

Siemens S7-1200/S7-1500 (S7CommPlus, Symbolic Addressing) (Ethernet)

Supported Series: Siemens S7-1200 Firmware V4.6.1 or previous versions, S7-1500 Firmware V1.8.0 ~ V3.1.0, ET2000SP Series

PLC simulation SIMATIC PLCSIM Advanced V3.0 and V4.0

Website: <http://www.siemens.com/entry/cc/en/>

HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Siemens S7-1200/S7-1500 (S7CommPlus, Symbolic Addressing) (Ethernet)		
PLC I/F	Ethernet		
Port no.	102		

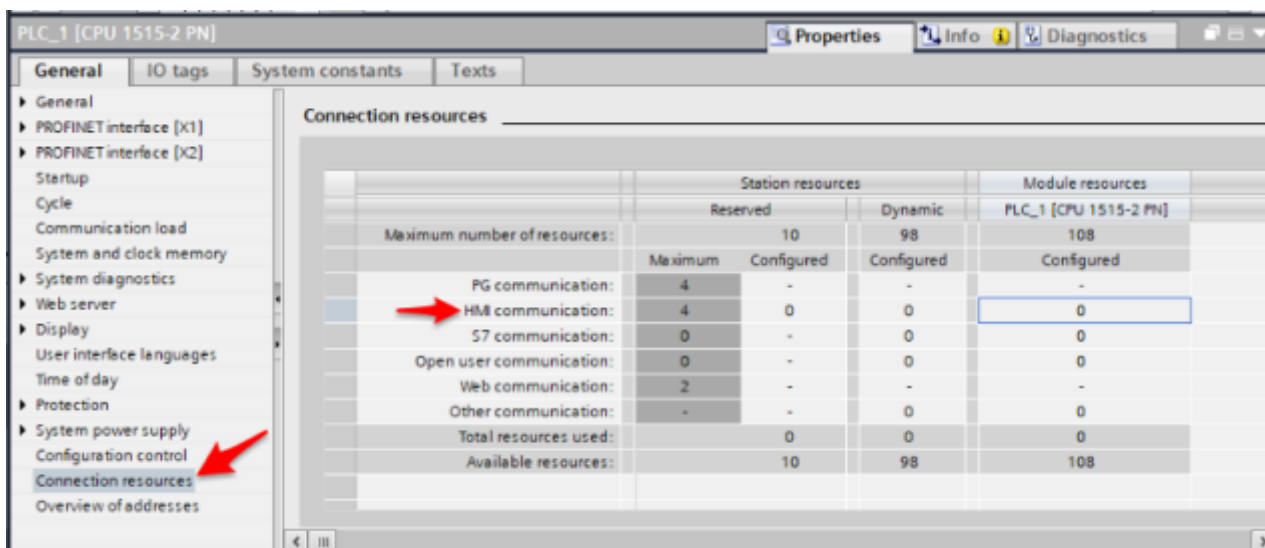
On-line simulator	Yes	Multi-HMI connect	TIA Settings *Note
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Limitations:

Not supported on iP/iE Series HMI models.

*Note:

According to Connection resource / HMI Communication settings

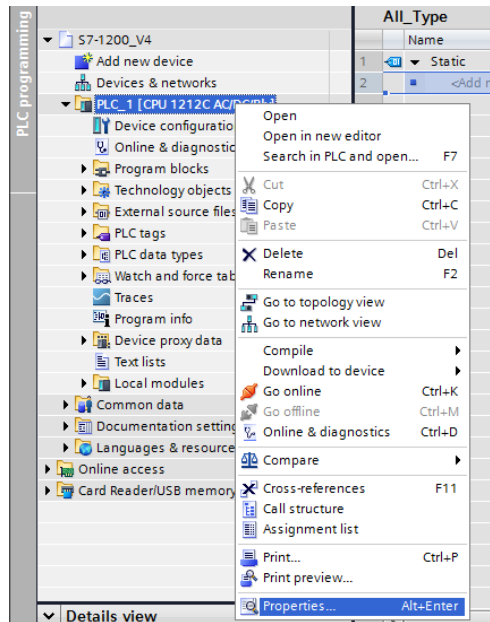


	Station resources		Dynamic	Module resources PLC_1 [CPU 1515-2 PN]
	Reserved	Dynamic		
Maximum number of resources:	10	98		108
	Maximum	Configured	Configured	Configured
PG communication:	4	-	-	-
HMI communication:	4	0	0	0
S7 communication:	0	-	0	0
Open user communication:	0	-	0	0
Web communication:	2	-	-	-
Other communication:	-	-	0	0
Total resources used:	0	0	0	0
Available resources:	10	98		108

