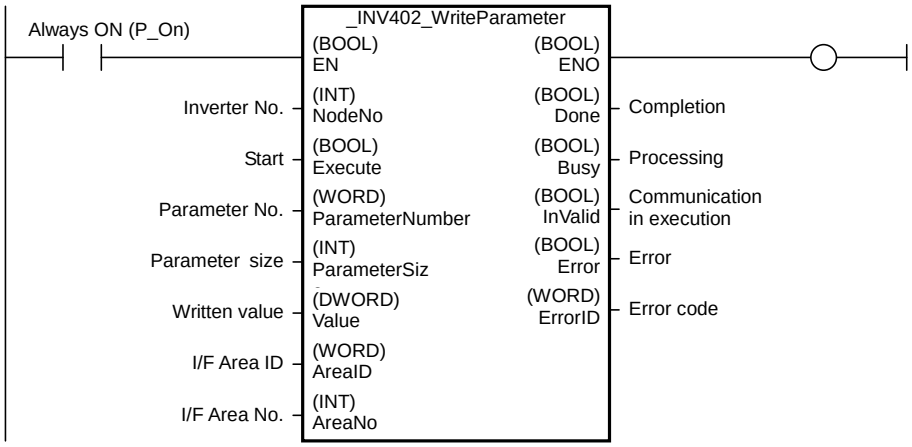
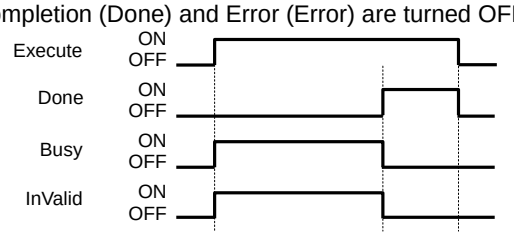
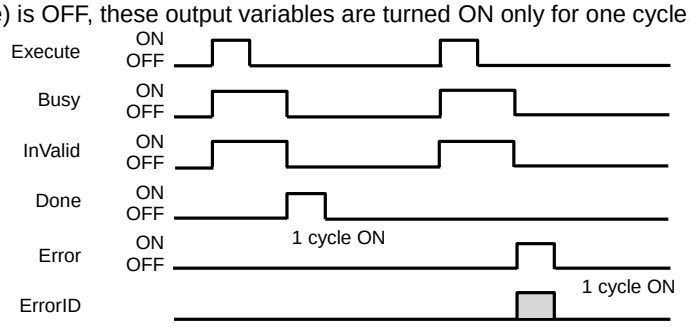
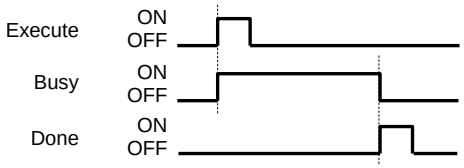
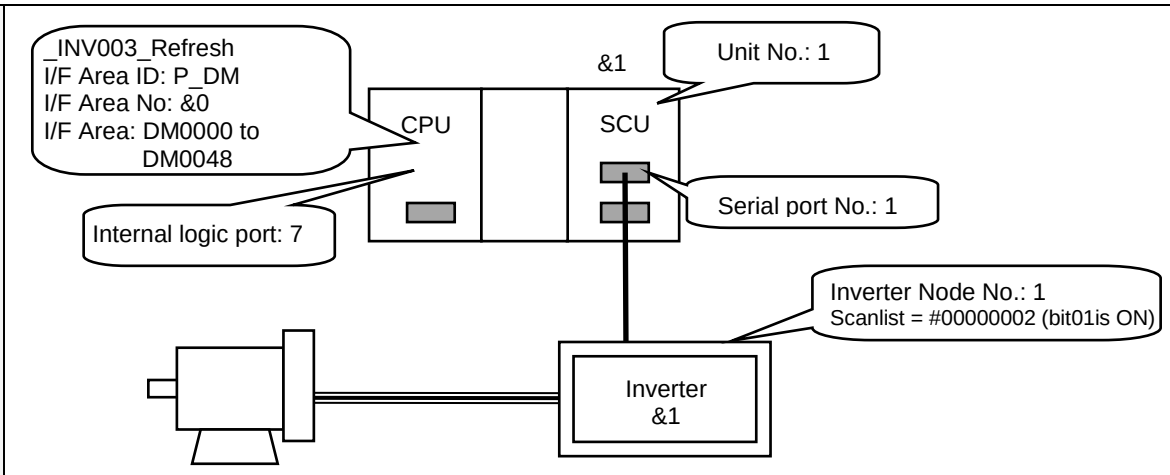
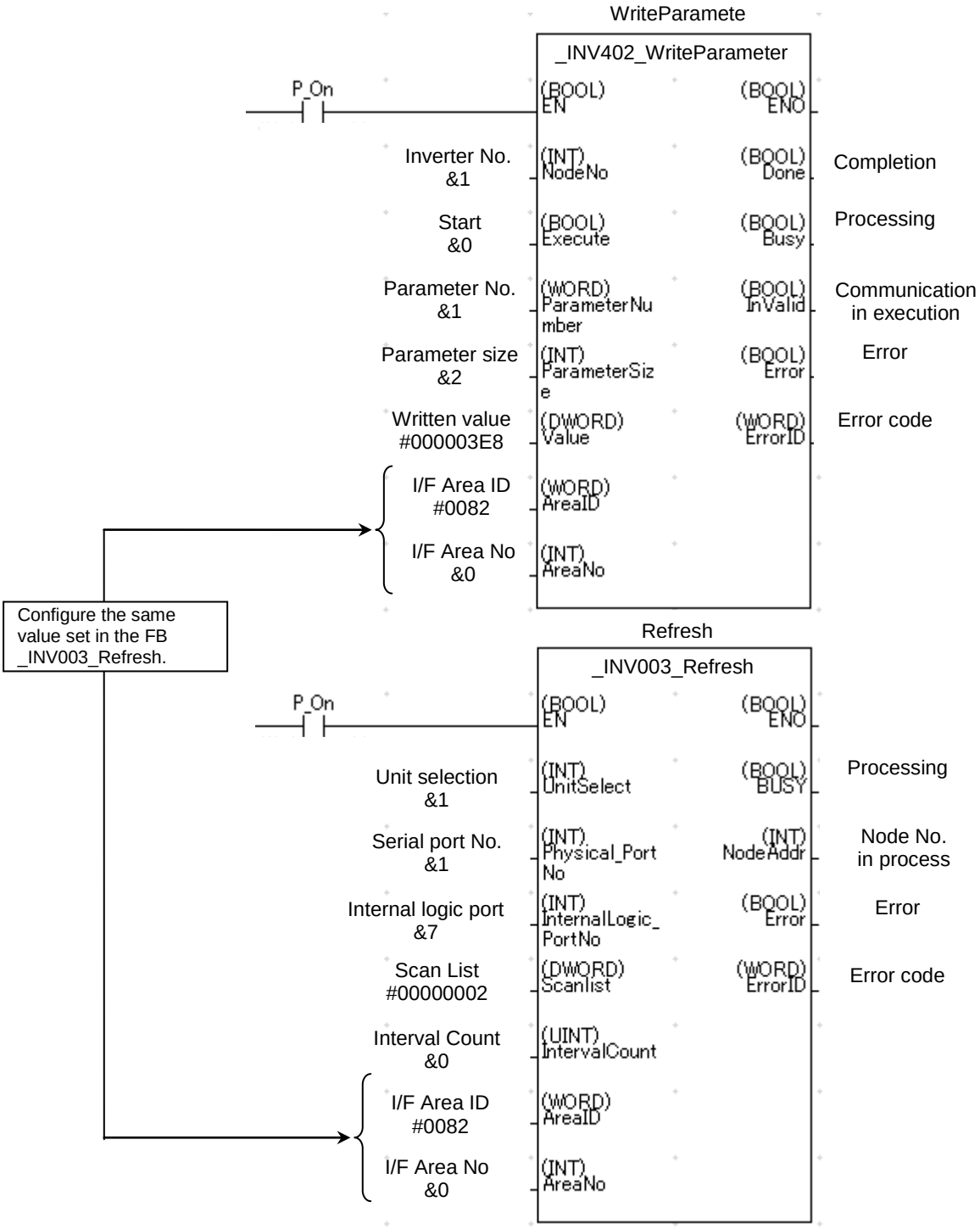
| INV 402 | Parameter Write: _INV402_WriteParameter |
|---|---|

