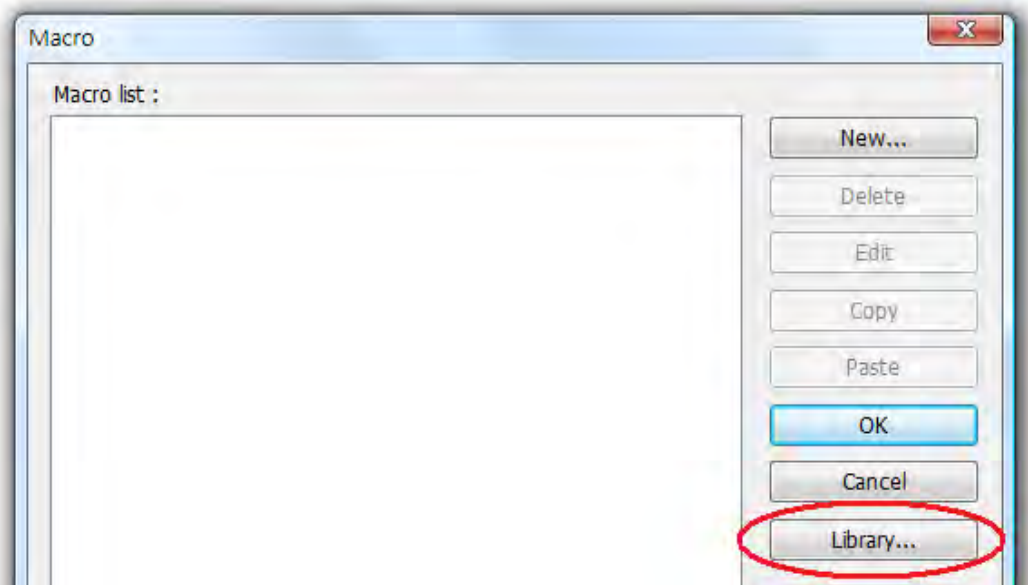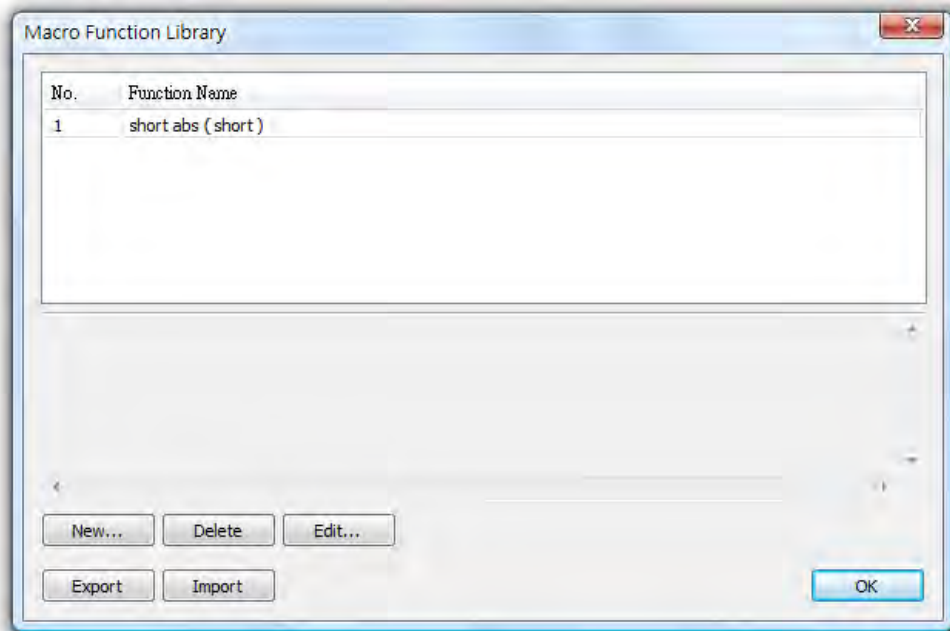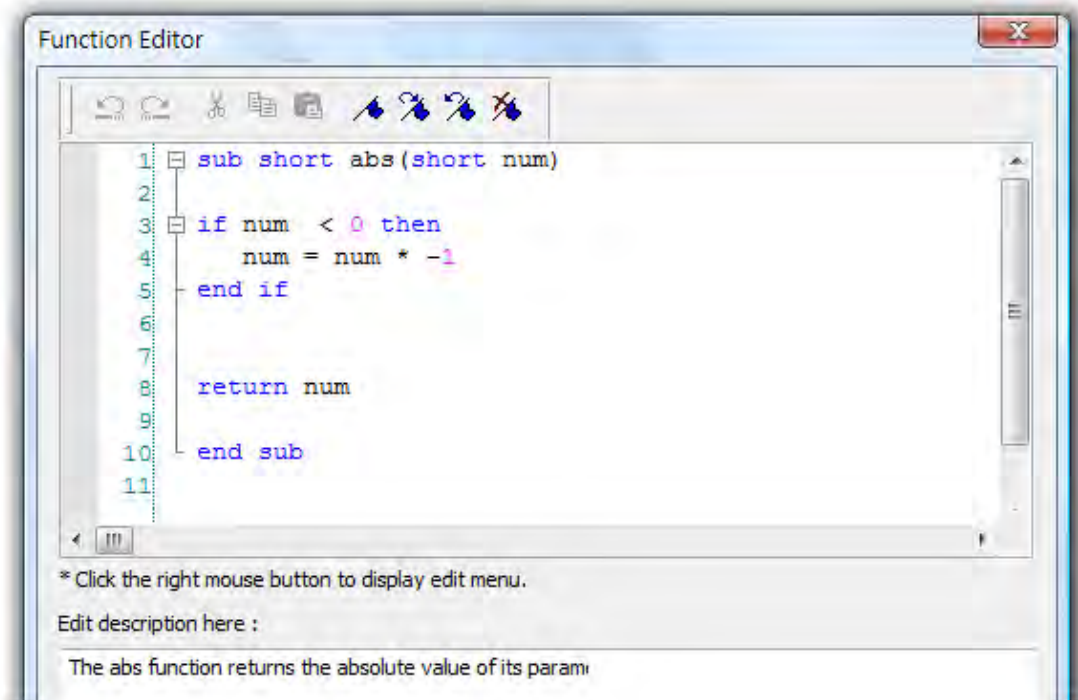# Version 4.5.1 2011/12/02

