How to Use Win-GRAF SoftLogic and eLogger HMI in the Win-GRAF PAC?

Download FAQ-018 Demo

"eLogger" is an HMI development tool developed by ICP DAS. It features an easy-to-use graphical user interface (GUI), not only supports the Local HMI (Section 2.5) but also the Web HMI (Section 2.9). Both eLogger and Win-GRAF project can run in the same PAC. Users can conduct remote I/O control through the web browser on a smart phone or tablet.

[Contents]



Visit the **Win-GRAF FAQ** web page to download demo programs (demo_faq018.zip):
https://www.icpdas.com/en/faq/index.php?kind=273#840 FAQ-018

Visit the web page to download the user manual and software:

- **Win-GRAF web page:**
  https://www.icpdas.com/en/product/guide+Software+Development__Tools+Win-GRAF

- **eLogger web page:**
  http://www.icpdas.com/en/product/guide+Software+eLogger+eLogger

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The following will show you how to design the Win-GRAF project and the eLogger project:

In this example, users need to use a WP-8x28-CE7 PAC come with a I-87063W module on slot 0 as well as Win-GRAF and eLogger HMI software. Refer to the following content to upload both Win-GRAF and eLogger projects to the PAC. In addition, it requires to install "eLogger Runtime" on PAC.

Win-GRAF Project	eLogger Project	Description
eL01.zip	eL_01.wez	**Designing the Local HMI and Web HMI Pages** Win-GRAF: ✧ Restore/Create a Win-GRAF Project (P3 - 4) ✧ Declare Win-GRAF Variables (P5 - 7) ✧ Set Win-GRAF Variables for accessing (P8 - 11) ✧ Edit Win-GRAF Programs (P12 - 15) ✧ Compile/Download Win-GRAF Project (P15 - 17) eLogger: ✧ Install eLogger Software (P18 - 20) ✧ Copy/Create an eLogger Project (P21 - 25) ✧ Design the Local HMI (P26 - 33) ✧ Save/Upload/Test the Local HMI (P34 - 37) ✧ Design the Web HMI (P38 - 44) ✧ Test the Web HMI (P45) ✧ Advanced eLogger Functions (P46 - 48)

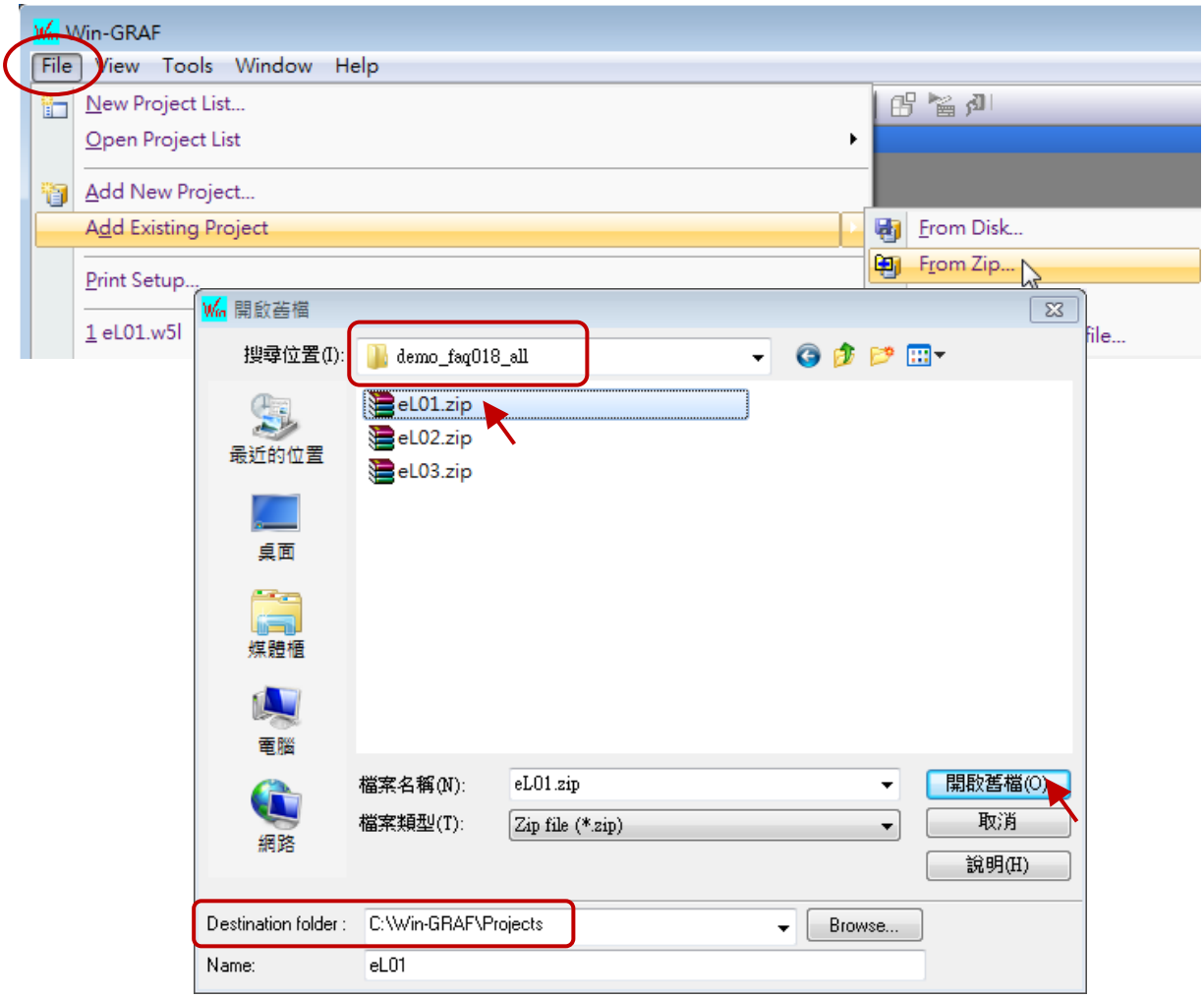
Also, there are two projects are provided for this FAQ (i.e., eL02 and eL03). Refer to Section 3.3 and 3.4 of the ISaGRAF FAQ – 115 for more details.

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Chapter 1. Writing the Win-GRAF Demo Program

If users are familiar with Win-GRAF programming, simply restore the "eL01.zip" to Win-GRAF on PC, and download it to the Win-GRAF PAC. Then, go to Chapter 2 to create eLogger HMI pages.

Restore the Win-GRAF Project:



If users are not familiar with Win-GRAF, refer to Win-GRAF FAQ:

- **FAQ-001** – How to install and run Win-GRAF Workbench.
  https://www.icpdas.com/en/faq/index.php?kind=273#61

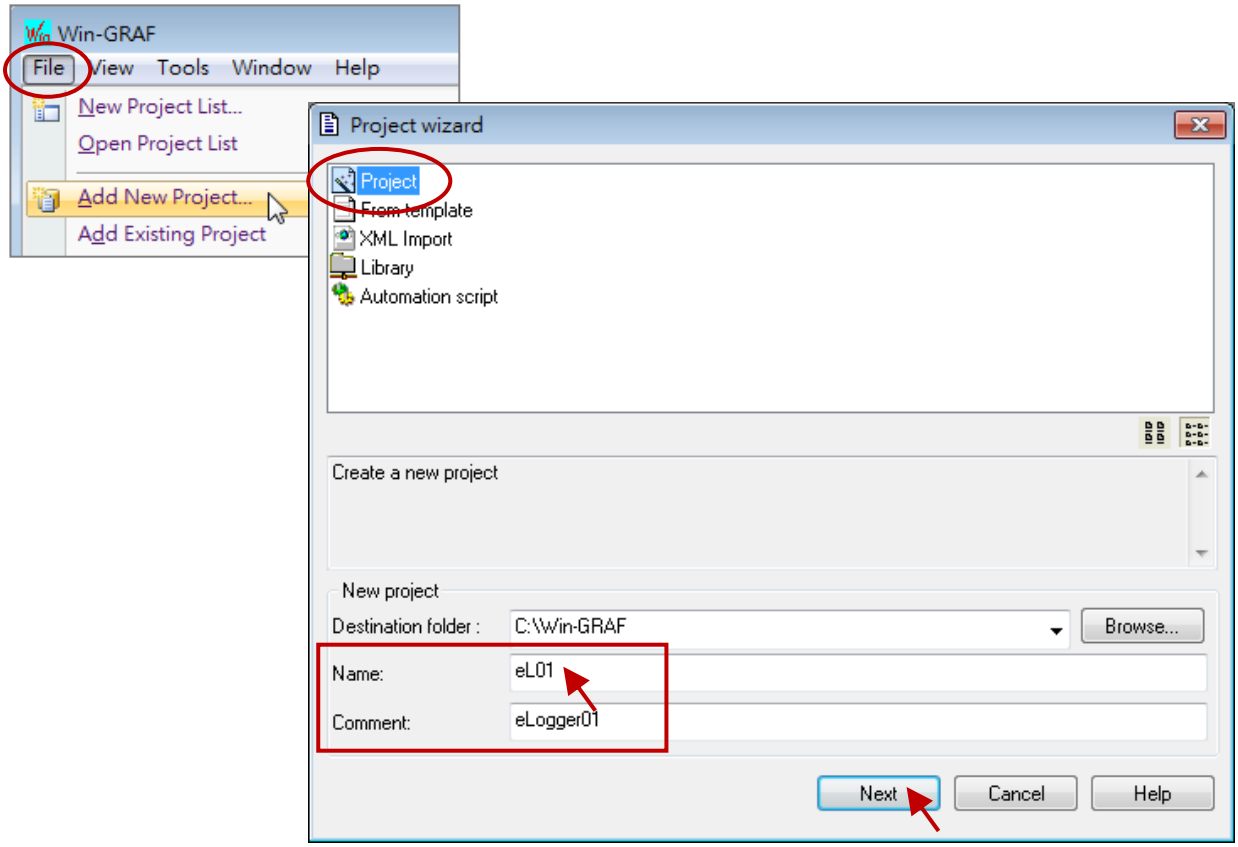
- **FAQ-003** – How to backup (5:13) or restore (5:40) a Win-GRAF project.
  https://www.icpdas.com/en/faq/index.php?kind=273#63

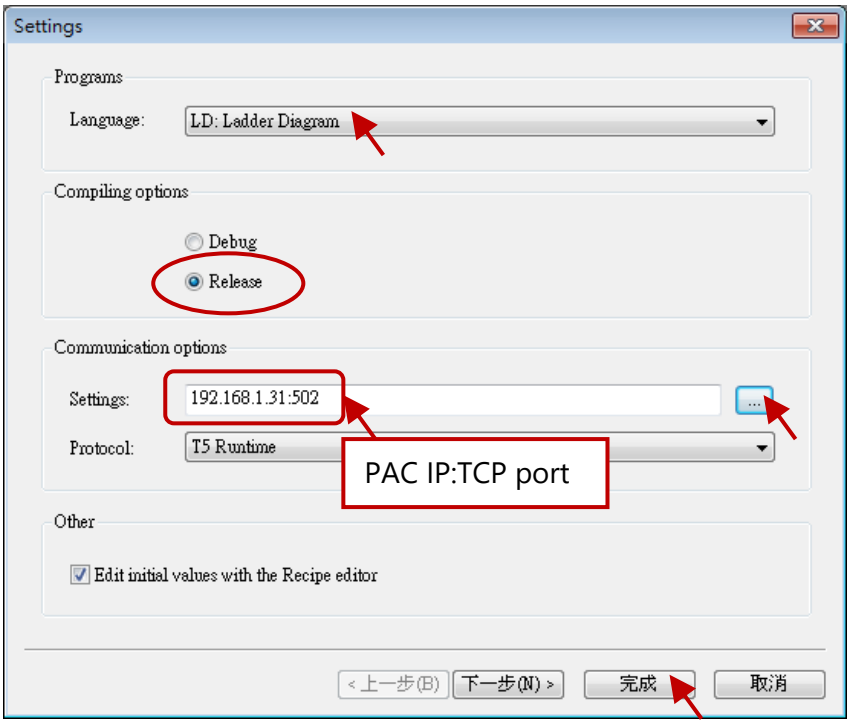
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1.1. Creating a Win-GRAF Project

Next

To launch Win-GRAF and then create a new project named as “eL01”.





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1.2. Declaring Win-GRAF Variables

Next

The following Win-GRAF variables will be used for this demo program.

Name	Type	Attrib.	Address	Description
Long_1	DINT	-	1	Used to communicate with eLogger tag DINT : 32-bit Long INT : 16-bit Integer REAL : 32-bit Float
PAC_ss			3	
Word_4	INT		5	
Float_5	REAL		6	
OUT_101	BOOL	Output	101	I/O variables which used to link to DO0 and DO1 of I-87063W on slot0
OUT_102			102	
M1		-	-	Used for the ST program Set the Init. Value of DIR as TRUE.
DIR				
PAC_Y	DINT			Used for the TIME_GET function block
PAC_M				
PAC_D				
PAC_WD				
PAC_hh				
PAC_mm				

Note:

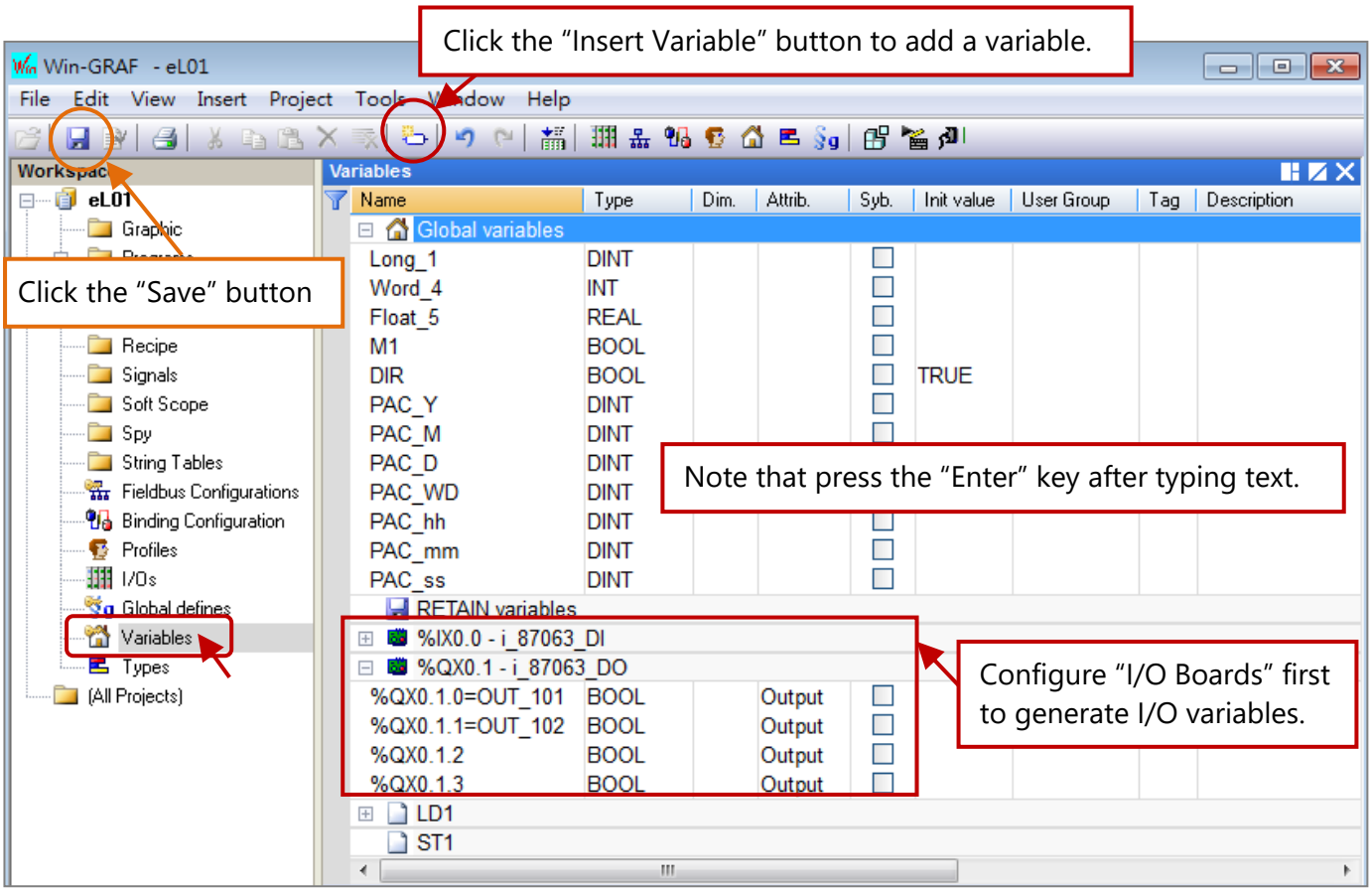
1. Configuring the **I/O Boards** function before using I/O variables, e.g., OUT_101 and OUT_102. (Reference: Section 1.2.2 Declaring I/O Variables)

2. Configuring the corresponding Modbus address to allow the HMI/SCADA to access Win-GRAF variable data. (Reference: Section 1.3 Make Win-GRAF Variables Accessible to the HMI/SCADA)

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1.2.1. Declaring Variables

Configure variables in the **Variables** window and click the **Save** button to save the settings.
(Reference: Section 2.3.1 and 2.3.2 of the Win-GRAF Getting Started Manual.)

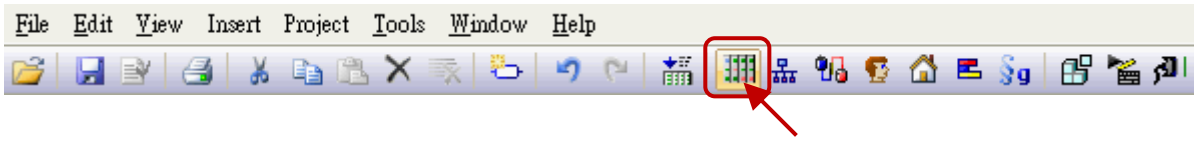


1.2.2. Declaring I/O Variables

In this example, using one I-87063W DIO module on Slot0 of the WP-8128-CE7 PAC. Therefore, adding "**i_87063**" on **No. 0** in the Win-GRAF **I/O Boards** window to link with I/O module.

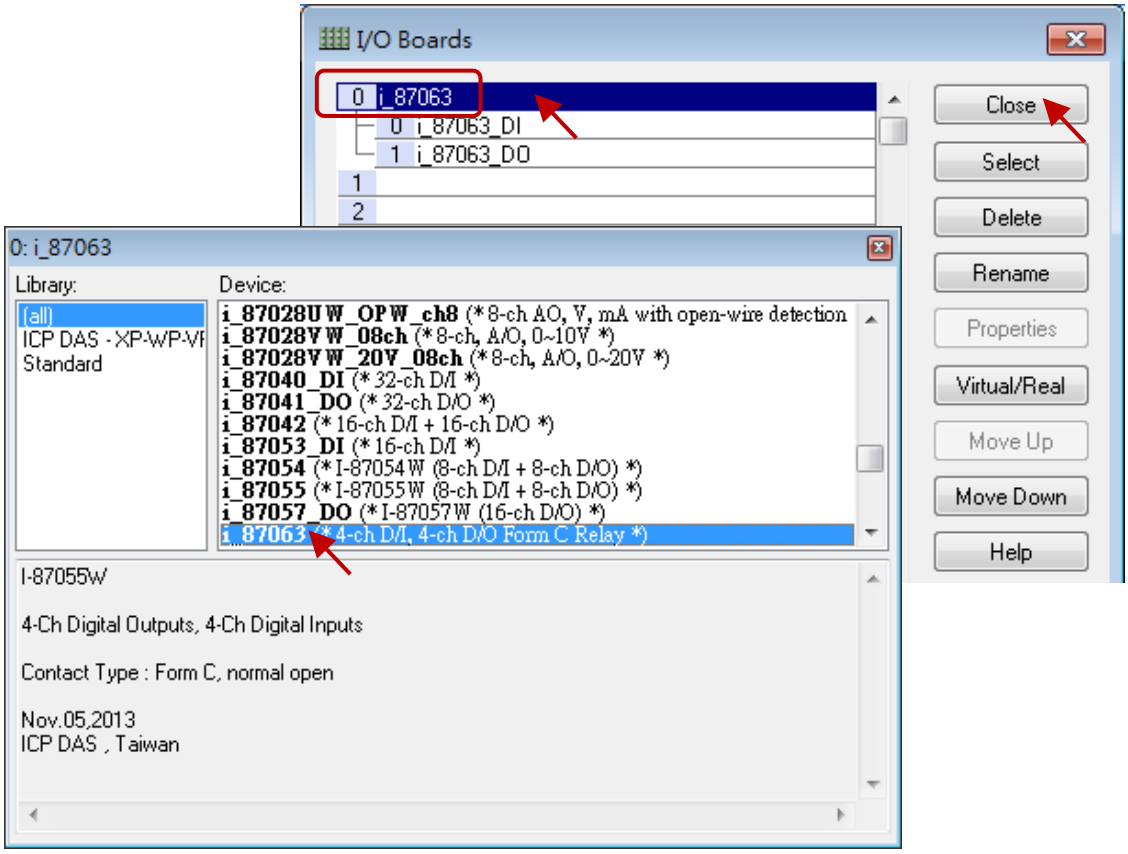
Follow these steps:

1. Click the **Open I/Os** button on the toolbar for adding the I/O link.

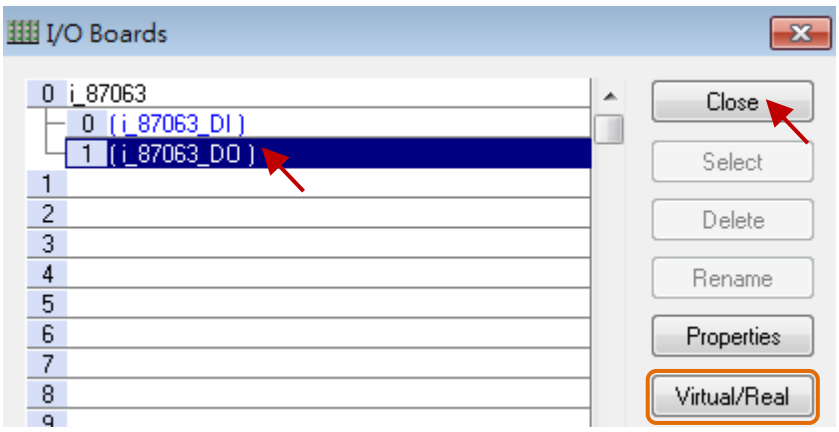


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2. Double-click on "Slot **0**" and double-click on "**i_87063**" to choose this I/O board, and then click the **Close** button to exit the window.



Note: Only for testing, click the **Virtual/Real** button to set it as a virtual I/O board If there is no I/O module.



After completing this process, all I/O variables will be displayed in the Variables window, as illustrated on the previous page. Users can double-click on the **Name** field to specify the variable name.

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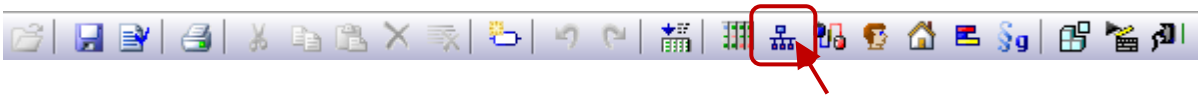
1.3. Make Win-GRAF Variables Accessible to the HMI/SCADA

Next

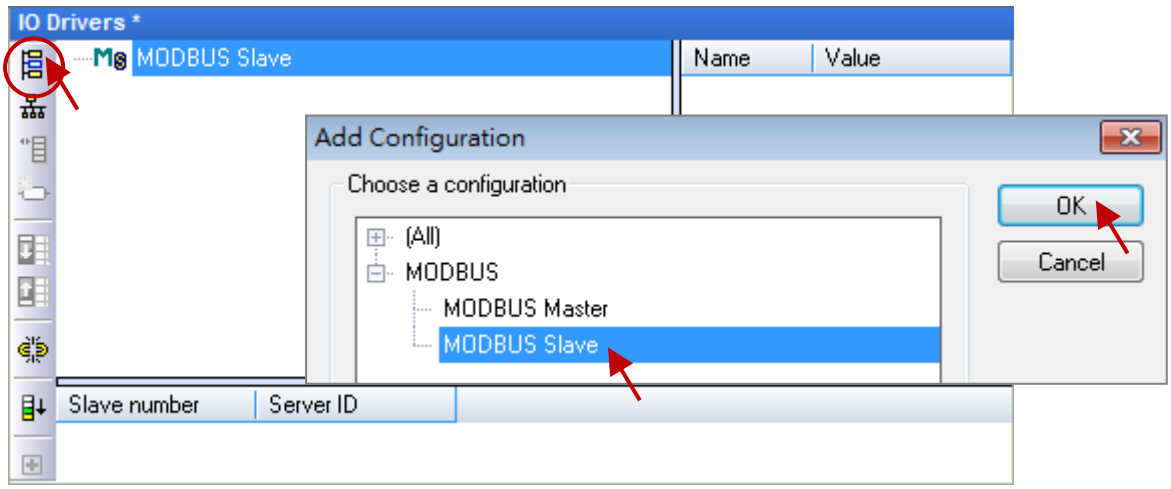
Configure Win-GRAF PAC as Modbus TCP Slave device and make Win-GRAF variables public.
(Reference: Chapter 3 of the Win-GRAF Getting Started Manual.)

