

Siemens S7-300

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 | | |
| PLC I/F | RS232 | | |
| Baud rate | 19200 | 9600,19200 | |
| Data bits | 8 | | |
| Parity | Odd | | |
| Stop bits | 1 | | |
| PLC sta. no. | 2 | | Must be same as the PLC setting. |

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 | FFFFFFDDDDo | 0 ~ 655359997 | Data Register Bit |
| B | DBxBit | FFFFFFDDDDDo | 0 ~ 10700655327 | |
| B | DB1Bit ~ DB99Bit | DDDDDo | 0 ~ 655327 | |
| 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 | FFFFFFDDDD | 0 ~ 655359999 | Data Register Byte |
| Byte | DBBx | FFFFFFDDDD | 0 ~ 1070065532 | |
| W | DBx | FFFFFFDDDD | 0 ~ 1070065532 | |
| W | DBn | FFFFFFDDDD | 0 ~ 655359999 | Data Register (must be even) |
| DW | DBDn | FFFFFFDDDD | 0 ~ 655359999 | Data Register Double Word (must be even) |
| DW | DBDx | FFFFFFDDDD | 0 ~ 1070065532 | |
| W | DBn_String | FFFFFFDDDD | 0 ~ 655359999 | |

| Bit/Word | Device type | Format | Range | Memo |
|----------|-------------|------------|----------------|---------------------------------------------|
| W | DBx_String | FFFFFFDDDD | 0 ~ 1070065532 | |
| W | DBn_String1 | FFFFFFDDDD | 0 ~ 655359999 | |
| W | DBx_String1 | FFFFFFDDDD | 0 ~ 1070065532 | |
| DW | DBDn_String | FFFFFFDDDD | 0 ~ 655359999 | Data Register Double Word (must be even) |
| DW | DBDx_String | FFFFFFDDDD | 0 ~ 1070065532 | |
| W | DB1-DB99 | DDDD | 0 ~ 8192 | Data Register |

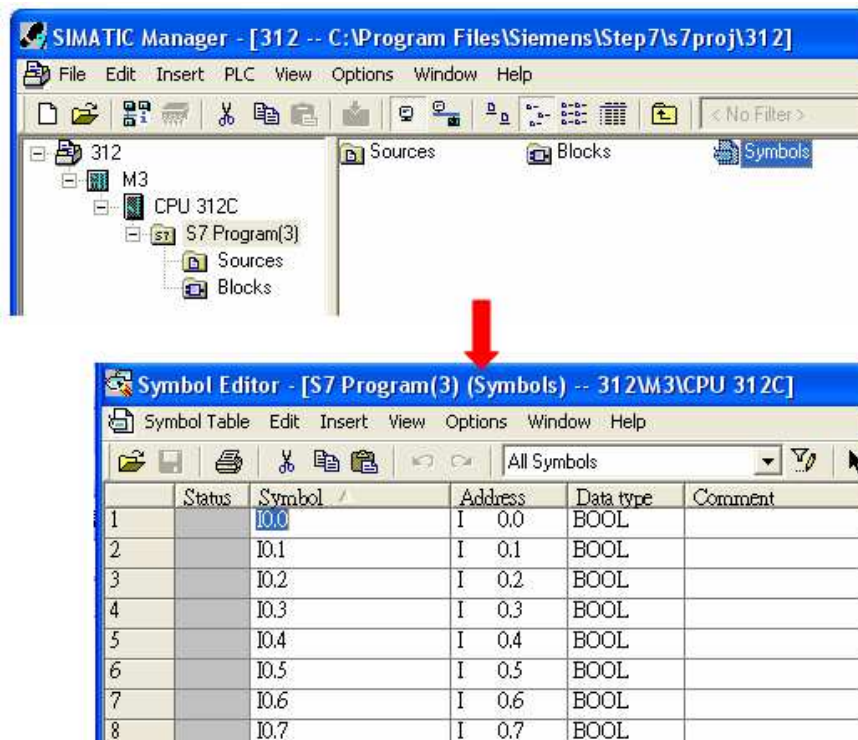
* Double word and floating point value must use DBDn device type.