| | | |
|---|---|---|
| **Basic function** | Writes the setting value of the specified parameter. | |
| **Symbol** |  | |
| **File name** | Lib\FBL\omronlib\ Inverter\INVRT(MX2_RX)\Serial_INV402_WriteParameter.cxf | |
| **Applicable models** | Inverters | 3G3MX2-*****-V1<br>3G3RX-*****-V1 |
| | CPU Unit | CJ2H-CPU** Unit version 1.4 or later<br>CJ2M-CPU** Unit version 2.0 or later<br>CP1H Unit version 1.2 or later<br>CP1L (except 10 points CPU) Unit version 1.0 or later |
| | Serial Communications Unit | CJ1W-SCU41-V1 Unit version 1.3 or later<br>CJ1W-SCU42 Unit version 2.0 or later<br>CJ1W-SCU31-V1 Unit version 1.3 or later<br>CJ1W-SCU32 Unit version 2.0 or later |
| | RS-422A/485 Option Board | CP1W-CIF11<br>CP1W-CIF12 |
| | CX-Programmer | Version 9.0 or higher |
| | Combination FB | _INV003_Refresh Version 1.0 or higher |
| **Language** | Ladder programming language | |
| **Conditions for usage** | ■ Precondition for Usage<br>This FB communicates with the inverter via a serial port which is controlled by the FB _INV003_Refresh. Start up the FB _INV003_Refresh to use this FB.<br>Configure the same value set in the FB _INV003_Refresh for I/F Area ID (AreaID) and I/F Area No (AreaNo) in this FB.<br>■ Shared Resources<br>I/F Area used for the FB _INV003_Refresh<br>■ Settings<br>For the settings of communications port and inverter, refer to the FB _INV003_Refresh. | |
| **Function description** | Writes the parameter of the inverter specified in Inverter No. (NodeNo).<br><br>Specify a parameter to write with Parameter No. (ParameterNumber), Parameter size (ParameterSize) and Written value (Value). When Start (Execute) is turned ON, the parameter value is written.<br><br>■ Output Variables Behavior<br>Processing (Busy) is turned ON when the input variable, Start (Execute) is turned ON, and turned OFF when Completion (Done) or Error (Error) is turned ON.<br>Error (Error) is turned ON when an error has occurred on this FB, and not turned ON due to errors in other FB or Instances.<br>Completion (Done) and Error (Error) are turned OFF when the input variable, Start (Execute) is turned OFF.<br>  | |

