SIEMENS

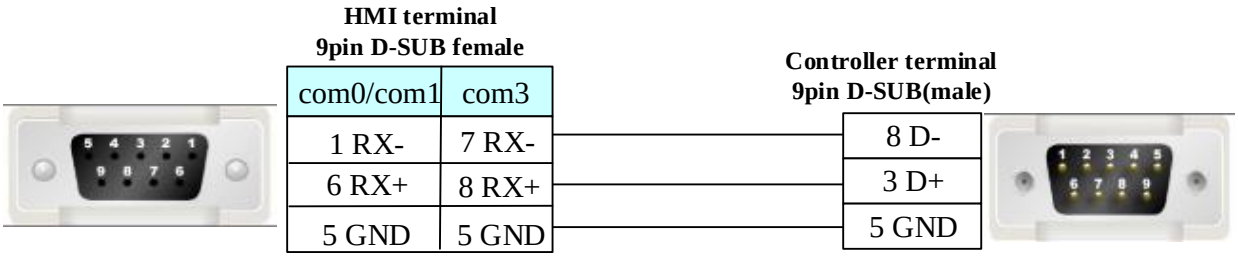
SIEMENS_SIEMENS S7-200

❖ 1 Introduction to Drive

Driver protocol	SIEMENS_SIEMENS S7-200
PLC Model number	SIEMENS S7-200 SMART
Website	https://www.siemens.com/cn/zh.html
communication mode	RS485
PLC interface	RS485
PLC station number	2
Online Simulation	Support

Hardware wiring method:

RS485 communication cable



❖ 2 HMI configure

➢ Configure communication connections

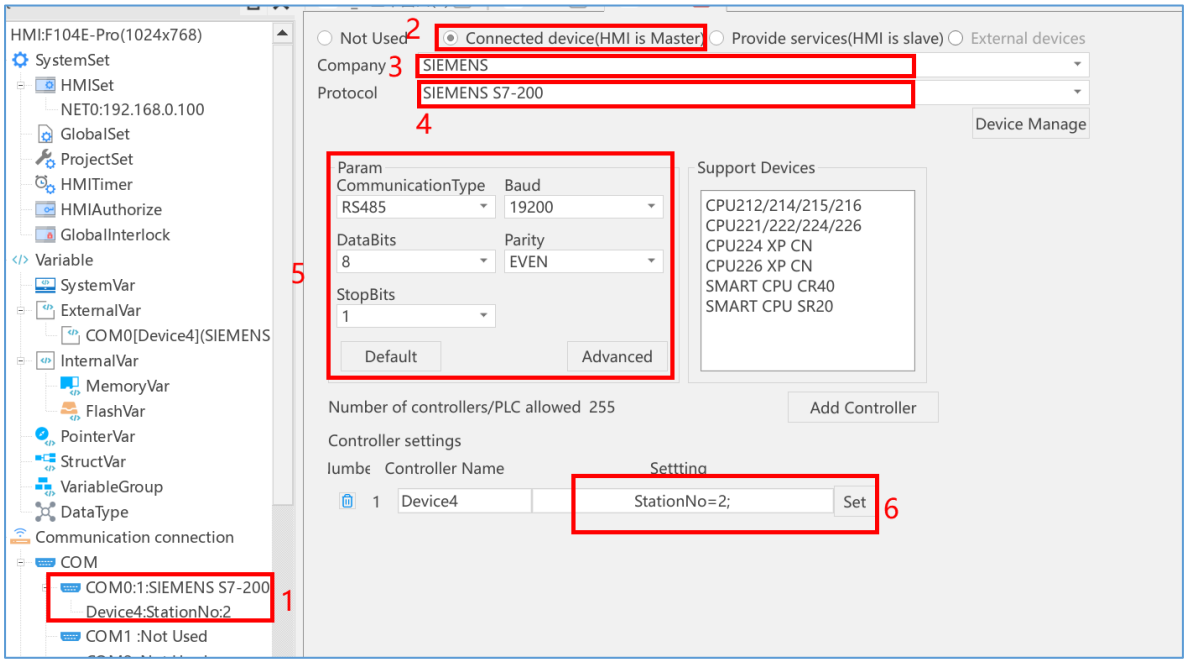


Figure1

(1)Project-Serial Port: Select the serial port where the driver needs to be added

