LESSON 2

CREATING PROJECTS

2.1. Working with Tags

A tag represents a single input or output variable monitored or controlled by the system. By changing tags, you can use any PLC or controller without re-developing the application. This chapter explains how you can define and manage tags with the tags editor.

After the tag is created in tags editor, you can use it in your application using the Select Tag Dialog Box. Please see Section 4.4.3.3 Selecting Tags for details. Or you can specify the tag by yourself. The format of a tag is Link Number\Tag Group Name\Tag Name.

For example:

Tags	Description
1\MONITOR\CORE DISPLAY	Indicates a local tag named CORE DISPLAY in MONITOR tag group of link 1
0\BOT\DECLARE	Indicates a local tag named DECLARE in BOT tag group of internal memory
0_ALARM SHOW	Indicates a global tag named _ALARM SHOW of internal memory

Note that the maximum text amount of the tag/tag group name is 48 characters. You are allowed to define not only tags for the link, but also the tags for a tag group of the link.

2.1.1. Types of Tags

There are two types of tags: global tags and local tags.

■ Global Tag
A global tag is a tag that can be used by all panel applications in the same project. With global tags, the panel applications in the same project can share the common address declaration without having to keep and maintain the same set of tags locally.

Note that a global tag can only be associated with internal variables.

■ Local Tag
A local tag is a tag that can only be used by the panel application in which the tag is located.

2.1.2. Opening and Closing Tags Editor

■ Opening Tags Editor

To open the global tags editor, use the Global Tags… command in the Project menu, or double click Global > Global Tags in the Project Manager tool window, or right-click Global > Global Tags in the Project Manager tool window to bring out the pop-up menu, and then use the Open command on the pop-up menu.
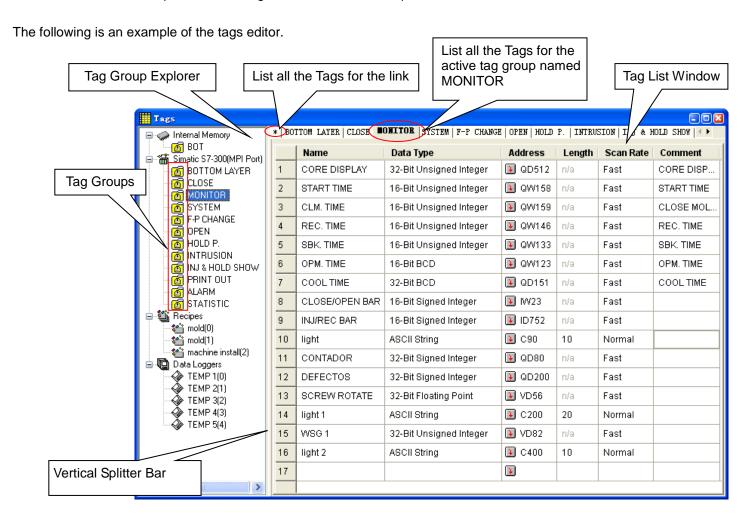
To open the local tags editor, use the Tags… command on the Panel menu, or double click Panel Application > Tags in the Project Manager tool window, or right-click the Panel Application > Tags in the Project Manager tool window to bring out the pop-up menu, and then use the Open command on the pop-up menu.

■ Closing Tags Editor

To close the tags editor, select the window and click the close button, or choose Windows... on the Window menu, select the window to close in the window dialog, and then click the Close Window(s) button. You can also right-click Global > Global Tags (Panel Application > Tags) in the Project Manager tool window to bring out the pop-up menu, and then use the Close command on the pop-up menu to close the tags editor.

2.1.3. Creating Tags with Tags Editor

You can use tags editor to create and manage tags. Tags editor is split into two panes: Tag Group Explorer on the left and Tag List Window on the right. Each pane scrolls separately, and both horizontally and vertically. You can position the mouse over the vertical splitter bar to drag the bar and resize the panes.
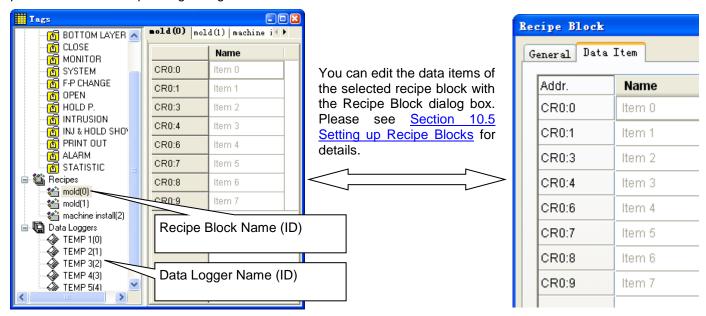
The following is an example of the tags editor.

2.1.3.1. Tag Group Explorer

Tag explorer displays links, recipes, data loggers and their tag groups, if any. From tags explorer, you can:

■ Open a tag group of a link for editing by clicking the node

■ Import and export tags of a link
    Described in Section 2.3.4

■ Add new groups to a link and delete or rename the existing tag groups
    Described in Section 2.3.5

■ View tags (Data Items) of recipes and data loggers.