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.

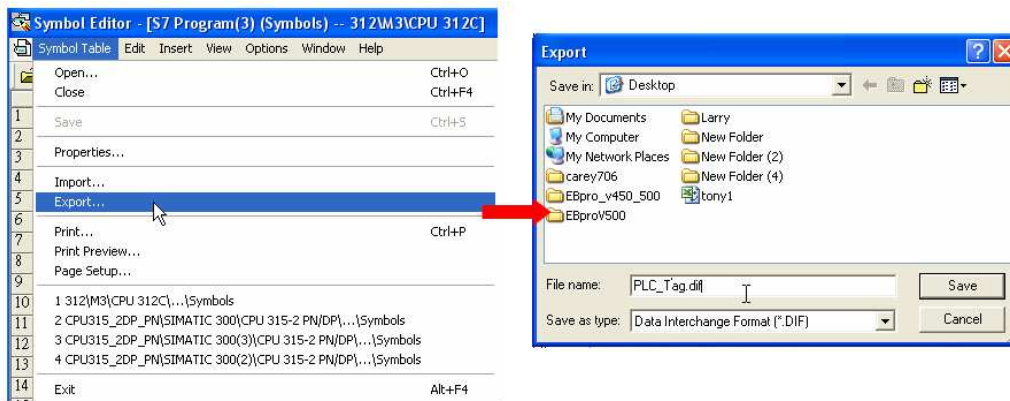


The top screenshot shows the SIMATIC Manager interface. The project tree on the left shows a project named '312' containing a sub-project 'M3' with a 'CPU 312C' and an 'S7 Program(3)'. The 'Symbols' tab is selected in the main workspace.

The bottom screenshot shows the 'Symbol Editor' window for 'S7 Program(3) (Symbols)'. It displays a table of symbols with the following columns: Status, Symbol, Address, Data type, and Comment.

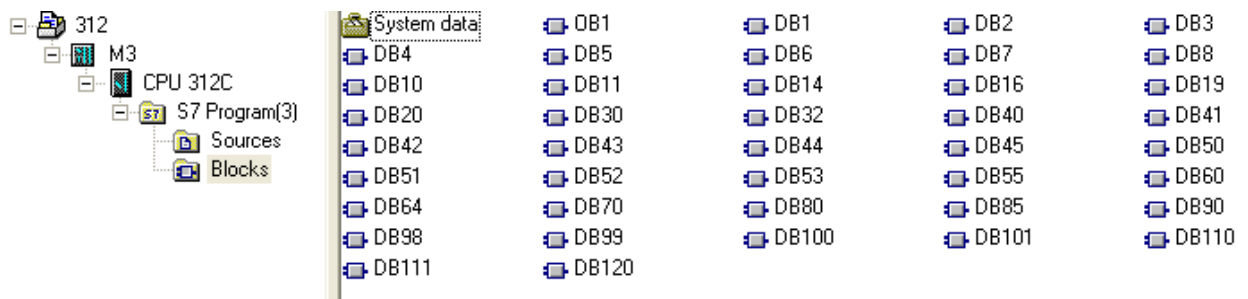
| Status | Symbol | Address | Data type | Comment |
|--------|--------|---------|-----------|---------|
| | I0.0 | I 0.0 | BOOL | |
| | I0.1 | I 0.1 | BOOL | |
| | I0.2 | I 0.2 | BOOL | |
| | I0.3 | I 0.3 | BOOL | |
| | I0.4 | I 0.4 | BOOL | |
| | I0.5 | I 0.5 | BOOL | |
| | I0.6 | I 0.6 | BOOL | |
| | I0.7 | I 0.7 | BOOL | |

