# Mitsubishi FX Series PLC(<u>Note 1</u>) / Mitsubishi FX2N PLC(<u>Note 2</u>)

#### HMI Factory Setting:

Baud rate: 9600, 7, Even, 1

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

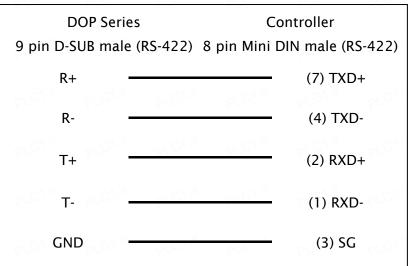
Control Area / Status Area: D0 / D10

#### Connection

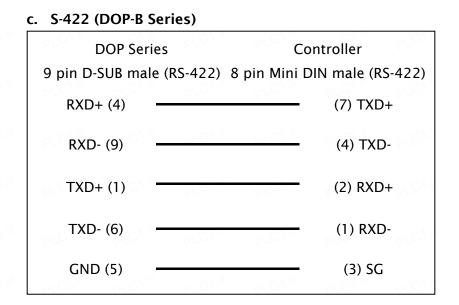
### a. RS-422 (DOP-A/AE Series)

| DOP Series                | Controller                   |
|---------------------------|------------------------------|
| 9 pin D-SUB male (RS-422) | 8 pin Mini DIN male (RS-422) |
| RXD+ (2)                  | (7) TXD+                     |
| RXD- (1)                  | (4) TXD-                     |
| TXD+ (3)                  | (2) RXD+                     |
| TXD- (4)                  | (1) RXD-                     |
| GND (5)                   | (3) SG                       |

#### b. RS-422 (DOP-AS35/AS38/AS57 Series)



## **DUP** Series HMI Connection Manual

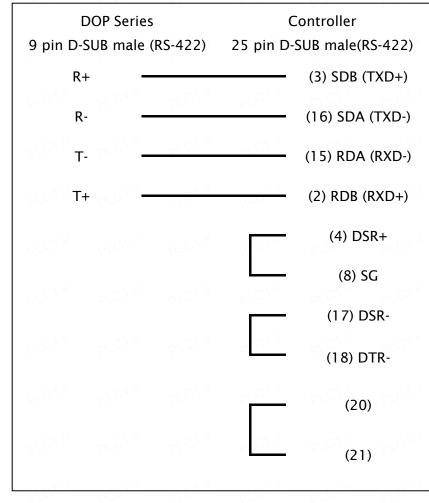


## d. RS-422 (DOP-A/AE Series)

| DOP Serie                           | es      | C                         | Controller      |
|-------------------------------------|---------|---------------------------|-----------------|
| 9 pin D-SUB male (RS-422)           |         | 25 pin D-SUB male(RS-422) |                 |
| RXD+ (2)                            |         |                           | (3) SDB (TXD+)  |
| RXD- (1)                            | pLC1.II | PLC1.1                    | (16) SDA (TXD-) |
| TXD- (4)                            | Krot il | y ca ir                   | (15) RDA (RXD-) |
| TXD+ (3)                            | PLC7.   | PLCT                      | (2) RDB (RXD+)  |
| PLO1 <sup>M</sup> PLO1 <sup>M</sup> |         |                           | (4) DSR+        |
|                                     |         |                           | (8) SG          |
| PLCI PLCI                           |         |                           | (17) DSR-       |
| PLOT IT PLOT IT                     |         | <u>e 186</u>              | (18) DTR-       |
| PLOT IT PLOT IT                     |         |                           | (20)            |
| PLC111 PLC111                       | PLC1.IT | PLC1.IT                   | (21)            |

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## f. RS-422 (DOP-B Series)

|         | DOP Series  | ;                  | (                   | Controller        |
|---------|-------------|--------------------|---------------------|-------------------|
| 9 pin D | -SUB male ( | (RS-422)           | 25 pin D            | -SUB male(RS-422) |
| RXD     | + (4) —     | PLC1.IT            | PLCAIT              | (3) SDB (TXD+)    |
| RXD     | - (9) —     | PLC1."             | PLC <sup>1.1</sup>  | (16) SDA (TXD-)   |
| TXD     | - (6) —     | PL <sup>UNIX</sup> | PL <sup>UNK</sup>   | (15) RDA (RXD-)   |
| TXD     | + (1) -     | X.GA.X             | AND AN              | (2) RDB (RXD+)    |
| PLC1 it |             |                    | PLC1.M              | (4) DSR+          |
| PLC1.IT |             |                    | P.C <sup>1, M</sup> | (8) SG            |
| PLC/ X  |             |                    | PLO <sup>N M</sup>  | (17) DSR-         |
| PLC1 X  |             |                    | P.CAM               | (18) DTR-         |
| PLC1.X  |             |                    |                     |                   |
| PLC1 M  |             |                    | 6 CV W              | (20)              |
| PLC1 Jr |             |                    | PLG1.M              | (21)              |
|         |             |                    |                     |                   |

## **Definition of PLC Read/Write Address**

## a. Registers

| Tuna                    | Format                        | Road /W/rite Range            | Data Longth | Note            |
|-------------------------|-------------------------------|-------------------------------|-------------|-----------------|
| Туре                    | Word No. (n) Read/Write Range |                               | Data Length | Note            |
| Auxiliary Relay         | Mn                            | <b>M</b> 0 – <b>M</b> 3064    | Byte        | <u>3</u>        |
| Special Auxiliary Relay | <b>M</b> n                    | <b>M</b> 8000 - <b>M</b> 8248 | Byte        | <u>3</u>        |
| Status Relay            | Sn                            | <b>S</b> 0 - <b>S</b> 992     | Byte        | <u>3</u>        |
| Input Relay             | <b>X</b> n                    | <b>X</b> 0 - <b>X</b> 360     | Byte        | Octal, <u>3</u> |
| Output Relay            | Yn                            | Y0 - Y360                     | Byte        | Octal, <u>3</u> |
| Timer PV                | Tn                            | <b>T</b> 0 – <b>T</b> 255     | Word        |                 |
| 16-位元 Counter PV        | Cn                            | <b>C</b> 0 – <b>C</b> 199     | Word        | CV. <u>1</u>    |
| 32-位元 Counter PV        | Cn                            | <b>C</b> 200 – <b>C</b> 255   | Double Word |                 |
| Data Register           | Dn                            | <b>D</b> 0 - <b>D</b> 7999    | Word        | CA.M            |
| Special Data Register   | Dn                            | <b>D</b> 8000 - <b>D</b> 8255 | Word        |                 |

### b. Contacts

| Туре                    | Format<br>Bit No. (b) | Read/Write Range          | Note  |
|-------------------------|-----------------------|---------------------------|-------|
| Auxiliary Relay         | Mb                    | M0 - M3071                |       |
| Special Auxiliary Relay | Mb                    | M8000 – M8255             | FLCV. |
| Status Relay            | Sb                    | <b>S</b> 0 - <b>S</b> 999 |       |
| Input Relay             | Xb                    | <b>X</b> 0 - <b>X</b> 377 | Octal |
| Output Relay            | Yb                    | Y0 - Y377                 | Octal |
| Timer Flag              | Tb                    | T0 - T255                 | FLO.  |
| Counter Flag            | Cb                    | <b>C</b> 0 - <b>C</b> 255 |       |



- 1) If connecting to Mitsubishi FX series PLC, the user can only use FX series communication protocol.
- 2) If connecting to Mitsubishi FX1N/FX2N series PLC, the user can only use FX2N communication protocol.
- 3) The device address must be the multiple of 8.