# **CC-Link IE Field Network Remote I/O Module FB Library Reference Manual**

Applicable modules:

NZ2GFCF1-32D, NZ2GFCF1-32T, NZ2GFCF1-32DT

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# Reference Manual Revision History

| Reference Manual | Date       | Description   |
|------------------|------------|---------------|
| Number           |            |               |
| FBM-M162-A       | 2015/12/18 | First edition |



### 1. Overview

### 1.1. Overview of the FB Library

This FB library is for using NZ2GFCF1-32D, NZ2GFCF1-32T, and NZ2GFCF1-32DT CC-Link IE Field Network remote I/O modules.

### 1.2. Function of the FB Library

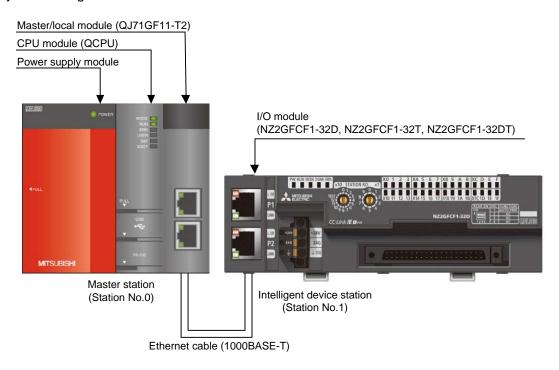
| Item                           | Description   |
|--------------------------------|---|
| M+NZ2GFCF132_InitialProcessing | Performs the initial processing after power-on.                         |
| M+NZ2GFCF132_SetOpeCondition   | Performs the operation condition setting.                               |
| M+NZ2GFCF132_ErrorOperation    | Monitors the error status and warning status, and performs error clear. |



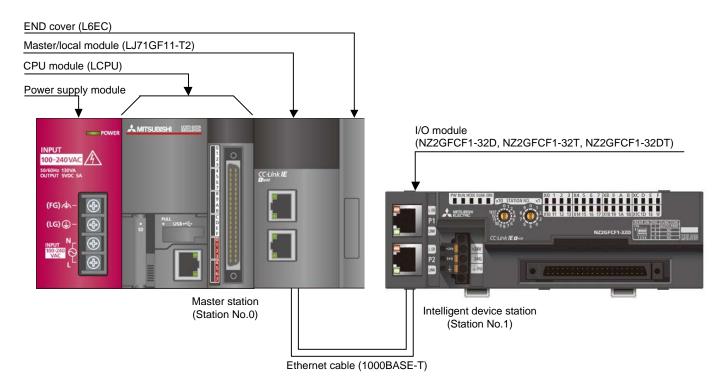
#### 1.3. System Configuration Examples

The following examples show system configurations when using the I/O modules (NZ2GFCF1-32D, NZ2GFCF1-32T, and NZ2GFCF1-32DT) as intelligent device stations.

#### (1) Q series system configuration



#### (2) L series system configuration



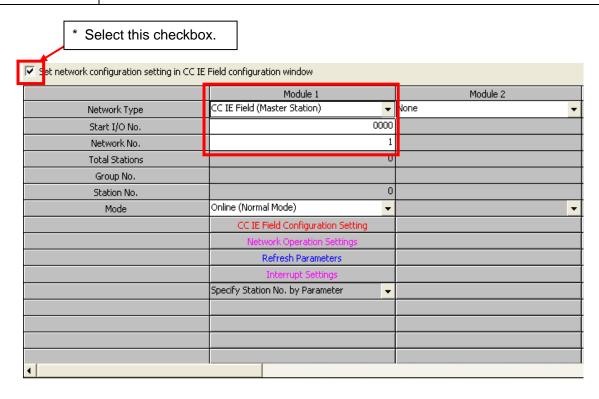


### 1.4. Setting the CC-Link IE Field Network Master/Local Module

This section explains the settings of CC-Link IE Field Network master/local module based on Section "1.3 System Configuration Examples". Set the following items using GX Works2.

### (1) Network parameters

| Item          | Description   |  |  |  |
|---------------|---|--|--|--|
| Network Type  | elect the CC IE Field (Master Station).   |  |  |  |
| Start I/O No. | Set the start I/O number of the master/local module in increments of 16 points. |  |  |  |
|               | Set "0000".   |  |  |  |
| Network No.   | Set the network number of the master/local module.                              |  |  |  |
|               | Set "1".  |  |  |  |





# (2) CC IE Field configuration setting

| Item            | Description   |  |  |  |  |
|-----------------|---|--|--|--|--|
| Station No.     | Set the station number of the intelligent device station connected to the master        |  |  |  |  |
|                 | station.  |  |  |  |  |
|                 | Set "1".  |  |  |  |  |
| Station Type    | Set the station type of the intelligent device station connected to the master station. |  |  |  |  |
|                 | Set "Intelligent Device Station".   |  |  |  |  |
| RX/RY Setting   | Set assignment for RX/RY for the intelligent device station connected to the master     |  |  |  |  |
|                 | station.  |  |  |  |  |
|                 | (a) Start Set "0000".   |  |  |  |  |
|                 | (b) End Set "001F".   |  |  |  |  |
| RWw/RWr Setting | Set assignment for RWw/RWr for the intelligent device station connected to the          |  |  |  |  |
|                 | master station.   |  |  |  |  |
|                 | (a) Start Set "0000".   |  |  |  |  |
|                 | (b) End Set "0013".   |  |  |  |  |

# [When using NZ2GFCF1-32D]

|          | No. Mode | Madal Nama   | del Name STA# | Station Tune               | RX/RY Setting |       |      | RWw/RWr Setting |       |      |
|----------|----------|--------------|---------------|----------------------------|---------------|-------|------|-----------------|-------|------|
|          |          | Model Name   |               | Station Type               | Points        | Start | End  | Points          | Start | End  |
| 10       | 0        | Host Station | 0             | Master Station             |               |       |      |                 |       |      |
| <b>=</b> | 1        | NZ2GFCF1-32D | 1             | Intelligent Device Station | 32            | 0000  | 001F | 20              | 0000  | 0013 |

\*Set the module to be used according to the environment.



### (3) Refresh parameter setting

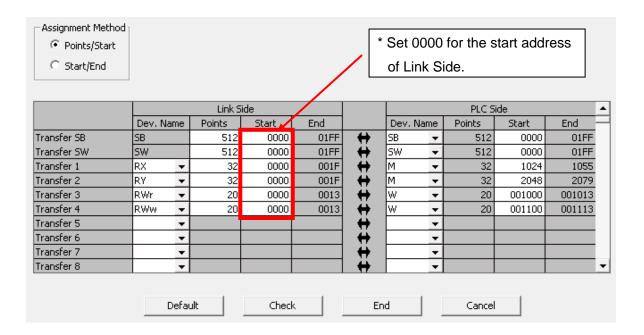
| Item        | Description                                  | Setting value                |
|-------------|--|------------------------------|
| Transfer SB | Select the link refresh range of SB device.  | •"Link Side Points" : 512    |
|             |  | •"Link Side Start" : 0000    |
|             |  | •"PLC Side Dev. Name": SB    |
|             |  | •"PLC Side Start" : 0000     |
| Transfer SW | Select the link refresh range of SW device.  | •"Link Side Points" : 512    |
|             |  | •"Link Side Start" : 0000    |
|             |  | •"PLC Side Dev. Name": SW    |
|             |  | •"PLC Side Start" : 0000     |
| Transfer 1  | Select the link refresh range of RX device.  | •"Link Side Dev. Name" : RX  |
|             |  | •"Link Side Points" : 32     |
|             |  | •"Link Side Start" : 0000    |
|             |  | •"PLC Side Dev. Name" : M    |
|             |  | •"PLC Side Start" : 1024     |
| Transfer 2  | Select the link refresh range of RY device.  | •"Link Side Dev. Name" : RY  |
|             |  | •"Link Side Points" : 32     |
|             |  | •"Link Side Start" : 0000    |
|             |  | •"PLC Side Dev. Name" : M    |
|             |  | •"PLC Side Start" : 2048     |
| Transfer 3  | Select the link refresh range of RWr device. | •"Link Side Dev. Name" : RWr |
|             |  | •"Link Side Points" : 20     |
|             |  | •"Link Side Start" : 0000    |
|             |  | •"PLC Side Dev. Name": W     |
|             |  | •"PLC Side Start" : 1000     |
| Transfer 4  | Select the link refresh range of RWw device. | •"Link Side Dev. Name" : RWw |
|             |  | •"Link Side Points" : 20     |
|             |  | •"Link Side Start" : 0000    |
|             |  | •"PLC Side Dev. Name" : W    |
|             |  | •"PLC Side Start" : 1100     |

<sup>\*</sup> Make sure to set "0000" for Start of Link Side.