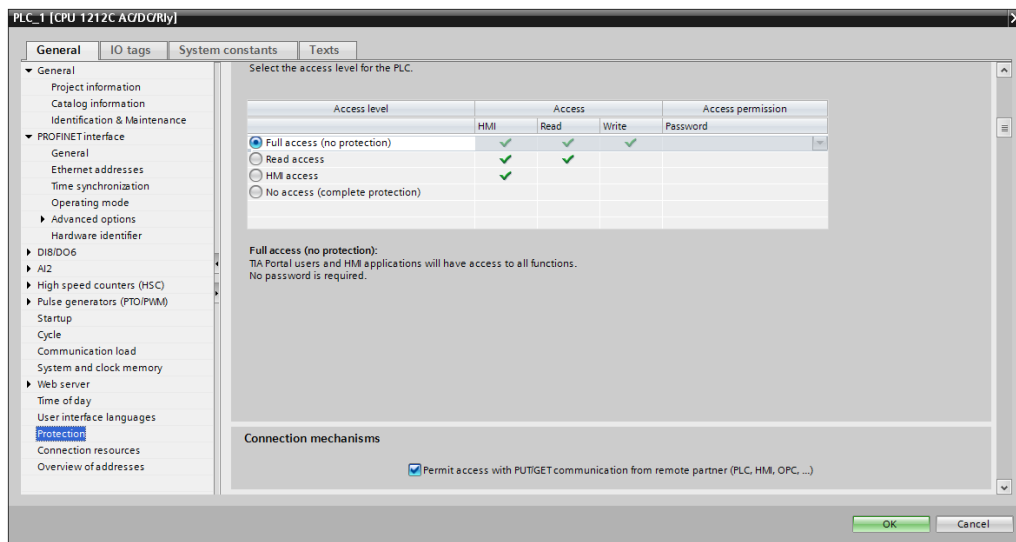
PLC Settings:

- **Support PLC firmware version V2.80 and previous versions**

Right click on the PLC program, and then click **[Properties]**.



Select **[Protection]**, and then select **[Permit access with PUT/GET communication from remote partner (PLC,HMI,OPC,...)]**.



To support CPU 1510SP F-1 PN (ET200S), the access level must be set to full access incl.

Select the access level for the PLC. Update password encryption

Access level	Access				Access per...
	HMI	Read	Write	Fail-safe	
<input checked="" type="radio"/> Full access incl. fail-safe (no protection)	✓	✓	✓	✓	
<input type="radio"/> Full access (no protection)	✓	✓	✓		
<input type="radio"/> Read access	✓	✓			
<input type="radio"/> HMI access	✓				
<input type="radio"/> No access (complete protection)					

Full access incl. fail-safe (no protection):
TIA Portal users and HMI applications will have access to all standard and fail-safe functions.
No password is required.

PLCs (S71200/FW4.2/ & S7-1500/FW1.7/) firmware version and above support HMI access using password function

IP Address Settings

IP address: 192 . 168 . 1 . 111
Port no.: 502

Password Setting

☒ Enable
Password: pAssvOrd

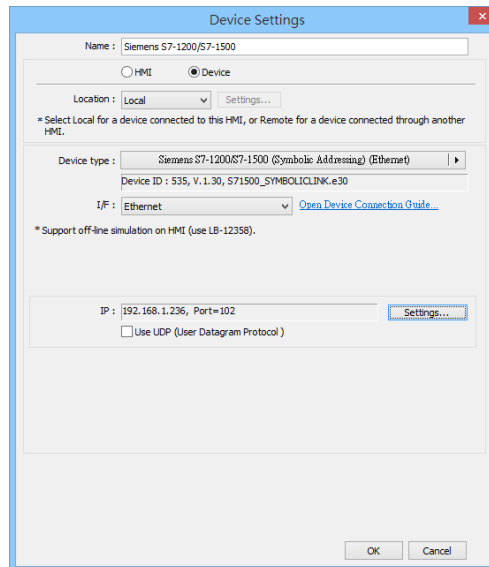
Timeout (sec): 1.0 Turn around delay (ms): 0

