# MITSUBISHI Electric Corporation MELSEC-AnN Series Computer Link Driver

Compatibl OS e version XDesignerPlus

4.0.0.0 or higher

4.0.0.0 or higher

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Thank you for using M2I's "Touch Operation Panel(M2I TOP) Series". Please read out this manual and make sure to learn connection method and process of TOP – External device"

## **1.** System configuration

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It explains device for connection, setup of, cable and structural system. Please choose proper system referring to this point.

## 2. Selecting TOP model and

### Page 3

### external devices

Select TOP model and external device..

## **3.** Example of Page 4

### system settings

It explains setup example for communication connection between the device and external terminal.

Select example according to the system you choose in "1.

System structure"

### 4. Communication setting

### details

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It explains the way of configuring TOP communication. If external setup is changed, make sure to have same setup of

TOP with external device by referring to this chapter.

## 5. Cable diagram

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Explains cable specifications required for access.

Select proper cable specifications according to the system you chose in "1. System configuration".

## **6.** Support address

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Check available addresses to communicate with external devices

referring to this chapter.



## 1. System configuration

The System configuration of TOP and "MITSUBISHI Electric Corporation – MELSEC-AnN Series Computer Link" is as below.

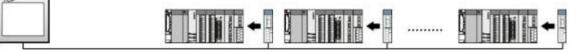
| Series                  | CPU                                     | Link I/F                               | Method            | System settings | Cable |
|-------------------------|---|--|-------------------|-----------------|-------|
|                         |   | AJ71C24                                | RS-232C           |                 |       |
|                         | A1NCPU<br>A2NCPU<br>A2NCPU-S1<br>A3NCPU | AJ71C24-S3<br>AJ71C24-S6<br>AJ71C24-S8 | RS-422 ( 4 wire ) |                 |       |
|                         |   | AJ71UC24                               | RS-232C           |                 |       |
|                         |   | AJ710C24                               | RS-422 ( 4 wire ) |                 |       |
| MELSEC<br>AnN<br>Series | A1SCPU<br>A1SJCPU<br>A1SJHCPU           | A1SJ71C24-R2<br>A1SJ71UC24-R2          | RS-232C           |                 |       |
|                         | A1SHCPU<br>A2SHCPU                      | A1SJ71C24-R4<br>A1SJ71UC24-R4          | RS-422 ( 4 wire ) |                 |       |
|                         | A0J2CPU<br>A0J2HCPU                     | A0J2-C214-S1                           | RS-422 ( 4 wire ) |                 |       |
|                         | A2CCPUC24                               | CPU integrated Link<br>port            | RS-232C           |                 |       |

#### Connection configuration

• 1 : 1(1 TOP and 1 External Device) Connection - It is a configuration for RS232C/422/485 communication.



• 1 : N(1 TOP and Several External Devices) Connection - It is a configuration for RS422/485 Communication.





## 2. Selecting TOP model and external devices

Select the external devices to connect to TOP.

| S Industrial Systems MELSEC-AnA(A2  |  |
|---|--|
| Vendor<br>121 Corporation<br>ITSUBISHI Electric Corporation<br>DMRON Industrial Automation<br>S. Industrial Systems<br>MELSEC-ANA(A2)   | PLC Model Device Station) s ETHERNET     |
| 121 Corporation         CC-LINK(Remote           IITSUBISHI Electric Corporation         MELSEC-A Series           DMRON Industrial Automation         MELSEC-AnA Se           S. Industrial Systems         MELSEC-AnA(A2) | Model<br>Device Station)<br>3 ETHERNET   |
| 121 Corporation         CC-LINK(Remote           IITSUBISHI Electric Corporation         MELSEC-A Series           DMRON Industrial Automation         MELSEC-AnA Se           S. Industrial Systems         MELSEC-AnA(A2) | Device Station)<br>s ETHERNET            |
| ITSUBISHI Electric Corporation<br>MRON Industrial Automation<br>S Industrial Systems<br>MELSEC-AnA(A2   | S ETHERNET                               |
| MRON Industrial Automation MELSEC-AnA Se<br>S Industrial Systems MELSEC-AnA(A2  |  |
| S Industrial Systems MELSEC-AnA(A2  | ries Computer Link                       |
|   |  |
| IODBUS Organization MELSEC-AnA(A2   | A/A3A) Series CPU Direct                 |
|   | U/A3U/A4U/A2US/A2USH) Series CPU Direct  |
| MELSEC-AnN (AU  | 0J2) Series CPU Direct                   |
| Rockwell Automation (AB) MELSEC-AnN (A2   | 2N,A3N) Series CPU Direct                |
| GE Fanuc Automation MELSEC-AnN Ser  | ries Computer Link                       |
| ANASONIC Electric Works MELSEC-AnN(An   | S,A0J2H) Series CPU Direct               |
| ASKAWA Electric Corporation MELSEC-FX Serie   | es CPU Direct                            |
| OKOGAWA Electric Corporatio MELSEC-FX Serie   | es Computer Link                         |
| Schneider Electric Industries MELSEC-FX Serie   | es Positioning Controller - FX2N-10/20GM |
| CDT Systems MELSEC-Q (UDE   | Type) Series CPU ETHERNET                |
| RS Automation(SAMSUNG) MELSEC-Q Series  | s CPU Direct                             |
| ITTACHI IES MELSEC-Q Series   | s ETHERNET(QJ71E71)                      |
| ATEK Automation Corporation MELSEC-Q Series   | s SERIAL(QJ71C24,Format1)                |
| ELTA Electronics MELSEC-Q Series  | s SERIAL(QJ71C24,Format5)                |
| COYO Electronic Industries MELSEC-Q(00CP  | U/01CPU) Series CPU Direct               |
| /IGOR Electric Corporation MELSEC-Q(00JCI   | PU) Series CPU Direct                    |
| Comfile Technology MELSERVO-J2 Set  | eries                                    |
| ongbu(DASAROBOT) MELSERVO-J3 S  | eries                                    |
| ROBOSTAR 🚽  |  |

| Setting         | details      |  | Contents                             |                                   |
|-----------------|--------------|--|--------------------------------------|-----------------------------------|
|                 |              | Select the name of a TOP series t                | hat is to be connected to PLC.       |                                   |
|                 |              | Before downloading the settings,                 | install the OS version specified in  | n the table below according to    |
|                 | Series       | TOP series.                                      |                                      |                                   |
| ТОР             |              | Series   | Version name                         |                                   |
|                 |              | XTOP / HTOP                                      | V4.0                                 |                                   |
|                 | Name         | Select the model name of TOP pr                  | oduct.                               |                                   |
|                 |              | Select the manufacturer of externa               | al devices to be connected to TC     | )P.                               |
|                 | Manufacturer | Please Choose "MITSUBISHI Electr                 | ric Corporation".                    |                                   |
| External device |              | Select the model series of externa               | I devices to be connected to TO      | Р.                                |
|                 | PLC          | Please select "MELSEC-AnN Series Computer Link". |                                      |                                   |
|                 |              | Please check, in the "1. System co               | onfiguration", if the relevant exter | rnal device is available to set a |
|                 |              | system configuration.                            |                                      |                                   |



## 3. Example of system settings

Regarding of communication interface settings for TOP and MELSEC-AnN Computer Link, we suggest as below.

