

Siemens S7-300 MPI

Supported Series: Siemens S7-300 series PLC

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

HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	SIEMENS S7-300 MPI		
PLC I/F	RS-485 2W		
Baud rate	187.5K		Only HMI with a sticker "MPI 187.5K" on the rear cover supports MPI communication.
Data bits	8		
Parity	Even		
Stop bits	1		
PLC sta. no.	2	2 ~ 31	

Online simulator	NO	Extend address mode	Yes
Broadcast command	NO		

Device Address:

Bit/Word	Device type	Format	Range	Memo
B	I	DDDDo	0 ~ 40957	Input (I)
B	Q	DDDDo	0 ~ 40957	Output (O)
B	M	DDDDo	0 ~ 40957	Bit Memory
B	DBnBit	FFFFDDDDo	0 ~ 409699997	Data Register Bit
B	DB0Bit ~	DDDDDo	0 ~ 655327	Data Register Bit
W	IW	DDDD	0 ~ 4095	Input (I)
W	QW	DDDD	0 ~ 4095	Output (O)
W	MW	DDDD	0 ~ 4095	Bit Memory
DW	MD	DDDD	0 ~ 4094	
Byte	MB	DDDD	0 ~ 4095	Bit Memory Byte
Byte	DBBn	FFFFDDDD	0 ~ 40969999	Data Register
W	DBn	FFFFDDDD	0 ~ 40969999	Data Register (must be even)

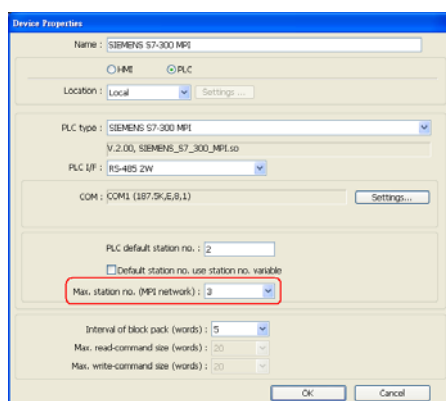
Bit/Word	Device type	Format	Range	Memo
DW	DBDn	FFFFDDDD	0 ~ 40969999	Data Register Double Word (multiple of 4)
W	DBn_String	FFFFDDDD	0 ~ 40969999	
DW	DBDn_String	FFFFDDDD	0 ~ 40969999	
W	DB0 ~ DB99	DDDD	0 ~ 65532	Data Register (must be even)

- Double word and floating point value must use DBDn device type.

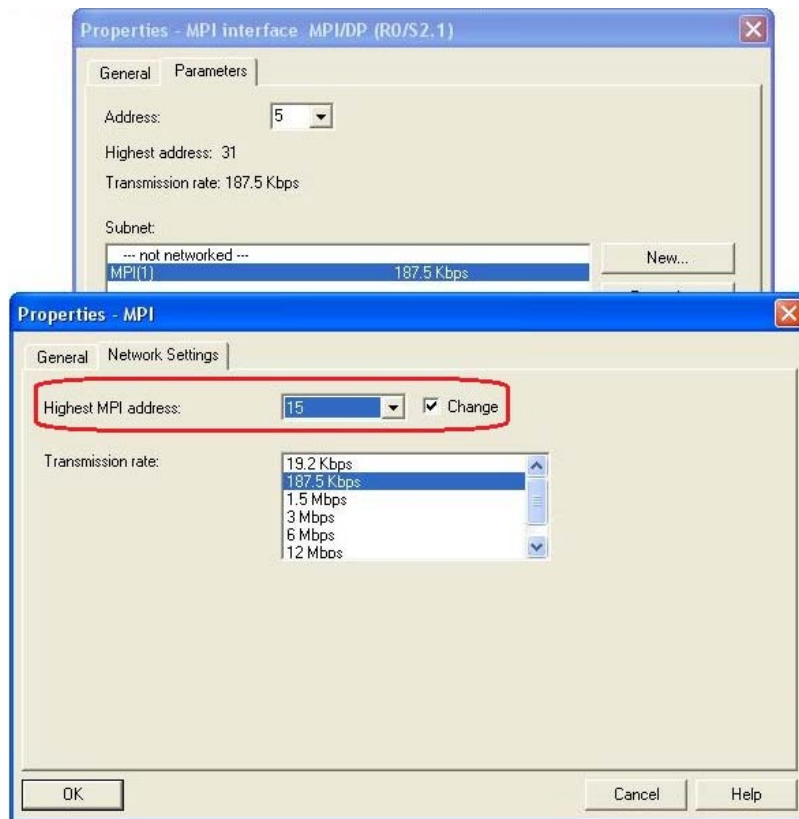
Multi-HMIs-Multi-PLCs Communication Setting:



For SIEMENS S7-300 MPI driver in Multi-HMIs-Multi-PLCs communication, [Max. station no. (MPI network)] parameter must be correctly set. This setting is relevant to the station no. of the devices, as shown, two HMI (station no. 0, 1) and two PLC (station no. 2, 3) are in MPI network, Max. Station No. should be set to 3.



For the effectiveness of communication, users may set PLC device in STEP 7 as shown below. In Properties MPI / Network Settings, set Highest MPI address to the number closest to the actual device station number.



Note:

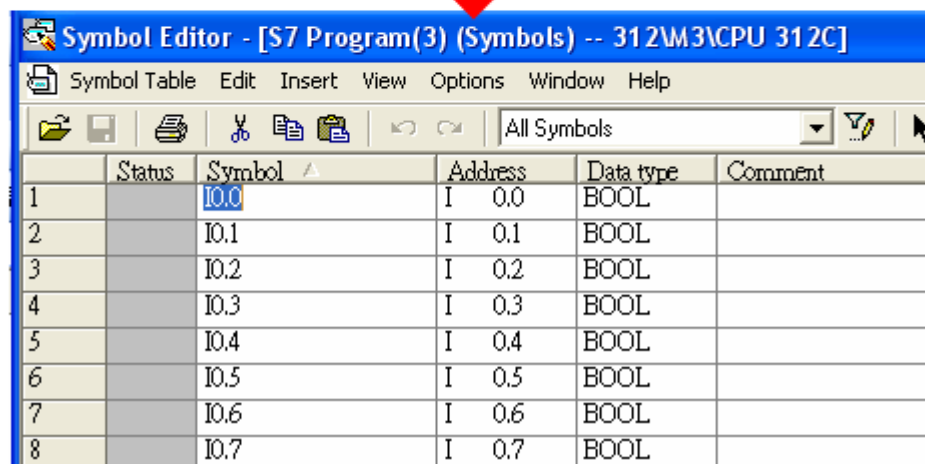
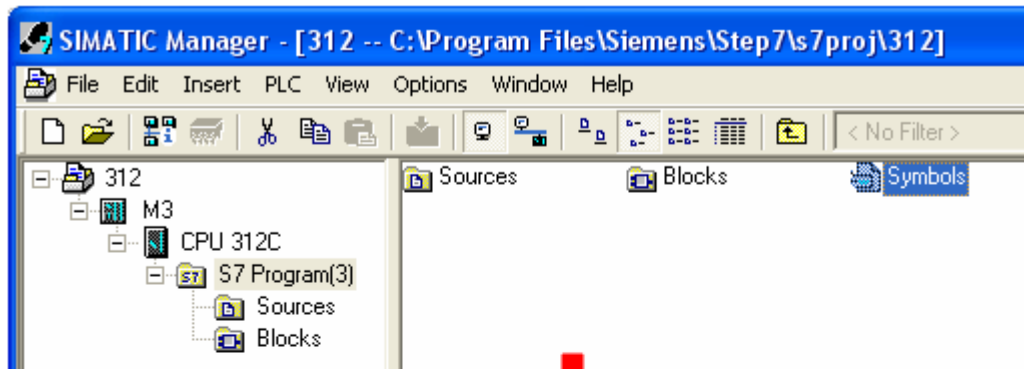
- HMI sta. no. can not be the same as PLC sta. no.
- Highly recommended that the device station numbers start from 0 sequentially and correctly set [Max. station no. (MPI network)].
- Available for EasyBuilder V4.50 and later.