The number of resending commands: 0

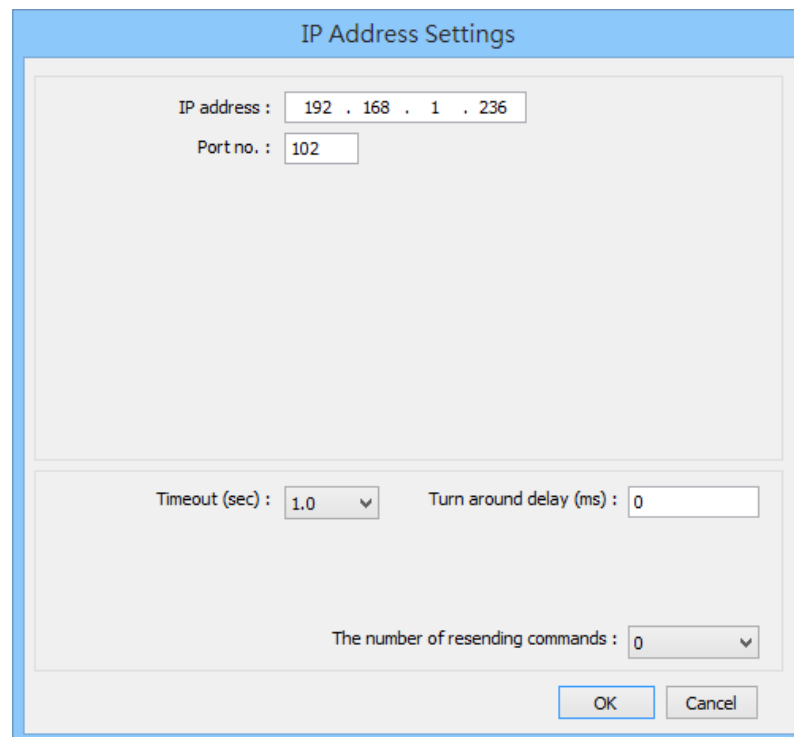
OK Cancel

Get Tag Info:

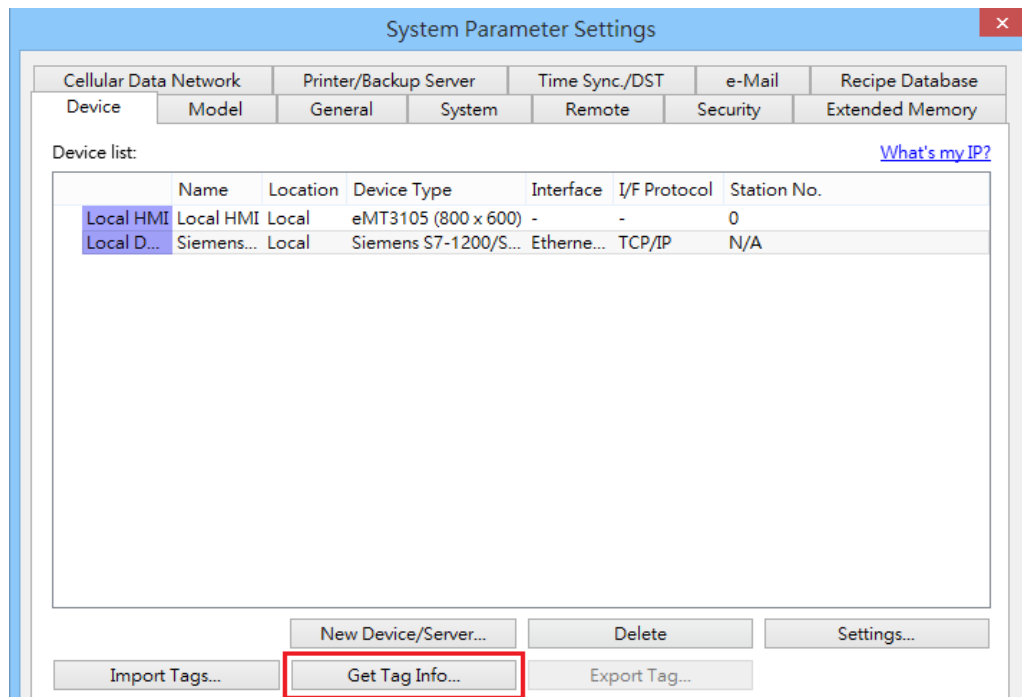
1. In S7-1500 program software create PLC program and tag and then download to PLC.
2. Select Go offline, EasyBuilder will connect to PLC and get tag data. In PLC type select **“Siemens S7-1200/S7-1500 (S7CommPlus, Symbolic Addressing) (Ethernet)”**.