Follow these steps:

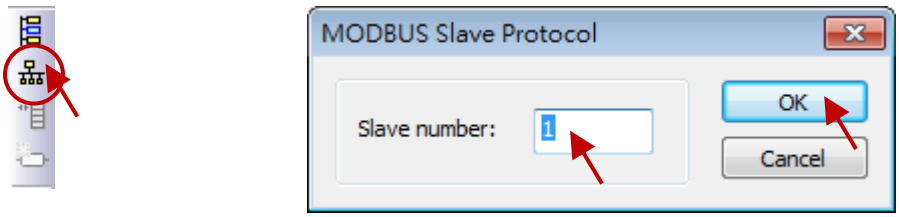
1. **Open the "I/O Drivers" Window.**
   Click the **Open Fieldbus Configuration** button on the toolbar.



2. **Enable the Win-GRAF PAC as the Modbus TCP Slave device.**
   Click the **Insert Configuration** button on the left, select **MOSBUS Slave**, and click **OK**.



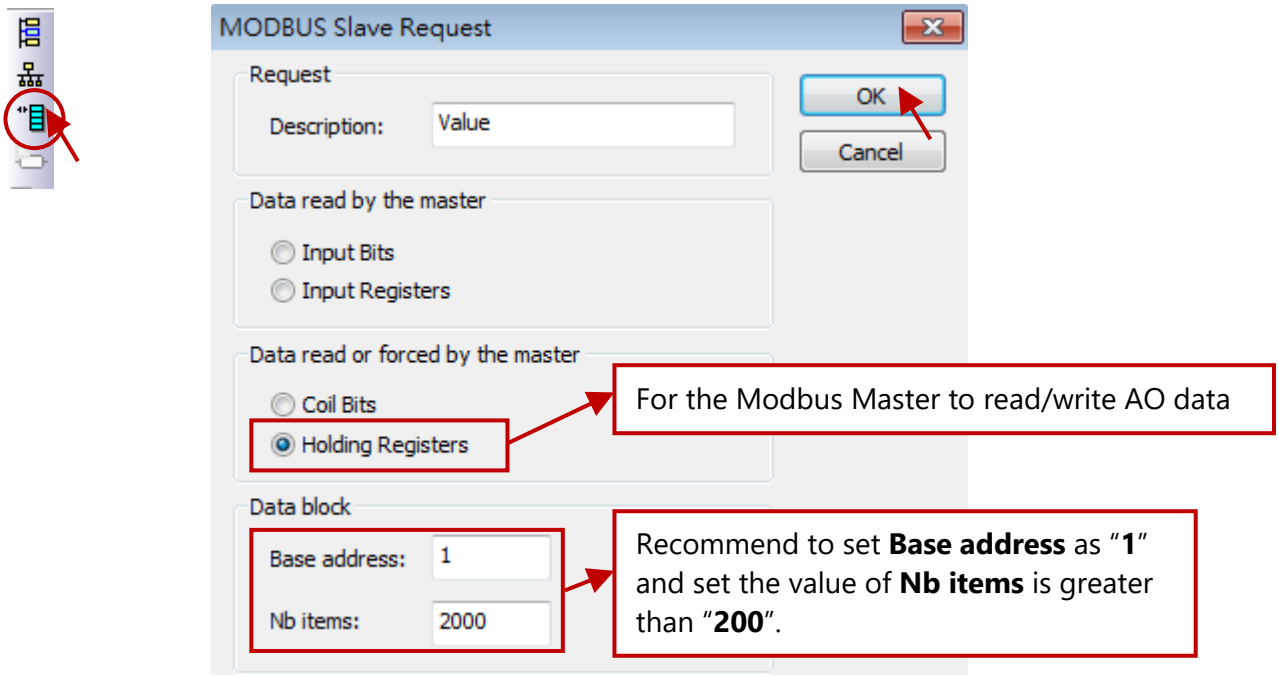
3. **Set the Slave ID.**
   Click the **Insert Master/Port** button on the left, set the **Slave number** (e.g., "1"), and click **OK**.



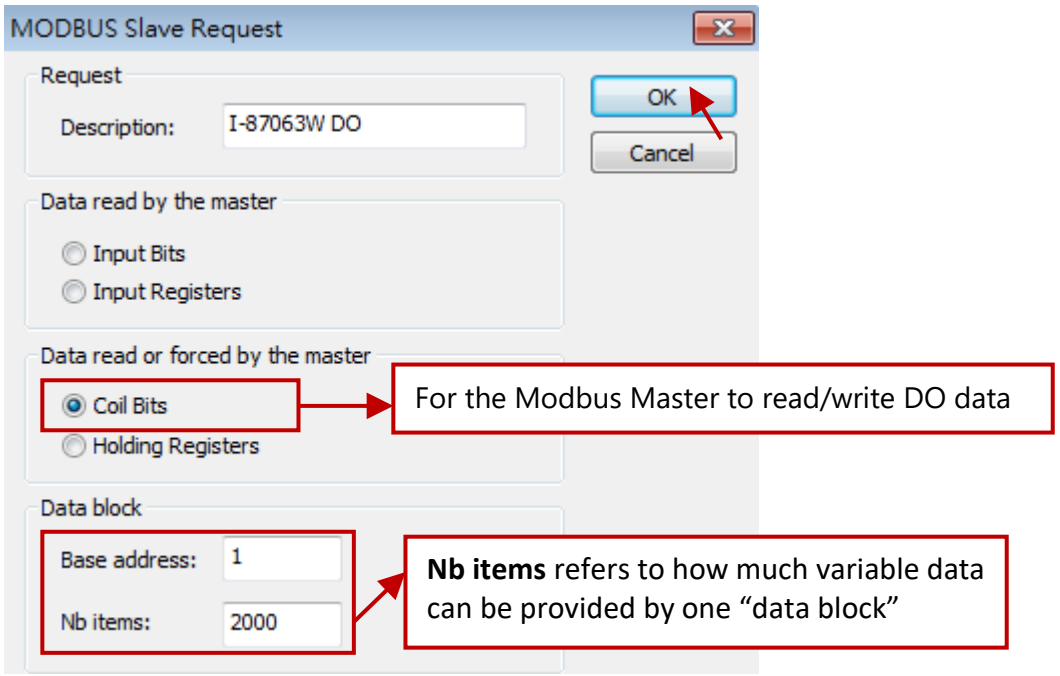
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4. Add Modbus Slave requests for eLogger HMI to read/write data.

Click the **Insert Slave/Data Block** button on the left to open the **MODBUS Slave Request** window. Next, choose **Holding Registers** (i.e., AO), set **Base address** as "1", and set **Nb items** as "2000".



As mentioned above, add one another **Data Block (Coil Bits, DO)** and configure it as illustrated in the figure below.



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5. Set the Modbus address for public Win-GRAF variables.

For AO Variables:

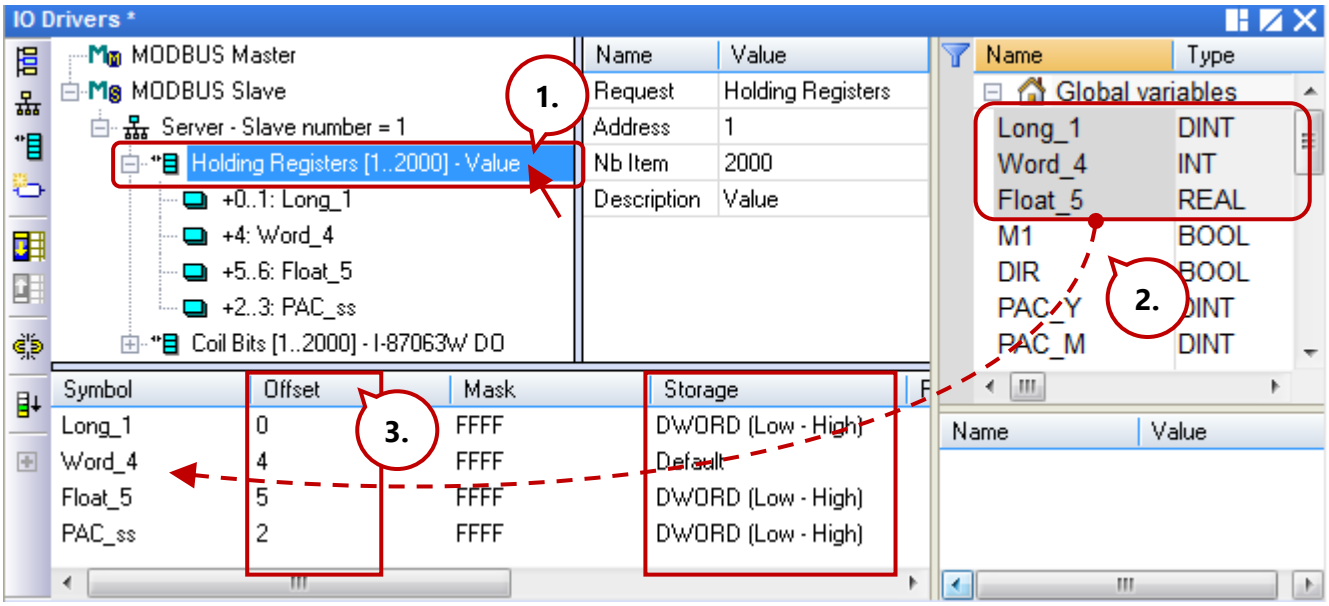
Click the Data Block - **Holding Registers**, drag variables to the **Symbol** field, and configure **Offset** and **Storage** fields.

Note:

- ✓ The **Offset** value starts at "**0**" and the Modbus address of variable is equal to this value **plus 1**.
- ✓ When using a 32-bit (or above) variable, e.g., DINT or REAL, two Modbus addresses are required. Moreover, the **Storage** field must set to "**DWORD (Low – High)**".

Name	Type	Address	Description
Long_1	DINT	1	Used to communicate with eLogger tag DINT : 32-bit Long INT : 16-bit Integer REAL : 32-bit Float
PAC_ss	DINT	3	
Word_4	INT	5	
Float_5	REAL	6	

Double-click data fields to set "**Offset**" and "**Storage**", and press the **Enter** key.

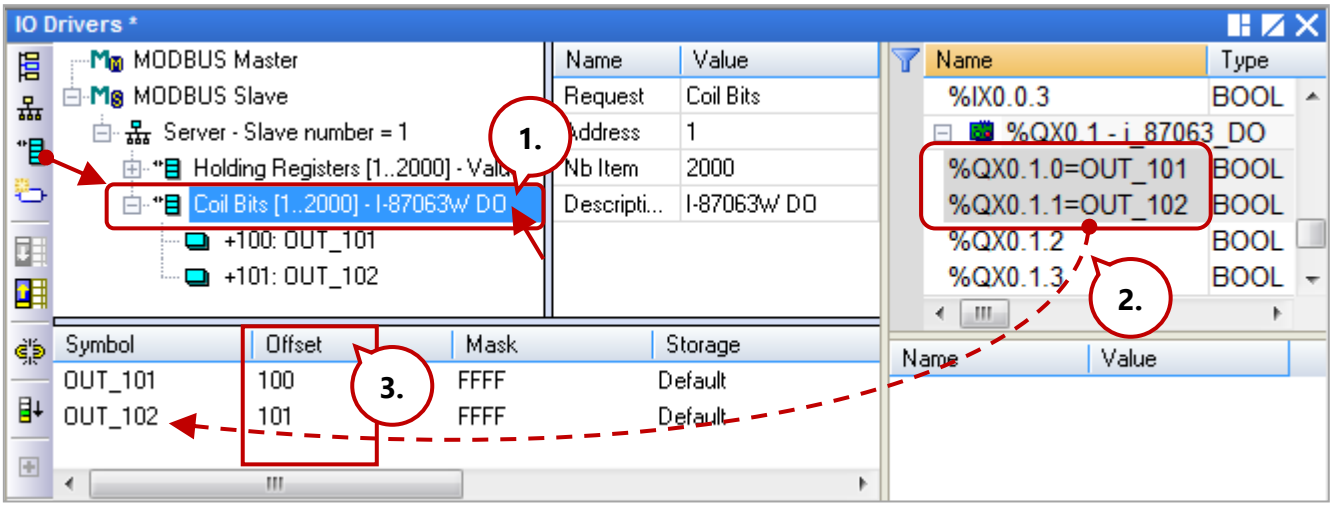


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For DO Variables:

Next, click the Data Block - **Coil Bits** and follow the same way to set "**OUT_101**" and "**OUT_102**" variables.

Name	Type	Address	Description
OUT_101	BOOL	101	Used to link to DO0 and DO1 of I-87063W on slot0
OUT_102		102	



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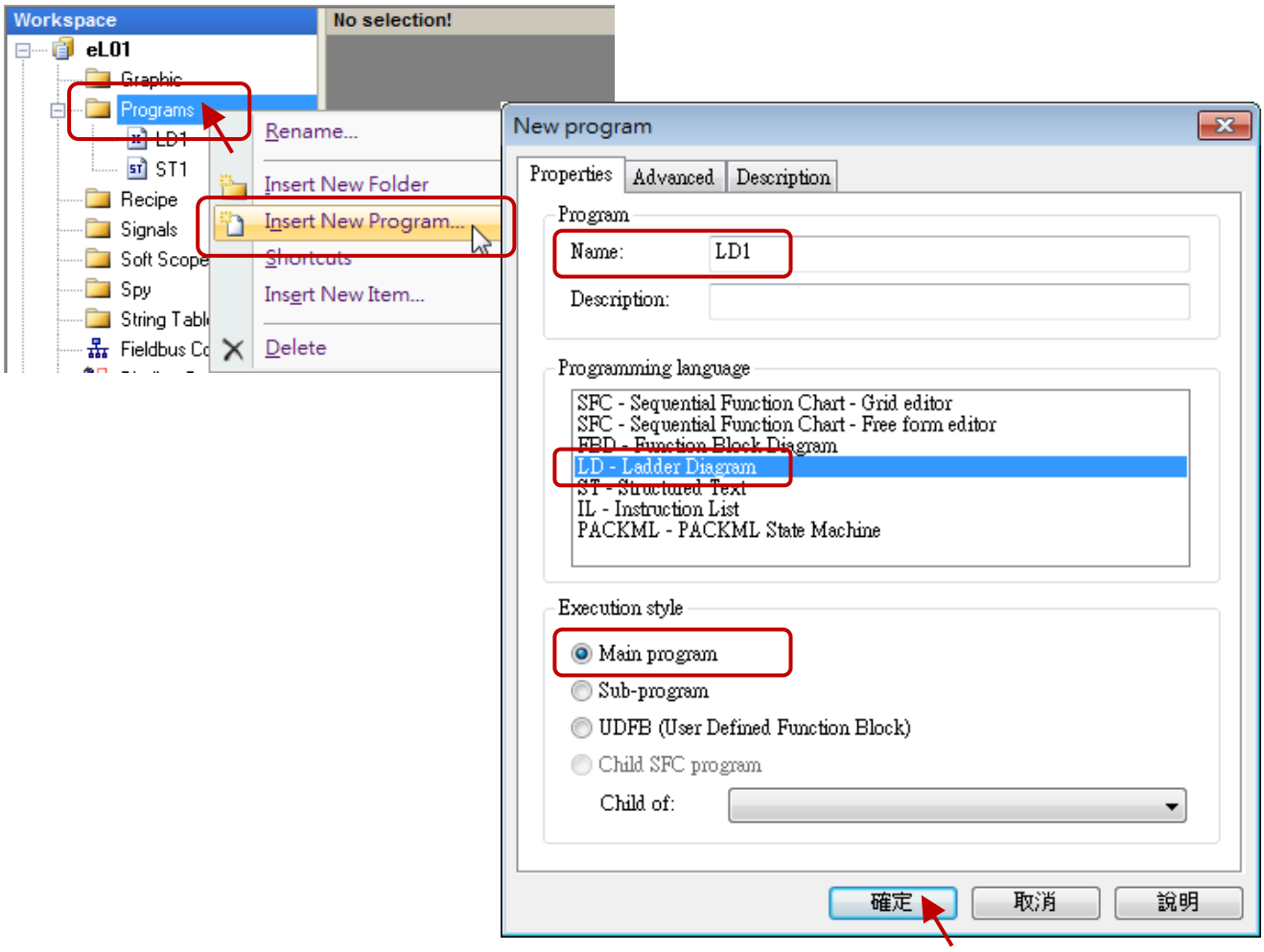
1.4. Writing an LD Program (LD1)

Next

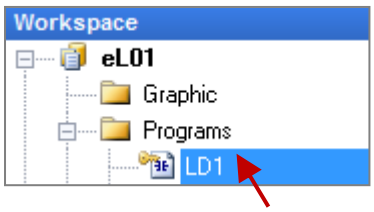
This Win-GRAF project includes an LD program (LD1) and an ST program (ST1).

Follow these steps:

1. **Add a LD program.**
   Right-click on **Programs** and click **Insert New Program**. Next, enter "LD1" as program name, select the **LD - Ladder Diagram** language and the **Main program** style, and then click **OK**.

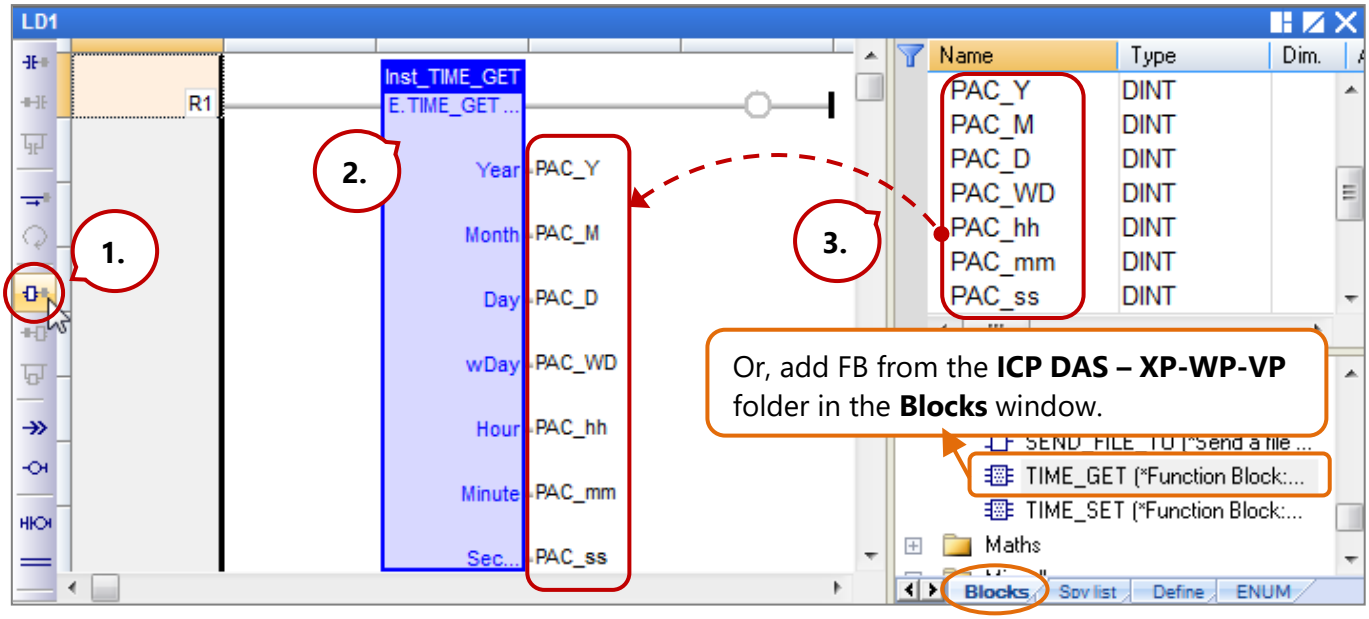


2. **Open the "LD1" window to edit program.**
   Double-click on **LD1** and add the **TIME_GET** function block to get the system date and time.



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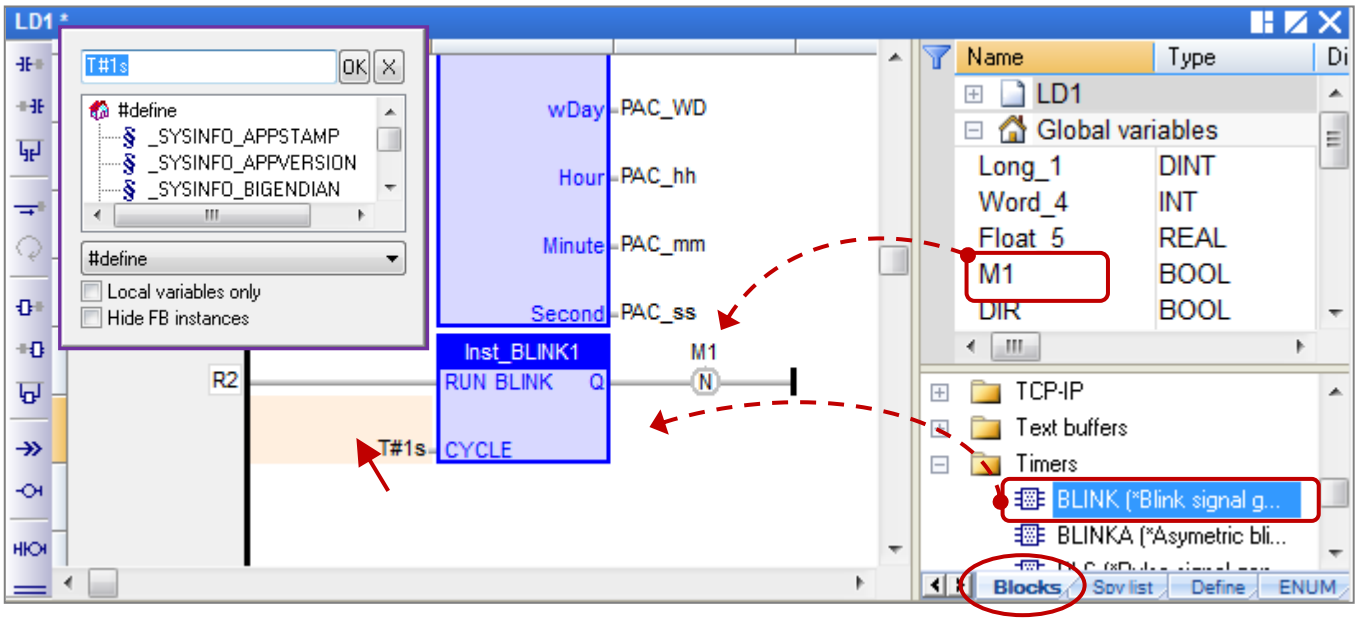
Click the **Insert FB before** button on the left side to add a function block. Double-click on it to choose the **TIME_GET**, and then assign variables for all parameters of FB.



Note: All parameters of function block must be assigned a variable even if only the "PAC_ss" variable is used in the project.

3. Add a "BLINK" FB to generate a pulse "True" to the "M1" variable every second.

In the **Blocks** window, drag the **BLINK** function block from the **Timers** folder to the **LD1** window. Next, assign the M1 variable and press Space several times to set its status to "N", and then double-click on the left side of **CYCLE** to enter "T#1s".



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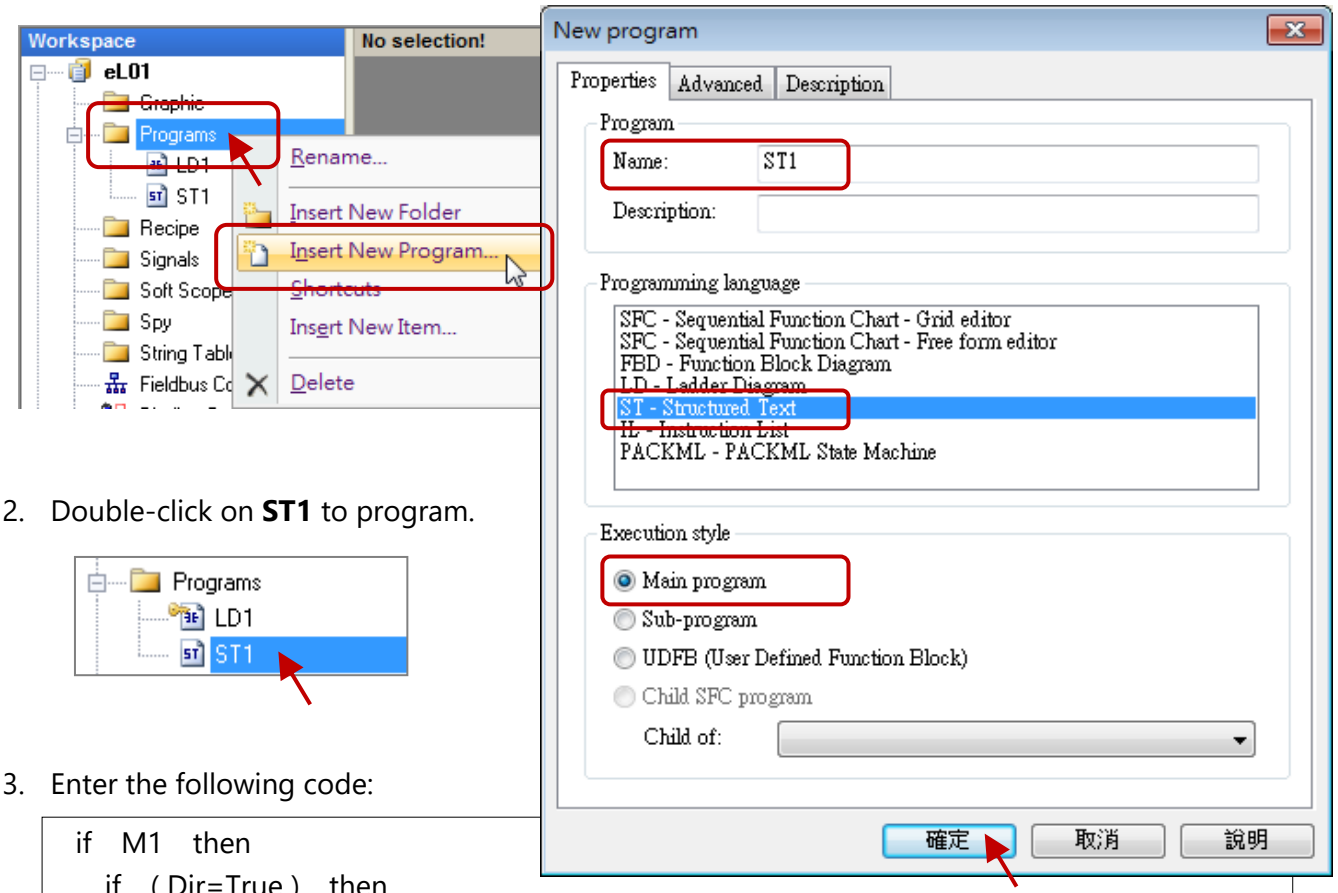
1.5. Writing an ST Program (ST1)

Next

This Win-GRAF project includes an LD program (LD1) and an ST program (ST1).