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

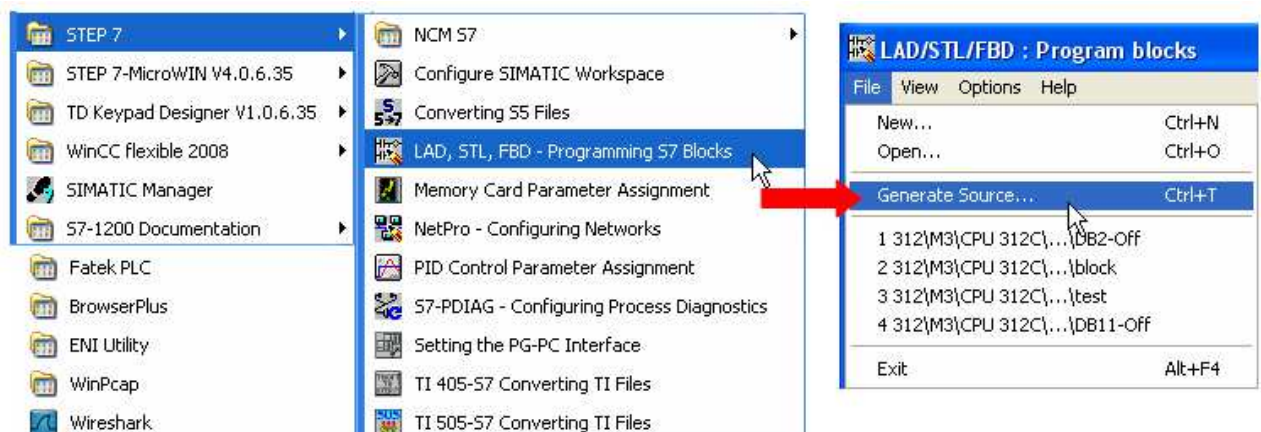


2. Building *.AWF File

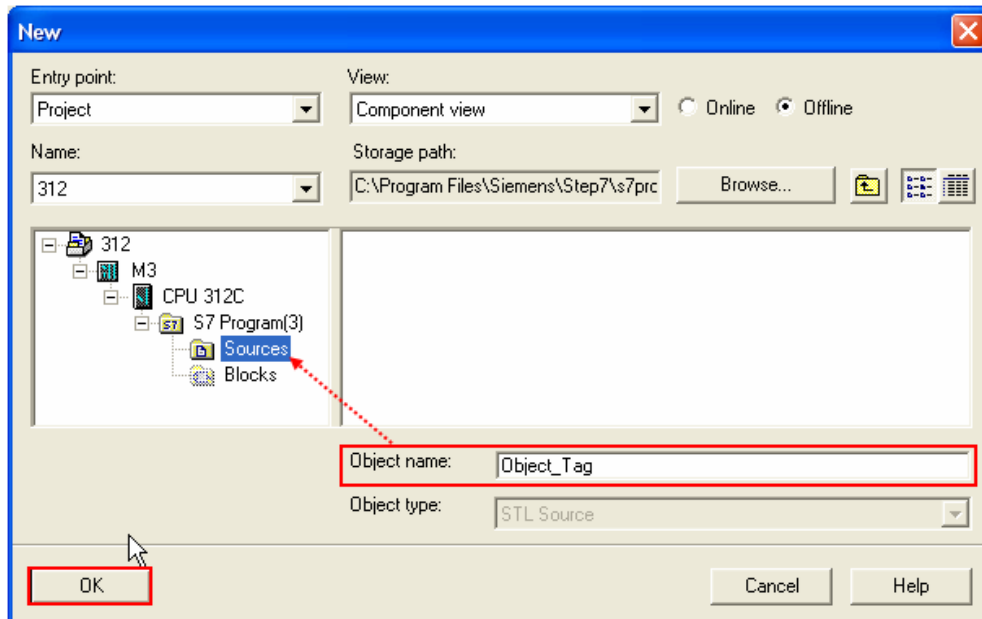
a. In **Blocks** create items as shown below:



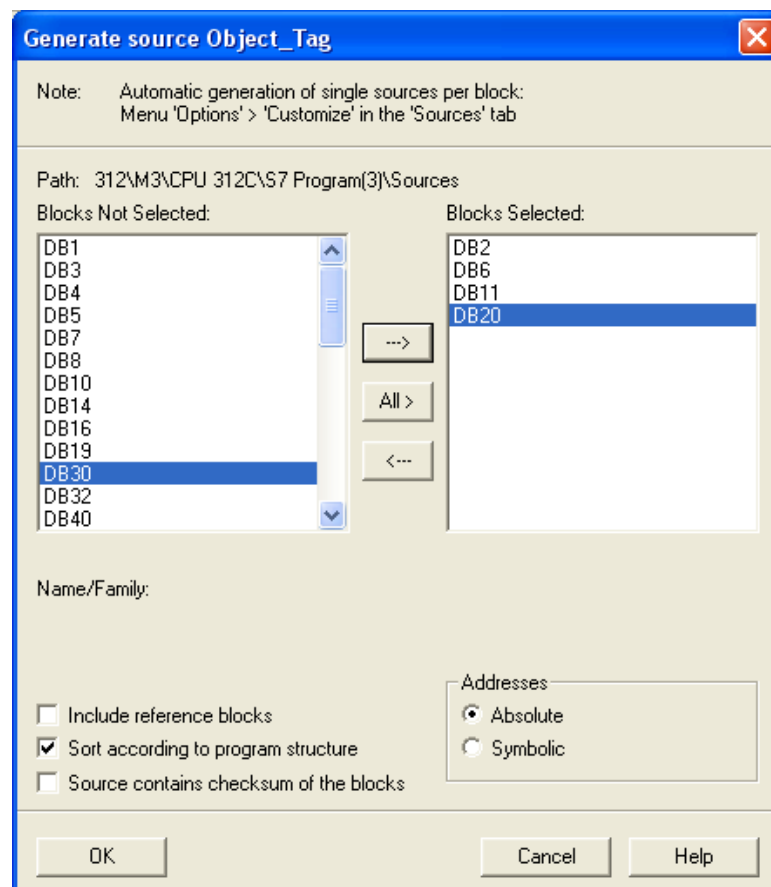
b. Open LAD/STL, FBD – Programming S7 Blocks, click **File -> Generate Source**.



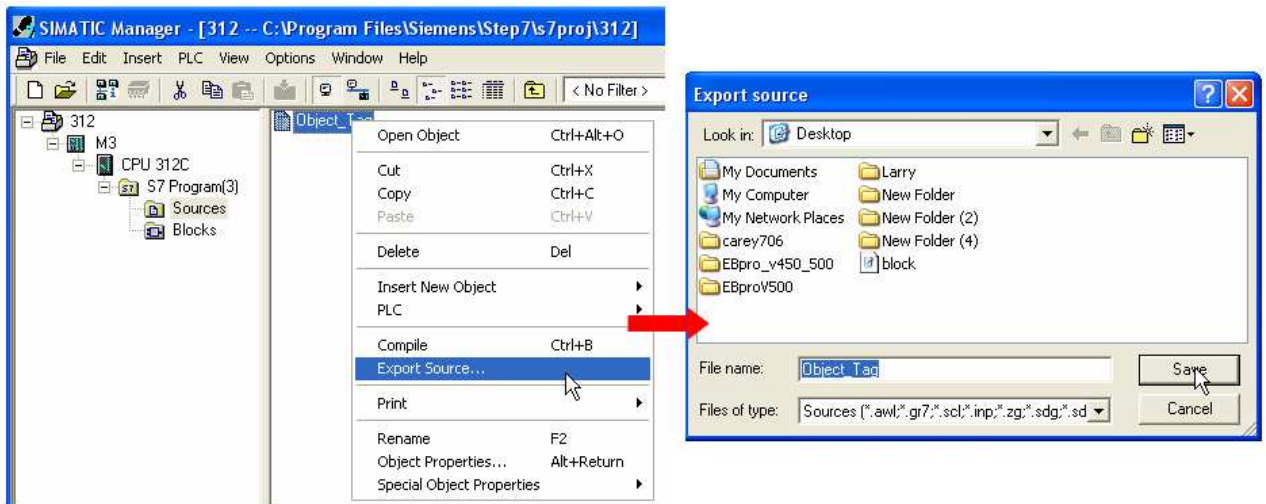
- c ․ Select **Sources** as storage path, specify the file name then click **OK**.



