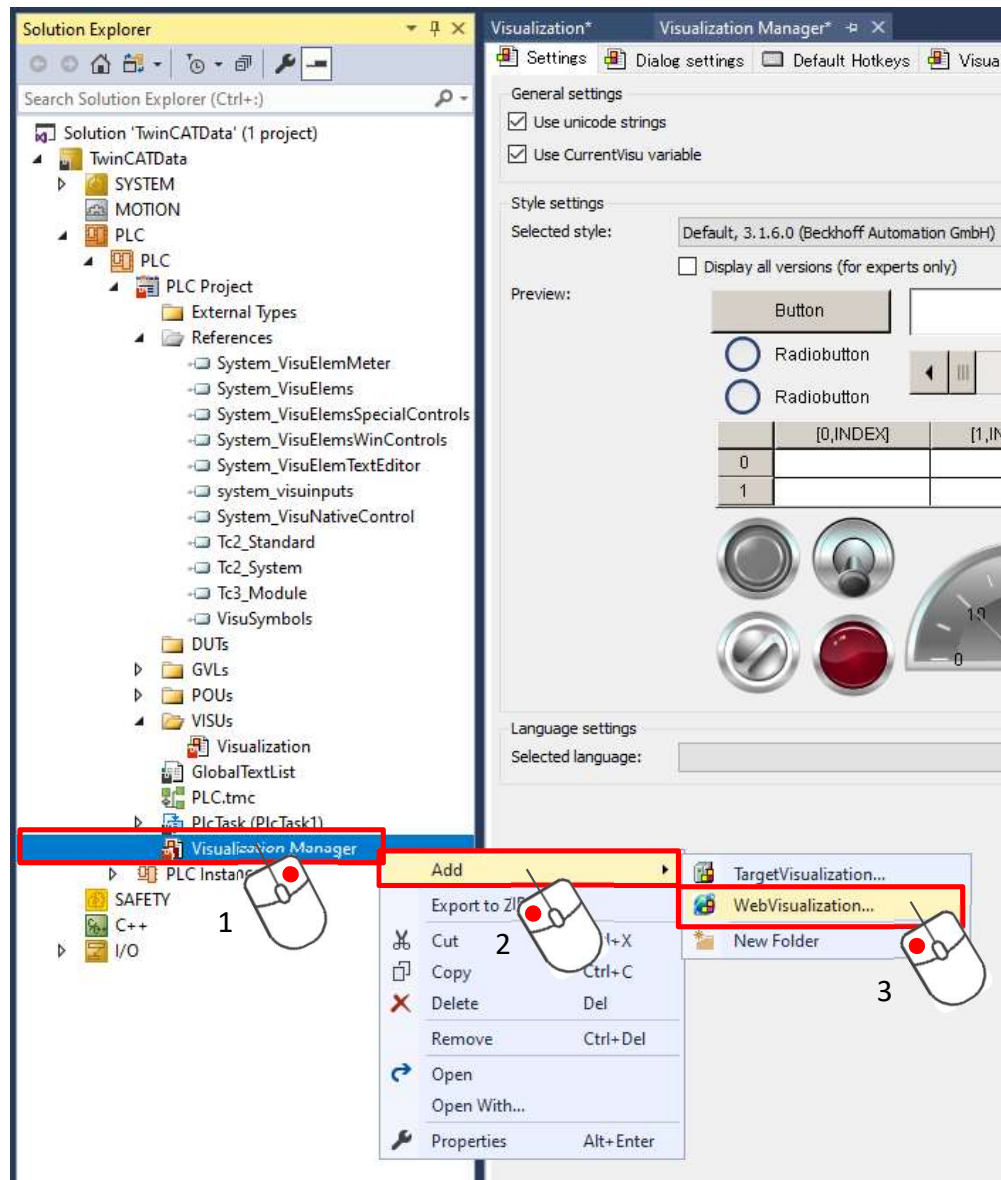
The Input Assistant window shows the following table:

Name	Type	Address	Origin
PLC	Application		
GVLs			
Irobot_IN	ARRAY [0..31]	%I*	
Q		%Q*	
TypeSystem	VAR_GLOBAL		
VisuElems			
Tc2_Standard	Library		Tc2_Standard, 3.3.3....
Tc2_System	Library		Tc2_System, 3.4.24....
Tc3_Module	Library		Tc3_Module, 3.3.21....
TwinCAT_SystemInfoVa...	VAR_GLOBAL		