[New Features]

1. Macro includes user-defined functions which can be used repeatedly in different Macros. Open Macro managing dialog, and click [Library] to enter Macro Function Library. User-defined functions can be added, edited, and deleted here.
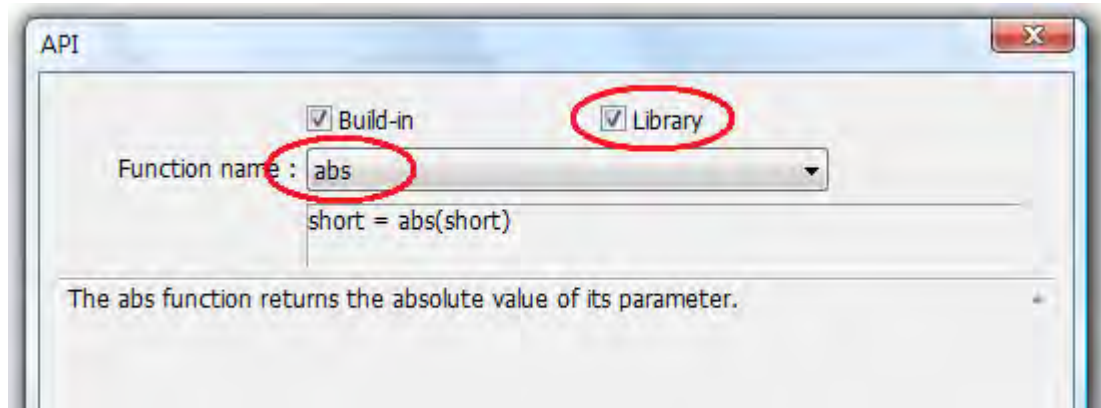

Click [New…] to add a new user-defined function.