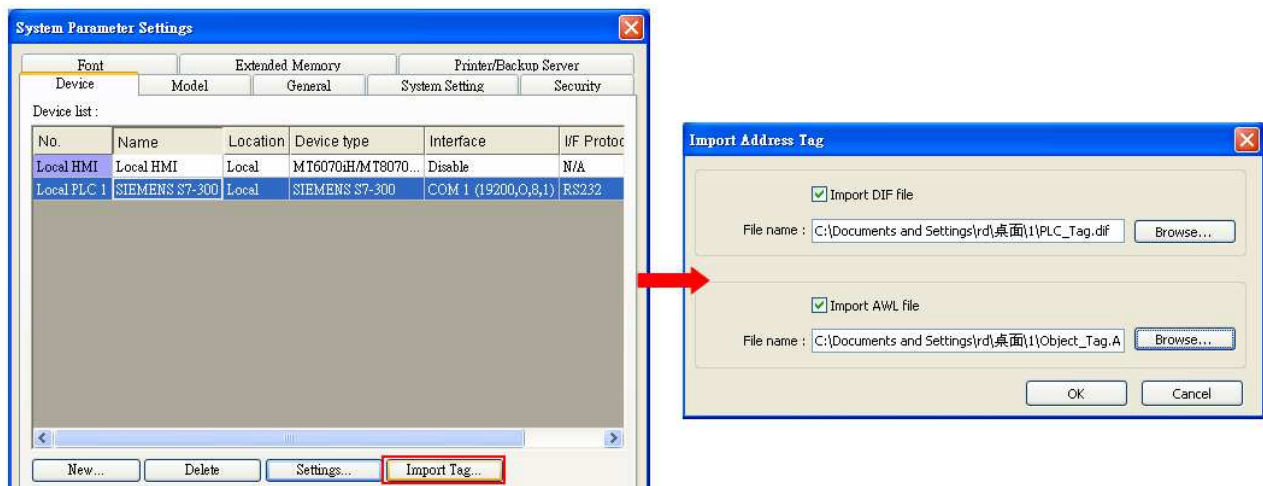
- d ․ Select the objects to be exported then click **OK**.



- 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:

Siemens S7-300 PC Adapter : 9P D-Sub to 9P D-Sub (Diagram 1 ~ Diagram 3)

Diagram 1

| | |
|-------------------|---------------------------------------------------------------|
| cMT Series | <i>cMT3071 / cMT3072 / cMT3090 / cMT3103 / cMT3151</i> |
| eMT Series | <i>eMT3070 / eMT3105 / eMT3120 / eMT3150</i> |
| MT-iE | <i>MT8073iE / MT8102iE</i> |
| MT-XE | <i>MT8092XE</i> |
| MT-iP | <i>MT6103iP / MT8102iP</i> |