The Properties window shows the following table:

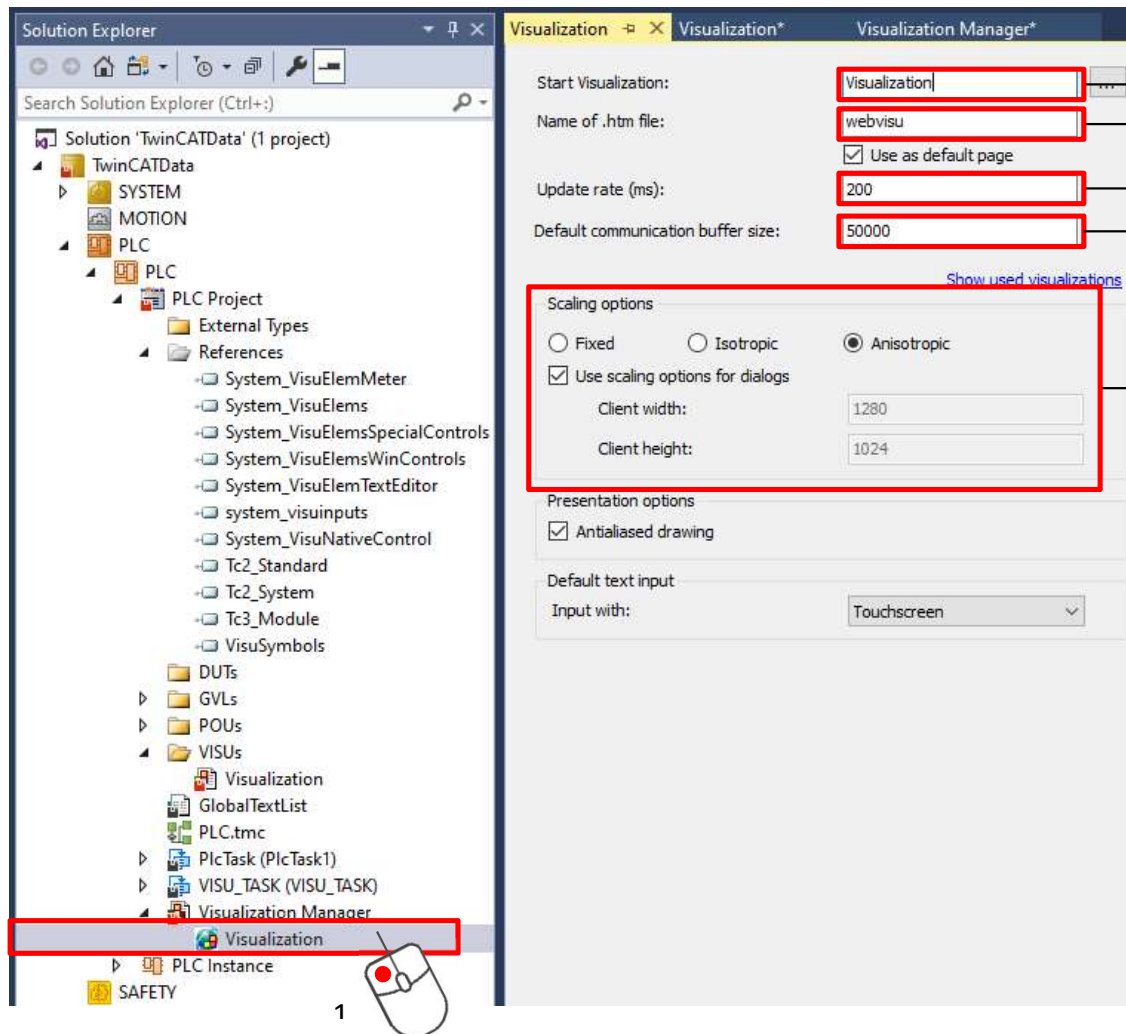
Property	Value
Height	70
Variable	Irobot_IN[6].4
Texts	

WebVisualization File creation



Name the initial screen "Visualization".

WebVisualization Property setting



Select newly created [Visualization]

File setting on the initial screen

Screen is called when PLC HMI Web starts

Setting of HMI Web HTML page

htm file name of the screen that will be called to the PLC HMI Web startup
→The name in red letters at the address below

Default address

http://IP address/Tc3PlcHmiWeb/Port_851/Visu/index.htm
The blue letters are controller address to connect to.

