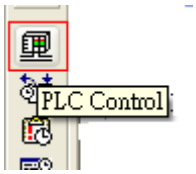
13.27 PLC Control

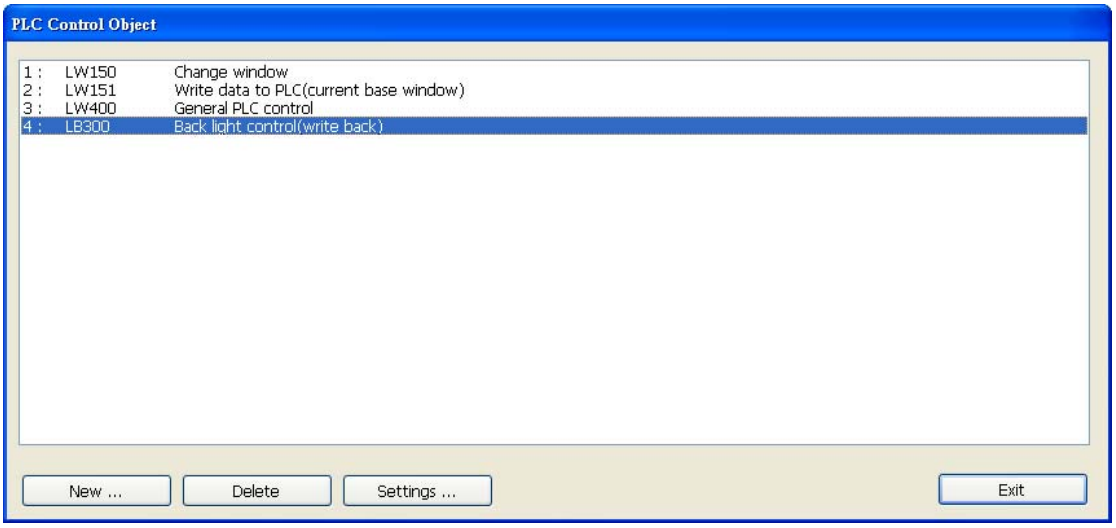
Overview

The PLC control object activates a specific operation when the corresponding control device is triggered.