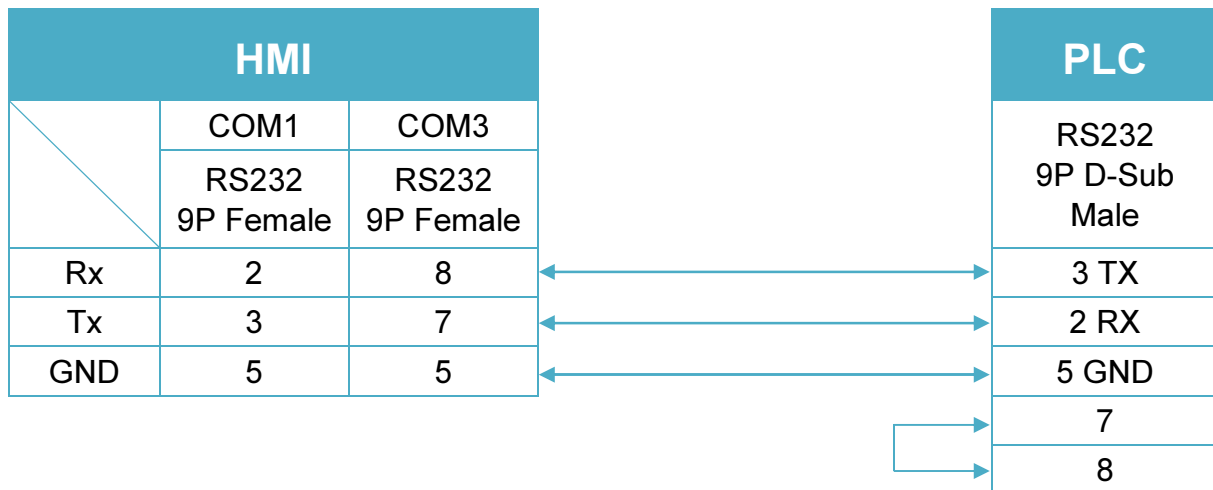


Diagram 2

| | |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| cMT Series | <i>cMT-SVR / cMT-G01 / cMT-G02 / cMT-HDM / cMT-FHD</i> |
| mTV | <i>mTV</i> |
| MT-iE | <i>MT8070iE / MT6070iE / MT8100iE / MT8121iE / MT8150iE / MT8071iE / MT6071iE / MT8072iE / MT6072iE / MT8073iE / MT8101iE / MT8102iE / MT8103iE</i> |
| MT-XE | <i>MT8121XE / MT8150XE / MT8090XE</i> |