(2)Select "Connected Devices"

(3)Select the external controller for the company brand SIEMENS

(4)Select the SIEMENS S7-200 protocol

(5)Configuration parameters --- just keep them the same as the actual controller's parameters

(6)Configure the controller name and station number---just keep the same parameters as the actual controller

➢ Create Variable

(1)Variables - External Variables Select the PLC where the variable is to be created

(2)Click Create on the right to create according to the desired data type

(3)Information filtering view, can be filtered by each data screening above

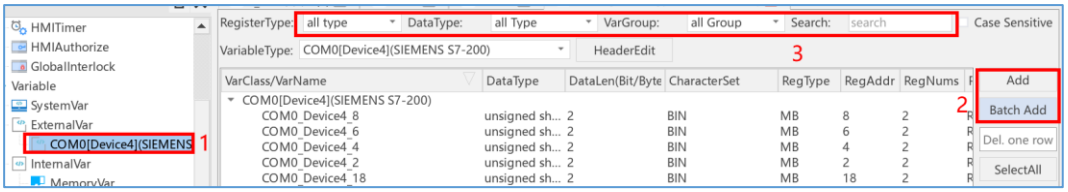


Figure2

❖ 3 External controller configuration

STEP 7-MicroWIN SMART software is used in this manual.

1.Communicate and upload with PLC. Open STEP 7-MicroWIN SMART software, click "Upload" in the interface, select the appropriate communication interface in the pop-up window, and then click "Find CPUs", in the "Find CPUs" will display the PLC connected to the computer, select the PLC and click OK to complete the communication. In "Find CPUs", the PLC connected to the computer will be displayed, select the PLC and click OK to complete the communication;