Follow these steps:

1. Right-click on **Programs** and click **Insert New Program**. Next, enter "ST1" as program name, select **ST - Structured Text** language and the **Main program** style, and then click **OK**.



2. Double-click on **ST1** to program.

3. Enter the following code:

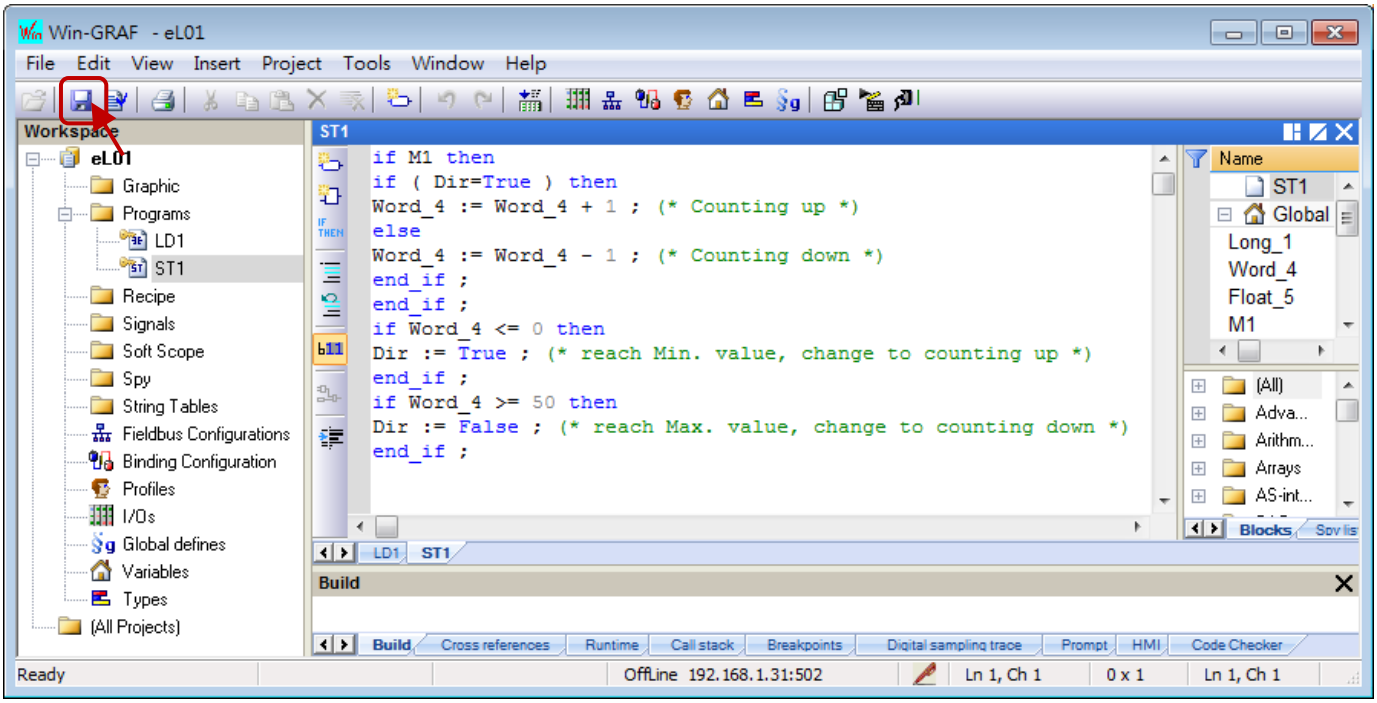
```
if   M1   then
   if   ( Dir=True )   then
      Word_4 := Word_4 + 1 ;       (* Counting up *)
   else
      Word_4 := Word_4 - 1 ;       (* Counting down *)
   end_if ;
end_if ;

if   Word_4 <= 0   then
   Dir := True ;                   (* reach Min. value, change to counting up *)
end_if ;

if   Word_4 >= 50   then
   Dir := False ;                  (*reach Max. value, change to counting down *)
end_if ;
```


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After completing the process, the screen will display as follows. Click **Save** to save the project.

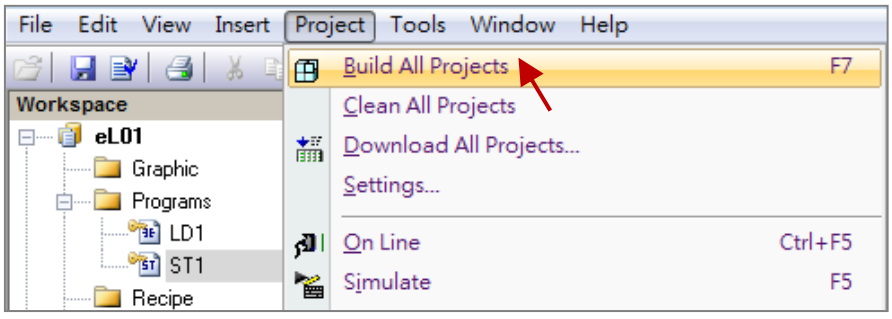


1.6. Compiling the Win-GRAF Project

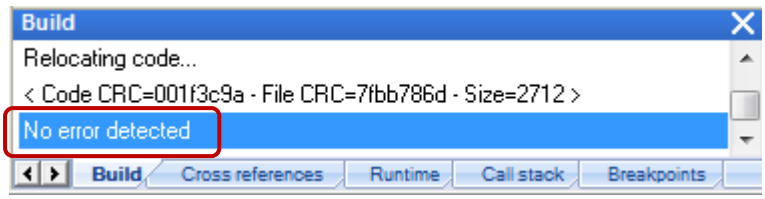
For the Win-GRAF project can function properly in the PAC, we need to compile all programs before downloading them.

Follow these steps:

1. Click **Project** on the menu bar and then click **Build All Projects** to compile all programs.



2. If the message "**No error detected**" is displayed that means the project was successfully compiled.



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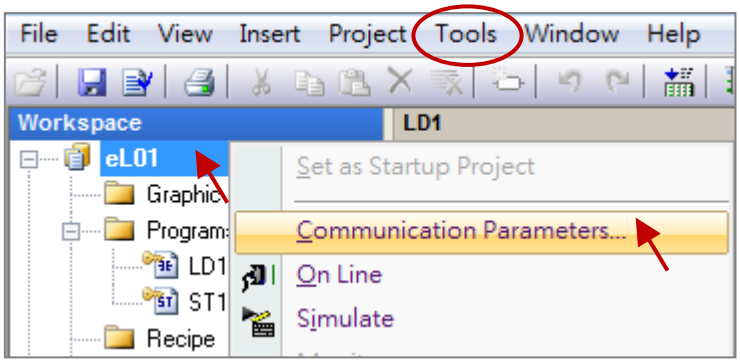
1.7. Downloading the Win-GRAF Project to the PAC

Contents, Next

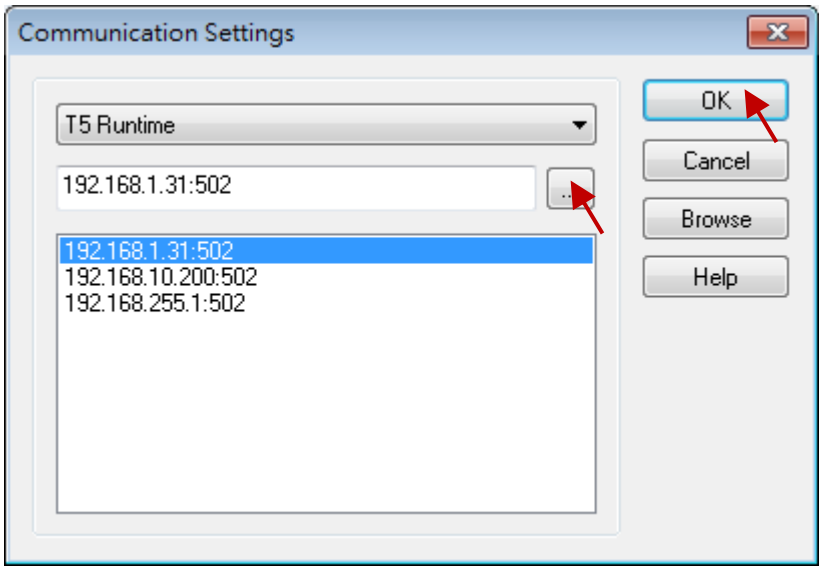
Before downloading the project, you need to configure the communication parameters.

Follow these steps:

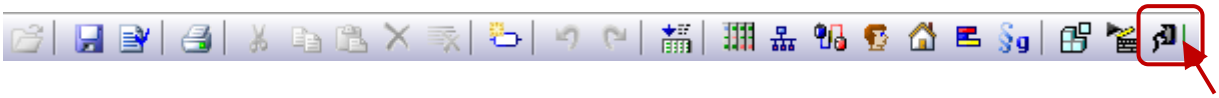
1. **Right-click** on the project name (i.e., eL01) and then click **Communication Parameters...** to open the settings window. Alternatively, click **Tools** on the menu bar and then click "Communication Parameters...".



2. Enter the IP address and the TCP port number of the Win-GRAF PAC (e.g., WP-8x28-CE7).
   Note: The factory-default IP address and TCP port number for the PAC is **192.168.255.1:502**.



3. Click the **On Line** button on the toolbar to establish the connection with the PAC.



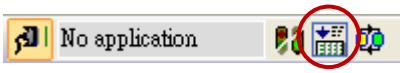
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Note:

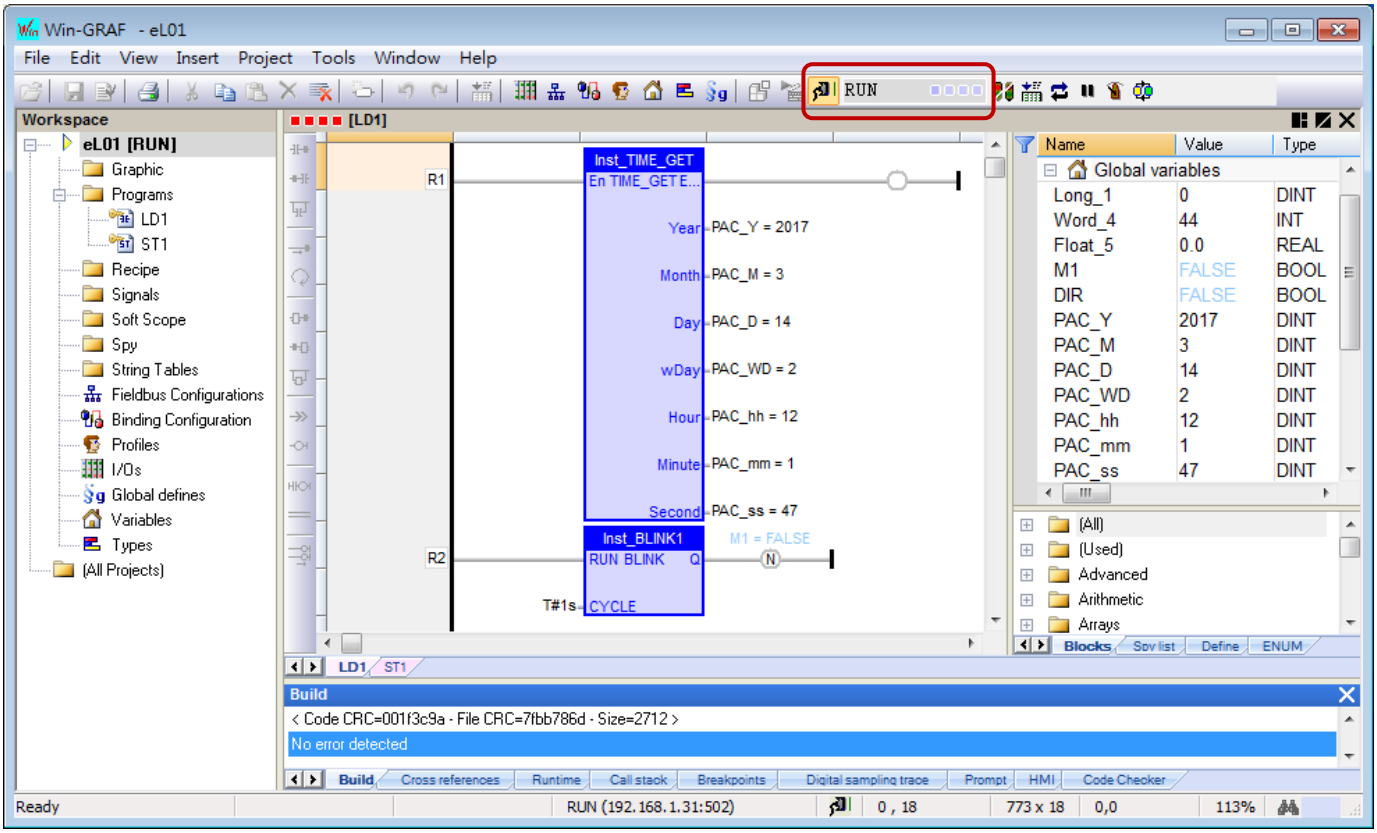
If the text box displays a "**Bad version**" text or a different project name that means the project has been modified or another project is running in the PAC. Only click the **Stop application** button on the toolbar to end this project.



4. Next, click **Download** on the toolbar to download the "eL01" project.



5. If the "**RUN**" is shown, which means the connection is made and the "eL01" project is running.



Congratulations! You have completed the process of writing, compiling, and downloading the Win-GRAF project.

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Chapter 2. Designing the eLogger HMI Page

eLogger includes two programs:

1. **eLogger Developer:**
   Installed on a PC, users can use it to design HMI pages and configure graphics components.

2. **eLogger Runtime:**
   Installed on a PAC, users MUST launch this program in order to perform the eLogger project.

Note: When using a XPAC or a WinPAC, you need to connect a VGA monitor to view the PAC/HMI screen.

2.1. Installing eLogger Developer (PC) and eLogger Runtime (PAC)

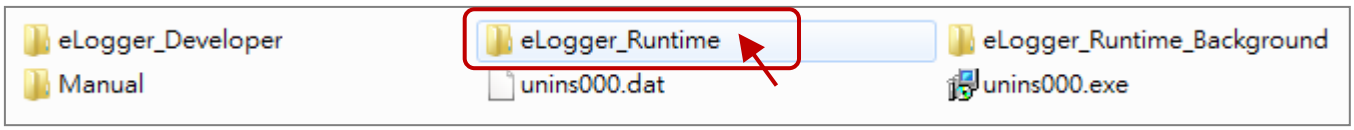
Next

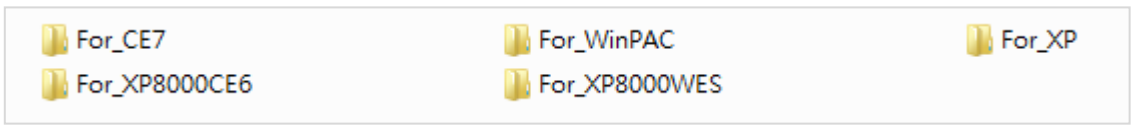
2.1.1. Install the eLogger Developer

If **eLogger Developer** (v1.6.2.0 or later) has not been installed on PC, downloading the latest version of eLogger at http://www.icpdas.com/en/product/guide+Software+eLogger+eLogger#1086 and installing it. Also, refer to the eLogger User Manual for more details.

2.1.2. Install the eLogger Runtime

If **eLogger Runtime** (v1.6.2.0 or later) has not been installed on PAC, first find the related files in the installation folder of eLogger, i.e., **C:\ICPDAS\eLogger**.

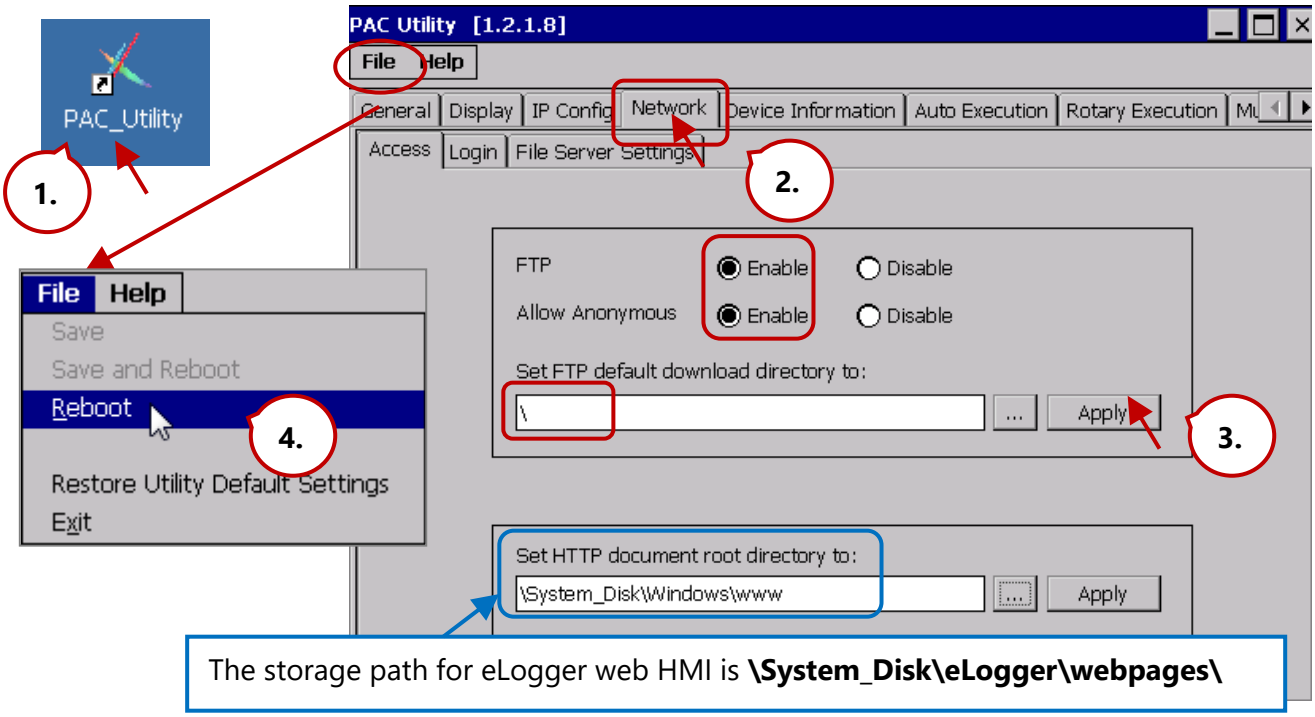




To install the **eLogger Runtime** by using FTP, make sure that the **FTP** function is enabled and set the directory to "****" on the **Network** page in the **PAC_Utility**.

If not, change the settings and click the **Apply** button. Further, click **File** on the menu bar and then select **Reboot** to reboot the PAC and apply the settings.

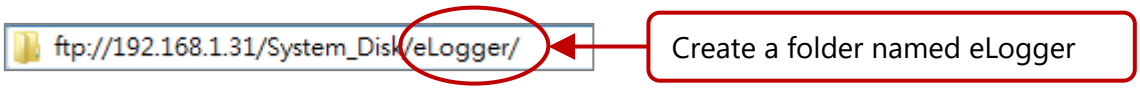
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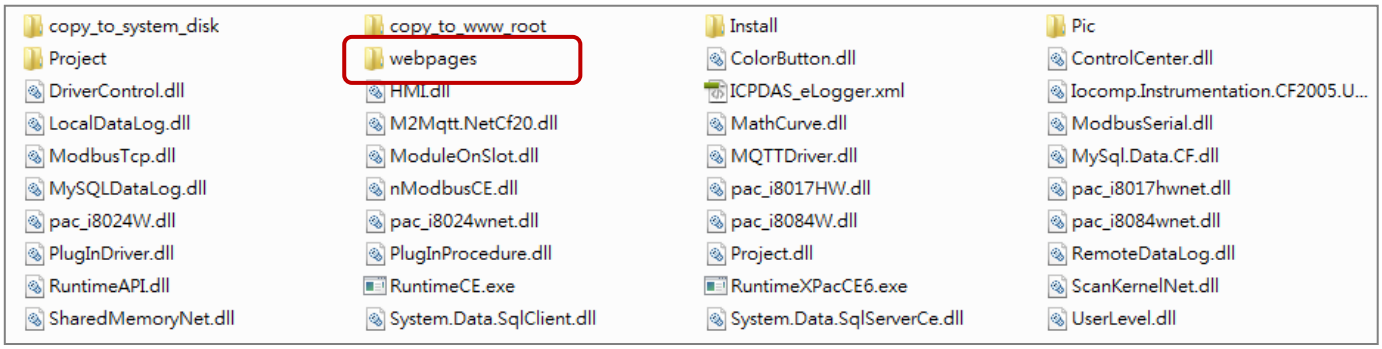


Note:

After uploading project that includes web HMI to the WinCE-based PAC (e.g., CE5, CE6, CE7), eLogger will automatically check the HTTP path and set it to **\System_Disk\eLogger\webpages** on the Network page in PAC Utility. And, a dialog box will be displayed to remind users to execute "File - Save & Reboot" to apply the settings.

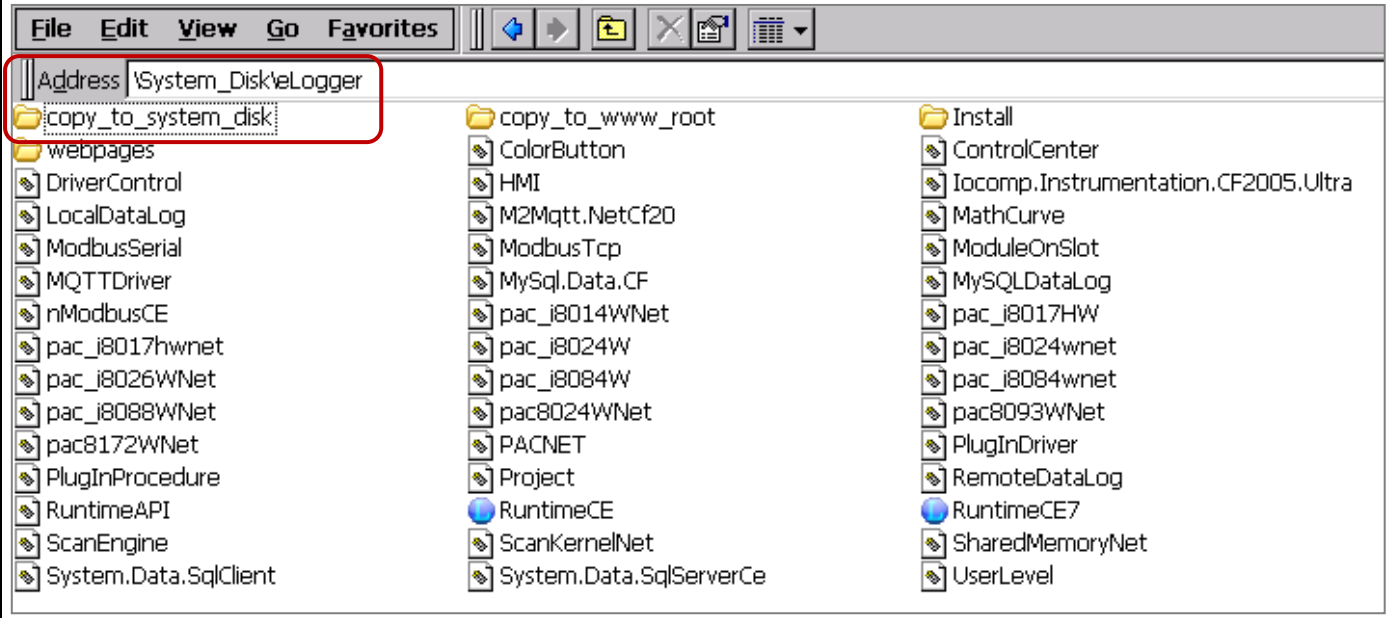
When using **WP-8x28-CE7**, copy all files from path C:\ICPDAS\eLogger\eLogger_Runtime**For_CE7** on PC to \System_Disk**eLogger** on PAC by using FTP (e.g., ftp://192.168.1.31).