Update cycle

Browser update cycle (ms)
Initial value: 200ms

Communication buffer size

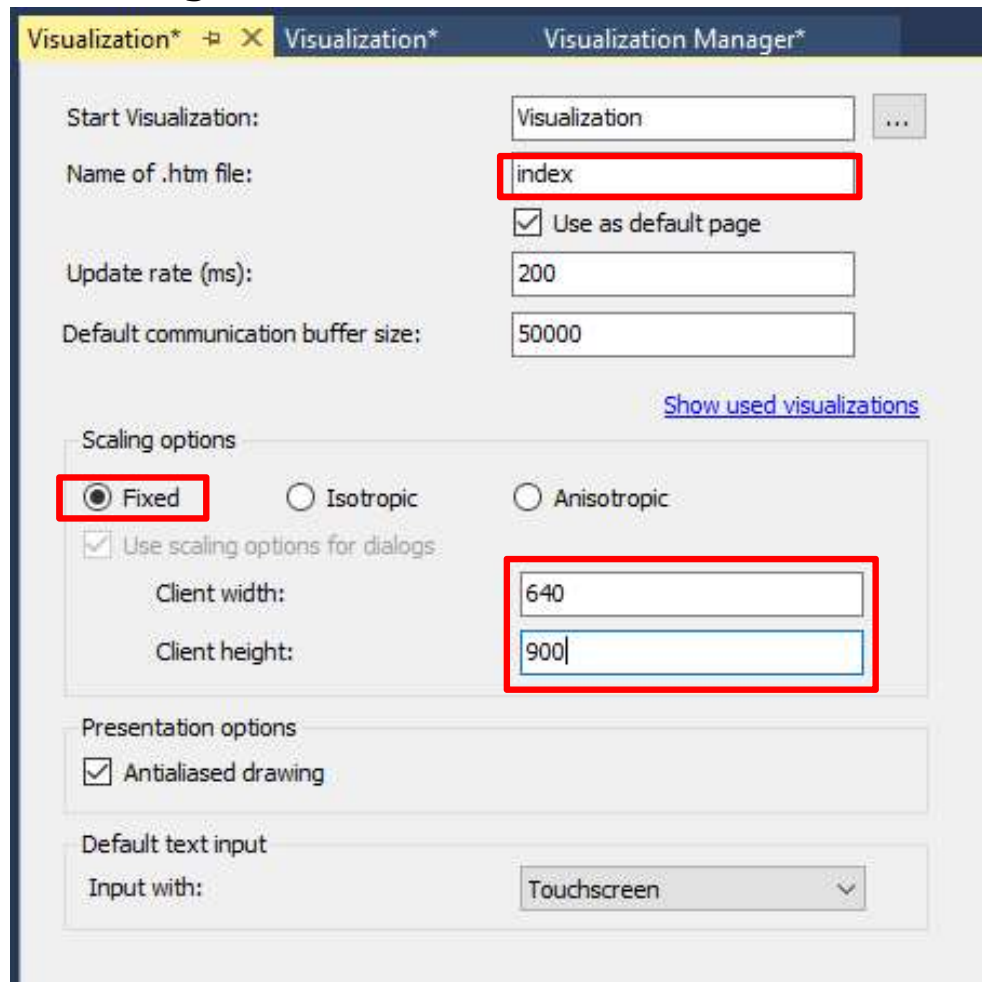
Maximum memory available for data transfer(Byte)
Initial value: 50,000Byte

Screen size setting

- Fixed: Independent of browser window size
- Isotropic: Depends on browser window size
Keep the item ratio
- Anisotropic: Depends on browser window size
Does not retain item ratio

WebVisualization Property setting

Rename the file to "index" for display on Smart TP.
In the [Scaling options], select the [Fixed] and enter "640" in the width and "900" in the height.