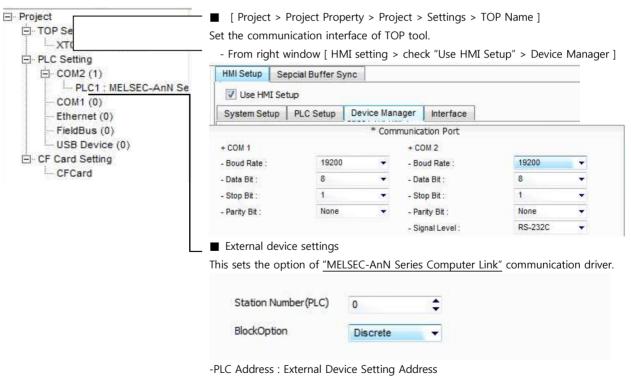
#### 3.1 Example of settings 1

The system is set as below.

| Details                |        | ТОР            | MELSEC-AnN Series | Remark   |
|------------------------|--------|----------------|-------------------|----------|
| Serial level (port/cha | annel) | RS-232C (COM2) | RS-232C           | User     |
|                        | anner  | N3-232C (COM2) | 13-2320           | settings |
|                        |        |                | 0                 | User     |
| Address(PLC Addres     | (S)    | —              | 0                 | settings |
|                        |        | 10             | 200               | User     |
| Serial baud rate       | [BPS]  | 19.            | 200               | settings |
|                        | (D.(J  |                | 2                 | User     |
| Serial data bit        | [Bit]  |                | 3                 | settings |
|                        | (D.(J  |                | 1                 | User     |
| Serial stop bit        | [Bit]  |                | 1                 | settings |
| Serial parity bit      | [Bit]  |                | DNE               | User     |
|                        | נטוגן  |                |                   | settings |

#### (1) XDesignerPlus setup

After setting the below details in [Project > Project Settings], download the detailed settings using TOP tool.





Set the communication setting by using DIP Switch of Serial Communication Unit. Please see PLC User Manual for more detail setup method.



Communication is possible when RUN LED of Serial Communication Unit is ON.

| Mode Se          | tting Rotary S  | Setting Information                         |                         |
|------------------|-----------------|---|-------------------------|
|                  | 1               | _   | Protocol Mode form 2    |
| <b>2.</b> Commur | ication Setting | Dip Switch will be set as b                 | elow.                   |
| DIP Switch       | Settings        | Setting Information                         | ( ON / OFF )            |
| -(1)/11          | OFF             | Choose<br>Communication<br>Channel          | ( RS-422 / RS-232C )    |
| -(3W12           | ON              | Setting Data bit                            | (8/7)                   |
| SW13             | OFF             |   |                         |
| - (SW14          | ON              | Setting the Transmit speed                  |                         |
| SW15             | ON              |   |                         |
| SW16             | OFF             | Setting parity bit                          | (Yes / No)              |
| SW17             | OFF             | Setting parity bit                          | (Even / Odd)            |
| SW18             | OFF             | Setting Stop bit                            | (2/1)                   |
| SW21             | ON              | Setting BCC                                 | (Yes / No)              |
| SW22             | ON              | Writing setting during<br>RUN               | (Possible / Impossible) |
| SW23             | OFF             | Transmission side<br>Termination Resistance | (Yes / No)              |
| SW24             | OFF             | Receiving side<br>Termination Resistance    | (Yes / No)              |

3. Set up the Station Setting Rotary Switch as below to set up the address of communication

#### card.

| Station Setting | Rotary Switch | Setting Information                               |
|-----------------|---------------|---|
| X10             | 0             |   |
| X1              | 0             | Set the Serial communication card address to '0'. |

4. Reset the power after setting Dip Switch



#### 3.2 Example of Settings 2

The system is set as below.

| Details                 |        | ТОР             | MELSEC-AnN Series | Remark   |
|-------------------------|--------|-----------------|-------------------|----------|
| Serial level (port/char |        | RS-232C (COM2)  | RS-232C           | User     |
|                         | inel)  | N3-252C (COWIZ) | 13-2320           | settings |
| Address (DLC Address)   | \      |                 | 0                 | User     |
| Address(PLC Address     | )      |                 | 0                 | settings |
| Carial based as to      |        | 10              | 200               | User     |
| Serial baud rate        | [BPS]  | 19.             | 200               | settings |
|                         | (D)(1) |                 | 2                 | User     |
| Serial data bit         | [Bit]  |                 | 3                 | settings |
| Carial stars bit        | (D)(1) |                 | 1                 | User     |
| Serial stop bit         | [Bit]  | -               | 1                 | settings |
| Sorial parity hit       | [D:+1  | NC              | DNE               | User     |
| Serial parity bit       | [Bit]  | NC.             | JINE              | settings |

#### (1) XDesignerPlus setup

After setting the below details in [Project > Project Settings], download the detailed settings using TOP tool.

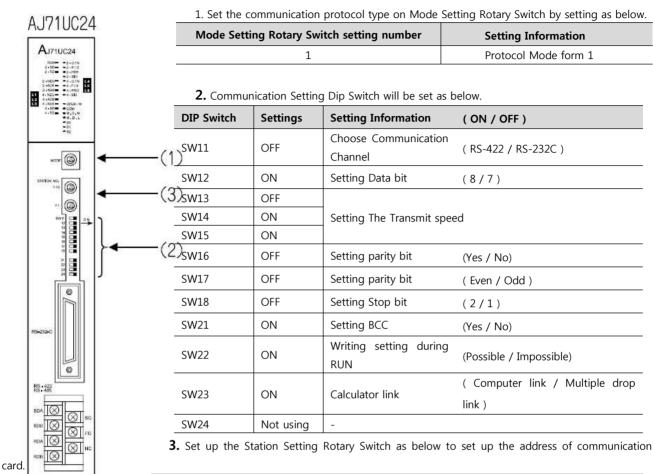
| TOP1                                    | - From right v   | vindow, [ H    | IMI setting | > check "Use HM  | I setup" > Dev | ice Manager    |
|---|------------------|----------------|-------------|------------------|----------------|----------------|
| ⊡ COM2 (1)                              | HMI Setup Se     | pcial Buffer S | ync         |                  |                |                |
| PLC1 : <u>MELSEC-AnN Se</u><br>COM1 (0) | 🔽 Use HMI Set    | up             |             |                  |                |                |
| - Ethernet (0)                          | System Setup     | PLC Setup      | Device Mana | ager Interface   |                |                |
| ··· FieldBus (0)                        |                  |                | * Comn      | nunication Port  |                |                |
| USB Device (0)                          | + COM 1          |                |             | + COM 2          |                | =              |
| E CF Card Setting                       | - Boud Rate :    | 19200          | 1           | - Boud Rate :    | 19200          | <b>•</b>       |
| CFCard                                  | - Data Bit :     | 8              |             | - Data Bit :     | 8              | <b>•</b> 1     |
|   | - Stop Bit :     | 1              |             | - Stop Bit :     | 1              |                |
|   | - Parity Bit :   | None           |             | - Parity Bit :   | None           | •              |
|   |                  |                |             | - Signal Level : | RS-232C        | <b>*</b>       |
|   | External devi    | ce settings    |             |                  |                |                |
|   | This sets the op | tion of "M     | ELSEC-AnN   | Series Computer  | Link" communi  | cation driver. |
|   |                  |                |             |                  |                |                |
|   | Station Num      | ber(PLC)       | 0           | ¢                |                |                |
|   | BlockOption      |                | Discrete    | 25.22            |                |                |



Set the communication setting by using DIP Switch of Serial Communication Unit. Please see PLC User Manual for more detail setup method.



Communication is possible when RUN LED of Serial Communication Unit is ON.



| Station Setting | g Rotary Switch | Setting Information                          |
|-----------------|-----------------|--|
| X10             | 0               |  |
| X1              | 0               | Set serial communication card address to '0' |

4. Reset the power after setting Dip Switch



#### 3.3 Examples of Setting 3

| The system is set as l | below. |                |                   |                  |
|------------------------|--------|----------------|-------------------|------------------|
| Details                |        | ТОР            | MELSEC-AnN Series | Remark           |
| Serial level (port/ch  | annel) | RS-232C (COM2) | RS-232C           | User<br>settings |
| Address(PLC Addres     | 55)    | —              | 0                 | User<br>settings |
| Serial baud rate       | [BPS]  | 19.            | 200               | User<br>settings |
| Serial data bit        | [Bit]  |                | 8                 | User<br>settings |
| Serial stop bit        | [Bit]  |                | 1                 | User<br>settings |
| Serial parity bit      | [Bit]  | NC             | DNE               | User<br>settings |

#### (1) XDesignerPlus setup

After setting the below details in [Project > Project Settings], download the detailed settings using TOP tool.

| PLC Setting       | HMI Setup S     | epcial Buffer S | whe           |                  |                |          |
|-------------------|-----------------|-----------------|---------------|------------------|----------------|----------|
| E-COM2 (1)        | Use HMI S       |                 | , inc         |                  |                | -        |
| COM1 (0)          |                 |                 |               | 1                |                |          |
| Ethernet (0)      | System Setup    | PLC Setup       | Device Manage | r Interface      |                | _        |
| - FieldBus (0)    |                 |                 | * Comm        | unication Port   |                |          |
| USB Device (0)    | + COM 1         |                 |               | + COM 2          |                |          |
| · CF Card Setting | - Boud Rate :   | 1920            | • 00          | - Boud Rate :    | 19200          | •        |
| CFCard            | - Data Bit :    | 8               | *             | - Data Bit :     | 8              | •        |
|                   | - Stop Bit :    | 1               |               | - Stop Bit :     | 1              |          |
|                   | - Parity Bit :  | Non             | • •           | - Parity Bit :   | None           | •        |
|                   |                 |                 |               | - Signal Level : | RS-232C        | ¥        |
|                   | ■ External dev  | vice settinas   |               |                  |                |          |
|                   |                 | -               |               | ios Computor Lip | « communicatio | on drive |
|                   | This sets the o |                 | ELSEC-ANN Ser | ies Computer Lin |                | in anve  |
|                   |                 |                 |               |                  |                |          |
|                   | Station Nur     | mber (PLC)      | 0             | \$               |                |          |
|                   |                 |                 |               |                  |                |          |



Set the communication setting by using DIP Switch of Serial Communication Unit. Please see PLC User Manual for more detail setup method.



Communication is possible when RUN LED of Serial Communication Unit is ON.

| NEU O<br>ACK O<br>NAK O            | Mode Set        | ing Rotary Swi    | Setting Information         |                                |  |
|------------------------------------|-----------------|-------------------|-----------------------------|--------------------------------|--|
| CN O<br>PIS O<br>PIRO O<br>tilo O  |                 | 1                 |                             | Protocol Mode form 1           |  |
| ao O                               | <b>2.</b> Commu | inication Setting | g Dip Switch will be set as | below.                         |  |
| ~                                  | DIP Switch      | Settings          | Setting Information         | ( ON / OFF )                   |  |
| €                                  | SW03            | Not using         | -                           |                                |  |
| DE<br>ORM1<br>ORM2<br>ORM3<br>ORM4 |                 | ON                | Writing setting dur<br>RUN  | ing<br>(Possible / Impossible) |  |
| FORM                               | SW05            | OFF               |                             |                                |  |
|                                    | SW06            | ON                | Setting The Transmit speed  |                                |  |
|                                    | SW07            | ON                |                             |                                |  |
|                                    | SW08            | ON                | Data bit                    | (8/7)                          |  |
|                                    | SW09            | OFF               | Setting parity bit          | (Yes / No)                     |  |
|                                    | SW10            | OFF               | Setting parity bit          | (Even / Odd)                   |  |
|                                    | SW11            | OFF               | Setting Stop bit            | (2/1)                          |  |
|                                    | SW12            | ON                | Setting BCC                 | (Yes / No)                     |  |

3. Reset the power after setting Dip Switch



#### 3.4 Examples of Setting 4

The system is set as below.

| Details                |       | ТОР                    | MELSEC-AnN Series | Remark   |  |  |
|------------------------|-------|------------------------|-------------------|----------|--|--|
| Serial level (port/cha |       | RS-232C (COM2) RS-232C |                   | User     |  |  |
|                        |       | KS-ZSZC (COMZ)         | K3-232C           | settings |  |  |
| Adduces (DLC Adduce    | >     |                        | 0                 | User     |  |  |
| Address(PLC Addres     | 55)   |                        | 0                 | settings |  |  |
| Carial haved rate      |       | 10                     | 200               | User     |  |  |
| Serial baud rate       | [BPS] | 19.                    | 19200             |          |  |  |
|                        | [D:+] |                        | 2                 | User     |  |  |
| Serial data bit        | [Bit] |                        | 3                 | settings |  |  |
|                        | (0.11 |                        |                   | User     |  |  |
| Serial stop bit        | [Bit] | -                      | 1                 |          |  |  |
| Serial parity bit      | [D:+] |                        | DNE               | User     |  |  |
| Serial parity bit      | [Bit] |                        | JINE              | settings |  |  |

#### (1) XDesignerPlus setup

After setting the below details in [Project > Project Settings], download the detailed settings using TOP tool.

| E PLC Setting<br>COM2 (1)                   | HMI Setup      | nt window, [ HI           | and a second |               |             |             |             |
|---|----------------|---------------------------|--------------|---------------|-------------|-------------|-------------|
|   | Use HMI        | Sepcial Buffer S<br>Setup | ync          |               |             |             |             |
| Ethernet (0)                                | System Setu    | IP PLC Setup              | Device Ma    | anager        | Interface   |             |             |
| FieldBus (0) USB Device (0) CF Card Setting |                |                           | * Comr       | nunicatio     | n Port      |             |             |
|   | + COM 1        |                           |              | + COM 2       |             |             |             |
|   | - Boud Rate :  | 9600                      |              | - Boud Rate : |             | 9600        |             |
| CFCard                                      | - Data Bit :   | 8                         |              | - Data        | Bit:        | 8           |             |
|   | - Stop Bit :   | 1                         | •            | - Stop        | Bit :       | 1           |             |
|   | - Parity Bit : | Odd                       | •            | - Parity      | /Bit:       | Odd         | 8.1         |
|   |                |                           |              | - Signa       | al Level :  | RS-232C     | 1.00        |
|   | External d     | evice settings            |              |               |             |             |             |
|   |                | option of "ME             | SEC-AnN      | Series        | Computer Li | nk" communi | cation driv |
|   |                | option of the             |              | Series        |             |             |             |
|   |                | lumber(PLC)               | 0            |               | -           |             |             |
|   |                |                           |              |               |             |             |             |

-PLC Address : External Device Setting Address



Set the communication setting by using DIP Switch of Serial Communication Unit. Please see PLC User Manual for more detail setup method.

Communication is possible when RUN LED of Serial Communication Unit is 'ON.

| 1. This sets communication protocol form on Mode Setting Rotary | Switch as below. |
|---|------------------|
| Made Catting Batan Cattal anti-                                 |                  |

| Mode Setting Rotary Switch setting number | Setting Information  |
|---|----------------------|
| 1   | Protocol Mode form 1 |

| DIP Switch | Settings | Setting Information        | ( ON   | / OFF )           |
|------------|----------|----------------------------|--------|-------------------|
| SW11       | OFF      |                            |        |                   |
| SW12       | ON       | Setting the Transmit speed |        |                   |
| SW13       | ON       |                            |        |                   |
| SW14       | ON       | Setting Data bit           |        | (8/7)             |
| SW15       | OFF      | Setting parity bit         |        | (Yes / No)        |
| SW16       | OFF      | Setting parity bit         | (Ever  | n / Odd )         |
| SW17       | OFF      | Setting Stop bit           | (2/1   | L )               |
| SW18       | ON       | Setting BCC                | (Yes / | No)               |
| SW19       | ON       | Select Main Channel        |        |                   |
| SW20       | OFF      | Writing setting during RUN | (Possi | ble / Impossible) |

**2.** Communication Setting Dip Switch will be set as below.

3. Set up the Station Setting Rotary Switch as below to set up the address of communication card.

| Station Setting | Rotary Switch | Setting Information                              |  |
|-----------------|---------------|--|--|
| X10             | 0             |  |  |
| X1              | 0             | Set the Serial communication card address to '0' |  |

4. Resert the power after setting Dip Switch

#### 3.5 Examples of Setting 5



#### The system is set as below.

| Details               |        | ТОР                   | MELSEC-AnN Series | Remark   |
|-----------------------|--------|-----------------------|-------------------|----------|
| Serial level (port/ch | appal) | RS-422 (4 wire, COM2) | RS-422            | User     |
|                       |        |                       | N3-422            | settings |
|                       | >      |                       |                   | User     |
| Address(PLC Addres    | 55)    | _                     | 0                 | settings |
|                       | (556)  |                       | 19200             |          |
| Serial baud rate      | [BPS]  | 15                    | 3200              | settings |
|                       | (0.11) |                       | 0                 | User     |
| Serial data bit       | [Bit]  |                       | 8                 | settings |
|                       | (0.11  |                       | 1                 | User     |
| Serial stop bit       | [Bit]  |                       | settings          |          |
| Carial parity bit     | [D:+1  | N                     |                   | User     |
| Serial parity bit     | [Bit]  |                       | ONE               | settings |

#### (1) XDesignerPlus setup

After setting the below details in [Project > Project Settings], download the detailed settings using TOP tool.

| PLC Setting       |                | nt window [HM    | and the second |             | 030 11111 5 |             |            |
|-------------------|----------------|------------------|----------------|-------------|-------------|-------------|------------|
| ⊡ COM2 (1)        | HMI Setup      | Sepcial Buffer S | ync            |             |             |             |            |
|                   | Use HMI        | Setup            |                |             |             |             |            |
| Ethernet (0)      | System Setu    | p PLC Setup      | Device         | Manager     | Interface   |             |            |
| FieldBus (0)      |                |                  | * Cor          | nmunication | Port        |             |            |
| USB Device (0)    | + COM 1        | + COM 1 + COM 2  |                |             |             |             |            |
| E CF Card Setting | - Boud Rate :  | 19200            |                | - Boud Ra   | ate :       | 19200       |            |
| CFCard            | - Data Bit :   | 8                | •              | - Data Bit  | :           | 8           | ÷          |
|                   | - Stop Bit :   | 1                |                | - Stop Bit  | r.          | 1           | •          |
|                   | - Parity Bit : | None             |                | - Parity B  | it :        | None        |            |
|                   |                |                  |                | - Signal L  | evel :      | RS-422(4)   | •          |
|                   | External de    | evice settings   |                |             |             |             |            |
|                   | Set the optior | n of Communic    | ation D        | river "MEL  | SEC-AnN Se  | ries Comput | ter Link". |
|                   |                |                  |                |             |             |             |            |
|                   | Station N      | umber(PLC)       | 0              |             |             |             |            |
|                   |                |                  | u u            | 18          |             |             |            |
|                   | BlockOpti      |                  | Discret        |             |             |             |            |



Set the communication setting by using DIP Switch of Serial Communication Unit. Please see PLC User Manual for more detail setup method.



Communication is possible when RUN LED of Serial Communication Unit is ON.

|   | Mode Settin        | g Rotary Swit    | ch setting number                           | Setting Information     |
|---|--------------------|------------------|---|-------------------------|
|   |                    | 5                |   | Protocol Mode form 1    |
| 1 | <b>2.</b> Communio | cation Setting I | Dip Switch will be set as be                | elow.                   |
|   | DIP Switch         | Settings         | Setting Information                         | ( ON / OFF )            |
|   |                    |                  | Choose                                      |                         |
|   | SW11               | ON               | Communication                               | (RS-422 / RS-232C)      |
| • | -(1)               |                  | Channel                                     |                         |
|   |                    | ON               | Setting Data bit                            | (8/7)                   |
|   | SW13               | OFF              |   |                         |
| 1 | SW14               | ON               | Setting The Transmit sp                     | beed                    |
|   | - (SW15            | ON               |   |                         |
|   | SW16               | OFF              | Setting parity bit                          | (Yes / No)              |
| , | SW17               | OFF              | Setting parity bit                          | (Even / Odd)            |
|   | SW18               | OFF              | Setting Stop bit                            | (2/1)                   |
|   | SW21               | ON               | Setting BCC                                 | (Yes / No)              |
|   | SW22               | ON               | Writing setting during<br>RUN               | (Possible / Impossible) |
|   | SW23               | OFF              | Transmission side<br>Termination Resistance | (Yes / No)              |
|   | SW24               | OFF              | Receiving side<br>Termination Resistance    | (Yes / No)              |

card.

| Station Setting | Rotary Switch | Setting Information                              |
|-----------------|---------------|--|
| X10             | 0             |  |
| X1              | 0             | Set the serial communication card address to '0' |

4. Reset the power after setting Dip Switch



#### 3.6 Examples of Setting 6

The system is set as below.

| Details                |        | ТОР                   | MELSEC-AnN Series | Remark   |
|------------------------|--------|-----------------------|-------------------|----------|
| Serial level (port/cha | nnol)  | RS-422 (4 wire, COM2) | RS-422            | User     |
|                        | innei) |                       | N3-422            | settings |
| Address(PLC Addres     | c)     |                       | 0                 | User     |
| Address(PLC Addres     | 5)     | _                     | 0                 | settings |
| Serial baud rate       | נססכו  | 10                    | 200               | User     |
| Serial Daug Tale       | [BPS]  | 19.                   | settings          |          |
| Serial data bit        | [D]+1  |                       | 8                 | User     |
|                        | [Bit]  |                       | D                 | settings |
| Sorial stop bit        | [D]+1  |                       | 1                 | User     |
| Serial stop bit        | [Bit]  | -                     | 1                 |          |
| Serial parity bit      | [Bit]  | NC                    | DNE               | User     |
|                        | [Dit]  |                       |                   | settings |

#### (1) XDesignerPlus setup

After setting the below details in [Project > Project Settings], download the detailed settings using TOP tool.

| E PLC Setting                              |   | vindow [HMI<br>Sepcial Buffer S |               | eneek   |                             | ip i Device                          |             |
|--|---|---------------------------------|---------------|---|-----------------------------|--------------------------------------|-------------|
| PLC <u>1 : MELSEC-AnN Se</u><br>- COM1 (0) | 1   |                                 | 1.0           |   |                             |                                      |             |
| Ethernet (0)                               | System Setup  | PLC Setup                       | Device I      | Manager   | Interface                   |                                      |             |
| - FieldBus (0)                             |   |                                 | * Com         | munication  | Port                        |                                      |             |
| USB Device (0)                             | + COM 1<br>- Boud Rate :<br>- Data Bit :<br>- Stop Bit :<br>- Parity Bit :<br>External devi | 19200<br>8<br>1<br>None         | ×<br>•<br>•   | + COM 2<br>- Boud F<br>- Data B<br>- Stop B<br>- Parity I<br>- Signal | kate:<br>it:<br>it:<br>3it: | 19200<br>8<br>1<br>None<br>RS-422(4) | *<br>*<br>* |
|  | This sets the op  | tion of <u>"MELS</u>            | EC-AnN S      | Series Co   | mputer Link"                | communicati                          | on driver   |
|  | Station Nun<br>BlockOption  | 1 50 57 12                      | 0<br>Discrete | ¢<br>•  |                             |                                      |             |



Set the communication setting by using DIP Switch of Serial Communication Unit. Please see PLC User Manual for more detail setup method.



Communication is possible when RUN LED of Serial Communication Unit is ON.

| C24                                      | Mode Setting I        | Rotary Switch    | setting nun               | nber              | Setting Information                       |
|--|-----------------------|------------------|---------------------------|-------------------|---|
| -2-0/N<br>-2-P(5                         |                       | 5                |                           |                   | Protocol Mode form 1                      |
| 2-50<br>4-0/N L4<br>4-9/5 L5<br>4-9/5 L5 | <b>2.</b> Communica   | tion Setting Di  | p Switch wil              | l be set as belov | <i>N</i> .                                |
| /m<br>M                                  | DIP Switch            | Settings         | Setting In                | nformation        | ( ON / OFF )                              |
|  | SW11                  | ON               | Choose C<br>Channel       | Communication     | ( RS-422 / RS-232C )                      |
| •  | —(1)<br>SW12          | ON               | Setting D                 | ata bit           | (8/7)                                     |
|  |                       | OFF              | Setting The Transmit spee |                   |   |
|  | SW14                  | ON               |                           |                   | ed  |
|  | SW15                  | ON               |                           |                   |   |
| ◀  | -(2 <sup>\$W16</sup>  | OFF              | Setting pa                | arity bit         | (Yes / No)                                |
|  | SW17                  | OFF              | Setting pa                | arity bit         | (Even / Odd)                              |
|  | SW18                  | OFF              | Setting St                | op bit            | (2/1)                                     |
|  | SW21                  | ON               | Setting B                 | CC                | (Yes / No)                                |
|  | SW22                  | ON               | Writing s<br>RUN          | setting during    | (Possible / Impossible)                   |
|  | SW23                  | ON               | Calculator                | r link            | ( Computer link / Multiple drop<br>link ) |
|  | SW24                  | Not using        | -                         |                   |   |
|  | <b>3.</b> Set the Sta | ition Setting Re | otary Switch              | as below to set   | up the address of communication ca        |
|  | Station Set           | ing Rotary Sw    | /itch                     | Settin            | g Information                             |
|  | X10                   |                  | 0                         |                   |   |
|  | X1                    |                  | 0                         | Set the Serial    | communication card address to '0'         |

4. Reset the power after setting Dip Switch)



#### 3.7 설정 예제 7

#### The system is set as below.

| Details                     |                            | ТОР                    | MELSEC-AnN Series | Remark   |  |
|-----------------------------|----------------------------|------------------------|-------------------|----------|--|
| Serial level (port/channel) |                            | RS-422 (4 wire, COM2)  | RS-422            | User     |  |
|                             | inner)                     | K3-422 (4 WILE, COWIZ) | N3-422            | settings |  |
| Address (DLC Address        | -)                         |                        | 0                 | User     |  |
| Address(PLC Address         | 5)                         | —                      | 0                 | settings |  |
| Serial baud rate            | rial baud rate [BPS] 19200 |                        |                   |          |  |
| Serial daug rate            | [BPS]                      | 19.                    | settings          |          |  |
| Conial data bit             |                            |                        | User              |          |  |
| Serial data bit             | [Bit]                      |                        | 8                 |          |  |
| Carrial stars bit           | stop bit [Bit] 1           |                        |                   | User     |  |
| Serial stop bit             |                            |                        |                   | settings |  |
| Serial parity bit           | [Ri+]                      | NC                     | DNE               | User     |  |
|                             | [Bit]                      |                        |                   | settings |  |

#### (1) XDesignerPlus setup

After setting the below details in [Project > Project Settings], download the detailed settings using TOP tool.

| Use HMI Setup        | I Buffer Sy  | /nc  |   |   |   |  |  |  |
|----------------------|--|--|---|---|---|--|--|--|
|                      |  |  |   |   |   |  |  |  |
| System Setup PL      |  | -  | Use HMI Setup   |   |   |  |  |  |
|                      | .C Setup   | Device Man   | ager  | Interface   |   |  |  |  |
|                      |  | * Com  | munica  | tion Port   |   |  |  |  |
| + COM 1              |  |  |   | DM 2  |   |  |  |  |
| - Boud Rate :        | 19200  | •  | - Boud Rate :   |   | 19200   | ÷  |  |  |
| - Data Bit :         | 8  |  | - Da  | ta Bit :  | 8   | •  |  |  |
| - Stop Bit :         | 1  |  | - Sto   | p Bit :   | 2   | *  |  |  |
| - Parity Bit :       | None   |  | - Par   | rity Bit :  | None  |  |  |  |
|                      |  |  | - Sig   | nal Level :   | RS-422(4)   | 8  |  |  |
| This sets the option | of <u>"MELS</u><br>PLC) 0  |  | eries (   | Computer Link"  | communication   | n driver.  |  |  |
|                      | <ul> <li>Boud Rate :</li> <li>Data Bit :</li> <li>Stop Bit :</li> <li>Parity Bit :</li> <li>External device so<br/>This sets the option<br/>Station Number (F<br/>BlockOption</li> </ul> | Boud Rate : 19200     Data Bit : 8     Stop Bit : 1     Parity Bit : None      External device settings This sets the option of <u>"MELS</u> Station Number(PLC) 0     BlockOption | Boud Rate :     19200     1     Data Bit :     Stop Bit :     1     Parity Bit :     None     This sets the option of <u>"MELSEC-AnN Sec</u> Station Number(PLC)     0     BlockOption     Discrete | Boud Rate :     19200     100 | Boud Rate :     19200     Boud Rate :     Data Bit :     Stop Bit :     Parity Bit :     None     Parity Bit :     Signal Level :   External device settings This sets the option of <u>"MELSEC-AnN Series Computer Link"</u> Station Number(PLC) | Boud Rate : 19200      Boud Rate : 19200     Data Bit : 8     Stop Bit : 1     Parity Bit : None     Parity Bit : None     Signal Level : RS-422(4)   External device settings This sets the option of <u>"MELSEC-AnN Series Computer Link"</u> communication Station Number(PLC)     O     BlockOption     Discrete |  |  |



Set the communication setting by using DIP Switch of Serial Communication Unit. Please see PLC User Manual for more detail setup method.



Communication is possible when RUN LED of Serial Communication Unit is ON.

| NAC CONT.<br>07N CONT.<br>7/5 CONT.<br>980 CONT.<br>40 CONT. | Mode Settin   | g Rotary Swit    | ch setting number         | Set     | ting Information               |
|--|---------------|------------------|---------------------------|---------|--------------------------------|
| COE CI VO/6  |               | 5                |                           | Pro     | tocol Mode form 1              |
|  | 2. Communi    | cation Setting I | Dip Switch will be set as | below.  |                                |
| алына<br>(Ж)-т   | DIP Switch    | Settings         | Setting Information       | ( ON )  | / OFF )                        |
| #<br>#<br>#  | — (3)<br>ŚW01 | OFF              | Not using                 |         |                                |
| ₩ <b></b>  | — (1\$w02     | ON               | Computer link             | Comp    | uter Link / Multiple drop link |
|  | SW03          | OFF              | Not using                 |         |                                |
|  | SW04          | ON               | Writing setting durin     | ng RUN  | (Possible / Impossible)        |
|  | SW05          | OFF              |                           |         |                                |
| - CD -   | SW06          | ON               | Setting The Transmit      | t speed |                                |
| 40   | SW07          | ON               |                           |         |                                |
| = 422 / 465<br>24 - R4                                       | SW08          | ON               | Setting Data bit          | (8/7    | )                              |
|  | SW09          | OFF              | Setting parity bit        | (Yes /  | No)                            |
|  | SW10          | OFF              | Setting parity bit        | ( Even  | / Odd )                        |
|  | SW11          | OFF              | Setting Stop bit          | (2/1    | )                              |
|  | SW12          | ON               | Setting BCC               | (Yes /  | No)                            |

| Station Setting | Rotary Switch | Setting Information                              |
|-----------------|---------------|--|
| X10             | 0             |  |
| X1              | 0             | Set the serial communication card address to '0' |

4. Reset the power after setting Dip Switch)



#### 3.8 Examples of Setting 8

The system is set as below.

| Details                     | ТОР                         | MELSEC-AnN Series | Remark   |  |
|-----------------------------|-----------------------------|-------------------|----------|--|
| Serial level (port/channel) | RS-422 (4 wire, COM2)       | RS-422            | User     |  |
|                             |                             | 113-422           | settings |  |
| Address (DLC Address)       |                             | 0                 | User     |  |
| Address(PLC Address)        | _                           | 0                 | settings |  |
| Carriel leaved rate [DDC]   | erial baud rate [BPS] 19200 |                   |          |  |
| Serial baud rate [BPS]      | 19                          | settings          |          |  |
| Serial data bit [Bit]       |                             |                   | User     |  |
| Serial data bit [Bit]       |                             | 8                 |          |  |
| Cavial stars bit (Dit)      | Serial stop bit [Bit] 1     |                   | User     |  |
|                             |                             |                   | settings |  |
| Serial parity bit [Bit]     |                             | DNE               | User     |  |
| Serial parity bit [Bit]     |                             |                   | settings |  |

#### (1) XDesignerPlus setup

After setting the below details in [Project > Project Settings], download the detailed settings using TOP tool.

| E PLC Setting   | - From right windo  | Buffer S | and a start  | IECK U   | se mini Setup   |                 | iger j   |
|---|---|----------|--------------|----------|-----------------|-----------------|----------|
| PLC1: MELSEC-AnN Se   | Use HMI Setup   | Duner of | iic          |          |                 |                 |          |
| COM1 (0)<br>Ethernet (0)                                    |   | C Setup  | Device Mana  | ager 📔   | Interface       |                 |          |
| FieldBus (0)<br>USB Device (0)<br>CF Card Setting<br>CFCard |   |          | * Com        | municati | ion Port        |                 |          |
|   | + COM 1 + COM 2   |          |              |          |                 |                 |          |
|   | - Boud Rate :   | 19200    | ÷            | - Boud   | d Rate :        | 19200           | •        |
|   | - Data Bit :  | 8        | N•+          | - Data   | Bit :           | 8               | <b>(</b> |
|   | - Stop Bit :  | 1        | ( <b>*</b> ) | - Stop   | Bit :           | 1               | •        |
|   | - Parity Bit :  | None     |              | - Parit  | y Bit:          | None            |          |
|   |   |          |              | - Sign   | al Level :      | RS-422(4)       |          |
|   | External device se<br>This sets the option of<br>Station Number(PL<br>BlockOption | c) 0     | EC-AnN Seri  | ies Com  | nputer Link" co | ommunication di | river.   |



Set the communication setting by using DIP Switch of Serial Communication Unit. Please see PLC User Manual for more detail setup method.



Communication is possible when RUN LED of Serial Communication Unit is ON.

| <b>1.</b> Set the communication | protocol form on Mode Setting Rotary Switch a | as below. |
|---------------------------------|---|-----------|
|                                 |   |           |

| Mode Setting Rotary Switch setting number | Setting Information  |
|---|----------------------|
| 5   | Protocol Mode form 1 |

#### 2. Communication Setting Dip Switch will be set as below.

| DIP Switch | Settings | Setting Information         | ( ON / C   | DFF ) |  |  |
|------------|----------|-----------------------------|--|-------|--|--|
| SW10       | ON       | Computer link / Multiple dr | Computer link / Multiple drop link 선택              |       |  |  |
| SW11       | ON       | Select Channel              | Select Channel                                     |       |  |  |
| SW12       | ON       | Writing setting during RUN  | Writing setting during RUN (Possible / Impossible) |       |  |  |
| SW13       | OFF      |                             |  |       |  |  |
| SW14       | ON       | Setting TheTransmit speed   | Setting TheTransmit speed                          |       |  |  |
| SW15       | ON       |                             |  |       |  |  |
| SW16       | ON       | Setting Data bit            | Setting Data bit (8/7)                             |       |  |  |
| SW17       | OFF      | Setting parity bit          | (Yes / No  | o)    |  |  |
| SW18       | OFF      | Setting parity bit          | Setting parity bit (Even / Odd )                   |       |  |  |
| SW19       | OFF      | Setting Stop bit            | Setting Stop bit (2/1)                             |       |  |  |
| SW20       | ON       | Setting BCC                 | (Yes / No  | 0)    |  |  |

#### 3. Set the End resistor dip switch as below.

| DIP Switch | Settings | Setting Information (ON / OFF )                     |  |  |  |
|------------|----------|---|--|--|--|
| SW21       | OFF      | Not using   |  |  |  |
| SW22       | OFF      | Transmission side Termination Resistance (Yes / No) |  |  |  |
| SW23       | OFF      | Receiving side Termination Resistance (Yes / No)    |  |  |  |

#### 4. Set the Station Setting Rotary Switch as below to set up the address of communication card.

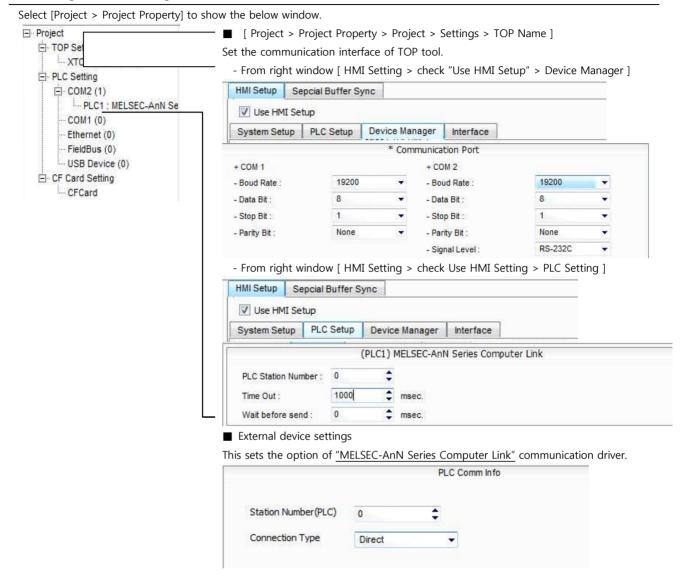
| Station Setting | Rotary Switch | Setting Information                              |
|-----------------|---------------|--|
| X10             | 0             |  |
| X1              | 0             | Set the serial communication card address to '0' |



## 4. Communication settings details

Communication settings are available at XDesignerPlus or TOP main menu. Communication settings must be identical with the external devices.

#### 4.1 XDesignerPlus settings details



#### Communication Interface Settings

| Details                   | Contents  |
|---------------------------|---|
| Circul Invel              | External device - select serial communication method between TOPs. (COM1 supplies RS-232C     |
| Signal level              | only)   |
| Baud rate                 | External device – select serial communication speed between TOPs.                             |
| Data bit                  | External device – select serial communication data bit between TOPs.                          |
| Stop bit                  | External device – select serial communication stop bit between TOPs.                          |
| Parity bit                | External device – select serial communication parity bit check method between TOPs.           |
| Time out [ x100 mSec ]    | Set up TOP's response waiting time from external device at [ $0 - 5000$ ] x 1 mSec.           |
| Transmitting Delay Time [ | Set up TOP's waiting time between response receiving – next command request transmission from |
| x10 mSec]                 |   |
| Receiving Wait Time [ x10 | external device at [0 - 5000] x 1mSec.  |



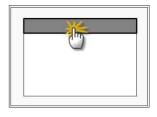
| mSec]                 |  |
|-----------------------|--|
| PLC address [0~65535] | Address of other device. Select between [ 0 – 65535 ]. |



### 4.2 TOP main menu setup item

- When a buzzer is on during the power reset, touch 1 spot at the upper LCD to move to "TOP Management Main" display.

| - Set up driver interface at TOP according to below Step1 $\rightarrow$ Step2. |  |
|--|--|
| (Press "TOP COM 2/1 setup" in <b>Step1</b> to change setup at <b>Step2</b> .)  |  |



#### Step 1. [ PLC setup ] - Setup driver interface.

| Setup                            |  |                  |  |  |  |
|----------------------------------|--|------------------|--|--|--|
| Address : 00                     | Cc   | ommunication     |  |  |  |
| eout : 1000 [mSec]               | In   | terface Settings |  |  |  |
| ay time of transmission : 0 [mSe | c]   |                  |  |  |  |
| P COM 2/1 : RS - 232C , 19200    |  |                  |  |  |  |
| Step 1-Reference.                |  |                  |  |  |  |
| Details                          | Contents   |                  |  |  |  |
| PLC address [0~65535]            | Address of other device. Select between [ 0 - 65535 ].                                   |                  |  |  |  |
| Timeout [ x1 mSec ]              | Set up TOP's response waiting time from external device at [ 0 – 5000 ] x 1 mSec.        |                  |  |  |  |
| Delay time of transmission       | Set up TOP's waiting time between response receiving – next command request transmission |                  |  |  |  |
| x1 mSec ]                        | from external device at [0 - 5000] x 1mSec.  |                  |  |  |  |
| TOP COM 2/1                      | TOP's Interface setup to external device.  | · · ·            |  |  |  |

| Port Settings              |          |                    |
|----------------------------|----------|--------------------|
| * Serial communication     |          | COM 1 Port         |
| + COM-1 Port               |          | Communication      |
| - Baud rate : 19200 [BPS]  |          | Interface Settings |
| - Data bit : 8 [BIT]       |          |                    |
| - Stop bit : 1 [BIT]       |          |                    |
| - Parity bit : NONE [BIT]  |          |                    |
| - Signal level : RS – 232C |          |                    |
| + COM-2 Port               |          | COM-2 Port         |
| - Baud Rate : 19200 [BPS]  |          | Communication      |
| - Data bit : 8 [BIT]       |          | Interface Settings |
| - Stop bit : 1 [BIT]       |          |                    |
| - Parity bit : NONE [BIT]  |          |                    |
| - Signal level : RS – 232C |          |                    |
| Step 2-Reference.          |          |                    |
| Details                    | Contents |                    |

| Details      | Contents  |  |  |  |  |
|--------------|---|--|--|--|--|
| Baud rate    | External device – select serial communication speed between TOPs.                   |  |  |  |  |
| Data bit     | External device – select serial communication data bit between TOPs.                |  |  |  |  |
| Stop bit     | External device – select serial communication stop bit between TOPs.                |  |  |  |  |
| Parity bit   | External device – select serial communication parity bit check method between TOPs. |  |  |  |  |
| Signal level | External device – select serial communication method between TOPs.                  |  |  |  |  |





#### 4.3 Communication diagnosis

- Confirm the set of interface state between the TOP and the external device
- Move to Menu by clicking the top side of LCD screen as resetting the power of TOP.

- Confirms if Port [COM 2 or COM 1] setting that is willing to use in [Communication Settings] matches with the setting of external devices.

- Port Communication Issue Diagnosis
- PLC Setting > TOP [ COM 2 or COM 1 ] click "Communication Diagnosis" button.

- Diagnosis dialog box will pop up on the screen, you can judge by following information that is shown on box no. 3 section.

| OK!             | Communication setting normal  |  |  |  |  |  |
|-----------------|---|--|--|--|--|--|
| Time Out Error! | Abnormal Communication setting                                      |  |  |  |  |  |
|                 | - Error in the setting situation of Cable and TOP / External device |  |  |  |  |  |
|                 | (reference : Communication Diagnosis sheet)                         |  |  |  |  |  |

■ Communication Diagnosis Sheet

- Please refer to the information below if you have a problem between external devices and communication connection.

| Designer Versio     | 1                            |                    | O.S Vers             | sion          |       |       |    |        |
|---------------------|------------------------------|--------------------|----------------------|---------------|-------|-------|----|--------|
| Details             | Contents                     |                    |                      |               |       |       |    | mation |
| System              | Name of CPU                  |                    |                      |               |       |       |    | NG     |
| configuration       | Name of cor<br>communicating | front port that is |                      |               |       |       | ОК | NG     |
|                     | System Connect               | ion Method         | 1:1                  |               | L:N   | N:1   | ОК | NG     |
| Connection<br>Cable | Name of Cable                |                    |                      | ·             |       |       | ОК | NG     |
| PLC setup           | Setup address                |                    |                      |               |       |       | ОК | NG     |
|                     | Serial baud rate             |                    |                      |               |       | [BPS] | ОК | NG     |
|                     | Serial data bit              |                    |                      |               | [BIT] | OK    | NG |        |
|                     | Serial Stop bit              | [BIT]              |                      |               | OK    | NG    |    |        |
|                     | Serial parity bit            |                    |                      |               | [BIT] | OK    | NG |        |
|                     | Assigned Addres              |                    |                      |               |       | ОК    | NG |        |
| TOP setup           | Setup port                   | СОМ                | 1                    |               | COM 2 | ОК    | NG |        |
|                     | Name of Driver               |                    |                      |               | •     |       | OK | NG     |
|                     | Confront Addres              | Project Proper     | ty Setup             |               |       | ОК    | NG |        |
|                     |                              |                    | When<br>Communicatic | Diagnosi<br>n | ng    |       | ОК | NG     |
|                     | Serial baud rate             |                    |                      |               | [BPS] | ОК    | NG |        |
|                     | Serial data bit              |                    |                      |               | [BIT] | ОК    | NG |        |
|                     | Serial Stop bit              |                    |                      |               | [BIT] | ОК    | NG |        |
|                     | Serial parity bit            |                    |                      |               |       | [BIT] | OK | NG     |



## 5. Cable diagram

This Chapter is to introduce the Cable diagram for regular communication between TOP and relative devices. (Cable diagram that is being introduced in this chapter might differ from the suggestions of "Mitsubishi Electric Corporation".)

| 5.1 Cable diagram   | n 1                         | •                     | -                                     |                       |                                       |   |
|---|-----------------------------|-----------------------|---------------------------------------|-----------------------|---------------------------------------|---|
| 1:1 Connection<br>(A) XTOP CONNECTION                         |                             | (9 pir                |                                       |                       |                                       |   |
| xTOP COM2<br>pin arrangement * Of Number<br>caution 1) Signal |                             |                       | Cable Connection Pin Of Number Signal |                       | LC<br>pin arrangement *<br>caution 1) |   |
| 1 5<br>0 0<br>6 9<br>Front View of                            | CD<br>RD<br>SD<br>DTR<br>SG | 1<br>2<br>3<br>4<br>5 | •                                     | 1<br>2<br>3<br>4<br>5 | FG<br>SD<br>RD<br>RTS<br>CTS          | Front view of<br>Communication<br>cable connecter |
| D-SUB 9 Pin (male,<br>up)                                     | DSR<br>RTS<br>CTS           | 6<br>7<br>8<br>9      | •                                     | 6<br>7<br>8<br>20     | DSR<br>SG<br>CD<br>DTR                | D-SUB 25 Pin<br>(male, up)                        |

\*Caution1) Pin arrangement is shown from connecting face in cable connection connecter.

| XTOP COM2                       |                      |               |                  | PLC           |                      |                                 |  |
|---------------------------------|----------------------|---------------|------------------|---------------|----------------------|---------------------------------|--|
| pin arrangement *<br>caution 1) | Name<br>of<br>Signal | Pin<br>Number | Cable Connection | Pin<br>Number | Name<br>of<br>Signal | pin arrangement *<br>caution 1) |  |
|                                 | CD                   | 1             |                  | 1             | FG                   |                                 |  |
|                                 | RD                   | 2             |                  | 2             | SD                   |                                 |  |
| 1 8                             | SD                   | 3             |                  | 3             | RD                   |                                 |  |
| (° °)                           | DTR                  | 4             |                  | 4             | RTS                  | Front view of                   |  |
| 9 15<br>Front View of           | SG                   | 5             | •                | 5             | CTS                  | Communication cable connecter   |  |
| D-SUB 15 Pin                    | DSR                  | 6             | •                | 6             | DSR                  | D-SUB 25 Pin                    |  |
| (male, up)                      | RTS                  | 7             |                  | 7             | SG                   | (male, up)                      |  |
|                                 | CTS                  | 8             |                  | 8             | CD                   |                                 |  |
|                                 |                      | 9             |                  | 20            | DTR                  |                                 |  |

(B) XTOP COM 2 Port (15 pin)

\*Caution1) Pin arrangement is shown from connecting face in cable connection connecter.

| (C) XTOP/AT                     |                      | . Port ( 6 Pli | 1)               | -             |                      |  |
|---------------------------------|----------------------|----------------|------------------|---------------|----------------------|--|
| XTOP/ATOP COM 1 Port            |                      | ť              |                  | PLC           |                      |  |
| pin arrangement *<br>caution 1) | Name<br>of<br>Signal | Pin<br>Number  | Cable Connection | Pin<br>Number | Name<br>of<br>Signal | pin arrangement *<br>caution 1)                  |
| 6 4 2                           |                      | 1              | -                | 1             | FG                   |  |
| (°° ,                           | RD                   |                | -                | 2             | SD                   | Front view of                                    |
| 5 3<br>Front View of            | SG                   | •              | ••               | 3             | RD                   | communication<br>cable connecter<br>D-SUB 25 Pin |
| D-SUB 6 Pin                     |                      |                | •                |               |                      | (male, up)                                       |

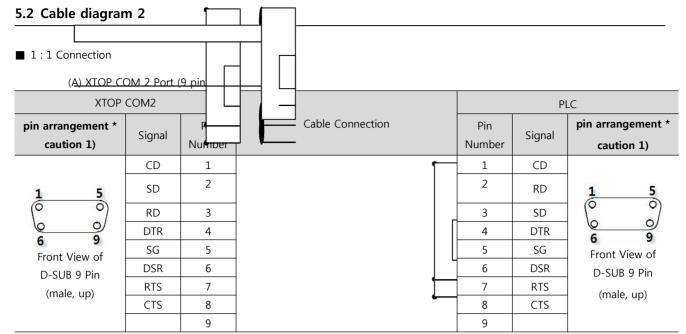
(C) XTOP/ATOP COM 1 Port ( 6 Pin)



|            |    | 4 | 4  | RTS |
|------------|----|---|----|-----|
|            |    | 5 | 5  | CTS |
| (mala un)  | SD | 6 | 6  | DSR |
| (male, up) |    |   | 7  | SG  |
|            |    |   | 8  | CD  |
|            |    |   | 20 | DTR |

\*Caution1) Pin arrangement is shown from connecting face in cable connection connecter.





\*Caution1) Pin arrangement is shown from connecting face in cable connection connecter.

| (B) XTOP CO                     | DM 2 Port ( | (15 pin)      |                  |               |        |                                 |
|---------------------------------|-------------|---------------|------------------|---------------|--------|---------------------------------|
| XTOP                            | COM2        |               |                  |               | PLC    |                                 |
| pin arrangement *<br>caution 1) | Signal      | Pin<br>Number | Cable Connection | Pin<br>Number | Signal | pin arrangement *<br>caution 1) |
|                                 | CD          | 1             |                  | 1             | CD     | ,                               |
| 1 8                             | SD          | 2             |                  | 2             | RD     | 1 5                             |
| (ÕÕ)                            | RD          | 3             |                  | 3             | SD     | (                               |
| 6 0                             | DTR         | 4             |                  | 4             | DTR    |                                 |
| 9 15                            | SG          | 5             |                  | 5             | SG     | 6 9                             |
| Front View of                   | DSR         | 6             |                  | 6             | DSR    | Front View of                   |
| D-SUB 15 Pin                    | RTS         | 7             |                  | 7             | RTS    | D-SUB 9 Pin                     |
| (male, up)                      | CTS         | 8             |                  | 8             | CTS    | (male, up)                      |
|                                 |             | 9             |                  | 9             |        |                                 |

\*Caution1) Pin arrangement is shown from connecting face in cable connection connecter.

| (B) XTOP/ATOP COM 1 Port ( 6 Pin) |  |
|-----------------------------------|--|

| (B) XTOP/A                         |          |               | 1)               |               |        |                                 |
|------------------------------------|----------|---------------|------------------|---------------|--------|---------------------------------|
| XTOP/ATOP                          | COM 1 Po | rt            |                  |               | PLC    |                                 |
| pin arrangement *<br>caution 1)    | Signal   | Pin<br>Number | Cable Connection | Pin<br>Number | Signal | pin arrangement *<br>caution 1) |
|                                    |          | 1             |                  | 1             | CD     |                                 |
| 6 4 2                              | RD       | 2             | •                | 2             | RD     | 1 5                             |
| $\left( \circ \circ \circ \right)$ | SG       | 3             | • •              | 3             | SD     | ( )                             |
|                                    |          | 4             |                  | 4             | DTR    |                                 |
| 5 1                                |          | 5             | •                | 5             | SG     | 6 9                             |
| <b>3</b><br>Front View of          | SD       | 6             | •                | 6             | DSR    | Front View of                   |
| D-SUB 6 Pin                        |          |               |                  | 7             | RTS    | D-SUB 9 Pin                     |
| (male, up)                         |          |               |                  | 8             | CTS    | (male, up)                      |
| (                                  |          |               |                  | 9             |        |                                 |

\*Caution1) Pin arrangement is shown from connecting face in cable connection connecter.



#### 5.3 Cable Table 3

#### ■ 1:1 Connection

(A) XTOP COM 2 Port (9 pin)

| XTOP  | COM2   |               |                  |        | PLC  |
|---|--------|---------------|------------------|--------|--|
| pin arrangement *<br>caution 1)                   | Signal | Pin<br>Number | Cable Connection | Signal | Pin Arrangement  |
|   | RDA    | 1             |                  | SDA    |  |
|   |        | 2             | •                | SDB    |  |
|   |        |               | •                |        |  |
|   |        | 3             | •••              | RDA    |  |
| <b>1 5</b>  |        |               | •                |        |  |
| 6 9<br>Front View of<br>D-SUB 9 Pin<br>(male, up) | RDB    | 4             | •                | RDB    | SDB SC<br>RDA SC<br>RDA SC<br>RDB SC<br>RDC<br>RDC |
|   | SG     | 5             |                  | SG     |  |
|   | SDA    | 6             |                  |        |  |
|   |        | 7             |                  |        |  |
|   |        | 8             |                  |        |  |
|   | SDB    | 9             |                  |        |  |

\*Caution1) Pin arrangement is shown from connecting face in cable connection connecter.

(B) XTOP COM 2 Port (15 pin)

| XTOP  | COM2   | • •           |                  |        | PLC                            |
|---|--------|---------------|------------------|--------|--------------------------------|
| pin arrangement *<br>caution 1)                     | Signal | Pin<br>Number | Cable Connection | Signal | Pin Arrangement                |
|   | _      | 1             |                  | SDA    |                                |
|   | (Pa    | iss)          |                  | SDB    |                                |
|   |        |               |                  | RDA    | SDA 🚫 SG                       |
| 9 15<br>Front View of<br>D-SUB 15 Pin<br>(male, up) | _      | 10            |                  | RDB    | SDB C IS FG<br>RDA C RDB C RDB |
|   | RDA    | 11            |                  | SG     |                                |
|   | RDB    | 12            |                  |        |                                |
|   | SDA    | 13            |                  |        |                                |
|   | SDB    | 14            |                  |        |                                |
|   | SG     | 15            |                  |        |                                |



\*Caution1) Pin arrangement is shown from connecting face in cable connection connecter.

| ATOP COM2                    |        | Cable Connection | PLC    |                 |  |
|------------------------------|--------|------------------|--------|-----------------|--|
| pin arrangement * caution 1) | Signal |                  | Signal | Pin Arrangement |  |
|                              | RDA    |                  | SDA    |                 |  |
|                              | RDB    |                  | SDB    |                 |  |
| Front side of                | SDA    |                  | RDA    |                 |  |
| Terminal Block 5 Pin         | SDB    |                  | RDB    |                 |  |
|                              | SG     |                  | SG     | RDB             |  |

(C) ATOP COM 2 Port (Terminal Block 5 pin)

\*Caution1) Pin arrangement is shown from connecting face in cable connection connecter.

■ 1 : N Connection - Please connect referring to 1:1 connection as below.

| ТОР            | Cable Connection and Signal | PLC            | Cable Connection and Signal | PLC            |
|----------------|-----------------------------|----------------|-----------------------------|----------------|
| Name of Signal | Direction                   | Name of Signal | Direction                   | Name of Signal |
| RDA            |                             | SDA            |                             | SDA            |
| RDB            |                             | SDB            |                             | SDB            |
| SDA            |                             | RDA            |                             | RDA            |
| SDB            |                             | RDB            |                             | RDB            |
| SG             |                             | SG             |                             | SG             |



## 6. Support address

Devices that are usable with TOP are as below.

There might be difference in the range of device (address) by type / series of CPU module TOP series supports the maximum address range that external device series use. Please refer to each CPU module user manual carefully for devices that you desired to use to prevent not getting out of range.

| Туре            | Remark | Bit designated address | Word designated address |
|-----------------|--------|------------------------|-------------------------|
| Input           | Bit    | X0000 - X07FF          | X0000 - X07F0           |
| Output          | Bit    | Y0000 - Y07FF          | Y0000 - Y07F0           |
| Link relay      | Bit    | B0000 - B03FF          |                         |
| Link register   | Word   |                        | W0000 - W03FF           |
| Special relay   | Bit    | F0000 - F0255          | F0000 - F0240           |
| Latch Relay     | Bit    | L0000 - L2047          |                         |
| Internal Relay  | Bit    | M0000 - M2047          | M0000 - M2032           |
| Special relay   | Bit    | M9000 - M9255          | M9000 - M9240           |
| Data Register   | Word   |                        | D0000 - D1023           |
| Timer-Coil      | Bit    | TC000 - TC255          |                         |
| Timer-Current   | Word   |                        | TN000 - TN255           |
| Timer-Point     | Bit    | TS000 - TS255          |                         |
| Counter-Coil    | Bit    | CC000 - CC255          |                         |
| Counter-Current | Word   |                        | CN000 - CN255           |
| Counter-Point   | Bit    | CS000 - CS255          |                         |