How to Import Tag:

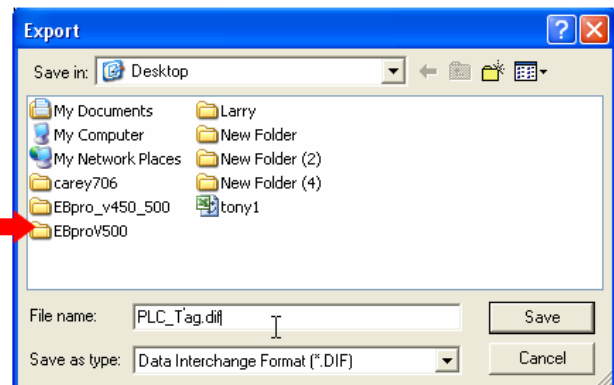
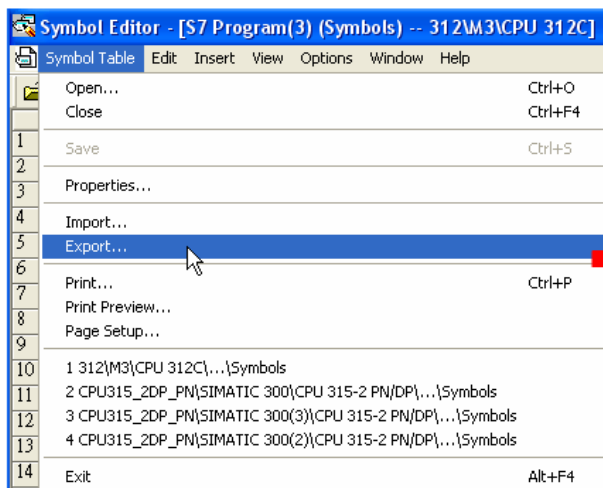
SIEMENS STEP 7 program allows building files of user-defined tag (*.dif file and *.AWL file), and import these files in EasyBuilder8000/EasyBuilderPro -> System Parameter Settings. The following describes how to build and import these two types of files.

1. Building *.dif File

a、 In “Symbols” create user-defined tag.

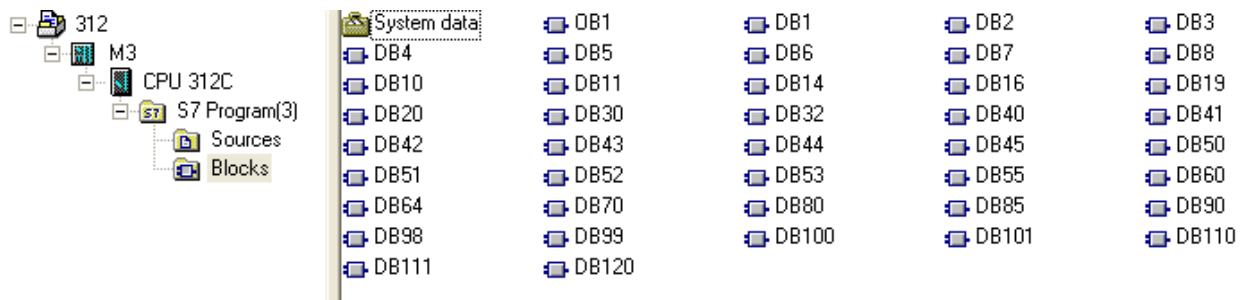


b、 Click **Export** to export the edited file and click **Save**.