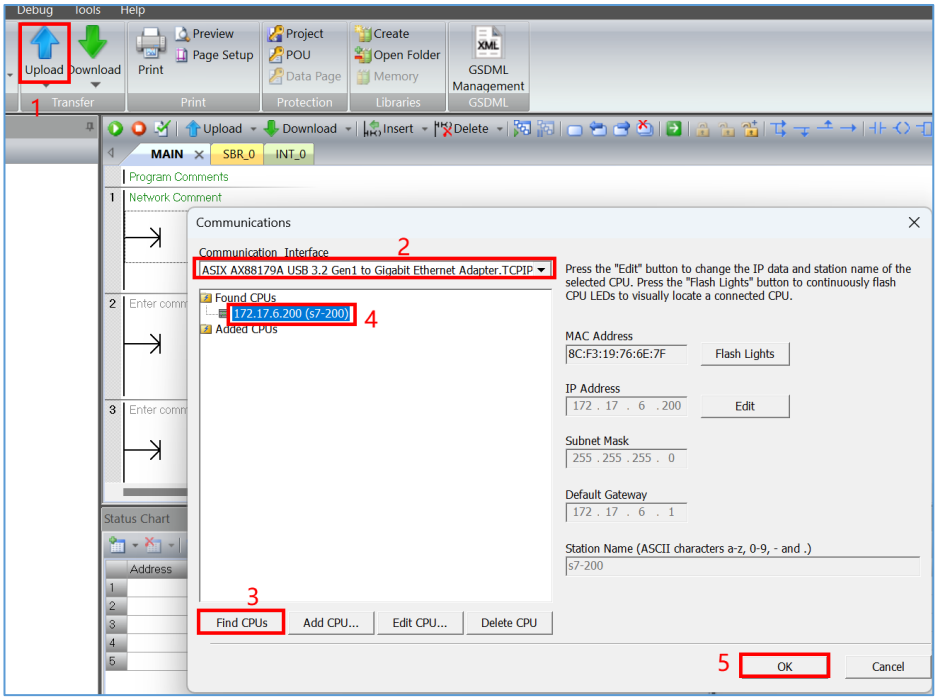


Figure3

2. After successful communication, the upload window will pop up, click "Upload" to complete the PLC upload;

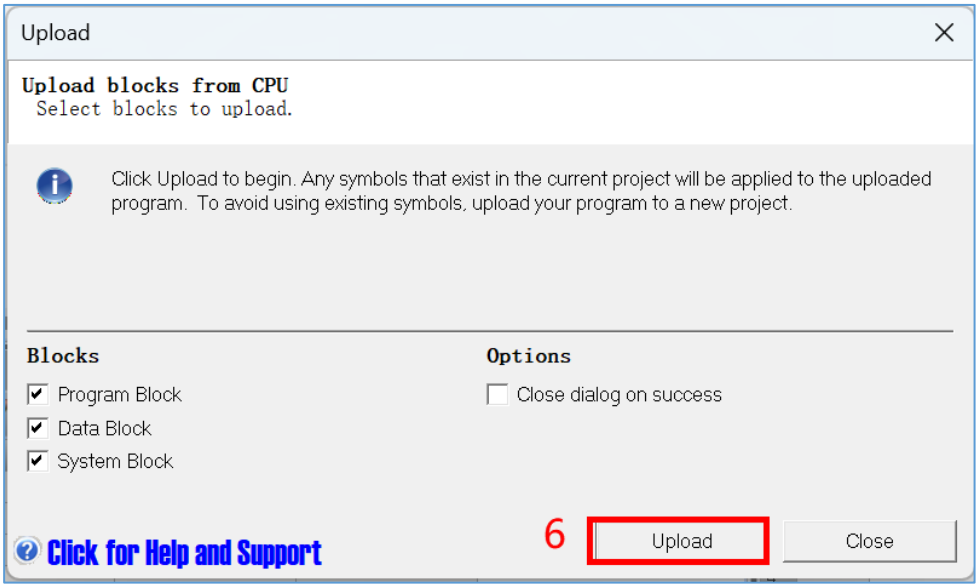


Figure4

3. After realizing the communication with PLC, you can double-click the "System Block" on the left side, select communication in the pop-up window, and set the PLC's address and baud rate at the RS485 port in the communication interface, and click OK after finishing the setup, and then click "Download" to realize the modification of the PLC's address and baud rate.