<sup>\*</sup> Change the Points of Link Side and Dev. Name and Start of PLC Side according to the system.

They must be the same as for "M\_F\_RWr" and "M\_F\_RWw" devices of the global label setting.





# 1.5. Setting Global Labels

Global labels must be set before using this FB. This section explains global label settings.

# (1) M\_F\_RWr Set remote input (RWr).

| Item       | Description  |
|------------|--|
| Class      | Select "VAR_GLOBAL".   |
| Label Name | Enter "M_F_RWr"  |
| Data Type  | Select "Word [Signed]".  |
| Device     | Enter the refresh device set for the refresh parameter with a "Z7" prefix. |

### (2) M\_F\_RWw Set remote output (RWw).

| Item       | Description  |
|------------|--|
| Class      | Select "VAR_GLOBAL".   |
| Label Name | Enter "M_F_RWw".   |
| Data Type  | Select "Word [Signed]".  |
| Device     | Enter the refresh device set for the refresh parameter with a "Z6" prefix. |

|   | Class        | Label Name | Data Type    | Constant | Device  | Comment            |
|---|--------------|------------|--------------|----------|---------|--------------------|
| 1 | VAR_GLOBAL ▼ | M_F_RWr    | Word[Signed] |          | W1000Z7 | RWr refresh device |
| 2 | VAR_GLOBAL ▼ | M_F_RWw    | Word[Signed] |          | W1100Z6 | RWw refresh device |
| 3 | ▼            |            |              |          |         |                    |
| 4 | ▼            |            |              |          |         |                    |
| 5 | -            |            |              |          |         |                    |



#### 1.6. Creating Interlock Program

Interlock programs must be created for the FBs. The following is an example of an interlock program.

Set an interlock program for cyclic transmission.

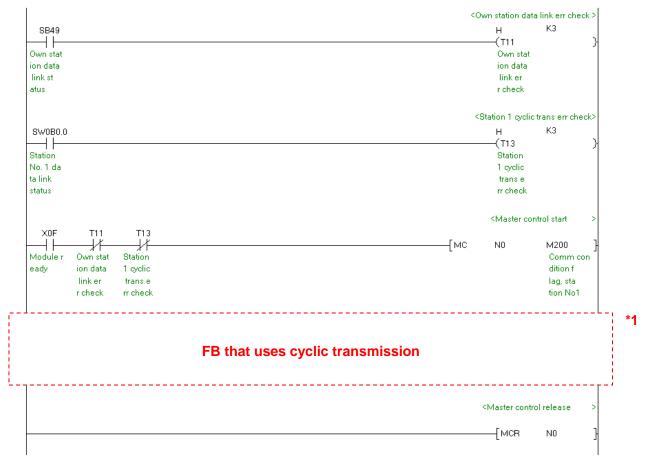
(Set a corresponding FB between MC and MCR instructions.)

#### 1.6.1. Cyclic Transmission Program

Use link special relay (SB) and link special register (SW) to create an interlock for cyclic transmission program.

- •Own station data link status (SB0049)
- •Each station data link status (SW00B0 to SW00B7)

Example: Interlock example (Station No. 1)



<sup>\*1</sup> All FBs described in this document use cyclic transmission.



#### 1.7. Relevant Manuals

CC-Link IE Field Network Remote I/O Module User's Manual

MELSEC-Q CC-Link IE Field Network Master/Local Module User's Manual

MELSEC-L CC-Link IE Field Network Master/Local Module User's Manual

QCPU User's Manual (Hardware Design, Maintenance and Inspection)

MELSEC-L CPU Module User's Manual (Hardware Design, Maintenance and Inspection)

GX Works2 Version 1 Operating Manual (Common)

GX Works2 Version 1 Operating Manual (Simple Project, Function Block)

#### 1.8. Note

Please make sure to read user's manuals for the corresponding products before using the products.



# 2. Details of the FB Library

2.1. M+NZ2GFCF132\_InitialProcessing (Initial processing)

### **FB Name**

M+NZ2GFCF132\_InitialProcessing

### **Function Overview**

| Item                | Description                                     |                                       |                                     |
|---------------------|---|---------------------------------------|-------------------------------------|
| Function overview   | Performs the initial processing after power-on. |                                       |                                     |
| Symbol              |   | M+NZ2GFCF132_InitialProcessing        |                                     |
|                     | Execution command——                             | B : FB_EN FE                          | B_ENO : B Execution status          |
|                     | Module start XY address                         | W : i_Start_IO_No F                   | FB_OK : B ——Completed without error |
|                     | Station No.                                     | W : i_Station_No FB_E                 | ERROR: B Error flag                 |
|                     |   | ERR                                   | OR_ID : W Error code                |
| Applicable hardware | CC-Link IE Field                                | NZ2GFCF1-32D, NZ2GFCF1-32             | 2T, NZ2GFCF1-32DT                   |
| and software        | Network remote I/O                              |                                       |                                     |
|                     | module  |                                       |                                     |
|                     | CC-Link IE Field                                | CC-Link IE Field Network maste        | r/local module *1                   |
|                     | Network module                                  | *1 The first five digits of the seria | al number are "14102" or later.     |
|                     | CPU module                                      |                                       |                                     |
|                     |   | Series                                | Model                               |
|                     |   | MELSEC-Q Series *1                    | Universal model QCPU *2             |
|                     |   | MELSEC-L Series                       | LCPU *3                             |
|                     |   | *1 Not applicable to QCPU (A m        | ode)                                |
|                     |   | *2 The first five digits of the seria | al number are "12012" or later.     |
|                     |   | *3 The first five digits of the seria | al number are "13012" or later.     |
|                     | Engineering software                            | GX Works2 *1                          |                                     |
|                     |   | Language                              | Software version                    |
|                     |   | Japanese version                      | Version1.86Q or later               |
|                     |   | English version                       | Version1.24A or later               |
|                     |   | Chinese (Simplified) version          | Version1.49B or later               |
|                     |   | Chinese (Traditional) version         | Version1.49B or later               |
|                     |   | Korean version                        | Version1.49B or later               |
|                     |   | *1 For software versions application  | ble to the modules used, refer to   |
|                     |   | "Relevant Manuals".                   |                                     |
| Programming         | Ladder  |                                       |                                     |
| language            |   |                                       |                                     |



| Item                 | Description  |
|----------------------|--|
| Number of steps      | 449 steps (for MELSEC-Q series universal model CPU)                                    |
|                      | * The number of steps of the FB in a program depends on the CPU model that is used and |
|                      | input and output definition.   |
| Function description | 1) By turning ON FB_EN (Execution command), the initial processing after power-on is   |
|                      | executed.  |
|                      | 2) FB operation is one-shot only, triggered by the FB_EN signal.                       |
|                      | 3) After FB_EN (Execution command) is turned ON, the FB is completed in multiple       |
|                      | scans.   |
|                      | 4) When the network configuration setting of the station number specified by           |
|                      | i_Station_No (Station No.) is incorrect, FB_ERROR (Error flag) turns ON and            |
|                      | processing is interrupted, and the error code 50 (decimal) is stored in ERROR_ID       |
|                      | (Error code).  |
|                      | Refer to the error code explanation section for details.                               |
|                      | 5) When the setting value of i_Station_No (Station No.) is out of range, the FB_ERROR  |
|                      | output turns ON and processing is interrupted, and the error code 60 (decimal) is      |
|                      | stored in ERROR_ID (Error code).   |
|                      | Refer to the error code explanation section for details.                               |
| Compiling method     | Macro type   |