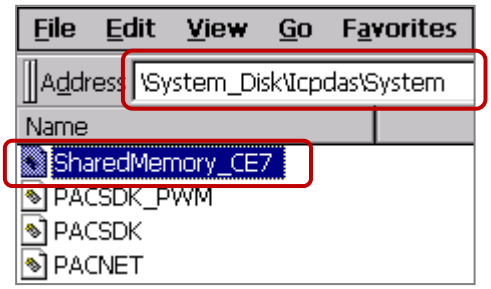


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Note: There is no need to copy files that stored in the "copy_to_www_root" folder since eLogger v1.6.5.0.



Next, copy all files (e.g.,"SharedMemory_CE7.dll") from path \System_Disk\eLogger**copy_to_system_disk** to **\System_Disk\Icpdas\System**. Note that files may be different according to the PAC model.

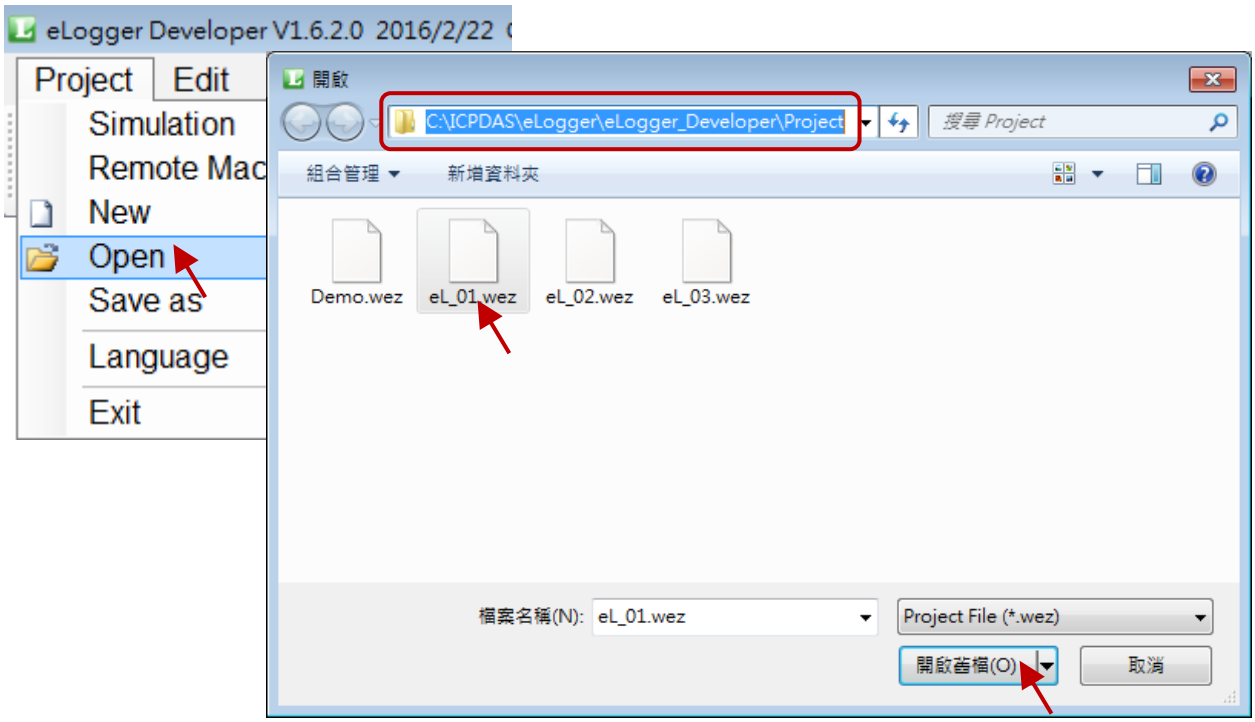


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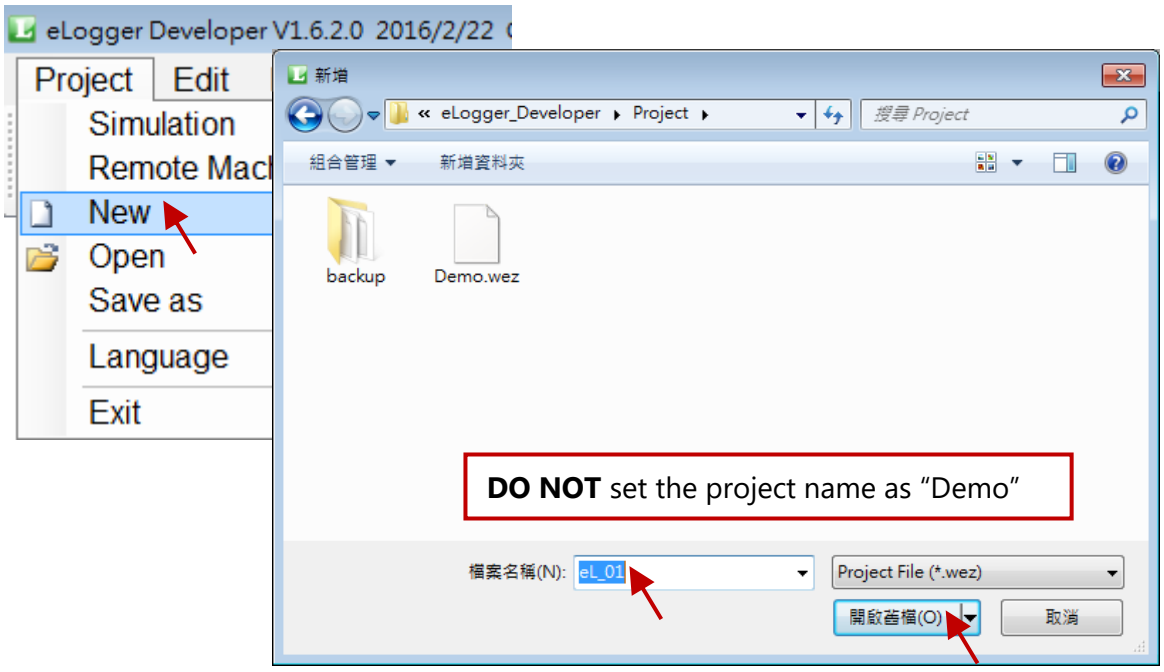
2.2. Creating the eLogger Project

Next

Users can open the "eL_01.wez" demo project by downloading the "demo_faq018_all.zip" file from Win-GRAF FAQ web page and unzipping it. Next, copy project files (.wez) to path "**C:\ICPDAS\eLogger\eLogger_Developer\Project**" on PC. Then, run eLogger Developer and click **Open** on the **Project** menu to open the project.

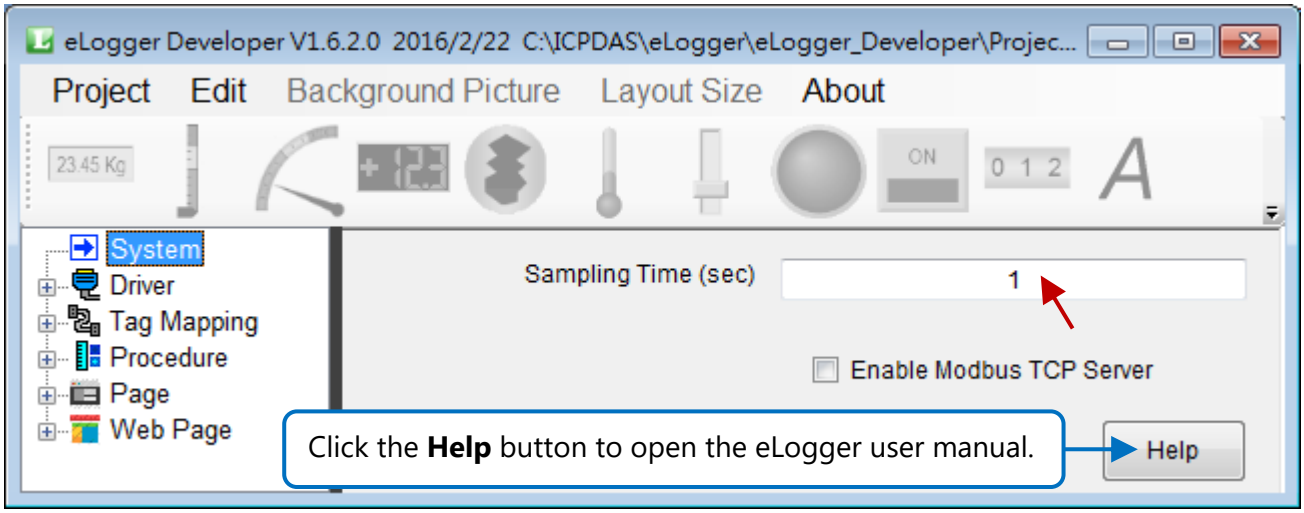


Alternatively, click **New** on the **Project** menu to create a new project named "eL_01".



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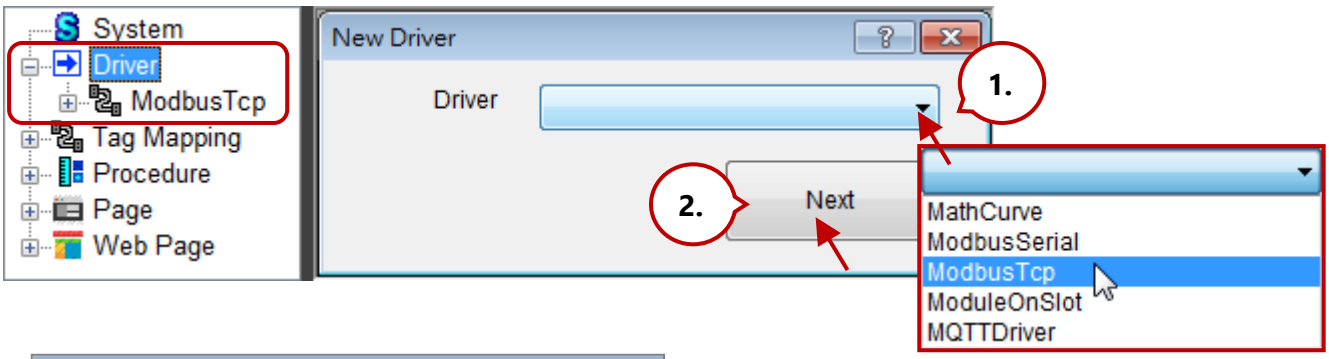
Further, it's recommended to set the eLogger **Sampling Time** as 1 second.

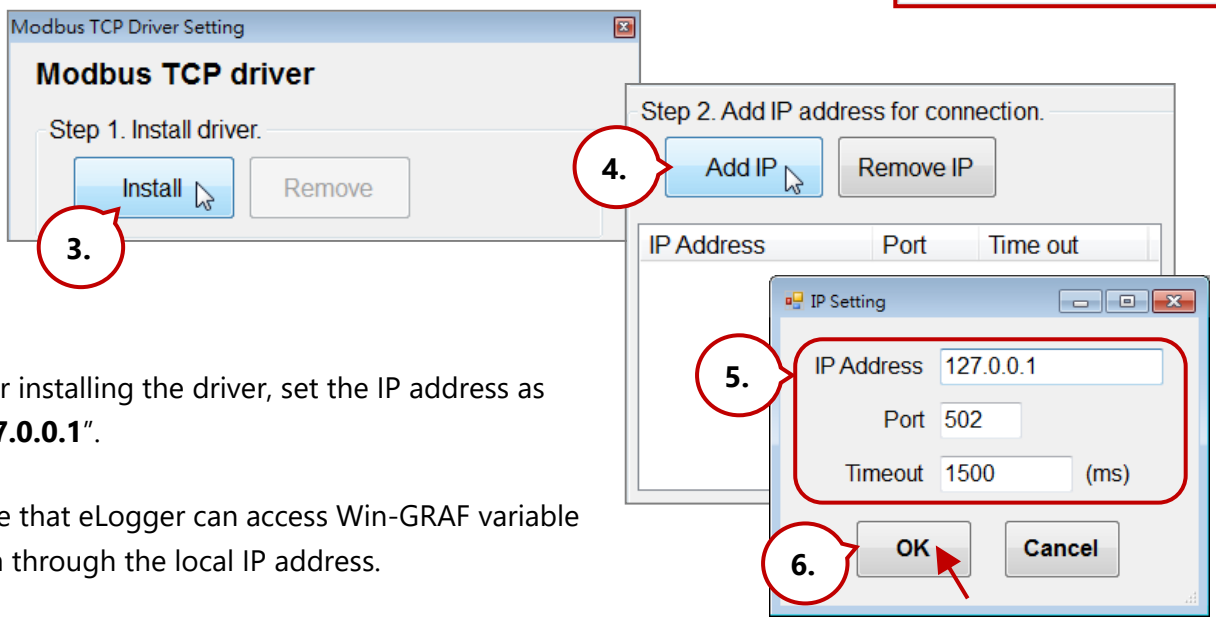


2.3. Installing the Modbus TCP Driver

Next

When operating eLogger with the Win-GRAF SoftLogic, installing the Modbus TCP driver is required.



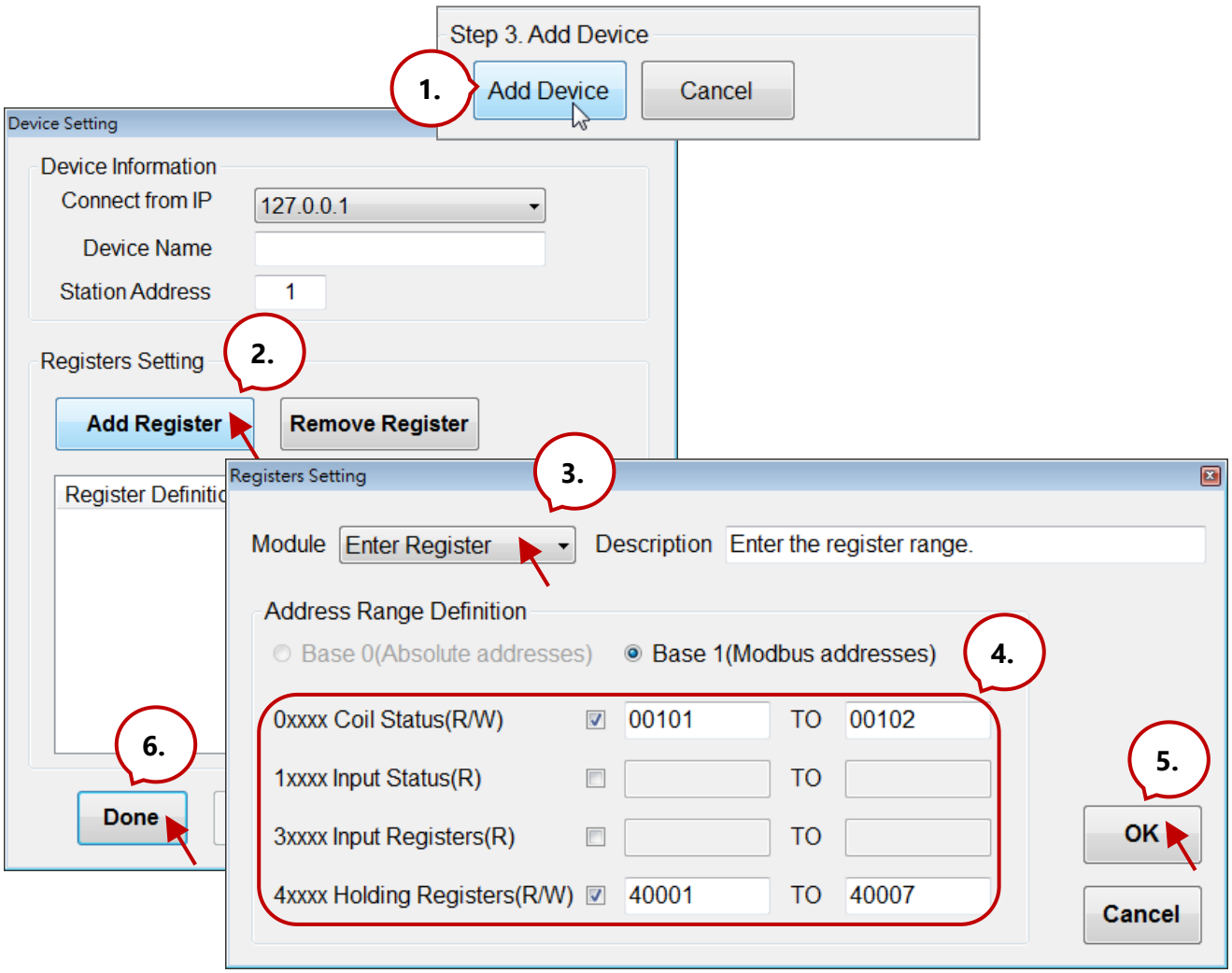


After installing the driver, set the IP address as "**127.0.0.1**".

Note that eLogger can access Win-GRAF variable data through the local IP address.

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Next, specify the range of Modbus address for eLogger tags.



Note: The Modbus address used for eLogger tag and Win-GRAF variable must be the same.

Name	Type	Address	Description
Long_1	DINT	1	Used to communicate with eLogger tag DINT : 32-bit Long INT : 16-bit Integer REAL : 32-bit Float
PAC_ss	DINT	3	
Word_4	INT	5	
Float_5	REAL	6	
OUT_101	BOOL	101	Used to link to DO0 and DO1 of I-87063W on slot0
OUT_102	BOOL	102	

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2.4. Declaring the eLogger Tag

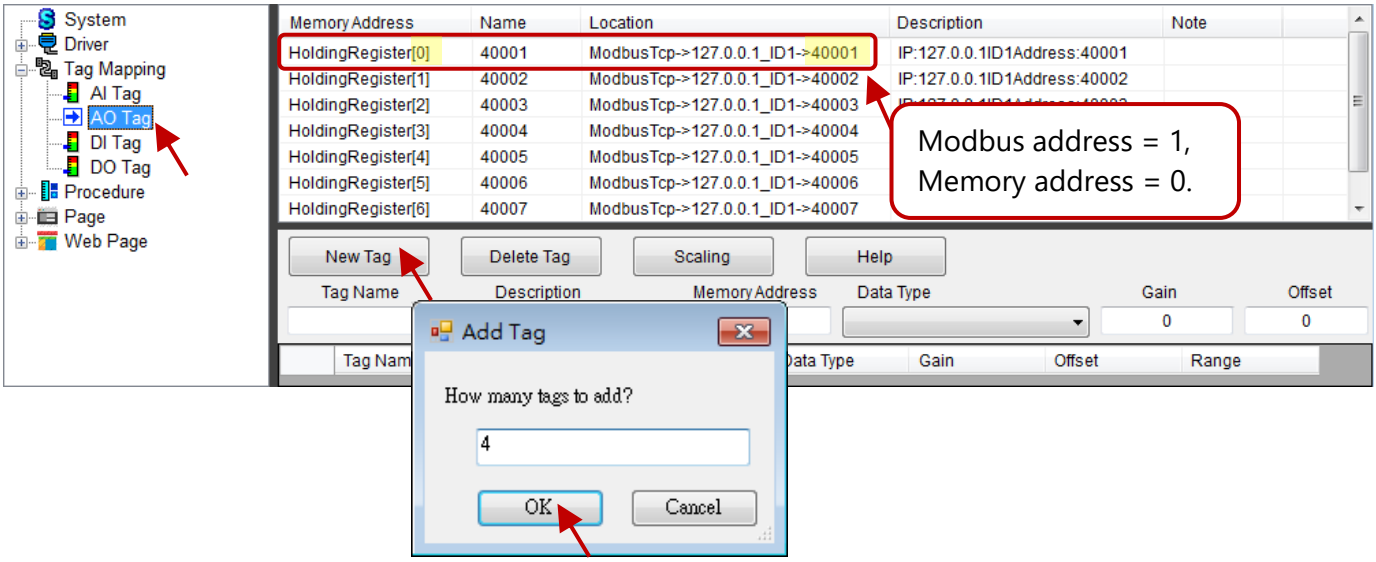
Next

To access Win-GRAF variables data, the corresponding eLogger IO tags and addresses must be configured. In this example, users can refer to the Win-GRAF variable table as listed above to configure four AO tags and two DO tags.

Follow these steps:

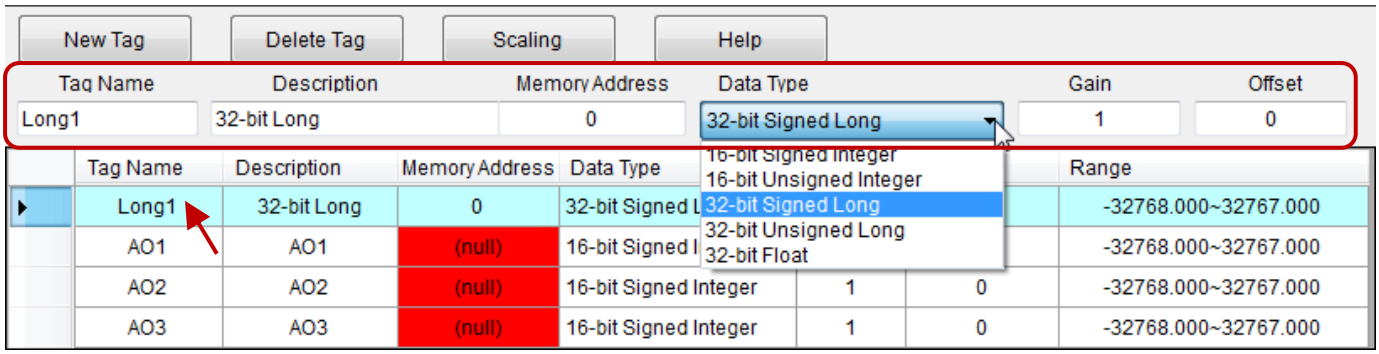
1. **Add I/O Tags**

   Click **AO Tag** and click the **New Tag** button, and then enter "4" and click **OK**.



2. **Set I/O Tags**

   Set the **Tag Name** as "Long1", the **Memory Address** as "0", the **Data Type** as "32-bit Signed Long".



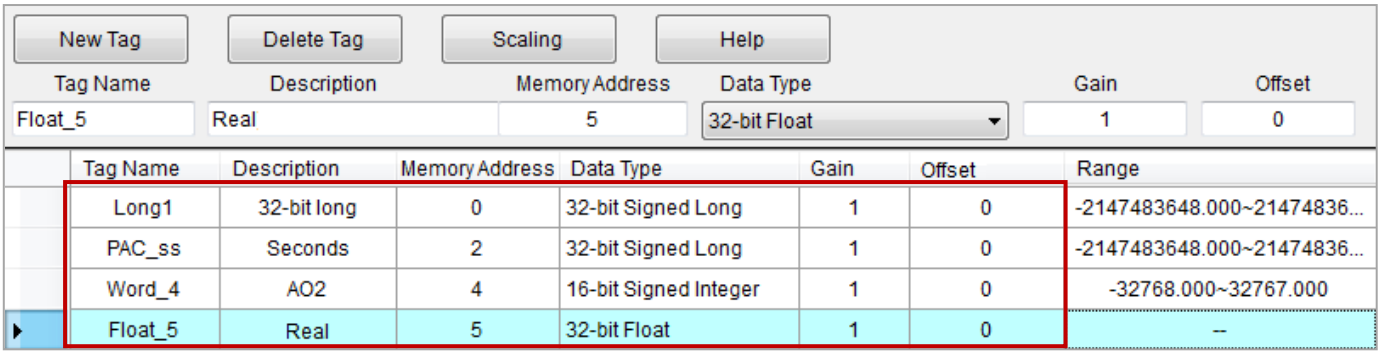
   Note that if **Gain** is set to "1" and **Offset** is set to "0" that means not to convert the value of variable. (Reference: Section 3.1 The Scaling Function)

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3. Set the 2nd to 4th AO tags

Note: When using 32-bit (or above) variables, e.g., "Long_1", "PAC_ss", and "Float_5", two Modbus addresses are needed. In addition, both the name of Win-GRAF variable and eLogger tag can be different because the data accessing is according to the address.

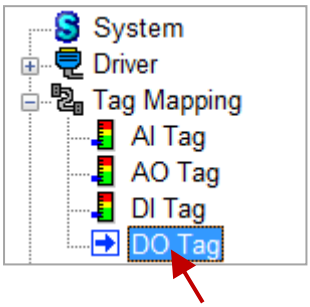
After completing the settings, the screen will be shown as below.



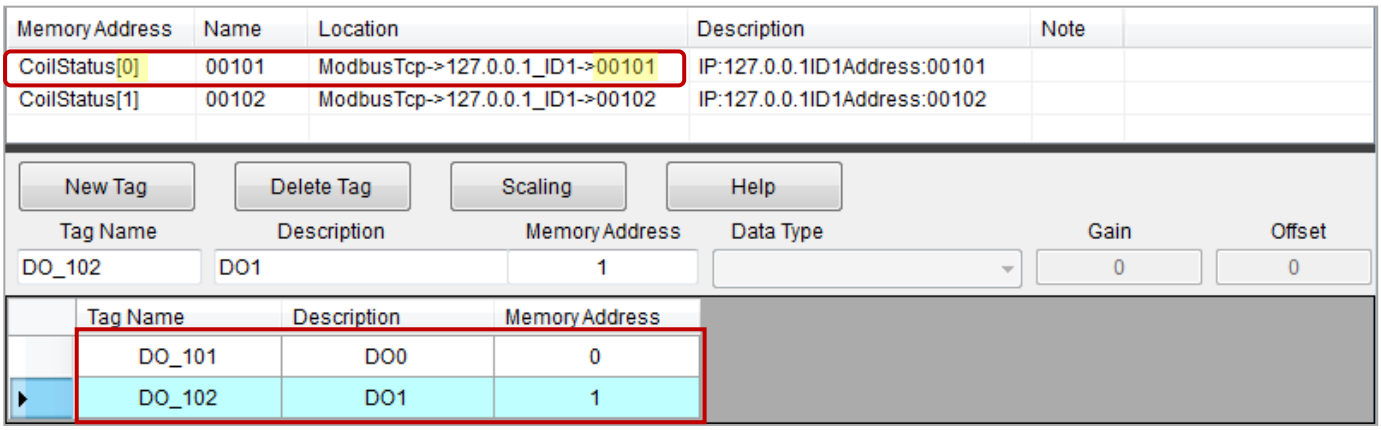
Tag Name	Description	Memory Address	Data Type	Gain	Offset	Range
Long1	32-bit long	0	32-bit Signed Long	1	0	-2147483648.000~21474836...
PAC_ss	Seconds	2	32-bit Signed Long	1	0	-2147483648.000~21474836...
Word_4	AO2	4	16-bit Signed Integer	1	0	-32768.000~32767.000
Float_5	Real	5	32-bit Float	1	0	--

4. Add DO Tags

Follow the similar way as described before to add two DO tags. After completing the settings, the screen will be shown as below.