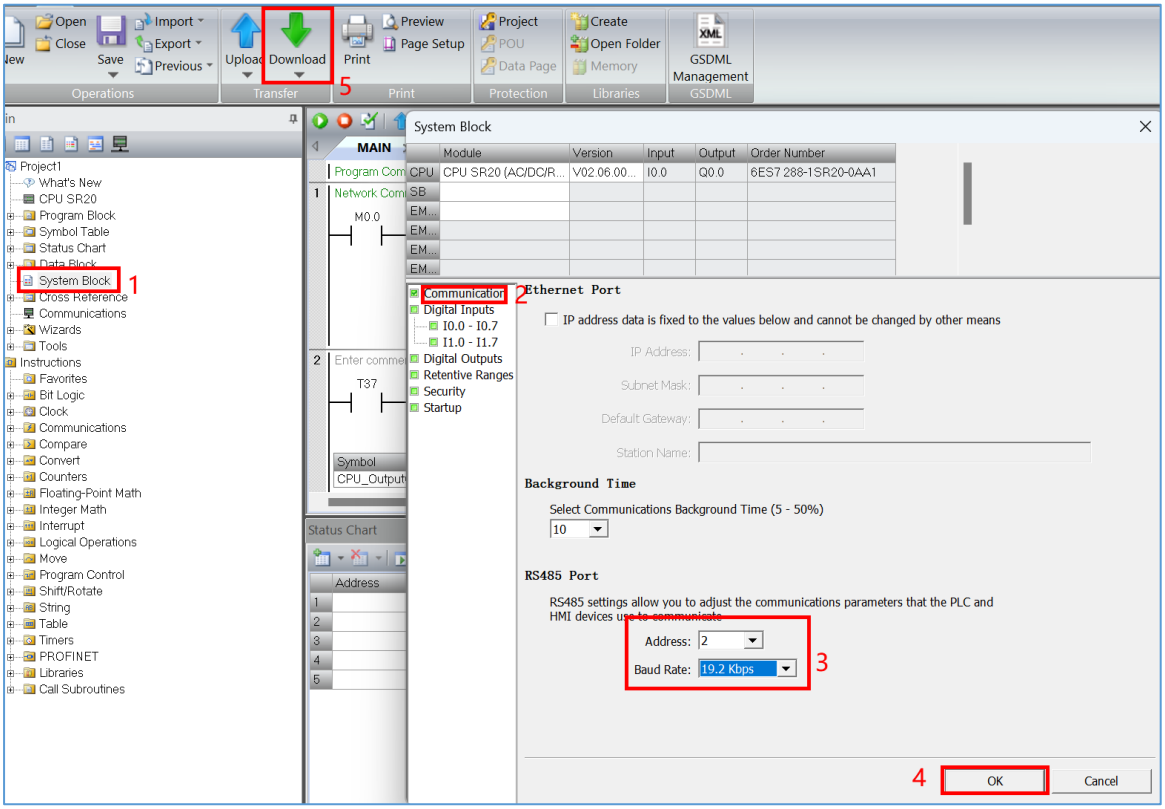


Figure5

❖ 4 Supported register type

Device	Bit address	Word address	Format	
SCR Node	S 0.0-31.7	----	DD.O	
Special Memory Bits	SM 0.0-1535.7	----	DDDD.O	
Counter Bit	C_BIT 0-255	----	DDD	
Timer Bit	T_BIT 0-255	----	DDD	
Variable Memory Node	V 0.0-20479.7	----	DDDDD.O	
Internal Memory Bits	M 0.0-31.7	----	DD.O	
Discrete Output and Image Registers Node	Q 0.0-31.7	----	DD.O	
Discrete Inputs and Image Registers Node	I 0.0-31.7	----	DD.O	
Analog Outputs	----	AQW 0-111	DDD	
Analog Inputs	----	AIW 0-111	DDD	
SCR	----	SD 0-31	DD	32-bit
SCR	----	SW 0-31	DD	
SCR	----	SB 0-31	DD	
Special Memory Registers	----	SMD 0-1535	DDDD	32-bit
Special Memory Registers	----	SMW 0-1535	DDDD	

Internal Memory	----	MD 0-31	DD	32-bit
Internal Memory	----	MW 0-31	DD	
Internal Memory	----	MB 0-31	DD	
Discrete Output and Image Registers	----	QD 0-31	DD	32-bit
Discrete Output and Image Registers	----	QW 0-31	DD	
Discrete Output and Image Registers	----	QB 0-31	DD	
Discrete Inputs and Image Registers	----	ID 0-31	DD	32-bit
Discrete Inputs and Image Registers	----	IW 0-31	DD	
Discrete Inputs and Image Registers	----	IB 0-31	DD	
Counter Current Value	----	C 0-255	DDD	
Timer Current Value	----	T 0-255	DDD	
Variable Memory	----	VD 0-20477	DDDDD	32-bit
Variable Memory	----	VW 0-20477	DDDDD	
Variable Memory	----	VB 0-20477	DDDDD	
Variable memory	DB2_DBX0-65535.7	------	DDDDD.O	
Variable memory	------	DB2_DBB0-65535	DDDDD	
Variable memory	------	DB2_DBD0-65535	DDDDD	
Variable memory	------	DB2_DBW0-65535	DDDDD	
Variable memory	------	DB2_String0-65534	DDDDD	

❖ 5 Advanced parameters and error messages

Reference Manual - Communication Advanced Parameters and Error Information Table

❖ 6 Software Configuration

The following steps use the associated word variable as an example:

1.Click on "Components" and select "Data Display - Number Input";