Function Editor Dialog:

Function Editor

```
1  □ sub short abs(short num)
2
3  □ if num  < 0 then
4        num = num * -1
5  └ end if
6
7
8     return num
9
10 └ end sub
11
```

* Click the right mouse button to display edit menu.

Edit description here :

The abs function returns the absolute value of its parame

An edited function can be saved to the list of functions.

API

☑ Build-in   ☑ Library

Function name : abs

short = abs(short)

The abs function returns the absolute value of its parameter.

2. When using PLC types: SIEMENS S7-300, S7-300 MPI, S7-300/ET200 S(Ethernet), S7-400 (Ethernet), address tag data generated by SIEMENS STEP 7 software can be imported. The data includes:

a. Symbol Table
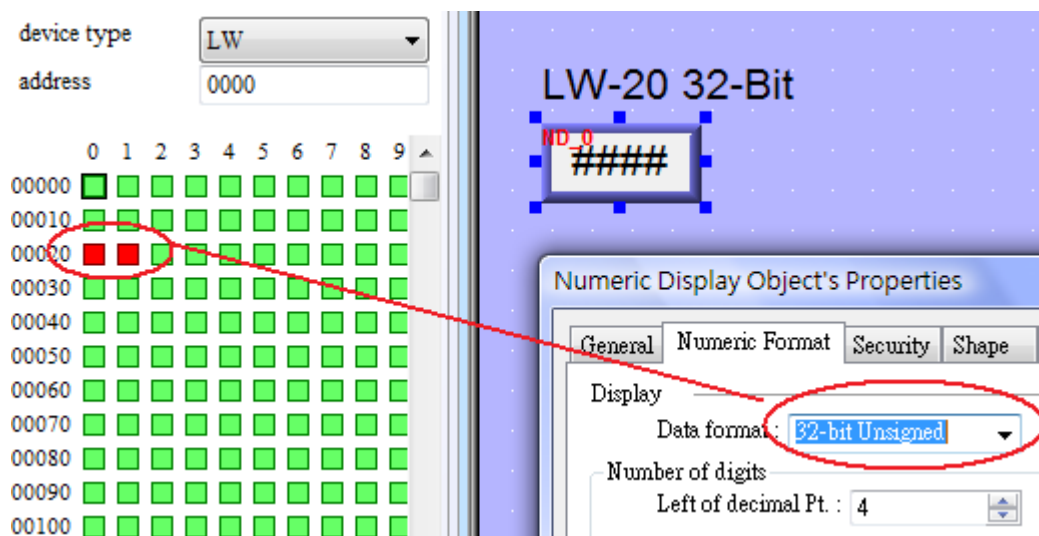
b. DB Data Declaration

c. DB Message
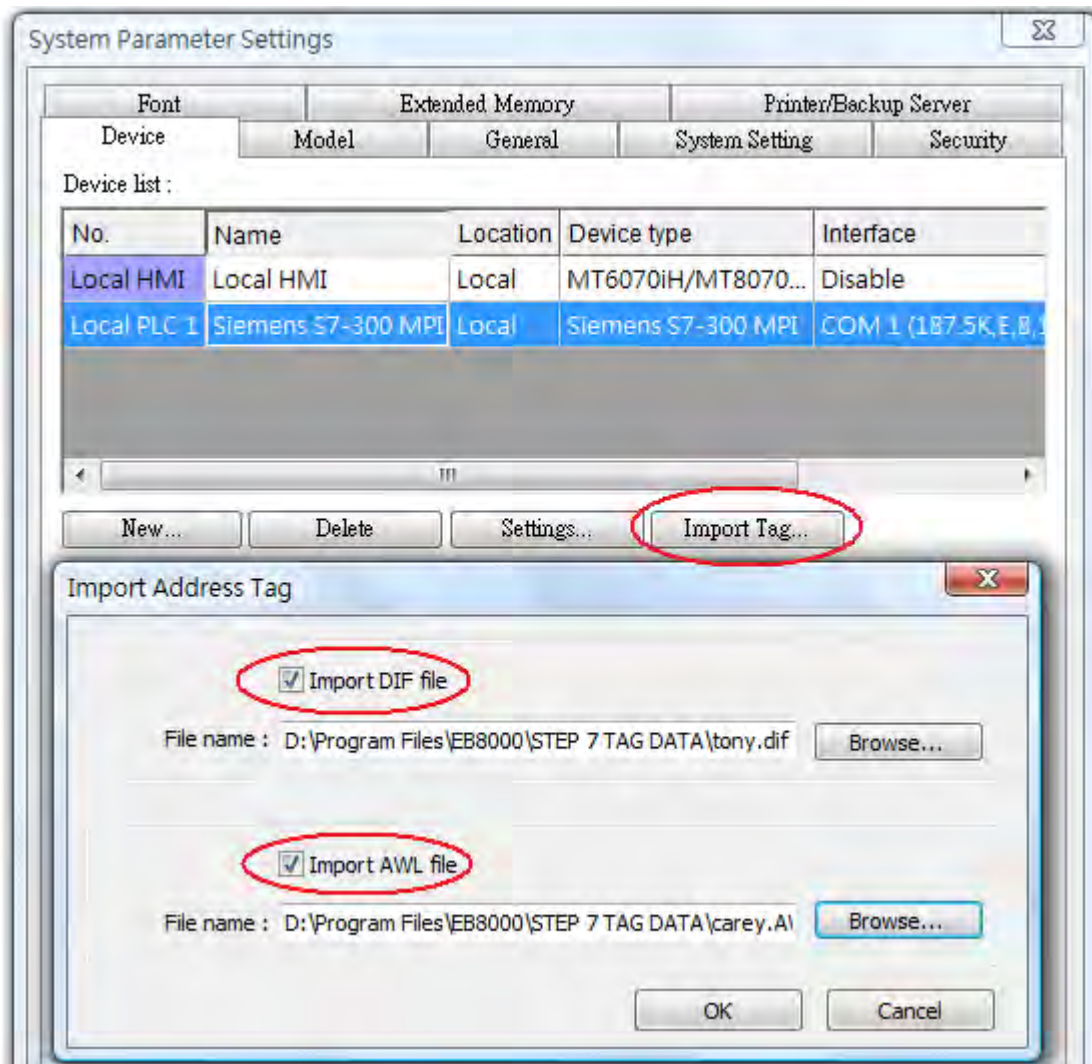
After TAG information is successfully imported, open Address Tag Library to view it.
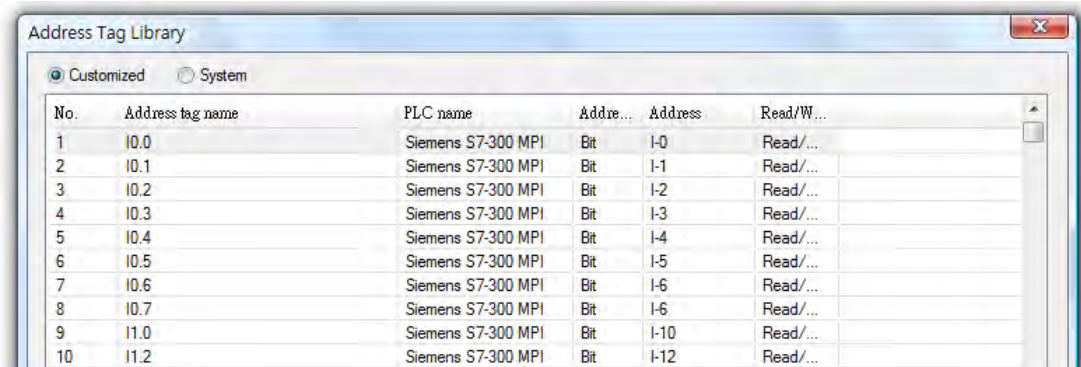
The imported tags can be selected when creating an object.
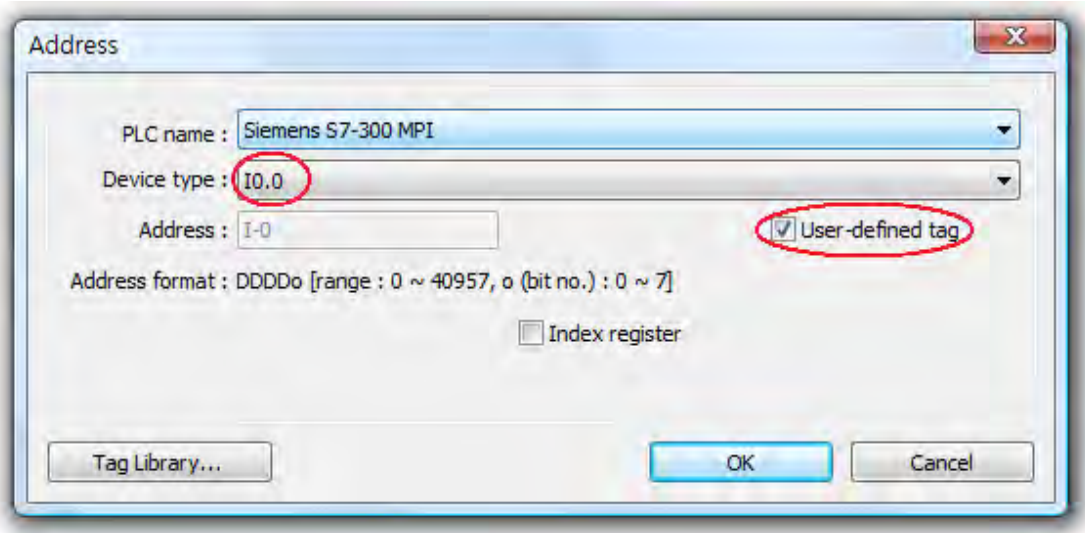
3. When setting object data format to "32-Bit Unsigned", Address Grid can correctly mark the used addresses. As shown below, addresses LW-20 and LW-21 are marked in red in Address Grid.