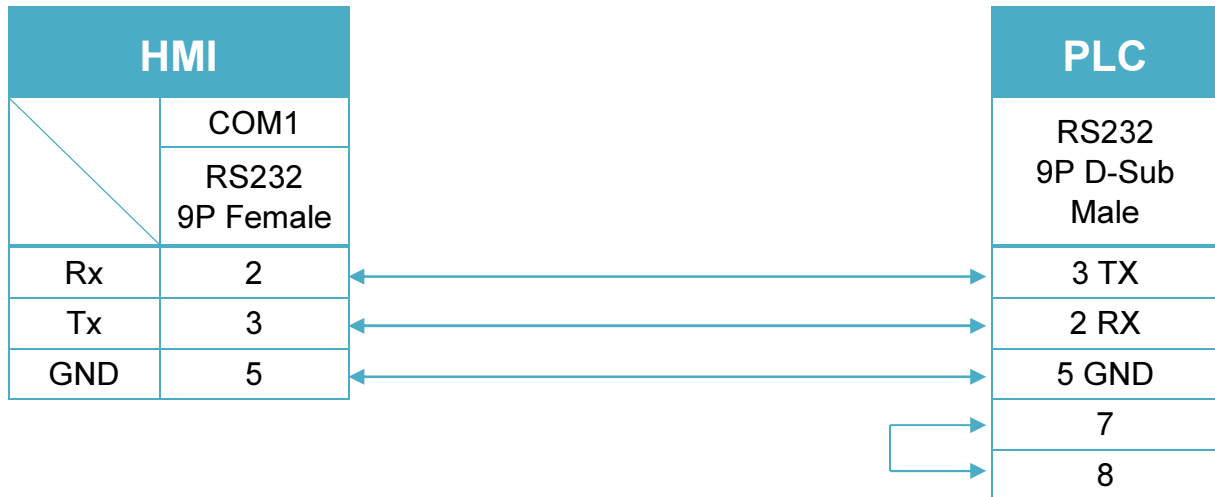
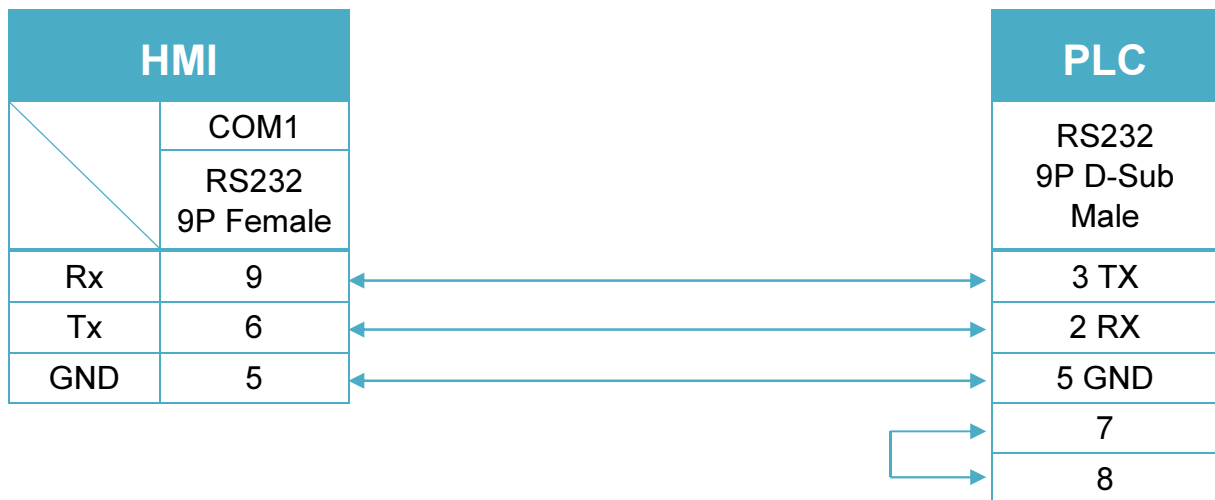
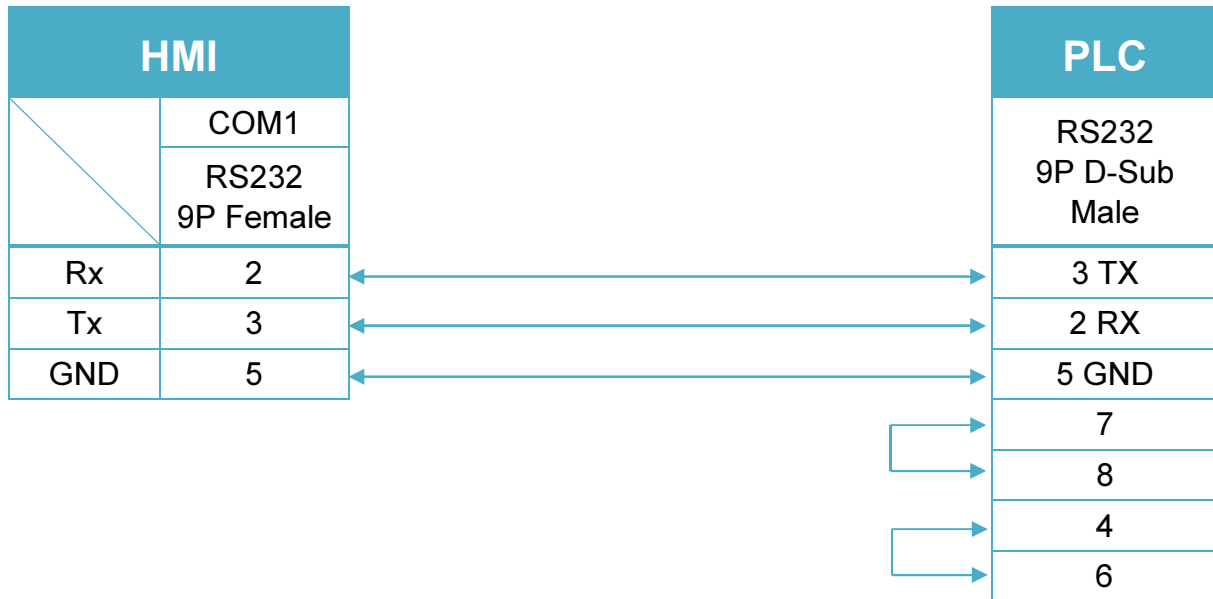


Diagram 3

MT-iE *MT8050iE / MT8053iE*

MT-iP *MT6051iP / MT8051iP / MT6071iP / MT8071iP*




Diagram 6
MT-iE *MT8050iE / MT8053iE*
MT-iP *MT6051iP / MT8051iP / MT6071iP / MT8071iP*
