## 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		C	Controller
9 pin D-SUB male (I	RS-422)	25 pin D-	SUB male(RS-422)
RXD+ (2)	01.01. <sup>31</sup>	ol C1. <sup>II</sup>	(3) SDB (TXD+)
RXD- (1) -	or C <sup>4 31</sup>	ol C <sup>1.11</sup>	(16) SDA (TXD-)
TXD- (4) 🗕	aLC1. <sup>ir</sup>	oLC1. <sup>)(</sup>	(15) RDA (RXD-)
TXD+ (3)	aLG1. <sup>31</sup>	oLC1. <sup>11</sup>	(2) RDB (RXD+)
RTS+ (7) -	aLO1. <sup>ir</sup>	ol.C1. <sup>jr</sup>	(4) CTS+
CTS+ (8) -	PLC1.it	pLC1.ir	(5) RTS+
RTS- (6) 🗕	PLC1.IT	pLC1. <sup>II</sup>	(17) CTS-
CTS- (9) —	pLC1.it	PLC1.ir	(18) RTS-
	$\sim C \Lambda^{M}$	$\sim c \Lambda^{M}$	

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### b. RS-422 (DOP-AS57 Series)

DOP Series		Controller		
9 pin D-SUB male (RS-422)		25 pin D-SUB male(RS-422)		
R+(COM2)	PLO1 if	PLC1.ir	(3) SDB (TXD+)	
R-(COM2)	PLC1.11	PLC1.1	(16) SDA (TXD-)	
T-(COM2)	PLC1.1	PLC1.N	(15) RDA (RXD-)	
T+(COM2)	PLC1.X	PLC1.W	(2) RDB (RXD+)	
T+(COM3)	PLC1.I	PLC1.N	(4) CTS+	
R+(COM3)	PLC1.1	PLC1.X	(5) RTS+	
T-(COM3)	PLC1.1	PLC1.11	(17) CTS-	
R-(COM3)	PLC1.1	PLC1.1	(18) RTS-	

L. RS-422 (DOP-D Series)			
DOP Series	C	Controller	
9 pin D-SUB male (RS-422)	25 pin D-	SUB male	(RS-422)
RXD+ (COM2-4)	PLONK	(3) SDB	(TXD+)
RXD- (COM2-9)	PLO X	(16) SD	A (TXD-)
TXD- (COM2-6)	PLO X	(15) RD	A (RXD-)
TXD+ (COM2-1)		(2) RDB	s (RXD+)
RTS+ (COM3-1)	<u>_</u>	(4) (	CTS+
CTS+ (COM3-4)	VICA X	(5) I	RTS+
RTS- (COM3-6)	VICAN.	(17)	CTS-
CTS- (COM3-9)	PP-AM	(18)	RTS-

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## Definition of PLC Read/Write Address

## a. Registers

plotting plotting plot	Format	Deed (Myrite Demos	Data	Note
Туре	Word No. (n)	Read/Write Range	Length	
Input	Xn	<b>X</b> 0 – <b>X</b> 7FF	Word	Hexadecimal,
21 A.S. 21 A.S.	N. A. M. A.		1.15	<u>1, 4</u>
Output	Yn	<b>Y</b> 0 – <b>Y</b> 7FF	Word	Hexadecimal,
	Ni Ace and Ni Ace		i na literative	1
Link Relay	Bn	BO – BFFF	Word	Hexadecimal,
NA A A			1 A A A A A A A A A A A A A A A A A A A	1
Internal Relay	<b>M</b> n	<b>M</b> 0 - <b>M</b> 8191	Word	1
Special Internal Relay	<b>SM</b> n	<b>SM</b> 9000 - <b>SM</b> 9255	Word	<u>2</u>
Latch Relay	Ln	L0 - L8191	Word	<u>1</u>

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Туре	Format Word No. (n)	Read/Write Range	Data Length	Note
Annunciator	Fn	<b>F</b> 0 – <b>F</b> 2047	Word	1
Timer Value	TNn	<b>TN</b> 0 – <b>TN</b> 2047	Word	PLO
Counter Value	<b>CN</b> n	<b>CN</b> 0 - <b>CN</b> 1023	Word	- CA. <sup>35</sup>
Data Register	Dn	D0 - D8191	Word	PL9
Special Data Register	SDn	<b>SD</b> 9000 - <b>SD</b> 9255	Word	CA. <sup>IX</sup>
File Register	<b>R</b> n	<b>R</b> 0 – <b>R</b> 8191	Word	PL <sup>a</sup>
Link Register	Wn	WO – WFFF	Word	Hexadecimal
Input Card Register	<b>PX</b> n	<b>PX</b> 0 – <b>PX</b> 7FF	Word	Hexadecimal,
	1.10		N	<u>1, 4</u>

### b. Contacts

Time	Format	- Bood /W/rite Dongo	Note
гуре	Bit No. (b)	Keau/ write Kange	
Input	Xb	X0 – X7FF	Hexadecimal, <u>4</u>
Output	Yb	Y0 – Y7FF	Hexadecimal
Link Relay	Bb	BO – BFFF	Hexadecimal
Internal Relay	Mb	M0 – M8191	PLC
Special Internal Relay	SMb	<b>SM</b> 9000 – <b>SM</b> 9255	
Latch Relay	Lb	L0 – L2047	PLC
Annunciator	Fb	<b>F</b> 0 – <b>F</b> 2047	
Timer Contact	TSb	<b>TS</b> 0 – <b>TS</b> 2047	PLC
Timer Coil	TCb	TC0 – TC2047	
Counter Contact	CSb	<b>CS</b> 0 – <b>CS</b> 1023	P/C/
Counter Coil	CCb	CC0 - CC1023	
Input Card Register	<b>PX</b> b	<b>PX</b> 0 – <b>PX</b> 7FF	Hexadecimal, <u>4</u>

### 

- 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  $\setminus$  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