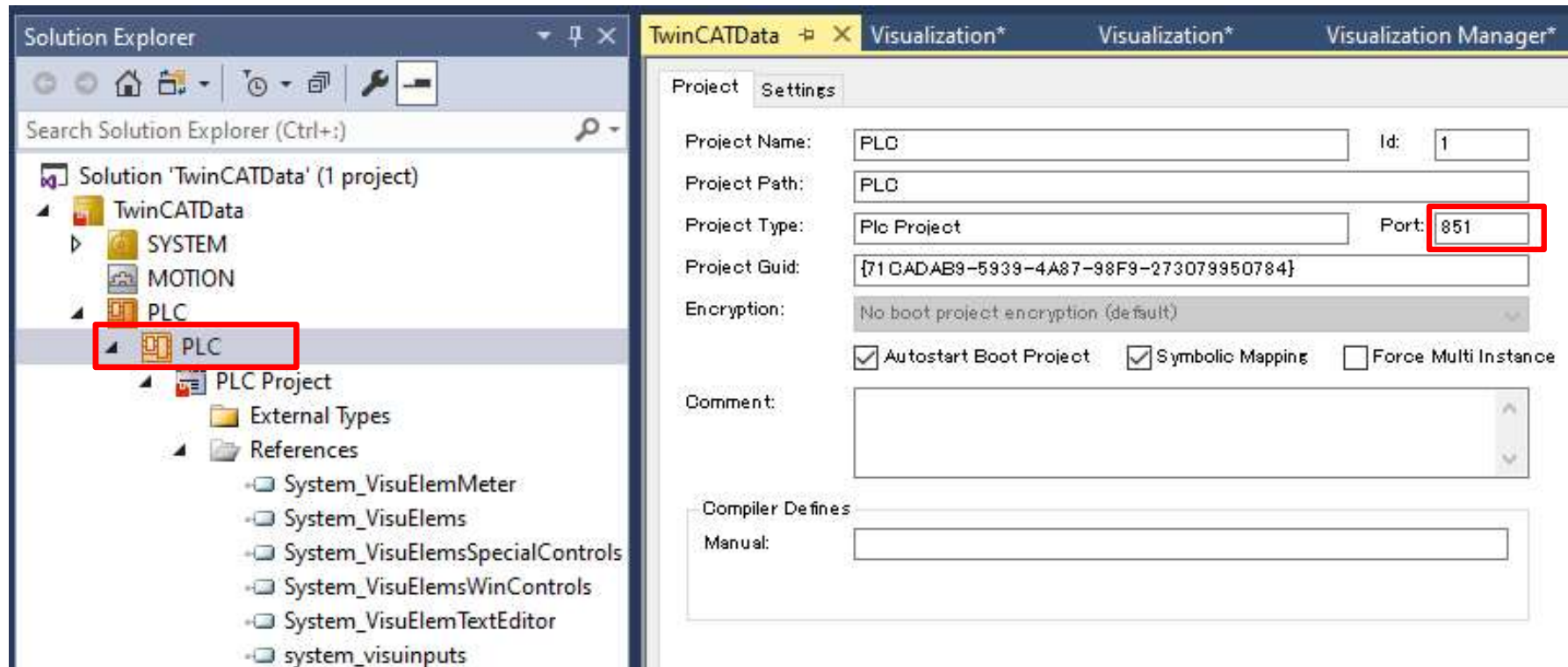


The screenshot shows the 'Visualization Manager' dialog box with the following settings:

- Start Visualization: Visualization
- Name of .htm file: index
- Update rate (ms): 200
- Default communication buffer size: 50000
- Scaling options:
 - ☒ Fixed
 - ☐ Isotropic
 - ☐ Anisotropic
 - ☒ Use scaling options for dialogs
 - Client width: 640
 - Client height: 900
- Presentation options:
 - ☒ Antialiased drawing
- Default text input:
 - Input with: Touchscreen