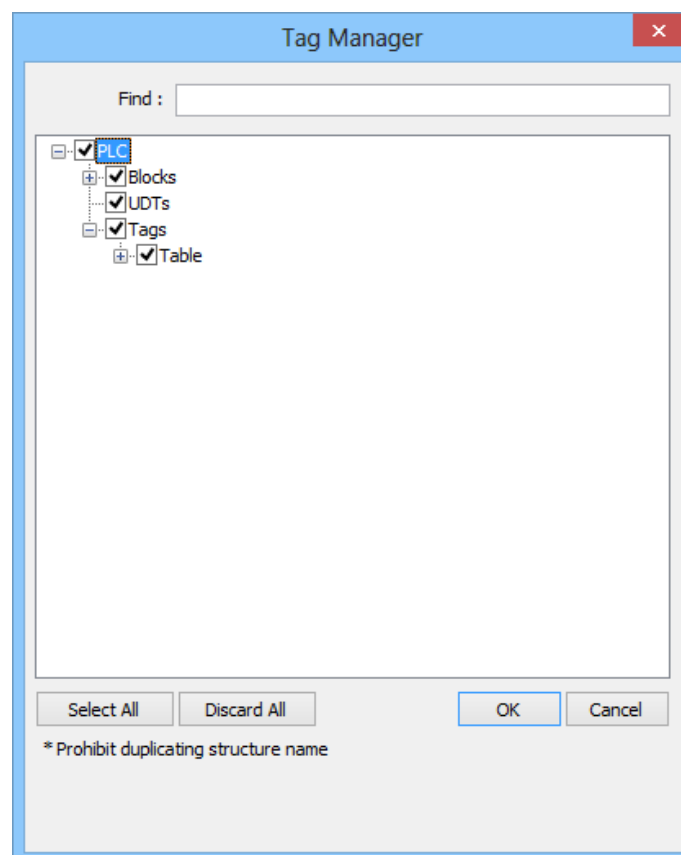
3. Click **“Settings...”**, input PLC IP address.



4. Check the PLC that is not connected to any PC. Click **"Get Tag Info..."**.

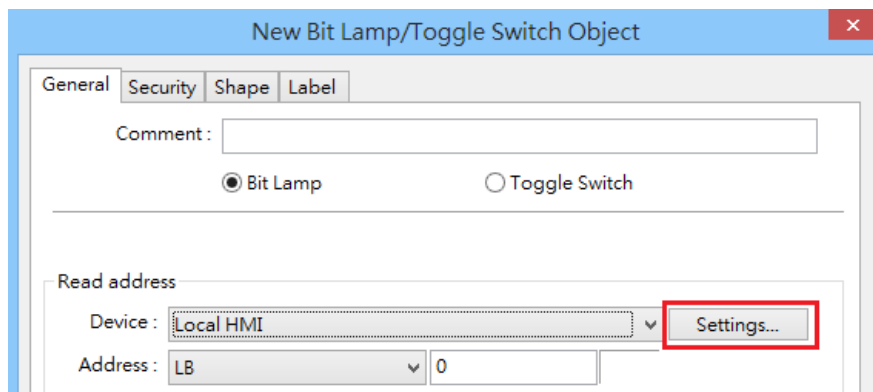


5. Added Tag Manager that allows selecting the Siemens S7-1500 PLC tags to be imported.



*Note: Prohibit duplicating structure name

6. Create an object and click read address “**Settings...**”



General Security Shape Label

Comment :