Tag Name	Memory Address
DO_101	0
DO_102	1



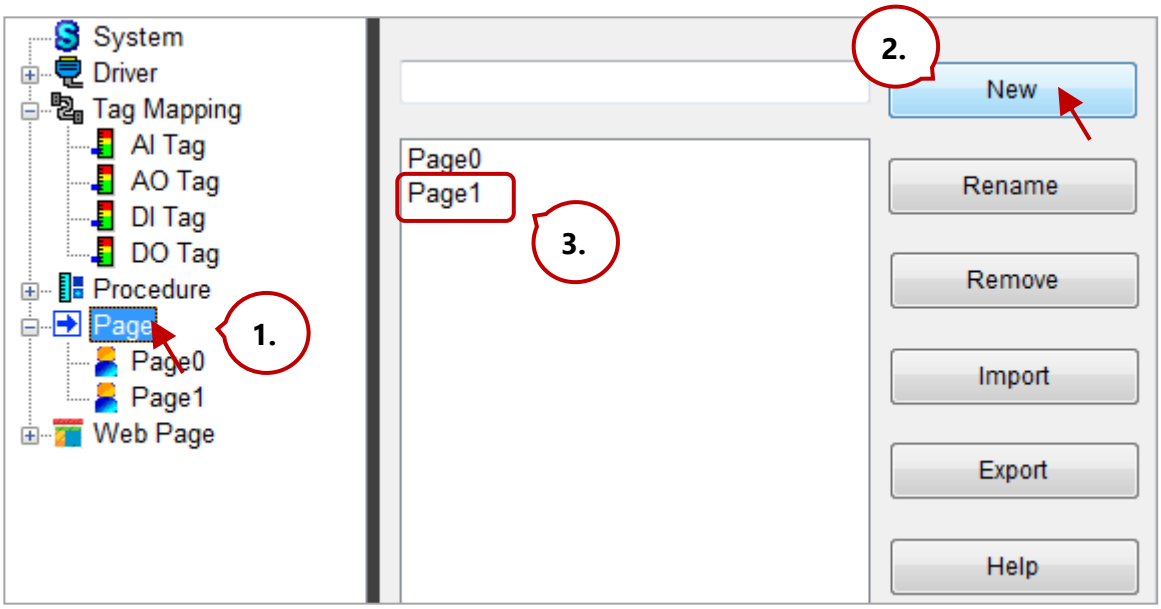
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2.5. How do I Design a eLogger Local HMI Page?

Next

2.5.1. Add a Local HMI Page

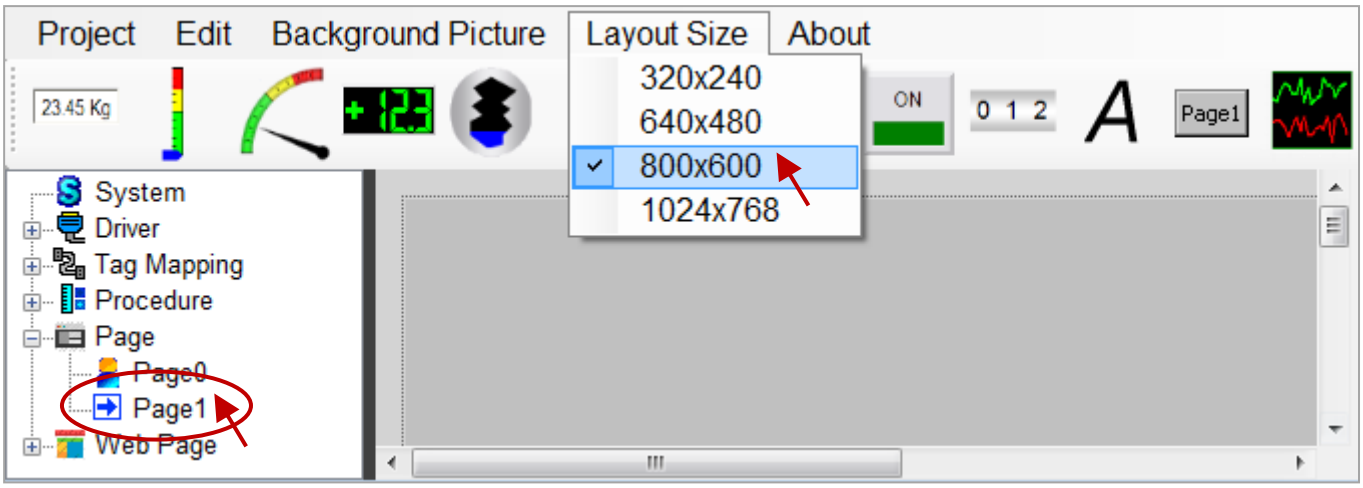
The demo project includes two web pages, i.e., **Page0** (the default page) and **Page1.** Click **Page** and click the **New** button to add the "Page1" page. Note that the Page0 will be displayed first after eLogger Runtime is running.



Next, click **Page 1** on the menu tree to edit page. First, choose the proper VGA layout size for the Win-GRAF PAC. Note that only the ViewPAC series comes with the touch panel.

WP-8x28-CE7, WP-5238-CE7, XP-8x48-CE6: **1024 * 768**

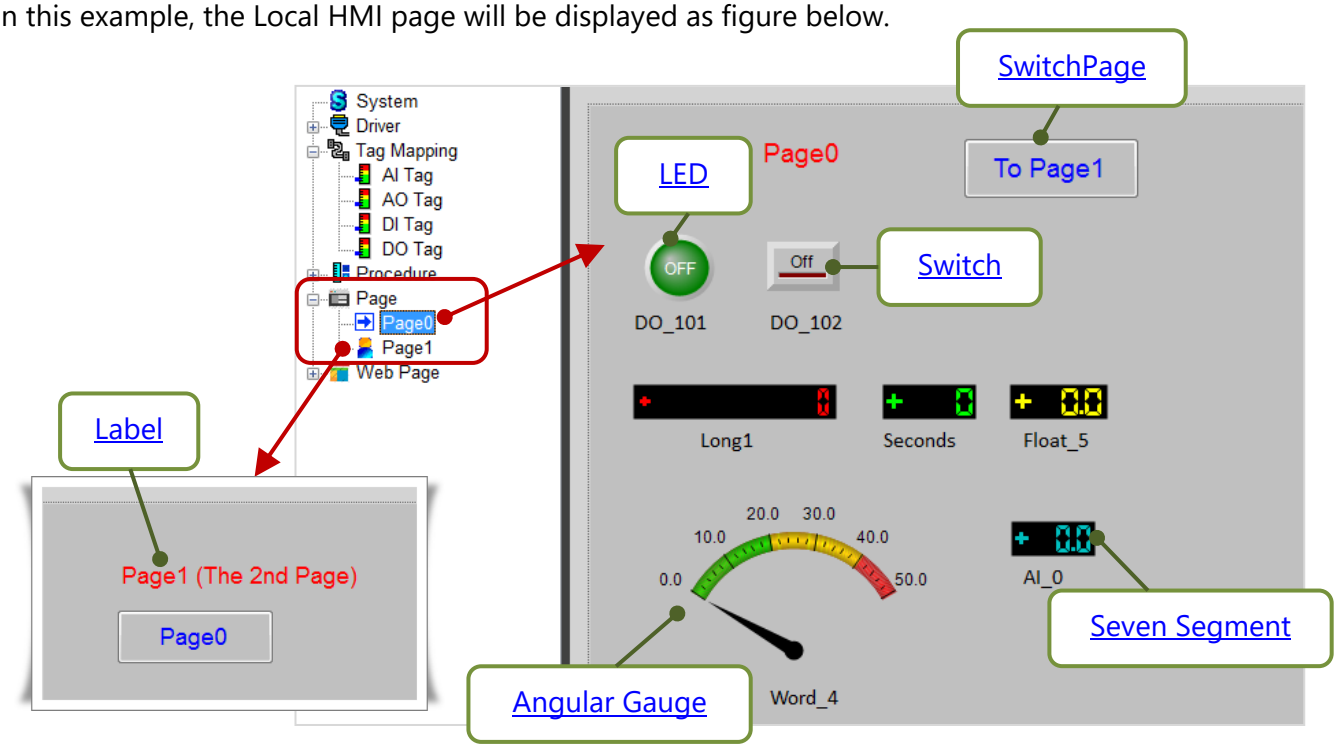
VP-4208-CE7: **800 * 600** ; VP-2208-CE7: **800 * 480** ; VP-1238-CE7: **640 * 480**



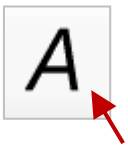
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2.5.2. Edit a Local HMI Page

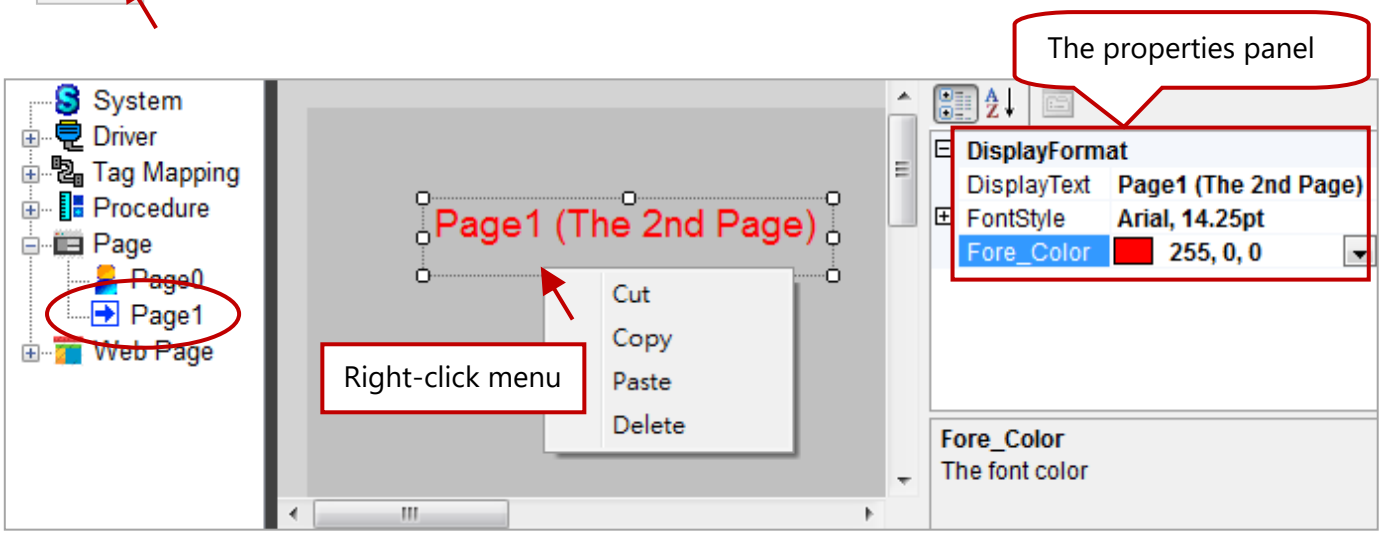
In this example, the Local HMI page will be displayed as figure below.



Add a Component - Label



On **Page1**, click the "Label" component and drag out a proper size. Next, configure the display text, the font size, and the color in the properties panel.



Note: Click on the component to display its properties panel. Moreover, you can also right-click on a component to cut, copy, paste or delete it.

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Add a Component - SwitchPage

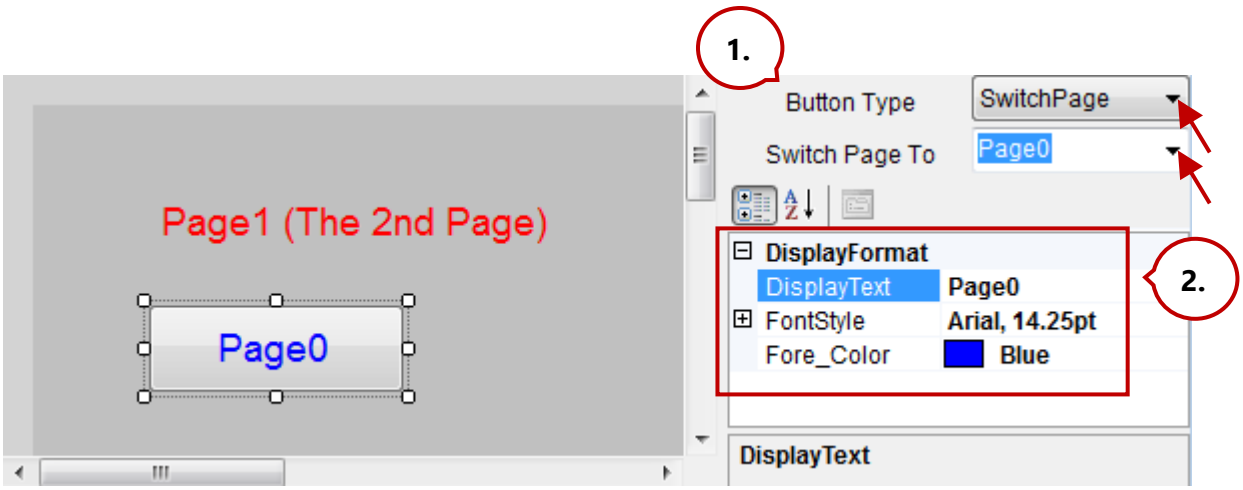
Local HMI



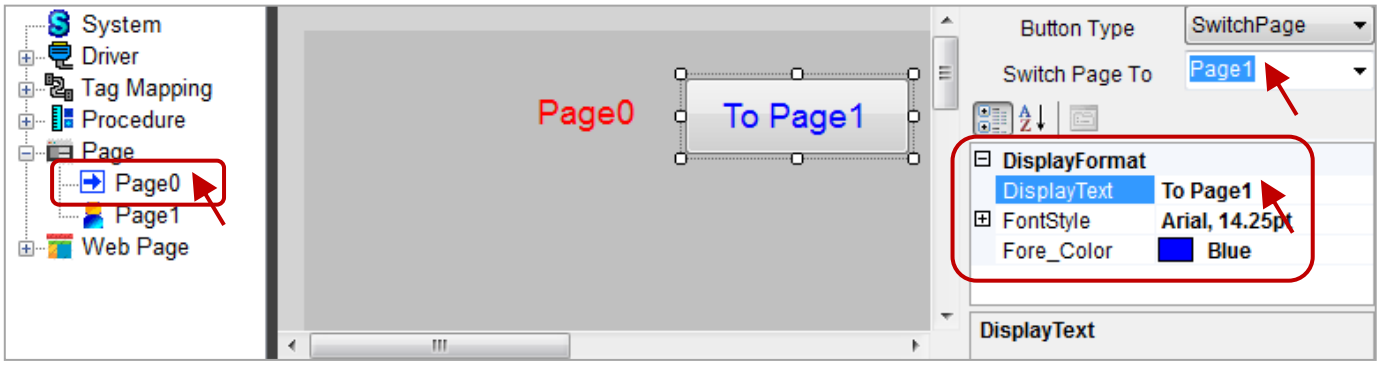
On **Page1**, click the "Button" component and drag out a proper size.

In the properties panel,

1. Set the **Button Type** as "SwitchPage" and the **Switch Page to** as "Page0".
2. Configure the display text, the font size, and the color appropriately.



Follow the same way as noted before to add a Label and a SwitchPage on **Page0**, and then change the settings as illustrated in the figure below.



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Add a Component - LED

Local HMI

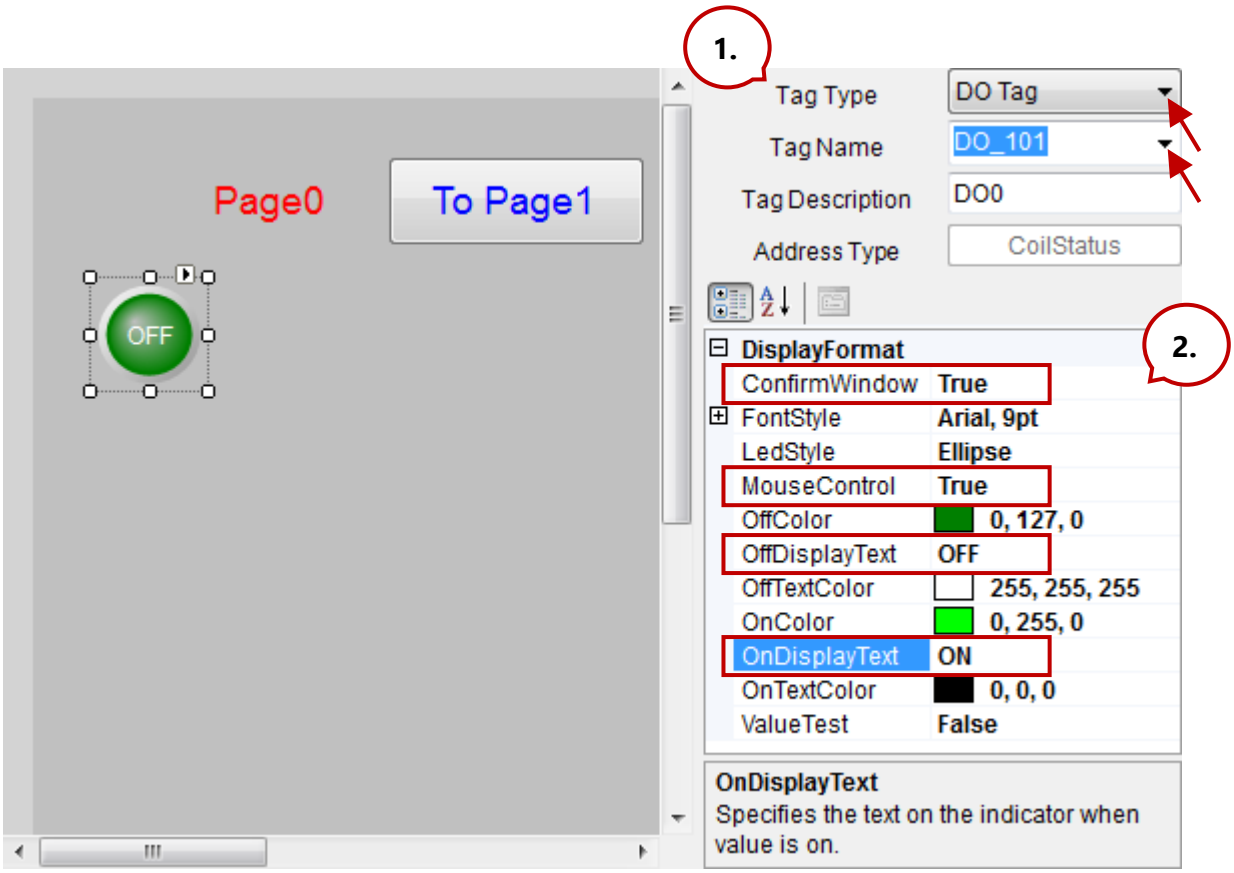


On **Page0**, click the "LED" component and drag out a proper size. This LED component is used to read/write the Win-GRAF variable named OUT_101, and its corresponding eLogger DO Tag called DO_101.

In the properties panel,

1. Set the **Tag Type** as "DO Tag", the **Tag Name** as "DO_101".
2. Set the **ConfirmWindow** as "True" means allowing output tag data after a confirmation.
   Set the **MouseControl** as "True" means allowing output data;
   "False" means only for reading data.

Also, set the text style and the color appropriately.



Note: Click on the component to display its properties panel. Moreover, you can also right-click on a component to cut, copy, paste or delete it.

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Add a Component - Switch

Local HMI

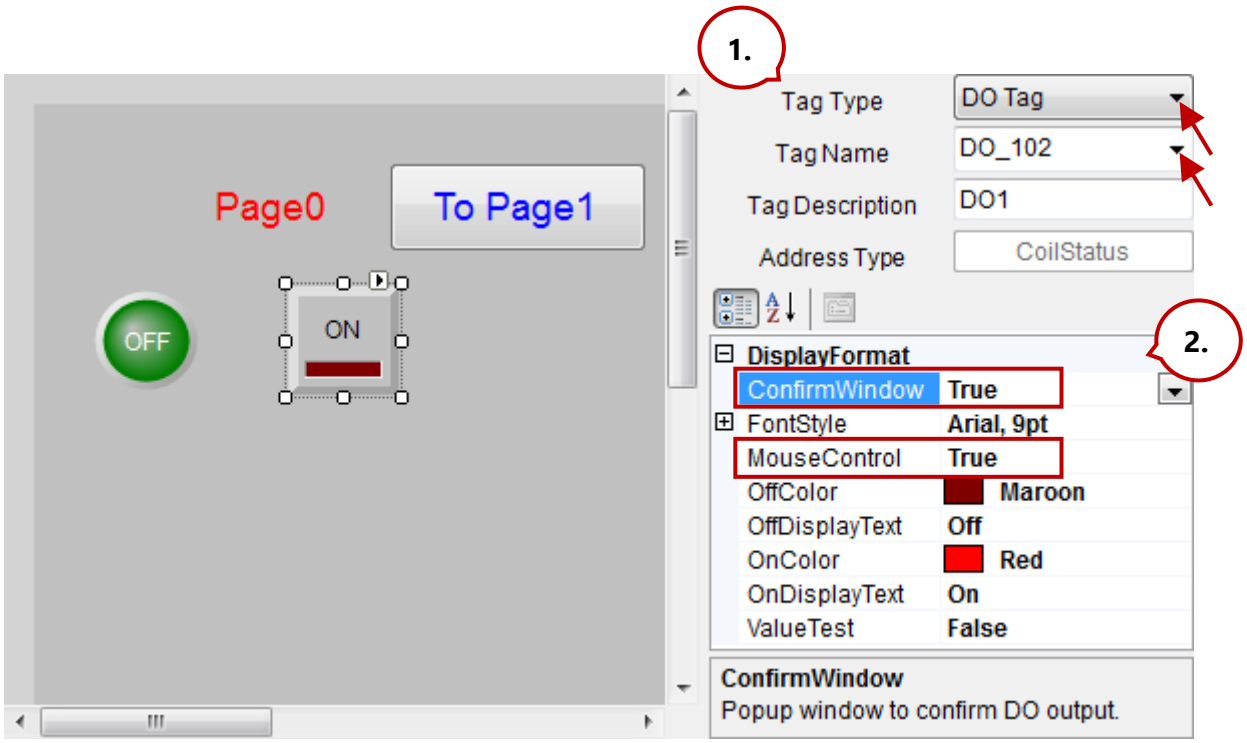


On **Page0**, click the "Switch" component and drag out a proper size.

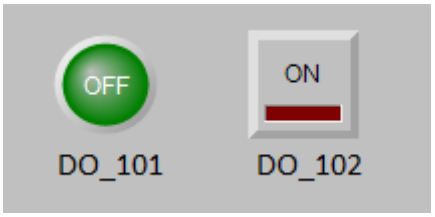
In the properties panel,

1. Set the **Tag Type** as "DO Tag", the **Tag Name** as "DO_102".
2. Set the **ConfirmWindow** as "True" means allowing output tag data after a confirmation.
   Set the **MouseControl** as "True" means allowing output data;
   "False" means only for reading data.

Also, set the text style and the color appropriately.



Moreover, you can **add two Labels** to describe the use of the LED and the Switch components, or see Section 2.5.1 for more details.