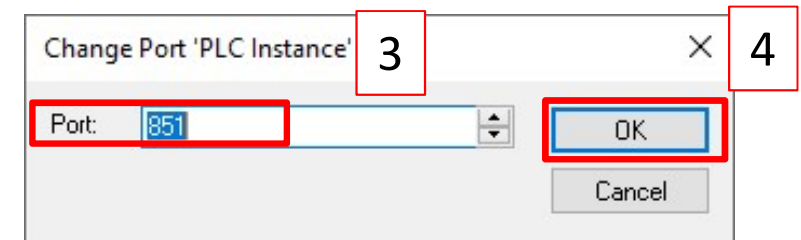
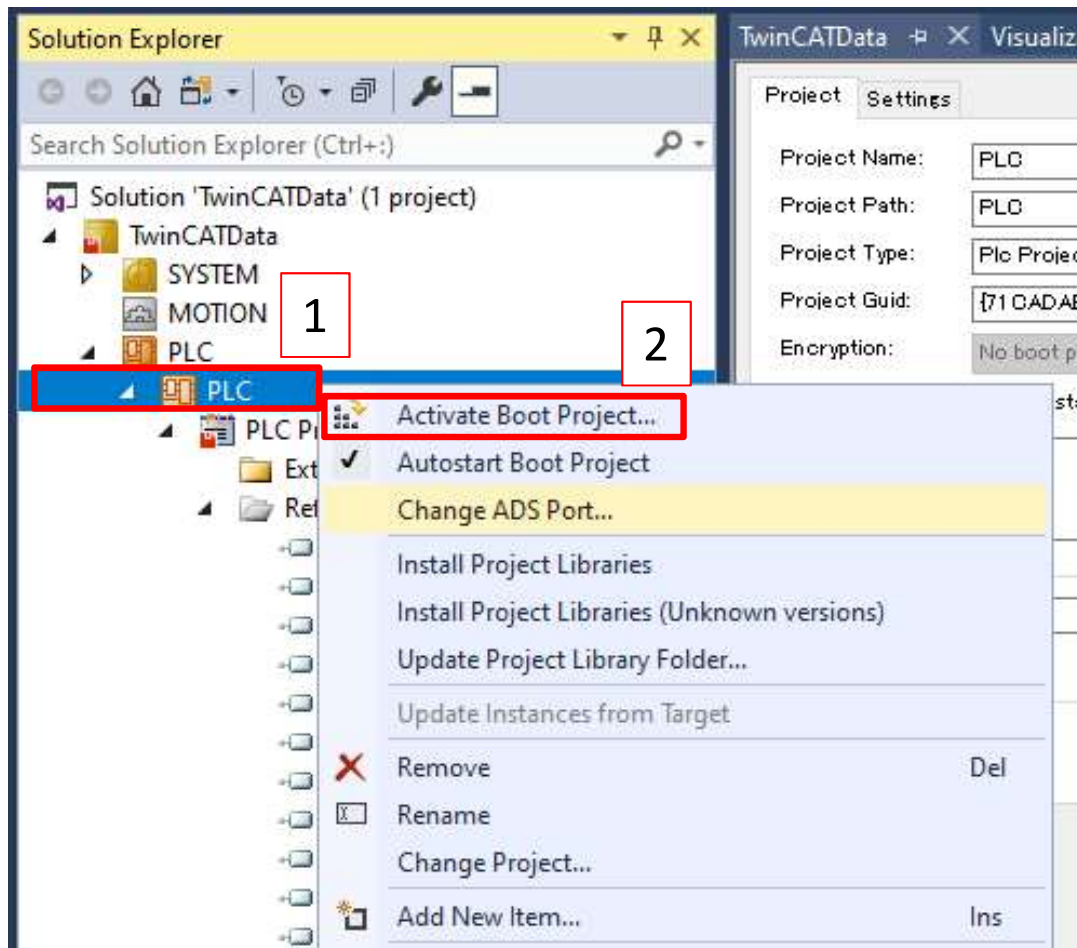
Visualization Port setting

Double-click [PLC] and confirm that the port is “851”.