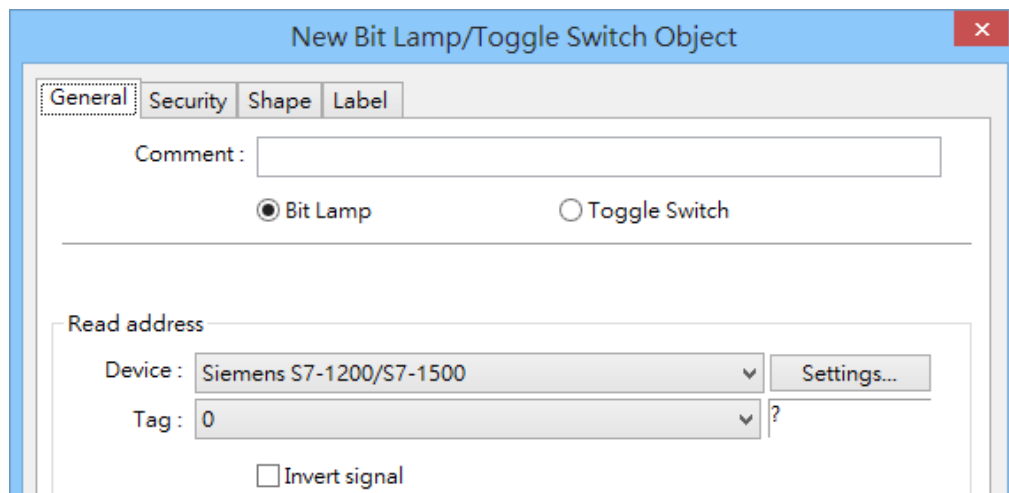
☒ Bit Lamp ☐ Toggle Switch

Read address

Device : Local HMI Settings...

Address : LB 0

7. In PLC name select S7-1200/1500 then click Tag.



General Security Shape Label

Comment :

☒ Bit Lamp ☐ Toggle Switch

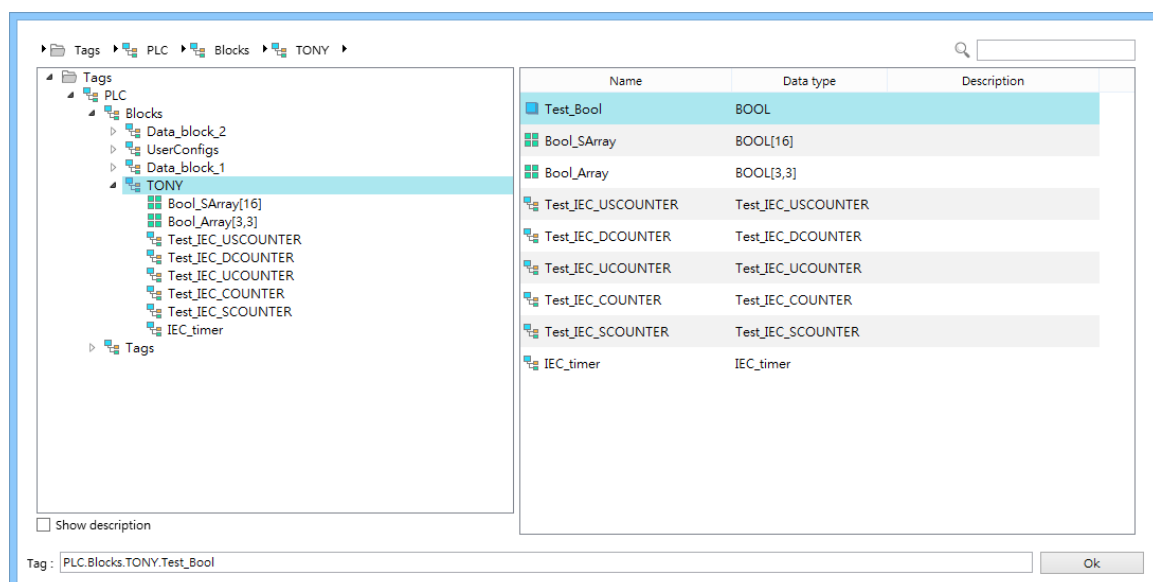
Read address

Device : Siemens S7-1200/S7-1500 Settings...