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Local HMI

Add a Component - Seven Segment



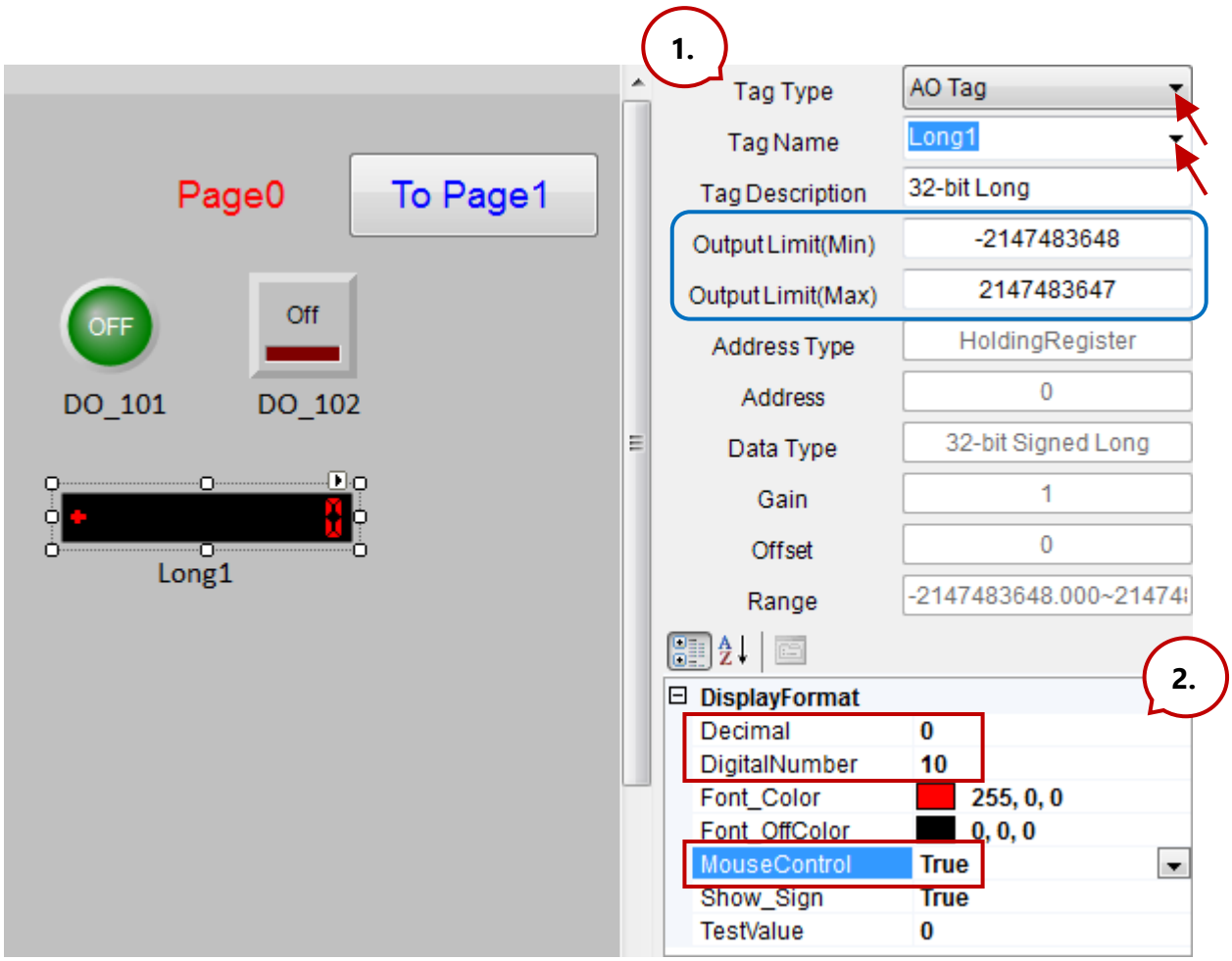
On **Page0**, click the "Seven Segment" component and drag out a proper size.

In the properties panel,

1. Set the **Tag Type** as "AO Tag", the **Tag Name** as "Long1".
   For the application needs, users can limit the range of output values.

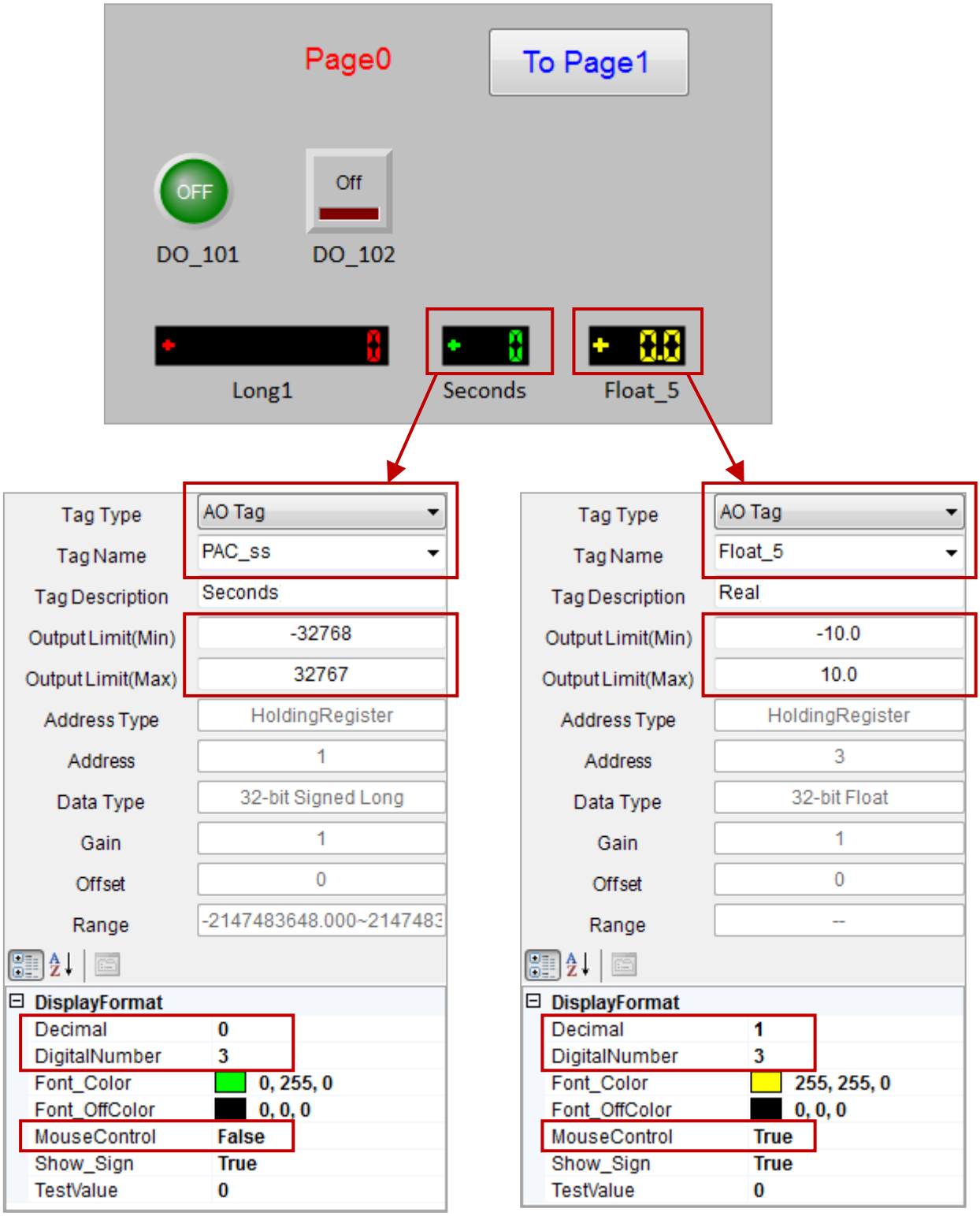
2. Set the **MouseControl** as "True" means allowing output data;
   "False" means only for reading data.
   Set the **Decimal** as "0" and the **DigitalNumber** as "10" (can be 1 to 24).
   In this example, the data type of "Long1" is a 32-bit Long, so no decimal place is required.

Finally, add a Label to describe the purpose of this component.



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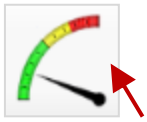
Next, follow the same way as described before to **add two Seven-Segment** components, and configure them as illustrated in the figure below, and then **add two Labels** to describe their uses.



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Add a Component - Angular Gauge

Local HMI

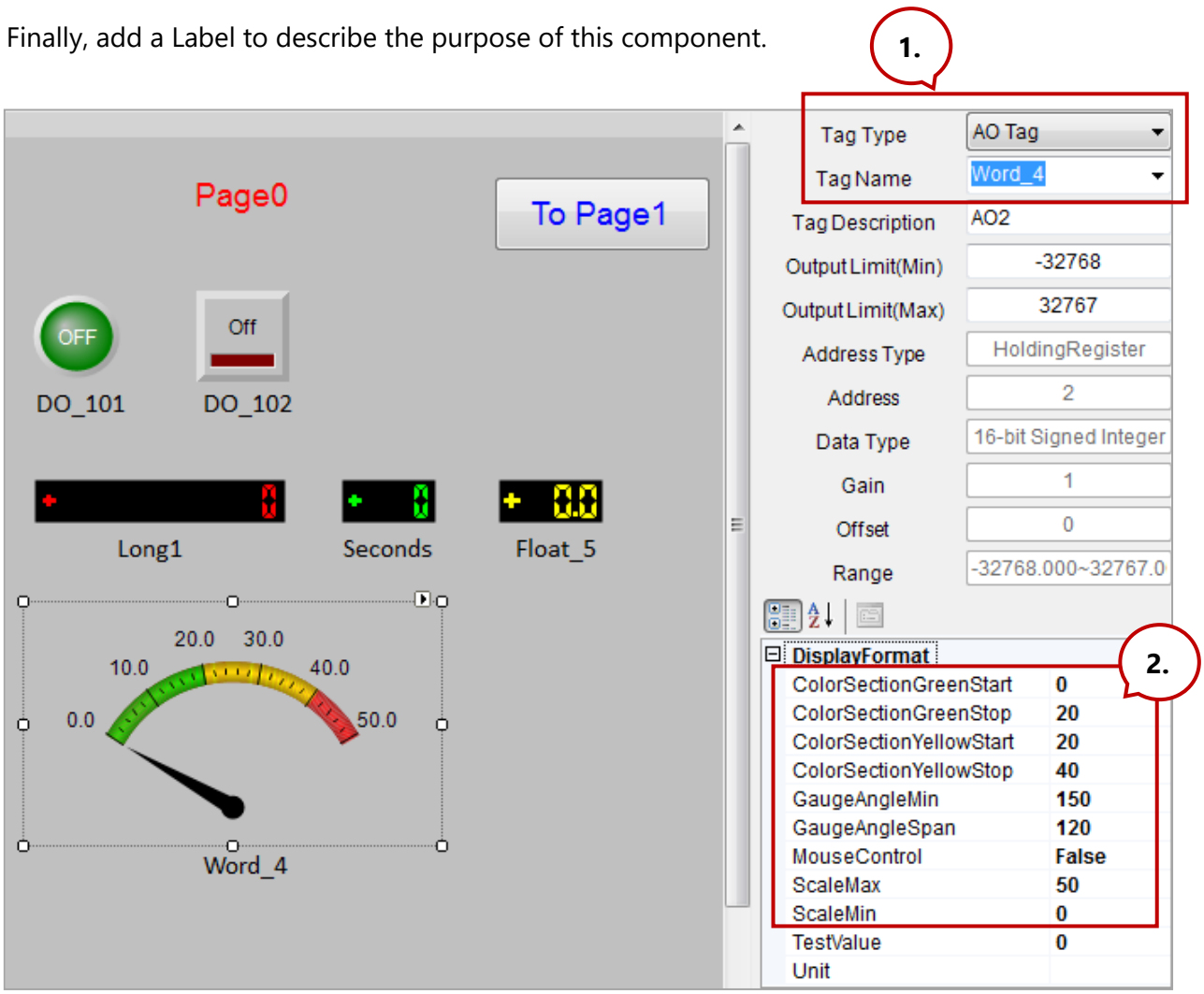


On **Page0**, click the "Angular Gauge" component and drag out a proper size.

In the properties panel,

1. Set the **Tag Type** as "AO Tag", the **Tag Name** as "Word_4".
2. Set the **MouseControl** as "False" means only for reading data.
   Set the **ScaleMin** as "0" and the **ScaleMax** as "50".
   In this case, the range of output values has been assigned as 0 to 50 in the Win-GRAF program.
   Set the **GaugeAngleMin** as 150 degrees and the **GaugeAngleSpan** as 120 degrees
   (i.e., the minimum value is at the location of 150 degrees, anti-clockwise direction. And,
   the entire header expansion is 120 degrees.)
   Set the **ColorSectionGreenStart** as "0" , the **ColorSectionGreenStop** as "20",
   the **ColorYellowSectionStart** as "20" and the **ColorYellowSectionStop** as "40".

Finally, add a Label to describe the purpose of this component.

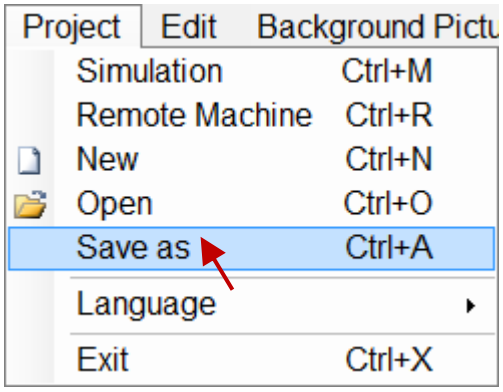


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2.6. Save or Backup an eLogger Project

Congratulations! You have completed the 1st eLogger project.

After completing an eLogger project, it is recommended to add a folder in the default path, e.g., C:\ICPDAS\eLogger\eLogger_Developer\Project**backup** to backup the project file (.wez).

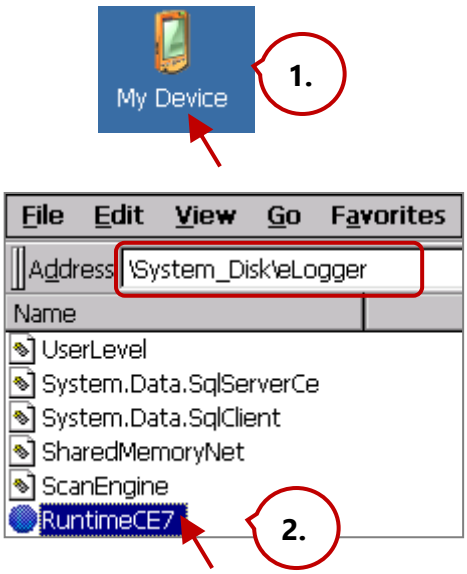


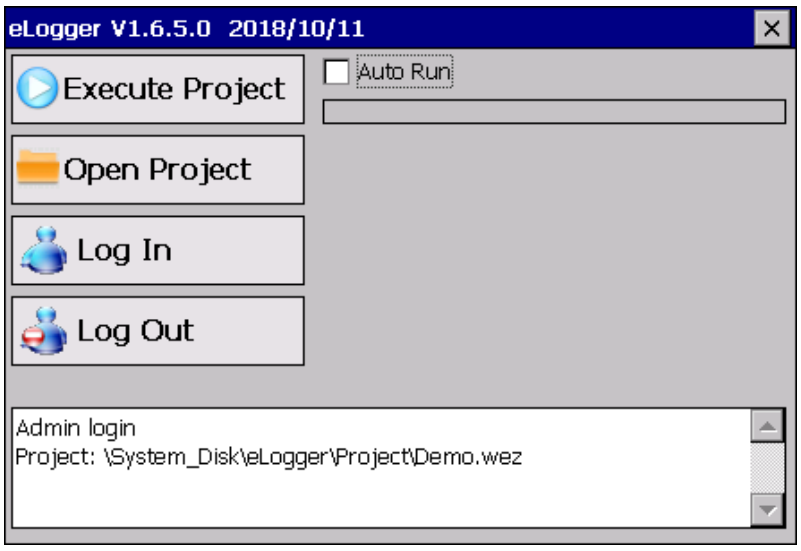
2.7. Uploading, Running, or Stopping an eLogger Project

Contents、Next

Follow these steps:

1. **Make sure that eLogger Runtime is activated.**
   If not, click **My Device** on PAC desktop and start the Runtime (e.g., RuntimeCE7.exe) in path **\System_Disk\eLogger**.



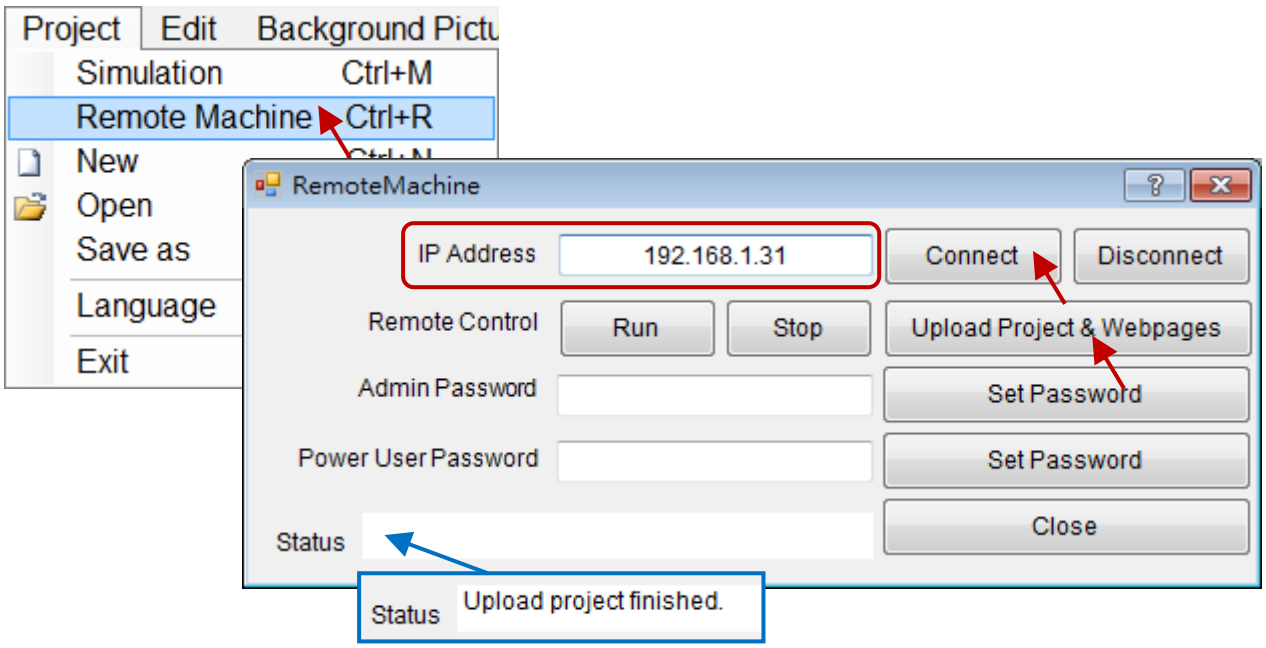


Notice:
If eLogger Runtime is not activated, eLogger Developer cannot establish connection to upload the project.

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2. Perform "Remote Machine" in eLogger Developer on PC.

Click **Remote Machine** on **Project** menu and enter the IP address of the PAC. Click **Connect** to make establish connection and click the **Upload Project & Web Pages** button to upload the project.

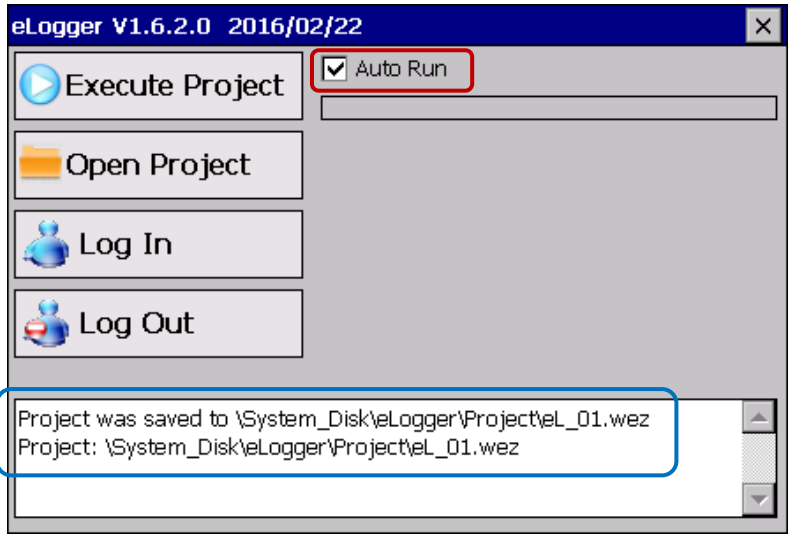


3. Remotely Run or Stop eLogger HMI on PC.

Click the **Run** or **Stop** button to remotely run / stop eLogger HMI in the PAC.

<u>Run eLogger HMI automatically whenever eLogger Runtime is activated</u>

After uploading the project, users can also tick **Auto Run** to automatically run eLogger HMI whenever "eLogger Runtime" is activated.



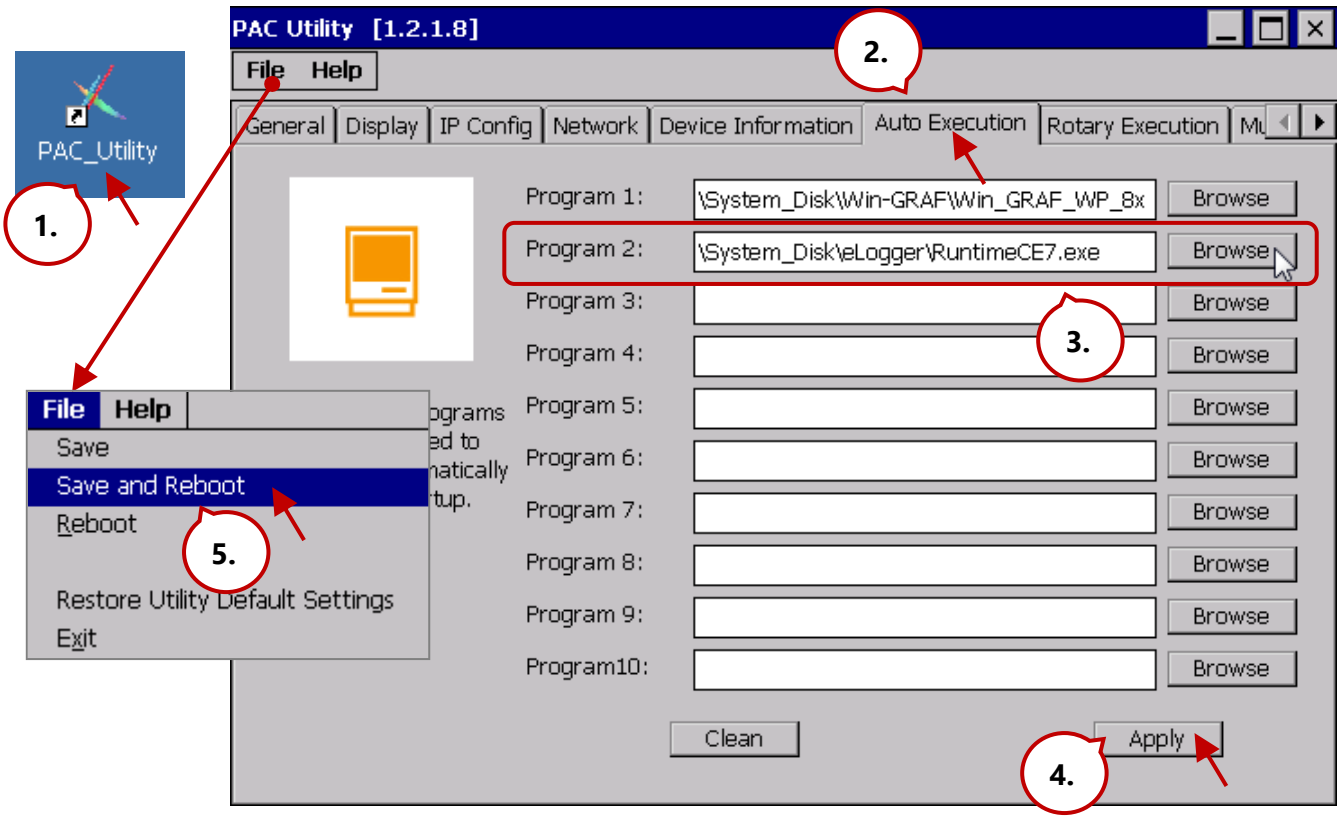
The report provides a summary of a successful uploads.

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Activate eLogger Runtime automatically whenever PAC is power-on

1) On the **Auto Execution** page in PAC Utility, set **Program 2** as eLogger Runtime (e.g., \System_Disk\eLogger\RuntimeCE7.exe) and click the **Apply** button.
2) Click **Reboot** on the **File** menu to restart the PAC and to apply the settings.

Note: The path of **Win-GRAF PAC driver** (e.g., \System_Disk\Win-GRAF\Win_GRAF_WP_8x28.exe) MUST be added on the **Auto Execution** page that can not be removed.