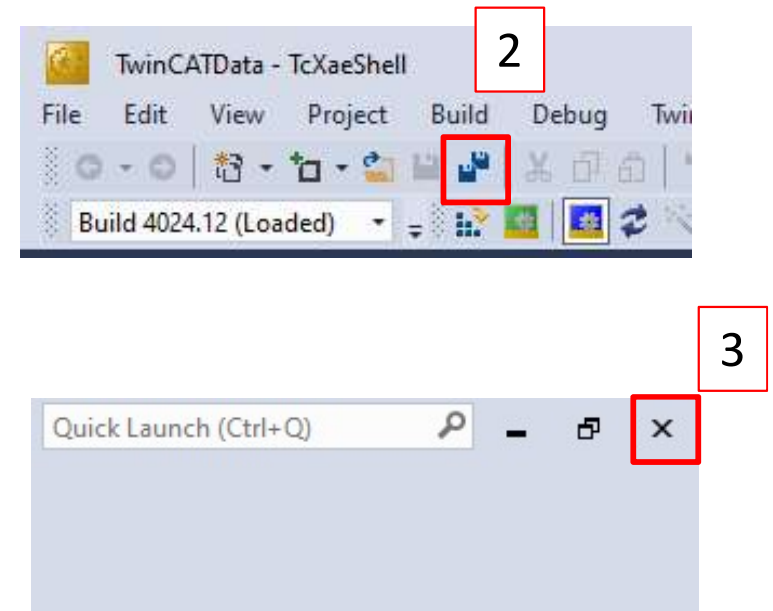
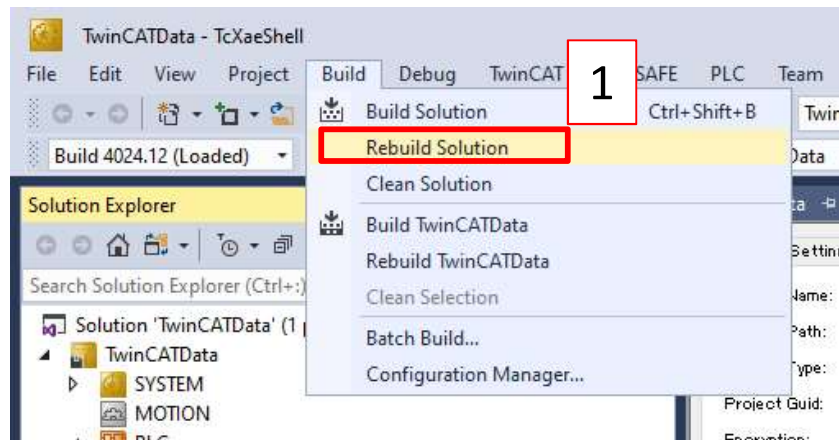
Visualization Port setting

If the port number is other than "851", right-click on the 1) [PLC] and select the 2) [Change ADS Port].
Change the port number to 3) "851" and click the 4) [OK] button.



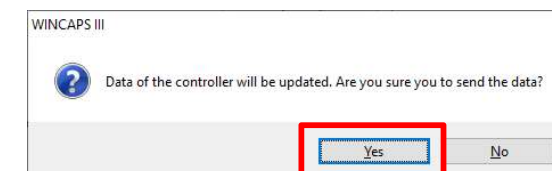
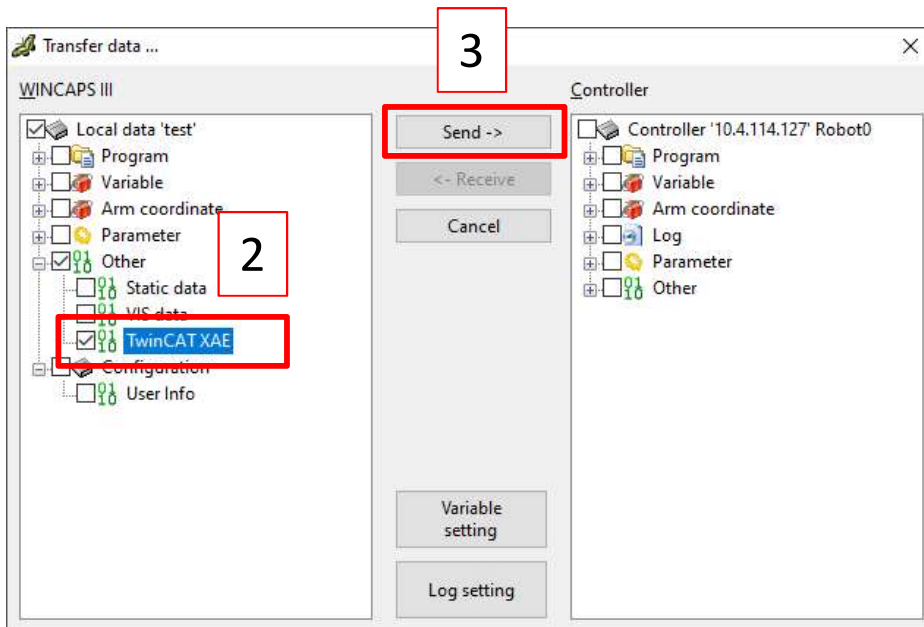
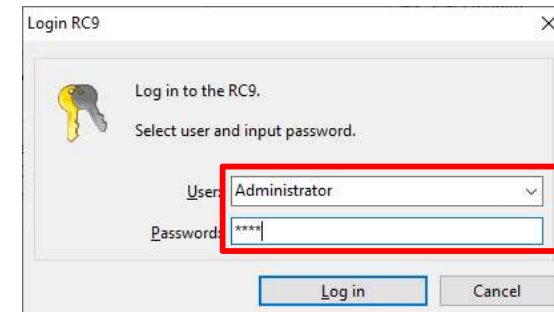
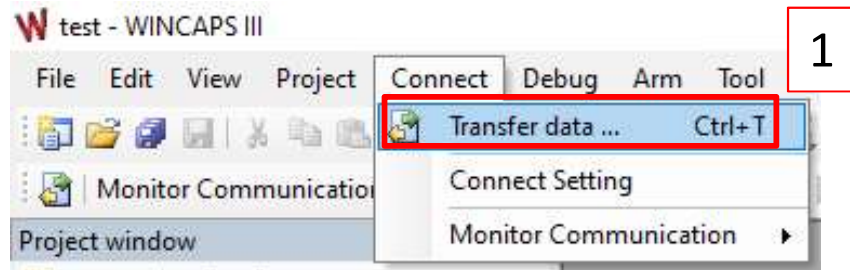
Setup steps TwinCAT setting