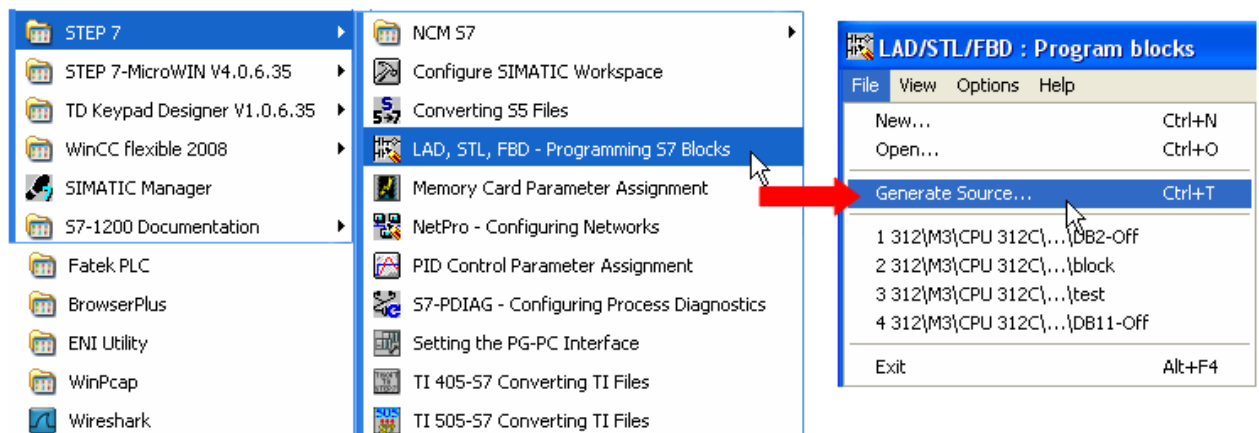


2. Building *.AWF File

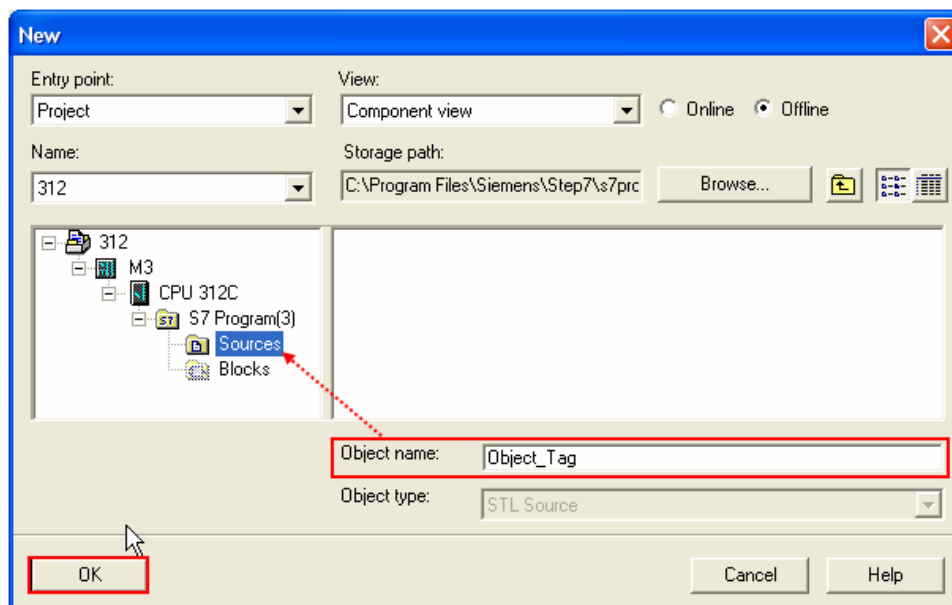
a、 In **Blocks** create items as shown below:



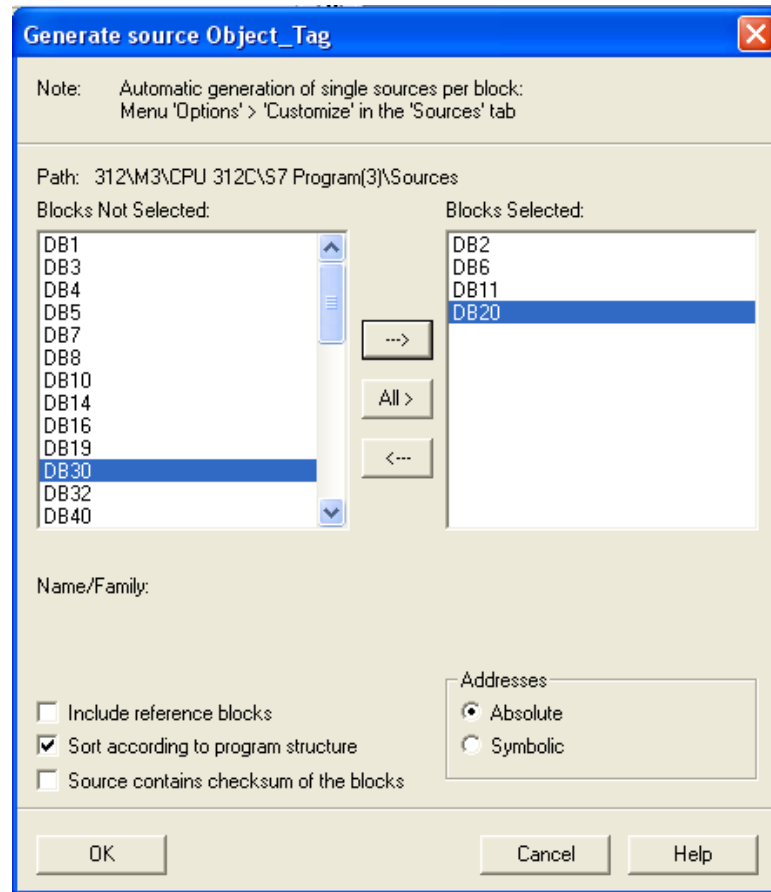
b、 Open **LAD/STL, FBD – Programming S7 Blocks**, click **File -> Generate Source**.



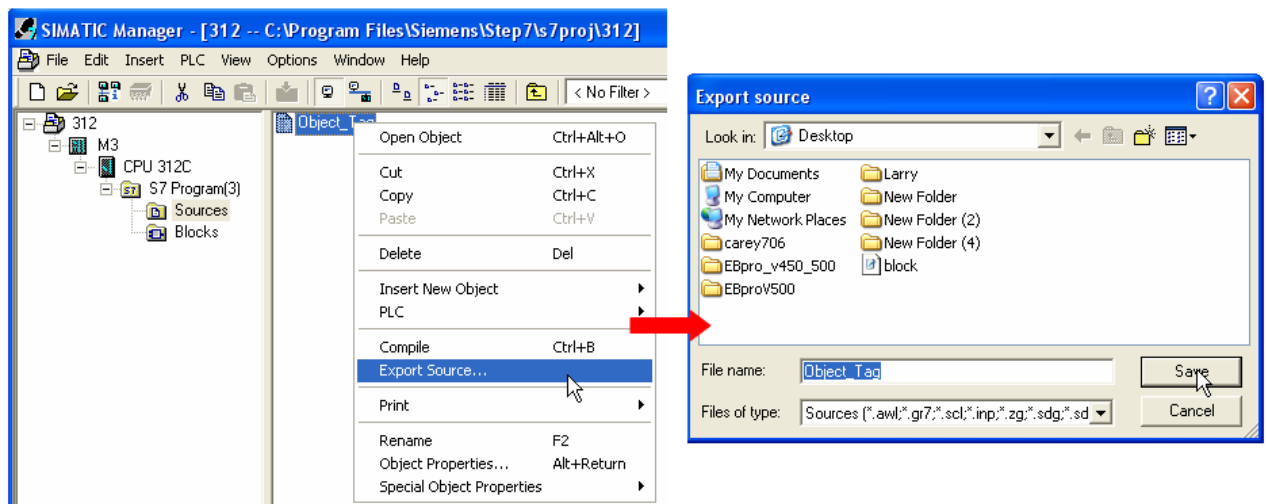
c、 Select **Sources** as storage path, specify the file name then click **OK**.



