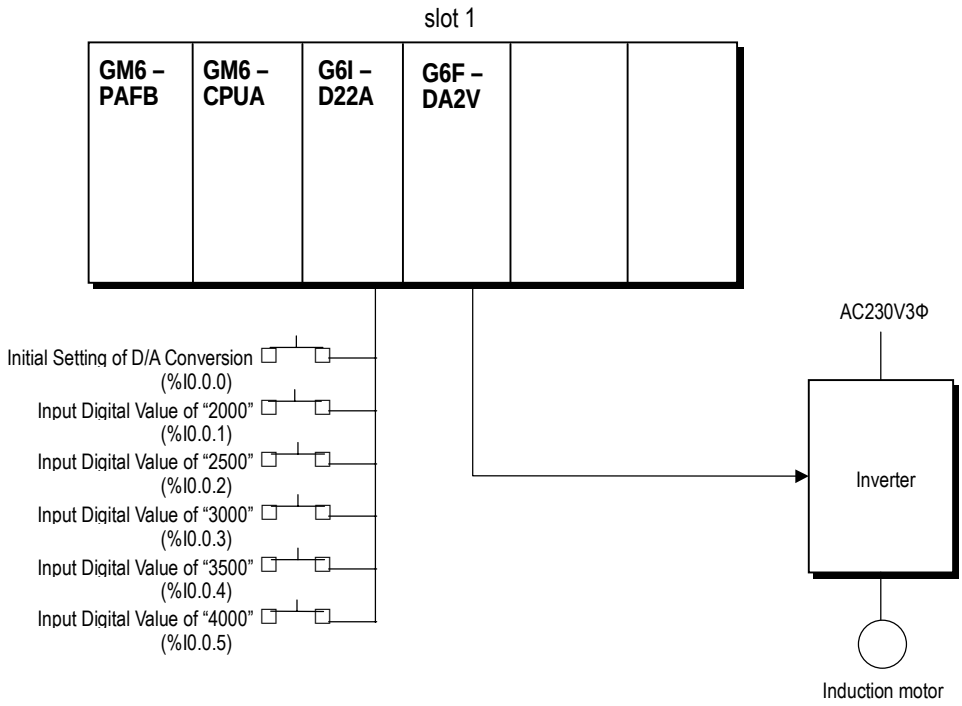
Chapter 5. PROGRAMMING

5.1 Programming for Controlling Inverter Speed with 5 Step Analog Output Voltage

1) System Configuration



2) Initial Settings

(1) Enabled channel : channel 0

3) Descriptions of the Program

(1) %I0.0.0 turning On leads to write digital value to D/A conversion module.

(2) %I0.0.1 turning On leads to output of "2000"(0 V) on channel 0.