4. Address Grid displays whether the address is used in Macro. The following shows GetData function uses address LW-123, and reads 2 words at one time. Therefore, Address Grid shows LW-123 and LW124 are currently used.

5. In Address Tag Library, "System reserved addresses" can be exported to EXCEL.

The exported content:

	A	B	C	D
1	LB-9000 : initialized as ON	Local HMI	LB	9000
2	LB-9001 : initialized as ON	Local HMI	LB	9001
3	LB-9002 : initialized as ON	Local HMI	LB	9002
4	LB-9003 : initialized as ON	Local HMI	LB	9003
5	LB-9004 : initialized as ON	Local HMI	LB	9004
6	LB-9005 : initialized as ON	Local HMI	LB	9005
7	LB-9006 : initialized as ON	Local HMI	LB	9006
8	LB-9007 : initialized as ON	Local HMI	LB	9007
9	LB-9008 : initialized as ON	Local HMI	LB	9008
10	LB-9009 : initialized as ON	Local HMI	LB	9009
11	LB-9010 : data download indicator	Local HMI	LB	9010
12	LB-9011 : data upload indicator	Local HMI	LB	9011
13	LB-9012 : data download/upload indicator	Local HMI	LB	9012
14	LB-9013 : FS window control[hide(ON)/show(OFF)]	Local HMI	LB	9013
15	LB-9014 : FS button control[hide(ON)/show(OFF)]	Local HMI	LB	9014
16	LB-9015 : FS window/button control[hide(ON)/show(OFF)]	Local HMI	LB	9015
17	LB-9016 : status is on when a client connects to this HMI	Local HMI	LB	9016