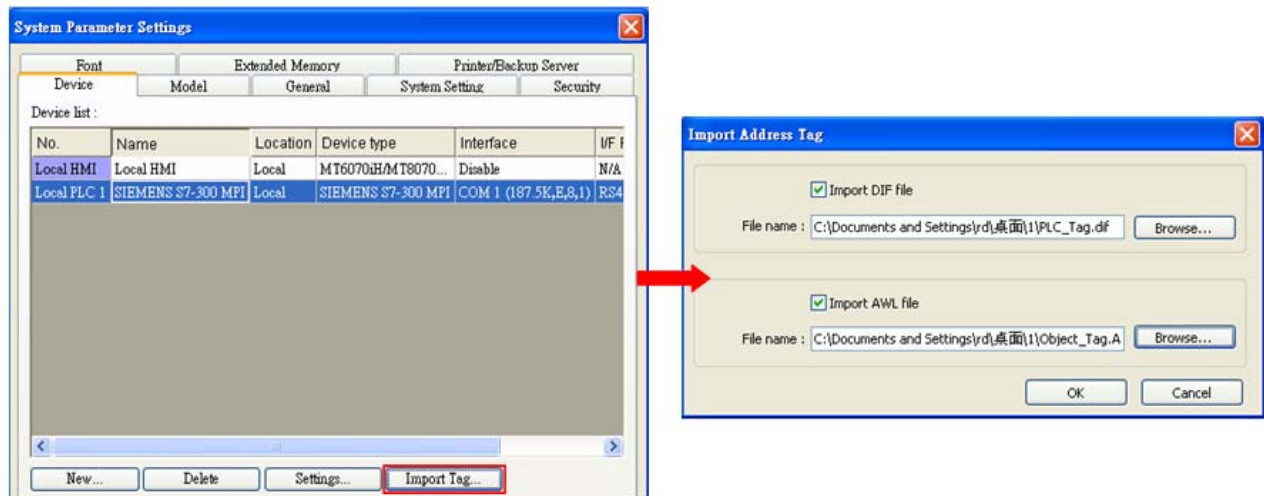
d、 Select the objects to be exported then click **OK**.



e、 Under **Sources** there will be names of the saved files, select **Export Source** to build *.AWL file.



The generated *.dif and *.AWL files can be imported in EasyBuilder8000/EasyBuilderPro **System Parameter Settings**, by clicking **Import Tag**.



Tag information successfully imported.






Wiring Diagram:




The following represents the cable end connector.

S7-200 PPI , S7-300 MPI :RS485 2W




eMT3000 series

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		RS485 2W 9P D-Sub Male
1 RX-	6 Data-		8 D-
2 RX+	9 Data+		3 D+
5 GND	5 GND		5 GND
			

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		RS485 2W 9P D-Sub Male
1 RX-	6 Data-		8 D-
2 RX+	9 Data+		3 D+
5 GND	5 GND		5 GND
			

MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		RS485 2W 9P D-Sub Male
1 RX-	7 Data-		8 D-
2 RX+	8 Data+		3 D+
5 GND	5 GND		5 GND
			

Driver Version:

Version	Date	Description
V1.90	May/26/2011	Added registers: MB & DBBn
V2.00	Aug/19d/2011	i Series HMI support Multi HMIs-Multi PLCs communication.