If there are any recipes or data loggers in the application, the tags editor will display their data items as the tags. All the data items (tags) for the recipes or data loggers are read only in the tags editor. If you want to edit the data items (tags), please use the corresponding dialog box.

You can edit the data items of the selected recipe block with the Recipe Block dialog box. Please see Section 10.5 Setting up Recipe Blocks for details.

Recipe Block Name (ID)

Data Logger Name (ID)

2.1.3.2. Tag List Window

Tag list window displays all the tags related to the selected tag group. In the tag list window, you can:

■   Switch between tag groups by clicking the window tab

■   Click any column header to sort the list

■   Add a tag by defining the tag name and then click other cells to edit the elements of the tag

The following table describes each attribute of the tag.

Item		Description
Name		Specifies the name for the tag. The name must be unique in the tag group. The maximum text amount of the name is 48 characters. Chinese characters are supported. The name cannot start with a number, and cannot be the same as a macro keyword. The name of global tags must start with underscore (_). The name of the local tags cannot start with underscore (_).
Data Type		Selects the data type for the tag from the dropdown list. The supported data types for each tag are the following: 16-Bit Unsigned Integer, 32-Bit Unsigned Integer, 16-Bit Signed Integer, 32-Bit Signed Integer, 16-Bit BCD, 32-Bit BCD, 32-Bit Floating Point, ASCII String, Bit.
Address	<Edit Box>	Specifies the bit address when the Data Type is Bit, otherwise specifies the word address.
	🔻	Click this icon to bring up the Address Input Keypad and specify the desired address for the <Edit Box> field.
Length		Specifies the string length when the Data Type is ASCII string, otherwise displays n/a
Scan Rate		Selects the scan rate for the tag from the dropdown list. The supported scan rates for each tag are Fast and Normal.
Comment		Type a comment for the tag.

■   Cut, copy, paste and delete selected tags using menu commands or key combinations.

You can right-click the number column to display a pop-up menu of editing commands. The editing commands available vary depending on what is selected.

The following table shows the supported editing commands.

Menu Command	Key Combination	Description
Cut	CTRL+X	Removes selected tags from the active window and saves them to the Clipboard.
Copy	CTRL+C	Duplicates selected tags in the active window.
Paste	CTRL+V	Pastes cut or copied tags into an active window.
Delete	DELETE	Deletes tags without copying it to the Clipboard.

Note that all editing commands require a selection in order to work. To select a tag, click the row on its header number column. To select multiple tags, click the row on its heard column and use Ctrl+Click to add a row to the selection.

2.1.4. Importing and Exporting Tags

■ **Importing Tags**

1) Right-click the Internal Memory, a link, or any tag groups item in the Tag Group Explorer to bring out the pop-up menu. Then use the Import Tags… command on the pop-up menu.
2) Click the *.csv file you want to import. If you want to open a tags import file that is saved in a different folder, locate and open the folder first.
3) Click Open.

Note: If the file format is not correct, the import operation will be cancelled.

Note: The tags import file can contain tags only, or many tag groups and their tags.

Note: If the name of a tag already exists in the tag group, you will be asked to confirm whether to replace the existing tag or not.

- If Yes, the tag in the tag group will be replaced by the tag from the file.
- If No, only the tag with nonexisting names will be imported.
- If Cancel, the import operation will be cancelled.

Note: If the tag group name already exists, you will be asked to confirm whether to replace the existing tag group or not.

- If Yes, the tags in the existing tag group will be removed and replaced by the tags from the file.
- If No, only the tag group with nonexistent name and its tags will be imported.
- If Cancel, the import operation will be cancelled.

■ **Exporting Tags**

If you have tags you want to reuse in another application panel, export the tags of the selected tag group as a .csv file. You may do the following:

1) Locate the tag group you would like to export.
2) Right-click on the tag group to display the pop-up menu; and then click Export Tags..,
3) If you want to save tags in a different folder, locate and open the folder first, then click Save.

You can export all the tags of the internal memory as a .csv file by right-clicking on the internal memory and then using the Export All Tags command on the pop-up menu.

2.1.5. Adding/Deleting/Renaming Tag Groups

■ **Adding a Tag Group**

1) Click the internal memory you want to add a tag group for.
2) Right-click the selected item to display the pop-up menu, and then click Add Group.
3) The new tag group will be added, and the default tag group name will become selected for renaming.

■ **Deleting a Tag Group:**

1) Locate the tag group you would like to delete.
2) Right-click on the tag group to display the pop-up menu, and then click Delete Group.

Note: You can only select one tag group to delete at one time.

■ **Renaming a Tag Group:**

1) Locate the tag group you would like to rename.
2) Right-click on the tag group to display the pop-up menu, and then click Rename Group or click the tag group.
3) The tag group name will become selected. Simply type the new name over the selected text, and then press the ENTER key or click anywhere outside the editing field.