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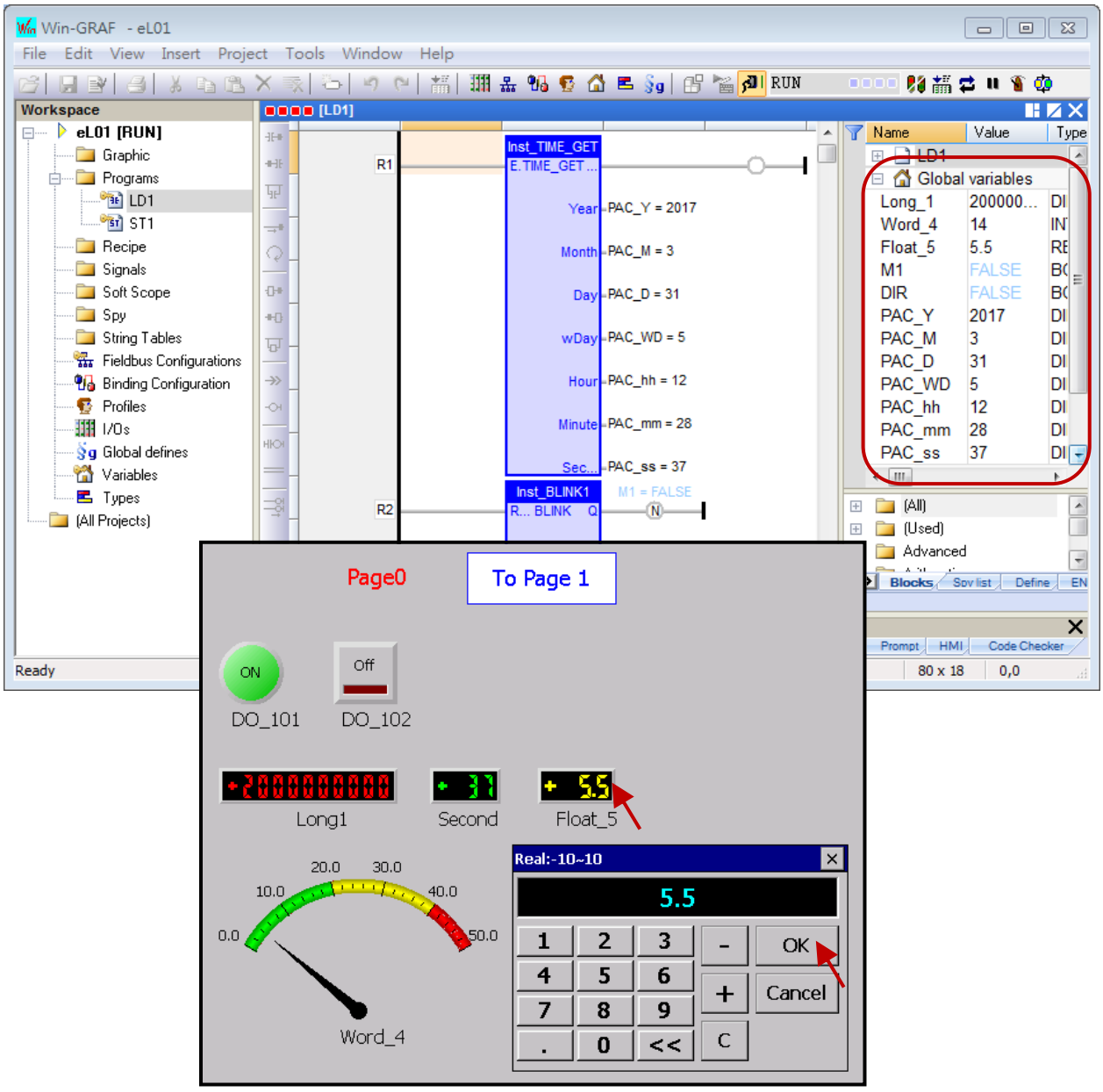
2.8. Testing eLogger Local HMI

Next

Follow these steps:

1. **Make sure that Win-GRAF project is running on PAC.**
   (Reference: Section 1.7, Downloading the Win-GRAF Project to the PAC)
   Run the Win-GRAF project so that eLogger can access Win-GRAF variable data.

2. **Run eLogger project and test the eLogger HMI on PAC.**
   (Reference: Section 1.7, Downloading, Running, or stopping an eLogger Project)
   Change values of Win-GRAF variable on PC or change DO status of eLogger HMI to test data accessing.



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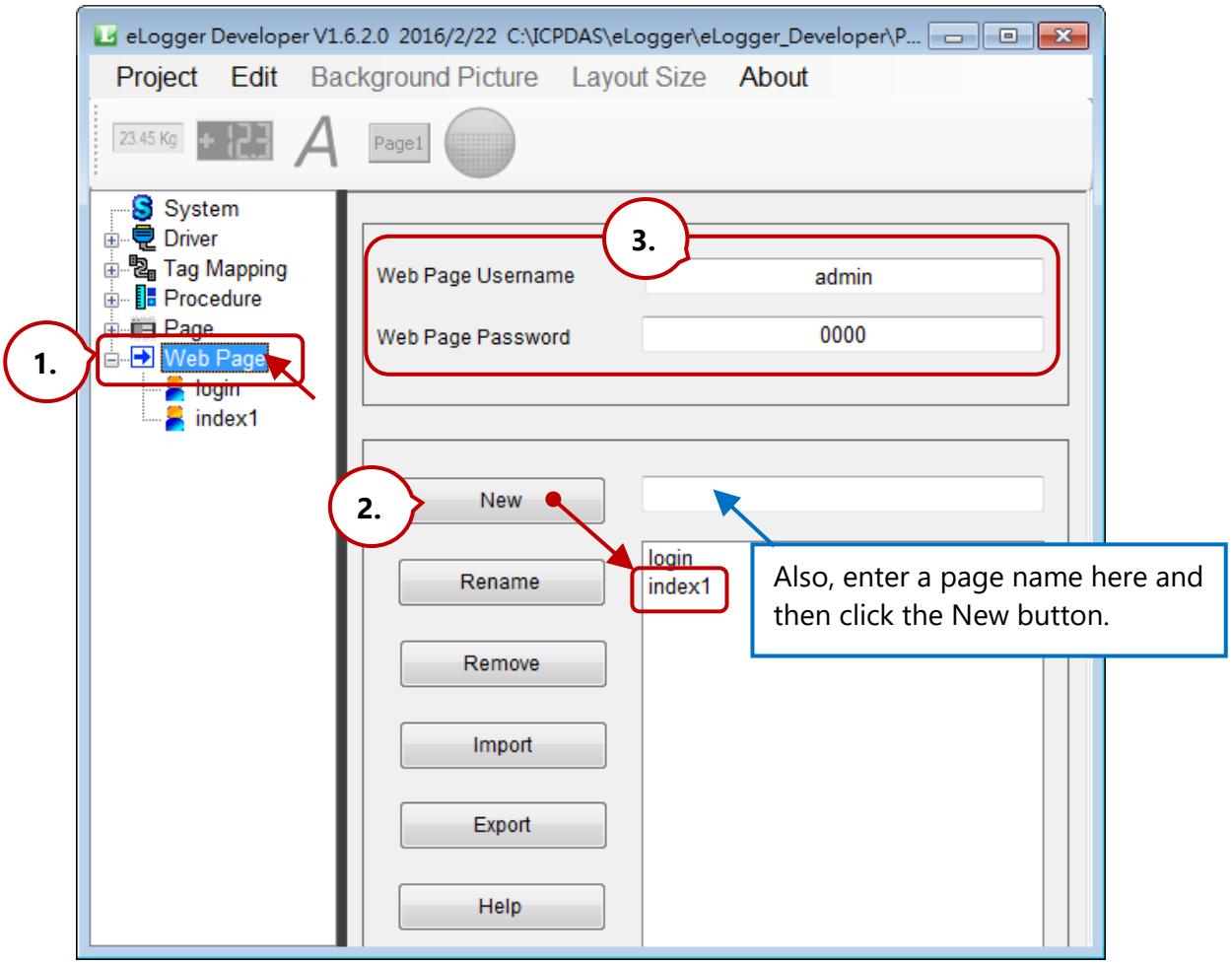
2.9. How do I Design a eLogger Web HMI Page?

Next

eLogger allows users to design their web HMI pages, set the username and the password for the **login** web page by using the eLogger Developer. After downloading the eLogger project to the PAC, users can log into the web page through a Web Browser, e.g., Google Chrome, Firefox, Safari, and so on, to conduct the remote I/O control.

2.9.1. Add a Web Page and Set the Login Username and Password

The demo project includes two web pages, **login** (the default page) and **index1.** Click **Web Page** and click the **New** button to add an "index1" page. Next, set the login username and password for the webpage.



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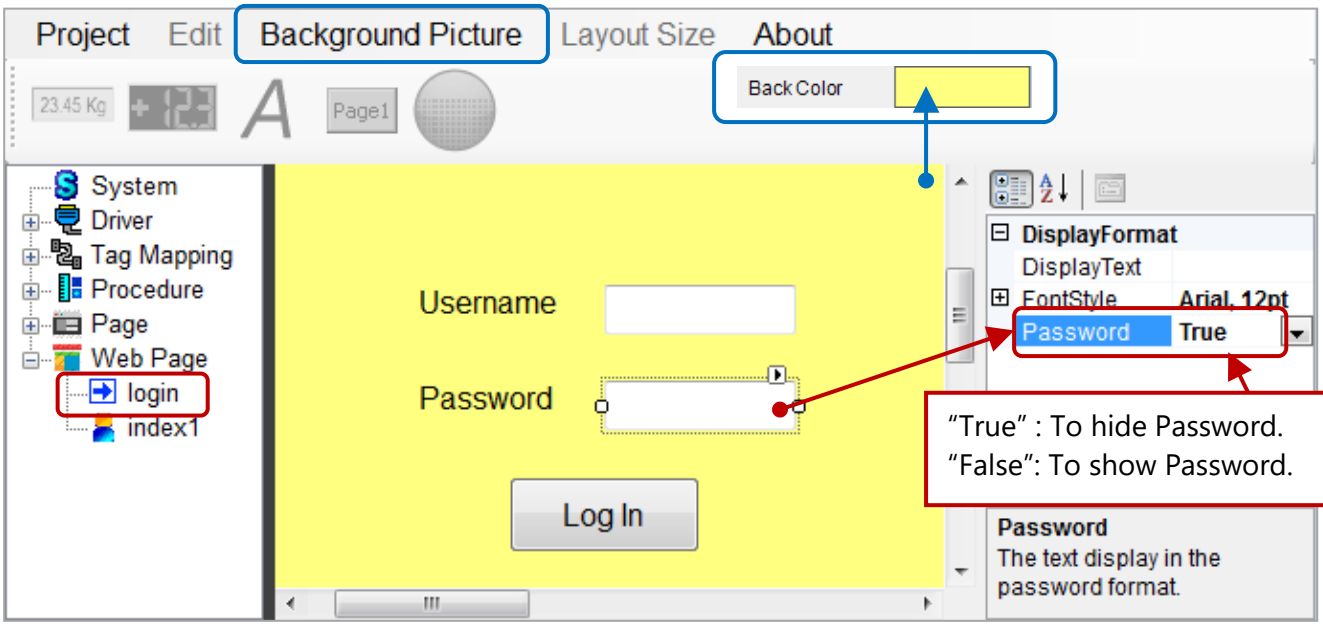
Next

2.9.2. Edit the Login Web Page

Note that any component on the default login web page CAN NOT be added or removed, can only be modified.

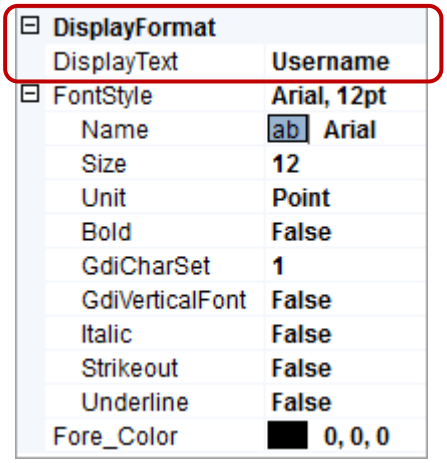
Configure the background color or image

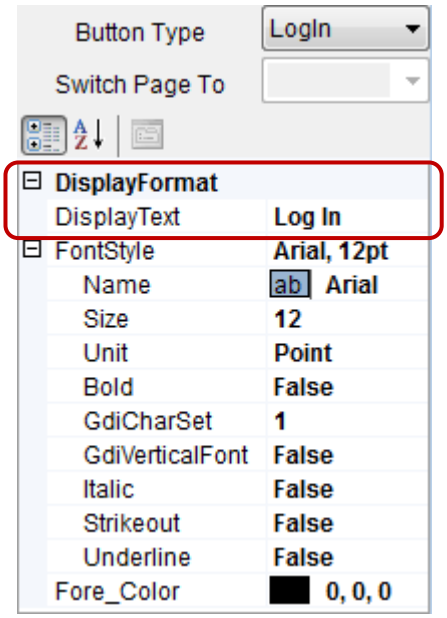
1. Click the **Back Color** property to set the background color.
2. Click **Background Picture** on the menu bar to add a background image. Note that the image will be stored in the **WebBackPic** folder under the HTTP path. (Reference: Section 2.1.2)



Configure properties of the component

Click on any component to display the corresponding property window and modify the settings.



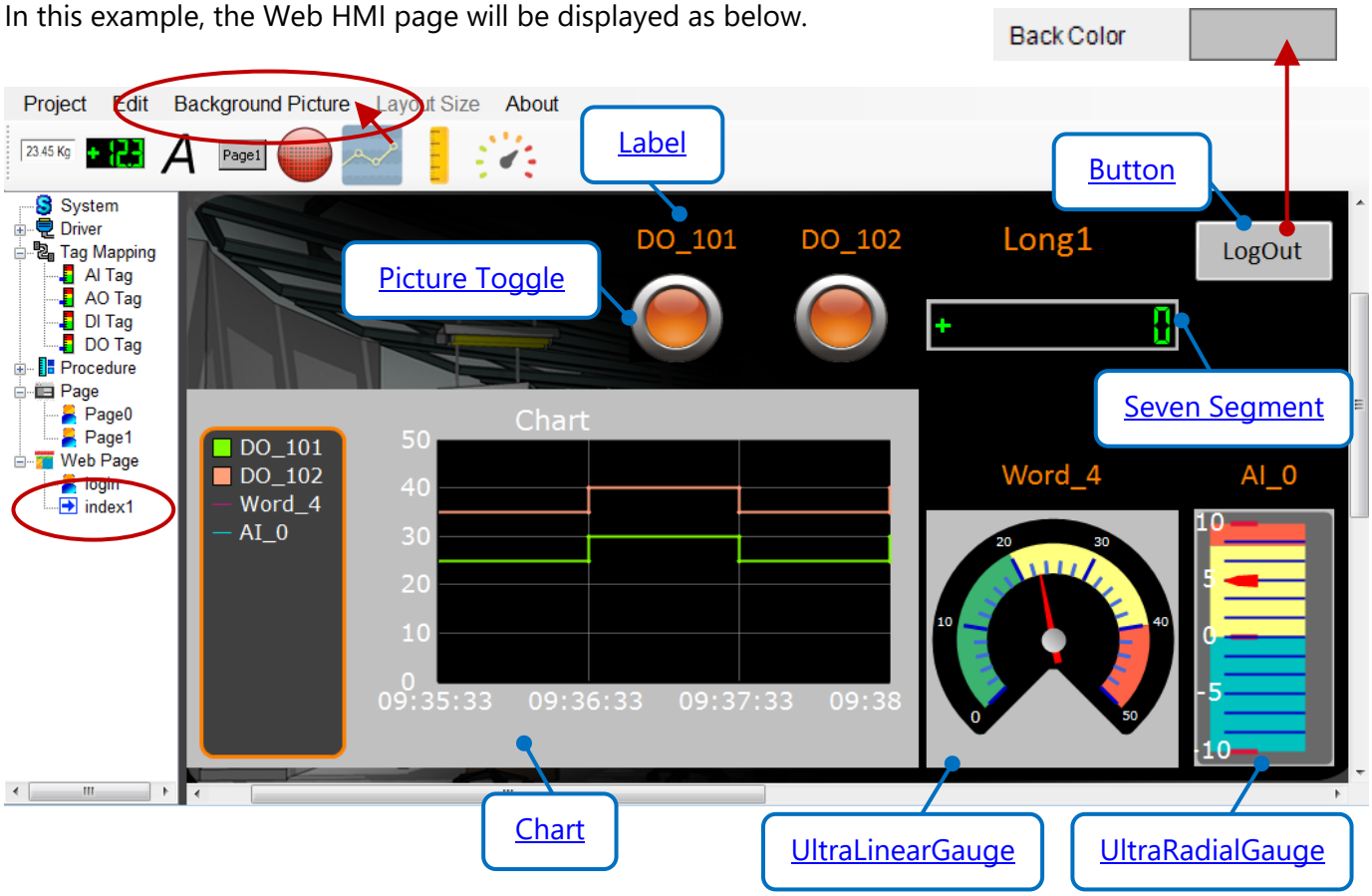


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2.9.3. Edit an eLogger Web Page

Next

In this example, the Web HMI page will be displayed as below.



Configure the background color or image

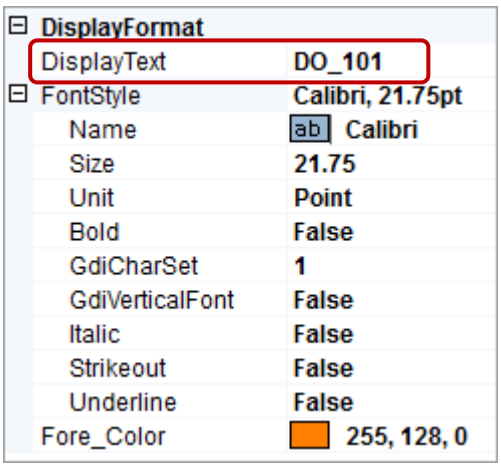
1. Click the **Back Color** property to set the background color.
2. Click **Background Picture** on the menu bar to add a background image. Note that the image will be stored in the **WebBackPic** folder under the HTTP path. (Reference: Section 2.1.2)

The following will show you all components that used in the eLogger web page - index1.

1) Label:



The web page includes five Label components (i.e., DO_101, DO_102, Long1, Word_4, and AI_0) that used to describe the purpose of the component.



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2) Picture Toggle:

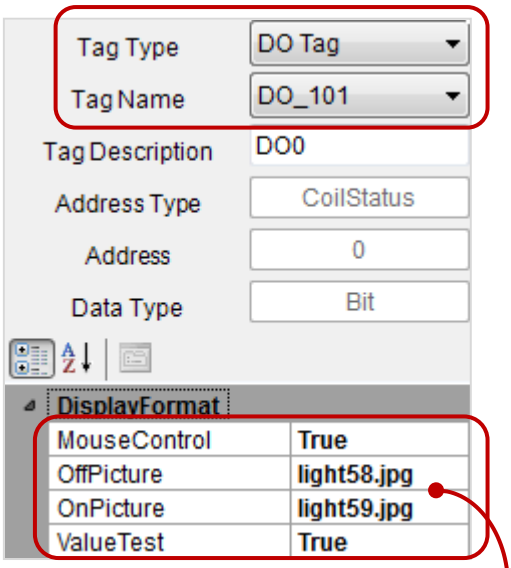


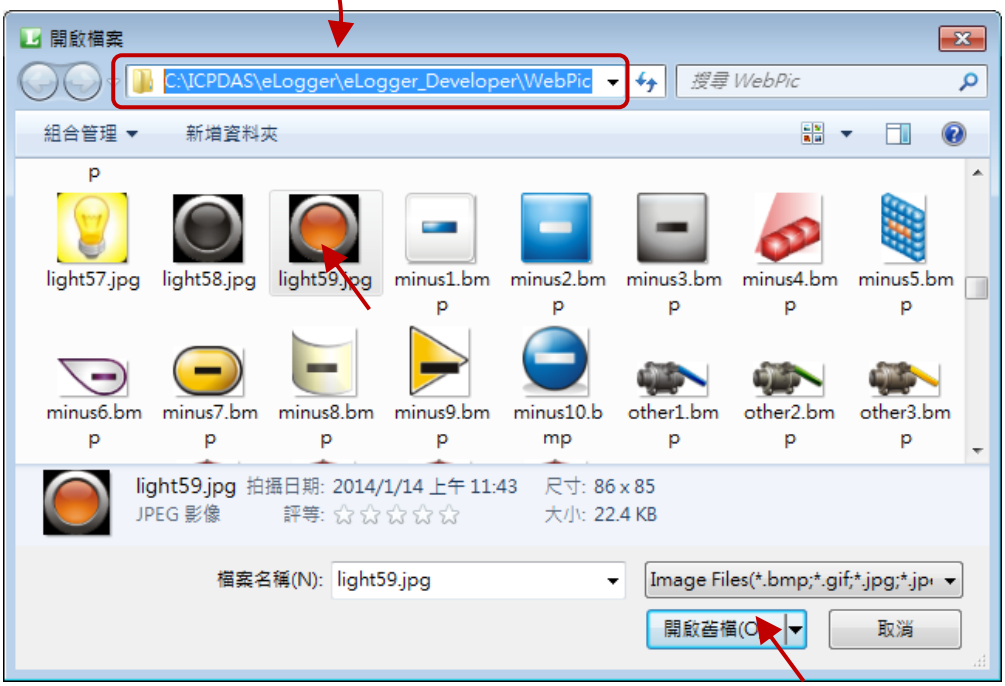
The web page includes two Picture Toggle components that used to display or control the state of the DO Tags (i.e., the DO_101 and DO_102). Refer to the property settings as illustrated in the figure below.

MouseControl: Set to "**True**" means that allows to change the state of the DO Tag;
Set to "False" means that only for reading data.

Off/OnPicture: Set the display image when the state of DO Tag is set to OFF or ON.
(The default images are stored in C:\ICPDAS\eLogger\eLogger_Developer**WebPic**)

ValueTest: Set to "**True**" to view the ON image; Set to "False" to view the OFF image.



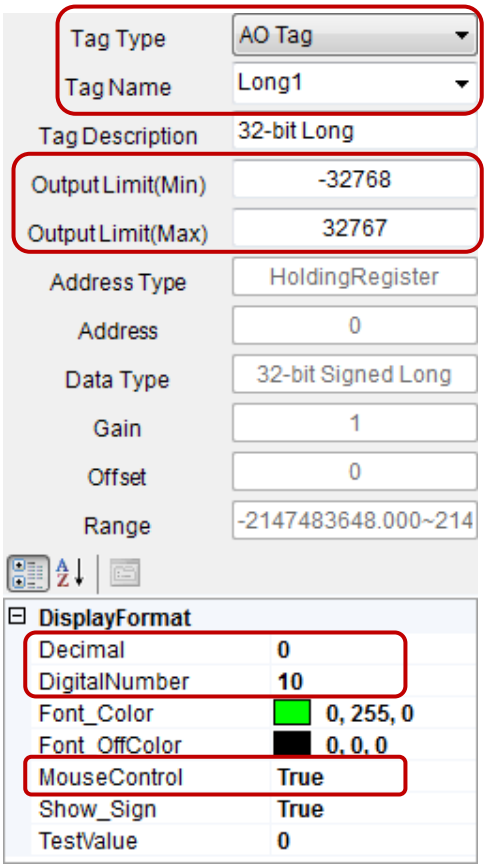


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3) Seven Segment:



The web page includes one Seven Segment component that used to display or write the value of the AO Tag (i.e., Long1).



Refer to the property settings as illustrated in the figure:

Output Limit (Min./Max.):
For the application needs, users can limit the range of output values (e.g., -32768 ~ 32767).

Decimal:
The decimal place is set to "0".

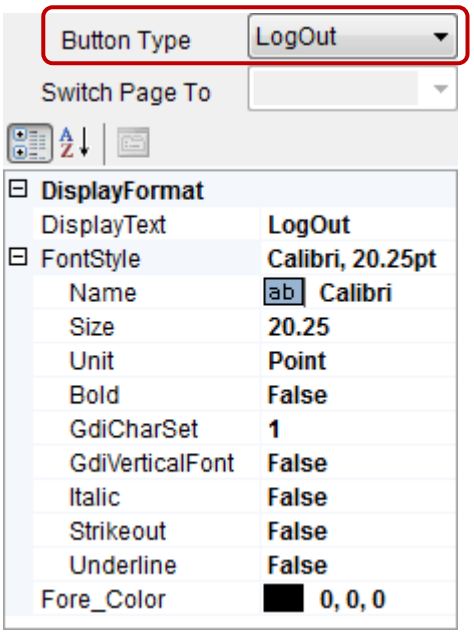
DigitalNumber:
The display number of digits is set to "10".

MouseControl:
Set to "True" indicates allowing to write the value of AO Tag.

4) Button:



The web page includes one Button component that used to log out the web page.

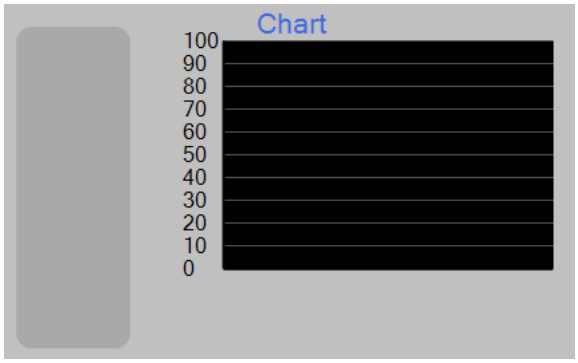


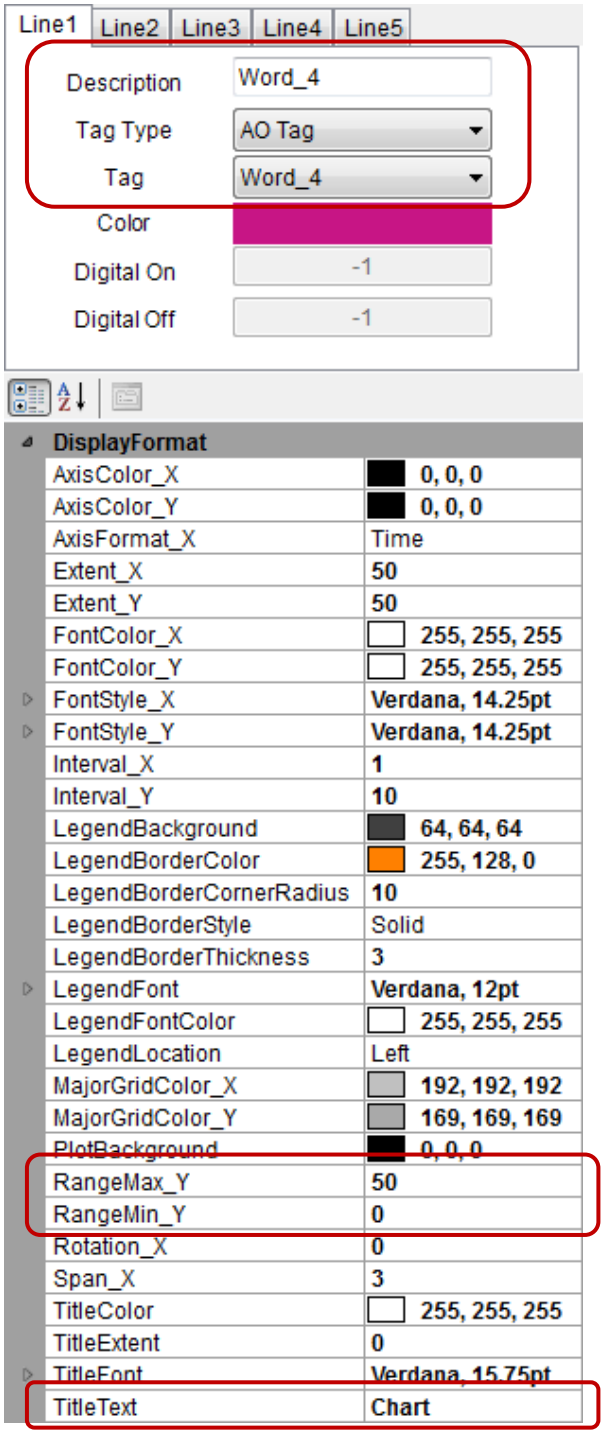
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5) Chart:



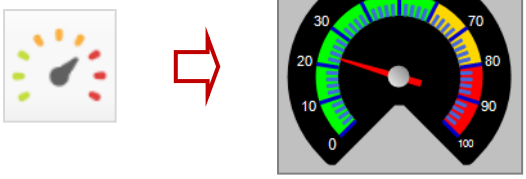
The web page includes one Chart component that used to display the line chart for I/O data. Refer to the property settings as illustrated in the figure.