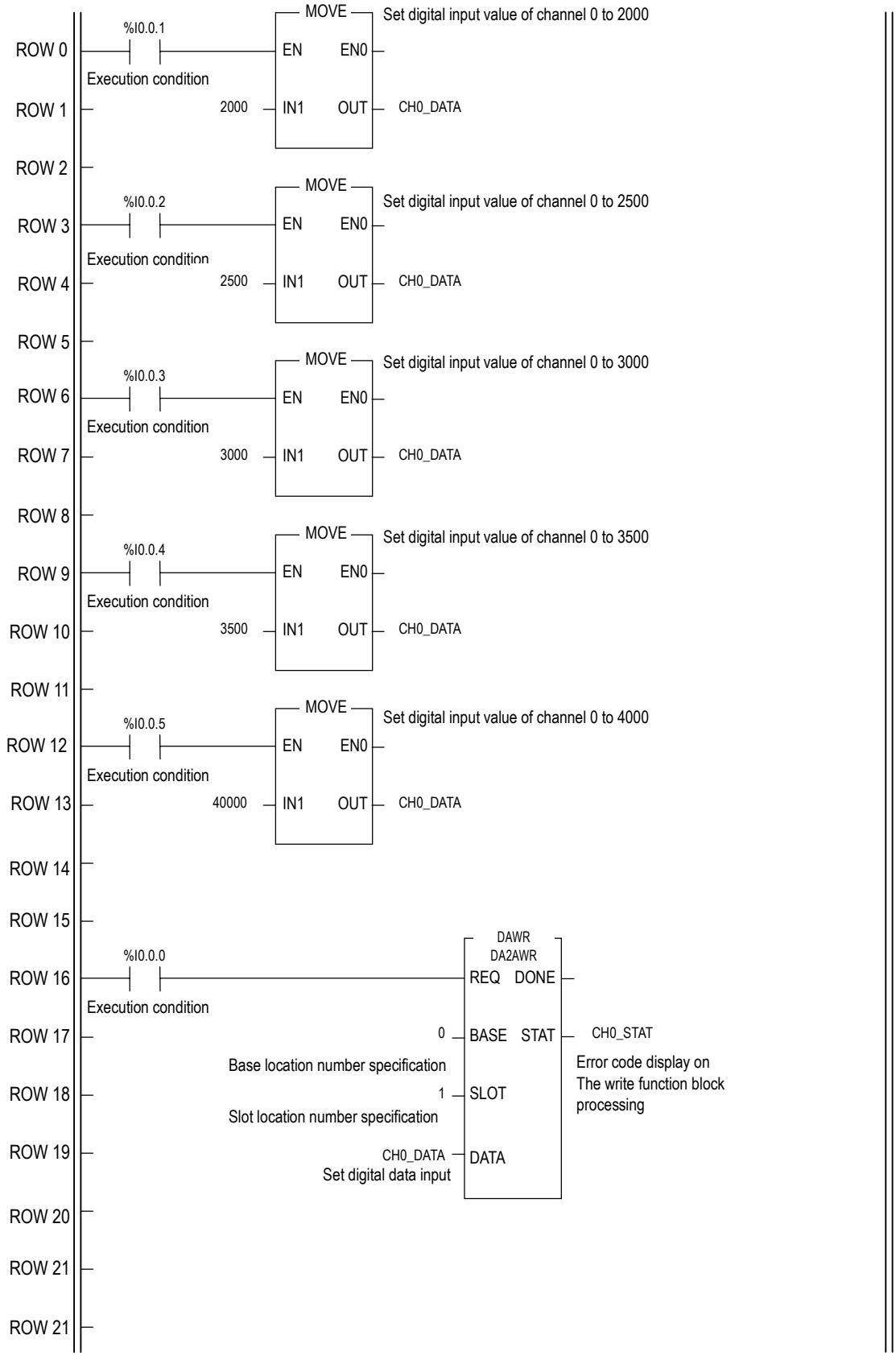
(3) %I0.0.2 turning On leads to output of "2500"(2.5 V) on channel 0

(4) %I0.0.3 turning On leads to output of "3000"(5 V) on channel 0.

