# Chapter 4. FUNCTION BLOCK

This chapter shows function block for the D/A conversion module on the GMWIN.

A kind of function block is as follows

| NO. | G6F-DA2V, G6F-DA2I | Function |
|---|---|---|
| 1 | DA2AWR | Writing D/A conversion (Array type) |
| 2 | DA2WR | Writing D/A conversion (Single type) |

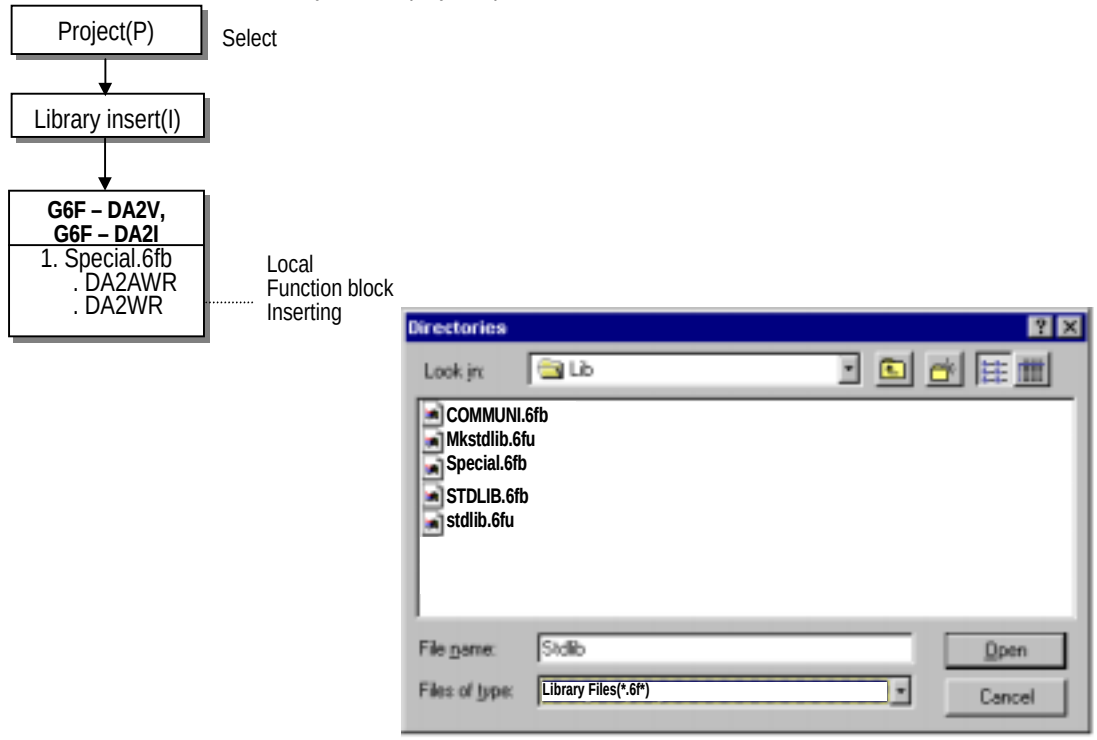
**REMARK**

Function block of the G6F-DA2V and G6F-DA2I are same

## 4.1 Insertion of the Function Block for D/A Conversion Module on the GMWIN

A function block can be inserted during the execution of the GMWIN according to the following procedure..

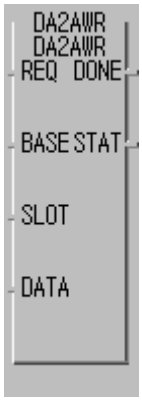
A function block can be inserted only when a project opens.



## 4.2 Function Blocks for Local

### 4.2.1 Module Write_ Array Type (G6F-DA2V / G6F-DA2I : DA2AWR)

Module write function block of the Array type is a program for the use in performing for every channel in block and setting a digital value to be converted into a D/A conversion.

