Mitsubishi

Mitsubishi FX5U

Directory

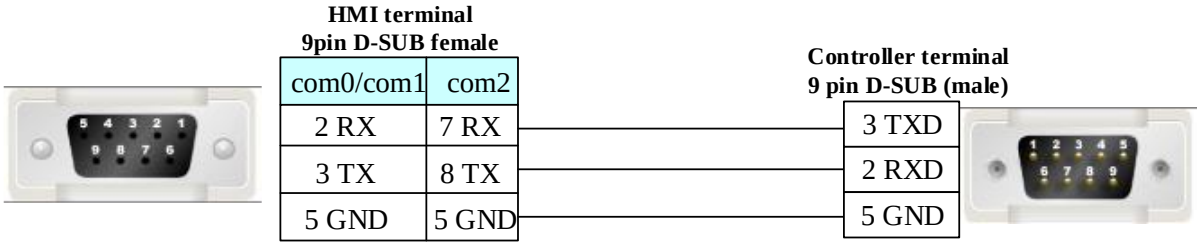
❖ 1 Introduction to Drive

Driver protocol	Mitsubishi FX5U
PLC Model number	FX5U Series
website	https://www.mitsubishielectric.com.cn/zh/index.html
communication mode	RS232、RS422、RS485
PLC interface	RS232、RS422、RS485
PLC station number	0
Online simulation	Support

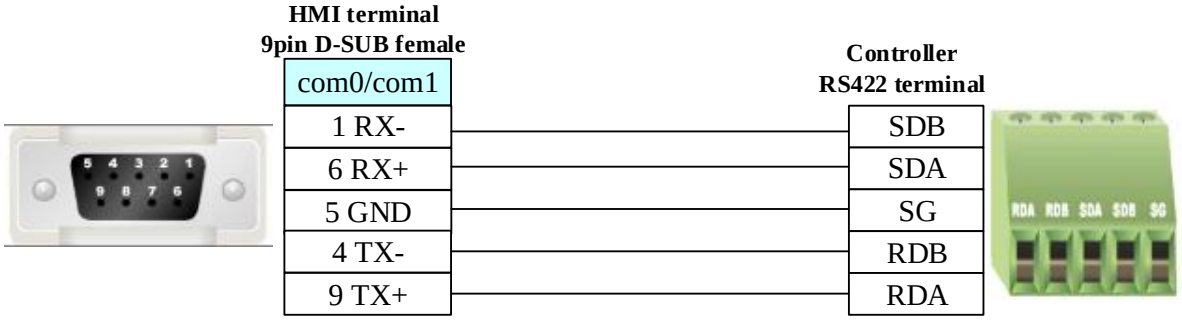
Hardware wiring method:

RS232 Communication Cable

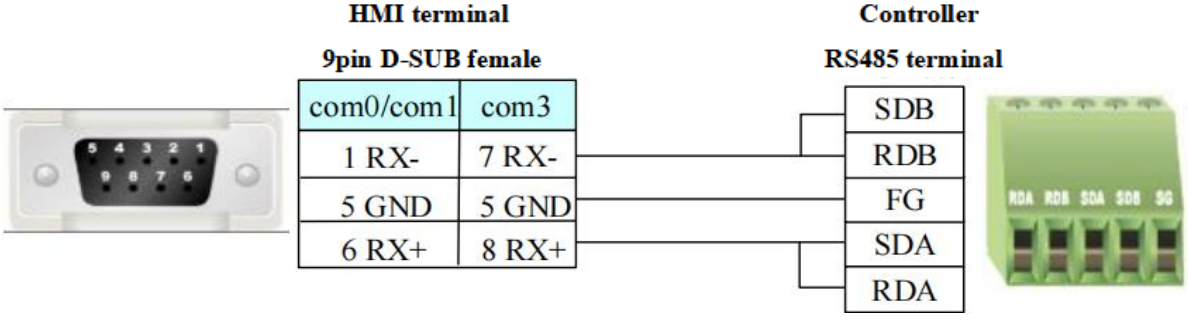
FX5-232ADP Communication Cable



RS422 communication cable



RS485 communication cable



❖ 2 HMI configure

➢ Configure communication connections

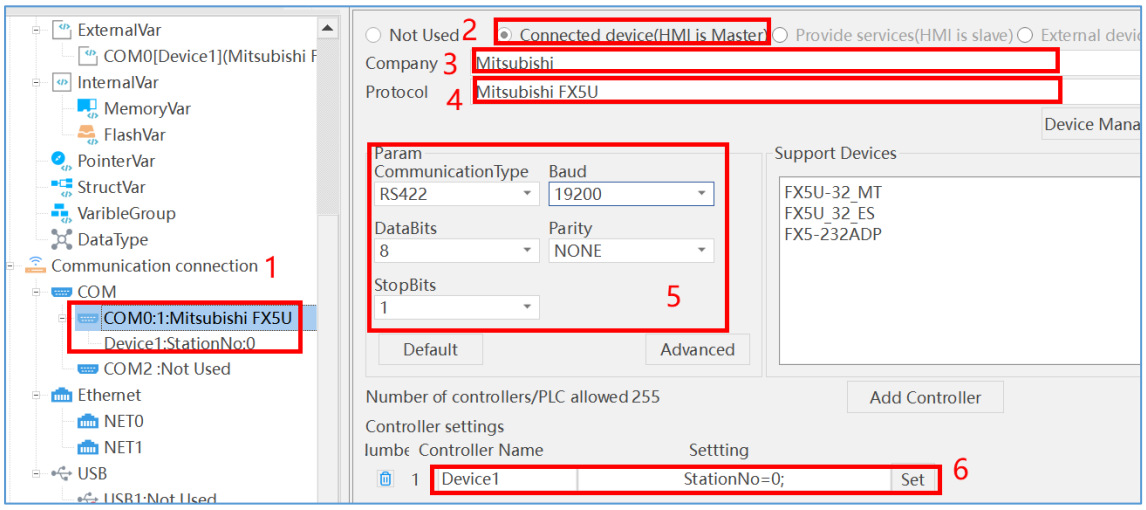


Figure 1

(1) Project-COM: Select the serial port to add the driver

(2) Select "Connected Devices"

(3) Select the company brand of the external controller Mitsubishi

(4) Select Mitsubishi FX5U protocol

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

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

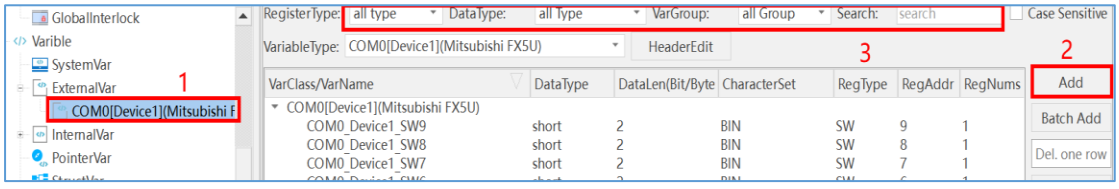


Figure 2

❖ 3 External controller configuration

This manual uses GX Works3 software and the PLC model is FX5U.

1.Communicate with PLC. Open GX Works3 software, first create a new project, select FX5CPU for series and FX5U for model, then connect with PLC, the following is the connection wizard:

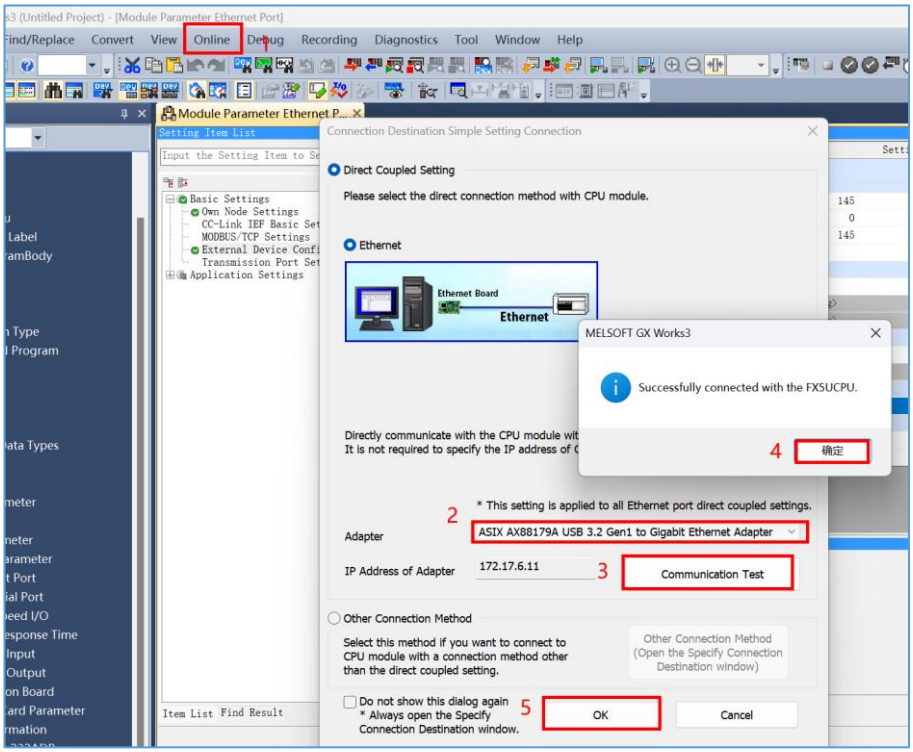


Figure 3

(1) Mouse click on "Online" and select "Current Connection Destination";

(2) Select the corresponding adapter, the computer should be in the same network segment as the PLC (i.e. the first three fields of the IP address have the same number and the last field has a different number);

2.Read the PLC, click on "Online", select "Read from PLC...", check the parameters to be read and complete the reading;

3. PLC configuration.

1) CPU body 485 serial port setting:

(1) Click "Parameter" - "FX5UCPU" - "Module Parameter" - "485 Serial Port - Basic Settings", see Figure 4 for detailed settings:

(2) After the basic settings are completed, click on "Fixed Setting", see Figure 5 for details;

(3) Click "Apply" after the configuration is complete, then click "Online" and select "Write to PLC..." to write to the PLC;

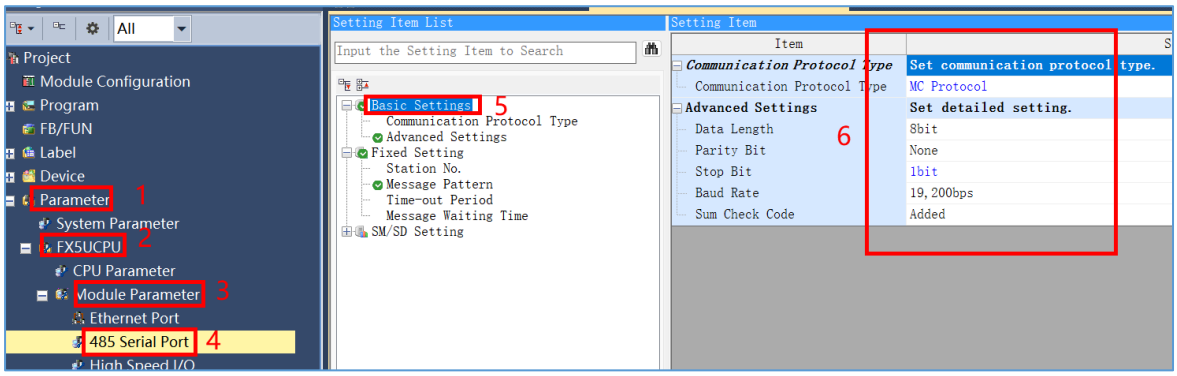


Figure 4

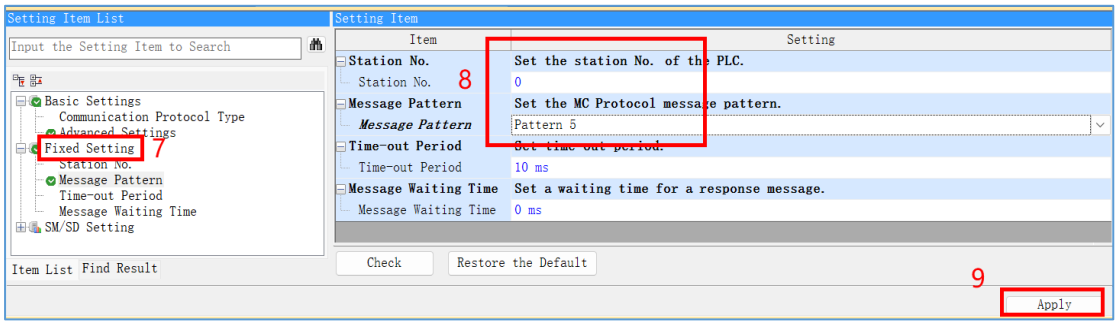


Figure 5

2) FX5-232ADP settings:

(1) Select "Parameters - Module Information - ADP1:FX5-232ADP - Basic Settings". and refer to Figure 6 for specific settings;

(2) After the basic settings are completed, click on "Fixed Setting", see Figure 7 for details;

(3) Click "Apply" after the configuration is complete, then click "Online" and select "Write to PLC..." to write to the PLC;

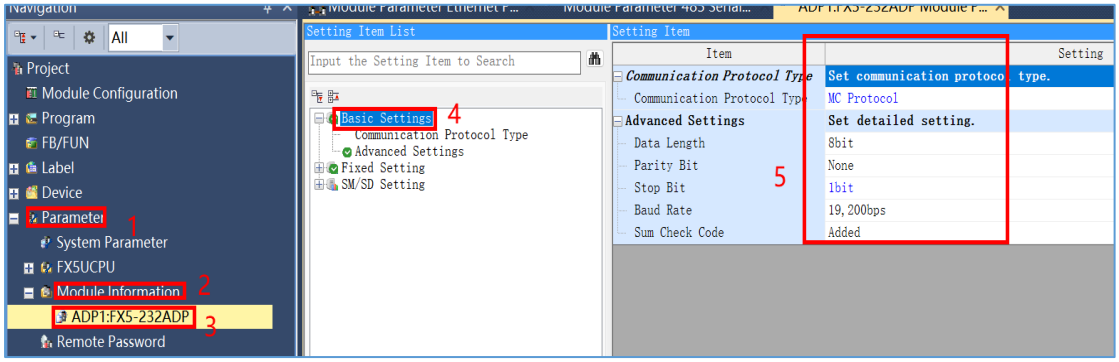


Figure 6

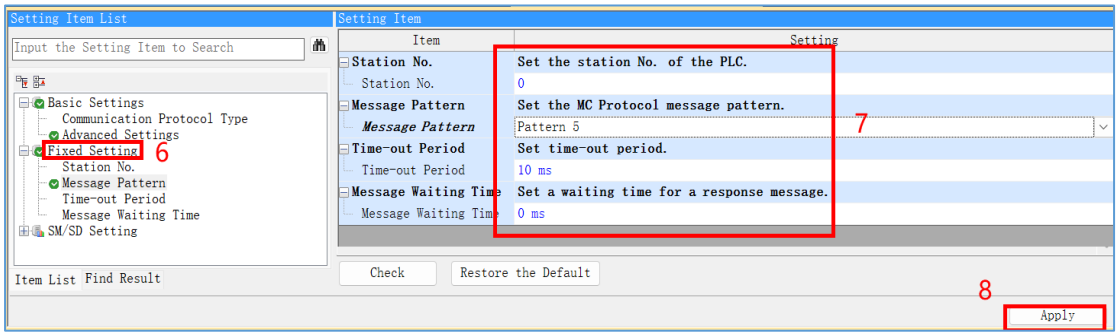


Figure 7

❖ 4 Supported register type

Device	Bit address	Word address	Format	
Accumulation timer (contact)	SS 0-15	----	DD	
Counters (contacts)	CS 0-255	----	DDD	
Counters (coils)	CC 0-255	----	DDD	
Timer (contact)	TS 0-511	----	DDD	

Accumulation timer (coil)	SC 0-15	----	DD	
Timer (coil)	TC 0-511	----	DDD	
Long Counter Valve(coil)	LCC 0-63	----	DD	
Long Counter Valve(contact)	LCS 0-63	----	DD	
Link special relays	SB 0-7FFF	----	HHHH	
Link Relay	B 0-7FFF	----	HHHH	
Status Relay	S 0-4095	----	DDDD	
Signal Relay	F 0-127	----	DDD	
Latching Relay	L 0-7679	----	DDDD	
Special Relay	SM 0-9999	----	DDDD	
Internal Relay	M 0-7679	----	DDDD	
Output Relay	Y 0-1777	----	OOOO	
Input Relay	X 0-1777	----	OOOO	
Address change register	----	Z 0-19	DD	
Accumulation register	----	SN 0-15	DD	
Data Register	----	D 0-7999	DDDD	
Timer	----	TN 0-511	DDD	
Counters	----	CN 0-255	DDD	
Linking special registers	----	SW 0-7FFF	HHHH	
Link Register	----	W 0-7FFF	HHHH	
File Register	----	R 0-32767	DDDDD	
Special Registers	----	SD 0-11999	DDDDD	
Ultra-long variable address register	----	LZ 0-1	D	32-bit
Long Counter Valve	----	LCN 0-63	DD	32-bit