Rebuild the solution.



Setup steps TwinCATData transfer

Transfer TwinCATData(TwinCAT XAE) from WINCAPS.



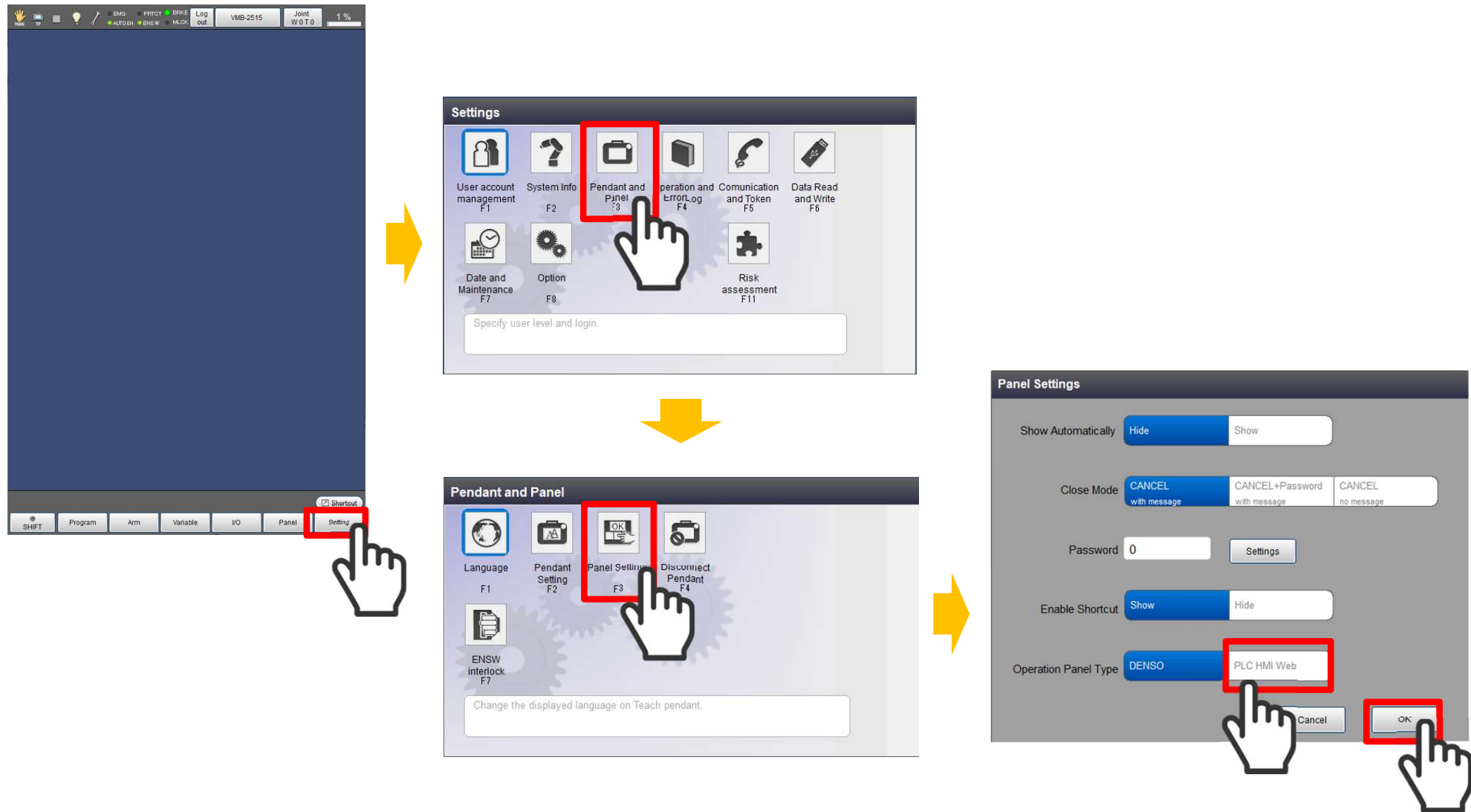
6

Restart the RC9.

Startup will take longer than usual.

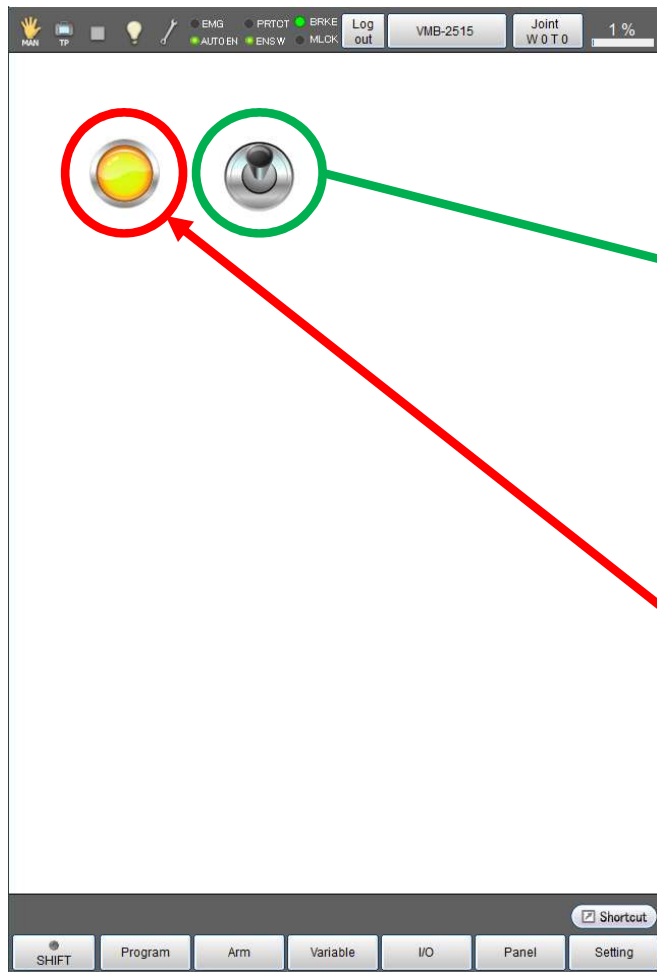
PLC HMI Web Display setting

Set Smart TP panel to display PLC HMI Web.



PLC HMI Web Operation check

It can be displayed from the Smart TP panel menu.



The screenshot shows the 'I/O Interface [SoftPLC]' table with the following data:

No.	Status	Type	Usage	Macro	Dummy	Smart
IO556	●	User input		DUIN5	☐	☐
IO557	●	User input		DUIN6	☐	☐
IO558	●	User input		DUIN7	☐	☐
IO559	●	User input		DUIN8	☐	☐
IO560	●	User input		DUIN9	☒	☒
IO561	●	User input		DUIN10	☐	☐
IO562	●	User input		DUIN11	☐	☐

The screenshot shows the 'I/O Interface [SoftPLC]' table with the following data:

No.	Status	Type	Usage	Macro	Dummy	Smart
IO816	●	User output		DUOUT17	☒	☐
IO817	●	User output		DUOUT18	☒	☐
IO818	●	User output		DUOUT19	☒	☐
IO819	●	User output		DUOUT20	☒	☐
IO820	●	User output		DUOUT21	☒	☒
IO821	●	User output		DUOUT22	☒	☐
IO822	●	User output		DUOUT23	☒	☐

PLC HMI Web Operation check

It can also be displayed on a PC browser.

[http://\[IP address\]/Tc3PlcHmiWeb/Port_851/Visu/index.htm](http://[IP address]/Tc3PlcHmiWeb/Port_851/Visu/index.htm)