6. The address tag used in Macro can include station number information.

If use address tag "Tag_1" in GetData function, this tag is displayed as "MW-3#100", showing that this function will read data of station number "3", register MW-100.
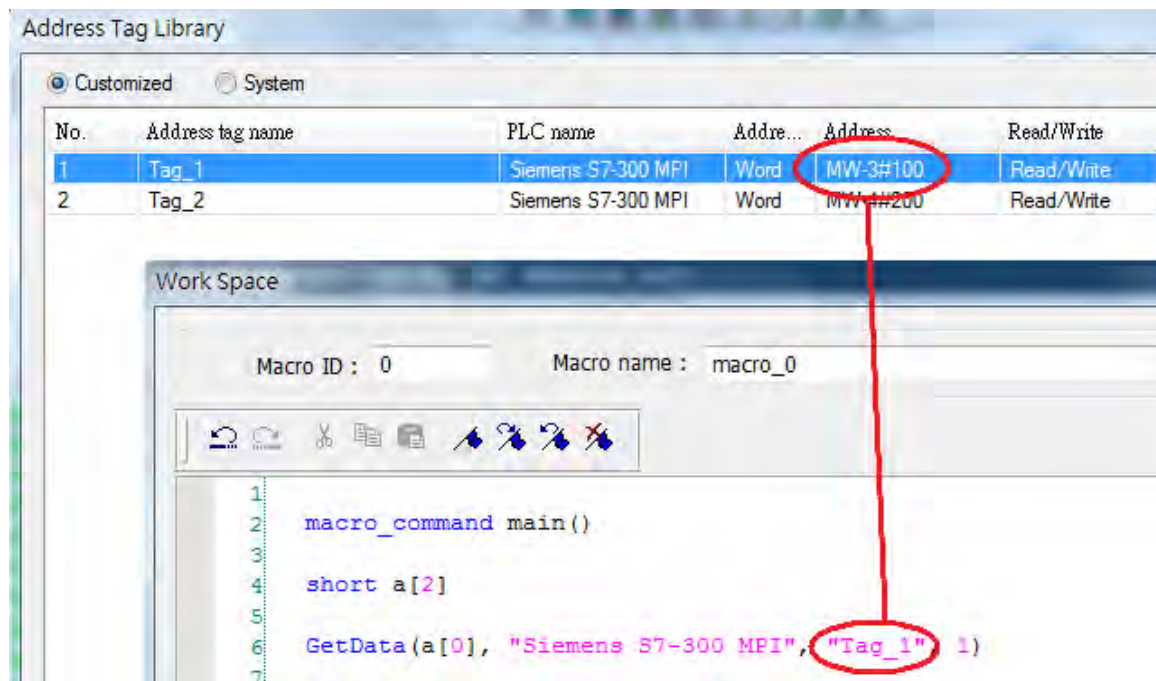
7. When modifying and saving project (mtp file), EasyBuilder8000 will automatically backup the original file. Up to three backup files are allowed and named according to time sequence:
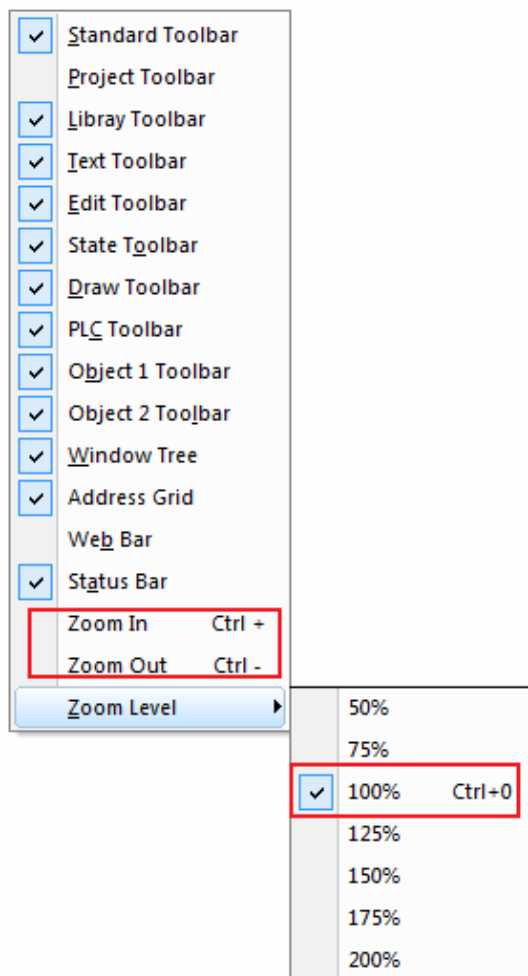
        filename.mtp.bak1 (the latest)

        filename.mtp.bak2

        filename.mtp.bak3

The following shows the detail of backup files of "test.mtp". "test mto.bak1" is the latest backup file.