| Item                | Description  |  |  |  |  |  |
|---------------------|--|--|--|--|--|--|
| Restrictions and    | 1) The FB does not include error recovery processing. Program the error recovery   |  |  |  |  |  |
| precautions         | processing separately in accordance with the required system operation.  |  |  |  |  |  |
|                     | 2) The FB cannot be used in an interrupt program.  |  |  |  |  |  |
|                     | 3) Please ensure that the FB_EN signal is capable of being turned OFF by the program.  |  |  |  |  |  |
|                     | Do not use this FB in programs that are only executed once such as a subroutine,   |  |  |  |  |  |
|                     | FOR-NEXT loop because it is impossible to turn OFF.  |  |  |  |  |  |
|                     | 4) This FB uses index registers Z6 to Z9. Please do not use these index registers in an interrupt program.   |  |  |  |  |  |
|                     | 5) A duplicated coil warning may occur during compile operation due to the RY signal   |  |  |  |  |  |
|                     | being operated by index modification in the FB. However this is not a problem and the  |  |  |  |  |  |
|                     | FB will operate without error.   |  |  |  |  |  |
|                     | 6) Every input must be provided with a value for proper FB operation.  |  |  |  |  |  |
|                     | 7) This FB uses cyclic transmission. Therefore, an interlock program for cyclic  |  |  |  |  |  |
|                     | transmission is required. For the interlock program, refer to Section "1.6.1 Cyclic  |  |  |  |  |  |
|                     | Transmission Program".   |  |  |  |  |  |
|                     | 8) Set the refresh parameters of the network parameter setting according to Section "1.4   |  |  |  |  |  |
|                     | Setting the CC-Link IE Field Network Master/Local Module".   |  |  |  |  |  |
|                     | 9) Set the global label setting according to Section "1.5 Setting Global Labels".  |  |  |  |  |  |
|                     | 10) Only one master/local module can be controlled by the CC-Link IE Field system FB. To   |  |  |  |  |  |
|                     | control 2 or more master/local modules by the FB, refer to "Appendix 1. When Using   |  |  |  |  |  |
|                     | the FB for 2 or More Master/Local Modules".  |  |  |  |  |  |
|                     | 11) If the processing of this FB is not completed, check if the station number of CC-Link IE   |  |  |  |  |  |
|                     | Field matches the station number of the network.   |  |  |  |  |  |
| FB operation type   | Pulsed execution (multiple scan execution type)  |  |  |  |  |  |
| Application example | Refer to "Appendix 2. FB Library Application Examples".  |  |  |  |  |  |
| Timing chart        | [When operation completes without error] [When an error occurs]  |  |  |  |  |  |
|                     | FB_EN (Execution command) FB_ENO (Execution status) FB_OK (Completed without error) RWrm+0 bit8 (Initial processing request flag) RWwm+0 bit8 (Initial processing completion flag) RWwm+0 bit11 (Remote READY) FB_ERROR (Error flag) ERROR_ID (Error code)  m: Address allocated to the master module by setting the station number  FB_EN (Execution command) FB_ENO (Execution status) FB_OK (Completed without error) RWrm+0 bit8 (Initial processing request flag) RWwm+0 bit8 (Initial processing completion flag) RWwm+0 bit11 (Remote READY) FB_ERROR (Error flag) ERROR_ID (Error code)  m: Address allocated to the master module by setting the station number |  |  |  |  |  |



| Item             | Description   |  |  |  |
|------------------|---|--|--|--|
| Relevant manuals | CC-Link IE Field Network Remote I/O Module User's Manual                        |  |  |  |
|                  | MELSEC-Q CC-Link IE Field Network Master/Local Module User's Manual             |  |  |  |
|                  | MELSEC-L CC-Link IE Field Network Master/Local Module User's Manual             |  |  |  |
|                  | QCPU User's Manual (Hardware Design, Maintenance and Inspection)                |  |  |  |
|                  | MELSEC-L CPU Module User's Manual (Hardware Design, Maintenance and Inspection) |  |  |  |
|                  | GX Works2 Version 1 Operating Manual (Common)                                   |  |  |  |
|                  | GX Works2 Version 1 Operating Manual (Simple Project, Function Block)           |  |  |  |

# Error codes

### ●Error code list

| Error code   | Description                                | Action   |
|--------------|--|--|
| 50 (Decimal) | The network configuration setting of the   | Review the following setting.                  |
|              | station number specified by i_Station_No   | Network configuration setting                  |
|              | is incorrect.                              | Refer to (2) in Section 1.4 Setting the        |
|              |  | CC-Link IE Field Network Master/Local          |
|              |  | Module   |
|              |  | •The value entered in i_Station_No             |
| 60 (Decimal) | The specified station number is not valid. | Please try again after confirming the setting. |
|              | The station number is not within the range |  |
|              | of 1 to 120.                               |  |



# Labels

# ●Input labels

| Name (Comment)    | Label name    | Data<br>type | Setting range             | Description                |
|-------------------|---------------|--------------|---------------------------|----------------------------|
| Execution command | FB_EN         |              | ON, OFF                   | ON: The FB is activated.   |
|                   |               | Bit          |                           | OFF: The FB is not         |
|                   |               |              |                           | activated.                 |
| Module start XY   | i_Start_IO_No |              | Depends on the I/O point  | Specify the starting XY    |
| address           |               |              | range of the CPU.         | address (in hexadecimal)   |
|                   |               |              | For details, refer to the | where the CC-Link IE Field |
|                   |               | Word         | CPU user's manual.        | Network master/local       |
|                   |               |              |                           | module is mounted. (For    |
|                   |               |              |                           | example, enter H10 for     |
|                   |               |              |                           | X10.)                      |
| Station No.       | i_Station_No  | Word         | 1 to 120                  | Specify the target station |
|                   |               | vvoid        |                           | number.                    |

# Output labels

| Name (Comment)          | Label name | Data<br>type | Initial value | Description   |  |
|-------------------------|------------|--------------|---------------|---|--|
| Execution status        | FB_ENO     | Bit          | OFF           | ON: Execution command is ON. OFF: Execution command is OFF.     |  |
| Completed without error | FB_OK      | Bit          | OFF           | When ON, it indicates that the initial processing is completed. |  |
| Error flag              | FB_ERROR   | Bit          | OFF           | When ON, it indicates that an error has occurred.               |  |
| Error code              | ERROR_ID   | Word         | 0             | FB error code output.   |  |



# **FB Version Upgrade History**

| Version | Date       | Description   |
|---------|------------|---------------|
| 1.00A   | 2015/12/18 | First edition |

### Note

This chapter includes information related to this function block.

It does not include information on restrictions of use such as combination with modules or programmable controller CPUs.

Before using any Mitsubishi products, please read all the relevant manuals.



# 2.2. M+NZ2GFCF132\_SetOpeCondition (Operation condition setting)

### **FB Name**

M+NZ2GFCF132\_SetOpeCondition

### **Function Overview**

| Item                | Description                               |  |                                       |  |
|---------------------|---|--|---------------------------------------|--|
| Function overview   | Performs the operation condition setting. |  |                                       |  |
| Symbol              | M+NZ2GFCF132_SetOpeCondition              |  |                                       |  |
|                     | Execution command———                      | B : FB_EN FE   | B_ENO : B Execution status            |  |
|                     | Module start XY address                   | W: i_Start_IO_No F   | FB_OK : B ——— Completed without error |  |
|                     | Station No.                               | W : i_Station_No FB_E  | ERROR: B Error flag                   |  |
|                     |   | ERR  | COR_ID : W Error code                 |  |
| Applicable hardware | CC-Link IE Field                          | NZ2GFCF1-32D, NZ2GFCF1-32  | 2T, NZ2GFCF1-32DT                     |  |
| and software        | Network remote I/O                        |  |                                       |  |
|                     | module                                    |  |                                       |  |
|                     | CC-Link IE Field                          | CC-Link IE Field Network maste                                     | er/local module *1                    |  |
|                     | Network module                            | *1 The first five digits of the seria                              | al number are "14102" or later.       |  |
|                     | CPU module                                |  |                                       |  |
|                     |   | Series   | Model                                 |  |
|                     |   | MELSEC-Q Series *1   | Universal model QCPU *2               |  |
|                     |   | MELSEC-L Series  | LCPU *3                               |  |
|                     |   | *1 Not applicable to QCPU (A mode)                                 |                                       |  |
|                     |   | *2 The first five digits of the seria                              | al number are "12012" or later.       |  |
|                     |   | *3 The first five digits of the seria                              | al number are "13012" or later.       |  |
|                     | Engineering software                      | GX Works2 *1   |                                       |  |
|                     |   | Language   | Software version                      |  |
|                     |   | Japanese version   | Version1.86Q or later                 |  |
|                     |   | English version  | Version1.24A or later                 |  |
|                     |   | Chinese (Simplified) version                                       | Version1.49B or later                 |  |
|                     |   | Chinese (Traditional) version                                      | Version1.49B or later                 |  |
|                     |   | Korean version   | Version1.49B or later                 |  |
|                     |   | *1 For software versions applicable to the modules used, reference |                                       |  |
|                     |   | "Relevant Manuals".  |                                       |  |
| Programming         | Ladder                                    |  |                                       |  |
| language            |   |  |                                       |  |