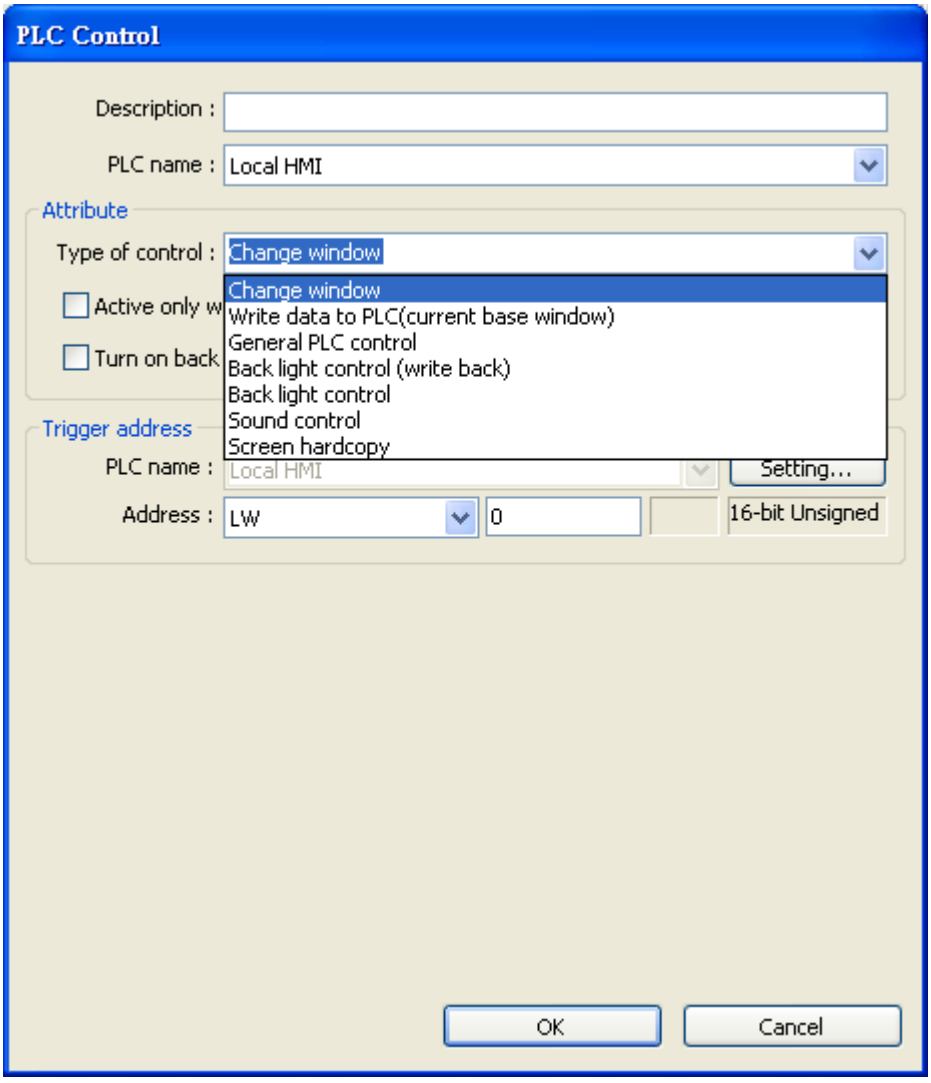
Configuration

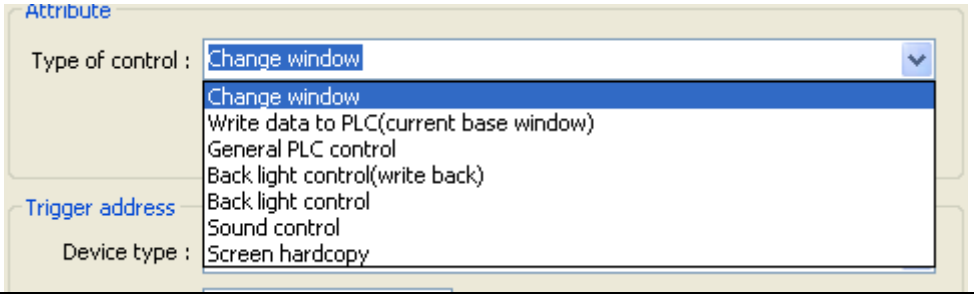
Click the "PLC Control" icon and the "PLC Control Object" summary appears as shown below.



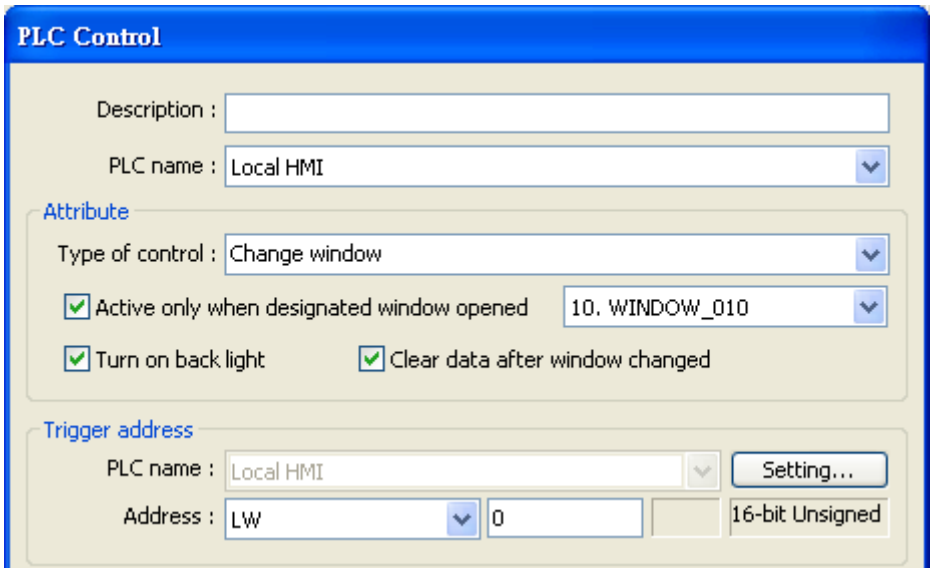


Press the "New…" button and the "PLC Control" dialogue box appears. Set all the attributes of PLC control and press OK button, a new PLC control object will be created.



Setting	Description
Attribute & Trigger address	**[Type of control]** To set the type of control. Click the select button and you can drag down a list of all available PLC control functions 
	a. "Change window" This is used to change base window. When the value of [Trigger address] is written in a valid window number, the system will close the current window and open the window designated by the [Trigger address]. The

new window number will be written to the [Trigger address + 1].



As an example of the above configuration. When writing a valid window number – 11 into LW0, the system will close the current window and open window 11, then write 11 into LW1 (LW0+1)

If you use 32-bit device as trigger address, and the device type of the trigger address is in word basis, then the system will write the window number into [Trigger address +2].

Below is the list of write address for each different type of data format.

Data Format	Trigger address	Write address
16-bit BCD	Address	Address + 1
32-bit BCD	Address	Address + 2
16-bit Unsigned	Address	Address + 1
16-bit Signed	Address	Address + 1
32-bit Unsigned	Address	Address + 2
32-bit Signed	Address	Address + 2

Note: If [LB-9017] = ON, the write back operation will not be executed.
If "Clear data after window changed" is selected, the [Trigger address] will be reset to 0 after new window is open.

b. "Write data to PLC (current base window)"
When the system changes the base window, the new window number will

be written into the [Trigger address].

c. "General PLC Control"

This function performs data transfer between PLC and HMI when users set appropriate value in [Trigger address].