❖ 5Advanced 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 - Value Entry";

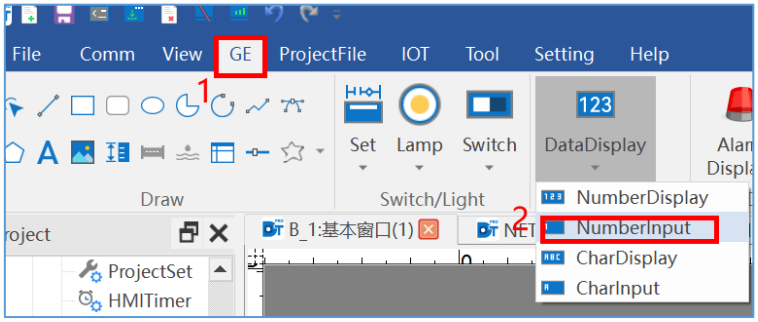


Figure 8

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;

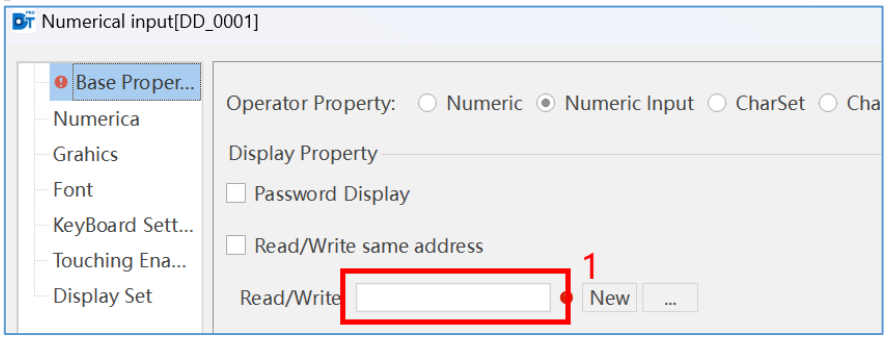


Figure 9

（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;

