

## Siemens S7 200

### HMI Factory Setting:

Baud rate: 9600, 7, Even, 1

Controller Station Number: 2

Control Area / Status Area: VW0/VW20

Applicable models: DOP-B / DOP-W / DOP-H / HMC series 、 DOP-100

### Connection

#### a. RS-232 (via PPI Multi-Master Cable)

DOP Series		Controller
9 pin D-sub male (RS-232)		
RXD (2)	—————	TD (3)
TXD (3)	—————	RD (2)
GND (5)	—————	GND (5)

#### b. RS-485 (via PLC Program Port)

DOP Series		Controller
9 pin D-sub male (RS-232)		
D+ (1)	—————	TXD/RXD+ (3)
D- (6)	—————	TXD/RXD- (8)
GND (5)	—————	SG (5)

## Definition of PLC Read/Write Address

### a. Registers

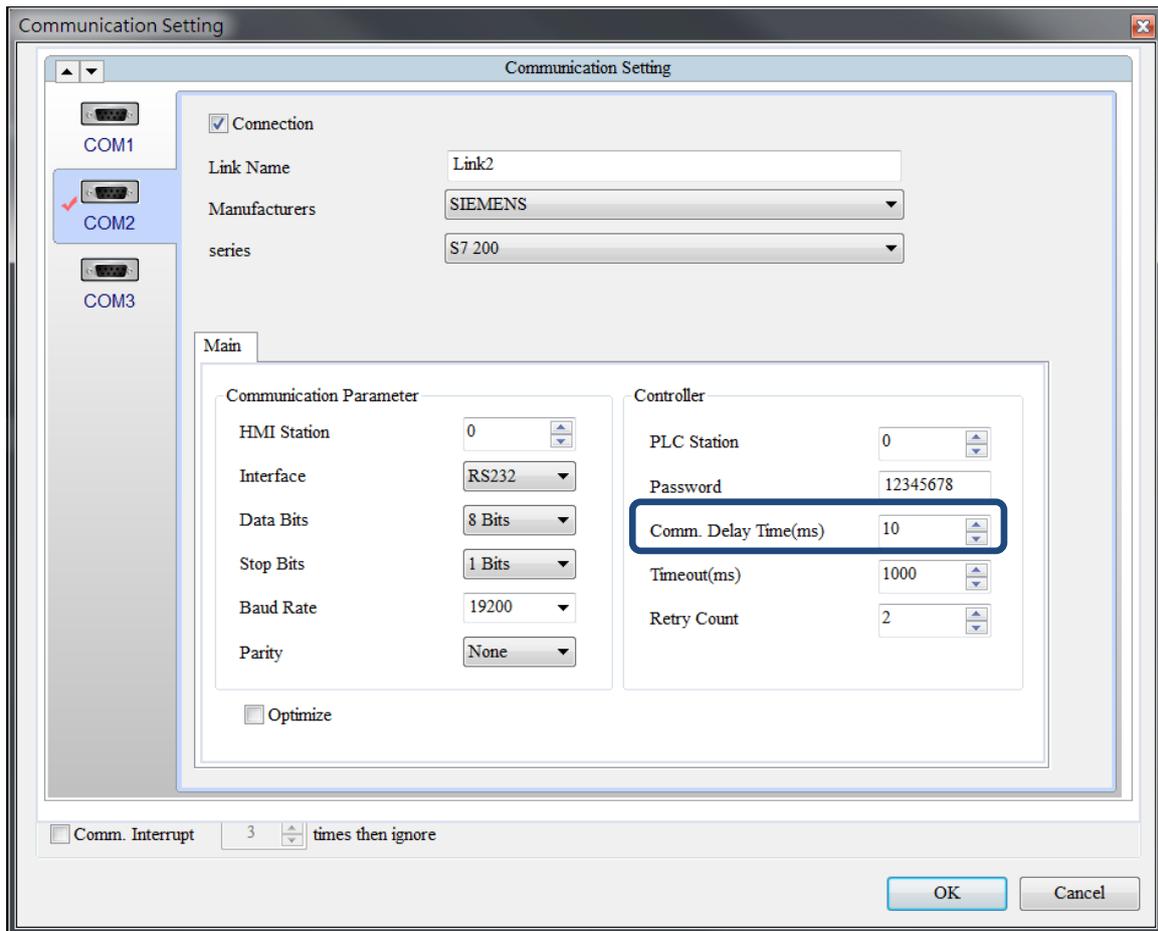
Type	Format	Read/Write Range	Data Length	Note
	Word No. (n)			
Timer	Tn	T0 - T255	Word	
Analog input word	AIWn	AIW0 - AIW30	Word	<a href="#">1,3</a>
Counter	Cn	C0 - C255	Word	
Analog output word	AQWn	AQW0 - AQW30	Word	<a href="#">1, 3</a>
Input Image	IWn	IW0 - IW14	Word	<a href="#">3</a>
Input Image	IDn	ID0 - ID12	Double Word	<a href="#">3</a>
Output Image	QWn	QW0 - QW14	Word	<a href="#">3</a>
Output Image	QDn	QD0 - QD12	Double Word	<a href="#">3</a>
Special Bits	SMWn	SMW0 - SMW199	Word	<a href="#">3</a>
Special Bits	SMDn	SMD0 - SMD197	Double Word	<a href="#">3</a>
Internal Bits	MWn	MW0 - MW98	Word	<a href="#">3</a>
Internal Bits	MDn	MD0 - MD96	Double Word	<a href="#">3</a>
Data Area	VWn	VW0 - VW20478	Word	<a href="#">3</a>
	DBWn	DBW0 - DBW20478	Double Word	<a href="#">3</a>
Data Area	VDn	VD0 - VD20476	Double Word	<a href="#">3</a>
Special S	SWn	SW0 - SW99	Word	<a href="#">3</a>
Special S	SDn	SD0 - SD97	Double Word	<a href="#">3</a>

### b. Contacts

Type	Format	Read/Write Range	Note
	Word No. (n) Bit No. (b)		
Timer Bit	Tb	T0 - T255	Read Only
Counter Bit	Cb	C0 - C255	Read Only
Input Image	In.b	I0.0 - I15.7	
Output Image	Qn.b	Q0.0 - Q15.7	
Special Bit	SMn.b	SM0.0 - SM200.7	
Internal Bit	Mn.b	M0.0 - M99.7	
Data Area Bit	Vn.b	V0.0 - V20479.7	
Special S Bit	Sn.b	S0.0 - S100.7	



- 1) n must be an even number.
- 2) S7-200 processes a longer period of internal program scanning or inputs an interruption command may slows down HMI response rate and cause “Must Retry” or “No Such Resource” error message. Communication Delay function is suggested to avoid this problem. The parameter setting unit is ms and suggested setting value is 10. The setting value should not be greater than 30.



- 3) Except register Tn and Cn , data type of register is Byte and its order is opposite to usual controller , for example :

- 1 、 IW3 is a word which combined from IB3 and IB4 , High Byte of IW3 is IB3 ; Low Byte of IW3 is IB4.
- 2 、 ID3 is Double Word which combined from IB3, IB4, IB5 and IB6, and its order from highest to lowest is IB3, IB4, IB5 and IB6.

And please be attentive to use these registers, because their Data type is different with Data Length, it will need more than one register for each access, for example:

- 1 、 AIW6 which Data Type is Byte and Data Length is 1 Word, when it used for one word Numeric Entry , it will occupy two addresses AIB6 and AIB7 ◦

- 2、MD12 which Data Type is Byte and Data Length is Double Word , when it used for one word Numeric Entry, it will occupy four addresses MB12,MB13,MB14 and MB15; But data only stored in MB14 and MB15.
- 3、IW3 which Data Type is Byte and Data Length is 1 Word , when it used for double word Numeric Entry, it will occupy for addresses IB3,IB4,IB5 and IB6 , order from highest to lowest byte is IB5,IB6,IB3 和 IB4.