| | |
|---|---|
| | ■ Output Variables Security Behavior for One Cycle<br>When the output variable, Completion (Done) or Error (Error) is turned ON, if the input variable, Start (Execute) is OFF, these output variables are turned ON only for one cycle.<br>  |
| **FB definition** | Several cycles execution type<br>This FB takes several cycles to finish processing after starting up.<br>It is impossible to use the same Instance in several areas at the same time because the status is held internally. |
| **FB precautions** | This FB takes several cycles to finish processing. It is possible to confirm whether the processing has been executed or not with the output variable, Processing (Busy).<br>■ Timing Chart<br>  |
| **EN input condition** | ・ Connect the EN input to the Always ON flag (P_ON).<br>If the EN is connected to a contact, this FB output is held by turning OFF the contact. |
| **Restrictions Others** | ・ Do not change relays in I/F Area during this FB operation because this FB uses them.<br>・ Use this FB in combination with FB _INV003_Refresh. For how to use, refer to usage examples. |

**Application example**



| | |
|---|---|
| **Reference** | It is possible to allocate and use some FB _INV402_WriteParameter」in order to issue a command for some axes. |
| **Related manuals** | For the programming with variables, refer to CHAPTER 4 Reference in PART 1: CX-Programmer, CX-Programmer Operation Manual (Cat. No. W446). |