| Item                 | Description  |  |  |
|----------------------|--|--|--|
| Number of steps      | 461 steps (for MELSEC-Q series universal model CPU)                                    |  |  |
|                      | * The number of steps of the FB in a program depends on the CPU model that is used and |  |  |
|                      | input and output definition.   |  |  |
| Function description | 1) By turning ON FB_EN (Execution command), the operation condition setting of the     |  |  |
|                      | target module is performed.  |  |  |
|                      | 2) FB operation is one-shot only, triggered by the FB_EN signal.                       |  |  |
|                      | 3) After FB_EN (Execution command) is turned ON, the FB is completed in multiple       |  |  |
|                      | scans.   |  |  |
|                      | 4) When the network configuration setting of the station number specified by           |  |  |
|                      | i_Station_No (Station No.) is incorrect, FB_ERROR (Error flag) turns ON and            |  |  |
|                      | processing is interrupted, and the error code 50 (decimal) is stored in ERROR_ID       |  |  |
|                      | (Error code).  |  |  |
|                      | Refer to the error code explanation section for details.                               |  |  |
|                      | 5) When the setting value of i_Station_No (Station No.) is out of range, the FB_ERROR  |  |  |
|                      | output turns ON and processing is interrupted, and the error code 60 (decimal) is      |  |  |
|                      | stored in ERROR_ID (Error code).   |  |  |
|                      | Refer to the error code explanation section for details.                               |  |  |
| Compiling method     | Macro type   |  |  |



| Item                | Description  |  |  |  |  |
|---------------------|--|--|--|--|--|
| Restrictions and    | The FB does not include error recovery processing. Program the error recovery  |  |  |  |  |
| precautions         | processing separately in accordance with the required system operation.  |  |  |  |  |
|                     | 2) The FB cannot be used in an interrupt program.  |  |  |  |  |
|                     | Please ensure that the FB_EN signal is capable of being turned OFF by the program.   |  |  |  |  |
|                     | Do not use this FB in programs that are only executed once such as a subroutine,   |  |  |  |  |
|                     | FOR-NEXT loop because it is impossible to turn OFF.  |  |  |  |  |
|                     | 4) This FB uses index registers Z6 to Z9. Please do not use these index registers in an  |  |  |  |  |
|                     | interrupt program.   |  |  |  |  |
|                     | 5) A duplicated coil warning may occur during compile operation due to the RY signal   |  |  |  |  |
|                     | being operated by index modification in the FB. However this is not a problem and the  |  |  |  |  |
|                     | FB will operate without error.   |  |  |  |  |
|                     | 6) Every input must be provided with a value for proper FB operation.  |  |  |  |  |
|                     | 7) This FB uses cyclic transmission. Therefore, an interlock program for cyclic  |  |  |  |  |
|                     | transmission is required. For the interlock program, refer to Section "1.6.1 Cyclic  |  |  |  |  |
|                     | Transmission Program".   |  |  |  |  |
|                     | 8) Set the refresh parameters of the network parameter setting according to Section "1.4   |  |  |  |  |
|                     | Setting the CC-Link IE Field Network Master/Local Module".   |  |  |  |  |
|                     | Set the global label setting according to Section "1.5 Setting Global Labels".   |  |  |  |  |
|                     | 10) Only one master/local module can be controlled by the CC-Link IE Field system FB. To   |  |  |  |  |
|                     | control 2 or more master/local modules by the FB, refer to "Appendix 1. When Using   |  |  |  |  |
|                     | the FB for 2 or More Master/Local Modules".  |  |  |  |  |
|                     | 11) If the processing of this FB is not completed, check if the station number of CC-Link IE   |  |  |  |  |
|                     | Field matches the station number of the network.   |  |  |  |  |
| FB operation type   | Pulsed execution (multiple scan execution type)  |  |  |  |  |
| Application example | Refer to "Appendix 2. FB Library Application Examples".  |  |  |  |  |
| Timing chart        | [When operation completes without error] [When an error occurs]  |  |  |  |  |
|                     | FB_EN (Execution command)  FB_EN (Execution command)   |  |  |  |  |
|                     | FB_ENO (Execution status) FB_OK (Completed FB_OK (Complet |  |  |  |  |
|                     | without error) RWwm+0 bit9 without error) RWwm+0 bit9  |  |  |  |  |
|                     | (Operation condition setting request flag)  (Operation condition setting request flag)   |  |  |  |  |
|                     | RWrm+0 bit9 (Operation condition setting completion flag)  RWrm+0 bit9 (Operation condition setting completion flag)   |  |  |  |  |
|                     | FB_ERROR (Error flag)  FB_ERROR (Error flag)   |  |  |  |  |
|                     | ERROR_ID (Error code)  0  ERROR_ID (Error code)  |  |  |  |  |
|                     | m: Address allocated to the master module by setting the m: Address allocated to the master module by setting the station number   |  |  |  |  |



| Item             | Description   |  |  |  |
|------------------|---|--|--|--|
| Relevant manuals | CC-Link IE Field Network Remote I/O Module User's Manual                        |  |  |  |
|                  | MELSEC-Q CC-Link IE Field Network Master/Local Module User's Manual             |  |  |  |
|                  | MELSEC-L CC-Link IE Field Network Master/Local Module User's Manual             |  |  |  |
|                  | QCPU User's Manual (Hardware Design, Maintenance and Inspection)                |  |  |  |
|                  | MELSEC-L CPU Module User's Manual (Hardware Design, Maintenance and Inspection) |  |  |  |
|                  | GX Works2 Version 1 Operating Manual (Common)                                   |  |  |  |
|                  | GX Works2 Version 1 Operating Manual (Simple Project, Function Block)           |  |  |  |

# Error codes

### ●Error code list

| Error code   | Description                                | Action   |
|--------------|--|--|
| 50 (Decimal) | The network configuration setting of the   | Review the following setting.                  |
|              | station number specified by i_Station_No   | Network configuration setting                  |
|              | is incorrect.                              | Refer to (2) in Section 1.4 Setting the        |
|              |  | CC-Link IE Field Network Master/Local          |
|              |  | Module.  |
|              |  | •The value entered in i_Station_No             |
| 60 (Decimal) | The specified station number is not valid. | Please try again after confirming the setting. |
|              | The station number is not within the range |  |
|              | of 1 to 120.                               |  |



# Labels

# ●Input labels

| Name (Comment)    | Label name    | Data<br>type | Setting range             | Description                |
|-------------------|---------------|--------------|---------------------------|----------------------------|
| Execution command | FB_EN         |              | ON, OFF                   | ON: The FB is activated.   |
|                   |               | Bit          |                           | OFF: The FB is not         |
|                   |               |              |                           | activated.                 |
| Module start XY   | i_Start_IO_No |              | Depends on the I/O point  | Specify the starting XY    |
| address           |               |              | range of the CPU.         | address (in hexadecimal)   |
|                   |               |              | For details, refer to the | where the CC-Link IE Field |
|                   |               | Word         | CPU user's manual.        | Network master/local       |
|                   |               |              |                           | module is mounted. (For    |
|                   |               |              |                           | example, enter H10 for     |
|                   |               |              |                           | X10.)                      |
| Station No.       | i_Station_No  | Word         | 1 to 120                  | Specify the target station |
|                   |               | vvold        |                           | number.                    |

# Output labels

| Name (Comment)    | Label name | Data<br>type | Initial value | Description                              |
|-------------------|------------|--------------|---------------|--|
| Execution status  | FB_ENO     | Rit          | OFF           | ON: Execution command is ON.             |
|                   |            | Bit OFF      |               | OFF: Execution command is OFF.           |
| Completed without | FB_OK      | Bit          | OFF           | When ON, it indicates that the operation |
| error             |            |              |               | condition setting is completed.          |
| Error flag        | FB_ERROR   | Bit          | OFF           | When ON, it indicates that an error has  |
|                   |            | Dil          | OFF           | occurred.                                |
| Error code        | ERROR_ID   | Word         | 0             | FB error code output.                    |



# **FB Version Upgrade History**

| Version | Date       | Description   |
|---------|------------|---------------|
| 1.00A   | 2015/12/18 | First edition |

### Note

This chapter includes information related to this function block.

It does not include information on restrictions of use such as combination with modules or programmable controller CPUs.

Before using any Mitsubishi products, please read all the relevant manuals.