Tag : 0 ?

☐ Invert signal

8. Select PLC tag.



Tags PLC Blocks TONY

Tags

- PLC
 - Blocks
 - Data_block_2
 - UserConfigs
 - Data_block_1
 - TONY
 - Bool_SArray[16]
 - Bool_Array[3,3]
 - Test_IJC_USCOUNTER
 - Test_IJC_DCOUNTER
 - Test_IJC_UCOUNTER
 - Test_IJC_COUNTER
 - Test_IJC_SCOUNTER
 - IEC_timer
 - Tags

Show description

Tag : PLC.Blocks.TONY.Test_Bool

Name	Data type	Description
Test_Bool	BOOL	
Bool_SArray	BOOL[16]	
Bool_Array	BOOL[3,3]	
Test_IJC_USCOUNTER	Test_IJC_USCOUNTER	
Test_IJC_DCOUNTER	Test_IJC_DCOUNTER	
Test_IJC_UCOUNTER	Test_IJC_UCOUNTER	
Test_IJC_COUNTER	Test_IJC_COUNTER	
Test_IJC_SCOUNTER	Test_IJC_SCOUNTER	
IEC_timer	IEC_timer	

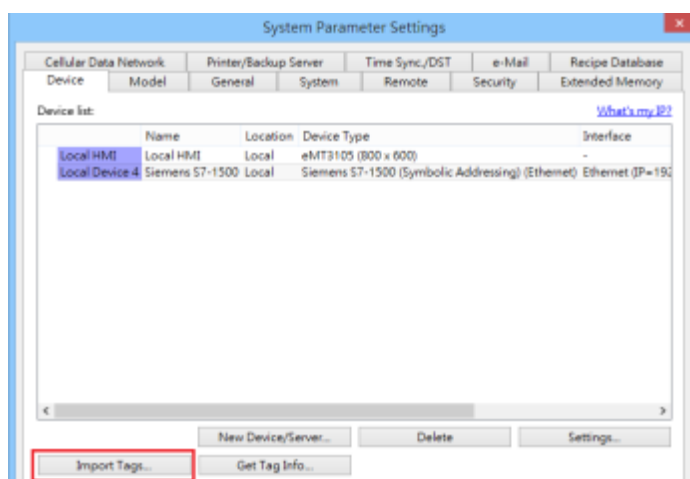
Ok

Import Tags

Apart from using Get Tag on HMI, tags from Siemens TIA project can be imported in EasyBuilder Pro.

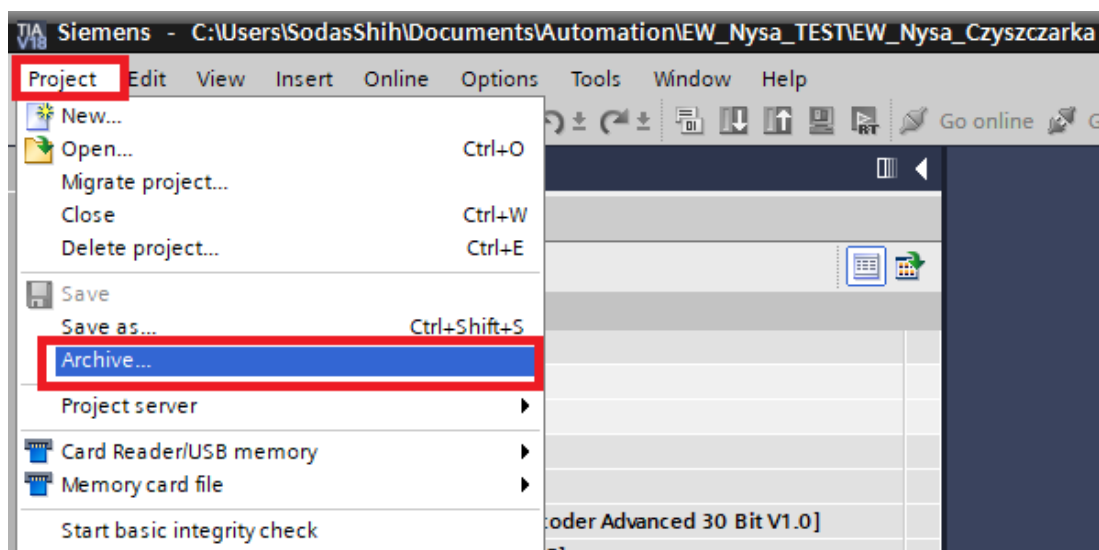
*** At least one db file must be imported. If only plc tags cannot be imported successfully.**