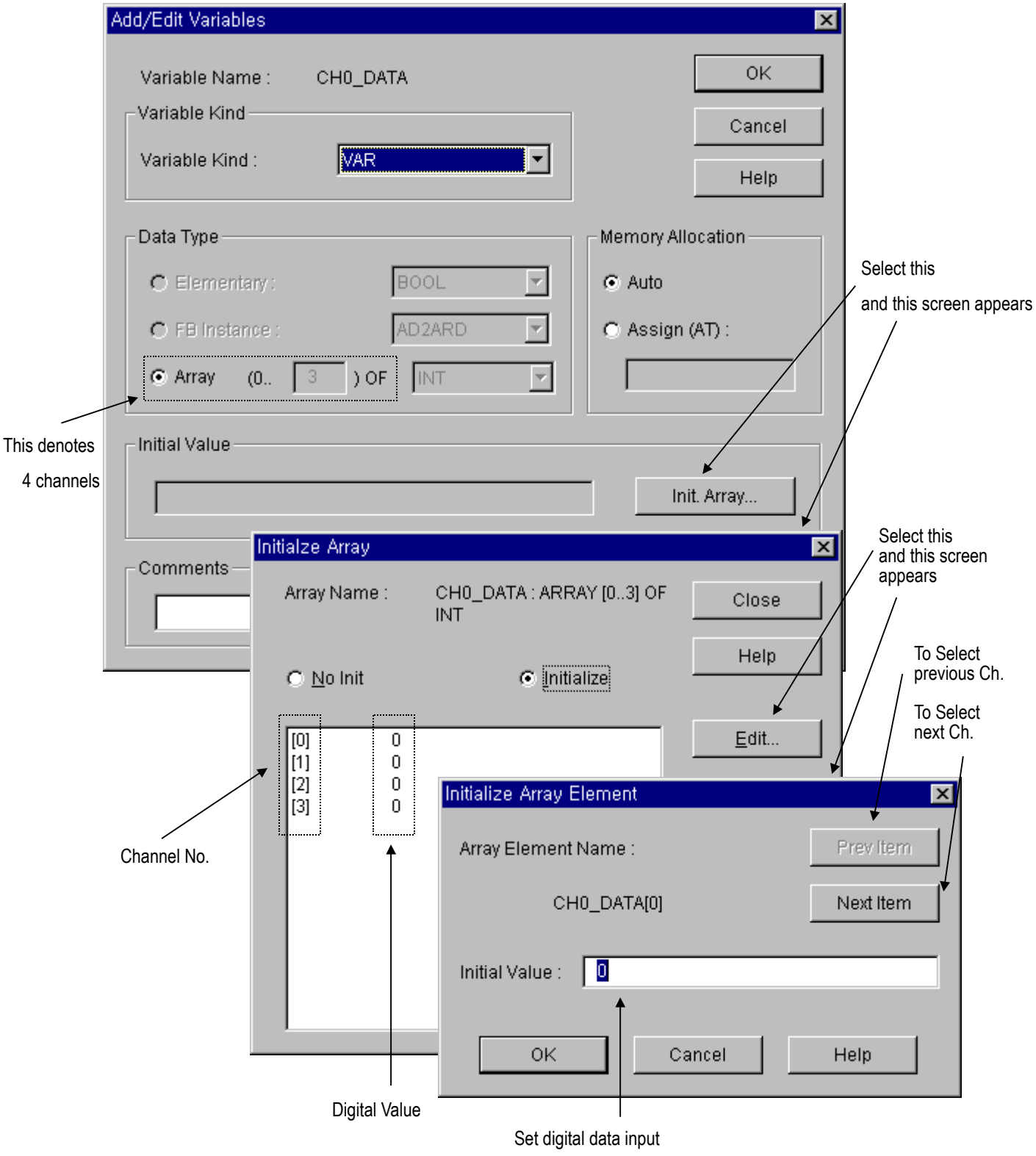
(5) %I0.0.4 turning On leads to output of "3500"(7.5 V) on channel 0.

(6) %I0.0.5 turning On leads to output of "4000"(10 V) on channel 0.

4) Program


ROW 0
%I0.0.1
MOVE
EN
EN0
Set digital input value of channel 0 to 2000
Execution condition
ROW 1
2000
IN1
OUT
CH0_DATA
ROW 2
ROW 3
%I0.0.2
MOVE
EN
EN0
Set digital input value of channel 0 to 2500
Execution condition
ROW 4
2500
IN1
OUT
CH0_DATA
ROW 5
ROW 6
%I0.0.3
MOVE
EN
EN0
Set digital input value of channel 0 to 3000
Execution condition
ROW 7
3000
IN1
OUT
CH0_DATA
ROW 8
ROW 9
%I0.0.4
MOVE
EN
EN0
Set digital input value of channel 0 to 3500
Execution condition
ROW 10
3500
IN1
OUT
CH0_DATA
ROW 11
ROW 12
%I0.0.5
MOVE
EN
EN0
Set digital input value of channel 0 to 4000
Execution condition
ROW 13
40000
IN1
OUT
CH0_DATA
ROW 14
ROW 15
ROW 16
%I0.0.0
DAWR
DA2AWR
REQ
DONE
Execution condition
ROW 17
0
BASE
STAT
CH0_STAT
Base location number specification
Error code display on
The write function block
processing
ROW 18
1
SLOT
Slot location number specification
ROW 19
CH0_DATA
DATA
Set digital data input
ROW 20
ROW 21
ROW 21