# 2.3. M+NZ2GFCF132\_ErrorOperation (Error operation)

# FB Name

M+NZ2GFCF132\_ErrorOperation

# **Function Overview**

| Item                             | Description   |  |                                     |  |  |
|----------------------------------|---|--|-------------------------------------|--|--|
| Function overview                | Monitors the error status and warning status, and performs error clear. |  |                                     |  |  |
| Symbol                           |   | M+NZ2GFCF132_ErrorOperation            |                                     |  |  |
|                                  | Execution command ———   | B : FB_EN F                            | FB_ENO : BExecution status          |  |  |
|                                  | Module start XY address ——  | W : i_Start_IO_No                      | FB_OK : B ——Completed without error |  |  |
|                                  | Station No.   | W: i_Station_No o_UNIT_                | ERROR : BModule error detection     |  |  |
|                                  | Error clear request———  | B: i_ErrorReset o_UNIT_ERF             | R_CODE : WModule error code         |  |  |
|                                  |   | o_UNIT_W                               | ARNING: BModule warning detection   |  |  |
|                                  |   | o_UNIT_WAF                             | R_CODE: WModule warning code        |  |  |
|                                  |   | FB_                                    | ERROR : B Error flag                |  |  |
|                                  |   | ER                                     | ROR_ID : W Error code               |  |  |
| Applicable hardware and software | CC-Link IE Field  Network remote I/O  module                            | NZ2GFCF1-32D, NZ2GFCF1-32              | 2T, NZ2GFCF1-32DT                   |  |  |
|                                  | CC-Link IE Field  | CC-Link IE Field Network maste         | er/local module *1                  |  |  |
|                                  | Network module  | *1 The first five digits of the seria  | al number are "14102" or later.     |  |  |
|                                  | CPU module  |  |                                     |  |  |
|                                  |   | Series                                 | Model                               |  |  |
|                                  |   | MELSEC-Q Series *1                     | Universal model QCPU *2             |  |  |
|                                  |   | MELSEC-L Series                        | LCPU *3                             |  |  |
|                                  |   | *1 Not applicable to QCPU (A mode)     |                                     |  |  |
|                                  | *2 The first five digits of the serial number are "12012" or later.     |  |                                     |  |  |
|                                  |   | *3 The first five digits of the serial | al number are "13012" or later.     |  |  |

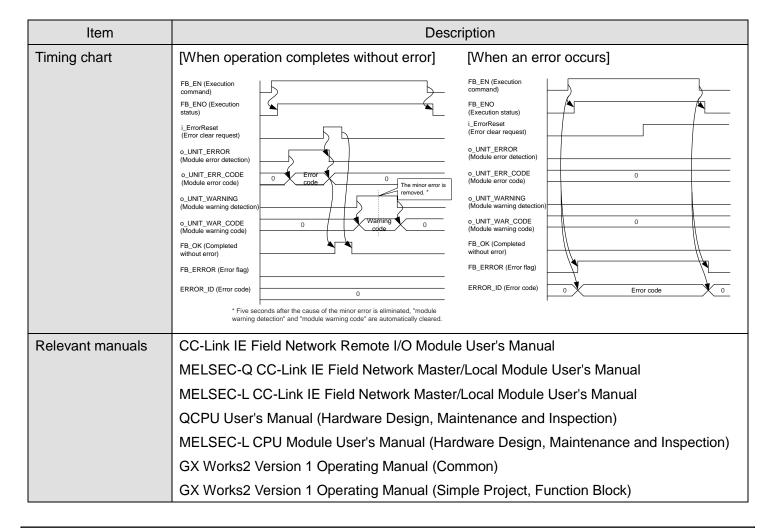


| Item                 | Description  |  |                                    |  |  |
|----------------------|--|--|------------------------------------|--|--|
|                      | Engineering software   | GX Works2 *1   |                                    |  |  |
|                      |  | Language   | Software version                   |  |  |
|                      |  | Japanese version   | Version1.86Q or later              |  |  |
|                      |  | English version  | Version1.24A or later              |  |  |
|                      |  | Chinese (Simplified) version   | Version1.49B or later              |  |  |
|                      |  | Chinese (Traditional) version  | Version1.49B or later              |  |  |
|                      |  | Korean version   | Version1.49B or later              |  |  |
|                      |  | *1 For software versions applica   | ble to the modules used, refer to  |  |  |
|                      |  | "Relevant Manuals".  |                                    |  |  |
| Programming          | Ladder   |  |                                    |  |  |
| language             |  |  |                                    |  |  |
| Number of steps      | 575 steps (for MELSE)  | C-Q series universal model CPU)  |                                    |  |  |
|                      | * The number of steps  | of the FB in a program depends or  | the CPU model that is used and     |  |  |
|                      | input and output defir   | nition.  |                                    |  |  |
| Function description | 1) By turning ON FB  | _EN (Execution command), the erro  | or status and warning status in    |  |  |
|                      | the target module  | is monitored.  |                                    |  |  |
|                      | 2) When an error occ   | curs, o_UNIT_ERROR (Module erro  | or detection) is turned ON and the |  |  |
|                      | error code is store  | d in o_UNIT_ERR_CODE (Module   | error code).                       |  |  |
|                      | 3) When a warning o  | 3) When a warning occurs, o_UNIT_WARNING (Module warning detection) is turned ON |                                    |  |  |
|                      | and the warning c  | and the warning code is stored in o_UNIT_WAR_CODE (Module warning code).         |                                    |  |  |
|                      | 4) When an alarm occurs, the alarm code is stored in o_UNIT_WAR_CODE (Module |  |                                    |  |  |
|                      | warning code).   |  |                                    |  |  |
|                      | 5) After FB_EN (Exe  | cution command) is turned ON, err  | or clear is performed when         |  |  |
|                      | i_ErrorReset (Erro   | or clear request) is turned ON during  | g error occurrence. A warning is   |  |  |
|                      | cleared automatic  | ally five seconds after the cause of   | the minor error in the module is   |  |  |
|                      | removed.   |  |                                    |  |  |
|                      | 6) When the network  | configuration setting of the station   | number specified by                |  |  |
|                      | i_Station_No (Stat   | ion No.) is incorrect, FB_ERROR (  | Error flag) turns ON and           |  |  |
|                      | processing is inter  | rupted, and the error code 50 (dec   | imal) is stored in ERROR_ID        |  |  |
|                      | (Error code).  |  |                                    |  |  |
|                      | Refer to the error   | code explanation section for details   | S.                                 |  |  |
|                      | 7) When the setting v  | value of i_Station_No (Station No.)  | is out of range, the FB_ERROR      |  |  |
|                      |  | nd processing is interrupted, and the  | ne error code 60 (decimal) is      |  |  |
|                      | stored in ERROR_   | ,  |                                    |  |  |
|                      |  | code explanation section for details   | i.                                 |  |  |
| Compiling method     | Macro type   |  |                                    |  |  |



| Item                | Description  |
|---------------------|--|
| Restrictions and    | The FB does not include error recovery processing. Program the error recovery                |
| precautions         | processing separately in accordance with the required system operation.                      |
|                     | 2) The FB cannot be used in an interrupt program.  |
|                     | 3) Please ensure that the FB_EN signal is capable of being turned OFF by the program.        |
|                     | Do not use this FB in programs that are only executed once such as a subroutine,             |
|                     | FOR-NEXT loop because it is impossible to turn OFF.  |
|                     | 4) This FB uses index registers Z6 to Z9. Please do not use these index registers in an      |
|                     | interrupt program.   |
|                     | 5) A duplicated coil warning may occur during compile operation due to the RY signal         |
|                     | being operated by index modification in the FB. However this is not a problem and the        |
|                     | FB will operate without error.   |
|                     | 6) Every input must be provided with a value for proper FB operation.                        |
|                     | 7) This FB uses cyclic transmission. Therefore, an interlock program for cyclic              |
|                     | transmission is required. For the interlock program, refer to Section "1.6.1 Cyclic          |
|                     | Transmission Program".   |
|                     | 8) Set the refresh parameters of the network parameter setting according to Section "1.4     |
|                     | Setting the CC-Link IE Field Network Master/Local Module".                                   |
|                     | 9) Set the global label setting according to Section "1.5 Setting Global Labels".            |
|                     | 10) Only one master/local module can be controlled by the CC-Link IE Field system FB. To     |
|                     | control 2 or more master/local modules by the FB, refer to "Appendix 1. When Using           |
|                     | the FB for 2 or More Master/Local Modules".  |
|                     | 11) If the processing of this FB is not completed, check if the station number of CC-Link IE |
|                     | Field matches the station number of the network. Also, confirm that the causes of the        |
|                     | error, warning and alarm have been removed.  |
| FB operation type   | Real-time execution  |
| Application example | Refer to "Appendix 2. FB Library Application Examples".                                      |