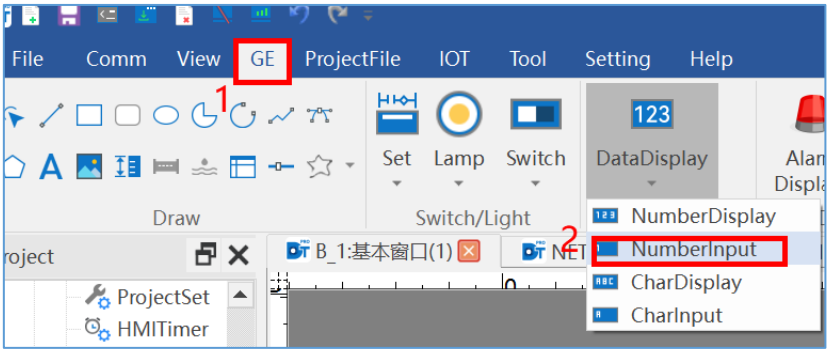


Figure6

2.Numeric input element associated variables;

(1)You can click the variable edit box to enter characters. A list of all variables matching the string will pop up and the desired external variable can be selected;

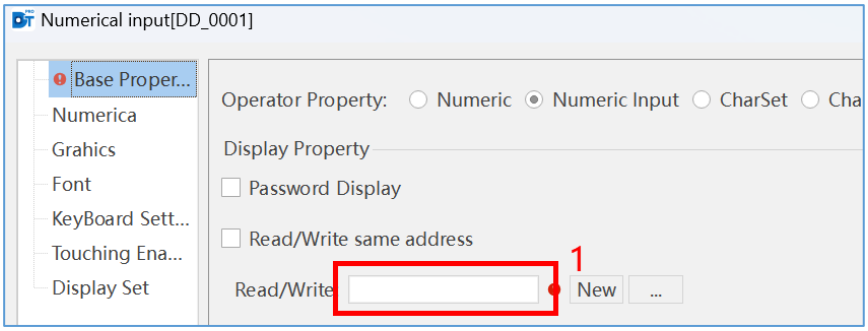


Figure7

(2)You can click the "New" button to add the required external variables. Select the external variable as the data source, set the required variable information, and confirm the variable edit box to display the newly created variable;

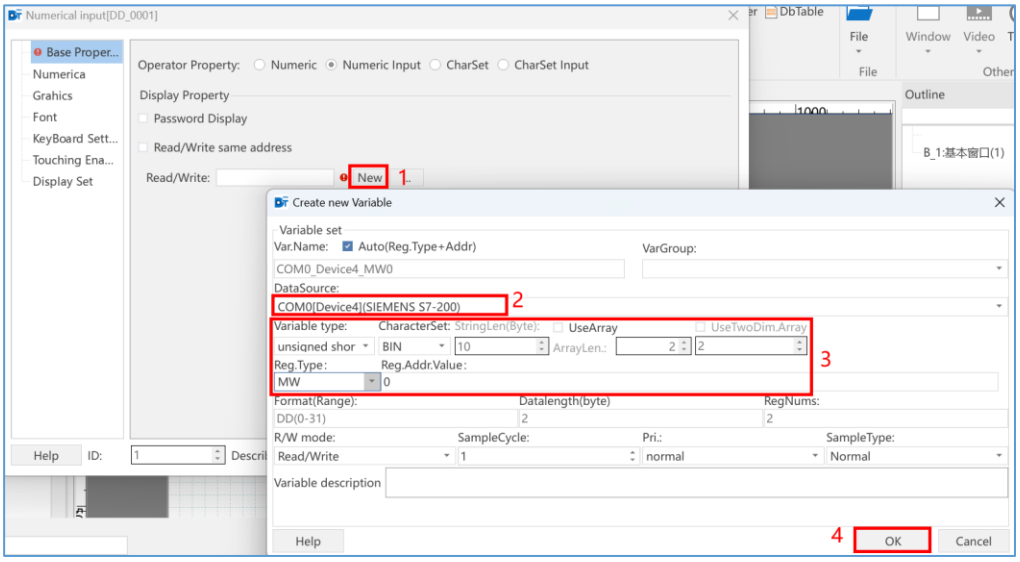


Figure8

(3)You can click on the "..." button to select a variable or add a new variable. You can select external variables and directly select existing variables or create variables (same as for new variables). The upper right corner allows you to find and filter variables, and array variables can be modified with subscripts, or you can dynamically index the array subscripts with variables;