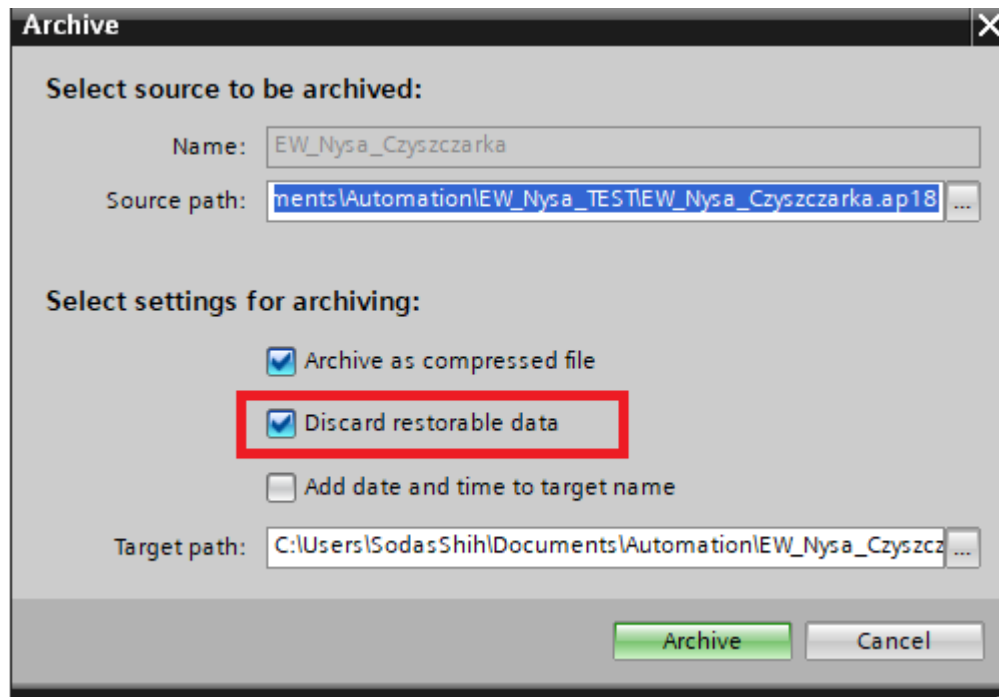
1. In System Parameter Settings add S7-1200/1500 into the device list and then click **[Import Tags...]**.



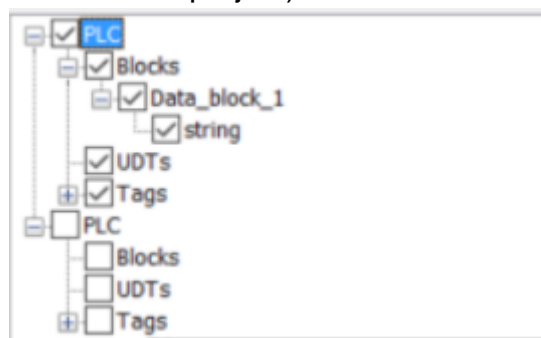
2. Select the ***.ap(*.apxx)** file.

When the *.ap file cannot be imported, you can try **[Project]** -> **[Archive]** and then import it again.