5) Digital value setting of I/O Variables

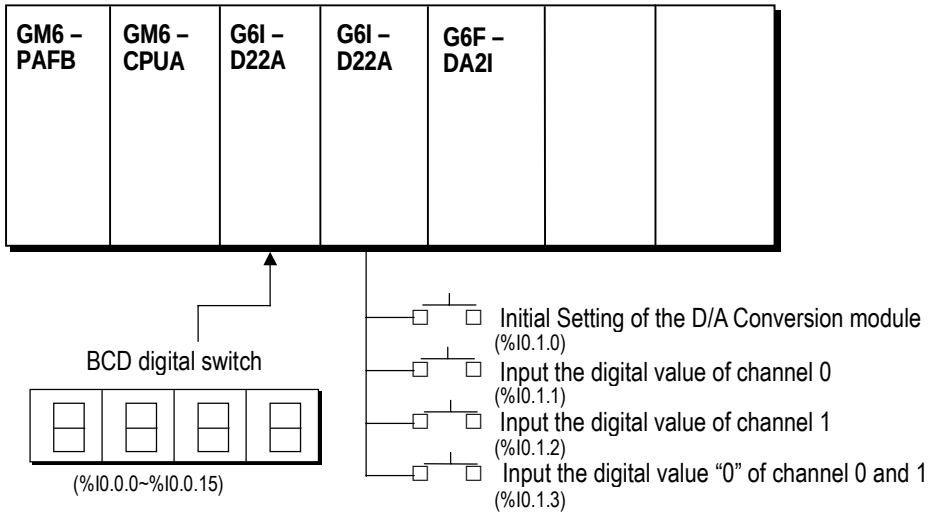


6) I/O Variables on Program

Variable name	Var_Kind	Data Type	(AT Address) (Initial Value)
CH0_DATA	: VAR	: ARRAY[0..3] OF INT	: = {0,0,0,0}
CH0_STAT	: VAR	: USINT	
DAWR	: VAR	: FB Instance	