EB test.mtp	2011/12/3	05:43	EasyBuilder Project ...	224 KB
test.mtp.bak1	2011/12/3	05:41	BAK1 File	224 KB
test.mtp.bak2	2011/12/3	05:40	BAK2 File	224 KB
test.mtp.bak3	2011/12/3	05:39	BAK3 File	224 KB

8. Shortcut keys are offered to zoom in/out editing screen.

✓	Standard Toolbar	
	Project Toolbar	
✓	Libray Toolbar	
✓	Text Toolbar	
✓	Edit Toolbar	
✓	State Toolbar	
✓	Draw Toolbar	
✓	PLC Toolbar	
✓	Object 1 Toolbar	
✓	Object 2 Toolbar	
✓	Window Tree	
✓	Address Grid	
	Web Bar	
✓	Status Bar	
	Zoom In	Ctrl +
	Zoom Out	Ctrl -
	Zoom Level	▶

	50%	
	75%	
✓	100%	Ctrl+0
	125%	
	150%	
	175%	
	200%	

Zoom In by pressing "Ctrl" and "+" keys.

Zoom Out by pressing "Ctrl" and "-" keys.

Return to Zoom Level 100% by pressing "Ctrl" and number "0" keys.

9. For an object, when changing PLC type or driver name, if the new driver contains the same address, this address will automatically be used
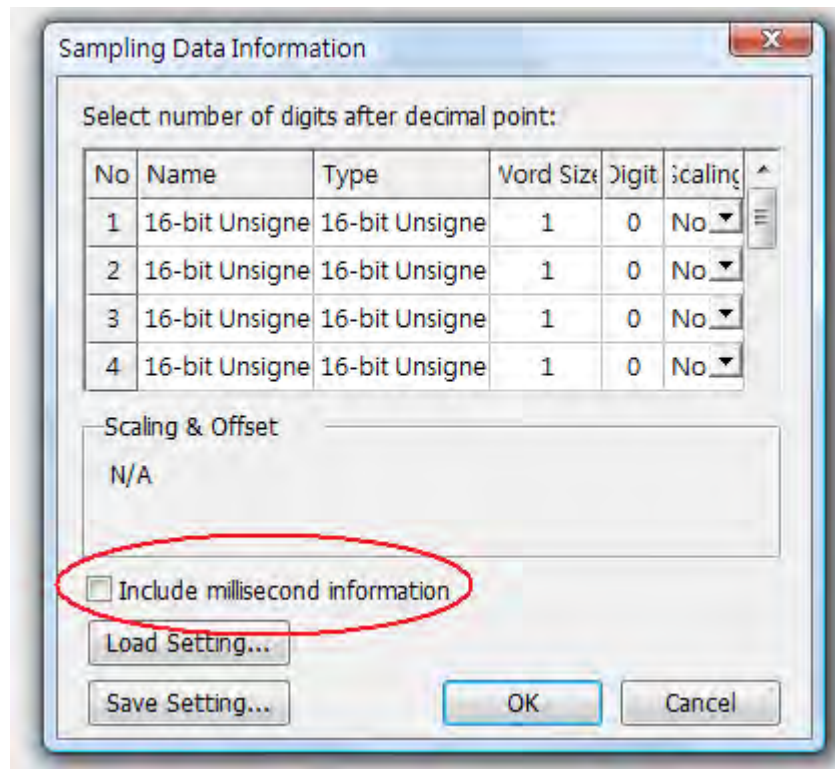
10. When opening a project, the font used will automatically be checked if it is installed. If not, a dialog is shown; users can select a replacement of font from the listed.
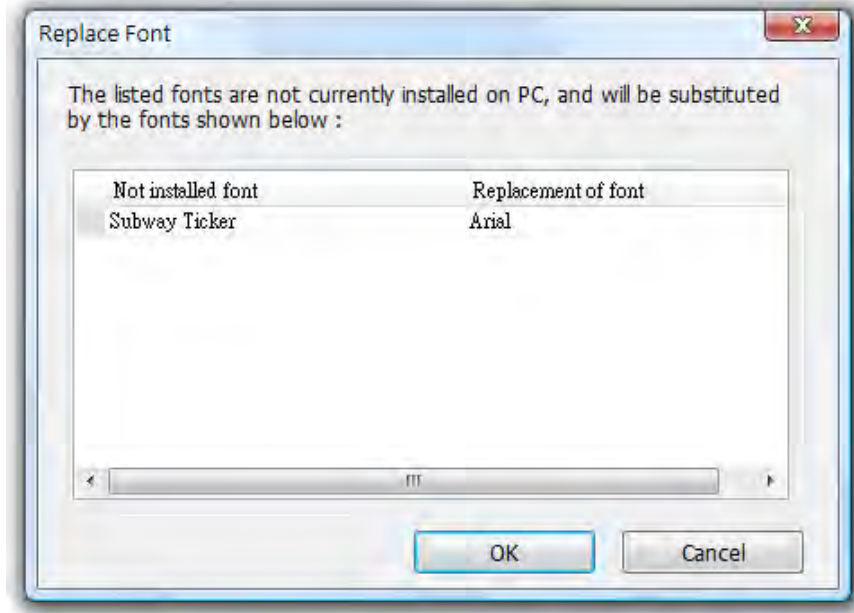
11. When using EasyConverter, whether or not to display millisecond information can be specified.