#### **Error codes**

#### ●Error code list

| Error code   | Description                                | Action   |
|--------------|--|--|
| 50 (Decimal) | The network configuration setting of the   | Review the following setting.                  |
|              | station number specified by i_Station_No   | Network configuration setting                  |
|              | is incorrect.                              | Refer to (2) in Section 1.4 Setting the        |
|              |  | CC-Link IE Field Network Master/Local          |
|              |  | Module.  |
|              |  | •The value entered in i_Station_No             |
| 60 (Decimal) | The specified station number is not valid. | Please try again after confirming the setting. |
|              | The station number is not within the range |  |
|              | of 1 to 120.                               |  |



# Labels

# ●Input labels

| Name (Comment)      | Label name    | Data<br>type | Setting range             | Description                  |
|---------------------|---------------|--------------|---------------------------|------------------------------|
| Execution command   | FB_EN         |              | ON, OFF                   | ON: The FB is activated.     |
|                     |               | Bit          |                           | OFF: The FB is not           |
|                     |               |              |                           | activated.                   |
| Module start XY     | i_Start_IO_No |              | Depends on the I/O point  | Specify the starting XY      |
| address             |               |              | range of the CPU.         | address (in hexadecimal)     |
|                     |               |              | For details, refer to the | where the CC-Link IE Field   |
|                     |               | Word         | CPU user's manual.        | Network master/local         |
|                     |               |              |                           | module is mounted. (For      |
|                     |               |              |                           | example, enter H10 for       |
|                     |               |              |                           | X10.)                        |
| Station No.         | i_Station_No  | Word         | 1 to 120                  | Specify the target station   |
|                     |               | vvoid        |                           | number.                      |
| Error clear request | i_ErrorReset  |              | ON, OFF                   | Turn ON when performing      |
|                     |               |              |                           | error clear. Turn OFF the    |
|                     |               | Bit          |                           | request when FB_OK           |
|                     |               |              |                           | (Completed without error) is |
|                     |               |              |                           | turned ON.                   |

### Output labels

| Name (Comment)           | Label name      | Data<br>type | Initial value | Description  |
|--------------------------|-----------------|--------------|---------------|--|
| Execution status         | FB_ENO          | Bit          | OFF           | ON: Execution command is ON. OFF: Execution command is OFF.        |
| Completed without error  | FB_OK           | Bit          | OFF           | When ON, it indicates error clear is completed.                    |
| Module error detection   | o_UNIT_ERROR    | Bit          | OFF           | When ON, it indicates an error has occurred.                       |
| Module error code        | o_UNIT_ERR_CODE | Word         | 0             | Return the error code for an error that occurred in the module.    |
| Module warning detection | o_UNIT_WARNING  | Bit          | OFF           | When ON, it indicates a warning has occurred.                      |
| Module warning code      | o_UNIT_WAR_CODE | Word         | 0             | Return the warning code for a warning that occurred in the module. |



| Name (Comment) | Label name | Data<br>type | Initial value | Description                                       |
|----------------|------------|--------------|---------------|---|
| Error flag     | FB_ERROR   | Bit          | OFF           | When ON, it indicates that an error has occurred. |
| Error code     | ERROR_ID   | Word         | 0             | FB error code output.                             |

# **FB Version Upgrade History**

| Version | Date       | Description   |
|---------|------------|---------------|
| 1.00A   | 2015/12/18 | First edition |

### Note

This chapter includes information related to this function block.

It does not include information on restrictions of use such as combination with modules or programmable controller CPUs.

Before using any Mitsubishi products, please read all the relevant manuals.



### Appendix 1. When Using the FB for 2 or More Master/Local Modules

To use 2 or more CC-Link IE field master/local modules and to use an FB for the second and subsequent CC-Link IE field master/local modules, it is necessary to create an FB for the second and subsequent modules from the MELSOFT Library CC-Link IE field master/local module FB using the following procedure.

Four steps are required to create the FB for the second and subsequent modules.

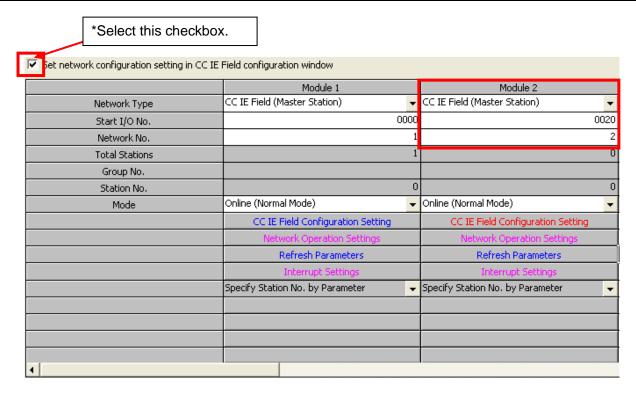
- (1) Enter network parameters
- (2) Set global labels
- (3) Copy MELSOFT Library to create the FB for the second module
- (4) Replace devices to create the FB for the second module



### Appendix 1.1. Entering Network Parameters

(1) Enter the network parameters for the second module.

| Item          | Description   |  |
|---------------|---|--|
| Network Type  | Select CC IE Field (Master Station).  |  |
| Start I/O No. | Set the start I/O number of the master/local module in increments of 16 points. |  |
|               | Set "0020".   |  |
| Network No.   | Set the network number of the master/local module.                              |  |
|               | Set "2".  |  |





# (2) Set the CC IE Field configuration setting for the second module.

| Item            | Description   |  |  |  |
|-----------------|---|--|--|--|
| Station No.     | Set the station number of the intelligent device station connected to the master        |  |  |  |
|                 | station.  |  |  |  |
|                 | Set "1".  |  |  |  |
| Station Type    | Set the station type of the intelligent device station connected to the master station. |  |  |  |
|                 | Set "Intelligent Device Station".   |  |  |  |
| RX/RY Setting   | Set assignment for RX/RY for the intelligent device station connected to the master     |  |  |  |
|                 | station.  |  |  |  |
|                 | (a) Start Set "0000.  |  |  |  |
|                 | (b) End Set "001F".   |  |  |  |
| RWw/RWr Setting | Set assignment for RWw/RWr for the intelligent device station connected to the          |  |  |  |
|                 | master station.   |  |  |  |
|                 | (a) Start Set "0000".   |  |  |  |
|                 | (b) End Set "0013".   |  |  |  |

# [When using NZ2GFCF1-32D]

|          | No. | Model Name   | STA# | Station Type               | RX/RY Setting |       |      | RWw/RWr Setting |       |      |
|----------|-----|--------------|------|----------------------------|---------------|-------|------|-----------------|-------|------|
|          |     |              | SIA# | Station Type               | Points        | Start | End  | Points          | Start | End  |
| 10       | 0   | Host Station | 0    | Master Station             |               |       |      |                 |       |      |
| <b>=</b> | 1   | NZ2GFCF1-32D | 1    | Intelligent Device Station | 32            | 0000  | 001F | 20              | 0000  | 0013 |

\*Set the module to be used according to the environment.

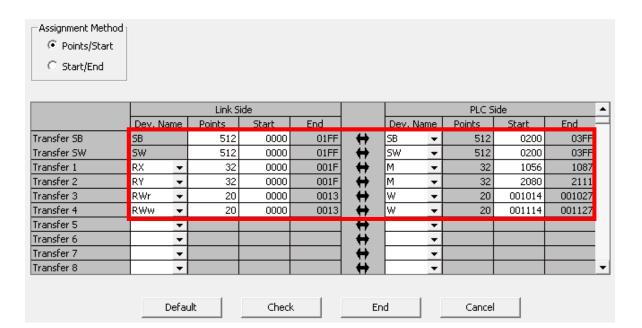


# (3) Enter the refresh parameters for the second module.

| Item        | Description                                  | Setting value                |
|-------------|--|------------------------------|
| Transfer SB | Select the link refresh range of SB device.  | •"Link Side Points" : 512    |
|             |  | •"Link Side Start" : 0000    |
|             |  | •"PLC Side Dev. Name" : SB   |
|             |  | •"PLC Side Start" : 0200     |
| Transfer SW | Select the link refresh range of SW device.  | •"Link Side Points" : 512    |
|             |  | •"Link Side Start" : 0000    |
|             |  | •"PLC Side Dev. Name" : SW   |
|             |  | •"PLC Side Start" : 0200     |
| Transfer 1  | Select the link refresh range of RX device.  | •"Link Side Dev. Name" : RX  |
|             |  | •"Link Side Points" : 32     |
|             |  | •"Link Side Start" : 0000    |
|             |  | •"PLC Side Dev. Name" : M    |
|             |  | •"PLC Side Start" : 1056     |
| Transfer 2  | Select the link refresh range of RY device.  | •"Link Side Dev. Name" : RY  |
|             |  | •"Link Side Points" : 32     |
|             |  | •"Link Side Start" : 0000    |
|             |  | •"PLC Side Dev. Name" : M    |
|             |  | •"PLC Side Start" : 2080     |
| Transfer 3  | Select the link refresh range of RWr device. | •"Link Side Dev. Name" : RWr |
|             |  | •"Link Side Points" : 20     |
|             |  | •"Link Side Start" : 0000    |
|             |  | •"PLC Side Dev. Name": W     |
|             |  | •"PLC Side Start" : 1014     |
| Transfer 4  | Select the link refresh range of RWw device. | •"Link Side Dev. Name" : RWw |
|             |  | •"Link Side Points" : 20     |
|             |  | •"Link Side Start" : 0000    |
|             |  | •"PLC Side Dev. Name" : W    |
|             |  | •"PLC Side Start" : 1114     |

<sup>\*</sup> Change the Points of Link Side and Dev. Name and Start of PLC Side according to the system.