Control code [Trigger address]	Operation for data transfer
1	PLC register → HMI RW
2	PLC register → HMI LW
3	HMI RW → PLC register
4	HMI LW → PLC register

With this function the system uses four continuous word devices, please refer to the following explanation.

Address	Purpose	Description
[Trigger address]	Control code	The valid control code is listed in the above table. When a new control code is written into the register, the system will conduct the data transfer function.
[Trigger address+1]	Number of words to transfer	
[Trigger address+2]	Offset to the start address of PLC register	If the value is "n", the start address of PLC register is "Trigger address + 4 + n".
[Trigger address+3]	The start address of LW or RW	

As an example, to transfer PLC registers [DM100, 101 … 105] to HMI [RW10, 11 … 15], follow the steps below:

1. Set Trigger address to DM10.
2. Set [DM11] = 6 (no. of words to transfer)
3. Set [DM12] = 86 (DM10+4+86= DM100)
4. Set [DM13] = 10 (RW10)
5. Set [DM10] = 1, The system will execute the data transfer operation.

d. "Back light control (write back)"

Set [Trigger address] to "ON", the system will turn on/off the backlight and reset the [Trigger address]. Any touch on the screen will turn the backlight on.

e. "Back light control"

This operation is the same as "Back light control (write back)" except the system would not reset the [Trigger address].

e. "Sound control"

Activate the [Trigger address], the system will play the sound.

Select a sound from sound library for the PLC Control.

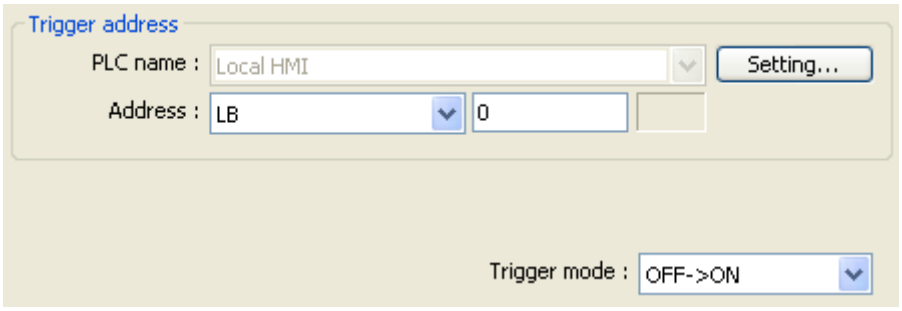
You may configure three different ways to activate the [Trigger address]:

(1) State change from OFF to ON (OFF->ON)

(2) State change from ON to OFF (ON->OFF)

(3) State change (either from ON->OFF or OFF->ON)

f. "Execute macro program"



Activate the [Trigger address], the system will execute the Macro.

You may configure three different ways to activate the [Trigger address]:

(1) State change from OFF to ON (OFF->ON)

(2) State change from ON to OFF (ON->OFF)

(3) State change (either from ON->OFF or OFF->ON)

(4) Always active when ON

h. "Screen hardcopy"

Activate the [Trigger address], the system will have designated window printed out.

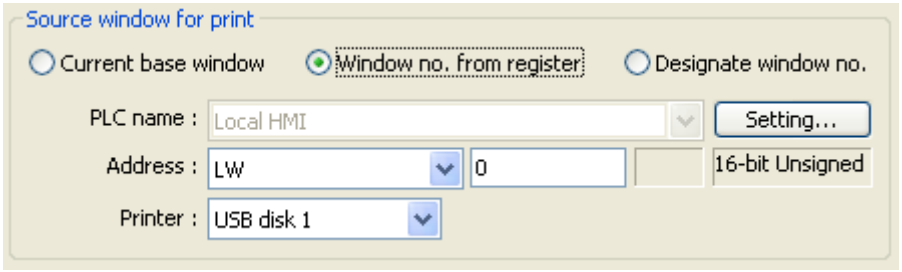
You may configure three different ways to activate the [Trigger address]:

(1) State change from OFF to ON (OFF->ON)

(2) State change from ON to OFF (ON->OFF)

(3) State change (either from ON->OFF or OFF->ON)

The designated window can be one of following three different types:



[Current base window]
Print the current base window when the operation is activated.

[Window no. from register]
Print the window designated by a PLC device when the operation is activated, if [LW0] = 14, the window no.14 will be printed out.

[Designate window no.]
Select a base window to be printed out when the operation is activated.

	Note 1. The system performs a ***background printing process*** when the printed window is not the current base window. 2. For a window designed to be printed at background, users should put neither direct window nor indirect window in it.