Mitsubishi A Series (CPU Port)

(Supporting A2A, A2AS, A2USH, A1SH, A3N, A2ASH(CPU-S1) Series)

HMI Factory Setting:

Baud rate: 9600, 8, ODD, 1

Controller Station Number: 0 (no PLC station number in protocol, therefore, only 1(HMI) to 1(PLC) communication is allowed.)

Control Area / Status Area: D0/D10

Connection

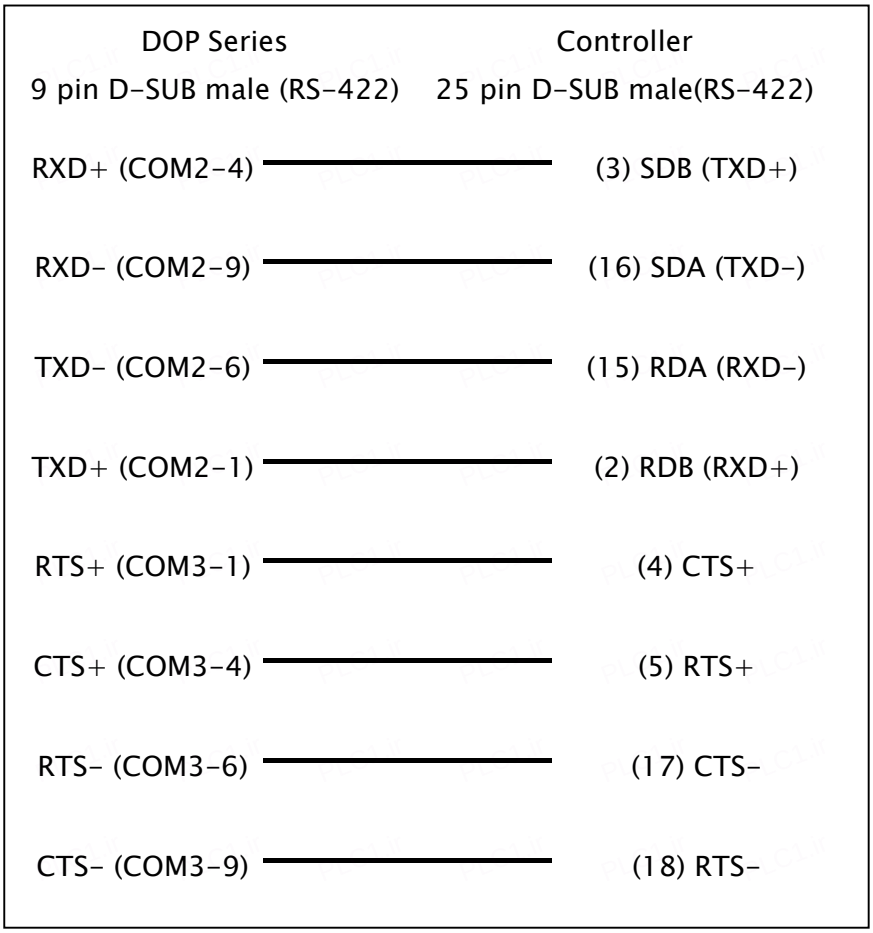
a. RS-422 (DOP-A/AE Series)

DOP Series 9 pin D-SUB male (RS-422)		Controller 25 pin D-SUB male(RS-422)
RXD+ (2)	———	(3) SDB (TXD+)
RXD- (1)	———	(16) SDA (TXD-)
TXD- (4)	———	(15) RDA (RXD-)
TXD+ (3)	———	(2) RDB (RXD+)
RTS+ (7)	———	(4) CTS+
CTS+ (8)	———	(5) RTS+
RTS- (6)	———	(17) CTS-
CTS- (9)	———	(18) RTS-

b. RS-422 (DOP-AS57 Series)

DOP Series 9 pin D-SUB male (RS-422)		Controller 25 pin D-SUB male(RS-422)
R+(COM2)	———	(3) SDB (TXD+)
R-(COM2)	———	(16) SDA (TXD-)
T-(COM2)	———	(15) RDA (RXD-)
T+(COM2)	———	(2) RDB (RXD+)
T+(COM3)	———	(4) CTS+
R+(COM3)	———	(5) RTS+
T-(COM3)	———	(17) CTS-
R-(COM3)	———	(18) RTS-

c. RS-422 (DOP-B Series)



Definition of PLC Read/Write Address

a. Registers

Type	Format	Read/Write Range	Data Length	Note
	Word No. (n)			
Input	Xn	X0 - X7FF	Word	Hexadecimal, 1, 4
Output	Yn	Y0 - Y7FF	Word	Hexadecimal, 1
Link Relay	Bn	B0 - BFFF	Word	Hexadecimal, 1
Internal Relay	Mn	M0 - M8191	Word	1
Special Internal Relay	SMn	SM9000 - SM9255	Word	2
Latch Relay	Ln	L0 - L8191	Word	1

Type	Format	Read/Write Range	Data Length	Note
	Word No. (n)			
Annunciator	Fn	F0 – F2047	Word	1
Timer Value	TNn	TN0 – TN2047	Word	
Counter Value	CNn	CN0 – CN1023	Word	
Data Register	Dn	D0 – D8191	Word	
Special Data Register	SDn	SD9000 – SD9255	Word	
File Register	Rn	R0 – R8191	Word	
Link Register	Wn	W0 – WFFF	Word	Hexadecimal
Input Card Register	PXn	PX0 – PX7FF	Word	Hexadecimal, 1, 4

b. Contacts

Type	Format	Read/Write Range	Note
	Bit No. (b)		
Input	Xb	X0 – X7FF	Hexadecimal, 4
Output	Yb	Y0 – Y7FF	Hexadecimal
Link Relay	Bb	B0 – BFFF	Hexadecimal
Internal Relay	Mb	M0 – M8191	
Special Internal Relay	SMb	SM9000 – SM9255	
Latch Relay	Lb	L0 – L2047	
Annunciator	Fb	F0 – F2047	
Timer Contact	TSb	TS0 – TS2047	
Timer Coil	TCb	TC0 – TC2047	
Counter Contact	CSb	CS0 – CS1023	
Counter Coil	CCb	CC0 – CC1023	
Input Card Register	PXb	PX0 – PX7FF	Hexadecimal, 4

NOTE

1) Device address must be the multiple of 16.

2) Device address must be 9000 plus the multiple of 16.

3) If the PLC station number is set as 0 and a read/write register error occurs on HMI, please reset the PLC station number to 255.

4) If a read/ write register X error occurs on HMI, please use register PX.

5) R address would vary upon the FILE REGISTER of PLC setting.

For Example：A2USH

1K : 3800-4000H

2K : 3000-4000H

3K : 2800-4000H

4K : 2000-4000H

5K~8K : …

FILE REGISTER：PLC must be on or Read/Write will be incorrect..

6) How to set File Register (R) for Mitsubishi A serial PLC:

1. Startup MELSOFT series GX Developer.
2. Open “Project Data List” windows. (“View” Option)
3. Double click Parameter \ PLC Parameter, and open “Setting” window.
4. Set Memory Capacity \ File Register (0 ~8).
5. Press “End” button on the bottom and complete the setting.
6. Execute OnLine\Write to PLC.
7. Enable the “Parameter \ PLC/Network” and “File register \ Main” option (check the check box next to “Parameter \ PLC/Network” and “File register \ Main”).
8. Press “Execute” button.
9. Complete