(4)Click "OK" to complete the operation of the selected variable, or double-click the variable to achieve the "OK" effect;

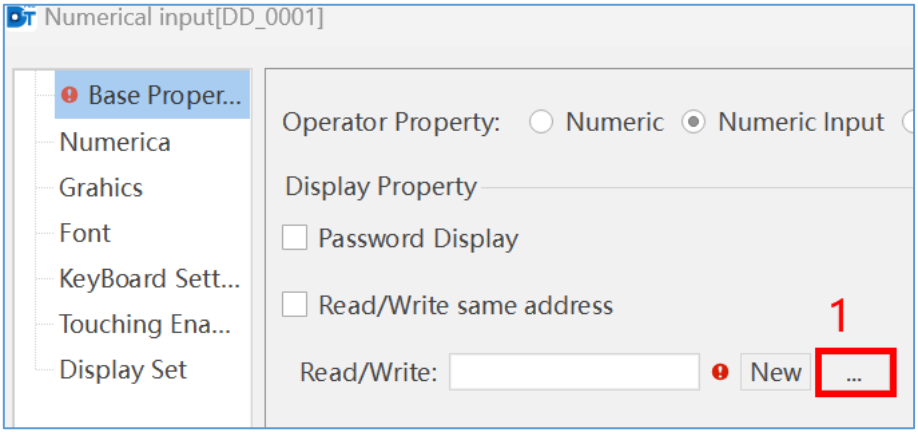


Figure9

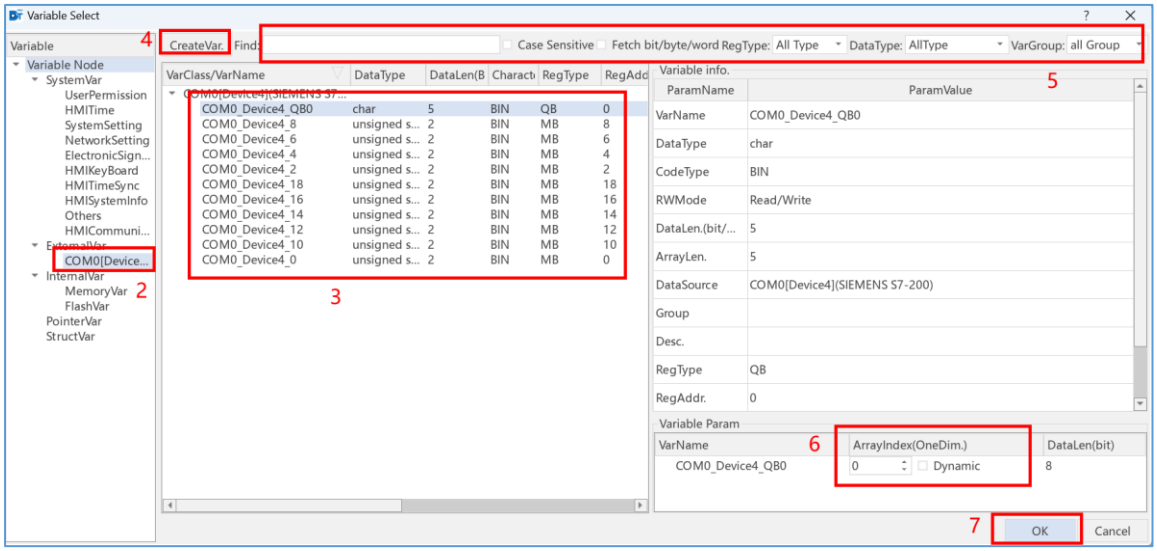


Figure10

(5)Click "OK" on the component property page to complete the procedure of associating a structural variable with a numeric input component.