### Appendix 1.2. Entering Global Labels

Enter the global labels for the second module.

Specify label names for the second module. The names must be different from the label names for the first module.

The following explains how to set the global label for the second module.

### (1) M\_F\_RWr2 Set remote register (RWr).

| Item       | Description  |
|------------|--|
| Class      | Select "VAR_GLOBAL".   |
| Label Name | Enter "M_F_RWr2".  |
| Data Type  | Select "Word [Signed]".  |
| Device     | Enter the refresh device set for the refresh parameter with a "Z7" prefix. |

### (2) M\_F\_RWw2 Set remote register (RWw).

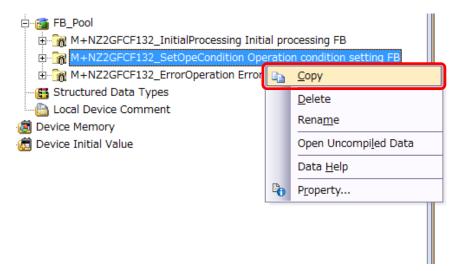
| Item       | Description  |
|------------|--|
| Class      | Select "VAR_GLOBAL".   |
| Label Name | Enter "M_F_RWw2".  |
| Data Type  | Select "Word [Signed]".  |
| Device     | Enter the refresh device set for the refresh parameter with a "Z6" prefix. |

|    | Class        | Label Name | Data Type    | Constant | Device  | Comment            |
|----|--------------|------------|--------------|----------|---------|--------------------|
| 1  | VAR_GLOBAL ▼ | M_F_RWr    | Word[Signed] |          | W1000Z7 | RWr refresh device |
| 2  | VAR_GLOBAL ▼ | M_F_RWw    | Word[Signed] |          | W1100Z6 | RWw refresh device |
| 3  | VAR_GLOBAL ▼ | M_F_RWr2   | Word[Signed] |          | W1014Z7 | RWr refresh device |
| 4  | VAR_GLOBAL ▼ | M_F_RWw2   | Word[Signed] |          | W1114Z6 | RWw refresh device |
| 5  | ▼            |            |              |          |         |                    |
| 6  | _            |            |              |          |         |                    |
| 7  | •            |            |              |          |         |                    |
| 8  | ▼            |            |              |          |         |                    |
| 9  | ▼            |            |              |          |         |                    |
| 10 | ▼            |            |              |          |         |                    |

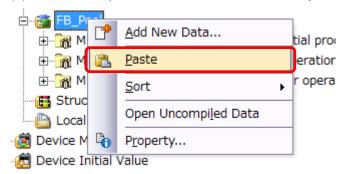


### Appendix 1.3. Copying MELSOFT Library to Create an FB for the Second Module

(1) Select an FB necessary for the second module from the Project tab of the Navigation window. Execute the Copy command.



(2) Paste the copied FB to "FB\_Pool" on the Project tab of the Navigation window.

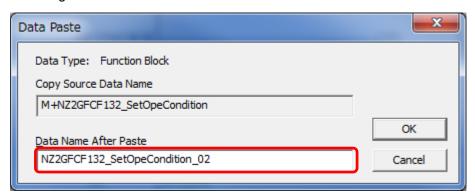




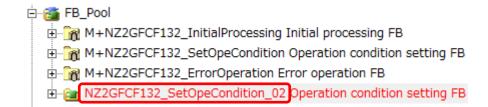
(3) After selecting the paste command, a window appears to enter an FB name. Enter an FB name after paste.

(Example: NZ2GFCF132\_SetOpeCondition\_02)

[Note] The character string "+" of M+··· cannot be entered.







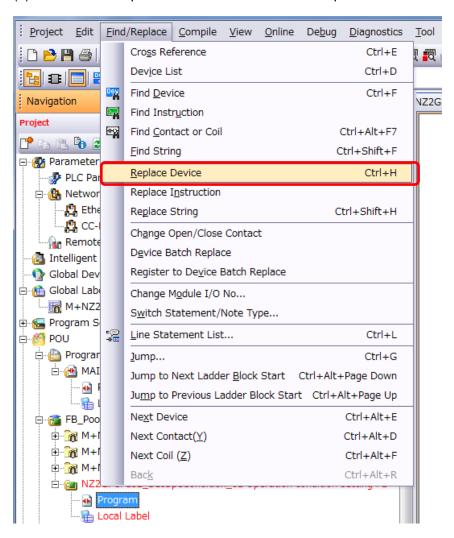


#### Appendix 1.4. Replacing Devices to Create the FB for the Second Module

(1) Open "Program" of the added FB.

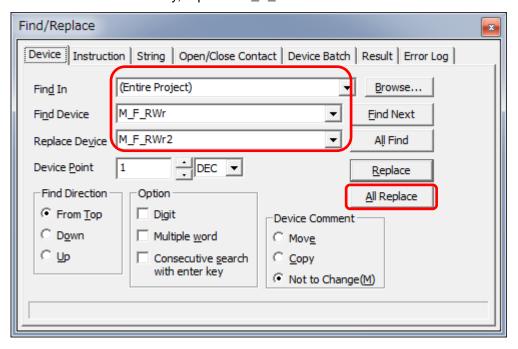


(2) Select "Find/Replace" menu and then select "Replace Device". "Find/Replace" window appears.





(3) Select "Current Window" from Find In, "M\_F\_RWr" from Find Device, and "M\_F\_RWr2" from Replace Device. Then replace all devices. In the same way, replace "M\_F\_RWw" all at once.



By performing the steps above, the CC-Link IE field master/local FB can be used for the second module.

#### [Point]

- (1) To use multiple FBs for the second CC-Link IE field master/local module, repeat "Appendix 1. When Using the FB for 2 or More Master/Local Modules".
- (2) To use an FB for third or subsequent CC-Link IE field master/local modules, make sure that the "Global label name", "Data Name After Paste" that is set when pasting FB data and "Replace Device" that is set when replacing devices are not duplicated for the first and second modules.

#### [Note]

If MELSOFT Library is upgraded, MELSOFT Library FBs can be upgraded by importing them again. However, the FBs that were created by following these procedures for the second and subsequent modules are not upgraded even if the FBs are imported again.

Therefore, to upgrade FBs that were created by following these procedures, after upgrading MELSOFT Library, follow these procedures again.

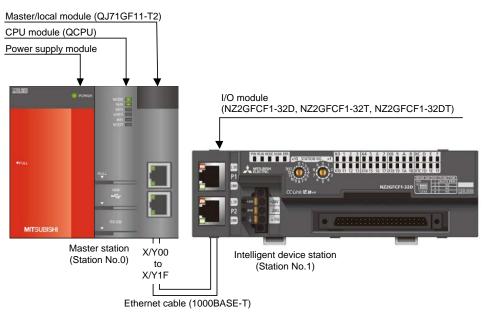


### Appendix 2. FB Library Application Examples

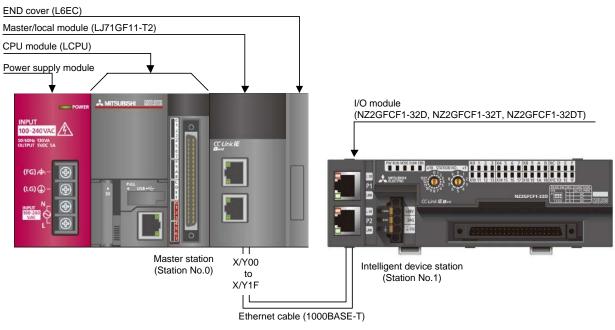
The application examples of the CC-Link IE Field Network remote I/O module FB are as follows.