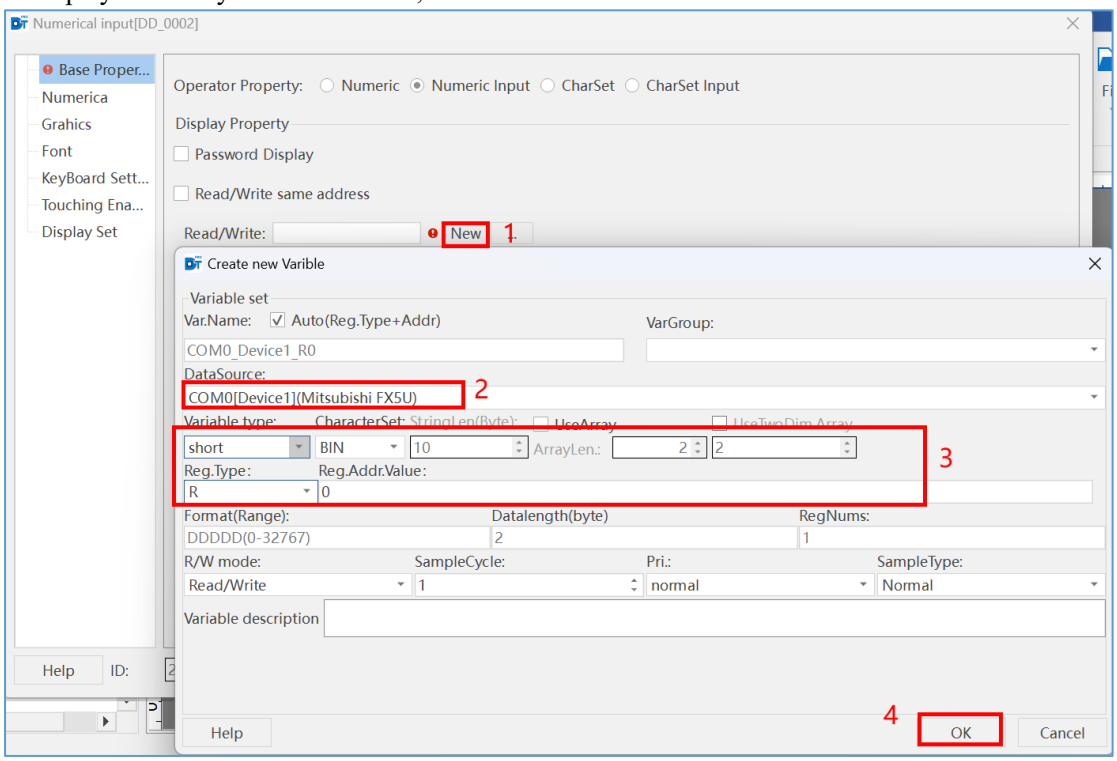


Figure 10

（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;

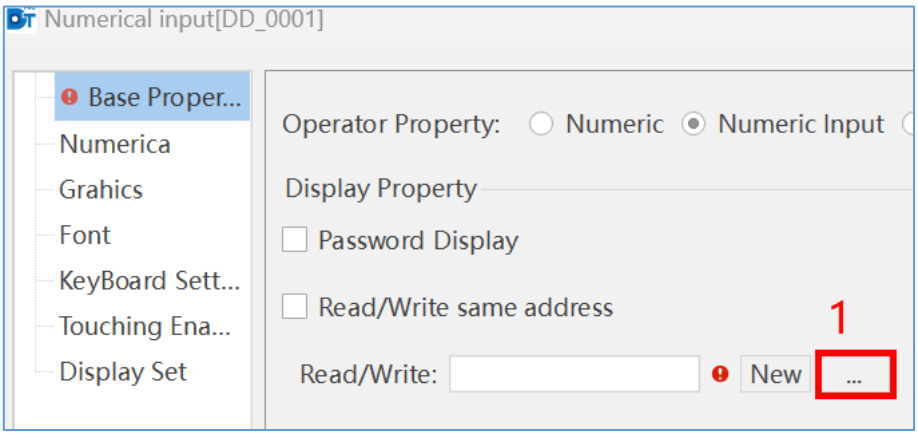


Figure 11

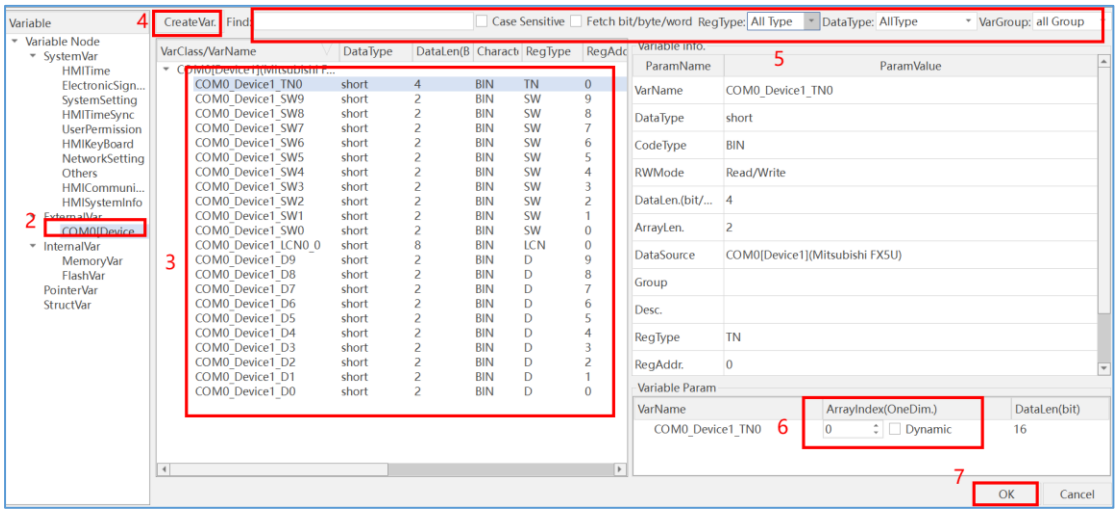


Figure 12

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