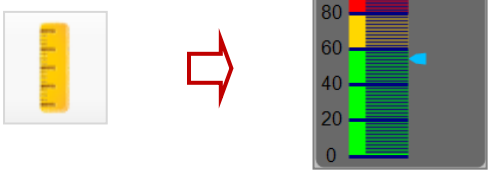
6) UltraRadialGauge:

Refer to the settings as the figure in the next page. The web page includes one UltraRadialGauge component that used to display a radial gauge for I/O data.



7) UltraLinearGauge:

Refer to the settings as the figure in the next page. The web page includes one UltraLinearGauge component that used to display a linear gauge for I/O data.



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6) UltraRadialGauge 

Tag Type	AO Tag
Tag Name	Word_4
Tag Description	AO2
Output Limit (Min.)	-32768
Output Limit (Max.)	32767
Address Type	HoldingRegister
Address	2
Data Type	16-bit Signed Integer
Gain	1
Offset	0
Range	-32768.000~32767.000

DisplayFormat	
BackgroundColor	0, 0, 0
GaugeEndAngle	405
GaugeStartAngle	135
LabelColor	255, 255, 255
LabelExtent	90
LabelFont	Verdana, 14.25pt
LabelFrequency	10
MajorExtent	55
MajorFrequency	10
MajorTickColor	0, 0, 205
MajorTickLength	20
MinorExtent	55
MinorFrequency	4
MinorTickColor	65, 105, 225
MinorTickLength	10
MouseControl	False
ScaleMax	50
ScaleMin	0
Section1Color	60, 179, 113
Section2Color	255, 255, 128
Section2Start	20
Section3Color	255, 99, 71
Section3Start	40
SectionExtent	55
SectionWidth	25
TestValue	23.45

7) UltraLinearGauge 

Tag Type	AI Tag
Tag Name	AI_0
Tag Description	AI0
Output Limit (Min.)	-32768
Output Limit (Max.)	32767
Address Type	InputRegister
Address	0
Data Type	16-bit Signed Integer
Gain	0.00030518
Offset	0
Range	-10.000~10.000

DisplayFormat	
BackgroundColor	105, 105, 105
LabelColor	255, 255, 255
LabelExtent	10
LabelFont	Verdana, 14.25pt
LabelFrequency	5
MajorExtent	25
MajorFrequency	10
MajorLength	20
MajorTickColor	220, 20, 60
MajorWidth	4
MarkerColor	255, 0, 0
MarkerExtent	20
MarkerWidth	25
MinorExtent	20
MinorFrequency	5
MinorLength	60
MinorTickColor	0, 0, 192
MinorWidth	2
MouseControl	False
ScaleMax	10
ScaleMin	-10
Section1Color	0, 192, 192
Section2Color	255, 255, 128
Section2Start	0
Section3Color	255, 99, 71
Section3Start	8
SectionExtent	10
SectionWidth	70
TestValue	5

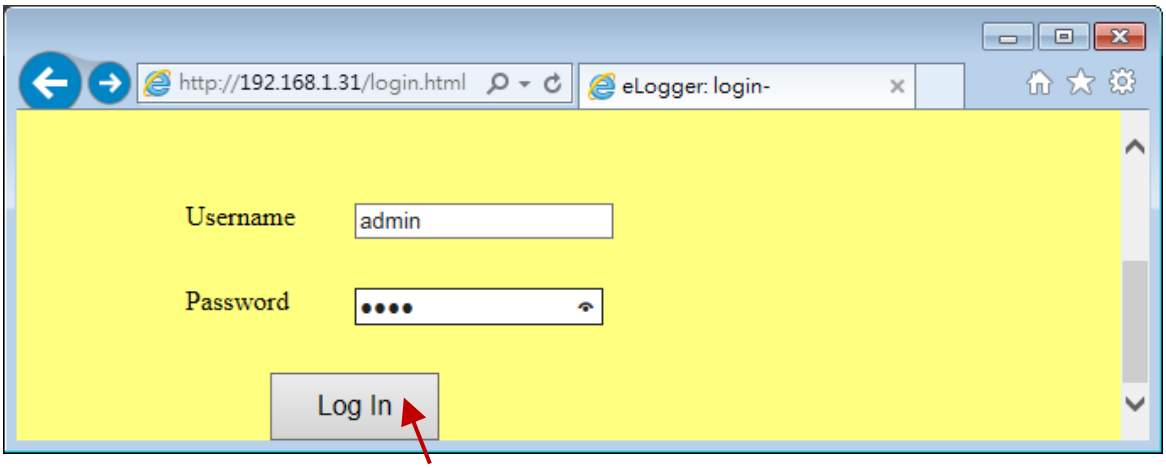
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Next

2.9.4. Test the eLogger Web PageNext

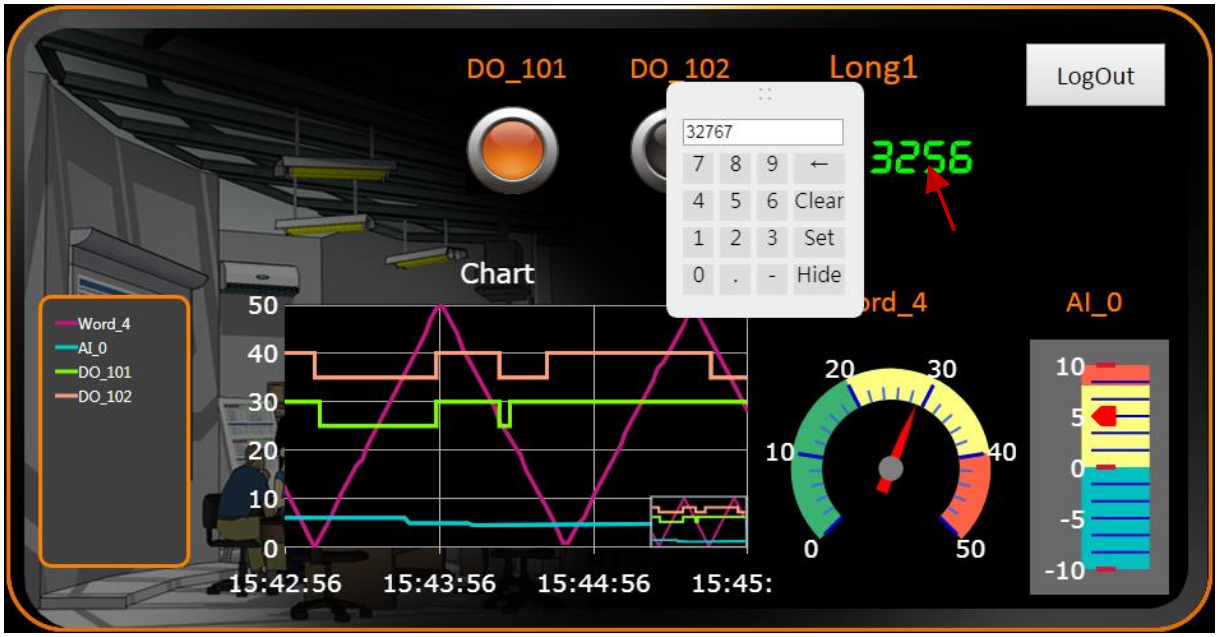
Before testing the web page, make sure that both the Win-GRAF project (eL01.zip, refer to Section 1.7) and the eLogger project (eL_01.wez, refer to Section 2.7) have been uploaded to the PAC.

1. Open a browser and enter the IP address of the PAC (e.g., 192.168.1.31) in the address bar on PC. Next, enter the username and the password (defaults: admin/0000), and then click the **Log-in** button to log into the web page.



2. Next, users can observe I/O data or click an HMI component to change either the status of the DO tag or the value of the AO Tag.

3. Click the **LogOut** button to log out the web page.



Note: To test negative value, first set the Long1 as a negative value on the local HMI page on PAC.

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Chapter 3. Advanced eLogger Functions

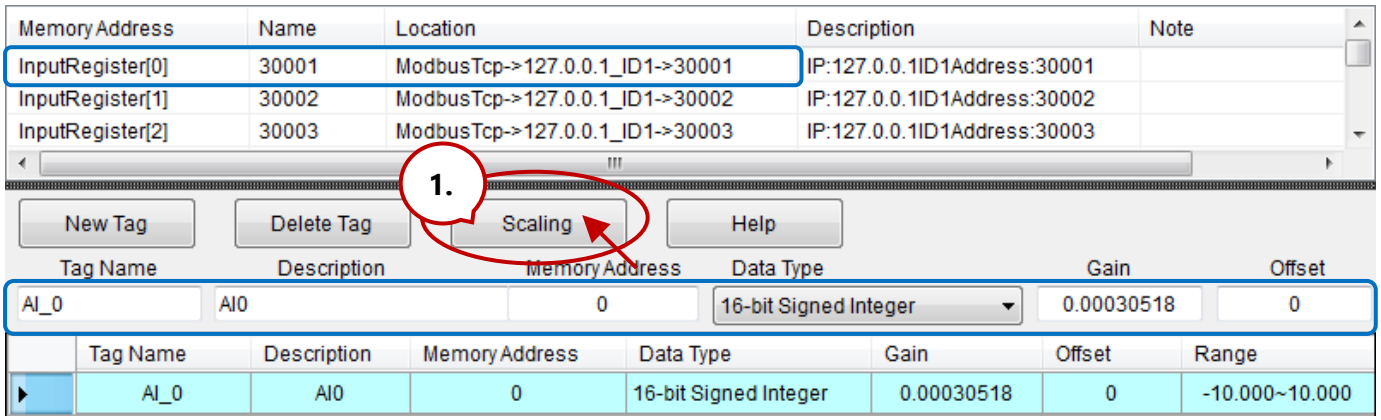
3.1. The Scaling Function

Next

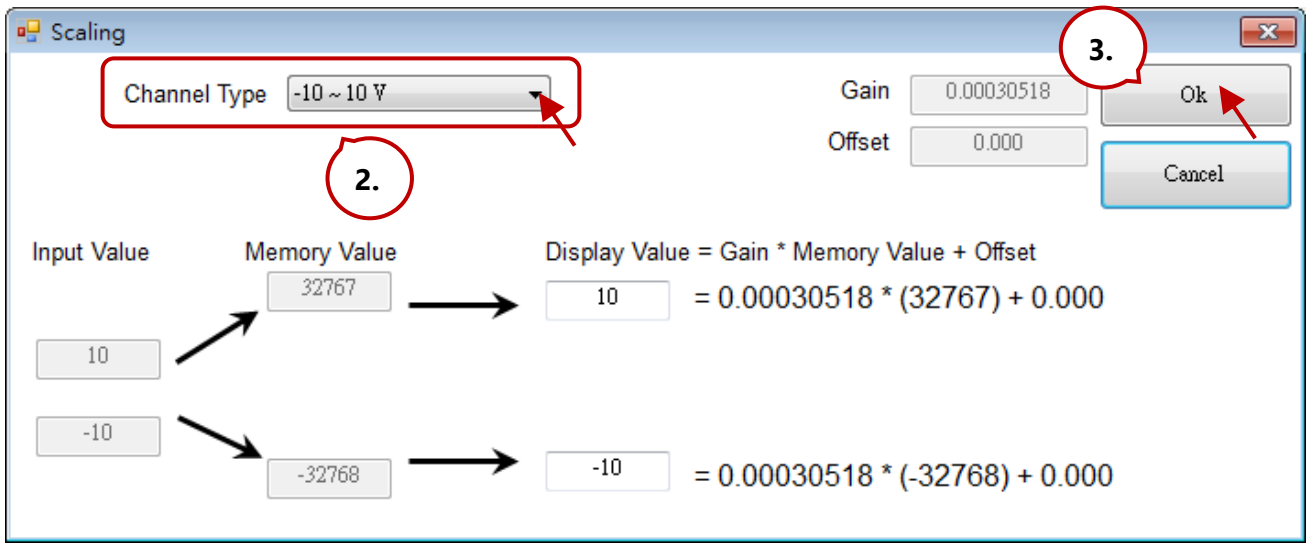
When using an I-8017HW-G, an eight-channel AI module, and setting the type code to “8” that means the module is used to measure -10 to +10 V. In this case, “AI_0” is used to read the value of channel 0 of the I-8017HW and the data type is a 16-bit signed integer.

However, the value that Win-GRAF workbench reads from the device is an integer ranging from -32768 to +32767. At this point, if users want to display the value in a range from -10 to +10 on eLogger HMI, the "Scaling" function must be used.

Note that if **Gain** is set to “1” and **Offset** is set to “0” that means not to convert value.



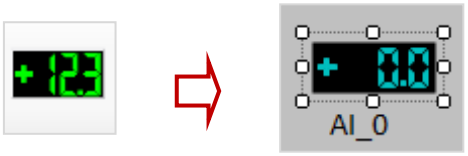
Click the **Scaling** button and choose a **Channel Type** (e.g., -10 to 10 V), and then click **OK**. Then, both the **Gain** and **Offset** values will automatically be set in the respective fields.

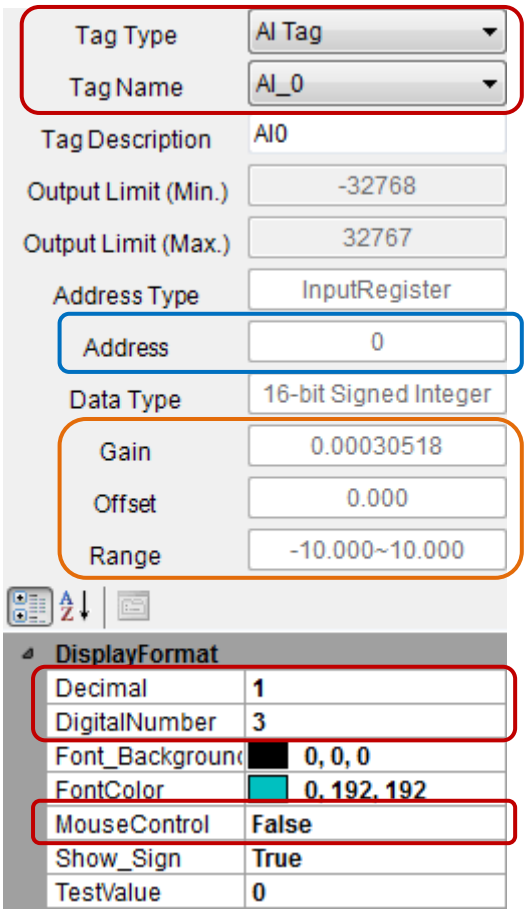


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Testing for the Value Conversion:

First, add a Seven Segment to the page and refer to the property settings as illustrated in the figure.

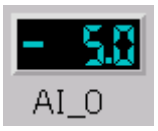


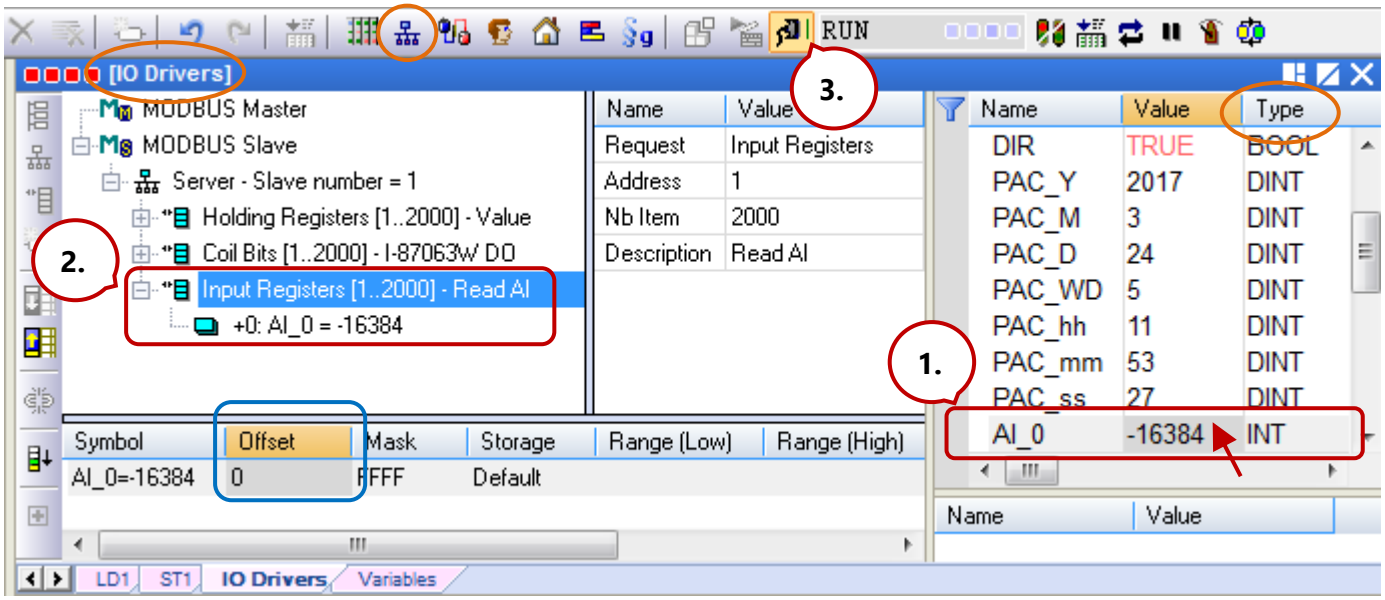


1) Set the **Tag Type** as "AI Tag".
2) Set the **Tag Name** as "AI_0".
3) Set the **MouseControl** as "False".
   "True": allowing output data; "False": only for reading data.

Win-GRAF Settings:

1. Add the "AI_0" variable in the Win-GRAF and set the **Type** as "INT".
2. Add a Data Block - **Input Registers** in the **IO Drivers** window allowing the eLogger HMI to read data. (Reference: Section 1.2 and 1.3 · Declare/Public Win-GRAF Variables.
3. Download the Win-GRAF project to the PAC and set the value of the AI_0 variable as "-16384". Then, the converted AI_0 value (-5.0) will be displayed on the eLogger HMI on PAC.



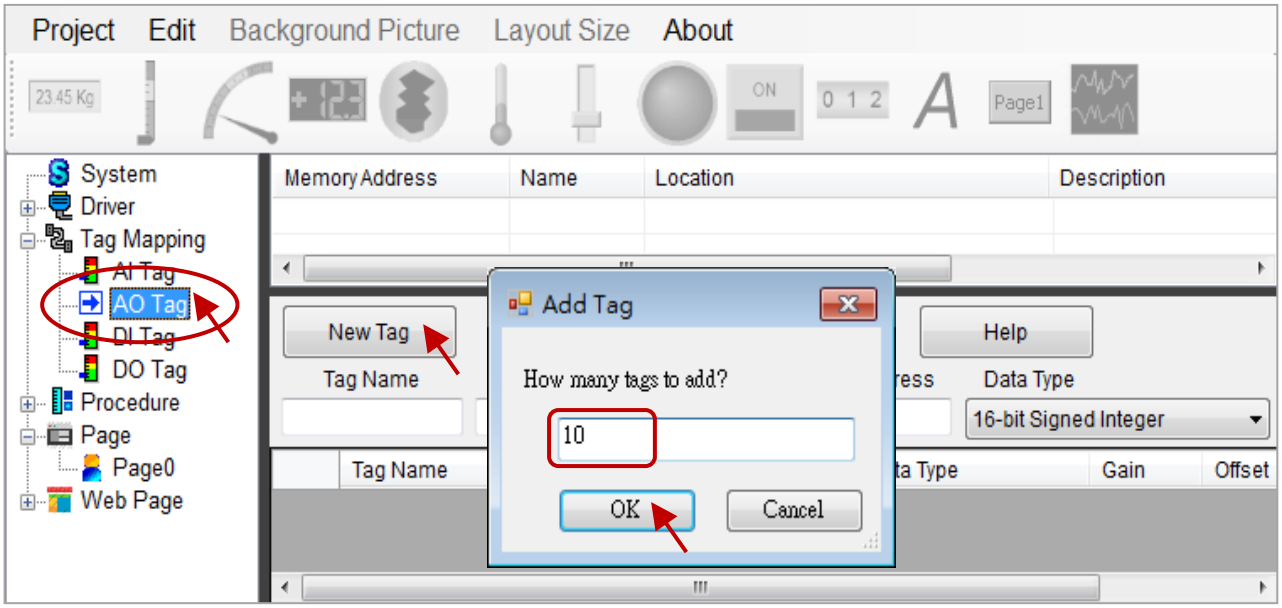


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3.2. Configuring Multiple eLogger Tags with Name and Data Type

[Contents]

eLogger allows to set the name and the data type for multiple tags at once, as follows:

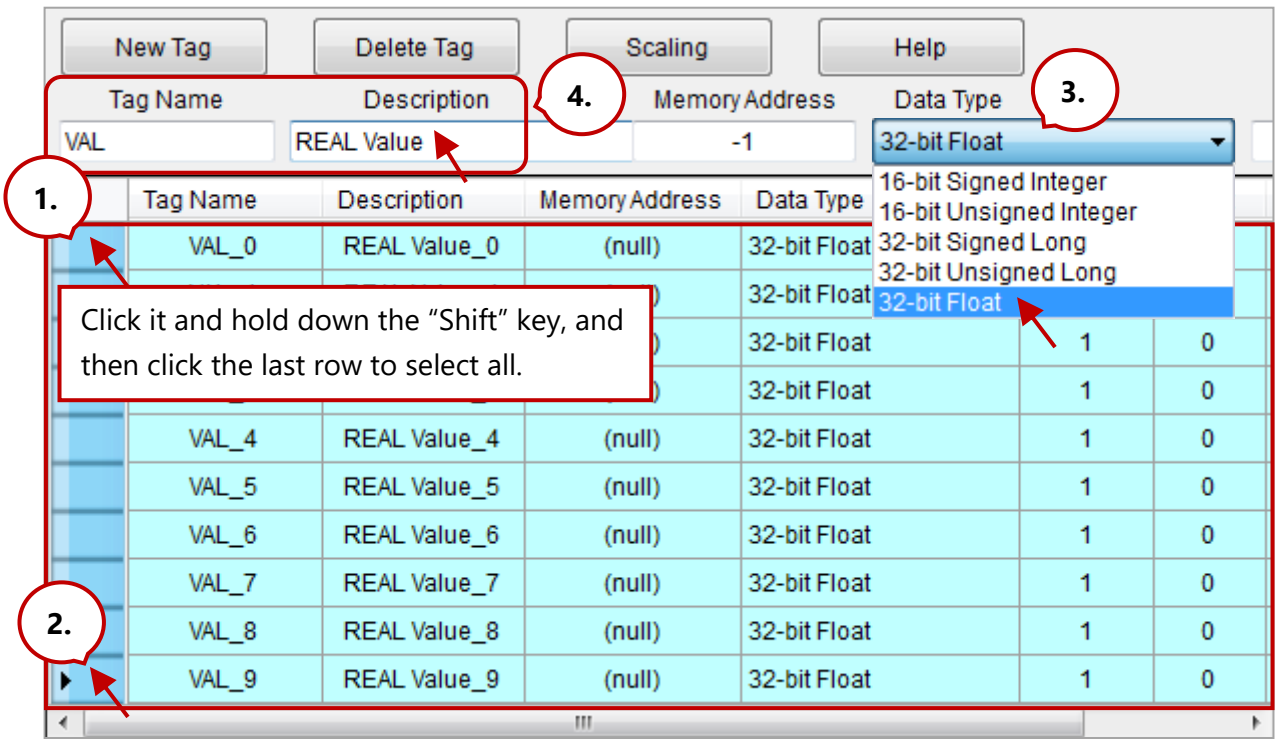


1. Set the Data Type for multiple tags.

After selecting multiple tags, choosing a data type.

2. Set the Tag Name and Description for multiple tags.

After selecting multiple tags, entering text in the **Tag Name** and **Description** fields.



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