### 1) System configuration

### (1) Q series system configuration



#### (2) L series system configuration



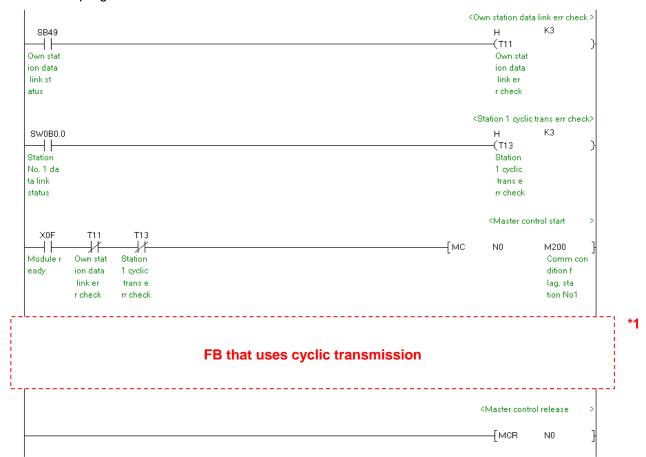
#### Reminder

- Every input must be provided with a value for proper FB operation. If not set, the values will be unspecified.
- Abbreviations may be used in the label comments due to the limitation on the number of the characters to display in GX Works2.



### Interlock program

\*This is the interlock program.



<sup>\*1</sup> All FBs described in this document use cyclic transmission.



# 2) List of devices

# a) External input (commands)

| Device | FB name                        | Application (ON details)            |
|--------|--------------------------------|-------------------------------------|
| MO     | M+NZ2GFCF132_InitialProcessing | Initial processing request          |
| M10    | M+NZ2GFCF132_SetOpeCondition   | Operation condition setting request |
| M20    | M+NZ2GFCF132_ErrorOperation    | Error operation request             |
| M21    |                                | Error clear request                 |

### b) External output (checks)

| Device | FB name                        | Application (ON details)                  |
|--------|--------------------------------|---|
| M1     | M+NZ2GFCF132_InitialProcessing | Initial processing FB ready               |
| M2     |                                | Initial processing FB complete            |
| F0     |                                | Initial processing FB error               |
| D0     |                                | Initial processing FB error code          |
| M11    | M+NZ2GFCF132_SetOpeCondition   | Operation condition setting FB ready      |
| M12    |                                | Operation condition setting FB complete   |
| F5     |                                | Operation condition setting FB error      |
| D10    |                                | Operation condition setting FB error code |
| M22    | M+NZ2GFCF132_ErrorOperation    | Error operation FB ready                  |
| M23    |                                | Error operation FB complete               |
| M24    |                                | Module error detection                    |
| D20    |                                | Module error code                         |
| M25    |                                | Module warning detection                  |
| D21    |                                | Module warning code                       |
| F10    |                                | Error operation FB error                  |
| D22    |                                | Error operation FB error code             |

# 3) Global label setting

### a) Common setting

| Class      | Label name | Data type     | Device  |
|------------|------------|---------------|---------|
| VAR_GLOBAL | M_F_RWr    | Word [Signed] | W1000Z7 |
| VAR_GLOBAL | M_F_RWw    | Word [Signed] | W1100Z6 |



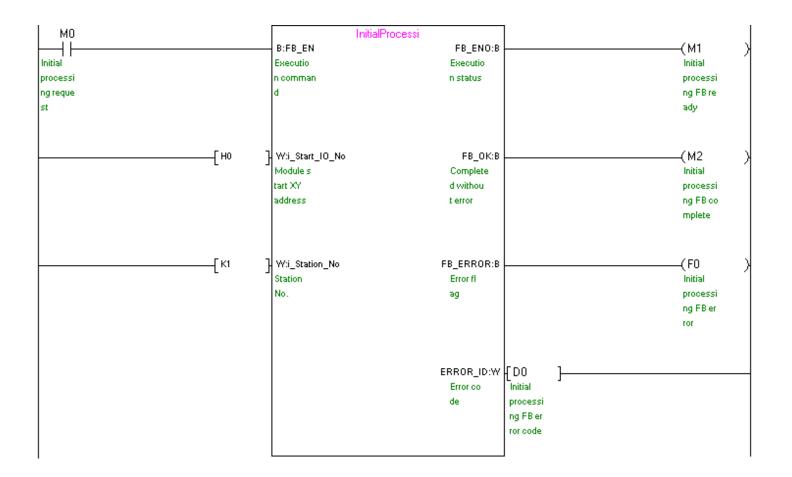
### 4) Programs

M+NZ2GFCF132\_InitialProcessing (Initial processing)

The example below shows a program with the following conditions.

| Label name    | Setting | Description   |
|---------------|---------|---|
|               | value   |   |
| i_Start_IO_No | H0      | Set the starting XY address where the CC-Link IE Field Network master/local |
|               |         | module is mounted to 0H.  |
| i_Station_No  | K1      | Set the target station number to 1.   |

By turning ON M0, the initial processing is performed.



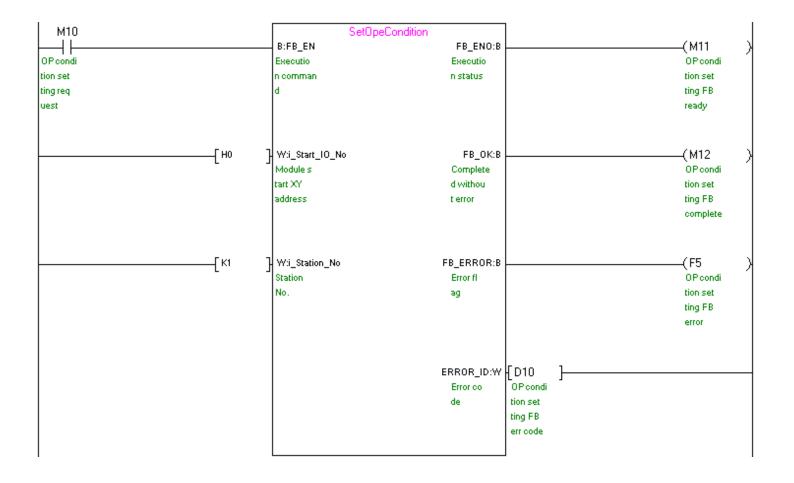


### M+NZ2GFCF132\_SetOpeCondition (Operation condition setting)

The example below shows a program with the following conditions.

| Label name    | Setting | Description   |
|---------------|---------|---|
|               | value   |   |
| i_Start_IO_No | H0      | Set the starting XY address where the CC-Link IE Field Network master/local |
|               |         | module is mounted to 0H.  |
| i_Station_No  | K1      | Set the target station number to 1.   |

By turning ON M10, the operation condition of the module is set.





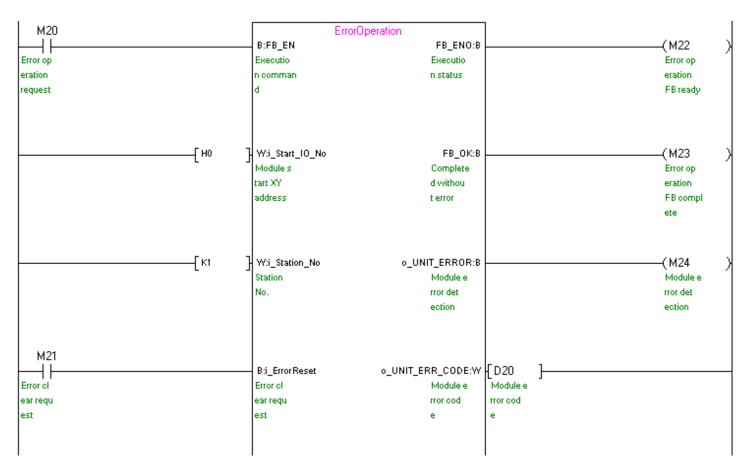
### M+NZ2GFCF132\_ErrorOperation (Error operation)

The example below shows a program with the following conditions.

| Label name    | Setting | Description   |
|---------------|---------|---|
|               | value   |   |
| i_Start_IO_No | H0      | Set the starting XY address where the CC-Link IE Field Network master/local |
|               |         | module is mounted to 0H.  |
| i_Station_No  | K1      | Set the target station number to 1.   |
| i_ErrorReset  | ON/OFF  | Turn ON when performing error clear.  |

By turning ON M20, error and warning occurrences are monitored.

After turning ON M20, by turning ON M21, error clear is performed.



(Continues to the next page)