[Corrections]

1. Fix History Data Display to completely display its title.
2. Fix Trend Display Object to correctly draw the trend line when using dynamic limits, 32-bit Float data type.
3. Fix when using [bitmap font] for Text Object, PC and HMI may display the font differently.

[New Drivers]

1. Newly added TINHAO driver
2. Newly added MODBUS TCP/IP (0x/1x Range Adjustable) driver
3. Schneider UniTelway driver supports PLCs-HMIs communication structure.
4. SIEMENS S7-200 driver added "MD" address type, the double word format of "M".
5. SIEMENS S7-1200 (Ethernet) driver supports "UDInt" and "UInt" data types.
6. FATEK FB Series driver added "FR" address type.

[Drivers]

1. Schneider MODBUS RTU and Schneider MODBUS TCP/IP drivers "0x" address type is renamed to "%M", and "4x" is renamed to "%MW".

2. Beckhoff driver name revised.

    Beckhoff Embedded PC(CX-ARM) => Beckhoff Embedded PC

    Beckhoff Embedded PC(PC or CX-86) => Beckhoff ADS/AMS Ethernet

3. Fix LS GLOFA Cnet driver to correctly read and write address over MX 10000.

4. Fix LS GLOFA Cnet driver to correctly display "IX" and "QX" address types.

5. Fix SAIA S-Bus (Ethernet) and SAIA PCD S-Bus Mode drivers to correctly read and write "Reg_Bit" address type.

6. Fix Mitsubishi Q00/Q00UJ/Q01/QJ71 driver to read the correct location when reading the bit address, and read over 1 word.

7. Fix Mitsubishi Q00/Q00UJ/Q01/QJ71 driver to normally communicate when using Master-Remote HMI structure.

8. Fix Mitsubishi Q00UJ/QnU/QnUD/QnUDH/QnUDEH (mini USB) driver to correctly process 0x10 data.

9. Fix Panasonic FP and Panasonic FP (Ethernet) to read and write "WY" address type of a station number that is not "1".

Version 4.5.0 2011/09/14

[New Features]

12. MACRO functions now support Non-English address tags.

13. When using Recipe Editor, if the format of the imported file does not match the format in use, a warning message will be shown.