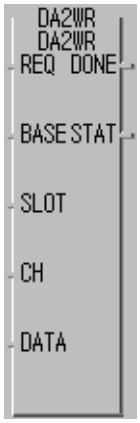
| Function Block | I/O | Variable | Data Type | Descriptions |
|---|---|---|---|---|
| G6F-DA2V<br>G6F-DA2I<br>  | input | REQ | BOOL | Function Block Execution Request Area<br>-The execution of function block initialization is requested in this area.<br>-If the status connected with this area is satisfied on the program execution and 0 is changed to 1, function block for the module is executed. |
| | | BASE | USINT | Base Location Number Area<br>-The base No. on which D/A conversion module is mounted is written on this area.<br>-Setting range : 0 to 1 |
| | | SLOT | USINT | Slot Location Number Area<br>-The slot No. on which D/A conversion module is mounted is written on this area.<br>-Setting range: 0 to 7 |
| | | DATA | INT[4]<br>*Note1 | Input Data Type Specification Area<br>-Input digital data type for each channel is specified in this area.<br>-Setting range:-48 ~ 4047 |
| | output | DONE | BOOL | Function Block Execution Complete Area<br>- When function block has been completed with no error, 1 is written and until next execution, 1 is continuing. When error occurs, 0 is written and operation come to stop. |
| | | STAT | USINT | Error Code Display Area<br>- When error occurs during function block processing, the error code number is written.<br>- For error code, refer to Manual 4.3. |

**REMARK**

* Note 1: USINT[4] of data type means that the number of element is 4, and also this means the whole number of channels and channel number.

### 4.2.2 Module Write_Single Type(G6F-DA2V / G6F-DA2I : DA4WR)

Module write function block of the Single type is a program for the use in performing for a channel of D/A conversion module and setting a digital value to be converted into a D/A conversion.

| Function block | I/O | Variable | Data type | Descriptions |
|---|---|---|---|---|
| G6F-DA2V<br>G6F-DA2I<br>  | input | REQ | BOOL | Function Block Execution Request Area<br>-The execution of function block is requested in this area.<br>- If the status connected with this area is satisfied on the program execution and 0 is changed to 1, function block for the module is executed. |
| | | BASE | USINT | Base Location Number Area<br>- The base No. on which D/A conversion module is mounted is written on this area.<br>- Setting range : 0 to 1 |
| | | SLOT | USINT | Slot Location Number Area<br>- The slot No. on which D/A conversion module is mounted is written on this area.<br>- Setting range: 0 to 7 |
| | | CH | USINT | Available Channel Specification Area<br>- Available channels are specified in this area.<br>-Range:0～3 |
| | | DATA | INT | Input Data Type Specification Area<br>-Input digital data type for each channel is specified in this area.<br>-Setting range: -48 ~ 4047 |
| | output | DONE | BOOL | Function Block Execution Complete Area<br>- When function block has been completed with no error, 1 is written and until next execution, 1 is continuing. When error occurs, 0 is written and operation come to stop. |
| | | STAT | USINT | Error Code Display Area<br>- When error occurs during function block processing, the error code number is written.<br>- For error code, refer to Manual 4.3. |

## 4.3 Errors on Function Block

This shows the errors on the output variable “STAT” of variables and the resolutions in accordance with them.

| STAT No. | Descriptions | Function Block | | Resolutions |
|---|---|---|---|---|
| | | Array type | Single type | |
| 0 | Operating with no fault | O | O | - |
| 1 | The base location number is exceeding the proper setting range | O | O | Correct the number in accordance with the proper range (See Manual 4.2) |
| 2 | H/W error of the base | O | O | Contact the service station. |
| 3 | The slot location number is exceeding the proper setting range | O | O | Set the right number to the slot mounting the D/A conversion module |
| 4 | The D/A conversion module on the slot is empty | O | O | Mount the D/A conversion module to the specified slot |
| 5 | The module loaded isn't the D/A module | O | O | Mount the D/A conversion module to the specified slot |
| 6 | The channel number is exceeding the proper range | - | O | Specify the available channel correctly |
| 7 | H/W error of the D/A conversion module | O | O | Contact the service station. |
| 8 | The D/A conversion module's shared memory error | O | O | Contact the service station. |