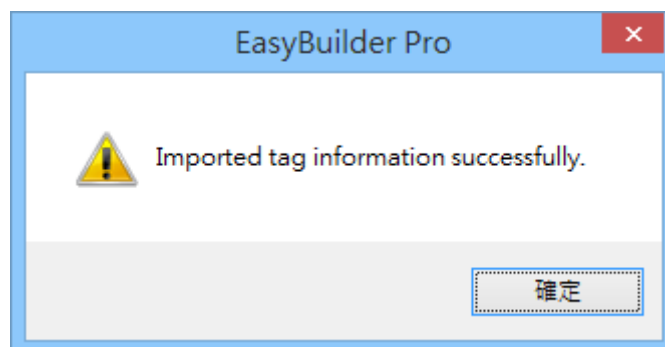




3. Select the tags to be imported and then click **OK**.
(Support multiple devices in the same project)



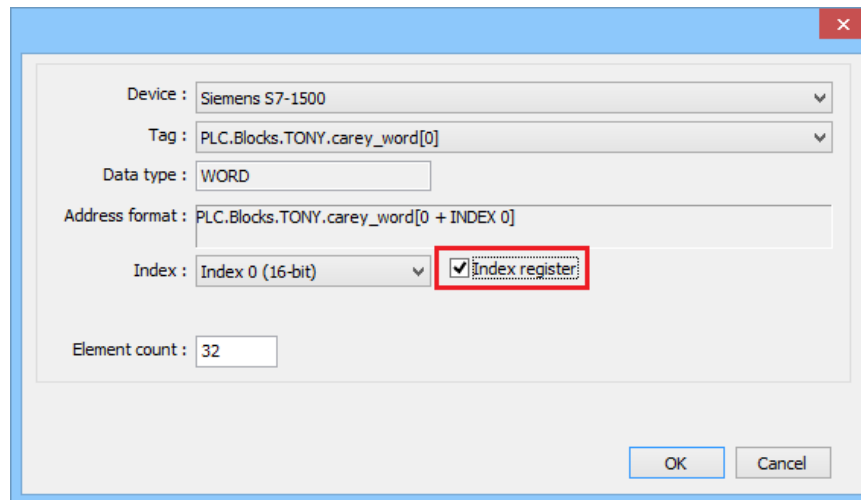
4. Tags are imported successfully.



Support Device Type:

Data type	EasyBuilder data format	Memo
Bool	bit	
Byte	16-bit BCD, Hex, Binary, Unsigned	8-bit
SInt	16-bit BCD, Hex, Binary, Signed	8-bit
USInt	16-bit BCD, Hex, Binary, Unsigned	8-bit
Word	16-bit BCD, Hex, Binary, Unsigned	16-bit
Int	16-bit BCD, Hex, Binary, Signed	16-bit
UInt	16-bit BCD, Hex, Binary, Unsigned	16-bit
DWord	32-bit BCD, Hex, Binary, Unsigned	32-bit
DInt	32-bit BCD, Hex, Binary, Signed	32-bit
Real	32-bit Float	32-bit
UDInt	32-bit BCD, Hex, Binary, Unsigned	32-bit
String		Max: 256
WString		
DTL		Read only
IEC_COUNTER		
IEC_DCOUNTER		
IEC_SCOUNTER		
IEC_UCOUNTER		
IEC_UDCOUNTER		
IEC_USCOUNTER		
Time	32-bit BCD, Hex, Binary, Unsigned	DWord
Time_Of_Day	32-bit BCD, Hex, Binary, Unsigned	DWord
Array		Bool, Byte, SINT, USInt, Word, Int, UInt, DWord, Dint, Real, UDInt, String
Struct		Bool, Byte, SINT, USInt, Word, Int, UInt, DWord, Dint, Real, UDInt, String

- String array can be used with index register.



- Both single-dimensional arrays and multi-dimensional arrays can start with non-zero values.
Example: [1..9] , or [1..3,2..5]
- Importing data types other than those in the above table may result in failure to communicate.
- Avoid using " " in tag name, such as "tag123".

Wiring Diagram:

Ethernet cable:

