

GT series  
Connection with other  
companies' PLCs  
**Manual**

---

# Safety Precautions

Observe the following notices to ensure personal safety or to prevent accidents.  
To ensure that you use this product correctly, read this User's Manual thoroughly before use.  
Make sure that you fully understand the product and information on safety.  
This manual uses two safety flags to indicate different levels of danger.

## **WARNING**

**If critical situations that could lead to user's death or serious injury is assumed by mishandling of the product:**

- Always take precautions to ensure the overall safety of your system, so that the whole system remains safe in the event of failure of this product or other external factor.
- DO NOT USE THE PROGRAMMABLE DISPLAY TO CONTROL SAFETY FEATURES OR OTHER CRITICAL OPERATIONS OF EQUIPMENT OR SYSTEMS. A COMMUNICATION ERROR (FOR ANY REASON) MIGHT PREVENT SUCH SAFETY FEATURES OR CRITICAL OPERATIONS FROM FUNCTIONING PROPERLY.
- Do not use this product in areas with inflammable gas. It could lead to an explosion.
- Exposing this product to excessive heat or open flames could cause damage to the lithium battery or other electronic parts.
- Battery may explode if mistreated. Do not recharge, disassemble or dispose of fire.

## **CAUTION**

**If critical situations that could lead to user's injury or only property damage is assumed by mishandling of the product.**

- To prevent excessive exothermic heat or smoke generation, use this product at the values less than the maximum of the characteristics and performance that are assured in these specifications.
- Do not dismantle or remodel the product. It could cause excessive exothermic heat or smoke generation.
- Do not touch the terminal while turning on electricity. It could lead to an electric shock.
- Use the external devices to function the emergency stop and interlock circuit.
- Connect the wires or connectors securely.  
The loose connection could cause excessive exothermic heat or smoke generation.
- Do not allow foreign matters such as liquid, flammable materials, metals to go into the inside of the product. It could cause excessive exothermic heat or smoke generation.
- Do not undertake construction (such as connection and disconnection) while the power supply is on. It could lead to an electric shock.
- The control force of the touch switches should be less than the specification of the product. Failure to do so could lead to a damage to the product or a personal injury.
- These touch switches operate using analog resistance membrane. Do not press more than one point on the screen at a time. Doing so might operate a switch located in the middle of the points pressed if one exists, and could lead to a damage to the facility or an accident.

# Copyright / Trademarks

- This manual and its contents are copyrighted.
- You may not copy this manual in whole or part, without written consent of Panasonic Industrial Devices SUNX Co., Ltd.
- Windows is a registered trademark of Microsoft Corporation in the United States and other countries.
- Ethernet is a registered trademark of Fuji Xerox Co., Ltd. and Xerox Corp.
- SDHC logo and SD logo are trademarks.
- All other company names and product names are trademarks or registered trademarks of their respective owners.

# Table of Contents

---

## Applicable PLCs Manufactured by Various Companies Selecting the PLC Model

|   |             |
|---|-------------|
| <b>1.Connection With Mitsubishi PLCs.....</b>                                   | <b>1-1</b>  |
| <b>1.1 MELSEC-FX1S/ FX1N/ FX1NC Series.....</b>                                 | <b>1-2</b>  |
| 1.1.1 Direct connection to the TOOL port .....                                  | 1-3         |
| 1.1.2 Using an Adapter .....  | 1-4         |
| <b>1.2 MELSEC-FX2N/ FX2NC/ FX3U/ FX3UC/ FX3G / FX3GC Series .....</b>           | <b>1-5</b>  |
| 1.2.1 Direct connection to the TOOL port .....                                  | 1-7         |
| 1.2.2 Using an Adapter .....  | 1-8         |
| <b>1.3 MELSEC-L (Serial communication) Series .....</b>                         | <b>1-9</b>  |
| 1.3.1 MELSEC-L (Serial communication) series .....                              | 1-12        |
| 1.3.2 MELSEC-L (Serial communication) series (RS422) .....                      | 1-12        |
| <b>1.4 MELSEC-L (CPU) Series .....</b>  | <b>1-13</b> |
| 1.4.1 MELSEC-L (CPU) Series .....   | 1-15        |
| <b>1.5 MELSEC-Q (Serial communication) Series .....</b>                         | <b>1-16</b> |
| 1.5.1 MELSEC-Q (Serial communication) series (RS232C).....                      | 1-19        |
| 1.5.2 MELSEC-Q (Serial communication) series (RS422) .....                      | 1-19        |
| 1.5.3 When directly connecting to the RS232C port of Q00CPU/ Q00UJCPU/Q01CPU .. | 1-20        |
| <b>1.6 MELSEC-Q (CPU) Series .....</b>  | <b>1-21</b> |
| 1.6.1 MELSEC-Q (CPU) Series .....   | 1-22        |
| <b>1.7 MELSEC-A (Computer Link) Series .....</b>                                | <b>1-23</b> |
| 1.7.1 MELSEC-A (Computer Link) Series.....                                      | 1-24        |
| <b>2.Connection With Omron PLCs.....</b>  | <b>2-1</b>  |
| <b>2.1 Omron SYSMAC-C Series (C/α/CV/CP1) .....</b>                             | <b>2-2</b>  |
| 2.1.1 SYSMAC C series (using link interface) (RS232C) .....                     | 2-5         |
| 2.1.2 SYSMAC α series (using link interface) (RS232C).....                      | 2-7         |
| 2.1.3 SYSMAC CV series (using link interface) (RS232C).....                     | 2-8         |
| 2.1.4 SYSMAC CP1 series (using link interface) (RS232C).....                    | 2-9         |
| 2.1.5 SYSMAC CP1 series (RS422/RS485).....                                      | 2-9         |
| 2.1.6 SYSMAC CP1 series (Built-in RS232C port type) .....                       | 2-10        |
| 2.1.7 When using the peripheral port of CPM2C .....                             | 2-11        |
| <b>2.2 Omron SYSMAC-CS/CJ Series .....</b>                                      | <b>2-12</b> |
| 2.2.1 SYSMAC CS1 series (1:1) (RS232C).....                                     | 2-16        |
| 2.2.2 SYSMAC CJ1 series (1:1) (RS232C) .....                                    | 2-16        |
| 2.2.3 SYSMAC CS1/CJ1 series (1:1) (RS422/RS485).....                            | 2-17        |
| 2.2.4 SYSMAC CJ2M series (1:1) (RS232C) .....                                   | 2-18        |

|  |             |
|--|-------------|
| 2.2.5 SYSMAC CJ2M series (RS422/RS485) .....                           | 2-19        |
| 2.2.6 When using the peripheral port.....                              | 2-20        |
| <b>3.Connection With Toshiba Machine PLCs .....</b>                    | <b>3-1</b>  |
| <b>3.1 PROVISOR TCmini Series.....</b>                                 | <b>3-2</b>  |
| 3.1.1 RS232C Connection .....  | 3-3         |
| 3.1.2 RS485 connection.....  | 3-4         |
| <b>4.Connection With Rockwell Automation (Allen-Bradley) PLCs.....</b> | <b>4-1</b>  |
| <b>4.1 Allen-Bradley SLC500 MicroLogix Series .....</b>                | <b>4-2</b>  |
| 4.1.1 SLC500 series(using link interface on the CPU unit).....         | 4-5         |
| 4.1.2 MicroLogix1000/1100.....   | 4-5         |
| <b>5.Connection With Siemens PLCs.....</b>                             | <b>5-1</b>  |
| <b>5.1 Siemens S7-200 Series.....</b>                                  | <b>5-2</b>  |
| 5.1.1 RS232C Connection (Connected with PC/PPI Cable).....             | 5-3         |
| 5.1.2 RS422 Connection .....   | 5-4         |
| <b>6.Connection With LS Industrial Systems PLCs .....</b>              | <b>6-1</b>  |
| <b>6.1 MASTER-K (Cnet) Series.....</b>                                 | <b>6-2</b>  |
| 6.1.1 Connection Method .....  | 6-3         |
| <b>7.Connection With Yokogawa PLCs.....</b>                            | <b>7-1</b>  |
| <b>7.1 FA-M3 Series .....</b>  | <b>7-2</b>  |
| 7.1.1 Connection Using PC Link Module .....                            | 7-3         |
| 7.1.2 CPU Direct Connection .....                                      | 7-4         |
| <b>8.Connection With Keyence PLCs.....</b>                             | <b>8-1</b>  |
| <b>8.1 KV-10/16/24/40 Series.....</b>                                  | <b>8-2</b>  |
| 8.1.1 Connection Method .....  | 8-3         |
| <b>8.2 KV-700 Series.....</b>  | <b>8-4</b>  |
| 8.2.1 Connection Method .....  | 8-5         |
| <b>8.3 KV-700 Series Connected using Unit KV-L20R/V .....</b>          | <b>8-6</b>  |
| 8.3.1 Connection Method .....  | 8-7         |
| <b>8.4 KV-1000 Series.....</b>   | <b>8-8</b>  |
| 8.4.1 Connection Method .....  | 8-9         |
| <b>8.5 KV-1000 Series Connected using Unit KV-L20R/V .....</b>         | <b>8-10</b> |
| 8.5.1 Connection Method .....  | 8-11        |

|  |             |
|--|-------------|
| <b>8.6 KV-3000 Series .....</b>                                      | <b>8-12</b> |
| 8.6.1 Connection Method .....  | 8-13        |
| <b>8.7 KV-3000/5000 Series Connected using Unit KV-L20R/V .....</b>  | <b>8-14</b> |
| 8.7.1 Connection Method .....  | 8-15        |
| <b>8.8 KV Nano Series .....</b>                                      | <b>8-16</b> |
| 8.8.1 Connection Method .....  | 8-17        |
| <b>8.9 KV Nano Series Connected using Unit KV-L20R/V .....</b>       | <b>8-18</b> |
| 8.9.1 Connection Method .....  | 8-19        |
| <br>   |             |
| <b>9.Connection With Hitachi PLCs .....</b>                          | <b>9-1</b>  |
| <br>   |             |
| <b>9.1 EH-150/EHV Series .....</b>                                   | <b>9-2</b>  |
| 9.1.1 RS232C Connection .....  | 9-5         |
| 9.1.2 RS422 Connection .....   | 9-8         |
| 9.1.3 RS485 Connection .....   | 9-9         |
| <b>9.2 MICRO-EH Series .....</b>                                     | <b>9-10</b> |
| 9.2.1 RS232C Connection .....  | 9-12        |
| <b>9.3 Web Controller Series .....</b>                               | <b>9-14</b> |
| 9.3.1 RS232C Connection .....  | 9-16        |
| 9.3.2 RS422 Connection .....   | 9-17        |
| 9.3.3 RS485 Connection .....   | 9-18        |
| <br>   |             |
| <b>10.Connection in Modbus (RTU Mode) .....</b>                      | <b>10-1</b> |
| <br>   |             |
| <b>10.1 Modbus (RTU Mode   modicon PLC) .....</b>                    | <b>10-2</b> |
| <b>10.2 Modbus (RTU Mode).....</b>                                   | <b>10-3</b> |
| <b>10.3 Modbus (RTU Mode) for Temperature Control Unit, etc.....</b> | <b>10-4</b> |
| <b>10.4 Connection Method .....</b>                                  | <b>10-6</b> |
| <br>   |             |
| <b>Record of changes</b>   |             |



## Applicable PLCs Manufactured by Various Companies

### PLC Compatibility

Corresponding PLC is as follows.

Models listed are the models that have been evaluated as of June, 2013.

| Manufacturer                       | Series       | Model     | RS232C type | RS422 (RS485) type |
|------------------------------------|--------------|-----------|-------------|--------------------|
| Panasonic Corporation              | FP series    | FP-X      | ◎           | ○                  |
|                                    |              | FP-Σ      | ◎           | ○                  |
|                                    |              | FP-e      | ◎           | ○                  |
|                                    |              | FP0/FP0R  | ◎           | ○                  |
|                                    |              | FP2       | ◎           | ○                  |
|                                    |              | FP2SH     | ◎           | ○                  |
| Mitsubishi Electric Corporation *1 | FX series *2 | FX0N      | ○           | ◎                  |
|                                    |              | FX1S      | ○           | ◎                  |
|                                    |              | FX1N      | ○           | ◎                  |
|                                    |              | FX1NC     | ○           | ◎                  |
|                                    |              | FX2N      | ○           | ◎                  |
|                                    |              | FX2NC     | ○           | ◎                  |
|                                    |              | FX3UC     | ○           | ◎                  |
|                                    |              | FX3U      | ○           | ◎                  |
|                                    |              | FX3G      | ○           | ◎                  |
|                                    |              | FX3GC     |             | ◎                  |
|                                    | L series     | L26CPU-BT | ○           | ○                  |
|                                    |              | L02CPU    | ◎           | ○                  |
|                                    | Q series *2  | Q00CPU    | ◎           |                    |
|                                    |              | Q01CPU    | ◎           |                    |
|                                    |              | Q00JCPU   | ○           |                    |
|                                    |              | Q00HCPU   | ○           |                    |
|                                    |              | Q00JCPU   | ◎           |                    |
|                                    |              | Q26UDHCPU | ○           | ○                  |
|                                    |              | Q25HCPU   | ◎           |                    |
|                                    |              | Q12HCPU   | ◎           |                    |
|                                    |              | Q06HCPU   | ◎           |                    |
|                                    |              | Q02HCPU   | ◎           |                    |
|                                    | Q02CPU       | ◎         |             |                    |

◎: Direct connection is possible to the CPU unit of the PLC.

○: Connection is possible using the communications unit or a signal conversion cable, etc.

Blank: Not evaluated.

\*1. PLCs other than FP series of Panasonic may be limited in the type of device that can be used and addresses. Please see each wiring diagram for details.

\*2 The connection with RS485 is not available for Mitsubishi FX series.

| Manufacturer                       | Series   | Model        | RS232C type | RS422 (RS485) type |
|------------------------------------|----------|--------------|-------------|--------------------|
| Mitsubishi Electric Corporation *1 | A series | A1N          | ○           |                    |
|                                    |          | A2N          | ○           |                    |
|                                    |          | A3N          | ○           |                    |
|                                    |          | A1S          | ○           |                    |
|                                    |          | A1SJ         | ○           |                    |
|                                    |          | A1SH         | ○           |                    |
|                                    |          | A2SH         | ○           |                    |
|                                    |          | A2CCPU24     | ◎           |                    |
| OMRON Corporation *1               | C series | C20H         | ◎           |                    |
|                                    |          | C28H         | ◎           |                    |
|                                    |          | C40H         | ◎           |                    |
|                                    |          | C120         | ○           |                    |
|                                    |          | C120F        | ○           |                    |
|                                    |          | C200H        | ○           |                    |
|                                    |          | C200HS       | ◎           |                    |
|                                    |          | C500         | ○           |                    |
|                                    |          | C500F        | ○           |                    |
|                                    |          | C1000H       | ○           |                    |
|                                    |          | C1000HF      | ○           |                    |
|                                    |          | C2000        | ○           |                    |
|                                    |          | C2000H       | ○           |                    |
|                                    |          | CPM1-20CDR-A | ◎           |                    |
|                                    |          | CPM2A        | ◎           |                    |
|                                    |          | CPM2B        | ◎           |                    |
|                                    |          | CPM2C        | ◎           |                    |
|                                    |          | CQM1H-CPU21  | ○           |                    |
| CQM1-CPU42                         | ◎        |              |             |                    |
| SRM1-C02                           | ◎        |              |             |                    |

◎: Direct connection is possible to the CPU unit of the PLC.

○: Connection is possible using the communications unit or a signal conversion cable, etc.

Blank: Not evaluated.

\*1. PLCs other than FP series of Panasonic may be limited in the type of device that can be used and addresses. Please see each wiring diagram for details.



| Manufacturer            | Series         | Model          | RS232C type | RS422 (RS485) type |
|-------------------------|----------------|----------------|-------------|--------------------|
| OMRON<br>Corporation *1 | α series       | C200HE-CPU32-Z | ○           |                    |
|                         |                | C200HE-CPU32   | ○           |                    |
|                         |                | C200HG-CPU33-Z | ○           |                    |
|                         |                | C200HG-CPU33   | ○           |                    |
|                         |                | C200HG-CPU53-Z | ○           |                    |
|                         |                | C200HG-CPU53   | ○           |                    |
|                         |                | C200HX-CPU34-Z | ○           |                    |
|                         |                | C200HX-CPU34   | ○           |                    |
|                         |                | C200HX-CPU54-Z | ○           |                    |
|                         |                | C200HX-CPU54   | ○           |                    |
|                         |                | C200HE-CPU42-Z | ◎           |                    |
|                         |                | C200HE-CPU42   | ◎           |                    |
|                         |                | C200HG-CPU43-Z | ◎           |                    |
|                         |                | C200HG-CPU43   | ◎           |                    |
|                         |                | C200HG-CPU63-Z | ◎           |                    |
|                         |                | C200HG-CPU63   | ◎           |                    |
|                         |                | C200HX-CPU44-Z | ◎           |                    |
|                         |                | C200HX-CPU44   | ◎           |                    |
|                         |                | C200HX-CPU64-Z | ○           |                    |
|                         |                | C200HX-CPU64   | ◎           |                    |
|                         | C200HX-CPU65-Z | ◎              |             |                    |
|                         | C200HX-CPU85-Z | ◎              |             |                    |
|                         | CV series      | CV500          | ◎           |                    |
|                         |                | CV1000         | ◎           |                    |
|                         |                | CVM1           | ◎           |                    |
|                         | CS1 series     | CS1H-CPU67     | ◎           |                    |
|                         |                | CS1H-CPU66     | ◎           |                    |
|                         |                | CS1H-CPU65     | ◎           |                    |
|                         |                | CS1H-CPU64     | ◎           |                    |
|                         |                | CS1H-CPU63     | ◎           |                    |
|                         |                | CS1G-CPU45     | ◎           |                    |
|                         |                | CS1G-CPU44     | ◎           |                    |
|                         |                | CS1G-CPU43     | ◎           |                    |
| CS1G-CPU42              | ◎              |                |             |                    |
| CJ series               | CJ1H           | ◎              |             |                    |
|                         | CJ1M           | ◎              |             |                    |
|                         | CJ1G           | ◎              |             |                    |
|                         | CJ2H           | ◎              |             |                    |
|                         | CJ2M           | ◎              | ○           |                    |

◎: Direct connection is possible to the CPU unit of the PLC.

○: Connection is possible using the communications unit or a signal conversion cable, etc.

Blank: Not evaluated.

\*1. PLCs other than FP series of Panasonic may be limited in the type of device that can be used and addresses. Please see each wiring diagram for details.

| Manufacturer                     | Series         | Model          | RS232C type                  | RS422 (RS485) type          |
|----------------------------------|----------------|----------------|------------------------------|-----------------------------|
| OMRON Corporation *1             | CP1 series     | CP1H           | ○                            |                             |
|                                  |                | CP1L           | ○                            |                             |
|                                  |                | CP1E           | ◎<br>Models with RS232C port | ○                           |
| Toshiba Machine Co., Ltd. *1     | TC mini series |                | ◎<br>Models with RS232C port | ◎<br>Models with RS485 port |
| Yokogawa Electric Corporation *1 | FA-M3 series   | F3SP59-7S      | ◎                            |                             |
|                                  |                | F3SP58-6S      | ◎                            |                             |
|                                  |                | F3SP58-6H      | ◎                            |                             |
|                                  |                | F3SP53-4S      | ◎                            |                             |
|                                  |                | F3SP53-4H      | ◎                            |                             |
|                                  |                | F3SP38-6S      | ◎                            |                             |
|                                  |                | F3SP38-6N      | ◎                            |                             |
|                                  |                | F3SP35-5N      | ◎                            |                             |
|                                  |                | F3SP28-3S      | ◎                            |                             |
|                                  |                | F3SP28-3N      | ◎                            |                             |
|                                  |                | F3SP25-2N      | ◎                            |                             |
|                                  |                | F3SP21-0N      | ◎                            |                             |
| KEYENCE Corporation *1           | KV series      | KV-10/16/24/40 | ◎                            |                             |
|                                  |                | KV700          | ◎                            | ○                           |
|                                  |                | KV1000         | ◎                            | ○                           |
|                                  |                | KV3000         | ◎                            | ○                           |
|                                  |                | KV5000         | ○                            | ○                           |
|                                  |                | KV Nano        | ◎                            |                             |

◎: Direct connection is possible to the CPU unit of the PLC.

○: Connection is possible using the communications unit or a signal conversion cable, etc.

Blank: Not evaluated.

\*1. PLCs other than FP series of Panasonic may be limited in the type of device that can be used and addresses. Please see each wiring diagram for details.

| Manufacturer  | Series                           | Model          | RS232C type | RS422 (RS485) type |
|---|----------------------------------|----------------|-------------|--------------------|
| Hitachi Industrial Equipment Systems Co., Ltd. *1                       | EH-150EHV series                 | EHV-CPU128     | ◎           | ◎                  |
|   |                                  | EHV-CPU64      | ◎           | ◎                  |
|   |                                  | EHV-CPU32      | ◎           | ◎                  |
|   |                                  | EHV-CPU16      | ◎           | ◎                  |
|   | EH150 series                     | EHV-CPU104A    | ◎           | ◎                  |
|   |                                  | EHV-CPU208A    | ◎           | ◎                  |
|   |                                  | EHV-CPU316A    | ◎           | ◎                  |
|   |                                  | EHV-CPU516     | ◎           | ◎                  |
|   |                                  | EHV-CPU548     | ◎           | ◎                  |
|   | MICRO-EH series                  | 10 points      |             |                    |
|   |                                  | 14 points      | ◎           |                    |
|   |                                  | 20 points      | ◎           |                    |
|   |                                  | 23 points      | ◎           | ◎                  |
|   |                                  | 28 points      | ◎           | ◎                  |
|   |                                  | 40 points      | ◎           |                    |
| 64 points   |                                  | ◎              |             |                    |
| Web Controller  | 10 points                        | ◎              |             |                    |
|   | 23 points                        | ◎              | ◎           |                    |
| Rockwell Automation Inc. (Allen-Bradley Models that support protocol *1 | MicroLogix                       | MicroLogix500  | ◎           |                    |
|   |                                  | MicroLogix1000 | ◎           |                    |
|   |                                  | MicroLogix1100 | ◎           |                    |
|   | SLC-500 series                   | SLC-5/03       | ◎           |                    |
|   |                                  | SLC-5/04       | ◎           |                    |
| Siemens *1  | S7-200 series                    | CPU222         | ○           | ◎                  |
|   |                                  | CPU216         | ○           | ◎                  |
|   |                                  | CPU215         | ○           | ◎                  |
|   |                                  | CPU214         | ○           | ◎                  |
|   |                                  | CPU212         | ○           | ◎                  |
| LS Industrial Systems Co., Ltd. *1                                      | MASTER-K series                  | 80S            | ◎           |                    |
|   |                                  | 200S           | ◎           |                    |
|   |                                  | 300S           | ○           |                    |
|   |                                  | 1000S          | ○           |                    |
| Modbus *1   | Models that support RTU protocol | *2             | ◎           | ◎                  |
| General-purpose serial *1   | MEW dedicated protocol           | *2             | ◎           | ◎                  |

◎: Direct connection is possible to the CPU unit of the PLC.

○: Connection is possible using the communications unit or a signal conversion cable, etc.

Blank: Not evaluated.

\*1. PLCs other than FP series of Panasonic may be limited in the type of device that can be used and addresses. Please see each wiring diagram for details.

\*2. We cannot specify what other device you should use; therefore, please test it using the actual equipment before using.

## Selecting the PLC Model

### PLC Model selection with GTWIN

Select the model of PLC being used from among the list of candidates

| PLC Model   | Usable GT   |      |      |
|---|---|------|------|
|   | GT01,GT02,GT02L,GT03-E,<br>GT05,GT11,GT12,GT21,<br>GT32,GT32-E  | GT10 | GT30 |
| Panasonic FP series   | ○   | ○    | ○    |
| General-Purpose Serial<br>(General-purpose RS232C device, such as<br>a personal computer or a microcomputer board.) | ○   | ○    | ○    |
| Mitsubishi MELSEC-FX series<br>(MELSEC-FX1N series)   | ○   | ○    | ○    |
| Mitsubishi MELSEC-FX2N series<br>(MELSEC-FX2N/FX3UC/FX3U series)  | ○   | ○    | ○    |
| Mitsubishi MELSEC-Q (Serial communication) series   | ○   | ×    | ×    |
| Mitsubishi MELSEC-Q (CPU) series  | ○   | ×    | ×    |
| Mitsubishi MELSEC-A (Computer Link) series  | ○   | ○    | ○    |
| Omron SYSMAC-C series<br>(SYSMAC-C/α/CV/CP1 series)   | ○   | ○    | ○    |
| Omron SYSMAC CS/CJ series<br>(SYSMAC-CS/CJ series)  | ○   | ×    | ×    |
| Rockwell Automation (Allen-Bradley SLC500<br>MicroLogix series  | ○   | ○    | ○    |
| Siemens S7-200 series   | ○   | ○    | ○    |
| LS Industrial Systems MASTER-K (Cnet) series  | ○   | ○    | ○    |
| Modbus Slave (RTU mode)   | ○   | ×    | ×    |
| Modbus(RTU Mode)<br>(PLC which supports Modbus RTU mode<br>protocol)  | ○   | ○    | ○    |
| Modbus(RTU Mode   modicon PLC)<br>(PLC which supports Modbus RTU   modicon<br>PLC mode protocol)                    | ○   | ○    | ○    |
| MODBUS(RTU mode   Temperature control unit, etc)  | ○<br>(GT02, GT02L, GT03-E, GT05,<br>GT12, GT32 and GT32-E only) | ×    | ×    |
| Yokogawa FA-M3 series   | ○   | ○    | ○    |
| TOSHIBA MACHINE PROVISOR TCmini series  | ○   | ○    | ×    |
| Keyence KV10/16/24/40 series  | ○   | ×    | ×    |
| Keyence KV700 series  | ○   | ×    | ×    |
| Keyence KV1000 series   | ○   | ×    | ×    |
| Keyence KV3000 / 5000 series  | ○   | ×    | ×    |
| HITACHI EH/EHV series<br>(EH-150/EHV/MICRO-EH/Web controller series)  | ○   | ×    | ×    |

# Chapter 1

---

## Connection With Mitsubishi PLCs

# 1.1 MELSEC-FX1S/ FX1N/ FX1NC Series

## PLC model selection

Select " Mitsubishi MELSEC-FX Series".

## Usable devices

| Bit/Word Device |                          | No.           | Memo  |
|-----------------|--------------------------|---------------|---|
| Bit Device      | Input Relay              | X0000-X0337   |   |
|                 | Output Relay             | Y0000-Y0337   |   |
|                 | Internal Relay           | M0000-M1535   |   |
|                 | State                    | S0000-S0999   |   |
|                 | Timer(contact)           | TS0000-TS0255 |   |
|                 | Counter(contact)         | CS0000-CS0255 |   |
| Word Device     | Input Relay              | X0000-X0320   | Specify address expression every 20           |
|                 | Output Relay             | Y0000-Y0320   | Specify address expression every 20           |
|                 | Internal Relay           | M0000-M1520   | Specify address expression every 16 multiples |
|                 | State                    | S0000-S0976   | Specify address expression every 16 multiples |
|                 | Timer(current)           | TN0000-TN0255 |   |
|                 | 16 Bits Counter(current) | CN0000-CN0199 |   |
|                 | 32 Bits Counter(current) | CN0200-CN0255 |   |
|                 | Data Register            | D0000-D0999   |   |

Note1) The addresses you can use may differ depending on the model. For details, please see the manual for the PLC you are using.

Note2) If using an input relay, output relay and auxiliary relay in word units, please set the address in 16 point increments from 000. (X000, X020, X040 ..., M000, M016, M032).

## Communication Parameters Settings

The example of communication settings of GT and PLC is shown below.

Setting Values for GT (Set in the configuration setting of GTWIN.)

| Item        | Setting |
|-------------|---------|
| Baud Rate   | 9600bps |
| Data Length | 7       |
| Stop Bits   | 1       |
| Parity      | Even    |

## Setting the communication conditions for the PLC

"0" should be stored in D8120. ("0" is the default value, so this setting should not need to be entered by the user.)

## 1.1.1 Direct connection to the TOOL port

### For 5V DC type

| CPU                   | I/F  | Wiring diagram  | GT Series |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                     |
|-----------------------|--|---|-----------|-------------|-------------|---|-----|-------|---|-----|--------|---|----|-------|---|-----|--------|---|-----|-------|---|---|---|---|-----|-----|---|---|---|---------|-------------|---|-----|---|-----|---|----|---|-----|---|-----|---|-----|---|-----|---|---|---------------------|
| FX1S<br>FX1N<br>FX1NC | TOOL port of PLC<br>Mini-DIN 8-pin loose-wire cable (AIGT8152) | <p>Mitsubishi Electric PLC<br/>TOOL port side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> <th>Cable color</th> </tr> </thead> <tbody> <tr><td>1</td><td>-RD</td><td>Green</td></tr> <tr><td>2</td><td>+RD</td><td>Yellow</td></tr> <tr><td>3</td><td>SG</td><td>Brown</td></tr> <tr><td>4</td><td>-SD</td><td>Orange</td></tr> <tr><td>5</td><td>+5V</td><td>White</td></tr> <tr><td>6</td><td>-</td><td>-</td></tr> <tr><td>7</td><td>+SD</td><td>Red</td></tr> <tr><td>8</td><td>-</td><td>-</td></tr> </tbody> </table> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+5V</td></tr> <tr><td>2</td><td>GND</td></tr> <tr><td>3</td><td>NC</td></tr> <tr><td>4</td><td>+SD</td></tr> <tr><td>5</td><td>-SD</td></tr> <tr><td>6</td><td>+RD</td></tr> <tr><td>7</td><td>-RD</td></tr> <tr><td>8</td><td>E<br/>Terminal station setting<br/>(120W resistor built in)</td></tr> </tbody> </table> | Pin No.   | Signal name | Cable color | 1 | -RD | Green | 2 | +RD | Yellow | 3 | SG | Brown | 4 | -SD | Orange | 5 | +5V | White | 6 | - | - | 7 | +SD | Red | 8 | - | - | Pin No. | Signal name | 1 | +5V | 2 | GND | 3 | NC | 4 | +SD | 5 | -SD | 6 | +RD | 7 | -RD | 8 | E<br>Terminal station setting<br>(120W resistor built in) | RS422<br>5V DC type |
| Pin No.               | Signal name  | Cable color   |           |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                     |
| 1                     | -RD  | Green   |           |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                     |
| 2                     | +RD  | Yellow  |           |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                     |
| 3                     | SG   | Brown   |           |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                     |
| 4                     | -SD  | Orange  |           |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                     |
| 5                     | +5V  | White   |           |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                     |
| 6                     | -  | -   |           |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                     |
| 7                     | +SD  | Red   |           |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                     |
| 8                     | -  | -   |           |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                     |
| Pin No.               | Signal name  |   |           |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                     |
| 1                     | +5V  |   |           |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                     |
| 2                     | GND  |   |           |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                     |
| 3                     | NC   |   |           |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                     |
| 4                     | +SD  |   |           |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                     |
| 5                     | -SD  |   |           |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                     |
| 6                     | +RD  |   |           |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                     |
| 7                     | -RD  |   |           |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                     |
| 8                     | E<br>Terminal station setting<br>(120W resistor built in)      |   |           |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                     |



#### Note:

- Keep the cable no longer than 2 m
- The power consumption of GT01/GT02/GT02L corresponds to that of Mitsubishi's F920 (5 V type) display device. When using, adhere to the conditions of use (number of units that can be expanded on a PLC, etc.) for the F920 (5 V type).

### For 24V DC type

| CPU                   | I/F  | Wiring diagram  | GT Series |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
|-----------------------|--|---|-----------|-------------|-------------|---|-----|-------|---|-----|--------|---|---|---|---|-----|--------|---|---|---|---|---|---|---|-----|-----|---|---|---|---------|-------------|---|------|---|-----|---|----|---|-----|---|-----|---|-----|---|-----|---|---|----------------------|
| FX1S<br>FX1N<br>FX1NC | TOOL port of PLC<br>Mini-DIN 8-pin loose-wire cable (AIGT8175) | <p>Mitsubishi Electric PLC<br/>TOOL port side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> <th>Cable color</th> </tr> </thead> <tbody> <tr><td>1</td><td>-RD</td><td>Green</td></tr> <tr><td>2</td><td>+RD</td><td>Yellow</td></tr> <tr><td>3</td><td>-</td><td>-</td></tr> <tr><td>4</td><td>-SD</td><td>Orange</td></tr> <tr><td>5</td><td>-</td><td>-</td></tr> <tr><td>6</td><td>-</td><td>-</td></tr> <tr><td>7</td><td>+SD</td><td>Red</td></tr> <tr><td>8</td><td>-</td><td>-</td></tr> </tbody> </table> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+24V</td></tr> <tr><td>2</td><td>GND</td></tr> <tr><td>3</td><td>NC</td></tr> <tr><td>4</td><td>+SD</td></tr> <tr><td>5</td><td>-SD</td></tr> <tr><td>6</td><td>+RD</td></tr> <tr><td>7</td><td>-RD</td></tr> <tr><td>8</td><td>E<br/>Terminal station setting<br/>(120W resistor built in)</td></tr> </tbody> </table> | Pin No.   | Signal name | Cable color | 1 | -RD | Green | 2 | +RD | Yellow | 3 | - | - | 4 | -SD | Orange | 5 | - | - | 6 | - | - | 7 | +SD | Red | 8 | - | - | Pin No. | Signal name | 1 | +24V | 2 | GND | 3 | NC | 4 | +SD | 5 | -SD | 6 | +RD | 7 | -RD | 8 | E<br>Terminal station setting<br>(120W resistor built in) | RS422<br>24V DC type |
| Pin No.               | Signal name  | Cable color   |           |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 1                     | -RD  | Green   |           |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 2                     | +RD  | Yellow  |           |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 3                     | -  | -   |           |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 4                     | -SD  | Orange  |           |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 5                     | -  | -   |           |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 6                     | -  | -   |           |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 7                     | +SD  | Red   |           |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 8                     | -  | -   |           |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| Pin No.               | Signal name  |   |           |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 1                     | +24V   |   |           |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 2                     | GND  |   |           |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 3                     | NC   |   |           |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 4                     | +SD  |   |           |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 5                     | -SD  |   |           |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 6                     | +RD  |   |           |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 7                     | -RD  |   |           |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 8                     | E<br>Terminal station setting<br>(120W resistor built in)      |   |           |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |

## 1.1.2 Using an Adapter

| CPU                   | Adapter     | Wiring diagram   | GT Series |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                        |
|-----------------------|-------------|--|-----------|-------------|---|----|---|----|---|----|---|----|---|----|---|----|---|---|---|---|---|---|---------|-------------|---|---|---|---|---|----|---|----|---|----|---|----|---|----|---|----|------------------------|
| FX1S<br>FX1N<br>FX1NC | FX1N-232-BD | <p>Mitsubishi Electric PLC adapter side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>CD</td></tr> <tr><td>2</td><td>RD</td></tr> <tr><td>3</td><td>SD</td></tr> <tr><td>4</td><td>ER</td></tr> <tr><td>5</td><td>SG</td></tr> <tr><td>6</td><td>DR</td></tr> <tr><td>7</td><td>-</td></tr> <tr><td>8</td><td>-</td></tr> <tr><td>9</td><td>-</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>FG</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> | Pin No.   | Signal name | 1 | CD | 2 | RD | 3 | SD | 4 | ER | 5 | SG | 6 | DR | 7 | - | 8 | - | 9 | - | Pin No. | Signal name | 1 | + | 2 | - | 3 | FG | 4 | SD | 5 | RD | 6 | NC | 7 | NC | 8 | SG | RS232C<br>24 V DC type |
| Pin No.               | Signal name |  |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                        |
| 1                     | CD          |  |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                        |
| 2                     | RD          |  |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                        |
| 3                     | SD          |  |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                        |
| 4                     | ER          |  |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                        |
| 5                     | SG          |  |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                        |
| 6                     | DR          |  |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                        |
| 7                     | -           |  |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                        |
| 8                     | -           |  |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                        |
| 9                     | -           |  |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                        |
| Pin No.               | Signal name |  |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                        |
| 1                     | +           |  |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                        |
| 2                     | -           |  |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                        |
| 3                     | FG          |  |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                        |
| 4                     | SD          |  |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                        |
| 5                     | RD          |  |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                        |
| 6                     | NC          |  |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                        |
| 7                     | NC          |  |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                        |
| 8                     | SG          |  |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                        |

\* Although No.6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.



## 1.2 MELSEC-FX2N/ FX2NC/ FX3U/ FX3UC/ FX3G / FX3GC Series

### Applicable versions of GTWIN and GT series

|        | Applicable versions of GTWIN and GT series |                   |
|--------|--|-------------------|
|        | FX2N • FX2NC •<br>FX3U • FX3UC • FX3G      | FX3GC             |
| GT01   | Ver.1.10 or later                          | Cannot be used    |
| GT02   | Ver.1.00 or later                          | Ver.1.62 or later |
| GT02L  | Ver.1.00 or later                          | Ver.1.52 or later |
| GT03-E | Ver.1.00 or later                          | Ver.1.02 or later |
| GT05   | Ver.1.00 or later                          | Ver.2.22 or later |
| GT11   | Ver.1.00 or later                          | Cannot be used    |
| GT12   | Ver.1.00 or later                          | Ver.1.92 or later |
| GT21   | Ver.1.00 or later                          | Cannot be used    |
| GT32   | Ver.1.00 or later                          | Ver.2.32 or later |
| GT32-E | Ver.1.00 or later                          | Ver.1.32 or later |
| GTWIN  | Ver.2.40 or later                          | Ver.2.E1 or later |

### PLC model selection

Select " Mitsubishi MELSEC-FX2N Series".

### Usable devices

| Bit/Word Device | Device                   | TS0000-TS0255 | No.           | Memo  |
|-----------------|--------------------------|---------------|---------------|---|
| Bit Device      | Input Relay              |               | X0000-X0337   |   |
|                 | Output Relay             |               | Y0000-Y0337   |   |
|                 | Internal Relay           |               | M0000-M3071   |   |
|                 | State                    |               | S0000-S0999   |   |
|                 | Timer(contact)           |               | TS0000-TS0255 |   |
|                 | Counter(contact)         |               | CS0000-CS0255 |   |
| Word Device     | Input Relay              |               | X0000-X0320   | Specify address expression every 20           |
|                 | Output Relay             |               | Y0000-Y0320   | Specify address expression every 20           |
|                 | Internal Relay           |               | M0000-M3056   | Specify address expression every 16 multiples |
|                 | State                    |               | S0000-S0976   | Specify address expression every 16 multiples |
|                 | Timer(current)           |               | TN0000-TN0255 |   |
|                 | 16 Bits Counter(current) |               | CN0000-CN0199 |   |
|                 | 32 Bits Counter(current) |               | CN0200-CN0255 |   |
|                 | Data Register            |               | D0000-D7999   |   |

Note1) The addresses you can use may differ depending on the model. For details, please see the manual for the PLC you are using.

Note2) If using an input relay, output relay and auxiliary relay in word units, please set the address in 16 point increments from 000. (X000, X020, X040 ..., M000, M016, M032).

### Communication Parameters Settings

The example of communication settings of GT and PLC is shown below.

Setting Values for GT (Set in the configuration setting of GTWIN.) Setting Values for GT

| Item        | Setting |
|-------------|---------|
| Baud Rate   | 9600bps |
| Data Length | 7       |
| Stop Bits   | 1       |
| Parity      | Even    |

### Setting Values for PLC (Computer link unit)

Specify 0 to D8120

Uncheck the box of "Operate Communication Setting".

## 1.2.1 Direct connection to the TOOL port

### For RS422 5V DC type

| CPU           | I/F  | Wiring diagram  | GT Series   |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
|---------------|--|---|-------------|-------------|-------------|---|-----|-------|---|-----|--------|---|----|-------|---|-----|--------|---|-----|-------|---|---|---|---|-----|-----|---|---|---|---------|-------------|---|-----|---|-----|---|----|---|-----|---|-----|---|-----|---|-----|---|---|----------------------|
| FX2N<br>FX2NC | TOOL port of PLC<br>Mini-DIN 8-pin loose-wire cable (AIGT8152) | <p>Mitsubishi Electric PLC<br/>TOOL port side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> <th>Cable color</th> </tr> </thead> <tbody> <tr><td>1</td><td>-RD</td><td>Green</td></tr> <tr><td>2</td><td>+RD</td><td>Yellow</td></tr> <tr><td>3</td><td>SG</td><td>Brown</td></tr> <tr><td>4</td><td>-SD</td><td>Orange</td></tr> <tr><td>5</td><td>+5V</td><td>White</td></tr> <tr><td>6</td><td>-</td><td>-</td></tr> <tr><td>7</td><td>+SD</td><td>Red</td></tr> <tr><td>8</td><td>-</td><td>-</td></tr> </tbody> </table> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+5V</td></tr> <tr><td>2</td><td>GND</td></tr> <tr><td>3</td><td>NC</td></tr> <tr><td>4</td><td>+SD</td></tr> <tr><td>5</td><td>-SD</td></tr> <tr><td>6</td><td>+RD</td></tr> <tr><td>7</td><td>-RD</td></tr> <tr><td>8</td><td>E<br/>Terminal station setting<br/>(120W resistor built in)</td></tr> </tbody> </table> | Pin No.     | Signal name | Cable color | 1 | -RD | Green | 2 | +RD | Yellow | 3 | SG | Brown | 4 | -SD | Orange | 5 | +5V | White | 6 | - | - | 7 | +SD | Red | 8 | - | - | Pin No. | Signal name | 1 | +5V | 2 | GND | 3 | NC | 4 | +SD | 5 | -SD | 6 | +RD | 7 | -RD | 8 | E<br>Terminal station setting<br>(120W resistor built in) | RS422<br>24V DC type |
| Pin No.       |  |   | Signal name | Cable color |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 1             |  |   | -RD         | Green       |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 2             | +RD  | Yellow  |             |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 3             | SG   | Brown   |             |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 4             | -SD  | Orange  |             |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 5             | +5V  | White   |             |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 6             | -  | -   |             |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 7             | +SD  | Red   |             |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 8             | -  | -   |             |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| Pin No.       | Signal name  |   |             |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 1             | +5V  |   |             |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 2             | GND  |   |             |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 3             | NC   |   |             |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 4             | +SD  |   |             |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 5             | -SD  |   |             |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 6             | +RD  |   |             |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 7             | -RD  |   |             |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 8             | E<br>Terminal station setting<br>(120W resistor built in)      |   |             |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| FX3U<br>FX3UC |  |   |             |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| FX3G<br>FX3GC |  |   |             |             |             |   |     |       |   |     |        |   |    |       |   |     |        |   |     |       |   |   |   |   |     |     |   |   |   |         |             |   |     |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |



#### Note:

- Keep the cable no longer than 2 m
- The power consumption of GT01/GT02/GT02L corresponds to that of Mitsubishi's F920 (5 V type) display device. When using, adhere to the conditions of use (number of units that can be expanded on a PLC, etc.) for the F920 (5 V type).

### For RS422 24V DC type

| CPU           | I/F  | Wiring diagram  | GT Series   |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
|---------------|--|---|-------------|-------------|-------------|---|-----|-------|---|-----|--------|---|---|---|---|-----|--------|---|---|---|---|---|---|---|-----|-----|---|---|---|---------|-------------|---|------|---|-----|---|----|---|-----|---|-----|---|-----|---|-----|---|---|----------------------|
| FX2N<br>FX2NC | TOOL port of PLC<br>Mini-DIN 8-pin loose-wire cable (AIGT8175) | <p>Mitsubishi Electric PLC<br/>TOOL port side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> <th>Cable color</th> </tr> </thead> <tbody> <tr><td>1</td><td>-RD</td><td>Green</td></tr> <tr><td>2</td><td>+RD</td><td>Yellow</td></tr> <tr><td>3</td><td>-</td><td>-</td></tr> <tr><td>4</td><td>-SD</td><td>Orange</td></tr> <tr><td>5</td><td>-</td><td>-</td></tr> <tr><td>6</td><td>-</td><td>-</td></tr> <tr><td>7</td><td>+SD</td><td>Red</td></tr> <tr><td>8</td><td>-</td><td>-</td></tr> </tbody> </table> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+24V</td></tr> <tr><td>2</td><td>GND</td></tr> <tr><td>3</td><td>NC</td></tr> <tr><td>4</td><td>+SD</td></tr> <tr><td>5</td><td>-SD</td></tr> <tr><td>6</td><td>+RD</td></tr> <tr><td>7</td><td>-RD</td></tr> <tr><td>8</td><td>E<br/>Terminal station setting<br/>(120W resistor built in)</td></tr> </tbody> </table> | Pin No.     | Signal name | Cable color | 1 | -RD | Green | 2 | +RD | Yellow | 3 | - | - | 4 | -SD | Orange | 5 | - | - | 6 | - | - | 7 | +SD | Red | 8 | - | - | Pin No. | Signal name | 1 | +24V | 2 | GND | 3 | NC | 4 | +SD | 5 | -SD | 6 | +RD | 7 | -RD | 8 | E<br>Terminal station setting<br>(120W resistor built in) | RS422<br>24V DC type |
| Pin No.       |  |   | Signal name | Cable color |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 1             |  |   | -RD         | Green       |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 2             | +RD  | Yellow  |             |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 3             | -  | -   |             |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 4             | -SD  | Orange  |             |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 5             | -  | -   |             |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 6             | -  | -   |             |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 7             | +SD  | Red   |             |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 8             | -  | -   |             |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| Pin No.       | Signal name  |   |             |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 1             | +24V   |   |             |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 2             | GND  |   |             |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 3             | NC   |   |             |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 4             | +SD  |   |             |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 5             | -SD  |   |             |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 6             | +RD  |   |             |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 7             | -RD  |   |             |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 8             | E<br>Terminal station setting<br>(120W resistor built in)      |   |             |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| FX3U<br>FX3UC |  |   |             |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| FX3G<br>FX3GC |  |   |             |             |             |   |     |       |   |     |        |   |   |   |   |     |        |   |   |   |   |   |   |   |     |     |   |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |

## 1.2.2 Using an Adapter

| CPU           | Adapter                      | Wiring diagram  | GT Series |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                       |
|---------------|------------------------------|---|-----------|-------------|---|----|---|----|---|----|---|----|---|----|---|----|---|---|---|---|---|---|---------|-------------|---|---|---|---|---|----|---|----|---|----|---|----|---|----|---|----|-----------------------|
| FX2N<br>FX2NC | FX2N-232-BD                  | <p>Mitsubishi Electric PLC adapter side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>CD</td></tr> <tr><td>2</td><td>RD</td></tr> <tr><td>3</td><td>SD</td></tr> <tr><td>4</td><td>ER</td></tr> <tr><td>5</td><td>SG</td></tr> <tr><td>6</td><td>DR</td></tr> <tr><td>7</td><td>-</td></tr> <tr><td>8</td><td>-</td></tr> <tr><td>9</td><td>-</td></tr> </tbody> </table> <p style="text-align: center;">To power supply</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>FG</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> <p style="text-align: center;">GT side</p> | Pin No.   | Signal name | 1 | CD | 2 | RD | 3 | SD | 4 | ER | 5 | SG | 6 | DR | 7 | - | 8 | - | 9 | - | Pin No. | Signal name | 1 | + | 2 | - | 3 | FG | 4 | SD | 5 | RD | 6 | NC | 7 | NC | 8 | SG | RS232C<br>24V DC type |
| Pin No.       | Signal name                  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                       |
| 1             | CD                           |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                       |
| 2             | RD                           |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                       |
| 3             | SD                           |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                       |
| 4             | ER                           |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                       |
| 5             | SG                           |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                       |
| 6             | DR                           |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                       |
| 7             | -                            |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                       |
| 8             | -                            |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                       |
| 9             | -                            |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                       |
| Pin No.       | Signal name                  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                       |
| 1             | +                            |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                       |
| 2             | -                            |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                       |
| 3             | FG                           |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                       |
| 4             | SD                           |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                       |
| 5             | RD                           |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                       |
| 6             | NC                           |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                       |
| 7             | NC                           |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                       |
| 8             | SG                           |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                       |
| FX3U<br>FX3UC | FX3UC-232-BD<br>FX3U-232-ADP |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                       |
| FX3G          | FX3G-232-BD                  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |                       |

\* Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.

## 1.3 MELSEC-L (Serial communication) Series

---

### PLC model selection

Select " Mitsubishi MELSEC-Q (Serial communication) series".

### Usable devices

|               | Bit/Word Device          | No.               |
|---------------|--------------------------|-------------------|
| Bit Device    | Input Relay              | X000000-X001FFF   |
|               | Output Relay             | Y000000-Y001FFF   |
|               | Internal Relay           | M000000-M032767   |
|               | Latch relay              | L000000-L032767   |
|               | Annunciator              | F000000-F032767   |
|               | Edge relay               | V000000-V032767   |
|               | Link Relay               | B000000-B007FFF   |
|               | Special relay            | SM000000-SM002047 |
|               | Link special relay       | SB000000-SB0007FF |
|               | Step relay               | S000000-S008191   |
|               | Direct access input      | DX000000-DX001FFF |
|               | Direct access output     | DY000000-DY001FFF |
|               | Timer(contact)           | TS000000-TS023087 |
|               | Timer(coil)              | TC000000-TC023087 |
|               | Retentive timer(contact) | SS000000-SS023087 |
|               | Retentive timer(coil)    | SC000000-SC023087 |
|               | Counter(contact)         | CS000000-CS023087 |
| Counter(coil) | CC000000-CC023087        |                   |

| Bit/Word Device                      |                                 | No.               | Memo  |
|--------------------------------------|---------------------------------|-------------------|---|
| Word Device                          | Input Relay                     | X000000-X001FF    | Specify address expression every 0            |
|                                      | Output Relay                    | Y000000-Y001FF0   | Specify address expression every 0            |
|                                      | Internal Relay                  | M000000-M032752   | Specify address expression every 16 multiples |
|                                      | Latch relay                     | L000000-L032752   |   |
|                                      | Annunciator                     | F000000-F032752   |   |
|                                      | Edge relay                      | V000000-V032752   |   |
|                                      | Link Relay                      | B000000-B007FF0   | Specify address expression every 10           |
|                                      | Special relay                   | SM000000-SM002032 |   |
|                                      | Link special relay              | SB000000-SB0007F0 |   |
|                                      | Step relay                      | S000000-S008176   |   |
|                                      | Direct access input             | DX000000-DX001FFF |   |
|                                      | Direct access output            | DY000000-DY001FFF |   |
|                                      | Timer(current)                  | TN000000-TN023087 |   |
|                                      | Retentive timer(Current value)  | SN000000-SN023087 |   |
|                                      | Counter(current)                | CN000000-CN023087 |   |
|                                      | Data Register                   | D000000-D025983   |   |
|                                      | Link Register                   | W000000-W00657F   |   |
|                                      | Link special register           | SW000000-SW0007FF |   |
|                                      | Index register                  | Z0-Z15            |   |
|                                      | File Register(for block number) | R000000-R032767   |   |
| File register(for sequential number) | ZR000000-ZR1042431              |                   |   |
| Special register                     | SD000000-SD002047               |                   |   |



**Note:**

- The maximum value that can be set with the GT is described.
- The range of usable addresses differs depending on the model. For details, please consult the manual for the PLC you will use.
- When you use a serial communication module, you will set some parameters (Slot No., Module type, I/O points and Start address etc). Input and output relay from the start address for set points can't be used.
- Although "Mitsubishi MELSEC-A (Computer Link) Serie" can be used, the address range is the same as the one for "Mitsubishi MELSEC-A (Computer Link) Series".

### Communication Parameters Settings

The example of communication settings of GT and PLC is shown below.

#### Setting Values for GT (Set in the configuration setting of GTWIN.)

| Item         | Setting  |
|--------------|----------|
| PLC Unit No. | 0        |
| Baud Rate    | 19200bps |
| Data Length  | 8        |
| Stop Bits    | 1        |
| Parity       | Odd      |
| Sum Check    | Yes      |

\*GT series supports the format 4 of QnA compatible 4C frame.

#### Setting Values for PLC (Serial communication unit)

| Item                   | Setting                |
|------------------------|------------------------|
| Station Number         | 0                      |
| Baud Rate              | 19200bps               |
| Data Length            | 8                      |
| Stop Bits              | 1                      |
| Parity                 | Odd                    |
| Sum Check              | Yes                    |
| Interface              | RS232C                 |
| Communication protocol | MC protocol (Format 4) |
| Online change          | Enable                 |

### 1.3.1 MELSEC-L (Serial communication) series

| CPU                  | Serial communication module | Wiring diagram  | GT Series |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
|----------------------|-----------------------------|---|-----------|-------------|---|----|---|----|---|----|---|---------|---|----|---|---------|---|----|---|----|---|----|---------|-------------|---|---|---|---|---|----|---|----|---|----|---|----|---|----|---|----|-------------|
| L26CPU-BT<br>L02SCPU | LJ71C24                     | <p>Mitsubishi Electric PLC<br/>Serial communication side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>CD</td></tr> <tr><td>2</td><td>RD</td></tr> <tr><td>3</td><td>SD</td></tr> <tr><td>4</td><td>DTR(ER)</td></tr> <tr><td>5</td><td>SG</td></tr> <tr><td>6</td><td>SDR(DR)</td></tr> <tr><td>7</td><td>RS</td></tr> <tr><td>8</td><td>CS</td></tr> <tr><td>9</td><td>RI</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>FG</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> | Pin No.   | Signal name | 1 | CD | 2 | RD | 3 | SD | 4 | DTR(ER) | 5 | SG | 6 | SDR(DR) | 7 | RS | 8 | CS | 9 | RI | Pin No. | Signal name | 1 | + | 2 | - | 3 | FG | 4 | SD | 5 | RD | 6 | NC | 7 | NC | 8 | SG | RS232C type |
| Pin No.              | Signal name                 |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 1                    | CD                          |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 2                    | RD                          |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 3                    | SD                          |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 4                    | DTR(ER)                     |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 5                    | SG                          |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 6                    | SDR(DR)                     |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 7                    | RS                          |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 8                    | CS                          |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 9                    | RI                          |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| Pin No.              | Signal name                 |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 1                    | +                           |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 2                    | -                           |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 3                    | FG                          |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 4                    | SD                          |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 5                    | RD                          |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 6                    | NC                          |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 7                    | NC                          |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 8                    | SG                          |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |

\*1 Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.

### 1.3.2 MELSEC-L (Serial communication) series (RS422)

| CPU         | Serial communication module | Wiring diagram   | GT Series   |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
|-------------|-----------------------------|--|-------------|-----|-----|-----|-----|----|----|----|---------|-------------|---|---|---|---|---|-----------|---|-----|---|-----|---|-----|---|-----|---|---|----------------------|
| L02SCPU     | LJ71C24                     | <p>Mitsubishi Electric PLC<br/>Serial communication side</p> <table border="1"> <thead> <tr> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>SDA</td></tr> <tr><td>SDB</td></tr> <tr><td>RDA</td></tr> <tr><td>RDB</td></tr> <tr><td>SG</td></tr> <tr><td>FG</td></tr> <tr><td>FG</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>+SD</td></tr> <tr><td>5</td><td>-SD</td></tr> <tr><td>6</td><td>+RD</td></tr> <tr><td>7</td><td>-RD</td></tr> <tr><td>8</td><td>E</td></tr> </tbody> </table> | Signal name | SDA | SDB | RDA | RDB | SG | FG | FG | Pin No. | Signal name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | +SD | 5 | -SD | 6 | +RD | 7 | -RD | 8 | E | RS422/<br>RS485 type |
| Signal name |                             |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| SDA         |                             |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| SDB         |                             |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| RDA         |                             |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| RDB         |                             |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| SG          |                             |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| FG          |                             |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| FG          |                             |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| Pin No.     | Signal name                 |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| 1           | +                           |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| 2           | -                           |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| 3           | NC(or FG)                   |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| 4           | +SD                         |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| 5           | -SD                         |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| 6           | +RD                         |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| 7           | -RD                         |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| 8           | E                           |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |



## 1.4 MELSEC-L (CPU) Series

---

### PLC model selection

Select " Mitsubishi MELSEC-Q (Serial communication) series".

### Usable devices

|               | Bit/Word Device          | No.               |
|---------------|--------------------------|-------------------|
| Bit Device    | Input Relay              | X000000-X001FFF   |
|               | Output Relay             | Y000000-Y001FFF   |
|               | Internal Relay           | M000000-M032767   |
|               | Latch relay              | L000000-L032767   |
|               | Annunciator              | F000000-F032767   |
|               | Edge relay               | V000000-V032767   |
|               | Link Relay               | B000000-B007FFF   |
|               | Special relay            | SM000000-SM002047 |
|               | Link special relay       | SB000000-SB0007FF |
|               | Step relay               | S000000-S008191   |
|               | Direct access input      | DX000000-DX001FFF |
|               | Direct access output     | DY000000-DY001FFF |
|               | Timer(contact)           | TS000000-TS023087 |
|               | Timer(coil)              | TC000000-TC023087 |
|               | Retentive timer(contact) | SS000000-SS023087 |
|               | Retentive timer(coil)    | SC000000-SC023087 |
|               | Counter(contact)         | CS000000-CS023087 |
| Counter(coil) | CC000000-CC023087        |                   |

| Bit/Word Device                      |                                 | No.               | Memo  |
|--------------------------------------|---------------------------------|-------------------|---|
| Word Device                          | Input Relay                     | X000000-X001FF    | Specify address expression every 0            |
|                                      | Output Relay                    | Y000000-Y001FF0   | Specify address expression every 0            |
|                                      | Internal Relay                  | M000000-M032752   | Specify address expression every 16 multiples |
|                                      | Latch relay                     | L000000-L032752   |   |
|                                      | Annunciator                     | F000000-F032752   |   |
|                                      | Edge relay                      | V000000-V032752   |   |
|                                      | Link Relay                      | B000000-B007FF0   | Specify address expression every 10           |
|                                      | Special relay                   | SM000000-SM002032 |   |
|                                      | Link special relay              | SB000000-SB0007F0 |   |
|                                      | Step relay                      | S000000-S008176   |   |
|                                      | Direct access input             | DX000000-DX001FFF |   |
|                                      | Direct access output            | DY000000-DY001FFF |   |
|                                      | Timer(current)                  | TN000000-TN023087 |   |
|                                      | Retentive timer(Current value)  | SN000000-SN023087 |   |
|                                      | Counter(current)                | CN000000-CN023087 |   |
|                                      | Data Register                   | D000000-D025983   |   |
|                                      | Link Register                   | W000000-W00657F   |   |
|                                      | Link special register           | SW000000-SW0007FF |   |
|                                      | Index register                  | Z0-Z15            |   |
|                                      | File Register(for block number) | R000000-R032767   |   |
| File register(for sequential number) | ZR000000-ZR1042431              |                   |   |
| Special register                     | SD000000-SD002047               |                   |   |



**Note:**

- The maximum value that can be set with the GT is described.
- The range of usable addresses differs depending on the model. For details, please consult the manual for the PLC you will use.
- When you use a serial communication module, you will set some parameters (Slot No., Module type, I/O points and Start address etc). Input and output relay from the start address for set points can't be used.
- Although "Mitsubishi MELSEC-A (Computer Link) Serie" can be used, the address range is the same as the one for "Mitsubishi MELSEC-A (Computer Link) Series".

## Communication Parameters Settings

The example of communication settings of GT and PLC is shown below.

### Setting Values for GT (Set in the configuration setting of GTWIN.)

| Item         | Setting  |
|--------------|----------|
| PLC Unit No. | 0        |
| Baud Rate    | 19200bps |
| Data Length  | 8        |
| Stop Bits    | 1        |
| Parity       | Odd      |
| Sum Check    | Yes      |

\*GT series supports the format 4 of QnA compatible 4C frame.

### Setting Values for PLC (Serial communication module)

| Item                     | Setting   |
|--------------------------|-----------|
| Station Number           | 0         |
| Baud Rate                | 19.2 Kbps |
| Data Length              | 8         |
| Stop Bits                | 1         |
| Parity                   | Odd       |
| Sum Check                | Check     |
| Interface                | RS232C    |
| Use Serial Communication | Check     |
| Online change            | Enable    |

## 1.4.1 MELSEC-L (CPU) Series

| CPU     | Link I/F                | Wiring diagram   | GT Series |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
|---------|-------------------------|--|-----------|-------------|---|----|---|----|---|----|---|---|---|----|---|----|---------|-------------|---|---|---|---|---|----|---|----|---|----|---|----|---|----|---|----|-------------|
| L02SCPU | RS232C port on CPU unit | <p>Mitsubishi Electric<br/>PLC side<br/>Mini-Din 6-pin</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>RD</td> </tr> <tr> <td>2</td> <td>SD</td> </tr> <tr> <td>3</td> <td>SG</td> </tr> <tr> <td>4</td> <td>-</td> </tr> <tr> <td>5</td> <td>DR</td> </tr> <tr> <td>6</td> <td>ER</td> </tr> </tbody> </table> <p>To power supply</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>+</td> </tr> <tr> <td>2</td> <td>-</td> </tr> <tr> <td>3</td> <td>FG</td> </tr> <tr> <td>4</td> <td>SD</td> </tr> <tr> <td>5</td> <td>RD</td> </tr> <tr> <td>6</td> <td>RS</td> </tr> <tr> <td>7</td> <td>CS</td> </tr> <tr> <td>8</td> <td>SG</td> </tr> </tbody> </table> | Pin No.   | Signal name | 1 | RD | 2 | SD | 3 | SG | 4 | - | 5 | DR | 6 | ER | Pin No. | Signal name | 1 | + | 2 | - | 3 | FG | 4 | SD | 5 | RD | 6 | RS | 7 | CS | 8 | SG | RS232C type |
| Pin No. | Signal name             |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 1       | RD                      |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 2       | SD                      |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 3       | SG                      |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 4       | -                       |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 5       | DR                      |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 6       | ER                      |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| Pin No. | Signal name             |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 1       | +                       |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 2       | -                       |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 3       | FG                      |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 4       | SD                      |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 5       | RD                      |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 6       | RS                      |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 7       | CS                      |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 8       | SG                      |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |

## 1.5 MELSEC-Q (Serial communication) Series

---

### PLC model selection

Select " Mitsubishi MELSEC-Q (Serial communication) Series".

\*When directly connecting to the RS232C port of Q00CPU or Q01CPU

Select "Mitsubishi MELSEC-Q (Serial communication) Series" for the PLC model.

### Usable devices

|            | Bit/Word Device          | No.               |
|------------|--------------------------|-------------------|
| Bit Device | Input Relay              | X000000-X001FFF   |
|            | Output Relay             | Y000000-Y001FFF   |
|            | Internal Relay           | M000000-M032767   |
|            | Latch relay              | L000000-L032767   |
|            | Annunciator              | F000000-F032767   |
|            | Edge relay               | V000000-V032767   |
|            | Link Relay               | B000000-B007FFF   |
|            | Special relay            | SM000000-SM002047 |
|            | Link special relay       | SB000000-SB0007FF |
|            | Step relay               | S000000-S008191   |
|            | Direct access input      | DX000000-DX001FFF |
|            | Direct access output     | DY000000-DY001FFF |
|            | Timer(contact)           | TS000000-TS023087 |
|            | Timer(coil)              | TC000000-TC023087 |
|            | Retentive timer(contact) | SS000000-SS023087 |
|            | Retentive timer(coil)    | SC000000-SC023087 |
|            | Counter(contact)         | CS000000-CS023087 |
|            | Counter(coil)            | CC000000-CC023087 |

|                                      | Bit/Word Device                 | No.               | Memo  |
|--------------------------------------|---------------------------------|-------------------|---|
| Word Device                          | Input Relay                     | X000000-X001FF    | Specify address expression every 0            |
|                                      | Output Relay                    | Y000000-Y001FF0   | Specify address expression every 0            |
|                                      | Internal Relay                  | M000000-M032752   | Specify address expression every 16 multiples |
|                                      | Latch relay                     | L000000-L032752   |   |
|                                      | Annunciator                     | F000000-F032752   |   |
|                                      | Edge relay                      | V000000-V032752   |   |
|                                      | Link Relay                      | B000000-B007FF0   | Specify address expression every 10           |
|                                      | Special relay                   | SM000000-SM002032 |   |
|                                      | Link special relay              | SB000000-SB0007F0 |   |
|                                      | Step relay                      | S000000-S008176   |   |
|                                      | Direct access input             | DX000000-DX001FFF |   |
|                                      | Direct access output            | DY000000-DY001FFF |   |
|                                      | Timer(current)                  | TN000000-TN023087 |   |
|                                      | Retentive timer(Current value)  | SN000000-SN023087 |   |
|                                      | Counter(current)                | CN000000-CN023087 |   |
|                                      | Data Register                   | D000000-D025983   |   |
|                                      | Link Register                   | W000000-W00657F   |   |
|                                      | Link special register           | SW000000-SW0007FF |   |
|                                      | Index register                  | Z0-Z15            |   |
|                                      | File Register(for block number) | R000000-R032767   |   |
| File register(for sequential number) | ZR000000-ZR1042431              |                   |   |
| Special register                     | SD000000-SD002047               |                   |   |



**Note:**

- The maximum value that can be set with the GT is described.
- The range of usable addresses differs depending on the model. For details, please consult the manual for the PLC you will use.
- When you use a serial communication module, you will set some parameters (Slot No., Module type, I/O points and Start address etc). Input and output relay from the start address for set points can't be used.
- Although "Mitsubishi MELSEC-A (Computer Link) Serie" can be used, the address range is the same as the one for "Mitsubishi MELSEC-A (Computer Link) Series".

### Communication Parameters Settings

The example of communication settings of GT and PLC is shown below.

#### Setting Values for GT (Set in the configuration setting of GTWIN.)

| Item         | Setting  |
|--------------|----------|
| PLC Unit No. | 0        |
| Baud Rate    | 19200bps |
| Data Length  | 8        |
| Stop Bits    | 1        |
| Parity       | Odd      |
| Sum Check    | Yes      |

\*GT series supports the format 4 of QnA compatible 4C frame.

#### Setting Values for PLC (Serial communication module)

| Item                   | Setting  |
|------------------------|----------|
| Station Number         | 0        |
| Baud Rate              | 19200bps |
| Data Length            | 8        |
| Stop Bits              | 1        |
| Parity                 | Odd      |
| Sum Check              | Yes      |
| Interface              | RS232C   |
| Communication protocol | Format 4 |

### 1.5.1 MELSEC-Q (Serial communication) series (RS232C)

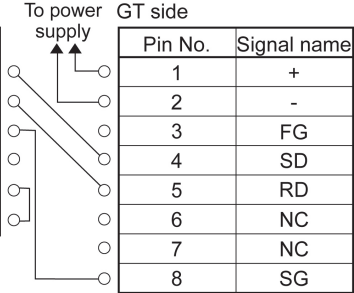
| CPU   | Serial communication module           | Wiring diagram  | GT Series |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
|---|---------------------------------------|---|-----------|-------------|---|----|---|----|---|----|---|---------|---|----|---|---------|---|----|---|----|---|----|---------|-------------|---|---|---|---|---|----|---|----|---|----|---|----|---|----|---|----|-------------|
| Q02CPU<br>Q02HCPU<br>Q06HCPU<br>Q12HCPU<br>Q25HCPU<br>Q00CPU<br>Q00HCPU<br>Q01CPU<br>Q00JCPU<br>Q26UDHCPU | QJ71C24N<br>QJ71C24-R2<br>QJ71C24N-R2 | <p>Mitsubishi Electric PLC<br/>Serial communication side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>CD</td></tr> <tr><td>2</td><td>RD</td></tr> <tr><td>3</td><td>SD</td></tr> <tr><td>4</td><td>DTR(ER)</td></tr> <tr><td>5</td><td>SG</td></tr> <tr><td>6</td><td>SDR(DR)</td></tr> <tr><td>7</td><td>RS</td></tr> <tr><td>8</td><td>CS</td></tr> <tr><td>9</td><td>RI</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>FG</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> | Pin No.   | Signal name | 1 | CD | 2 | RD | 3 | SD | 4 | DTR(ER) | 5 | SG | 6 | SDR(DR) | 7 | RS | 8 | CS | 9 | RI | Pin No. | Signal name | 1 | + | 2 | - | 3 | FG | 4 | SD | 5 | RD | 6 | NC | 7 | NC | 8 | SG | RS232C type |
| Pin No.   | Signal name                           |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 1   | CD                                    |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 2   | RD                                    |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 3   | SD                                    |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 4   | DTR(ER)                               |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 5   | SG                                    |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 6   | SDR(DR)                               |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 7   | RS                                    |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 8   | CS                                    |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 9   | RI                                    |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| Pin No.   | Signal name                           |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 1   | +                                     |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 2   | -                                     |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 3   | FG                                    |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 4   | SD                                    |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 5   | RD                                    |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 6   | NC                                    |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 7   | NC                                    |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 8   | SG                                    |   |           |             |   |    |   |    |   |    |   |         |   |    |   |         |   |    |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |

\*1 Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.

### 1.5.2 MELSEC-Q (Serial communication) series (RS422)

| CPU         | Serial communication module | Wiring diagram   | GT Series   |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
|-------------|-----------------------------|--|-------------|-----|-----|-----|-----|----|----|----|---------|-------------|---|---|---|---|---|-----------|---|-----|---|-----|---|-----|---|-----|---|---|----------------------|
| Q26UDHCPU   | QJ71C24N                    | <p>Mitsubishi Electric PLC<br/>Serial communication side</p> <table border="1"> <thead> <tr> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>SDA</td></tr> <tr><td>SDB</td></tr> <tr><td>RDA</td></tr> <tr><td>RDB</td></tr> <tr><td>SG</td></tr> <tr><td>FG</td></tr> <tr><td>FG</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>+SD</td></tr> <tr><td>5</td><td>-SD</td></tr> <tr><td>6</td><td>+RD</td></tr> <tr><td>7</td><td>-RD</td></tr> <tr><td>8</td><td>E</td></tr> </tbody> </table> | Signal name | SDA | SDB | RDA | RDB | SG | FG | FG | Pin No. | Signal name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | +SD | 5 | -SD | 6 | +RD | 7 | -RD | 8 | E | RS422/<br>RS485 type |
| Signal name |                             |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| SDA         |                             |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| SDB         |                             |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| RDA         |                             |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| RDB         |                             |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| SG          |                             |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| FG          |                             |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| FG          |                             |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| Pin No.     | Signal name                 |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| 1           | +                           |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| 2           | -                           |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| 3           | NC(or FG)                   |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| 4           | +SD                         |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| 5           | -SD                         |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| 6           | +RD                         |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| 7           | -RD                         |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |
| 8           | E                           |  |             |     |     |     |     |    |    |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                      |

### 1.5.3 When directly connecting to the RS232C port of Q00CPU/ Q00UJCPU/ Q01CPU

| CPU                          | Link I/F                   | Wiring diagram   | GT Series |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
|------------------------------|----------------------------|--|-----------|-------------|---|----|---|----|---|----|---|---|---|----|---|----|---------|-------------|---|---|---|---|---|----|---|----|---|----|---|----|---|----|---|----|-------------|
| Q00CPU<br>Q00UJCPU<br>Q01CPU | RS232C port on<br>CPU unit | <p>Mitsubishi Electric<br/>PLC side<br/>Mini-Din 6-pin</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>RD</td></tr> <tr><td>2</td><td>SD</td></tr> <tr><td>3</td><td>SG</td></tr> <tr><td>4</td><td>-</td></tr> <tr><td>5</td><td>DR</td></tr> <tr><td>6</td><td>ER</td></tr> </tbody> </table>  <p>To power supply</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>FG</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> | Pin No.   | Signal name | 1 | RD | 2 | SD | 3 | SG | 4 | - | 5 | DR | 6 | ER | Pin No. | Signal name | 1 | + | 2 | - | 3 | FG | 4 | SD | 5 | RD | 6 | NC | 7 | NC | 8 | SG | RS232C type |
| Pin No.                      | Signal name                |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 1                            | RD                         |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 2                            | SD                         |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 3                            | SG                         |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 4                            | -                          |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 5                            | DR                         |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 6                            | ER                         |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| Pin No.                      | Signal name                |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 1                            | +                          |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 2                            | -                          |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 3                            | FG                         |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 4                            | SD                         |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 5                            | RD                         |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 6                            | NC                         |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 7                            | NC                         |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 8                            | SG                         |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |

\*1 Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.



## 1.6 MELSEC-Q (CPU) Series

### PLC model selection

Select "MELSEC-Q (CPU) series".

### Usable devices

|                                      | Bit/Word Device                 | No.               | Memo  |
|--------------------------------------|---------------------------------|-------------------|---|
| Bit Device                           | Input Relay                     | X000000-X001FFF   |   |
|                                      | Output Relay                    | Y000000-Y001FFF   |   |
|                                      | Internal Relay                  | M000000-M032767   |   |
|                                      | Latch relay                     | L000000-L032767   |   |
|                                      | Annunciator                     | F000000-F032767   |   |
|                                      | Edge relay                      | V000000-V032767   |   |
|                                      | Link Relay                      | B000000-B007FFF   |   |
|                                      | Special relay                   | SM000000-SM002047 |   |
|                                      | Link special relay              | SB000000-SB0007FF |   |
|                                      | Step relay                      | S000000-S008191   |   |
|                                      | Timer(contact)                  | TS000000-TS023087 |   |
|                                      | Timer(coil)                     | TC000000-TC023087 |   |
|                                      | Retentive timer(contact)        | SS000000-SS023087 |   |
|                                      | Retentive timer(coil)           | SC000000-SC023087 |   |
|                                      | Counter(contact)                | CS000000-CS023087 |   |
|                                      | Counter(coil)                   | CC000000-CC023087 |   |
| Word Device                          | Input Relay                     | X000000-X001FF0   | Specify address expression every 0            |
|                                      | Output Relay                    | Y000000-Y001FF0   | Specify address expression every 0            |
|                                      | Internal Relay                  | M000000-M032752   | Specify address expression every 16 multiples |
|                                      | Latch relay                     | L000000-L032752   |   |
|                                      | Annunciator                     | F000000-F032752   |   |
|                                      | Edge relay                      | V000000-V032752   |   |
|                                      | Link Relay                      | B000000-B007FF0   | Specify address expression every 0            |
|                                      | Special relay                   | SM000000-SM002032 |   |
|                                      | Link special relay              | SB000000-SB0007F0 |   |
|                                      | Step relay                      | S000000-S008176   |   |
|                                      | Timer(current)                  | TN000000-TN023087 |   |
|                                      | Retentive timer(Current value)  | SN000000-SN023087 |   |
|                                      | Counter(current)                | CN000000-CN023087 |   |
|                                      | Data Register                   | D000000-D025983   |   |
|                                      | Link Register                   | W000000-W00657F   |   |
|                                      | Link special register           | SW000000-SW0007FF |   |
|                                      | File Register(for block number) | R000000-R032767   |   |
| File register(for sequential number) | ZR000000-ZR1042431              |                   |   |
| Special register                     | SD000000-SD002047               |                   |   |

### Communication Parameters Settings

The example of communication settings of GT and PLC is shown below.  
Setting Values for GT (Set in the configuration setting of GTWIN.)

| Item         | Setting  |
|--------------|----------|
| PLC Unit No. | 0        |
| Baud Rate    | 19200bps |
| Data Length  | 8        |
| Stop Bits    | 1        |
| Parity       | Odd      |

The communication condition setting at the PLC side is not required.  
Uncheck the box of "Use Serial Communication".

### 1.6.1 MELSEC-Q (CPU) Series

| CPU  | Link I/F                      | Wiring diagram   | GT Series |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
|--|-------------------------------|--|-----------|-------------|---|----|---|----|---|----|---|---|---|----|---|----|---------|-------------|---|---|---|---|---|----|---|----|---|----|---|----|---|----|---|----|-------------|
| Q02CPU<br>Q02HCPU<br>Q06HCPU<br>Q12HCPU<br>Q25HCPU | RS232C<br>port on<br>CPU unit | <p>Mitsubishi Electric<br/>PLC side<br/>Mini-Din 6-pin</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>RD</td></tr> <tr><td>2</td><td>SD</td></tr> <tr><td>3</td><td>SG</td></tr> <tr><td>4</td><td>-</td></tr> <tr><td>5</td><td>DR</td></tr> <tr><td>6</td><td>ER</td></tr> </tbody> </table> <p>To power supply</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>FG</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>RS</td></tr> <tr><td>7</td><td>CS</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> | Pin No.   | Signal name | 1 | RD | 2 | SD | 3 | SG | 4 | - | 5 | DR | 6 | ER | Pin No. | Signal name | 1 | + | 2 | - | 3 | FG | 4 | SD | 5 | RD | 6 | RS | 7 | CS | 8 | SG | RS232C type |
| Pin No.  | Signal name                   |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 1  | RD                            |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 2  | SD                            |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 3  | SG                            |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 4  | -                             |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 5  | DR                            |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 6  | ER                            |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| Pin No.  | Signal name                   |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 1  | +                             |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 2  | -                             |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 3  | FG                            |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 4  | SD                            |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 5  | RD                            |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 6  | RS                            |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 7  | CS                            |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 8  | SG                            |  |           |             |   |    |   |    |   |    |   |   |   |    |   |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |

## 1.7 MELSEC-A (Computer Link) Series

### PLC model selection

Select "Mitsubishi MELSEC-A (Computer Link) Series".

### Usable devices

| Bit/Word Device |                  | No.           | Memo  |
|-----------------|------------------|---------------|---|
| Bit Device      | Input Relay      | X0000-X07FF   |   |
|                 | Output Relay     | Y0000-Y07FF   |   |
|                 | Internal Relay   | M0000-M2047   |   |
|                 | Link Relay       | B0000-B03FF   |   |
|                 | Timer(contact)   | TS0000-TS0255 |   |
|                 | Counter(contact) | CS0000-CS0255 |   |
| Word Device     | Input Relay      | X0000-X07F0   | Specify address expression every 0            |
|                 | Output Relay     | Y0000-Y07F0   | Specify address expression every 0            |
|                 | Internal Relay   | M0000-M2032   | Specify address expression every 16 multiples |
|                 | Link Relay       | B0000-B03F0   | Specify address expression every 0            |
|                 | Timer(current)   | TN0000-TN0255 |   |
|                 | Counter(current) | CN0000-CN0255 |   |
|                 | Data Register    | D0000-D1023   |   |
|                 | Link Register    | W0000-W03FF   |   |
| File Register   | R0000-R8191      |               |   |



#### Note:

- The maximum value that can be specified on GT is mentioned.
- The usable range of addresses varies depending on PLC models. For the details, refer to the manual for the PLC in use.

### Communication Parameters Settings

The example of communication settings of GT and PLC is shown below.

Setting Values for GT (Set in the configuration setting of GTWIN.)

| Item         | Setting  |
|--------------|----------|
| PLC Unit No. | 0        |
| Baud Rate    | 19200bps |
| Data Length  | 7        |
| Stop Bits    | 1        |
| Parity       | Even     |

Setting Values for PLC (Computer Link)

| Item           | Setting  |
|----------------|----------|
| Station Number | 0        |
| Baud Rate      | 19200bps |
| Data Length    | 7        |
| Stop Bits      | 1        |
| Parity         | Even     |
| Sum Check      | Yes      |
| Interface      | RS232C   |
| Mode Setup     | 4        |

## 1.7.1 MELSEC-A (Computer Link) Series

| CPU                  | Computer Link module  | Wiring diagram  | GT Series |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
|----------------------|---|---|-----------|-------------|---|----|---|----|---|----|---|----|---|----|---|----|---|----|---|----|----|----|---------|-------------|---|---|---|---|---|----|---|----|---|----|---|----|---|----|---|----|-------------|
| A1N<br>A2N<br>A3N    | AJ71C24<br>AJ71C24-S3<br>AJ71C24-S6<br>AJ71C24-S8<br>AJ71UC24<br>(Only A2N) | <p>Mitsubishi Electric<br/>Computer Link side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>FG</td></tr> <tr><td>2</td><td>SD</td></tr> <tr><td>3</td><td>RD</td></tr> <tr><td>4</td><td>RS</td></tr> <tr><td>5</td><td>CS</td></tr> <tr><td>6</td><td>DR</td></tr> <tr><td>7</td><td>SG</td></tr> <tr><td>8</td><td>CD</td></tr> <tr><td>20</td><td>ER</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>FG</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> | Pin No.   | Signal name | 1 | FG | 2 | SD | 3 | RD | 4 | RS | 5 | CS | 6 | DR | 7 | SG | 8 | CD | 20 | ER | Pin No. | Signal name | 1 | + | 2 | - | 3 | FG | 4 | SD | 5 | RD | 6 | NC | 7 | NC | 8 | SG | RS232C type |
| Pin No.              | Signal name   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 1                    | FG  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 2                    | SD  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 3                    | RD  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 4                    | RS  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 5                    | CS  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 6                    | DR  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 7                    | SG  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 8                    | CD  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 20                   | ER  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| Pin No.              | Signal name   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 1                    | +   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 2                    | -   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 3                    | FG  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 4                    | SD  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 5                    | RD  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 6                    | NC  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 7                    | NC  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 8                    | SG  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| A1S                  | A1SJ71C24-R2<br>A1SJ71UC24-R2   | <p>Mitsubishi Electric<br/>Computer Link side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>CD</td></tr> <tr><td>2</td><td>RD</td></tr> <tr><td>3</td><td>SD</td></tr> <tr><td>4</td><td>ER</td></tr> <tr><td>5</td><td>SG</td></tr> <tr><td>6</td><td>DR</td></tr> <tr><td>7</td><td>RS</td></tr> <tr><td>8</td><td>CS</td></tr> <tr><td>9</td><td>-</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>FG</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table>   | Pin No.   | Signal name | 1 | CD | 2 | RD | 3 | SD | 4 | ER | 5 | SG | 6 | DR | 7 | RS | 8 | CS | 9  | -  | Pin No. | Signal name | 1 | + | 2 | - | 3 | FG | 4 | SD | 5 | RD | 6 | NC | 7 | NC | 8 | SG |             |
| Pin No.              | Signal name   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 1                    | CD  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 2                    | RD  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 3                    | SD  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 4                    | ER  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 5                    | SG  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 6                    | DR  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 7                    | RS  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 8                    | CS  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 9                    | -   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| Pin No.              | Signal name   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 1                    | +   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 2                    | -   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 3                    | FG  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 4                    | SD  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 5                    | RD  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 6                    | NC  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 7                    | NC  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| 8                    | SG  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| A1SJ<br>A2SH<br>A1SH | A1SJ71UC24-R2   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |
| A2CCPU24             | RS232C port on<br>CPU unit  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |    |    |         |             |   |   |   |   |   |    |   |    |   |    |   |    |   |    |   |    |             |

\* Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.

# Chapter 2

---

## Connection With Omron PLCs

## 2.1 Omron SYSMAC-C Series (C/α/CV/CP1)

### PLC model selection

Select "Omron SYSMAC-Cseries."

### Usable devices

|             | Bit/Word Device   | No.             |
|-------------|---|-----------------|
| Bit Device  | I/O Relay<br>Internal Hold Relay<br>Special Auxiliary Relay | 000000-614315   |
|             | Data link Relay   | LR00000-LR19915 |
|             | Auxiliary Memory Relay                                      | AR00000-AR95915 |
|             | Hold Relay  | HR00000-HR51115 |
|             | Timer(contact)  | TIM0000-TIM4095 |
|             | Counter(contact)  | CNT0000-CNT4095 |
| Word Device | I/O Relay<br>Internal Hold Relay<br>Special Auxiliary Relay | 0000-6143       |
|             | Data link Relay   | LR000-LR199     |
|             | Auxiliary Memory Relay                                      | AR000-AR959     |
|             | Hold Relay  | HR000-HR511     |
|             | Timer(current)  | TIM0000-TIM4095 |
|             | Counter(current)  | CNT0000-CNT4095 |
|             | Data Memory   | DM0000-DM9999   |

\*For details, please consult the manual for the PLC you will use.



#### Note:

- The maximum value that can be set with the GT is described.
- The range of usable addresses differs depending on the model. For details, please consult the manual for the PLC you will use.
- It is used with CS1 or CJ1, but the timer (TIM) and counter (CNT) cannot be used.  
Set the PLC model to "Omron SYSMAC-CS/SJ Series" for using it.

### Communication Parameters Settings

The example of communication settings of GT and PLC is shown below.

#### Setting Values for GT (Set in the configuration setting of GTWIN.)

| Item      | Setting  |
|-----------|----------|
| Baud Rate | 19200bps |
| Data Bits | 7        |
| Stop Bits | 1        |
| Parity    | Even     |

#### Setting Values for PLC

| Item                  | Setting           |
|-----------------------|-------------------|
| Mode of PLC           | Monitor Mode      |
| Mode Selection        | Higher Order Link |
| Baud Rate             | 19200bps          |
| Data Bits             | 7                 |
| Stop Bits             | 1                 |
| Parity                | Even              |
| Station Number        | 0                 |
| CTS Setup             | Normally ON       |
| DC +5V power supply   | No                |
| Type of Communication | RS232C*           |

\*Models that allow RS232C or RS485 communication with the adapter or unit are available.

For almost all models the PLC communication setting method is as follows. However, differences may arise depending on the model. For details, please consult the manual for the PLC you will use when making the settings.

**To communicate using the RS232C port of the CPU unit**

Set the system area as follows.

| Address | Value set  | Setting  |
|---------|------------|--|
| DM6600  | 0201 (HEX) | Setting of PLC main unit mode (monitor mode)                         |
| DM6645  | 0001 (HEX) | Mode setting of RS232C port (high link)                              |
| DM6646  | 0004 (HEX) | Setting of communication conditions (19200 bps, 7 bits, even, 1 bit) |
| DM6648  | 0000 (HEX) | Setting of device number (Device No. 0)                              |

**To communicate using the communication port**

Set the system area as follows.

**To communicate with port A**

| Address | Value set  | Setting  |
|---------|------------|--|
| DM6600  | 0201 (HEX) | Setting of PLC main unit mode (monitor mode)                         |
| DM6550  | 0001 (HEX) | Mode setting of RS232C port (high link)                              |
| DM6551  | 0004 (HEX) | Setting of communication conditions (19200 bps, 7 bits, even, 1 bit) |

**To communicate with port B**

| Address | Value set  | Setting  |
|---------|------------|--|
| DM6600  | 0201 (HEX) | Setting of PLC main unit mode (monitor mode)                         |
| DM6555  | 0001 (HEX) | Mode setting of RS232C port (high link)                              |
| DM6556  | 0004 (HEX) | Setting of communication conditions (19200 bps, 7 bits, even, 1 bit) |

**To communicate using the high link I/F unit**

Make sure set the CPU mode to monitor mode.

Use the DIP switch or rotary switch on the link I/F unit to make settings such as the baud rate.

For details please refer to the manual for the unit your are using.

**To communicate using the peripheral port**

Set the system area as follows.

| Address | Value set  | Setting  |
|---------|------------|--|
| DM6600  | 0201 (HEX) | Setting of PLC main unit mode (monitor mode)                         |
| DM6550  | 0001 (HEX) | Mode setting of RS232C port (high link)                              |
| DM6551  | 0004 (HEX) | Setting of communication conditions (19200 bps, 7 bits, even, 1 bit) |



## 2.1.1 SYSMAC C series (using link interface) (RS232C)

| CPU  | Link I/F  | Wiring diagram   | GT series |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
|--|---|--|-----------|-------------|---|----|---|----|---|----|---|----|---|----|---|---|---|----|---|---|----|----|---------|-------------|---|---|---|---|---|-----------|---|----|---|----|---|----|---|----|---|----|-------------|
| C200H                                      | C200H-LK201 *1<br>C120-LK201-V1 *2                    | <p>Omron PLC side<br/>D-sub 25-pin</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>FG</td></tr> <tr><td>2</td><td>SD</td></tr> <tr><td>3</td><td>RD</td></tr> <tr><td>4</td><td>RS</td></tr> <tr><td>5</td><td>CS</td></tr> <tr><td>6</td><td>-</td></tr> <tr><td>7</td><td>SG</td></tr> <tr><td>:</td><td></td></tr> <tr><td>20</td><td>ER</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> | Pin No.   | Signal name | 1 | FG | 2 | SD | 3 | RD | 4 | RS | 5 | CS | 6 | - | 7 | SG | : |   | 20 | ER | Pin No. | Signal name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | SD | 5 | RD | 6 | NC | 7 | NC | 8 | SG | RS232C type |
| Pin No.                                    | Signal name   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | FG  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | SD  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | RD  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | RS  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | CS  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | -   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | SG  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| :  |   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 20   | ER  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| Pin No.                                    | Signal name   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | +   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | -   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | NC(or FG)   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | SD  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | RD  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | NC  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | NC  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8  | SG  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| C200HS                                     | C200H-LK201 *1<br>C120-LK201-V1 *2                    | <p>Omron PLC side<br/>D-sub 25-pin</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>FG</td></tr> <tr><td>2</td><td>SD</td></tr> <tr><td>3</td><td>RD</td></tr> <tr><td>4</td><td>RS</td></tr> <tr><td>5</td><td>CS</td></tr> <tr><td>6</td><td>-</td></tr> <tr><td>7</td><td>SG</td></tr> <tr><td>:</td><td></td></tr> <tr><td>20</td><td>ER</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> | Pin No.   | Signal name | 1 | FG | 2 | SD | 3 | RD | 4 | RS | 5 | CS | 6 | - | 7 | SG | : |   | 20 | ER | Pin No. | Signal name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | SD | 5 | RD | 6 | NC | 7 | NC | 8 | SG |             |
| Pin No.                                    | Signal name   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | FG  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | SD  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | RD  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | RS  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | CS  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | -   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | SG  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| :  |   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 20   | ER  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| Pin No.                                    | Signal name   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | +   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | -   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | NC(or FG)   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | SD  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | RD  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | NC  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | NC  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8  | SG  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
|  | Link interface on the CPU unit *3                     | <p>Omron PLC side<br/>D-sub 9-pin</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>FG</td></tr> <tr><td>2</td><td>SD</td></tr> <tr><td>3</td><td>RD</td></tr> <tr><td>4</td><td>RS</td></tr> <tr><td>5</td><td>CS</td></tr> <tr><td>6</td><td>-</td></tr> <tr><td>7</td><td>-</td></tr> <tr><td>8</td><td>-</td></tr> <tr><td>9</td><td>SG</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal Name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table>   | Pin No.   | Signal name | 1 | FG | 2 | SD | 3 | RD | 4 | RS | 5 | CS | 6 | - | 7 | -  | 8 | - | 9  | SG | Pin No. | Signal Name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | SD | 5 | RD | 6 | NC | 7 | NC | 8 | SG |             |
| Pin No.                                    | Signal name   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | FG  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | SD  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | RD  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | RS  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | CS  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | -   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | -   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8  | -   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 9  | SG  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| Pin No.                                    | Signal Name   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | +   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | -   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | NC(or FG)   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | SD  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | RD  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | NC  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | NC  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8  | SG  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| C500<br>C500F<br>C1000H<br>C2000<br>C2000H | C120-LK201-V1 *2<br>C500-LK201-V1 *1<br>C500-LK203 *1 | <p>Omron PLC side<br/>D-sub 25-pin</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>FG</td></tr> <tr><td>2</td><td>SD</td></tr> <tr><td>3</td><td>RD</td></tr> <tr><td>4</td><td>RS</td></tr> <tr><td>5</td><td>CS</td></tr> <tr><td>6</td><td>-</td></tr> <tr><td>7</td><td>SG</td></tr> <tr><td>:</td><td></td></tr> <tr><td>20</td><td>ER</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> | Pin No.   | Signal name | 1 | FG | 2 | SD | 3 | RD | 4 | RS | 5 | CS | 6 | - | 7 | SG | : |   | 20 | ER | Pin No. | Signal name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | SD | 5 | RD | 6 | NC | 7 | NC | 8 | SG |             |
| Pin No.                                    | Signal name   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | FG  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | SD  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | RD  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | RS  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | CS  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | -   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | SG  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| :  |   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 20   | ER  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| Pin No.                                    | Signal name   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | +   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | -   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | NC(or FG)   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | SD  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | RD  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | NC  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | NC  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8  | SG  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| C1000HF                                    | C500-LK203 *1   | <p>Omron PLC side<br/>D-sub 25-pin</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>FG</td></tr> <tr><td>2</td><td>SD</td></tr> <tr><td>3</td><td>RD</td></tr> <tr><td>4</td><td>RS</td></tr> <tr><td>5</td><td>CS</td></tr> <tr><td>6</td><td>-</td></tr> <tr><td>7</td><td>SG</td></tr> <tr><td>:</td><td></td></tr> <tr><td>20</td><td>ER</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> | Pin No.   | Signal name | 1 | FG | 2 | SD | 3 | RD | 4 | RS | 5 | CS | 6 | - | 7 | SG | : |   | 20 | ER | Pin No. | Signal name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | SD | 5 | RD | 6 | NC | 7 | NC | 8 | SG |             |
| Pin No.                                    | Signal name   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | FG  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | SD  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | RD  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | RS  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | CS  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | -   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | SG  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| :  |   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 20   | ER  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| Pin No.                                    | Signal name   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | +   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | -   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | NC(or FG)   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | SD  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | RD  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | NC  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | NC  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8  | SG  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |

| CPU                  | Link I/F   | Wiring diagram  | GT series |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
|----------------------|--|---|-----------|-------------|---|----|---|----|---|----|---|----|---|----|---|---|---|----|---|---|----|----|---------|-------------|---|---|---|---|---|-----------|---|----|---|----|---|----|---|----|---|----|-------------|
| C20H<br>C28H<br>C40H | Link interface on the CPU unit *3                  | <p>Omron PLC side<br/>D-sub 9-pin</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>FG</td></tr> <tr><td>2</td><td>SD</td></tr> <tr><td>3</td><td>RD</td></tr> <tr><td>4</td><td>RS</td></tr> <tr><td>5</td><td>CS</td></tr> <tr><td>6</td><td>-</td></tr> <tr><td>7</td><td>SG</td></tr> <tr><td>8</td><td>-</td></tr> <tr><td>9</td><td>-</td></tr> </tbody> </table> <p>To power supply</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table>   | Pin No.   | Signal name | 1 | FG | 2 | SD | 3 | RD | 4 | RS | 5 | CS | 6 | - | 7 | SG | 8 | - | 9  | -  | Pin No. | Signal name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | SD | 5 | RD | 6 | NC | 7 | NC | 8 | SG | RS232C type |
| Pin No.              | Signal name  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1                    | FG   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2                    | SD   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3                    | RD   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4                    | RS   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5                    | CS   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6                    | -  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7                    | SG   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8                    | -  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 9                    | -  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| Pin No.              | Signal name  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1                    | +  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2                    | -  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3                    | NC(or FG)  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4                    | SD   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5                    | RD   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6                    | NC   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7                    | NC   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8                    | SG   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| C120<br>C120F        | C120-LK201-V1 *2                                   | <p>Omron PLC side<br/>D-sub 25-pin</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>FG</td></tr> <tr><td>2</td><td>SD</td></tr> <tr><td>3</td><td>RD</td></tr> <tr><td>4</td><td>RS</td></tr> <tr><td>5</td><td>CS</td></tr> <tr><td>6</td><td>-</td></tr> <tr><td>7</td><td>SG</td></tr> <tr><td>⋮</td><td></td></tr> <tr><td>20</td><td>ER</td></tr> </tbody> </table> <p>To power supply</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> | Pin No.   | Signal name | 1 | FG | 2 | SD | 3 | RD | 4 | RS | 5 | CS | 6 | - | 7 | SG | ⋮ |   | 20 | ER | Pin No. | Signal name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | SD | 5 | RD | 6 | NC | 7 | NC | 8 | SG |             |
| Pin No.              | Signal name  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1                    | FG   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2                    | SD   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3                    | RD   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4                    | RS   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5                    | CS   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6                    | -  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7                    | SG   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| ⋮                    |  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 20                   | ER   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| Pin No.              | Signal name  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1                    | +  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2                    | -  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3                    | NC(or FG)  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4                    | SD   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5                    | RD   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6                    | NC   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7                    | NC   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8                    | SG   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| CQM1-CPU42           | RS232C port on CPU unit                            | <p>Omron PLC side<br/>D-sub 9-pin</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>FG</td></tr> <tr><td>2</td><td>SD</td></tr> <tr><td>3</td><td>RD</td></tr> <tr><td>4</td><td>RS</td></tr> <tr><td>5</td><td>CS</td></tr> <tr><td>6</td><td>-</td></tr> <tr><td>7</td><td>-</td></tr> <tr><td>8</td><td>-</td></tr> <tr><td>9</td><td>SG</td></tr> </tbody> </table> <p>To power supply</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal Name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table>   | Pin No.   | Signal name | 1 | FG | 2 | SD | 3 | RD | 4 | RS | 5 | CS | 6 | - | 7 | -  | 8 | - | 9  | SG | Pin No. | Signal Name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | SD | 5 | RD | 6 | NC | 7 | NC | 8 | SG |             |
| Pin No.              | Signal name  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1                    | FG   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2                    | SD   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3                    | RD   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4                    | RS   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5                    | CS   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6                    | -  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7                    | -  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8                    | -  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 9                    | SG   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| Pin No.              | Signal Name  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1                    | +  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2                    | -  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3                    | NC(or FG)  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4                    | SD   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5                    | RD   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6                    | NC   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7                    | NC   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8                    | SG   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| SRM1-C02<br>CPM2A    | CPM1-CIF01<br>RS232C port on CPU unit              |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| CPM1-20CDR-A         | CPM1-CIF01   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| CQM1H-CPU21          | RS232C port on CPU unit                            |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| CPM2C *1             | CPM2C-CIF01-V1<br>CPM2C-CIF01-11<br>CPM2C-CIF01-21 | <p>Omron PLC side<br/>D-sub 9-pin</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>FG</td></tr> <tr><td>2</td><td>SD</td></tr> <tr><td>3</td><td>RD</td></tr> <tr><td>4</td><td>RS</td></tr> <tr><td>5</td><td>CS</td></tr> <tr><td>6</td><td>-</td></tr> <tr><td>7</td><td>-</td></tr> <tr><td>8</td><td>-</td></tr> <tr><td>9</td><td>SG</td></tr> </tbody> </table> <p>To power supply</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal Name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table>   | Pin No.   | Signal name | 1 | FG | 2 | SD | 3 | RD | 4 | RS | 5 | CS | 6 | - | 7 | -  | 8 | - | 9  | SG | Pin No. | Signal Name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | SD | 5 | RD | 6 | NC | 7 | NC | 8 | SG |             |
| Pin No.              | Signal name  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1                    | FG   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2                    | SD   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3                    | RD   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4                    | RS   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5                    | CS   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6                    | -  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7                    | -  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8                    | -  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 9                    | SG   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| Pin No.              | Signal Name  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1                    | +  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2                    | -  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3                    | NC(or FG)  |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4                    | SD   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5                    | RD   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6                    | NC   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7                    | NC   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8                    | SG   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| CPM2B                | RS232C port on CPU unit                            |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |    |   |   |    |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |

\*1 Base mounting type

\*2 CPU mounting type

\*3 Connecting to the RS232C port

\*4 A connection cable for peripherals is required for the connection to the peripheral port

\*5 Although No.6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.

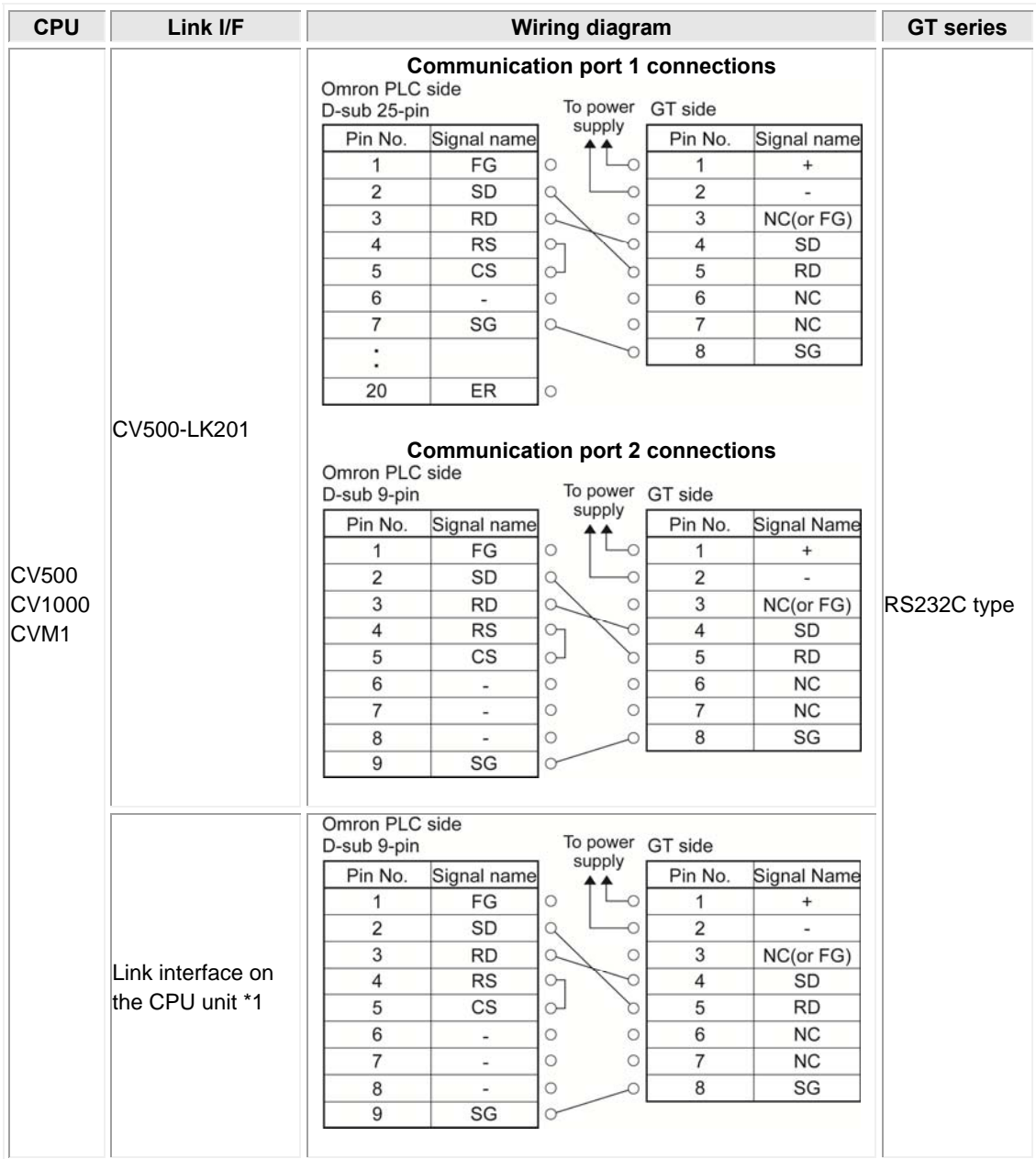
## 2.1.2 SYSMAC $\alpha$ series (using link interface) (RS232C)

For GT01, GT05, GT11, GT21 and GT32

| CPU  | Link I/F   | Wiring diagram | GT series                        |
|--|--|----------------|----------------------------------|
| C200HE-CUP32-Z<br>C200HE-CPU32<br>C200HG-CPU33-Z<br>C200HG-CPU33<br>C200HG-CPU53-Z<br>C200HG-CPU53<br>C200HX-CPU34-Z<br>C200HX-CPU34<br>C200HX-CPU54-Z<br>C200HX-CPU54                                     | C200HW-COM02-V1<br>C200HW-COM04-V1<br>C200HW-COM05-V1<br>C200HW-COM06-V1 |                | GT01/GT05/<br>GT11/GT21/<br>GT32 |
| C200HE-CUP42-Z<br>C200HE-CPU42<br>C200HG-CPU43-Z<br>C200HG-CPU43<br>C200HG-CPU63-Z<br>C200HG-CPU63<br>C200HX-CPU44-Z<br>C200HX-CPU44<br>C200HX-CPU64-Z<br>C200HX-CPU64<br>C200HX-CPU65-Z<br>C200HX-CPU85-Z | RS232C port on<br>CPU unit   |                |                                  |
| C200HX-CPU64-Z   | C200-LK201-V1  |                |                                  |

\* Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.

### 2.1.3 SYSMAC CV series (using link interface) (RS232C)



\*1 Connect to the HOSTLINK port.

\*2 Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.

## 2.1.4 SYSMAC CP1 series (using link interface) (RS232C)

| CPU     | Link I/F                          | Wiring diagram   | GT series |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
|---------|-----------------------------------|--|-----------|-------------|---|----|---|----|---|----|---|----|---|----|---|---|---|---|---|---|---|----|---------|-------------|---|---|---|---|---|-----------|---|----|---|----|---|----|---|----|---|----|-------------|
| CP1H    | RS232C option board<br>CP1W-CIF01 | <p>Omron PLC side<br/>D-sub 9-pin</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>FG</td></tr> <tr><td>2</td><td>SD</td></tr> <tr><td>3</td><td>RD</td></tr> <tr><td>4</td><td>RS</td></tr> <tr><td>5</td><td>CS</td></tr> <tr><td>6</td><td>-</td></tr> <tr><td>7</td><td>-</td></tr> <tr><td>8</td><td>-</td></tr> <tr><td>9</td><td>SG</td></tr> </tbody> </table> <p>To power supply</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal Name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> <p>GT side</p> | Pin No.   | Signal name | 1 | FG | 2 | SD | 3 | RD | 4 | RS | 5 | CS | 6 | - | 7 | - | 8 | - | 9 | SG | Pin No. | Signal Name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | SD | 5 | RD | 6 | NC | 7 | NC | 8 | SG | RS232C type |
| Pin No. | Signal name                       |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1       | FG                                |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2       | SD                                |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3       | RD                                |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4       | RS                                |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5       | CS                                |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6       | -                                 |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7       | -                                 |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8       | -                                 |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 9       | SG                                |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| Pin No. | Signal Name                       |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1       | +                                 |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2       | -                                 |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3       | NC(or FG)                         |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4       | SD                                |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5       | RD                                |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6       | NC                                |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7       | NC                                |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8       | SG                                |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |

\* Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.

## 2.1.5 SYSMAC CP1 series (RS422/RS485)

Connected with Adapter or Unit

| CPU     | Link I/F                               | Wiring diagram  | GT series |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
|---------|--|---|-----------|-------------|---|------|---|------|---|------|---|------|---|----|---------|-------------|---|---|---|---|---|-----------|---|-----|---|-----|---|-----|---|-----|---|---|------------------|
| CP1H    | RS422/485 optional board<br>CP1W/CIF11 | <p>Omron PLC adapter side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>RDA-</td></tr> <tr><td>2</td><td>RDB+</td></tr> <tr><td>3</td><td>SDA-</td></tr> <tr><td>4</td><td>SDB+</td></tr> <tr><td>5</td><td>FG</td></tr> </tbody> </table> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>+SD</td></tr> <tr><td>5</td><td>-SD</td></tr> <tr><td>6</td><td>+RD</td></tr> <tr><td>7</td><td>-RD</td></tr> <tr><td>8</td><td>E</td></tr> </tbody> </table> | Pin No.   | Signal name | 1 | RDA- | 2 | RDB+ | 3 | SDA- | 4 | SDB+ | 5 | FG | Pin No. | Signal name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | +SD | 5 | -SD | 6 | +RD | 7 | -RD | 8 | E | RS422/RS485 type |
| Pin No. | Signal name                            |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 1       | RDA-                                   |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 2       | RDB+                                   |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 3       | SDA-                                   |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 4       | SDB+                                   |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 5       | FG                                     |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| Pin No. | Signal name                            |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 1       | +                                      |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 2       | -                                      |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 3       | NC(or FG)                              |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 4       | +SD                                    |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 5       | -SD                                    |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 6       | +RD                                    |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 7       | -RD                                    |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 8       | E                                      |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |



### Note:

Refer to the figures below for the settings of the dip switches of RS422/RS485 conversion adapter CJ1W-CIF11.

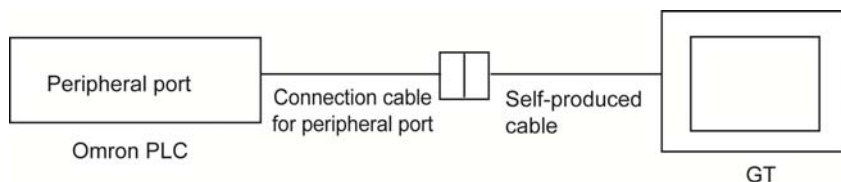
| Adapter or unit                      | Dip switches |
|--------------------------------------|--------------|
| RS422/485 optional board<br>CP-CIF11 |              |

## 2.1.6 SYSMAC CP1 series (Built-in RS232C port type)

| CPU     | Link I/F    | Wiring diagram  | GT series |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
|---------|-------------|---|-----------|-------------|---|----|---|----|---|----|---|----|---|----|---|---|---|---|---|---|---|----|---------|-------------|---|---|---|---|---|-----------|---|----|---|----|---|----|---|----|---|----|-------------|
| CP1E    | N/NA type   | <p>Omron PLC side<br/>D-sub 9-pin</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>FG</td></tr> <tr><td>2</td><td>SD</td></tr> <tr><td>3</td><td>RD</td></tr> <tr><td>4</td><td>RS</td></tr> <tr><td>5</td><td>CS</td></tr> <tr><td>6</td><td>-</td></tr> <tr><td>7</td><td>-</td></tr> <tr><td>8</td><td>-</td></tr> <tr><td>9</td><td>SG</td></tr> </tbody> </table> <p>To power supply</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal Name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> | Pin No.   | Signal name | 1 | FG | 2 | SD | 3 | RD | 4 | RS | 5 | CS | 6 | - | 7 | - | 8 | - | 9 | SG | Pin No. | Signal Name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | SD | 5 | RD | 6 | NC | 7 | NC | 8 | SG | RS232C type |
| Pin No. | Signal name |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1       | FG          |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2       | SD          |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3       | RD          |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4       | RS          |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5       | CS          |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6       | -           |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7       | -           |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8       | -           |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 9       | SG          |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| Pin No. | Signal Name |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1       | +           |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2       | -           |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3       | NC(or FG)   |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4       | SD          |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5       | RD          |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6       | NC          |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7       | NC          |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8       | SG          |   |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |

\* Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.

## 2.1.7 When using the peripheral port of CPM2C



The wiring diagrams vary according to the connection cables for the peripheral port to be used.

| Omron PLC                | Connection cable for peripheral port made by Omron   | Wiring diagram   | GT series   |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
|--------------------------|--|--|-------------|-------------|----|----|----|----|----|----|----|----|----|----|----|---|----|---|----|----|---|---------|-------------|-------------|---|---|---|---|-----------|-----------|----|----|----|----|----|----|----|----|----|----|-------------|
| CPM2                     | CS1W-CN118<br>(D-sub 9-pin)<br>COM2C-CN111   | <p>Omron PLC side<br/>D-sub 9-pin</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>FG</td></tr> <tr><td>2</td><td>SD</td></tr> <tr><td>3</td><td>RD</td></tr> <tr><td>4</td><td>RS</td></tr> <tr><td>5</td><td>CS</td></tr> <tr><td>6</td><td>-</td></tr> <tr><td>7</td><td>-</td></tr> <tr><td>8</td><td>-</td></tr> <tr><td>9</td><td>SG</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal Name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> | Pin No.     | Signal name | 1  | FG | 2  | SD | 3  | RD | 4  | RS | 5  | CS | 6  | - | 7  | - | 8  | -  | 9 | SG      | Pin No.     | Signal Name | 1 | + | 2 | - | 3         | NC(or FG) | 4  | SD | 5  | RD | 6  | NC | 7  | NC | 8  | SG | RS232C type |
|                          | Pin No.  | Signal name  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
|                          | 1  | FG   |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 2                        | SD   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 3                        | RD   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 4                        | RS   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 5                        | CS   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 6                        | -  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 7                        | -  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 8                        | -  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 9                        | SG   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| Pin No.                  | Signal Name  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 1                        | +  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 2                        | -  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 3                        | NC(or FG)  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 4                        | SD   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 5                        | RD   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 6                        | NC   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 7                        | NC   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 8                        | SG   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| CS1W-CN225<br>CS1W-CN625 | <p>25-pin connecting cable side for peripheral port</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>FG</td></tr> <tr><td>2</td><td>RD</td></tr> <tr><td>3</td><td>SD</td></tr> <tr><td>4</td><td>CS</td></tr> <tr><td>5</td><td>RS</td></tr> <tr><td>6</td><td>-</td></tr> <tr><td>7</td><td>SG</td></tr> <tr><td>:</td><td></td></tr> <tr><td>25</td><td>-</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> | Pin No.  | Signal name | 1           | FG | 2  | RD | 3  | SD | 4  | CS | 5  | RS | 6  | -  | 7 | SG | : |    | 25 | - | Pin No. | Signal name | 1           | + | 2 | - | 3 | NC(or FG) | 4         | SD | 5  | RD | 6  | NC | 7  | NC | 8  | SG |    |             |
| Pin No.                  | Signal name  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 1                        | FG   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 2                        | RD   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 3                        | SD   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 4                        | CS   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 5                        | RS   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 6                        | -  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 7                        | SG   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| :                        |  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 25                       | -  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| Pin No.                  | Signal name  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 1                        | +  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 2                        | -  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 3                        | NC(or FG)  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 4                        | SD   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 5                        | RD   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 6                        | NC   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 7                        | NC   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 8                        | SG   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| CS1W-CN226<br>CS1W-CN626 | <p>Omron PLC side<br/>D-sub 9-pin</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>-</td></tr> <tr><td>2</td><td>RD</td></tr> <tr><td>3</td><td>SD</td></tr> <tr><td>4</td><td>ER</td></tr> <tr><td>5</td><td>SG</td></tr> <tr><td>6</td><td>DR</td></tr> <tr><td>7</td><td>RS</td></tr> <tr><td>8</td><td>CS</td></tr> <tr><td>9</td><td>-</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table>                  | Pin No.  | Signal name | 1           | -  | 2  | RD | 3  | SD | 4  | ER | 5  | SG | 6  | DR | 7 | RS | 8 | CS | 9  | - | Pin No. | Signal name | 1           | + | 2 | - | 3 | NC(or FG) | 4         | SD | 5  | RD | 6  | NC | 7  | NC | 8  | SG |    |             |
| Pin No.                  | Signal name  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 1                        | -  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 2                        | RD   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 3                        | SD   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 4                        | ER   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 5                        | SG   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 6                        | DR   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 7                        | RS   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 8                        | CS   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 9                        | -  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| Pin No.                  | Signal name  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 1                        | +  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 2                        | -  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 3                        | NC(or FG)  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 4                        | SD   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 5                        | RD   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 6                        | NC   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 7                        | NC   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 8                        | SG   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |

\* Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.

## 2.2 Omron SYSMAC-CS/CJ Series

### PLC model selection

Select "Omron SYSMAC-CS/CJ series".

Usable devices vary according to the version of GTWIN.

There is a restriction on the version of GT firmware if the GTWIN is Ver2.96 or later.

| GT Series | GTWIN Version     | GT Version         |
|-----------|-------------------|--------------------|
| GT01      | Ver.2.96 or later | Ver.1.343 or later |
| GT05      |                   | Ver.1.00 or later  |
| GT11      |                   | Ver.1.241 or later |
| GT21      |                   | Ver.1.141 or later |
| GT32      |                   | Ver.1.03 or later  |
| GT02      | Ver.2.A0 or later | Ver.1.00 or later  |
| GT12      | Ver.2.97 or later | Ver.1.00 or later  |
| GT02L     | Ver.2.B0 or later | Ver.1.00 or later  |
| GT32-E    | Ver.2.C0 or later | Ver.1.00 or later  |
| GT03-E    | Ver.2.D0 or later | Ver.1.00 or later  |

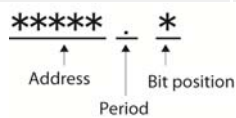
### Usable devices(When the version of GTWIN is Ver.2.96 or later)

| Bit/Word Device                         |  | No.                        | Memo |
|---|--|----------------------------|------|
| Bit Device                              | I/O Relay<br>Internal Hold Relay<br>Special Auxiliary Relay<br>Analog setting value storage area | 0000.00~9999.15            | *1   |
|   | Data link Relay  | L 0000.00~L 9999.15        | *1   |
|   | Auxiliary Memory Relay   | A 0000.00~A 9999.15        | *1   |
|   | Hold Relay   | H0000.00~H 9999.15         | *1   |
|   | Timer(contact)   | T 0000~T 4095              | *1   |
|   | Counter(contact)   | C 0000~C 4095              | *1   |
|   | Data memory  | D 00000.00~D 32767.15      | *1   |
|   | Internal auxiliary relay   | W 0000.00~W 9999.15        | *1   |
|   | Extended data memory (Current bank)  | EW 00000.00~EW 32767.15    | *1   |
|   | Extended data memory (Bank designation)  | E 0-00000.00~E 18-32767.15 | *2   |
|   | Task flag  | TK 00~TK 31                | *1   |
| Word Device                             | I/O Relay<br>Internal Hold Relay<br>Special Auxiliary Relay<br>Analog setting value storage area | 0000~9999                  |      |
|   | Data link Relay  | L 0000~L 9999              |      |
|   | Auxiliary Memory Relay   | A 0000~A 9999              |      |
|   | Hold Relay   | H 0000~H 9999              |      |
|   | Timer(current)   | T 0000~T 4095              |      |
|   | Counter(current)   | C 0000~C 4095              |      |
|   | Data Memory  | D 00000~D 32767            |      |
|   | Internal auxiliary relay   | W 0000~W 9999              |      |
|   | Extended data memory (Current bank)  | EM 00000~EM 32767          |      |
| Extended data memory (Bank designation) | E 0-00000~E 18-32767   | *3                         |      |
| Double Word                             | Index register   | IR 00~IR 15                |      |

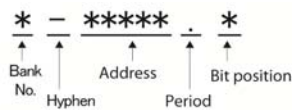


|        |  |  |  |
|--------|--|--|--|
| Device |  |  |  |
|--------|--|--|--|

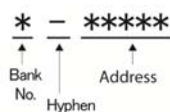
\* 1 The input in GTWIN is as follows:



\* 2 The input in GTWIN is as follows:



\* 3 The input in GTWIN is as follows:



\* 4 For details, please consult the manual for the PLC you will use.

### Usable devices (When the version of GTWIN is 2.95 or older)

There is no restriction on the version of GT firmware if the version of GTWIN is older than Ver2.95.

| Bit/Word Device |   | No.             |
|-----------------|---|-----------------|
| Bit Device      | I/O Relay<br>Internal Hold Relay<br>Special Auxiliary Relay | 000000-614315   |
|                 | Data link Relay   | LR00000-LR19915 |
|                 | Auxiliary Memory Relay                                      | AR00000-AR95915 |
|                 | Hold Relay  | HR00000-HR51115 |
|                 | Timer(contact)  | TIM0000-TIM2047 |
|                 | Counter(contact)  | CNT0000-CNT2047 |
| Word Device     | I/O Relay<br>Internal Hold Relay<br>Special Auxiliary Relay | 0000-6143       |
|                 | Data link Relay   | LR000-LR199     |
|                 | Auxiliary Memory Relay                                      | AR000-AR959     |
|                 | Hold Relay  | HR000-HR511     |
|                 | Timer(current)  | TIM0000-TIM2047 |
|                 | Counter(current)  | CNT0000-CNT2047 |
|                 | Data Memory   | DM0000-DM9999   |

\*For details, please consult the manual for the PLC you will use.



#### Note:

- The maximum value that can be set with the GT is described.
- The range of usable addresses differs depending on the model. For details, please consult the manual for the PLC you will use.

### Communication Parameters Settings

The example of communication settings of GT and PLC is shown below.

#### Setting Values for GT (Set in the configuration setting of GTWIN.)

| Item      | Setting  |
|-----------|----------|
| Baud Rate | 19200bps |
| Data Bits | 7        |
| Stop Bits | 1        |
| Parity    | Even     |

#### Setting Values for PLC

| Item                  | Setting           |
|-----------------------|-------------------|
| Mode of PLC           | Monitor Mode      |
| Mode Selection        | Higher Order Link |
| Baud Rate             | 19200bps          |
| Data Bits             | 7                 |
| Stop Bits             | 1                 |
| Parity                | Even              |
| Station Number        | 0                 |
| CTS Setup             | Normally ON       |
| DC +5V power supply   | No                |
| Type of Communication | RS232C*           |

\*Models that allow RS232C or RS485 communication with the adapter or unit are available.

For almost all models the PLC communication setting method is as follows. However, differences may arise depending on the model. For details, please consult the manual for the PLC you will use when making the settings.

#### To communicate using the RS232C port of the CPU unit

Set the system area as follows.

| Address | Value set  | Setting  |
|---------|------------|--|
| DM6600  | 0201 (HEX) | Setting of PLC main unit mode (monitor mode)                         |
| DM6645  | 0001 (HEX) | Mode setting of RS232C port (high link)                              |
| DM6646  | 0004 (HEX) | Setting of communication conditions (19200 bps, 7 bits, even, 1 bit) |
| DM6648  | 0000 (HEX) | Setting of device number (Device No. 0)                              |

#### To communicate using the communication port

Set the system area as follows.

##### To communicate with port A

| Address | Value set  | Setting  |
|---------|------------|--|
| DM6600  | 0201 (HEX) | Setting of PLC main unit mode (monitor mode)                         |
| DM6550  | 0001 (HEX) | Mode setting of RS232C port (high link)                              |
| DM6551  | 0004 (HEX) | Setting of communication conditions (19200 bps, 7 bits, even, 1 bit) |

##### To communicate with port B

| Address | Value set  | Setting  |
|---------|------------|--|
| DM6600  | 0201 (HEX) | Setting of PLC main unit mode (monitor mode)                         |
| DM6555  | 0001 (HEX) | Mode setting of RS232C port (high link)                              |
| DM6556  | 0004 (HEX) | Setting of communication conditions (19200 bps, 7 bits, even, 1 bit) |

#### To communicate using the high link I/F unit

Make sure set the CPU mode to monitor mode.

Use the DIP switch or rotary switch on the link I/F unit to make settings such as the baud rate.

For details please refer to the manual for the unit your are using.

#### To communicate using the peripheral port

Set the system area as follows.

| Address | Value set  | Setting  |
|---------|------------|--|
| DM6600  | 0201 (HEX) | Setting of PLC main unit mode (monitor mode)                         |
| DM6550  | 0001 (HEX) | Mode setting of RS232C port (high link)                              |
| DM6551  | 0004 (HEX) | Setting of communication conditions (19200 bps, 7 bits, even, 1 bit) |

## 2.2.1 SYSMAC CS1 series (1:1) (RS232C)

| CPU  | Link I/F   | Wiring diagram   | GT series |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
|--|--|--|-----------|-------------|---|----|---|----|---|----|---|----|---|----|---|---|---|---|---|---|---|----|---------|-------------|---|---|---|---|---|-----------|---|----|---|----|---|----|---|----|---|----|-------------|
| CS1H-CPU67<br>CS1H-CPU66<br>CS1H-CPU65<br>CS1H-CPU64<br>CS1H-CPU63<br>CS1G-CPU45<br>CS1G-CPU44<br>CS1G-CPU43<br>CS1G-CPU42 | RS232C port on CPU unit<br>CS1W-SCU21-V1<br>CS1W-SCB21-V1<br><br>CS1W-SCB41-V1 | <p>Omron PLC side<br/>D-sub 9-pin</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>FG</td></tr> <tr><td>2</td><td>SD</td></tr> <tr><td>3</td><td>RD</td></tr> <tr><td>4</td><td>RS</td></tr> <tr><td>5</td><td>CS</td></tr> <tr><td>6</td><td>-</td></tr> <tr><td>7</td><td>-</td></tr> <tr><td>8</td><td>-</td></tr> <tr><td>9</td><td>SG</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal Name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> | Pin No.   | Signal name | 1 | FG | 2 | SD | 3 | RD | 4 | RS | 5 | CS | 6 | - | 7 | - | 8 | - | 9 | SG | Pin No. | Signal Name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | SD | 5 | RD | 6 | NC | 7 | NC | 8 | SG | RS232C type |
| Pin No.  | Signal name  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | FG   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | SD   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | RD   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | RS   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | CS   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | -  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | -  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8  | -  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 9  | SG   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| Pin No.  | Signal Name  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | +  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | -  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | NC(or FG)  |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | SD   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | RD   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | NC   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | NC   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8  | SG   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |

\*1 A connection cable for peripherals is required for the connection to the peripheral port.

\*2 Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.

## 2.2.2 SYSMAC CJ1 series (1:1) (RS232C)

| CPU                  | Link I/F                    | Wiring diagram   | GT series |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
|----------------------|-----------------------------|--|-----------|-------------|---|----|---|----|---|----|---|----|---|----|---|---|---|---|---|---|---|----|---------|-------------|---|---|---|---|---|-----------|---|----|---|----|---|----|---|----|---|----|-------------|
| CJ1H<br>CJ1M<br>CJ1G | RS232C port on the CPU unit | <p>Omron PLC side<br/>D-sub 9-pin</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>FG</td></tr> <tr><td>2</td><td>SD</td></tr> <tr><td>3</td><td>RD</td></tr> <tr><td>4</td><td>RS</td></tr> <tr><td>5</td><td>CS</td></tr> <tr><td>6</td><td>-</td></tr> <tr><td>7</td><td>-</td></tr> <tr><td>8</td><td>-</td></tr> <tr><td>9</td><td>SG</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal Name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> | Pin No.   | Signal name | 1 | FG | 2 | SD | 3 | RD | 4 | RS | 5 | CS | 6 | - | 7 | - | 8 | - | 9 | SG | Pin No. | Signal Name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | SD | 5 | RD | 6 | NC | 7 | NC | 8 | SG | RS232C type |
| Pin No.              | Signal name                 |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1                    | FG                          |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2                    | SD                          |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3                    | RD                          |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4                    | RS                          |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5                    | CS                          |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6                    | -                           |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7                    | -                           |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8                    | -                           |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 9                    | SG                          |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| Pin No.              | Signal Name                 |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1                    | +                           |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2                    | -                           |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3                    | NC(or FG)                   |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4                    | SD                          |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5                    | RD                          |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6                    | NC                          |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7                    | NC                          |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8                    | SG                          |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |

\*1 A connection cable for peripherals is required for the connection to the peripheral port.

\*2 Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.

\*3 It is possible to the RS232C port and peripheral port at the same time.

## 2.2.3 SYSMAC CS1/CJ1 series (1:1) (RS422/RS485)

Connected with Adapter, or Unit

| CPU        | Link I/F                               | Wiring diagram   | GT series |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
|------------|--|--|-----------|-------------|---|------|---|------|---|------|---|------|---|----|---------|-------------|---|---|---|---|---|-----------|---|-----|---|-----|---|-----|---|-----|---|---|------------------|
| CS1 series | RS422 conversion adapter<br>CJ1W-CIF11 | <div style="display: flex; justify-content: space-around;"> <table border="1" style="font-size: small;"> <caption>Omron PLC adapter side</caption> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>RDA-</td></tr> <tr><td>2</td><td>RDB+</td></tr> <tr><td>3</td><td>SDA-</td></tr> <tr><td>4</td><td>SDB+</td></tr> <tr><td>5</td><td>FG</td></tr> </tbody> </table> <table border="1" style="font-size: small;"> <caption>GT side</caption> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>+SD</td></tr> <tr><td>5</td><td>-SD</td></tr> <tr><td>6</td><td>+RD</td></tr> <tr><td>7</td><td>-RD</td></tr> <tr><td>8</td><td>E</td></tr> </tbody> </table> </div> | Pin No.   | Signal name | 1 | RDA- | 2 | RDB+ | 3 | SDA- | 4 | SDB+ | 5 | FG | Pin No. | Signal name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | +SD | 5 | -SD | 6 | +RD | 7 | -RD | 8 | E | RS422/RS485 type |
| Pin No.    | Signal name                            |  |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 1          | RDA-                                   |  |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 2          | RDB+                                   |  |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 3          | SDA-                                   |  |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 4          | SDB+                                   |  |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 5          | FG                                     |  |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| Pin No.    | Signal name                            |  |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 1          | +                                      |  |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 2          | -                                      |  |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 3          | NC(or FG)                              |  |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 4          | +SD                                    |  |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 5          | -SD                                    |  |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 6          | +RD                                    |  |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 7          | -RD                                    |  |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 8          | E                                      |  |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| CJ1 series | RS422 conversion unit<br>NT-AL001      |  |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |



### Note:

Refer to the figures below for the settings of the dip switches of RS422/485 optional board CPW-CFIF11 and RS422 conversion unit NT-AL001.

| Adapter or unit                        | Dip switches |
|--|--------------|
| RS422 conversion adapter<br>CJ1W-CIF11 |              |
| RS422 conversion unit<br>NT-AL001      |              |

The RS422 conversion adapter CJ1W-CIF11 is a non-insulated type, and the RS422 conversion adapter NT-AL001 is a isolated type.

When the transmission distance is long, use the isolated type.

## 2.2.4 SYSMAC CJ2M series (1:1) (RS232C)

| CPU                                | Link I/F                          | Wiring diagram   | GT series |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
|------------------------------------|-----------------------------------|--|-----------|-------------|---|----|---|----|---|----|---|----|---|----|---|---|---|---|---|---|---|----|---------|-------------|---|---|---|---|---|-----------|---|----|---|----|---|----|---|----|---|----|-------------|
| CJ2M-CPU1 <input type="checkbox"/> | RS232C port on the CPU unit       | <p>Omron PLC side<br/>D-sub 9-pin</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>FG</td></tr> <tr><td>2</td><td>SD</td></tr> <tr><td>3</td><td>RD</td></tr> <tr><td>4</td><td>RS</td></tr> <tr><td>5</td><td>CS</td></tr> <tr><td>6</td><td>-</td></tr> <tr><td>7</td><td>-</td></tr> <tr><td>8</td><td>-</td></tr> <tr><td>9</td><td>SG</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal Name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> | Pin No.   | Signal name | 1 | FG | 2 | SD | 3 | RD | 4 | RS | 5 | CS | 6 | - | 7 | - | 8 | - | 9 | SG | Pin No. | Signal Name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | SD | 5 | RD | 6 | NC | 7 | NC | 8 | SG | RS232C type |
| Pin No.                            | Signal name                       |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1                                  | FG                                |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2                                  | SD                                |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3                                  | RD                                |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4                                  | RS                                |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5                                  | CS                                |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6                                  | -                                 |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7                                  | -                                 |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8                                  | -                                 |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 9                                  | SG                                |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| Pin No.                            | Signal Name                       |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1                                  | +                                 |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2                                  | -                                 |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3                                  | NC(or FG)                         |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4                                  | SD                                |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5                                  | RD                                |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6                                  | NC                                |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7                                  | NC                                |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8                                  | SG                                |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| CJ2M-CPU3 <input type="checkbox"/> | RS232C option board<br>CP1W-CIF01 |  |           |             |   |    |   |    |   |    |   |    |   |    |   |   |   |   |   |   |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |

\* Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.

## 2.2.5 SYSMAC CJ2M series (RS422/RS485)

Connected with Adapter or Unit

| CPU                                | Link I/F                               | Wiring diagram  | GT series |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
|------------------------------------|--|---|-----------|-------------|---|------|---|------|---|------|---|------|---|----|---------|-------------|---|---|---|---|---|-----------|---|-----|---|-----|---|-----|---|-----|---|---|------------------|
| CJ2M-CPU3 <input type="checkbox"/> | RS422/485 optional board<br>CP1W-CIF11 | <p>Omron PLC adapter side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>RDA-</td></tr> <tr><td>2</td><td>RDB+</td></tr> <tr><td>3</td><td>SDA-</td></tr> <tr><td>4</td><td>SDB+</td></tr> <tr><td>5</td><td>FG</td></tr> </tbody> </table> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>+SD</td></tr> <tr><td>5</td><td>-SD</td></tr> <tr><td>6</td><td>+RD</td></tr> <tr><td>7</td><td>-RD</td></tr> <tr><td>8</td><td>E</td></tr> </tbody> </table> | Pin No.   | Signal name | 1 | RDA- | 2 | RDB+ | 3 | SDA- | 4 | SDB+ | 5 | FG | Pin No. | Signal name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | +SD | 5 | -SD | 6 | +RD | 7 | -RD | 8 | E | RS422/RS485 type |
| Pin No.                            | Signal name                            |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 1                                  | RDA-                                   |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 2                                  | RDB+                                   |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 3                                  | SDA-                                   |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 4                                  | SDB+                                   |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 5                                  | FG                                     |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| Pin No.                            | Signal name                            |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 1                                  | +                                      |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 2                                  | -                                      |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 3                                  | NC(or FG)                              |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 4                                  | +SD                                    |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 5                                  | -SD                                    |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 6                                  | +RD                                    |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 7                                  | -RD                                    |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |
| 8                                  | E                                      |   |           |             |   |      |   |      |   |      |   |      |   |    |         |             |   |   |   |   |   |           |   |     |   |     |   |     |   |     |   |   |                  |

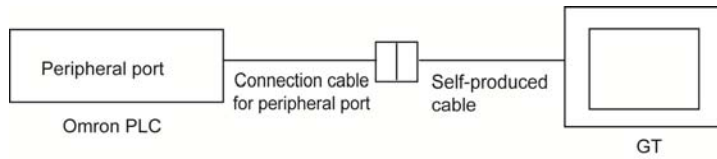


### Note:

Refer to the figures below for the settings of the dip switches of RS422/RS485 conversion adapter CJ1W-CIF11.

| Adapter or unit                      | Dip switches |
|--------------------------------------|--------------|
| RS422/485 optional board<br>CP-CIF11 |              |

## 2.2.6 When using the peripheral port



The wiring diagrams vary according to the connection cables for the peripheral port to be used.

| Omron PLC  | Connection cable for peripheral port made by Omron   | Wiring diagram   | GT series   |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
|--|--|--|-------------|-------------|----|----|----|----|----|----|----|----|----|----|----|---|----|---|----|----|---|---------|-------------|-------------|---|---|---|---|-----------|-----------|----|----|----|----|----|----|----|----|----|----|-------------|
| CS1H-CPU67<br>CS1H-CPU66<br>CS1H-CPU65<br>CS1H-CPU64<br>CS1H-CPU63<br>CS1G-CPU45<br>CS1G-CPU44<br>CS1G-CPU43<br>CS1G-CPU42<br>CJ1H<br>CJ1M<br>CJ1G | CS1W-CN118<br>(D-sub9-pin)<br>COM2C-CN111  | <p>Omron PLC side<br/>D-sub 9-pin</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>FG</td></tr> <tr><td>2</td><td>SD</td></tr> <tr><td>3</td><td>RD</td></tr> <tr><td>4</td><td>RS</td></tr> <tr><td>5</td><td>CS</td></tr> <tr><td>6</td><td>-</td></tr> <tr><td>7</td><td>-</td></tr> <tr><td>8</td><td>-</td></tr> <tr><td>9</td><td>SG</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal Name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> | Pin No.     | Signal name | 1  | FG | 2  | SD | 3  | RD | 4  | RS | 5  | CS | 6  | - | 7  | - | 8  | -  | 9 | SG      | Pin No.     | Signal Name | 1 | + | 2 | - | 3         | NC(or FG) | 4  | SD | 5  | RD | 6  | NC | 7  | NC | 8  | SG | RS232C type |
|  | Pin No.  | Signal name  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
|  | 1  | FG   |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 2  | SD   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 3  | RD   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 4  | RS   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 5  | CS   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 6  | -  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 7  | -  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 8  | -  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 9  | SG   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| Pin No.  | Signal Name  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 1  | +  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 2  | -  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 3  | NC(or FG)  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 4  | SD   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 5  | RD   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 6  | NC   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 7  | NC   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 8  | SG   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| CS1W-CN225<br>CS1W-CN625   | <p>25-pin connecting cable<br/>side for peripheral port</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>FG</td></tr> <tr><td>2</td><td>RD</td></tr> <tr><td>3</td><td>SD</td></tr> <tr><td>4</td><td>CS</td></tr> <tr><td>5</td><td>RS</td></tr> <tr><td>6</td><td>-</td></tr> <tr><td>7</td><td>SG</td></tr> <tr><td>:</td><td></td></tr> <tr><td>25</td><td>-</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> | Pin No.  | Signal name | 1           | FG | 2  | RD | 3  | SD | 4  | CS | 5  | RS | 6  | -  | 7 | SG | : |    | 25 | - | Pin No. | Signal name | 1           | + | 2 | - | 3 | NC(or FG) | 4         | SD | 5  | RD | 6  | NC | 7  | NC | 8  | SG |    |             |
| Pin No.  | Signal name  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 1  | FG   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 2  | RD   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 3  | SD   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 4  | CS   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 5  | RS   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 6  | -  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 7  | SG   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| :  |  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 25   | -  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| Pin No.  | Signal name  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 1  | +  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 2  | -  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 3  | NC(or FG)  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 4  | SD   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 5  | RD   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 6  | NC   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 7  | NC   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 8  | SG   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| CS1W-CN226<br>CS1W-CN626   | <p>Omron PLC side<br/>D-sub 9-pin</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>-</td></tr> <tr><td>2</td><td>RD</td></tr> <tr><td>3</td><td>SD</td></tr> <tr><td>4</td><td>ER</td></tr> <tr><td>5</td><td>SG</td></tr> <tr><td>6</td><td>DR</td></tr> <tr><td>7</td><td>RS</td></tr> <tr><td>8</td><td>CS</td></tr> <tr><td>9</td><td>-</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table>                      | Pin No.  | Signal name | 1           | -  | 2  | RD | 3  | SD | 4  | ER | 5  | SG | 6  | DR | 7 | RS | 8 | CS | 9  | - | Pin No. | Signal name | 1           | + | 2 | - | 3 | NC(or FG) | 4         | SD | 5  | RD | 6  | NC | 7  | NC | 8  | SG |    |             |
| Pin No.  | Signal name  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 1  | -  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 2  | RD   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 3  | SD   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 4  | ER   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 5  | SG   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 6  | DR   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 7  | RS   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 8  | CS   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 9  | -  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| Pin No.  | Signal name  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 1  | +  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 2  | -  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 3  | NC(or FG)  |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 4  | SD   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 5  | RD   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 6  | NC   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 7  | NC   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |
| 8  | SG   |  |             |             |    |    |    |    |    |    |    |    |    |    |    |   |    |   |    |    |   |         |             |             |   |   |   |   |           |           |    |    |    |    |    |    |    |    |    |    |             |





# Chapter 3

---

## Connection With Toshiba Machine PLCs

## 3.1 PROVISOR Tcmini Series

### PLC model selection

Select "TOSHIBA MACHINE PROVISOR Tcmini Series".

### Usable devices

|             | Bit/Word Device           | No.           |
|-------------|---------------------------|---------------|
| Bit Device  | Input                     | X0000-X0F7F   |
|             | Output                    | Y0000-Y0F7F   |
|             | Internal Relay            | R0000-R077F   |
|             | Timer Relay               | T0000-T077F   |
|             | Counter Relay             | C0000-C077F   |
|             | Latch Relay               | L0000-L007F   |
|             | Edge Relay                | E0000-E077F   |
|             | Special Auxiliary Relay   | A0000-A016F   |
| Word Device | Input                     | X0000W-X00F7W |
|             | Output                    | Y0000W-Y00F7W |
|             | Internal Relay            | R0000W-R0077W |
|             | Timer Relay               | T0000W-T0077W |
|             | Counter Relay             | C0000W-C0077W |
|             | Latch Relay               | L0000W-L0007W |
|             | Edge Relay                | E0000W-E0077W |
|             | Special Auxiliary Relay   | A0000W-A0016W |
|             | Data Register             | D0000-D0F7F   |
|             | Timer Counter (current)   | P0000-P077F   |
|             | Timer Counter (set value) | V0000-V077F   |

The following list illustrates each expression of PLC device in GTWIN.

When you enter a value of devices, follow below expression.

|             | Expression in PLC | Expression in GTWIN |
|-------------|-------------------|---------------------|
| Bit Device  | R120              | R120                |
| Word Device | R12W/X12W/Y12W    | RW12/XW12/YW12      |

### Communication Parameters Settings

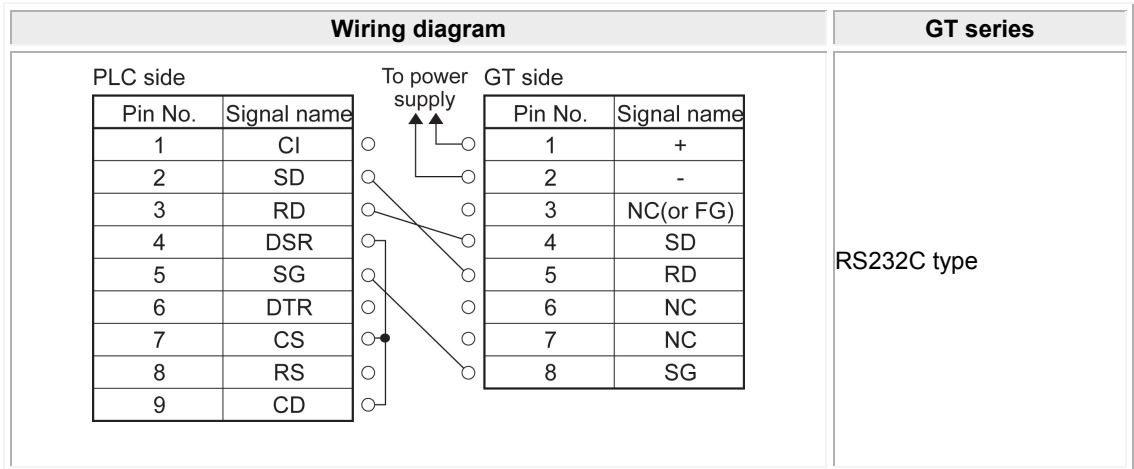
The example of communication settings of GT and PLC is shown below.

#### Setting Values for GT (Set in the configuration setting of GTWIN.)

| Item           | Setting  |
|----------------|----------|
| Baud Rate      | 19200bps |
| Length of Bits | 8        |
| Stop Bits      | 1        |
| Parity         | None     |

### 3.1.1 RS232C Connection

For GT01, GT05, GT11, GT21 and GT32



\* Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.

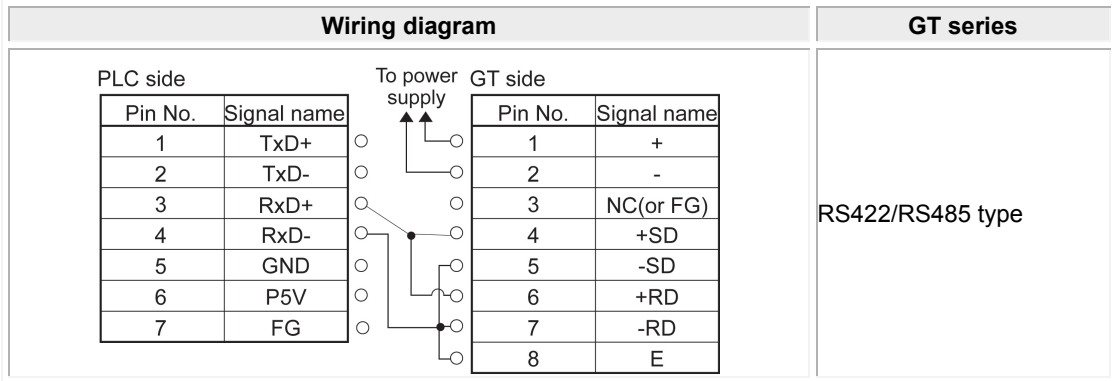
### 3.1.2 RS485 connection

#### Communication mode on PLC side

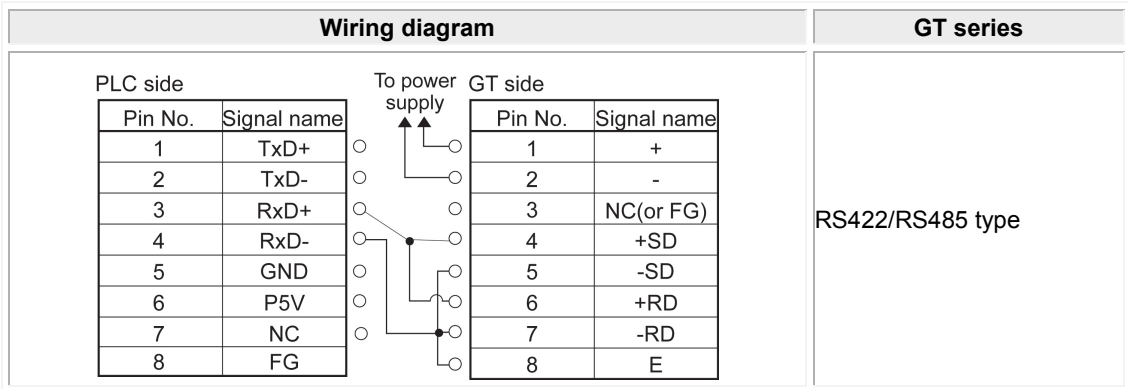
Set it to the host communication protocol connection mode.

\* For information on the setting method, refer to the “Tcmini” manual.

#### In case of 7 pins



#### In case of 8 pins



#### Note:

Confirm the appropriate versions of GTWIN and GT to connect with RS485 type.

| Gtseries | GTWIN Version     | GT Version        |
|----------|-------------------|-------------------|
| GT01     | Ver.2.71 or later | Ver.1.3 or later  |
| GT02     | Ver.2.A0 or later | Ver.1.00 or later |
| GT02L    | Ver.2.B0 or later | Ver.1.00 or later |
| GT03-E   | Ver.2.D0 or later | Ver.1.00 or later |
| GT05     | Ver.2.90 or later | Ver.1.0 or later  |
| GT11     | Ver.2.71 or later | Ver.1.20 or later |
| GT12     | Ver.2.97 or later | Ver.1.00 or later |
| GT21     | Ver.2.71 or later | Ver.1.10 or later |
| GT32     | Ver.2.80 or later | Ver.1.00 or later |
| GT32-E   | Ver.2.C0 or later | Ver.1.00 or later |

# Chapter 4

---

## Connection With Rockwell Automation (Allen-Bradley) PLCs

## 4.1 Allen-Bradley SLC500 MicroLogix Series

### PLC model selection

Select "Allen-Bradley SLC500 MicroLogix Series".

Usable devices vary according to the version of GTWIN.

### Usable devices (When the version of GTWIN is Ver.2.96 or later)

| Bit/Word Device            |                                  | No.                     |
|----------------------------|----------------------------------|-------------------------|
| Bit Device                 | Bit                              | B 3:0/0~B 255:255/15    |
|                            | Input                            | I: 0.0/0~I: 30.255/15   |
|                            | Output                           | O: 0.0/0~O: 30.255/15   |
|                            | Status                           | S 0/0~S 164/15          |
|                            | Timer (Effective bit)            | T/EN 3:0~T/EN 255:255   |
|                            | Timer (Clock bit)                | T/TT 3:0~T/TT 255:255   |
|                            | Timer (Completion bit)           | T/DN 3:0~T/DN 255:255   |
|                            | Counter (Up counter)             | C/CU 3:0~C/CU 255:255   |
|                            | Counter (Down counter)           | C/CD 3:0~C/CD 255:255   |
|                            | Counter (Completion bit)         | C/DN 3:0~C/DN 255:255   |
|                            | Counter (Overflow bit)           | C/OV 3:0~C/OV 255:255   |
|                            | Counter (Underflow bit)          | C/UN 3:0~C/UN 255:255   |
|                            | Counter (Accumulator update bit) | C/UA 3:0~C/UA 255:255   |
|                            | Integer                          | N 7:/0~N 255:255/15     |
|                            | Control (Effective bit)          | R/EN 6:0~R/EN 255:255   |
|                            | Control (Unload effective bit)   | R/EU6:0~R/EU 255:255    |
|                            | Control (Completion bit)         | R/DN 6:0~R/DN 255:255   |
|                            | Control (Stack empty bit)        | R/EM 6:0~R/EM 255:255   |
|                            | Control (Error bit)              | R/ER 6:0~R/ER 255:255   |
|                            | Control (Unload bit)             | R/UL 6:0~R/UL 255:255   |
| Control (Prohibition bit)  | R/IN 6:0~R/IN 255:255            |                         |
| Control (Detection bit)    | R/FD 6:0~R/FD 255:255            |                         |
| Word Device                | Bit                              | B 3:0~B 255:255         |
|                            | Input                            | I: 0.0~I: 30.255        |
|                            | Output                           | O: 0.0~O: 30.255        |
|                            | Status                           | S 0~S 164               |
|                            | Timer (Setting value)            | T.ACC 3:0~T.ACC 255:255 |
|                            | Timer (Current value)            | T.PRE 3:0~T.PRE 255:255 |
|                            | Counter (Setting value)          | C.ACC 3:0~C.ACC 255:255 |
|                            | Counter (Current value)          | C.PER 7:0~C.PER 255:255 |
|                            | Integer                          | N 7:0~N 255:255         |
|                            | ASCII                            | A 8:0~A 255:255         |
|                            | Control (Position)               | R.POS 6:0~C.POS 255:255 |
|                            | Control (Length)                 | R.LEN 6:0~R.LEN 255:255 |
|                            | Double Word Device               | Floating decimal point  |
| Long word (2-word integer) |                                  | L 9:0~C.PER 255:255     |
| Character string Device    | Character string                 | ST 9:0~ST 255:255       |



**Note:**

**Restrictions on character string device**

- When using the ST (character string) of character string device, it is used only as a character string. When referring devices, use the data format "ASCII" of data parts.
- When writing character strings from GT, specify the number of characters for the sub-element 0 on the PLC side.
- If a number larger than 3 is specified for "No. of displayed digits" when using the data format "ASCII" of data parts, the settable maximum element number is restricted.
- Set "Address" to "Low -> High" and "Word" to "High -> Low" in "Reference Order" under "Option" of the attribute edit with the data format "ASCII" of data parts.

The following list illustrates each expression of PLC device in GTWIN.  
When you enter a value of devices, follow below expression.

| Bit/Word Device | Expression in PLC  | Expression in GTWIN  |
|-----------------|--|--|
| Bit Device      | <p>T 4 : 0 / EN</p> <p>Bit number<br/>Element<br/>File number<br/>File type</p>          | <p>T / EN 4 : 0</p> <p>Element<br/>File number<br/>Bit number<br/>File type</p>          |
| Word Device     | <p>T 4 : 0 . Acc</p> <p>Sub-element number<br/>Element<br/>File number<br/>File type</p> | <p>T . Acc 4 : 0</p> <p>Element<br/>File number<br/>Sub-element number<br/>File type</p> |

**Usable devices (When the version of GTWIN is 2.95 or older)**

| Bit/Word Device |         | No.                  |
|-----------------|---------|----------------------|
| Bit Device      | Bit     | B3:000/ 0-B3:255/ 15 |
| Word Device     | Bit     | B3:000-B3:255        |
|                 | Integer | N7:000-N7:255        |

The following list illustrates each expression of PLC device in GTWIN.  
When you enter a value of devices, follow below expression.

|             | Expression in PLC        | Expression in GTWIN      |
|-------------|--------------------------|--------------------------|
| Bit Device  | <p>B 3 : 2 0 0 / 1 0</p> | <p>B 3 : 2 0 0 - 1 0</p> |
| Word Device | <p>N 7 : 2 0 0</p>       | <p>N 7 : 2 0 0</p>       |

**Communication Parameters Settings**

The example of communication settings of GT and PLC is shown below.

**Setting Values for GT (Set in the configuration setting of GTWIN.)**

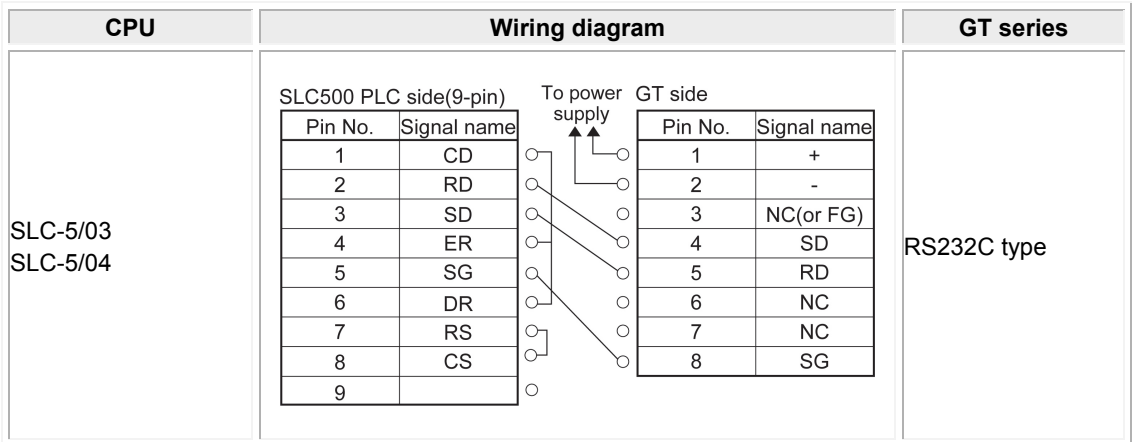
| Item         | Setting  |
|--------------|----------|
| GT Unit No.  | 01       |
| PLC Unit No. | 00       |
| Baud Rate    | 19200bps |
| Data Bits    | 8        |
| Stop Bits    | 1        |
| Parity       | None     |

**Setting Values for PLC**

| Item                    | Setting         |
|-------------------------|-----------------|
| Baud Rate               | 192000bps       |
| Parity                  | None            |
| Stop Bits               | 1               |
| Data Bits               | 8               |
| Communication Driver    | DF1 Full Duplex |
| Control Line            | No Handshaking  |
| Error Detection         | CRC             |
| Embedded Responses      | Enabled         |
| Duplicate Packet Detect | Enable          |



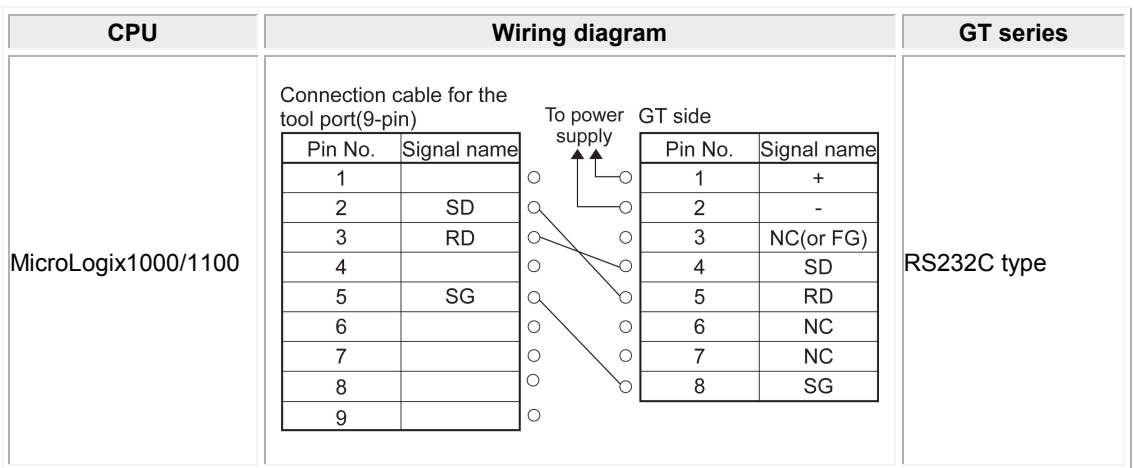
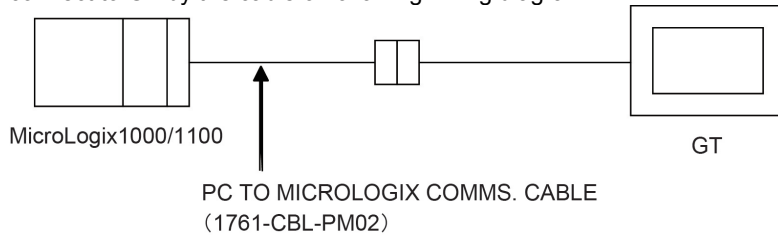
### 4.1.1 SLC500 series(using link interface on the CPU unit)



\* Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.

### 4.1.2 MicroLogix1000/1100

MicroLogix1000/1100 and PC TO MICROLOGIX COMMS. CABLE are connected as follows, then connect to GT by the cable of following wiring diagram.



\* Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.



# Chapter 5

---

## Connection With Siemens PLCs

## 5.1 Siemens S7-200 Series

### PLC model selection

Select "Siemens S7-200 series".

### Usable devices

| Bit/Word Device |                        | No.         | Memo                             |
|-----------------|------------------------|-------------|----------------------------------|
| Bit Device      | Input                  | I00-I77     |                                  |
|                 | Output                 | Q00-Q77     |                                  |
|                 | Bit Memory             | M00-M317    |                                  |
|                 | Timer(contact)         | T00-T255    |                                  |
|                 | Counter(contact)       | C00-C255    |                                  |
|                 | Special Memory         | SM00-SM1947 |                                  |
|                 | Sequence Control Relay | S00-S317    |                                  |
| Word Device     | Input                  | IW0-IW6     | Address should be an even number |
|                 | Output                 | QW0-QW6     | Address should be an even number |
|                 | Bit Memory             | MW0-MW30    | Address should be an even number |
|                 | Timer(current)         | T0-T255     | Address should be an even number |
|                 | Counter(current)       | C0-C255     | Address should be an even number |
|                 | Special Memory         | SMW0-SMW193 | Address should be an even number |
|                 | Sequence Control Relay | SW0-SW30    | Address should be an even number |
|                 | Variable Memory        | VW0-VW5118  | Address should be an even number |

The following list illustrates each expression of PLC device in GTWIN.

When you enter a value of devices, follow below expression.

|             | Expression in PLC | Expression in GTWIN |
|-------------|-------------------|---------------------|
| Bit Device  | Q3.2              | Q3-2                |
| Word Device | VW100             | VW100               |

### Communication Parameters Settings

The example of communication settings of GT and PLC is shown below.

#### Setting Values for GT

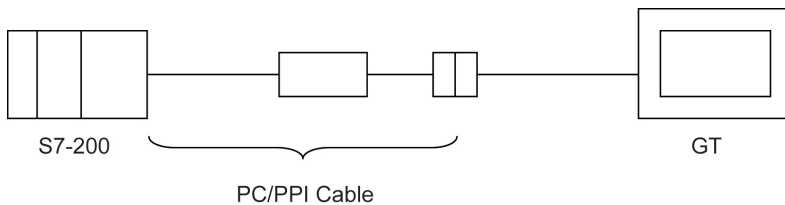
| Item         | Setting |
|--------------|---------|
| GT Unit No.  | 01      |
| PLC Unit No. | 02      |
| Baud Rate    | 9600bps |
| Data Bits    | 8       |
| Stop Bits    | 1       |
| Parity       | Even    |

#### Setting Values for PLC

| Item         | Setting |
|--------------|---------|
| PLC Unit No. | 02      |

### 5.1.1 RS232C Connection (Connected with PC/PPI Cable)

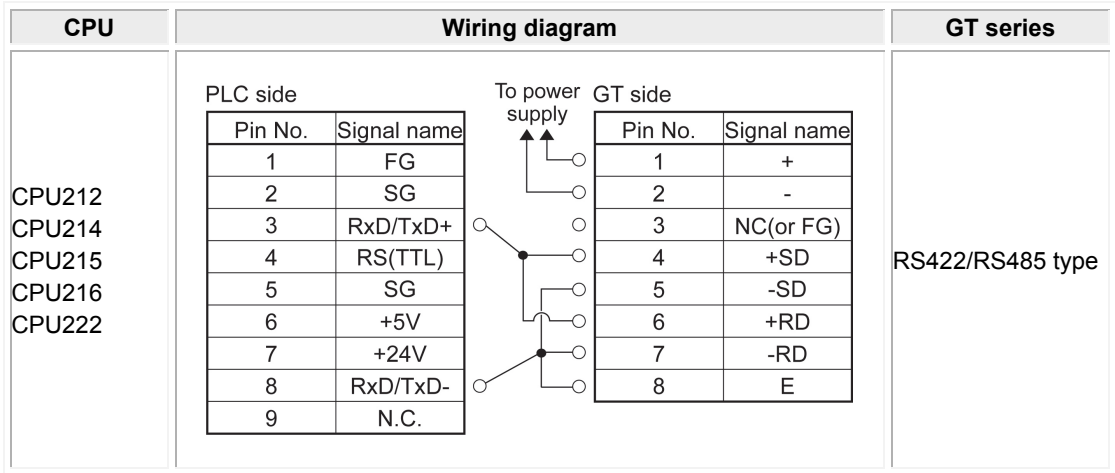
S7-200 and PC/PPI Cable are connected as follows, then connect to GT by the cable of following wiring diagram.



| CPU  | Wiring diagram  | GT series |             |   |  |   |    |   |    |   |  |   |    |   |  |   |    |   |    |   |  |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
|--|---|-----------|-------------|---|--|---|----|---|----|---|--|---|----|---|--|---|----|---|----|---|--|---------|-------------|---|---|---|---|---|-----------|---|----|---|----|---|----|---|----|---|----|-------------|
| CPU212<br>CPU214<br>CPU215<br>CPU216<br>CPU222 | <p>PC/PPI cable side (9-pin)</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td></td></tr> <tr><td>2</td><td>SD</td></tr> <tr><td>3</td><td>RD</td></tr> <tr><td>4</td><td></td></tr> <tr><td>5</td><td>SG</td></tr> <tr><td>6</td><td></td></tr> <tr><td>7</td><td>RS</td></tr> <tr><td>8</td><td>CS</td></tr> <tr><td>9</td><td></td></tr> </tbody> </table> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> <p>Wiring connections: Pin 2 (SD) to Pin 4 (SD), Pin 3 (RD) to Pin 5 (RD), Pin 5 (SG) to Pin 8 (SG). Pins 1, 4, 6, 7, 8, 9 are unconnected on the PC/PPI side. Pins 1, 2, 3, 6, 7 are unconnected on the GT side.</p> | Pin No.   | Signal name | 1 |  | 2 | SD | 3 | RD | 4 |  | 5 | SG | 6 |  | 7 | RS | 8 | CS | 9 |  | Pin No. | Signal name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | SD | 5 | RD | 6 | NC | 7 | NC | 8 | SG | RS232C type |
| Pin No.  | Signal name   |           |             |   |  |   |    |   |    |   |  |   |    |   |  |   |    |   |    |   |  |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  |   |           |             |   |  |   |    |   |    |   |  |   |    |   |  |   |    |   |    |   |  |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | SD  |           |             |   |  |   |    |   |    |   |  |   |    |   |  |   |    |   |    |   |  |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | RD  |           |             |   |  |   |    |   |    |   |  |   |    |   |  |   |    |   |    |   |  |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  |   |           |             |   |  |   |    |   |    |   |  |   |    |   |  |   |    |   |    |   |  |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | SG  |           |             |   |  |   |    |   |    |   |  |   |    |   |  |   |    |   |    |   |  |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  |   |           |             |   |  |   |    |   |    |   |  |   |    |   |  |   |    |   |    |   |  |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | RS  |           |             |   |  |   |    |   |    |   |  |   |    |   |  |   |    |   |    |   |  |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8  | CS  |           |             |   |  |   |    |   |    |   |  |   |    |   |  |   |    |   |    |   |  |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 9  |   |           |             |   |  |   |    |   |    |   |  |   |    |   |  |   |    |   |    |   |  |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| Pin No.  | Signal name   |           |             |   |  |   |    |   |    |   |  |   |    |   |  |   |    |   |    |   |  |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | +   |           |             |   |  |   |    |   |    |   |  |   |    |   |  |   |    |   |    |   |  |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | -   |           |             |   |  |   |    |   |    |   |  |   |    |   |  |   |    |   |    |   |  |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | NC(or FG)   |           |             |   |  |   |    |   |    |   |  |   |    |   |  |   |    |   |    |   |  |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | SD  |           |             |   |  |   |    |   |    |   |  |   |    |   |  |   |    |   |    |   |  |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | RD  |           |             |   |  |   |    |   |    |   |  |   |    |   |  |   |    |   |    |   |  |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | NC  |           |             |   |  |   |    |   |    |   |  |   |    |   |  |   |    |   |    |   |  |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | NC  |           |             |   |  |   |    |   |    |   |  |   |    |   |  |   |    |   |    |   |  |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8  | SG  |           |             |   |  |   |    |   |    |   |  |   |    |   |  |   |    |   |    |   |  |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |

\* Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.

## 5.1.2 RS422 Connection



# Chapter 6

---

## Connection With LS Industrial Systems PLCs

## 6.1 MASTER-K (Cnet) Series

---

### PLC model selection

Select "LG MASTER-K (Cnet) Series".

### Usable devices

| Bit/Word Device |                | No.           |
|-----------------|----------------|---------------|
| Bit Device      | Input/Output   | P0000-P063F   |
|                 | Internal Relay | M0000-M191F   |
| Word Device     | Input/Output   | PW0000-PW0063 |
|                 | Internal Relay | MW0000-MW0191 |
|                 | Data Register  | D0000-D9999   |

### Communication Parameters Settings

The example of communication settings of GT and PLC is shown below.

#### Setting Values for GT (Set in the configuration setting of GTWIN.)

| Item      | Setting  |
|-----------|----------|
| Baud Rate | 19200bps |
| Data Bits | 8        |
| Stop Bits | 1        |
| Parity    | Non      |

#### Setting Values for PLC

| Item           | Setting  |
|----------------|----------|
| Station Number | 00       |
| Baud Rate      | 19200bps |
| Data Bits      | 8        |
| Stop Bits      | 1        |
| Parity         | Non      |



## 6.1.1 Connection Method

| CPU   | Link I/F                | Wiring diagram | GT series   |
|-------|-------------------------|----------------|-------------|
| 80S   | RS232C port on CPU unit |                | RS232C type |
| 200S  | RS232C port on CPU unit |                |             |
| 200S  | G6L-CUEB                |                | RS232C type |
| 300S  | G4L-CUEA                |                |             |
| 1000S | G3L-CUEA                |                |             |

\* Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.



# Chapter 7

---

## Connection With Yokogawa PLCs

## 7.1 FA-M3 Series

### PLC model selection

Select "Yokogawa FA-M3 Series"

### Usable devices

| Bit/Word Device |                  | No.             | Memo   |
|-----------------|------------------|-----------------|--|
| Bit Device      | Input Relay      | X00201-X71664   | Specify by slot number(1 digit) + unit number(2 digit) + terminal number(2 digit)            |
|                 | Output Relay     | Y00201-Y71164   | Specify by slot number(1 digit) + unit number(2 digit) + terminal number(2 digit)            |
|                 | Internal Relay   | I00001-I65535   |  |
|                 | Link Relay       | L00001-L78192   | Specify by system number(1 digit) + link relay number(4 digit)                               |
|                 | Timer            | T0001-T3072     |  |
|                 | Counter          | C0001-C3072     |  |
| Word Device     | Input Relay      | X00201-X71649   | Specify address by the lower 2 digits: 17, 33, or 49.  |
|                 | Output Relay     | Y00201-Y71649   | Specify address by the lower 2 digits: 17, 33, or 49.  |
|                 | Internal Relay   | I00001-I65521   | Specify in single units of remainder after dividing the address by 16.                       |
|                 | Link Relay       | L00001-L78177   | Specify in single units of remainder after dividing the lower 4 digits of the address by 16. |
|                 | Data Register    | D00001-D65535   |  |
|                 | Link Register    | W00001-W78192   | Specify by system number(1 digit) + link register number(4 digit)                            |
|                 | Timer(current)   | TP0001-TP3072   |  |
|                 | Counter(current) | CP0001-CP3072   |  |
|                 | File Register    | B000001-B099999 |  |

### Communication Parameters Settings

The example of communication settings of GT and PLC is shown below.

#### Setting values for GT (Set in the configuration setting of GTWIN.)

| Item           | Setting  |
|----------------|----------|
| PLC Unit No.   | 1        |
| Baud Rate      | 19200bps |
| Length of Bits | 8        |
| Stop Bits      | 1        |
| Parity         | None     |

#### Setting Values for PLC (Link I/F)

| Item                  | Setting  |
|-----------------------|----------|
| Station Number        | 1        |
| Baud Rate             | 19200bps |
| Length of Bits        | 8        |
| Stop Bits             | 1        |
| Parity                | None     |
| Check Sum             | No       |
| Specify End Character | Yes      |
| Protect Function      | No       |

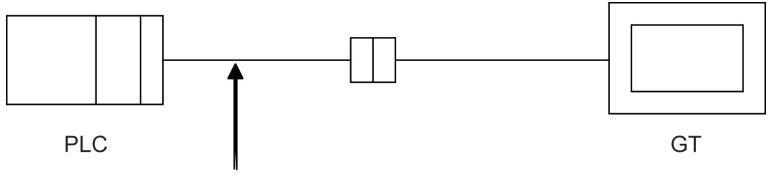
## 7.1.1 Connection Using PC Link Module

| CPU  | PC link module                      | Wiring diagram  | GT series   |  |         |  |         |             |         |             |   |  |   |   |   |    |   |   |   |    |   |           |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |  |  |  |             |
|--|-------------------------------------|---|-------------|--|---------|--|---------|-------------|---------|-------------|---|--|---|---|---|----|---|---|---|----|---|-----------|---|----|---|----|---|----|---|----|---|----|---|----|---|----|---|----|---|----|---|----|---|--|--|--|-------------|
| F3SP21-0N<br>F3SP25-2N<br>F3SP28-3N<br>F3SP28-3S<br>F3SP35-5N<br>F3SP38-6N<br>F3SP38-6S<br>F3SP53-4H<br>F3SP53-4S<br>F3SP58-6H<br>F3SP58-6S<br>F3SP59-7S | F3LC11-1N<br>F3LC11-1F<br>F3LC12-1F | <p>The diagram shows the wiring between the PLC side and the GT side. On the PLC side, pins 2, 3, 4, and 5 are connected to pins 2, 3, 4, and 5 of the GT side respectively. On the GT side, pins 1 and 2 are connected to a power supply (+ and -). Pin 3 of the GT side is connected to a power supply (NC(or FG)).</p> <table border="1"> <thead> <tr> <th colspan="2">PLC side</th> <th colspan="2">GT side</th> </tr> <tr> <th>Pin No.</th> <th>Signal name</th> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td>1</td> <td>+</td> </tr> <tr> <td>2</td> <td>RD</td> <td>2</td> <td>-</td> </tr> <tr> <td>3</td> <td>SD</td> <td>3</td> <td>NC(or FG)</td> </tr> <tr> <td>4</td> <td>ER</td> <td>4</td> <td>SD</td> </tr> <tr> <td>5</td> <td>SG</td> <td>5</td> <td>RD</td> </tr> <tr> <td>6</td> <td>DR</td> <td>6</td> <td>NC</td> </tr> <tr> <td>7</td> <td>RS</td> <td>7</td> <td>NC</td> </tr> <tr> <td>8</td> <td>CS</td> <td>8</td> <td>SG</td> </tr> <tr> <td>9</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> | PLC side    |  | GT side |  | Pin No. | Signal name | Pin No. | Signal name | 1 |  | 1 | + | 2 | RD | 2 | - | 3 | SD | 3 | NC(or FG) | 4 | ER | 4 | SD | 5 | SG | 5 | RD | 6 | DR | 6 | NC | 7 | RS | 7 | NC | 8 | CS | 8 | SG | 9 |  |  |  | RS232C type |
| PLC side   |                                     | GT side   |             |  |         |  |         |             |         |             |   |  |   |   |   |    |   |   |   |    |   |           |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |  |  |  |             |
| Pin No.  | Signal name                         | Pin No.   | Signal name |  |         |  |         |             |         |             |   |  |   |   |   |    |   |   |   |    |   |           |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |  |  |  |             |
| 1  |                                     | 1   | +           |  |         |  |         |             |         |             |   |  |   |   |   |    |   |   |   |    |   |           |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |  |  |  |             |
| 2  | RD                                  | 2   | -           |  |         |  |         |             |         |             |   |  |   |   |   |    |   |   |   |    |   |           |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |  |  |  |             |
| 3  | SD                                  | 3   | NC(or FG)   |  |         |  |         |             |         |             |   |  |   |   |   |    |   |   |   |    |   |           |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |  |  |  |             |
| 4  | ER                                  | 4   | SD          |  |         |  |         |             |         |             |   |  |   |   |   |    |   |   |   |    |   |           |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |  |  |  |             |
| 5  | SG                                  | 5   | RD          |  |         |  |         |             |         |             |   |  |   |   |   |    |   |   |   |    |   |           |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |  |  |  |             |
| 6  | DR                                  | 6   | NC          |  |         |  |         |             |         |             |   |  |   |   |   |    |   |   |   |    |   |           |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |  |  |  |             |
| 7  | RS                                  | 7   | NC          |  |         |  |         |             |         |             |   |  |   |   |   |    |   |   |   |    |   |           |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |  |  |  |             |
| 8  | CS                                  | 8   | SG          |  |         |  |         |             |         |             |   |  |   |   |   |    |   |   |   |    |   |           |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |  |  |  |             |
| 9  |                                     |   |             |  |         |  |         |             |         |             |   |  |   |   |   |    |   |   |   |    |   |           |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |  |  |  |             |

\* Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.

## 7.1.2 CPU Direct Connection

PLC and a cable for a programming tool (KM11-2T) are connected as follows, then connect to GT by the cable of following wiring diagram.



Yokogawa' s cable for programming tool (KM11-2T)

| CPU  | Conversion cable | Wiring diagram  | GT series |             |   |   |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
|--|------------------|---|-----------|-------------|---|---|---|----|---|----|---|----|---|----|---|----|---|----|---|----|---|---|---------|-------------|---|---|---|---|---|-----------|---|----|---|----|---|----|---|----|---|----|-------------|
| F3SP21-0N<br>F3SP25-2N<br>F3SP28-3N<br>F3SP28-3S<br>F3SP35-5N<br>F3SP38-6N<br>F3SP38-6S<br>F3SP53-4H<br>F3SP53-4S<br>F3SP58-6H<br>F3SP58-6S<br>F3SP59-7S | KM11-2T          | <div style="display: flex; justify-content: space-between;"> <table border="1" style="margin-right: 20px;"> <caption>Cable side</caption> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>-</td></tr> <tr><td>2</td><td>SD</td></tr> <tr><td>3</td><td>RD</td></tr> <tr><td>4</td><td>DR</td></tr> <tr><td>5</td><td>SG</td></tr> <tr><td>6</td><td>ER</td></tr> <tr><td>7</td><td>CS</td></tr> <tr><td>8</td><td>RS</td></tr> <tr><td>9</td><td>-</td></tr> </tbody> </table> <div style="text-align: center;"> <p>To power supply</p> </div> <table border="1" style="margin-left: 20px;"> <caption>GT side</caption> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> </div> | Pin No.   | Signal name | 1 | - | 2 | SD | 3 | RD | 4 | DR | 5 | SG | 6 | ER | 7 | CS | 8 | RS | 9 | - | Pin No. | Signal name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | SD | 5 | RD | 6 | NC | 7 | NC | 8 | SG | RS232C type |
| Pin No.  | Signal name      |   |           |             |   |   |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | -                |   |           |             |   |   |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | SD               |   |           |             |   |   |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | RD               |   |           |             |   |   |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | DR               |   |           |             |   |   |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | SG               |   |           |             |   |   |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | ER               |   |           |             |   |   |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | CS               |   |           |             |   |   |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8  | RS               |   |           |             |   |   |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 9  | -                |   |           |             |   |   |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| Pin No.  | Signal name      |   |           |             |   |   |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | +                |   |           |             |   |   |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | -                |   |           |             |   |   |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | NC(or FG)        |   |           |             |   |   |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | SD               |   |           |             |   |   |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | RD               |   |           |             |   |   |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | NC               |   |           |             |   |   |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | NC               |   |           |             |   |   |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8  | SG               |   |           |             |   |   |   |    |   |    |   |    |   |    |   |    |   |    |   |    |   |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |

\* Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.

# Chapter 8

---

## Connection With Keyence PLCs

## 8.1 KV-10/16/24/40 Series

### PLC model selection

Select "Keyence KV-10/16/24/40 series".

Confirm the appropriate versions of GTWIN and GT to connect with Keyence KV-10/16/24/40 series.

| GTseries | GTWIN Version     | GT Version        |
|----------|-------------------|-------------------|
| GT01     | Ver.2.80 or later | Ver.1.31 or later |
| GT02     | Ver.2.A0 or later | Ver.1.00 or later |
| GT02L    | Ver.2.B0 or later | Ver.1.00 or later |
| GT03-E   | Ver.2.E0 or later | Ver.1.00 or later |
| GT05     | Ver.2.90 or later | Ver.1.00 or later |
| GT11     | Ver.2.80 or later | Ver.1.21 or later |
| GT12     | Ver.2.97 or later | Ver.1.00 or later |
| GT21     | Ver.2.80 or later | Ver.1.11 or later |
| GT32     | Ver.2.80 or later | Ver.1.00 or later |
| GT32-E   | Ver.2.C0 or later | Ver.1.00 or later |

### Usable devices

| Bit/Word Device |  | No.           | Memo                             |
|-----------------|--|---------------|----------------------------------|
| Bit Device      | Relay  | 00000-17915   |                                  |
|                 | Timer  | T000-T249     |                                  |
|                 | Counter                                      | C000-C249     |                                  |
|                 | High-speed Counter/CTH                       | CTH0-CTH1     |                                  |
|                 | High-speed Counter Comparator                | CTC0-CTC3     | It is not possible to output it. |
| Word Device     | Data Memory                                  | DM0000-DM1999 |                                  |
|                 | Temporary Data Memory                        | DM0000-DM1999 |                                  |
|                 | Digital Trimmer                              | AT0-AT1       |                                  |
|                 | Timer(current value)                         | TC000-TC249   |                                  |
|                 | Counter(current value)                       | CC000-CC249   |                                  |
|                 | High-speed counter/CTH (current value)       | CTHC0-CTHC1   |                                  |
|                 | High-speed Counter Comparator(current Value) | CTCC0-CTCC3   |                                  |
|                 | Timer(set value)                             | TS000-TS249   |                                  |
|                 | Counter(set vlue)                            | CS000-CS249   |                                  |
|                 | High-speed counter/CTH (set value)           | CTHS0-CTHS1   |                                  |
|                 | High-speed Counter Comparator(set value)     | CTCS0-CTCS3   |                                  |

Note1) The high-speed counter comparator cannot output.

Note2) It takes some time for communicating due to limitations of PLC communication protocol.

Therefore, the speed of screen change may be slower, or the response of the touch switches may be worse.



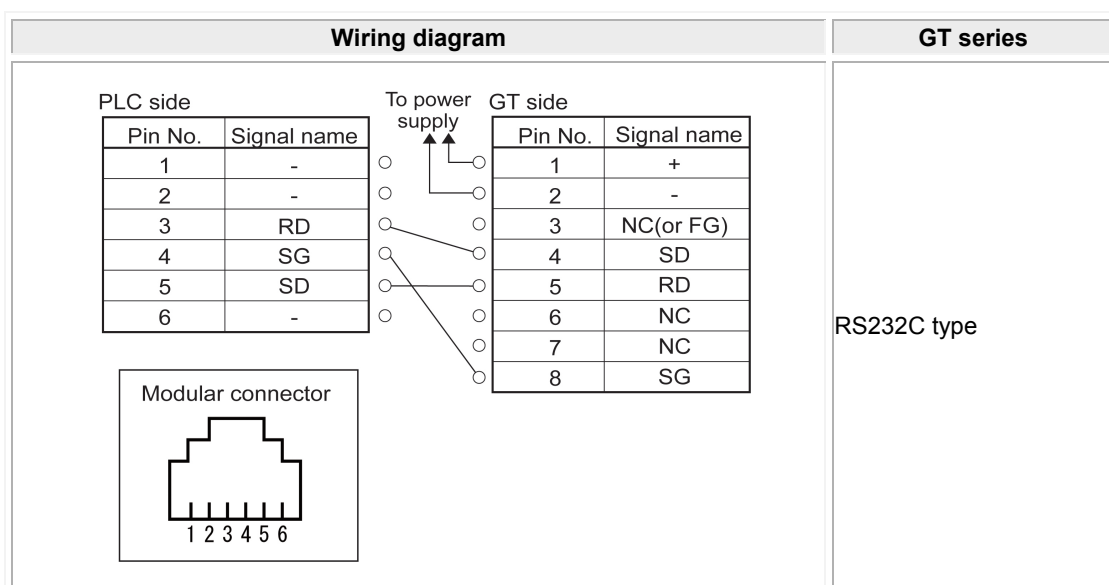
### Communication Parameters Settings

The example of communication settings of GT and PLC is shown below.

#### Setting Values for GT (Set in the configuration setting of GTWIN.)

| Item      | Setting |
|-----------|---------|
| Baud Rate | 9600bps |
| Data Bits | 8       |
| Stop Bits | 1       |
| Parity    | Even    |

### 8.1.1 Connection Method



\* Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.

\* The numbers of module connector on the PLC show the pin numbers on the unit.

## 8.2 KV-700 Series

### PLC model selection

Select "Keyence KV-700 Series".

### Usable devices

| Bit/Word Device    |  | No.             | Memo                             |
|--------------------|--|-----------------|----------------------------------|
| Bit Device         | Relay                                    | 00000-59915     |                                  |
|                    | Control Relay                            | CR0000-CR3915   |                                  |
|                    | Timer                                    | T000-T511       |                                  |
|                    | Counter                                  | C000-C511       |                                  |
|                    | High-speed Counter Comparator            | CTC0-CTC3       | It is not possible to output it. |
| Word Device        | Data Memory                              | DM00000-DM39999 |                                  |
|                    | Control Memory                           | CM0000-CM3999   |                                  |
|                    | Temporary Data Memory                    | TM000-TM511     |                                  |
| Double Word Device | Digital Trimmer                          | AT0-AT7         |                                  |
|                    | Timer(set Value)                         | T/TC000-T/TC511 |                                  |
|                    | Counter(set Value)                       | C/CC000-C/CC511 |                                  |
|                    | High-speed Counter Comparator(set Value) | CTH0-CTH1       |                                  |
|                    | Timer(current)                           | T/TS000-T/TS511 |                                  |
|                    | Counter(current)                         | C/CS000-C/CS511 |                                  |
|                    | High-speed Counter Comparator(current)   | CTC0-CTC3       |                                  |

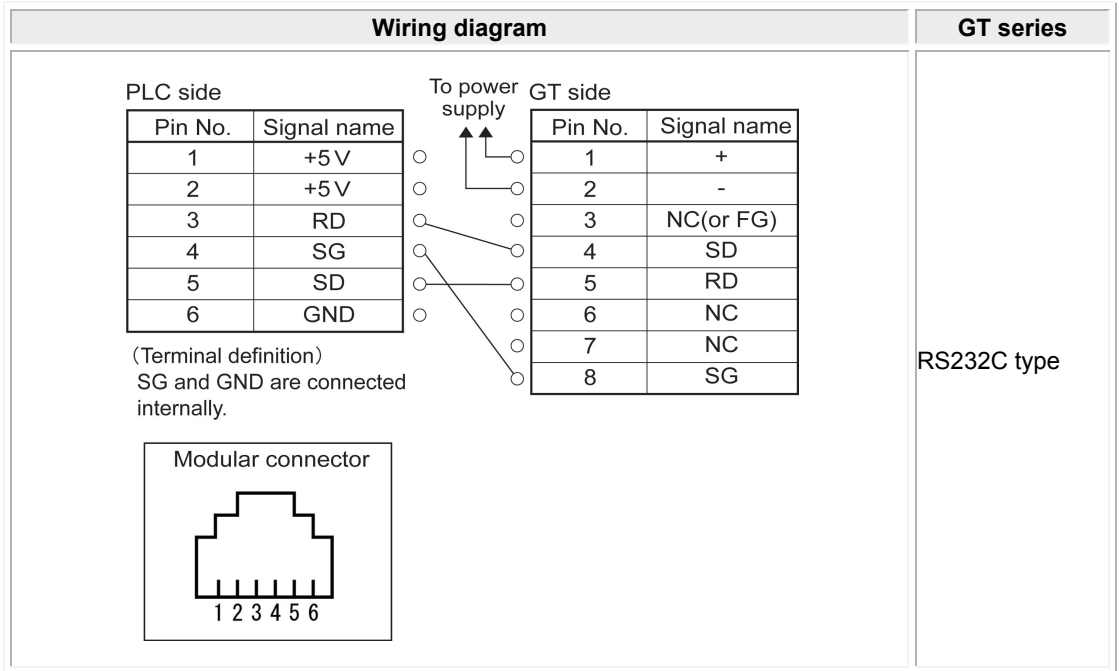
### Communication Parameters Settings

The example of communication settings of GT and PLC is shown below.

#### Setting Values for GT (Set in the configuration setting of GTWIN.)

| Item      | Setting |
|-----------|---------|
| Baud Rate | 9600bps |
| Data Bits | 8       |
| Stop Bits | 1       |
| Parity    | Even    |

## 8.2.1 Connection Method



- Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.

## 8.3 KV-700 Series Connected using Unit KV-L20R/V

### PLC model selection

Select "Keyence KV-700 Series".

### Usable devices

|                    | Bit/Word Device                          | No.             | Memo                             |
|--------------------|--|-----------------|----------------------------------|
| Bit Device         | Relay                                    | 00000-59915     |                                  |
|                    | Control Relay                            | CR0000-CR3915   |                                  |
|                    | Timer                                    | T000-T511       |                                  |
|                    | Counter                                  | C000-C511       |                                  |
|                    | High-speed Counter Comparator            | CTC0-CTC3       | It is not possible to output it. |
| Word Device        | Data Memory                              | DM00000-DM39999 |                                  |
|                    | Control Memory                           | CM0000-CM3999   |                                  |
|                    | Temporary Data Memory                    | TM000-TM511     |                                  |
| Double Word Device | Digital Trimmer                          | AT0-AT7         |                                  |
|                    | Timer(set Value)                         | T/TC000-T/TC511 |                                  |
|                    | Counter(set Value)                       | C/CC000-C/CC511 |                                  |
|                    | High-speed Counter Comparator(set Value) | CTH0-CTH1       |                                  |
|                    | Timer(current)                           | T/TS000-T/TS511 |                                  |
|                    | Counter(current)                         | C/CS000-C/CS511 |                                  |
|                    | High-speed Counter Comparator(current)   | CTC0-CTC3       |                                  |

### Communication Parameters Settings

The example of communication settings of GT and PLC is shown below.

#### Setting Values for GT (Set in the configuration setting of GTWIN.)

| Item      | Setting                               |
|-----------|---------------------------------------|
| Baud Rate | 9600, 19200, 38400, 57600, 115200 bps |
| Data Bits | 8                                     |
| Stop Bits | 1                                     |
| Parity    | Even                                  |

#### KV-L20R Setting (Port1)

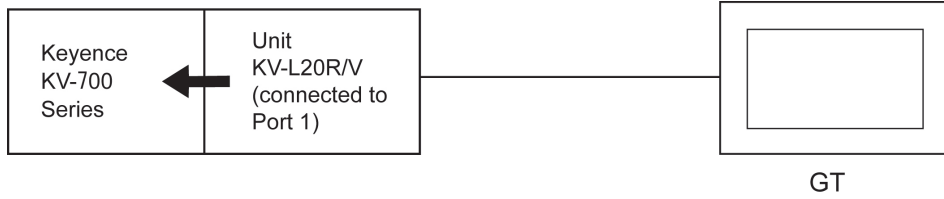
| Item               | Setting                               |
|--------------------|---------------------------------------|
| Operation          | KV mode(high link)                    |
| Baud rate          | 9600, 19200, 38400, 57600, 115200 bps |
| RS/CS flow control | Not used                              |



#### Note:

- Use the port 1.
- Use a unit editor supplied with the KV BUILDER for the settings of the KV-L20R/V.

### 8.3.1 Connection Method



| Wiring diagram             |             |                 |         | GT Series   |
|----------------------------|-------------|-----------------|---------|-------------|
| KV-L20R/V side D-sub 9-pin |             | To power supply | GT side |             |
| Pin No.                    | Signal name |                 | Pin No. | Signal Name |
| 1                          | -           |                 | 1       | +           |
| 2                          | RD          |                 | 2       | -           |
| 3                          | SD          |                 | 3       | NC(or FG)   |
| 4                          | -           |                 | 4       | SD          |
| 5                          | SG          |                 | 5       | RD          |
| 6                          | -           |                 | 6       | NC          |
| 7                          | RS          |                 | 7       | NC          |
| 8                          | CS          |                 | 8       | SG          |
| 9                          | -           |                 |         |             |

RS232C type

- Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.

## 8.4 KV-1000 Series

### PLC model selection

Select "Keyence KV-1000 Series".

### Usable devices

|                    | Bit/Word Device                          | No.               | Memo                             |
|--------------------|--|-------------------|----------------------------------|
| Bit Device         | Relay                                    | 00000-59915       |                                  |
|                    | Control Relay                            | CR0000-CR3915     |                                  |
|                    | Internal Hold Relay                      | MR00000-MR99915   |                                  |
|                    | Latch Relay                              | LR00000-LR99915   |                                  |
|                    | Timer                                    | T0000-T3999       |                                  |
|                    | Counter                                  | C0000-C3999       |                                  |
|                    | High-speed Counter Comparator            | CTC0-CTC3         | It is not possible to output it. |
| Word Device        | Data Memory                              | DM00000-DM65534   |                                  |
|                    | Control Memory                           | CM00000-CM11998   |                                  |
|                    | Temporary Data Memory                    | TM000-TM511       |                                  |
|                    | Enhancing Data Memory                    | EM00000-FM65534   |                                  |
|                    | Enhancing Data Memory                    | FM00000-FM32766   |                                  |
|                    | Index Register                           | Z01-Z12           |                                  |
| Double Word Device | Digital Trimmer                          | AT0-AT7           |                                  |
|                    | Timer(set Value)                         | T/TC0000-T/TC3999 |                                  |
|                    | Counter(set Value)                       | C/CC0000-C/CC3999 |                                  |
|                    | High-speed Counter Comparator(set Value) | CTH0-CTH1         |                                  |
|                    | Timer(current)                           | T/TS0000-T/TS3999 |                                  |
|                    | Counter(current)                         | C/CS0000-C/CS3999 |                                  |
|                    | High-speed Counter Comparator(current)   | CTC0-CTC3         |                                  |

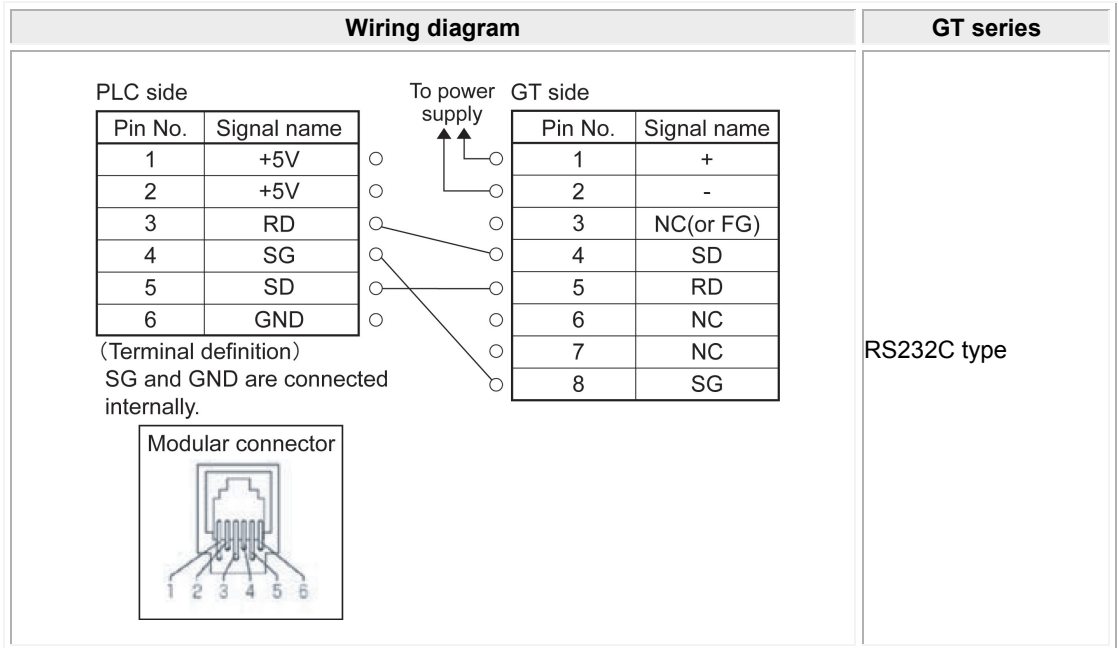
### Communication Parameters Settings

The example of communication settings of GT and PLC is shown below.

#### Setting Values for GT (Set in the configuration setting of GTWIN.)

| Item      | Setting                               |
|-----------|---------------------------------------|
| Baud Rate | 9600, 19200, 38400, 57600, 115200 bps |
| Data Bits | 8                                     |
| Stop Bits | 1                                     |
| Parity    | Even                                  |

## 8.4.1 Connection Method



- Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.

## 8.5 KV-1000 Series Connected using Unit KV-L20R/V

### PLC model selection

Select “Keyence KV-1000 Series”.

The following version of GTWIN is required to select “Keyence KV-1000 series” from the PLC model selection. When the version of your GTWIN is older than the one below, select “Keyence KV-700 series”. In that case, the range of usable devices is the same as the one for Keyence KV-700 series.

| GT     | GTWIN Version     | GT Version  |
|--------|-------------------|-------------|
| GT01   | Ver.2.90 or later | Ver.1.33 以上 |
| GT02   | Ver.2.A0 or later | Ver.1.00 以上 |
| GT02L  | Ver.2.B0 or later | Ver.1.00 以上 |
| GT03-E | Ver.2.E0 以上       | Ver.1.00 以上 |
| GT05   | Ver.2.90 以上       | Ver.1.00 以上 |
| GT11   | Ver.2.90 以上       | Ver.1.23 以上 |
| GT12   | Ver.2.97 以上       | Ver.1.00 以上 |
| GT21   | Ver.2.90 以上       | Ver.1.13 以上 |
| GT32   | Ver.2.90 以上       | Ver.1.00 以上 |
| GT32-E | Ver.2.C0 以上       | Ver.1.00 以上 |

### Usable devices

| Bit/Word Device    |  | No.             | Memo                             |
|--------------------|--|-----------------|----------------------------------|
| Bit Device         | Relay                                    | 00000-59915     |                                  |
|                    | Control Relay                            | CR0000-CR3915   |                                  |
|                    | Timer                                    | T000-T511       |                                  |
|                    | Counter                                  | C000-C511       |                                  |
|                    | High-speed Counter Comparator            | CTC0-CTC3       | It is not possible to output it. |
| Word Device        | Data Memory                              | DM00000-DM39999 |                                  |
|                    | Control Memory                           | CM0000-CM3999   |                                  |
|                    | Temporary Data Memory                    | TM000-TM511     |                                  |
| Double Word Device | Digital Trimmer                          | AT0-AT7         |                                  |
|                    | Timer(set Value)                         | T/TC000-T/TC511 |                                  |
|                    | Counter(set Value)                       | C/CC000-C/CC511 |                                  |
|                    | High-speed Counter Comparator(set Value) | CTH0-CTH1       |                                  |
|                    | Timer(current)                           | T/TS000-T/TS511 |                                  |
|                    | Counter(current)                         | C/CS000-C/CS511 |                                  |
|                    | High-speed Counter Comparator(current)   | CTC0-CTC3       |                                  |



### Communication Parameters Settings

The example of communication settings of GT and PLC is shown below.

#### Setting Values for GT (Set in the configuration setting of GTWIN.)

| Item      | Setting                           |
|-----------|-----------------------------------|
| Baud Rate | 9600/19200/38400/57600/115200 bps |
| Data Bits | 8                                 |
| Stop Bits | 1                                 |
| Parity    | Even                              |

#### KV-L20R Setting (Port1)

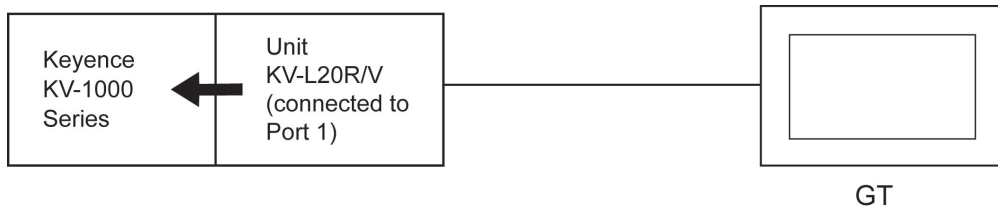
| Item               | Setting                           |
|--------------------|-----------------------------------|
| Operation          | KV mode(high link)                |
| Baud rate          | 9600/19200/38400/57600/115200 bps |
| RS/CS flow control | Not used                          |



#### Note:

- Use the port 1.
- Use a unit editor supplied with the KV BUILDER for the settings of the KV-L20R/V.

### 8.5.1 Connection Method



| Wiring diagram             |             |   |             | GT Series   |
|----------------------------|-------------|---|-------------|-------------|
| KV-L20R/V side D-sub 9-pin |             |   | RS232C type |             |
| Pin No.                    | Signal name |   | Pin No.     | Signal Name |
| 1                          | -           |   | 1           | +           |
| 2                          | RD          |   | 2           | -           |
| 3                          | SD          |   | 3           | NC(or FG)   |
| 4                          | -           |   | 4           | SD          |
| 5                          | SG          |   | 5           | RD          |
| 6                          | -           |   | 6           | NC          |
| 7                          | RS          |   | 7           | NC          |
| 8                          | CS          | 8 | SG          |             |
| 9                          | -           |   |             |             |

\* Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.

## 8.6 KV-3000 Series

### PLC model selection

Select "Keyence KV-3000/5000 Series".  
KV-5000 series cannot be connected to CPU directly.

### Usable devices

| Bit/Word Device    |  | No.                 | Memo                             |
|--------------------|--|---------------------|----------------------------------|
| Bit Device         | Input Relay                              | R 00000~R 99915     |                                  |
|                    | Output Relay                             |                     |                                  |
|                    | Internal Auxiliary Relay                 |                     |                                  |
|                    | Link Relay                               | B 0000~B 3FFF       |                                  |
|                    | Control Relay                            | CR0000~CR3915       |                                  |
|                    | Internal Hold Relay                      | MR00000~MR99915     |                                  |
|                    | Latch Relay                              | LR00000~LR99915     |                                  |
|                    | Work Relay                               | VB 0000~VB 3FFF     |                                  |
|                    | Timer(contact)                           | T0000~T3999         |                                  |
|                    | Counter(contact)                         | C0000~C3999         |                                  |
|                    | High-speed Counter Comparator(contact)   | CTC0~CTC3           | It is not possible to output it. |
| Word Device        | Data Memory                              | DM00000~DM65534     |                                  |
|                    | Control Memory                           | CM 00000~CM 05999   |                                  |
|                    | Temporary Data Memory                    | TM000~TM511         |                                  |
|                    | Enhancing Data Memory                    | EM 00000~EM 65534   |                                  |
|                    | File register (Current bank system)      | FM 00000~FM 32767   |                                  |
|                    | File register (Serial number system)     | ZF 000000~ZF 131071 |                                  |
|                    | Link register                            | W 0000~W 3FFF       |                                  |
|                    | Work memory                              | VM 00000~VM 59999   |                                  |
| Double Word Device | Digital Trimmer                          | TRM 0~TRM 7         | It is not possible to output it. |
|                    | Timer(set Value)                         | TC 0000~TC 3999     |                                  |
|                    | Counter(set Value)                       | CC 0000~CC 3999     |                                  |
|                    | High-speed Counter Comparator(set Value) | CTH 0~CTH 1         |                                  |
|                    | Timer(current)                           | TS 0000~TS 3999     |                                  |
|                    | Counter(current)                         | CS 0000~CS 3999     |                                  |
|                    | High-speed Counter Comparator(current)   | CTC 0~CTC 3         |                                  |
|                    | Index register                           | Z 01~Z 12           |                                  |

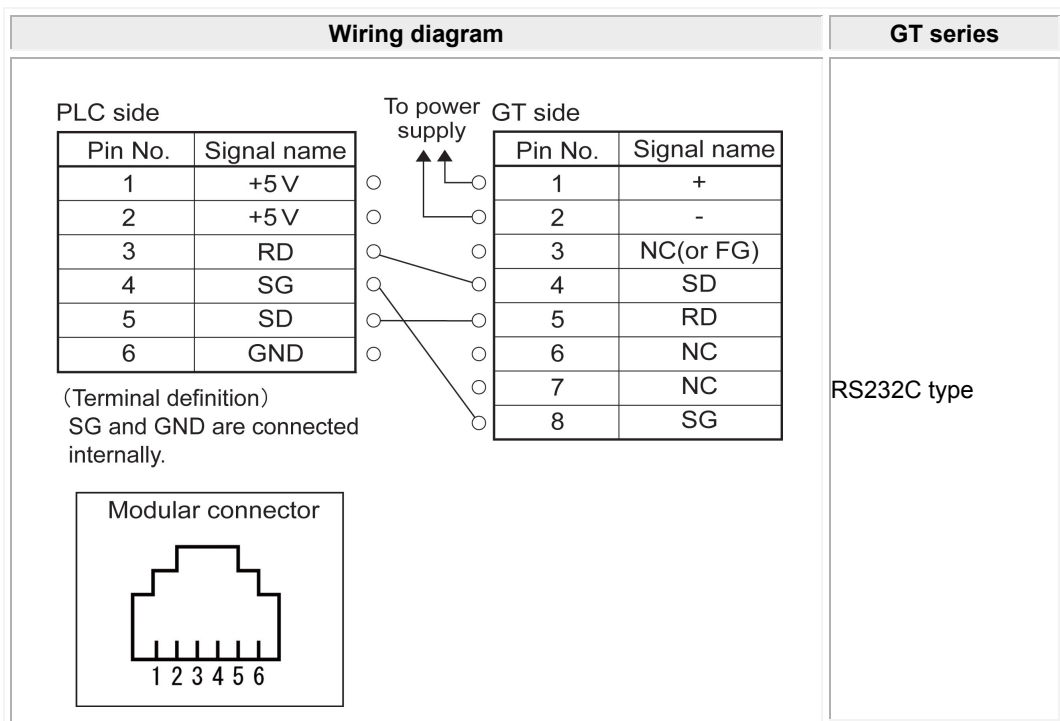
### Communication Parameters Settings

The example of communication settings of GT and PLC is shown below.

#### Setting Values for GT (Set in the configuration setting of GTWIN.)

| Item      | Setting                           |
|-----------|-----------------------------------|
| Baud Rate | 9600/19200/38400/57600/115200 bps |
| Data Bits | 8                                 |
| Stop Bits | 1                                 |
| Parity    | Even                              |

### 8.6.1 Connection Method



\* Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.

## 8.7 KV-3000/5000 Series Connected using Unit KV-L20R/V

### PLC model selection

Select "Keyence KV-3000/5000 Series".

### Usable devices

| Bit/Word Device    |  | No.                 | Memo                             |
|--------------------|--|---------------------|----------------------------------|
| Bit Device         | Input Relay                              | R 00000~R 99915     |                                  |
|                    | Output Relay                             |                     |                                  |
|                    | Internal Auxiliary Relay                 |                     |                                  |
|                    | Link Relay                               | B 0000~B 3FFF       |                                  |
|                    | Control Relay                            | CR0000-CR3915       |                                  |
|                    | Internal Hold Relay                      | MR00000-MR99915     |                                  |
|                    | Latch Relay                              | LR00000-LR99915     |                                  |
|                    | Work Relay                               | VB 0000~VB 3FFF     |                                  |
|                    | Timer(contact)                           | T0000-T3999         |                                  |
|                    | Counter(contact)                         | C0000-C3999         |                                  |
|                    | High-speed Counter Comparator(contact)   | CTC0-CTC3           | It is not possible to output it. |
| Word Device        | Data Memory                              | DM00000-DM65534     |                                  |
|                    | Control Memory                           | CM 00000~CM 05999   |                                  |
|                    | Temporary Data Memory                    | TM000-TM511         |                                  |
|                    | Enhancing Data Memory                    | EM 00000~EM 65534   |                                  |
|                    | File register (Current bank system)      | FM 00000~FM 32767   |                                  |
|                    | File register (Serial number system)     | ZF 000000~ZF 131071 |                                  |
|                    | Link register                            | W 0000~W 3FFF       |                                  |
|                    | Work memory                              | VM 00000~VM 59999   |                                  |
| Double Word Device | Digital Trimmer                          | TRM 0~TRM 7         | It is not possible to output it. |
|                    | Timer(set Value)                         | TC 0000~TC 3999     |                                  |
|                    | Counter(set Value)                       | CC 0000~CC 3999     |                                  |
|                    | High-speed Counter Comparator(set Value) | CTH 0~CTH 1         |                                  |
|                    | Timer(current)                           | TS 0000~TS 3999     |                                  |
|                    | Counter(current)                         | CS 0000~CS 3999     |                                  |
|                    | High-speed Counter Comparator(current)   | CTC 0~CTC 3         |                                  |
|                    | Index register                           | Z 01~Z 12           |                                  |

## Communication Parameters Settings

The example of communication settings of GT and PLC is shown below.

### Setting Values for GT (Set in the configuration setting of GTWIN.) Setting Values for GT

| Item      | Setting                           |
|-----------|-----------------------------------|
| Baud Rate | 9600/19200/38400/57600/115200 bps |
| Data Bits | 8                                 |
| Stop Bits | 1                                 |
| Parity    | Even                              |

### KV-L20R Setting (Port1)

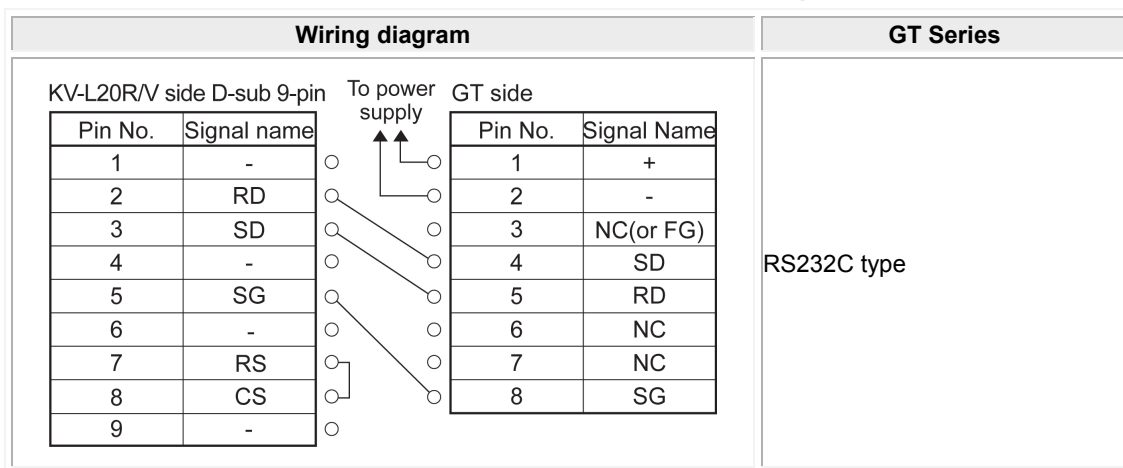
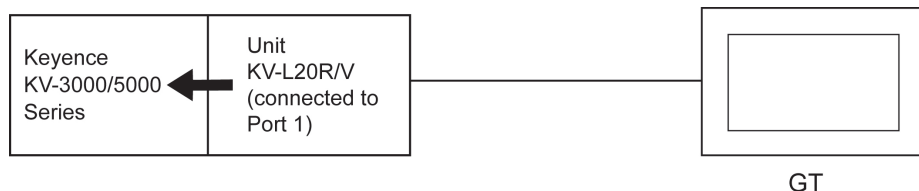
| Item               | Setting                           |
|--------------------|-----------------------------------|
| Operation          | KV mode(high link)                |
| Baud rate          | 9600/19200/38400/57600/115200 bps |
| RS/CS flow control | Not used                          |



#### Note:

- Use the port 1.
- Use a unit editor supplied with the KV BUILDER for the settings of the KV-L20R/V.

## 8.7.1 Connection Method



\* Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.

## 8.8 KV Nano Series

### Applicable versions of GTWIN and GT series

| GT series | Applicable versions |
|-----------|---------------------|
| GT01      | Cannot be used      |
| GT02      | Ver.1.00 or later   |
| GT02L     | Ver.1.00 or later   |
| GT03-E    | Ver.1.00 or later   |
| GT05      | Ver.1.00 or later   |
| GT11      | Cannot be used      |
| GT12      | Ver.1.00 or later   |
| GT21      | Cannot be used      |
| GT32      | Ver.1.00 or later   |
| GT32-E    | Ver.1.00 or later   |
| GTWIN     | Ver.2.E1 or later   |

### PLC model selection

Select "Keyence KV-3000/5000 Series".

### Usable devices

| Bit/Word Device    |   | No.              | Memo                             |
|--------------------|---|------------------|----------------------------------|
| Bit Device         | Input Relay<br>Output Relay<br>Internal Auxiliary Relay | R 000~R 59915    |                                  |
|                    | Link Relay  | B 0~B 1FFF       |                                  |
|                    | Control Relay   | CR 000~CR 8915   |                                  |
|                    | Internal Hold Relay                                     | MR 000~MR 59915  |                                  |
|                    | Latch Relay   | LR 000~LR 19915  |                                  |
|                    | Work Relay  | VB 0000~VB 1FFF  |                                  |
|                    | Timer(contact)  | T 0~T 511        |                                  |
|                    | Counter(contact)  | C 0~C 255        |                                  |
|                    | High-speed Counter Comparator(contact)                  | CTC 0~CTC 7      | It is not possible to output it. |
| Word Device        | Data Memory   | DM 0~DM 32767    |                                  |
|                    | Control Memory  | CM 0~CM 8999     |                                  |
|                    | Temporary Data Memory                                   | TM 0~TM 511      |                                  |
|                    | Link register   | W 0~W 3FFF       |                                  |
|                    | Work memory   | VM 00000~VM 9999 |                                  |
| Double Word Device | Timer(current)  | TC 0~TC 511      |                                  |
|                    | Counter (current)                                       | CC 0~CC 255      |                                  |
|                    | High-speed counter (current)                            | CTH 0~CTH 3      |                                  |
|                    | Timer(set Value)  | TS 0~TS 511      |                                  |
|                    | Counter(set Value)                                      | CS 0~CS 255      |                                  |
|                    | High-speed Counter Comparator(set Value)                | CTC 0~CTC 7      |                                  |
|                    | Index register  | Z 01~Z 12        |                                  |

### Communication Parameters Settings

The example of communication settings of GT and PLC is shown below.

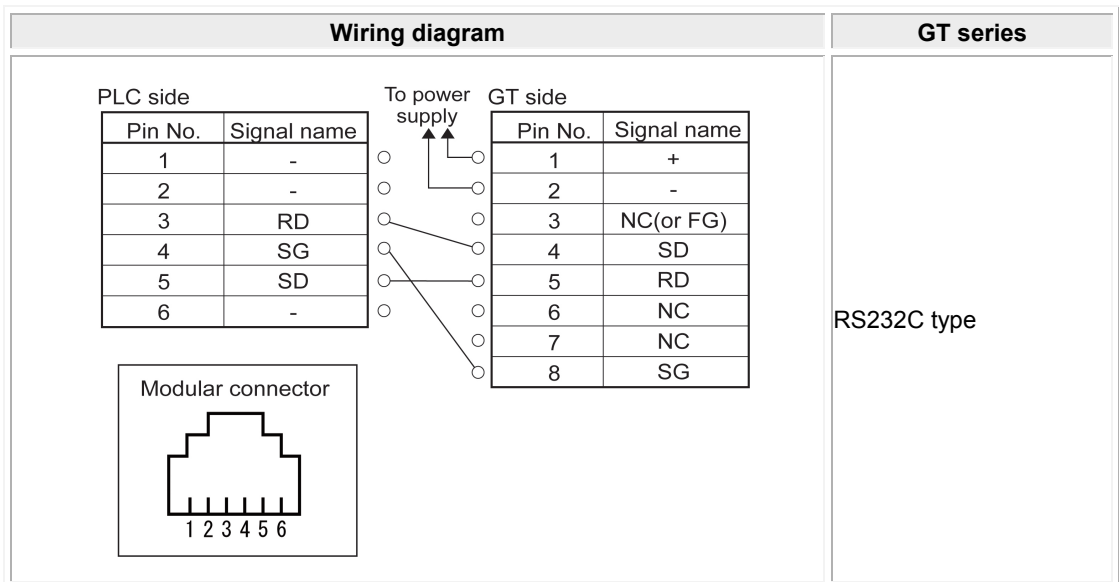
#### Setting Values for GT (Set in the configuration setting of GTWIN.)

| Item      | Setting                           |
|-----------|-----------------------------------|
| Baud Rate | 9600/19200/38400/57600/115200 bps |
| Data Bits | 8                                 |
| Stop Bits | 1                                 |
| Parity    | Even                              |

#### PLC Setting

| Item               | Setting                           |
|--------------------|-----------------------------------|
| Operation          | KV mode(high link)                |
| Baud rate          | 9600/19200/38400/57600/115200 bps |
| RS/CS flow control | Not used                          |

## 8.8.1 Connection Method



\* Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.

\* The numbers of module connector on the PLC show the pin numbers on the unit.

## 8.9 KV Nano Series Connected using Unit KV-L20R/V

### Applicable versions of GTWIN and GT series

| GT series | Applicable versions |
|-----------|---------------------|
| GT01      | Cannot be used      |
| GT02      | Ver.1.00 or later   |
| GT02L     | Ver.1.00 or later   |
| GT03-E    | Ver.1.00 or later   |
| GT05      | Ver.1.00 or later   |
| GT11      | Cannot be used      |
| GT12      | Ver.1.00 or later   |
| GT21      | Cannot be used      |
| GT32      | Ver.1.00 or later   |
| GT32-E    | Ver.1.00 or later   |
| GTWIN     | Ver.2.E1 or later   |

### PLC model selection

Select "Keyence KV-3000/5000 Series".

### Usable devices

| Bit/Word Device    |   | No.              | Memo                             |
|--------------------|---|------------------|----------------------------------|
| Bit Device         | Input Relay<br>Output Relay<br>Internal Auxiliary Relay | R 000~R 59915    |                                  |
|                    | Link Relay  | B 0~B 1FFF       |                                  |
|                    | Control Relay   | CR 000~CR 8915   |                                  |
|                    | Internal Hold Relay                                     | MR 000~MR 59915  |                                  |
|                    | Latch Relay   | LR 000~LR 19915  |                                  |
|                    | Work Relay  | VB 0000~VB 1FFF  |                                  |
|                    | Timer(contact)  | T 0~T 511        |                                  |
|                    | Counter(contact)  | C 0~C 255        |                                  |
|                    | High-speed Counter Comparator(contact)                  | CTC 0~CTC 7      | It is not possible to output it. |
| Word Device        | Data Memory   | DM 0~DM 32767    |                                  |
|                    | Control Memory  | CM 0~CM 8999     |                                  |
|                    | Temporary Data Memory                                   | TM 0~TM 511      |                                  |
|                    | Link register   | W 0~W 3FFF       |                                  |
|                    | Work memory   | VM 00000~VM 9999 |                                  |
| Double Word Device | Timer(current)  | TC 0~TC 511      |                                  |
|                    | Counter (current)                                       | CC 0~CC 255      |                                  |
|                    | High-speed counter (current)                            | CTH 0~CTH 3      |                                  |
|                    | Timer(set Value)  | TS 0~TS 511      |                                  |
|                    | Counter(set Value)                                      | CS 0~CS 255      |                                  |
|                    | High-speed Counter Comparator(set Value)                | CTC 0~CTC 7      |                                  |
|                    | Index register  | Z 01~Z 12        |                                  |



### Communication Parameters Settings

The example of communication settings of GT and PLC is shown below.

#### Setting Values for GT (Set in the configuration setting of GTWIN.)

| Item      | Setting                           |
|-----------|-----------------------------------|
| Baud Rate | 9600/19200/38400/57600/115200 bps |
| Data Bits | 8                                 |
| Stop Bits | 1                                 |
| Parity    | Even                              |

#### KV-N10L Setting (port 1)

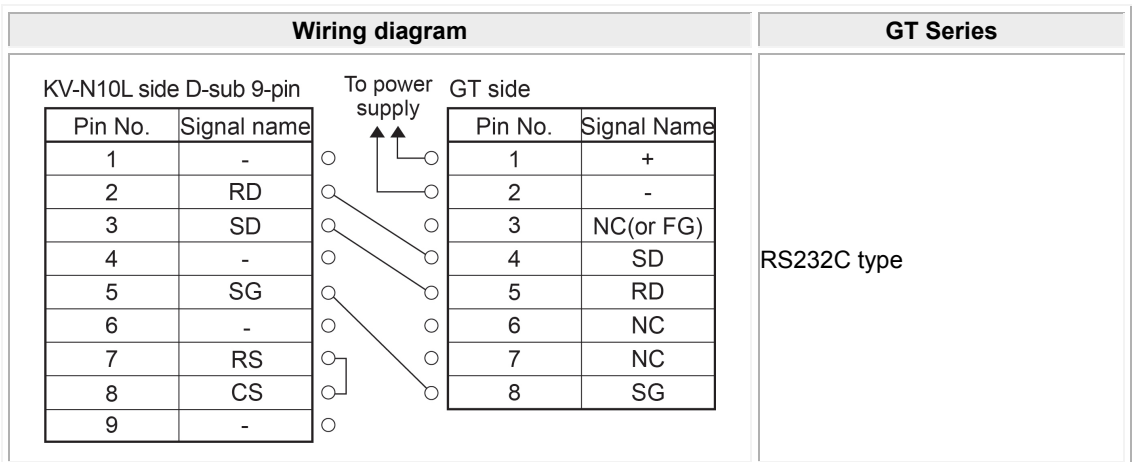
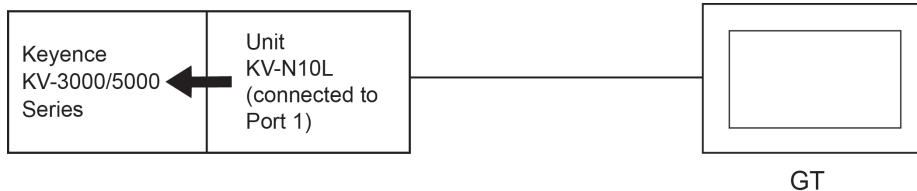
| Item               | Setting                           |
|--------------------|-----------------------------------|
| Operation          | KV mode(high link)                |
| Baud rate          | 9600/19200/38400/57600/115200 bps |
| RS/CS flow control | Not used                          |



#### Note:

- Use the port 1.
- Use a unit editor supplied with the KV BUILDER for the settings of the KV-N10L.

## 8.9.1 Connection Method



\* Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.



# Chapter 9

---

## Connection With Hitachi PLCs

## 9.1 EH-150/EHV Series

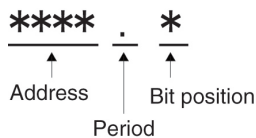
### PLC model selection

Select "Hitachi EH/EHV series".

### Usable devices

|                             | Bit/Word Device          | No.                   | Memo             |
|-----------------------------|--------------------------|-----------------------|------------------|
| Bit Device                  | External input           | X 0000~X 4FF95        |                  |
|                             | External output          | Y 0000~Y 4FF95        |                  |
|                             | Internal output          | R 000~R FFF           |                  |
|                             | Internal output          | WR 0000.0~WR FFFF.F   | *                |
|                             | CPU link                 | L 00000~L 73FFF       |                  |
|                             | Internal output          | WN 00000.0~WN 1FFFF.F | *                |
|                             | Data area                | M 00000~M 7FFFF       |                  |
|                             | Extended external input  | EX 00000~EX 5A7FF     |                  |
|                             | Extended external output | EY 00000~EY 5A7FF     |                  |
|                             | On delay timer           | TD 0000~TD 2559       |                  |
|                             | Off delay timer          | TDN 0000~TDN 2559     |                  |
|                             | Single shot              | SS 0000~SS 2559       |                  |
|                             | Monostable timer         | MS 0000~MS 2559       |                  |
|                             | Integrating timer        | TMR 0000~TMR 2559     |                  |
|                             | Watchdog timer           | WDT 0000~WTD 2559     |                  |
|                             | Counter                  | CU 0000~CU 2047       |                  |
|                             | Ring counter             | RCU 00000~RCU 2047    |                  |
|                             | Word Device              | Updown counter        | CT 00000~CT 2047 |
| External input              |                          | WX 0000~WX 4FF5       |                  |
| External output             |                          | WY 0000~WY 4FF5       |                  |
| Internal output             |                          | WR 0000~WR FFFF       |                  |
| CPU link                    |                          | WL 0000~WL 73FF       |                  |
| Internal output             |                          | WN 00000~WN 1FFFF     |                  |
| Data area                   |                          | WM 0000~WM 7FFF       |                  |
| Extended external input     |                          | WEX 0000~WEX 5A7F     |                  |
| Extended external output    |                          | WEY 0000~WEY 5A7F     |                  |
| Timer/Counter current value | TC 0000~TC 2559          |                       |                  |

\* The input in GTWIN is as follows:



#### Note:

- The maximum value that can be set with the GT is described.
- The range of usable addresses differs depending on the model. For details, please consult the manual for the PLC you will use.

## Communication Parameters Settings

The example of communication settings of GT and PLC is shown below.

### Setting Values for GT (Set in the configuration setting of GTWIN.)

| Item        | Setting  |
|-------------|----------|
| Baud Rate   | 19200bps |
| Data Length | 7        |
| Stop Bits   | 1        |
| Parity Bit  | Even     |

### Setting Values for PLC

#### Setting for -CPU104A/EH-CPU208A/EH-CPU316A/EH-CPU516/EH-CPU548

##### When using Port 1

The settings for the dip switches and special internal output are required.

Set the dip switches of CPU module as follows.

| Item      | Setting                  |
|-----------|--------------------------|
| Port type | Setting for special port |
| Baud rate | 19200 bps                |

Set the special internal output as follows.

| Item                               | Setting   |
|------------------------------------|---|
| Interface *1                       | For RS232C connection: RS232C   |
|                                    | For RS422 connection: RS422 internal terminating resistance function is ON. |
|                                    | For RS485 connection: RS422 internal terminating resistance function is ON. |
| Procedure of communication control | Procedure 1 of transmission control (No unit No.) *2                        |

\*1 It varies according to the communication method.

\*2 The procedure 1 of transmission control with unit number cannot be used.

\*3 For the details of the method of communication setting, refer to the "EH-150 Application Manual".

##### When using Port 2

The setting of the dip switches is required.

The PHL switch must be "ON". It cannot be used if the switch is "OFF".

Set the dip switches of CPU module as follows.

| Item                               | Setting   |
|------------------------------------|---|
| Port type                          | Setting for special port *1                       |
| Baud rate                          | 19200bps  |
| Procedure of communication control | Procedure 1 of transmission control (No unit No.) |

\*1 As it is fixed, the setting is not required.

\*2 For the details of the method of communication setting, refer to the "EH-150 Application Manual".

### Setting for EHV-CPU128/EHV-CPU64/EHV-CPU32/EHV-CPU16

It should be specified with a programming tool.

Specify the setting for the serial port as below with a programming tool.

| Item                    | Setting   |
|-------------------------|---|
| Type                    | Special port  |
| Port type *1            | For RS232C connection: RS232C                                       |
|                         | For RS422 connection: RS422/485                                     |
|                         | For RS485 connection: RS422/485                                     |
| Baud rate               | 19200bps  |
| Communication procedure | Procedure 1 of transmission control (No unit No.) 1:1 communication |
| Unit No.                | No unit No.   |
| With modem connection   | Not check   |

\*1 It varies according to the communication method.

\*2 For the details of the method of communication setting, refer to the "EH-150EHV series Ladder Programming Software Control Editor Instruction Manual".

### Setting for EH-SIO

#### Port 1 or Port 2

The setting for the dip switches and the ladder program to perform the default setting is required.

Specify as below with the dip switches for each port.

| Item        | Setting  |
|-------------|----------|
| Baud Rate   | 19200bps |
| Data Length | 1        |
| Parity Bit  | Even     |
| Stop Bits   | 7        |

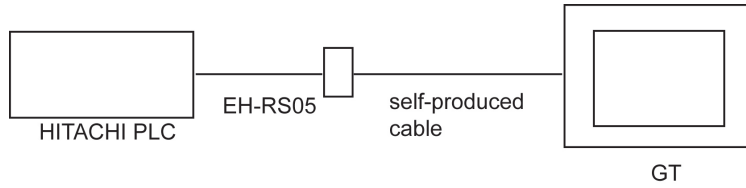
Specify the setting for the communication port of EH-SIO with a ladder program as below.

| Item                                  | Setting   |
|---------------------------------------|---|
| Default setting of communication mode | Hi-Protocol mode                                  |
| Communication procedure               | Procedure 1 of transmission control (No unit No.) |
| Unit No.                              | No  |

\* For the details of the method of communication setting, refer to the "EH-150 Application Manual".

## 9.1.1 RS232C Connection

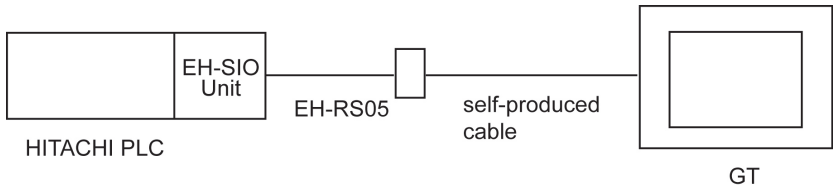
When connecting with EH-RS05 and a self-produced cable



| CPU  | Link I/F                      | Wiring diagram   |  | GT series |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
|--|-------------------------------|--|--|-----------|-------------|---|---|---|----|---|----|---|----|---|----|---|---|---|----|---|---|---|----|----|----|----|----|----|----|----|-----|----|-----|----|---|---------|-------------|---|---|---|---|---|-----------|---|----|---|----|---|----|---|----|---|----|-------------|
| EH-CPU104A<br>EH-CPU208A<br>EH-CPU316A<br>EH-CPU516<br>EH-CPU548 | Port 1 or<br>Port 2 on<br>CPU | <p>Cable side<br/>D-sub 15-bin</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>-</td></tr> <tr><td>2</td><td>SD</td></tr> <tr><td>3</td><td>RD</td></tr> <tr><td>4</td><td>RS</td></tr> <tr><td>5</td><td>CS</td></tr> <tr><td>6</td><td>-</td></tr> <tr><td>7</td><td>DR</td></tr> <tr><td>8</td><td>-</td></tr> <tr><td>9</td><td>PG</td></tr> <tr><td>10</td><td>PG</td></tr> <tr><td>11</td><td>CD</td></tr> <tr><td>12</td><td>CD</td></tr> <tr><td>13</td><td>ER1</td></tr> <tr><td>14</td><td>ER2</td></tr> <tr><td>15</td><td>-</td></tr> </tbody> </table> <p style="text-align: center;">To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>RS</td></tr> <tr><td>7</td><td>CS</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> |  | Pin No.   | Signal name | 1 | - | 2 | SD | 3 | RD | 4 | RS | 5 | CS | 6 | - | 7 | DR | 8 | - | 9 | PG | 10 | PG | 11 | CD | 12 | CD | 13 | ER1 | 14 | ER2 | 15 | - | Pin No. | Signal name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | SD | 5 | RD | 6 | RS | 7 | CS | 8 | SG | RS232C type |
| Pin No.  | Signal name                   |  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | -                             |  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | SD                            |  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | RD                            |  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | RS                            |  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | CS                            |  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | -                             |  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | DR                            |  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8  | -                             |  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 9  | PG                            |  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 10   | PG                            |  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 11   | CD                            |  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 12   | CD                            |  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 13   | ER1                           |  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 14   | ER2                           |  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 15   | -                             |  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| Pin No.  | Signal name                   |  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | +                             |  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | -                             |  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | NC(or FG)                     |  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | SD                            |  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | RD                            |  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | RS                            |  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | CS                            |  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8  | SG                            |  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| EHV-CPU128<br>EHV-CPU64<br>EHV-CPU32<br>EHV-CPU16                | Serial port<br>on CPU         |  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |

\* The settings vary according to the ports and communication methods. Refer to the above settings for communication conditions.

**When connecting with EH-RS05 and a self-produced cable using EH-SIO unit**

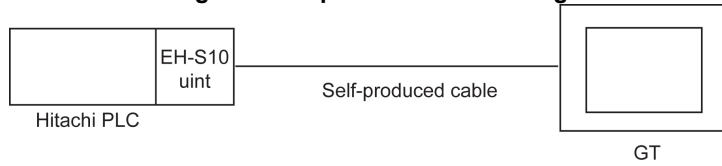


| CPU  | Unit                             | Wiring diagram   | GT series   |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
|--|----------------------------------|--|-------------|-------------|---|---|---|----|---|----|---|----|---|----|---|---|---|----|---|---|---|----|----|----|----|----|----|----|----|-----|----|-----|----|---|---------|-------------|---|---|---|---|---|-----------|---|----|---|----|---|----|---|----|---|----|-------------|
| EH-CPU104A<br>EH-CPU208A<br>EH-CPU316A<br>EH-CPU516<br>EH-CPU548 | Port 1 or<br>Port 2 of<br>EH-SIO | <p>Cable side<br/>D-sub 15-bin</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>-</td></tr> <tr><td>2</td><td>SD</td></tr> <tr><td>3</td><td>RD</td></tr> <tr><td>4</td><td>RS</td></tr> <tr><td>5</td><td>CS</td></tr> <tr><td>6</td><td>-</td></tr> <tr><td>7</td><td>DR</td></tr> <tr><td>8</td><td>-</td></tr> <tr><td>9</td><td>PG</td></tr> <tr><td>10</td><td>PG</td></tr> <tr><td>11</td><td>CD</td></tr> <tr><td>12</td><td>CD</td></tr> <tr><td>13</td><td>ER1</td></tr> <tr><td>14</td><td>ER2</td></tr> <tr><td>15</td><td>-</td></tr> </tbody> </table> <p>To power supply</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>RS</td></tr> <tr><td>7</td><td>CS</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> <p>GT side</p> | Pin No.     | Signal name | 1 | - | 2 | SD | 3 | RD | 4 | RS | 5 | CS | 6 | - | 7 | DR | 8 | - | 9 | PG | 10 | PG | 11 | CD | 12 | CD | 13 | ER1 | 14 | ER2 | 15 | - | Pin No. | Signal name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | SD | 5 | RD | 6 | RS | 7 | CS | 8 | SG | RS232C type |
| Pin No.  |                                  |  | Signal name |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | -                                |  |             |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | SD                               |  |             |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | RD                               |  |             |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | RS                               |  |             |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | CS                               |  |             |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | -                                |  |             |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | DR                               |  |             |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8  | -                                |  |             |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 9  | PG                               |  |             |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 10   | PG                               |  |             |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 11   | CD                               |  |             |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 12   | CD                               |  |             |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 13   | ER1                              |  |             |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 14   | ER2                              |  |             |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 15   | -                                |  |             |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| Pin No.  | Signal name                      |  |             |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | +                                |  |             |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | -                                |  |             |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | NC(or FG)                        |  |             |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | SD                               |  |             |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | RD                               |  |             |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | RS                               |  |             |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | CS                               |  |             |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8  | SG                               |  |             |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| EHV-CPU128<br>EHV-CPU64<br>EHV-CPU32<br>EHV-CPU16                |                                  |  |             |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |

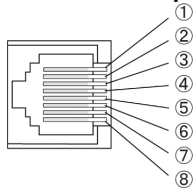
\* The settings vary according to the ports and communication methods. Refer to the above settings for communication conditions.



**When connecting with self-produced cable using a RJ45 connector**



**RJ45 modular port**

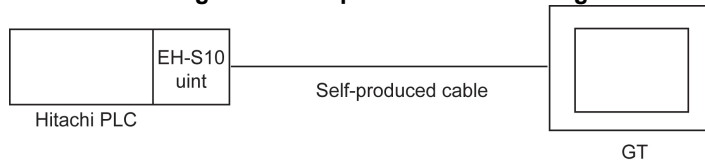


Port 1 viewed from the front of the module (socket side)

| CPU  | Link I/F                | Wiring diagram  | GT series |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
|--|-------------------------|---|-----------|-------------|---|----|---|----|---|-----|---|-----|---|----|---|----|---|----|---|----|---------|-------------|---|---|---|---|---|-----------|---|----|---|----|---|----|---|----|---|----|-------------|
| EH-CPU104A<br>EH-CPU208A<br>EH-CPU316A<br>EH-CPU516<br>EH-CPU548 | Port 1 or Port 2 on CPU | <p>HITACHI PLC side RJ45 connector</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>SG</td></tr> <tr><td>2</td><td>CD</td></tr> <tr><td>3</td><td>ER1</td></tr> <tr><td>4</td><td>ER2</td></tr> <tr><td>5</td><td>SD</td></tr> <tr><td>6</td><td>RD</td></tr> <tr><td>7</td><td>DR</td></tr> <tr><td>8</td><td>RS</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> | Pin No.   | Signal name | 1 | SG | 2 | CD | 3 | ER1 | 4 | ER2 | 5 | SD | 6 | RD | 7 | DR | 8 | RS | Pin No. | Signal name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | SD | 5 | RD | 6 | NC | 7 | NC | 8 | SG | RS232C type |
| Pin No.  | Signal name             |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | SG                      |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | CD                      |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | ER1                     |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | ER2                     |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | SD                      |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | RD                      |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | DR                      |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8  | RS                      |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| Pin No.  | Signal name             |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | +                       |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | -                       |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | NC(or FG)               |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | SD                      |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | RD                      |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | NC                      |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | NC                      |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8  | SG                      |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| EHV-CPU128<br>EHV-CPU64<br>EHV-CPU32<br>EHV-CPU16                | Serial port on CPU      |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |

\* The settings vary according to the ports and communication methods. Refer to the above settings for communication conditions.

**When connecting with a self-produced cable using a RJ45 connector with EH-SIO unit**

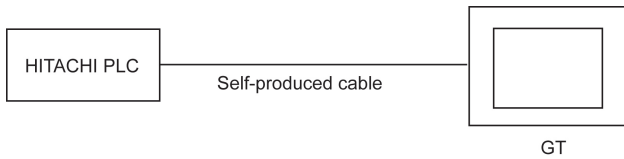


\* Refer to the above drawing of RJ45 modular port.

| CPU  | Unit                       | Wiring diagram  | GT series |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
|--|----------------------------|---|-----------|-------------|---|----|---|----|---|-----|---|-----|---|----|---|----|---|----|---|----|---------|-------------|---|---|---|---|---|-----------|---|----|---|----|---|----|---|----|---|----|-------------|
| EH-CPU104A<br>EH-CPU208A<br>EH-CPU316A<br>EH-CPU516<br>EH-CPU548 | Port 1 or Port 2 of EH-SIO | <p>HITACHI PLC side RJ45 connector</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>SG</td></tr> <tr><td>2</td><td>CD</td></tr> <tr><td>3</td><td>ER1</td></tr> <tr><td>4</td><td>ER2</td></tr> <tr><td>5</td><td>SD</td></tr> <tr><td>6</td><td>RD</td></tr> <tr><td>7</td><td>DR</td></tr> <tr><td>8</td><td>RS</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> | Pin No.   | Signal name | 1 | SG | 2 | CD | 3 | ER1 | 4 | ER2 | 5 | SD | 6 | RD | 7 | DR | 8 | RS | Pin No. | Signal name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | SD | 5 | RD | 6 | NC | 7 | NC | 8 | SG | RS232C type |
| Pin No.  | Signal name                |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | SG                         |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | CD                         |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | ER1                        |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | ER2                        |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | SD                         |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | RD                         |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | DR                         |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8  | RS                         |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| Pin No.  | Signal name                |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | +                          |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | -                          |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | NC(or FG)                  |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | SD                         |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | RD                         |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | NC                         |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | NC                         |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8  | SG                         |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| EHV-CPU128<br>EHV-CPU64<br>EHV-CPU32<br>EHV-CPU16                |                            |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |

\* The settings vary according to the ports and communication methods. Refer to the above settings for communication conditions.

## 9.1.2 RS422 Connection



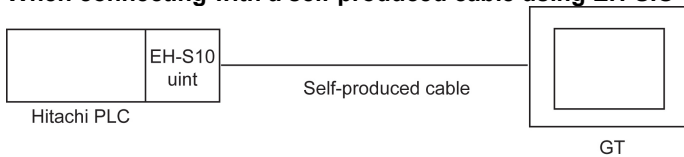
\* Refer to the above drawing of RJ45 modular port.

### When connecting with a self-produced cable

| CPU  | Link I/F  | Wiring diagram   | GT series |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
|--|---|--|-----------|-------------|---|----|---|---|---|---|---|-----|---|-----|---|-----|---|-----|---|---|---------|-------------|---|------|---|-----|---|----|---|-----|---|-----|---|-----|---|-----|---|---|----------------------|
| EH-CPU104A<br>EH-CPU208A<br>EH-CPU316A<br>EH-CPU516<br>EH-CPU548 | Port 1 on CPU                                     | <p>HITACHI PLC<br/>RS422 CPU port side<br/>RJ45 connector</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>SG</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>-</td></tr> <tr><td>4</td><td>SD+</td></tr> <tr><td>5</td><td>SD-</td></tr> <tr><td>6</td><td>RD-</td></tr> <tr><td>7</td><td>RD+</td></tr> <tr><td>8</td><td>-</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+24V</td></tr> <tr><td>2</td><td>GND</td></tr> <tr><td>3</td><td>NC</td></tr> <tr><td>4</td><td>+SD</td></tr> <tr><td>5</td><td>-SD</td></tr> <tr><td>6</td><td>+RD</td></tr> <tr><td>7</td><td>-RD</td></tr> <tr><td>8</td><td>E<br/>Terminal stating<br/>(120W resistor built in)</td></tr> </tbody> </table> | Pin No.   | Signal name | 1 | SG | 2 | - | 3 | - | 4 | SD+ | 5 | SD- | 6 | RD- | 7 | RD+ | 8 | - | Pin No. | Signal name | 1 | +24V | 2 | GND | 3 | NC | 4 | +SD | 5 | -SD | 6 | +RD | 7 | -RD | 8 | E<br>Terminal stating<br>(120W resistor built in) | RS422/<br>RS485 type |
| Pin No.  | Signal name                                       |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 1  | SG  |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 2  | -   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 3  | -   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 4  | SD+   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 5  | SD-   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 6  | RD-   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 7  | RD+   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 8  | -   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| Pin No.  | Signal name                                       |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 1  | +24V  |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 2  | GND   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 3  | NC  |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 4  | +SD   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 5  | -SD   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 6  | +RD   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 7  | -RD   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 8  | E<br>Terminal stating<br>(120W resistor built in) |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| EHV-CPU128<br>EHV-CPU64<br>EHV-CPU32<br>EHV-CPU16                | Serial port on CPU                                |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |

\* The settings vary according to the ports and communication methods. Refer to the above settings for communication conditions.

### When connecting with a self-produced cable using EH-SIO unit

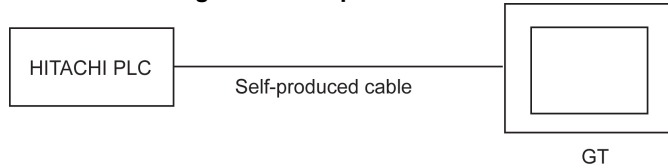


| CPU  | Link I/F  | Wiring diagram  | GT series |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
|--|---|---|-----------|-------------|---|-----|---|-----|---|-----|---|-----|---|------|---|----|---------|-------------|---|------|---|-----|---|----|---|-----|---|-----|---|-----|---|-----|---|---|----------------------|
| EH-CPU104A<br>EH-CPU208A<br>EH-CPU316A<br>EH-CPU516<br>EH-CPU548 | Port 2 of EH-SIO (connector for RS-422/485)             | <p>HITACHI PLC<br/>RS422 CPU port side<br/>connector for RS-422/485</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>SD+</td></tr> <tr><td>2</td><td>SD-</td></tr> <tr><td>3</td><td>RD+</td></tr> <tr><td>4</td><td>RD-</td></tr> <tr><td>5</td><td>TERM</td></tr> <tr><td>6</td><td>SG</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+24V</td></tr> <tr><td>2</td><td>GND</td></tr> <tr><td>3</td><td>NC</td></tr> <tr><td>4</td><td>+SD</td></tr> <tr><td>5</td><td>-SD</td></tr> <tr><td>6</td><td>+RD</td></tr> <tr><td>7</td><td>-RD</td></tr> <tr><td>8</td><td>E<br/>Terminal staon setting<br/>(120W resistor built in)</td></tr> </tbody> </table> | Pin No.   | Signal name | 1 | SD+ | 2 | SD- | 3 | RD+ | 4 | RD- | 5 | TERM | 6 | SG | Pin No. | Signal name | 1 | +24V | 2 | GND | 3 | NC | 4 | +SD | 5 | -SD | 6 | +RD | 7 | -RD | 8 | E<br>Terminal staon setting<br>(120W resistor built in) | RS422/<br>RS485 type |
| Pin No.  | Signal name   |   |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 1  | SD+   |   |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 2  | SD-   |   |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 3  | RD+   |   |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 4  | RD-   |   |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 5  | TERM  |   |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 6  | SG  |   |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| Pin No.  | Signal name   |   |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 1  | +24V  |   |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 2  | GND   |   |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 3  | NC  |   |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 4  | +SD   |   |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 5  | -SD   |   |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 6  | +RD   |   |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 7  | -RD   |   |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 8  | E<br>Terminal staon setting<br>(120W resistor built in) |   |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| EHV-CPU128<br>EHV-CPU64<br>EHV-CPU32<br>EHV-CPU16                |   |   |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |

\* The settings vary according to the ports and communication methods. Refer to the above settings for communication conditions.

### 9.1.3 RS485 Connection

#### When connecting with a self-produced cable

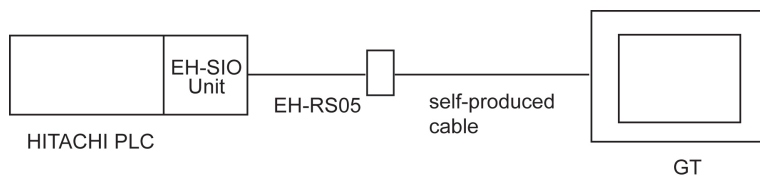


\* Refer to the above drawing of RJ45 modular port.

| CPU  | Link I/F  | Wiring diagram  | GTseries |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
|--|---|---|----------|-------------|---|----|---|---|---|---|---|-----|---|-----|---|-----|---|-----|---|---|---------|-------------|---|------|---|-----|---|----|---|-----|---|-----|---|-----|---|-----|---|---|----------------------|
| EH-CPU104A<br>EH-CPU208A<br>EH-CPU316A<br>EH-CPU516<br>EH-CPU548 | Port 1<br>on CPU  | <p>HITACHI PLC<br/>RS485 CPU port side<br/>RJ45 connector</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>SG</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>-</td></tr> <tr><td>4</td><td>SD+</td></tr> <tr><td>5</td><td>SD-</td></tr> <tr><td>6</td><td>RD-</td></tr> <tr><td>7</td><td>RD+</td></tr> <tr><td>8</td><td>-</td></tr> </tbody> </table> <p>To power supply</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+24V</td></tr> <tr><td>2</td><td>GND</td></tr> <tr><td>3</td><td>NC</td></tr> <tr><td>4</td><td>+SD</td></tr> <tr><td>5</td><td>-SD</td></tr> <tr><td>6</td><td>+RD</td></tr> <tr><td>7</td><td>-RD</td></tr> <tr><td>8</td><td>E<br/>Terminal station setting<br/>(120W resistor built in)</td></tr> </tbody> </table> | Pin No.  | Signal name | 1 | SG | 2 | - | 3 | - | 4 | SD+ | 5 | SD- | 6 | RD- | 7 | RD+ | 8 | - | Pin No. | Signal name | 1 | +24V | 2 | GND | 3 | NC | 4 | +SD | 5 | -SD | 6 | +RD | 7 | -RD | 8 | E<br>Terminal station setting<br>(120W resistor built in) | RS422/<br>RS485 type |
| Pin No.  | Signal name   |   |          |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 1  | SG  |   |          |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 2  | -   |   |          |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 3  | -   |   |          |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 4  | SD+   |   |          |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 5  | SD-   |   |          |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 6  | RD-   |   |          |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 7  | RD+   |   |          |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 8  | -   |   |          |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| Pin No.  | Signal name   |   |          |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 1  | +24V  |   |          |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 2  | GND   |   |          |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 3  | NC  |   |          |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 4  | +SD   |   |          |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 5  | -SD   |   |          |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 6  | +RD   |   |          |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 7  | -RD   |   |          |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 8  | E<br>Terminal station setting<br>(120W resistor built in) |   |          |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| EHV-CPU128<br>EHV-CPU64<br>EHV-CPU32<br>EHV-CPU16                | Serial port<br>on CPU                                     |   |          |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |

\* The settings vary according to the ports and communication methods. Refer to the above settings for communication conditions.

#### When connecting with a self-produced cable using EH-SIO unit



| CPU  | Link I/F  | Wiring diagram   | GT series |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
|--|---|--|-----------|-------------|---|-----|---|-----|---|-----|---|-----|---|------|---|----|---------|-------------|---|------|---|-----|---|----|---|-----|---|-----|---|-----|---|-----|---|---|----------------------|
| EH-CPU104A<br>EH-CPU208A<br>EH-CPU316A<br>EH-CPU516<br>EH-CPU548 | Port 2 of<br>EH-SIO<br>(connector<br>for RS-<br>422/485)  | <p>HITACHI PLC<br/>RS485 CPU port side<br/>connector for RS-422/485</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>SD+</td></tr> <tr><td>2</td><td>SD-</td></tr> <tr><td>3</td><td>RD+</td></tr> <tr><td>4</td><td>RD-</td></tr> <tr><td>5</td><td>TERM</td></tr> <tr><td>6</td><td>SG</td></tr> </tbody> </table> <p>To power supply</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+24V</td></tr> <tr><td>2</td><td>GND</td></tr> <tr><td>3</td><td>NC</td></tr> <tr><td>4</td><td>+SD</td></tr> <tr><td>5</td><td>-SD</td></tr> <tr><td>6</td><td>+RD</td></tr> <tr><td>7</td><td>-RD</td></tr> <tr><td>8</td><td>E<br/>Terminal station setting<br/>(120W resistor built in)</td></tr> </tbody> </table> | Pin No.   | Signal name | 1 | SD+ | 2 | SD- | 3 | RD+ | 4 | RD- | 5 | TERM | 6 | SG | Pin No. | Signal name | 1 | +24V | 2 | GND | 3 | NC | 4 | +SD | 5 | -SD | 6 | +RD | 7 | -RD | 8 | E<br>Terminal station setting<br>(120W resistor built in) | RS422/<br>RS485 type |
| Pin No.  |   | Signal name  |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 1  | SD+   |  |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 2  | SD-   |  |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 3  | RD+   |  |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 4  | RD-   |  |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 5  | TERM  |  |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 6  | SG  |  |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| Pin No.  | Signal name   |  |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 1  | +24V  |  |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 2  | GND   |  |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 3  | NC  |  |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 4  | +SD   |  |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 5  | -SD   |  |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 6  | +RD   |  |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 7  | -RD   |  |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 8  | E<br>Terminal station setting<br>(120W resistor built in) |  |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| EHV-CPU128<br>EHV-CPU64<br>EHV-CPU32<br>EHV-CPU16                |   |  |           |             |   |     |   |     |   |     |   |     |   |      |   |    |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |

\* The settings vary according to the ports and communication methods. Refer to the above settings for communication conditions.

## 9.2 MICRO-EH Series

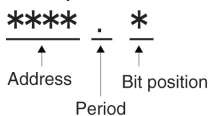
### PLC model selection

Select "Hitachi EH/EHV series".

### Usable devices

|                | Bit/Word Device             | No.                   | Memo |
|----------------|-----------------------------|-----------------------|------|
| Bit Device     | External input              | X 0000~X 4FF95        |      |
|                | External output             | Y 0000~Y 4FF95        |      |
|                | Internal output             | R 000~R FFF           |      |
|                | Internal output             | WR 0000.0~WR FFFF.F   | *    |
|                | CPU link                    | L 00000~L 73FFF       |      |
|                | Internal output             | WN 00000.0~WN 1FFFF.F | *    |
|                | Data area                   | M 00000~M 7FFFF       |      |
|                | Extended external input     | EX 00000~EX 5A7FF     |      |
|                | Extended external output    | EY 00000~EY 5A7FF     |      |
|                | On delay timer              | TD 0000~TD 2559       |      |
|                | Off delay timer             | TDN 0000~TDN 2559     |      |
|                | Single shot                 | SS 0000~SS 2559       |      |
|                | Monostable timer            | MS 0000~MS 2559       |      |
|                | Integrating timer           | TMR 0000~TMR 2559     |      |
|                | Watchdog timer              | WDT 0000~WTD 2559     |      |
|                | Counter                     | CU 0000~CU 2047       |      |
|                | Ring counter                | RCU 00000~RCU 2047    |      |
| Updown counter | CT 00000~CT 2047            |                       |      |
| Word Device    | External input              | WX 0000~WX 4FF5       |      |
|                | External output             | WY 0000~WY 4FF5       |      |
|                | Internal output             | WR 0000~WR FFFF       |      |
|                | CPU link                    | WL 0000~WL 73FF       |      |
|                | Internal output             | WN 00000~WN 1FFFF     |      |
|                | Data area                   | WM 0000~WM 7FFF       |      |
|                | Extended external input     | WEX 0000~WEX 5A7F     |      |
|                | Extended external output    | WEY 0000~WEY 5A7F     |      |
|                | Timer/Counter current value | TC 0000~TC 2559       |      |

\* The input in GTWIN is as follows:



#### Note:

- The maximum value that can be set with the GT is described.
- The range of usable addresses differs depending on the model. For details, please consult the manual for the PLC you will use.

### Communication Parameters Settings

The example of communication settings of GT and PLC is shown below.

#### Setting Values for GT (Set in the configuration setting of GTWIN.)

| Item        | Setting  |
|-------------|----------|
| Baud Rate   | 19200bps |
| Data Length | 7        |
| Stop Bits   | 1        |
| Parity Bit  | Even     |

#### Setting Values for PLC

##### Setting for MICRO-EH

##### Port1

The settings for the dip switches and the special internal output are required.

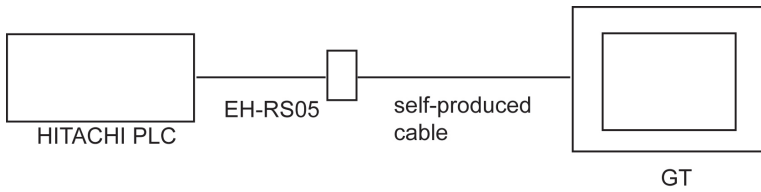
Specify as follows

| Item                               | Setting   |
|------------------------------------|---|
| Port type                          | Setting for special port                          |
| Procedure of communication control | Procedure 1 of transmission control (No unit No.) |
| Baud rate                          | 19200 bps   |

\* For the details of the method of communication setting, refer to the "EH-SIO Application Manual".

## 9.2.1 RS232C Connection

When connecting with EH-RS05 and a self-produced cable



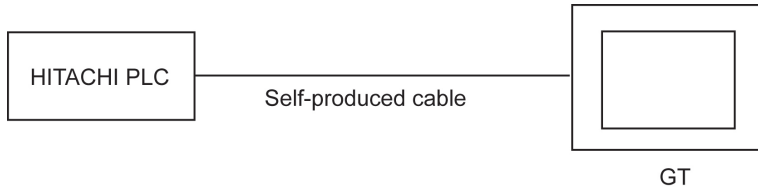
### MICRO-EH series

| PLC type   | Link I/F      | Wiring diagram   | GT series |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
|--|---------------|--|-----------|-------------|---|---|---|----|---|----|---|----|---|----|---|---|---|----|---|---|---|----|----|----|----|----|----|----|----|-----|----|-----|----|---|---------|-------------|---|---|---|---|---|-----------|---|----|---|----|---|----|---|----|---|----|-------------|
| 14 points<br>20 points<br>23 points<br>28 points<br>40 points<br>64 points | Port 1 on CPU | <p>Cable side<br/>D-sub 15-bin</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>-</td></tr> <tr><td>2</td><td>SD</td></tr> <tr><td>3</td><td>RD</td></tr> <tr><td>4</td><td>RS</td></tr> <tr><td>5</td><td>CS</td></tr> <tr><td>6</td><td>-</td></tr> <tr><td>7</td><td>DR</td></tr> <tr><td>8</td><td>-</td></tr> <tr><td>9</td><td>PG</td></tr> <tr><td>10</td><td>PG</td></tr> <tr><td>11</td><td>CD</td></tr> <tr><td>12</td><td>CD</td></tr> <tr><td>13</td><td>ER1</td></tr> <tr><td>14</td><td>ER2</td></tr> <tr><td>15</td><td>-</td></tr> </tbody> </table> <p>To power supply</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>RS</td></tr> <tr><td>7</td><td>CS</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> <p>GT side</p> | Pin No.   | Signal name | 1 | - | 2 | SD | 3 | RD | 4 | RS | 5 | CS | 6 | - | 7 | DR | 8 | - | 9 | PG | 10 | PG | 11 | CD | 12 | CD | 13 | ER1 | 14 | ER2 | 15 | - | Pin No. | Signal name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | SD | 5 | RD | 6 | RS | 7 | CS | 8 | SG | RS232C type |
| Pin No.  | Signal name   |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | -             |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | SD            |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | RD            |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | RS            |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | CS            |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | -             |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | DR            |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8  | -             |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 9  | PG            |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 10   | PG            |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 11   | CD            |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 12   | CD            |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 13   | ER1           |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 14   | ER2           |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 15   | -             |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| Pin No.  | Signal name   |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | +             |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | -             |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | NC(or FG)     |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | SD            |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | RD            |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | RS            |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | CS            |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8  | SG            |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |

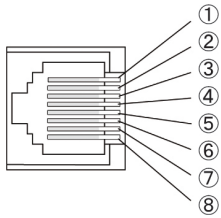
\* The settings vary according to the ports and communication methods. Refer to the above settings for communication conditions.

\* The 10-point type cannot be used.

**When connecting with self-produced cable using a RJ45 connector**



**RJ45 modular port**



**Port 1 viewed from the front of the module (socket side)**

**MICRO-EH series**

| PLC type   | Link I/F      | Wiring diagram  | GTseries |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
|--|---------------|---|----------|-------------|---|----|---|----|---|-----|---|-----|---|----|---|----|---|----|---|----|---------|-------------|---|---|---|---|---|-----------|---|----|---|----|---|----|---|----|---|----|-------------|
| 14 points<br>20 points<br>23 points<br>28 points<br>40 points<br>64 points | Port 1 on CPU | <p>HITACHI PLC side<br/>RJ45 connector</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>SG</td></tr> <tr><td>2</td><td>CD</td></tr> <tr><td>3</td><td>ER1</td></tr> <tr><td>4</td><td>ER2</td></tr> <tr><td>5</td><td>SD</td></tr> <tr><td>6</td><td>RD</td></tr> <tr><td>7</td><td>DR</td></tr> <tr><td>8</td><td>RS</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> | Pin No.  | Signal name | 1 | SG | 2 | CD | 3 | ER1 | 4 | ER2 | 5 | SD | 6 | RD | 7 | DR | 8 | RS | Pin No. | Signal name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | SD | 5 | RD | 6 | NC | 7 | NC | 8 | SG | RS232C type |
| Pin No.  | Signal name   |   |          |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | SG            |   |          |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | CD            |   |          |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | ER1           |   |          |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | ER2           |   |          |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | SD            |   |          |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | RD            |   |          |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | DR            |   |          |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8  | RS            |   |          |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| Pin No.  | Signal name   |   |          |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | +             |   |          |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | -             |   |          |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | NC(or FG)     |   |          |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | SD            |   |          |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | RD            |   |          |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | NC            |   |          |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | NC            |   |          |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8  | SG            |   |          |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |

\* The settings vary according to the ports and communication methods. Refer to the above settings for communication conditions.

\* The 10-point type cannot be used.

## 9.3 Web Controller Series

### PLC model selection

Select "Hitachi EH/EHV series".

### Usable devices

|             | Bit/Word Device             | No.                  | Memo |
|-------------|-----------------------------|----------------------|------|
| Bit Device  | External input              | X 0000~X 4FF95       |      |
|             | External output             | Y 0000~Y 4FF95       |      |
|             | Internal output             | R 000~R FFF          |      |
|             | Internal output             | WR 0000.0~WR FFFF.F  | *    |
|             | CPU link                    | L 0000~L 73FFF       |      |
|             | Internal output             | WN 0000.0~WN 1FFFF.F | *    |
|             | Data area                   | M 0000~M 7FFFF       |      |
|             | Extended external input     | EX 0000~EX 5A7FF     |      |
|             | Extended external output    | EY 0000~EY 5A7FF     |      |
|             | On delay timer              | TD 0000~TD 2559      |      |
|             | Off delay timer             | TDN 0000~TDN 2559    |      |
|             | Single shot                 | SS 0000~SS 2559      |      |
|             | Monostable timer            | MS 0000~MS 2559      |      |
|             | Integrating timer           | TMR 0000~TMR 2559    |      |
|             | Watchdog timer              | WDT 0000~WTD 2559    |      |
|             | Counter                     | CU 0000~CU 2047      |      |
|             | Ring counter                | RCU 0000~RCU 2047    |      |
|             | Updown counter              | CT 0000~CT 2047      |      |
| Word Device | External input              | WX 0000~WX 4FF5      |      |
|             | External output             | WY 0000~WY 4FF5      |      |
|             | Internal output             | WR 0000~WR FFFF      |      |
|             | CPU link                    | WL 0000~WL 73FF      |      |
|             | Internal output             | WN 0000~WN 1FFFF     |      |
|             | Data area                   | WM 0000~WM 7FFF      |      |
|             | Extended external input     | WEX 0000~WEX 5A7F    |      |
|             | Extended external output    | WEY 0000~WEY 5A7F    |      |
|             | Timer/Counter current value | TC 0000~TC 2559      |      |

\* The input in GTWIN is as follows:

|         |        |              |
|---------|--------|--------------|
| ****    | .      | *            |
| ↑       | ↑      | ↑            |
| Address | Period | Bit position |



### Note:

- The maximum value that can be set with the GT is described.
- The range of usable addresses differs depending on the model. For details, please consult the manual for the PLC you will use.



### Communication Parameters Settings

The example of communication settings of GT and PLC is shown below.

#### Setting Values for GT (Set in the configuration setting of GTWIN.)

| Item        | Setting  |
|-------------|----------|
| Baud Rate   | 19200bps |
| Data Length | 7        |
| Stop Bits   | 1        |
| Parity Bit  | Even     |

#### Setting Values for PLC

##### Setting for Web Controller

##### Serial port

For setting the serial port, start a Web browser on a PC, and access the page of the system configurator of Web Controller.

Specify as follows.

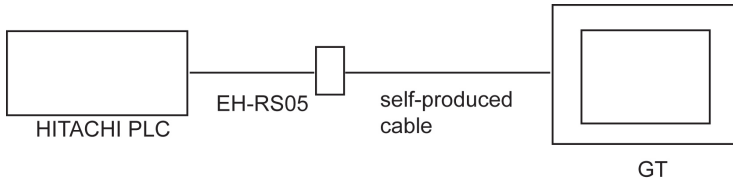
| Item                               | Setting   |
|------------------------------------|---|
| Protocol                           | Passive-HIPROTOCOL  |
| Interface*1                        | For RS232C connection: RS-232C                                      |
|                                    | For RS422 connection: RS-422/RS-485                                 |
|                                    | For RS485 connection: RS-422/RS-485                                 |
| Procedure of communication control | Procedure of transmission control 1 (No unit No.) 1:1 communication |
| Transfer rate                      | 19200 bps   |

\*1 It varies according to the communication method.

\*2 For the details of the method of communication setting, refer to the "Web Controller User's Manual".

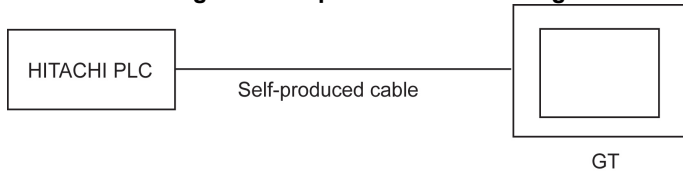
### 9.3.1 RS232C Connection

When connecting with EH-RS05 and a self-produced cable

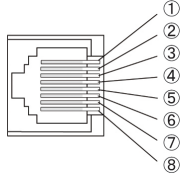


| PLC type   | Link I/F           | Wiring diagram   | GT series |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
|--|--------------------|--|-----------|-------------|---|---|---|----|---|----|---|----|---|----|---|---|---|----|---|---|---|----|----|----|----|----|----|----|----|-----|----|-----|----|---|---------|-------------|---|---|---|---|---|-----------|---|----|---|----|---|----|---|----|---|----|-------------|
| 10 points<br>(EH-WD10DR)<br><br>23 points<br>(EH-WD23DR) | Serial port on CPU | <div style="display: flex; justify-content: space-between;"> <table border="1" style="margin-right: 20px;"> <caption>Cable side<br/>D-sub 15-bin</caption> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>-</td></tr> <tr><td>2</td><td>SD</td></tr> <tr><td>3</td><td>RD</td></tr> <tr><td>4</td><td>RS</td></tr> <tr><td>5</td><td>CS</td></tr> <tr><td>6</td><td>-</td></tr> <tr><td>7</td><td>DR</td></tr> <tr><td>8</td><td>-</td></tr> <tr><td>9</td><td>PG</td></tr> <tr><td>10</td><td>PG</td></tr> <tr><td>11</td><td>CD</td></tr> <tr><td>12</td><td>CD</td></tr> <tr><td>13</td><td>ER1</td></tr> <tr><td>14</td><td>ER2</td></tr> <tr><td>15</td><td>-</td></tr> </tbody> </table> <div style="text-align: center;"> <p>To power supply</p> </div> <table border="1" style="margin-left: 20px;"> <caption>GT side</caption> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>RS</td></tr> <tr><td>7</td><td>CS</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> </div> | Pin No.   | Signal name | 1 | - | 2 | SD | 3 | RD | 4 | RS | 5 | CS | 6 | - | 7 | DR | 8 | - | 9 | PG | 10 | PG | 11 | CD | 12 | CD | 13 | ER1 | 14 | ER2 | 15 | - | Pin No. | Signal name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | SD | 5 | RD | 6 | RS | 7 | CS | 8 | SG | RS232C type |
| Pin No.  | Signal name        |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | -                  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | SD                 |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | RD                 |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | RS                 |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | CS                 |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | -                  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | DR                 |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8  | -                  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 9  | PG                 |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 10   | PG                 |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 11   | CD                 |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 12   | CD                 |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 13   | ER1                |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 14   | ER2                |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 15   | -                  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| Pin No.  | Signal name        |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | +                  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | -                  |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | NC(or FG)          |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | SD                 |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | RD                 |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | RS                 |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | CS                 |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8  | SG                 |  |           |             |   |   |   |    |   |    |   |    |   |    |   |   |   |    |   |   |   |    |    |    |    |    |    |    |    |     |    |     |    |   |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |

**When connecting with self-produced cable using a RJ45 connector**



**RJ45 modular port**

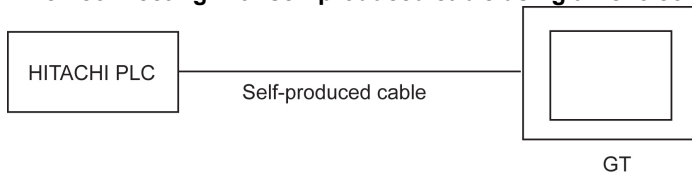


**Port 1 viewed from the front of the module (socket side)**

| PLC type   | Link I/F              | Wiring diagram  | GT series |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
|--|-----------------------|---|-----------|-------------|---|----|---|----|---|-----|---|-----|---|----|---|----|---|----|---|----|---------|-------------|---|---|---|---|---|-----------|---|----|---|----|---|----|---|----|---|----|-------------|
| 10 points<br>(EH-WD10DR)<br><br>23 points<br>(EH-WD23DR) | Serial port<br>on CPU | <p>HITACHI PLC side<br/>RJ45 connector</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>SG</td></tr> <tr><td>2</td><td>CD</td></tr> <tr><td>3</td><td>ER1</td></tr> <tr><td>4</td><td>ER2</td></tr> <tr><td>5</td><td>SD</td></tr> <tr><td>6</td><td>RD</td></tr> <tr><td>7</td><td>DR</td></tr> <tr><td>8</td><td>RS</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>NC(or FG)</td></tr> <tr><td>4</td><td>SD</td></tr> <tr><td>5</td><td>RD</td></tr> <tr><td>6</td><td>NC</td></tr> <tr><td>7</td><td>NC</td></tr> <tr><td>8</td><td>SG</td></tr> </tbody> </table> | Pin No.   | Signal name | 1 | SG | 2 | CD | 3 | ER1 | 4 | ER2 | 5 | SD | 6 | RD | 7 | DR | 8 | RS | Pin No. | Signal name | 1 | + | 2 | - | 3 | NC(or FG) | 4 | SD | 5 | RD | 6 | NC | 7 | NC | 8 | SG | RS232C type |
| Pin No.  | Signal name           |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | SG                    |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | CD                    |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | ER1                   |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | ER2                   |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | SD                    |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | RD                    |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | DR                    |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8  | RS                    |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| Pin No.  | Signal name           |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 1  | +                     |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 2  | -                     |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 3  | NC(or FG)             |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 4  | SD                    |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 5  | RD                    |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 6  | NC                    |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 7  | NC                    |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |
| 8  | SG                    |   |           |             |   |    |   |    |   |     |   |     |   |    |   |    |   |    |   |    |         |             |   |   |   |   |   |           |   |    |   |    |   |    |   |    |   |    |             |

**9.3.2 RS422 Connection**

**When connecting with self-produced cable using a RJ45 connector**

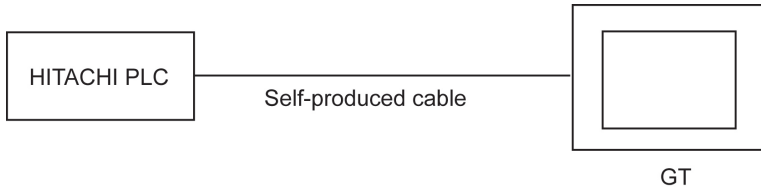


\* Refer to the above drawing of RJ45 modular port.

| PLC type                 | Link I/F  | Wiring diagram   | GT series |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
|--------------------------|---|--|-----------|-------------|---|----|---|---|---|---|---|-----|---|-----|---|-----|---|-----|---|---|---------|-------------|---|------|---|-----|---|----|---|-----|---|-----|---|-----|---|-----|---|---|----------------------|
| 23 points<br>(EH-WD23DR) | Serial port<br>on CPU                             | <p>HITACHI PLC<br/>RS422 CPU port side<br/>RJ45 connector</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>SG</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>-</td></tr> <tr><td>4</td><td>SD+</td></tr> <tr><td>5</td><td>SD-</td></tr> <tr><td>6</td><td>RD-</td></tr> <tr><td>7</td><td>RD+</td></tr> <tr><td>8</td><td>-</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+24V</td></tr> <tr><td>2</td><td>GND</td></tr> <tr><td>3</td><td>NC</td></tr> <tr><td>4</td><td>+SD</td></tr> <tr><td>5</td><td>-SD</td></tr> <tr><td>6</td><td>+RD</td></tr> <tr><td>7</td><td>-RD</td></tr> <tr><td>8</td><td>E<br/>Terminal stating<br/>(120W resistor built in)</td></tr> </tbody> </table> | Pin No.   | Signal name | 1 | SG | 2 | - | 3 | - | 4 | SD+ | 5 | SD- | 6 | RD- | 7 | RD+ | 8 | - | Pin No. | Signal name | 1 | +24V | 2 | GND | 3 | NC | 4 | +SD | 5 | -SD | 6 | +RD | 7 | -RD | 8 | E<br>Terminal stating<br>(120W resistor built in) | RS422/<br>RS485 type |
| Pin No.                  | Signal name                                       |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 1                        | SG  |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 2                        | -   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 3                        | -   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 4                        | SD+   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 5                        | SD-   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 6                        | RD-   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 7                        | RD+   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 8                        | -   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| Pin No.                  | Signal name                                       |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 1                        | +24V  |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 2                        | GND   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 3                        | NC  |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 4                        | +SD   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 5                        | -SD   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 6                        | +RD   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 7                        | -RD   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 8                        | E<br>Terminal stating<br>(120W resistor built in) |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |

### 9.3.3 RS485 Connection

When connecting with self-produced cable using a RJ45 connector



\* Refer to the above drawing of RJ45 modular port.

| PLC type                 | Link I/F  | Wiring diagram   | GT series |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
|--------------------------|---|--|-----------|-------------|---|----|---|---|---|---|---|-----|---|-----|---|-----|---|-----|---|---|---------|-------------|---|------|---|-----|---|----|---|-----|---|-----|---|-----|---|-----|---|---|----------------------|
| 23 points<br>(EH-WD23DR) | Serial<br>port on<br>CPU                                  | <p>HITACHI PLC<br/>RS485 CPU port side<br/>RJ45 connector</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>SG</td></tr> <tr><td>2</td><td>-</td></tr> <tr><td>3</td><td>-</td></tr> <tr><td>4</td><td>SD+</td></tr> <tr><td>5</td><td>SD-</td></tr> <tr><td>6</td><td>RD-</td></tr> <tr><td>7</td><td>RD+</td></tr> <tr><td>8</td><td>-</td></tr> </tbody> </table> <p>To power supply</p> <p>GT side</p> <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Signal name</th> </tr> </thead> <tbody> <tr><td>1</td><td>+24V</td></tr> <tr><td>2</td><td>GND</td></tr> <tr><td>3</td><td>NC</td></tr> <tr><td>4</td><td>+SD</td></tr> <tr><td>5</td><td>-SD</td></tr> <tr><td>6</td><td>+RD</td></tr> <tr><td>7</td><td>-RD</td></tr> <tr><td>8</td><td>E<br/>Terminal station setting<br/>(120W resistor built in)</td></tr> </tbody> </table> | Pin No.   | Signal name | 1 | SG | 2 | - | 3 | - | 4 | SD+ | 5 | SD- | 6 | RD- | 7 | RD+ | 8 | - | Pin No. | Signal name | 1 | +24V | 2 | GND | 3 | NC | 4 | +SD | 5 | -SD | 6 | +RD | 7 | -RD | 8 | E<br>Terminal station setting<br>(120W resistor built in) | RS422/<br>RS485 type |
| Pin No.                  | Signal name   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 1                        | SG  |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 2                        | -   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 3                        | -   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 4                        | SD+   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 5                        | SD-   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 6                        | RD-   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 7                        | RD+   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 8                        | -   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| Pin No.                  | Signal name   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 1                        | +24V  |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 2                        | GND   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 3                        | NC  |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 4                        | +SD   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 5                        | -SD   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 6                        | +RD   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 7                        | -RD   |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |
| 8                        | E<br>Terminal station setting<br>(120W resistor built in) |  |           |             |   |    |   |   |   |   |   |     |   |     |   |     |   |     |   |   |         |             |   |      |   |     |   |    |   |     |   |     |   |     |   |     |   |   |                      |

# **Chapter 10**

---

## **Connection in Modbus (RTU Mode)**

## 10.1 Modbus (RTU Mode | modicon PLC)

### PLC model selection

-For the PLC made by Modicon

-Device setting: Start No. \*\*\*\*\*1

Select "Modbus (RTU Mode | modicon PLC)".

### Usable devices

| Bit/Word Device |                  | No.           | Memo  |
|-----------------|------------------|---------------|---|
| Bit Device      | Input            | 100001-165536 |   |
|                 | Coil             | 000001-065536 |   |
| Word Device     | Input            | 100001-165536 | Specify address expression every 16 multiples |
|                 | Coil             | 000001-065536 | Specify address expression every 16 multiples |
|                 | Input Register   | 300001-365536 |   |
|                 | Holding Register | 400001-465536 |   |

### Communication Parameters Settings

The example of communication settings of GT and PLC is shown below.

#### Setting Values for GT (Set in the configuration setting of GTWIN.)

| Item           | Setting  |
|----------------|----------|
| PLC Unit No.   | 1        |
| Baud Rate      | 19200bps |
| Length of Bits | 8        |
| Stop Bits      | 1        |
| Parity         | Even     |

#### Setting Values for PLC

| Item            | Setting  |
|-----------------|----------|
| Station Address | 1        |
| Mode            | RTU      |
| Baud Rate       | 19200bps |
| Length of Bits  | 8        |
| Stop Bits       | 1        |
| Parity          | Even     |

### Other companies' PLCs to be used

Make sure to check on the actual equipment to be used.

## 10.2 Modbus (RTU Mode)

### PLC model selection

**Device setting: Start No. \*\*\*\*\*0**

Select "Modbus (RTU Mode)".

### Usable devices

| Bit/Word Device |                  | No.           | Memo  |
|-----------------|------------------|---------------|---|
| Bit Device      | Input            | 100000-165535 |   |
|                 | Coil             | 000000-065535 |   |
| Word Device     | Input            | 100000-165535 | Specify address expression every 16 multiples |
|                 | Coil             | 000000-065535 | Specify address expression every 16 multiples |
|                 | Input Register   | 300000-365535 |   |
|                 | Holding Register | 400000-465535 |   |

### Communication Parameters Settings

The example of communication settings of GT and PLC is shown below.

#### Setting Values for GT (Set in the configuration setting of GTWIN.)

| Item           | Setting  |
|----------------|----------|
| PLC Unit No.   | 1        |
| Baud Rate      | 19200bps |
| Length of Bits | 8        |
| Stop Bits      | 1        |
| Parity         | Even     |

#### Setting Values for PLC

| Item            | Setting  |
|-----------------|----------|
| Station Address | 1        |
| Mode            | RTU      |
| Baud Rate       | 19200bps |
| Length of Bits  | 8        |
| Stop Bits       | 1        |
| Parity          | Even     |

### Other companies' PLCs to be used

Make sure to check on the actual equipment to be used.

PLC checked on the actual equipment: DL05 made by Koyo Electronics Industries Co., Ltd

## 10.3 Modbus (RTU Mode) for Temperature Control Unit, etc

---

### PLC model selection

**Device setting: Start No. \*\*\*\*\*0**

Select "Modbus (RTU mode | Temperature control unit, etc)

### Overview of communication

Only function codes "03" and "06" which are the command to read/write the contents of the holding registers are used. The function code "03" is a message to enable the contents of multiple holding registers to be read, however, GT reads the number of holding registers by 1 word.

For outputting bit, read the value of the holding register to be output and change the bit before writing.

### Usable devices

| Bit/Word Device |                  | No.               |
|-----------------|------------------|-------------------|
| Bit Device      | Holding register | 400000.0-465535.F |
| Word Device     | Holding Register | 400000-465535     |

### Communication Parameters Settings

The example of communication settings of GT and a device such as temperature control unit is shown below.

#### Setting Values for GT (Set in the configuration setting of GTWIN.)

| Item           | Setting  |
|----------------|----------|
| PLC Unit No.   | 1        |
| Baud Rate      | 19200bps |
| Length of Bits | 8        |
| Stop Bits      | 1        |
| Parity         | Even     |

#### Setting Values for Temperature control unit, etc

| Item            | Setting  |
|-----------------|----------|
| Station Address | 1        |
| Mode            | RTU      |
| Baud Rate       | 19200bps |
| Length of Bits  | 8        |
| Stop Bits       | 1        |
| Parity          | Even     |

### Precautions when making communication settings

When connecting the GT via RS485, set the transmission delay in GT Configuration to 5 ms or more. (The appropriate values vary according to equipment to be connected. Check with actual equipment.)



**Function code****Function code 03 (Read Holding Registers)****Command**

|             |                      |                          |                         |                      |                      |                         |                        |
|-------------|----------------------|--------------------------|-------------------------|----------------------|----------------------|-------------------------|------------------------|
| GT unit No. | Function code<br>03H | Starting No.<br>(Higher) | Starting No.<br>(Lower) | No. of read<br>00(H) | No. of read<br>01(H) | Error check<br>(Higher) | Error check<br>(Lower) |
| 1 byte      | 1 byte               | 1 byte                   | 1 byte                  | 1 byte               | 1 byte               | 1 byte                  | 1 byte                 |

**Response**

|             |                      |                      |                  |                 |                         |                        |
|-------------|----------------------|----------------------|------------------|-----------------|-------------------------|------------------------|
| GT unit No. | Function code<br>03H | No. of data<br>02(H) | Data<br>(Higher) | Data<br>(Lower) | Error check<br>(Higher) | Error check<br>(Lower) |
| 1 byte      | 1 byte               | 1 byte               | 1 byte           | 1 byte          | 1 byte                  | 1 byte                 |

**Function code 06 (Write to Single Holding Register)****Command**

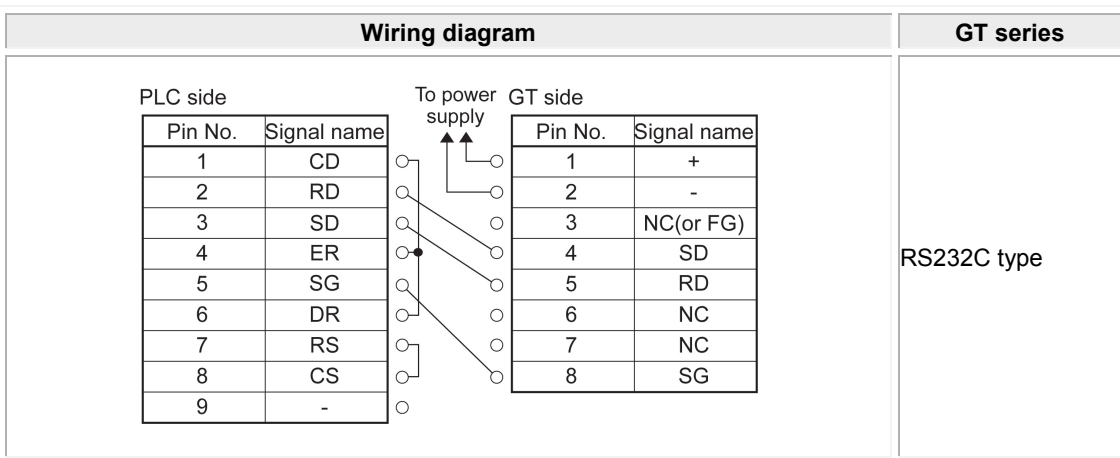
|             |                      |                 |                |                        |                       |                         |                        |
|-------------|----------------------|-----------------|----------------|------------------------|-----------------------|-------------------------|------------------------|
| GT unit No. | Function code<br>06H | No.<br>(Higher) | No.<br>(Lower) | Write data<br>(Higher) | Write data<br>(Lower) | Error check<br>(Higher) | Error check<br>(Lower) |
| 1 byte      | 1 byte               | 1 byte          | 1 byte         | 1 byte                 | 1 byte                | 1 byte                  | 1 byte                 |

**Response**

|             |                      |                 |                |                        |                       |                         |                        |
|-------------|----------------------|-----------------|----------------|------------------------|-----------------------|-------------------------|------------------------|
| GT unit No. | Function code<br>06H | No.<br>(Higher) | No.<br>(Lower) | Write data<br>(Higher) | Write data<br>(Lower) | Error check<br>(Higher) | Error check<br>(Lower) |
| 1 byte      | 1 byte               | 1 byte          | 1 byte         | 1 byte                 | 1 byte                | 1 byte                  | 1 byte                 |

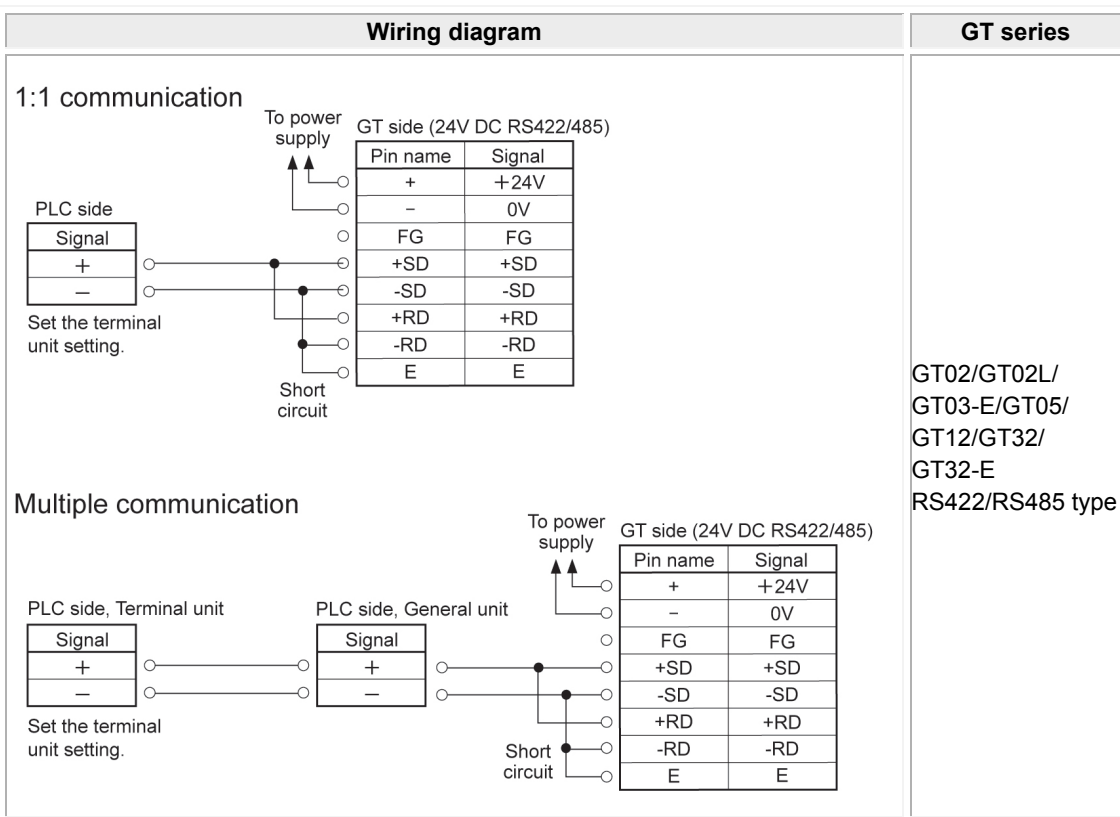
# 10.4 Connection Method

## RS232C connection



\* Although No. 6 and 7 of the models except GT01 is RS/CS, they can be used in the above connection.

## RS485 connection



## Record of changes

| Manual No.    | Date     | Description of changes                                |
|---------------|----------|---|
| ARCT1F449E    | Aug.2008 | First Edition   |
| ARCT1F449E-1  | Aug.2008 | 2 <sup>nd</sup> Edition                               |
| ARCT1F449E-2  | Feb.2009 | 3 <sup>rd</sup> Edition<br>- Change in Corporate name |
| ARCT1F449E-3  | Jul.2009 | 4 <sup>th</sup> Edition                               |
| ARCT1F449E-4  | Sep.2009 | 5 <sup>th</sup> Edition                               |
| ARCT1F449E-5  | Feb.2010 | 6 <sup>th</sup> Edition                               |
| ARCT1F449E-6  | May.2010 | 7 <sup>th</sup> Edition                               |
| ARCT1F449E-7  | Jun.2010 | 8 <sup>th</sup> Edition                               |
| ARCT1F449E-8  | Dec.2010 | 9 <sup>th</sup> Edition                               |
| ARCT1F449E-9  | Dec.2011 | 10 <sup>th</sup> Edition                              |
| ARCT1F449E-10 | Jul.2013 | 11 <sup>th</sup> Edition<br>- Additions: GT03-E       |
| ARCT1F449E-11 | Nov.2013 | 12 <sup>th</sup> Edition                              |

Please contact .....

## Panasonic Industrial Devices SUNX Co., Ltd.

■ Overseas Sales Division (Head Office): 2431-1 Ushiyama-cho, Kasugai-shi, Aichi, 486-0901, Japan

■ Telephone: +81-568-33-7861 ■ Facsimile: +81-568-33-8591

[panasonic.net/id/pidsx/global](http://panasonic.net/id/pidsx/global)

About our sale network, please visit our website.