**■ Variable Table**

**Input Variables**

| Name | Variable name | Data type | Default | Range | Description |
|---|---|---|---|---|---|
| EN | EN | BOOL | 0 (OFF) | ON/OFF | 1 (ON): Starts FB<br>0 (OFF): Does not start FB |
| Inverter No. | NodeNo | INT | &1 | &1 to &31 | Specifies the node No. of the inverter. |
| Start | Execute | BOOL | 0 (OFF) | ON/OFF | Starts up the FB when this variable is turned ON. |
| Parameter No. | ParameterNumber | WORD | #0000 | Refer to the right column | Specifies a holding register inside the inverter to write data.<br>For details, refer to the inverter manuals "Multi-function Compact Inverter MX2 Series Type V1 User's Manual (I585) and High-function General-purpose Inverter 3G3RX Series Type V1 User's Manual (I578)". |
| Parameter size | ParameterSize | INT | &1 | &1, &2 | Specifies the word size to write.<br>For details, refer to the inverter manuals "Multi-function Compact Inverter MX2 Series Type V1 User's Manual (I585) and High-function General-purpose Inverter 3G3RX Series Type V1 User's Manual (I578)". |
| Written value | Value | DWORD | #0 | Refer to the right column | Specifies the value to write. |
| I/F Area ID | AreaID | WORD | #0082 | Refer to the right column | The work area is shared by configuring the same Area specified for the FB _INV003_Refresh that controls the applicable serial port. |
| I/F Area No | AreaNo | INT | &0 | Refer to the right column | |

**Output Variables**

| Name | Variable name | Data type | Range | Description |
|---|---|---|---|---|
| ENO | ENO | BOOL | ON/OFF | 1 (ON): FB operating normally<br>0 (OFF): FB not operating normally |
| Completion | Done | BOOL | ON/OFF | When this variable is 1 (ON), FB processing has been completed. |
| Processing | Busy | BOOL | ON/OFF | When this variable is 1 (ON), the FB is in process. |
| Communication in execution | InValid | BOOL | ON/OFF | When this variable is 1 (ON), the FB accesses the message communications area in I/F Area and the command communication with the inverter is in execution. |
| Error | Error | BOOL | ON/OFF | When this variable is 1 (ON), an error has occurred in the FB. For details on the error, refer to Error code (ErrorID). |
| Error code | ErrorID | WORD | 0x0000 to 0xFFFF | Returns the code for the error which occurred in the FB. For details on the error, refer to "Error/Abort Condition List". |

**■ Error/Abort Condition List**

| Name | Error code | Probable error cause | Corrective measure |
|---|---|---|---|
| Normal completion | #0000 | - | - |
| Response error | #0001 to #7FFF | A response error of the communications command occurred. | Identify an error cause from the FINS Commands End Codes List in Communications Command Reference Manual (W342). |
| Modbus exception response | #8001 to #9FFF | An exception response was returned via Modbus communication. | Identify an error cause from the Exception Response in Multi-function Compact Inverter MX2 Series Type V1 User's Manual (I585) and High-function General-purpose Inverter 3G3RX Series Type V1 User's Manual (I578). The exception response and code are respectively output to upper double digits (xx) and lower double digits (yy) of an error code "#xxyy". |
| Out of the input variable | #A000 | The input variable in this FB is out of range. | Set an input variable value within the specified range. |
| Communications stop | #A010 | The specified node does not communicate. | Set the node in the scan list of FB _INV003_Refresh. |
| Communications error | #A011 | A communications error occurred in the specified node. | Remove the error cause and then execute the command again. |
| Inverter error | #A100 | An inverter error occurred. | Refer to Multi-function Compact Inverter MX2 Series Type V1 User's Manual (I585) and High-function |

| | | | |
|---|---|---|---|
| | | | General-purpose Inverter 3G3RX Series Type V1 User's Manual (I578) to identify an error cause. |
| External operation (Response area) | #A210 | “Response area” in I/F Area was operated from outside the FB. | Do not operate I/F Area outside the FB. Moreover, do not use I/F Area with OUT instructions. |

■ **Revision History**

| Version | Date | Contents |
|---|---|---|
| 1.00 | 2013.4.1 | Original production |

■ Note

This document explains the function of the function block.
It does not provide information of restrictions on the use of Units and Components or combination of them. For actual applications, make sure to read the operation manuals of the applicable products.