5.2 Programming for Displaying D/A Conversions which is Set by Digital Switch

1) System Configuration



2) Initial Settings

(1) Enabled channel : channel 0, 1

3) Descriptions of the Program

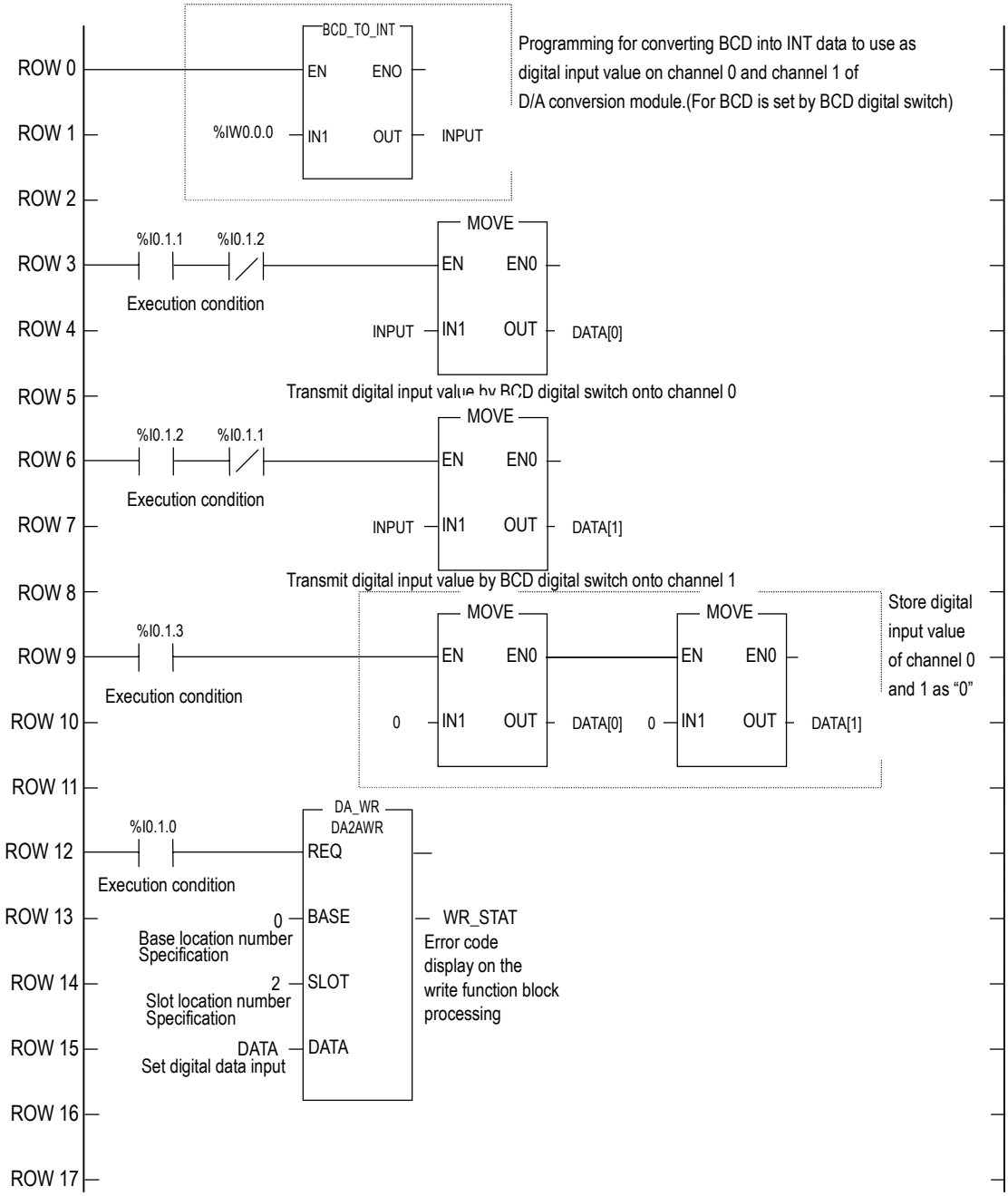
(1) %I0.1.0 turning On leads to write the digital value to D/A conversion module.

(2) %I0.1.1 turning On leads to output of the values by digital switch on channel 0 of D/A module.

(3) %I0.1.2 turning On leads to output on channel 1.

(4) %I0.1.3 turning On leads to initialization of digital input value to "0" on channel 0 and channel 1.

4) Program


ROW 0
ROW 1
ROW 2
ROW 3
ROW 4
ROW 5
ROW 6
ROW 7
ROW 8
ROW 9
ROW 10
ROW 11
ROW 12
ROW 13
ROW 14
ROW 15
ROW 16
ROW 17
BCD_TO_INT
EN
ENO
%IW0.0.0
IN1
OUT
INPUT
Programming for converting BCD into INT data to use as digital input value on channel 0 and channel 1 of D/A conversion module.(For BCD is set by BCD digital switch)
%I0.1.1
%I0.1.2
Execution condition
MOVE
EN0
INPUT
DATA[0]
Transmit digital input value by BCD digital switch onto channel 0
%I0.1.2
%I0.1.1
DATA[1]
Transmit digital input value by BCD digital switch onto channel 1
%I0.1.3
0
Store digital input value of channel 0 and 1 as “0”
%I0.1.0
DA_WR
DA2AWR
REQ
BASE
WR_STAT
Error code display on the write function block processing
Base location number Specification
SLOT
2
Slot location number Specification
DATA
Set digital data input

5) I/O Variables on Program

Variable name	Var_Kind	Data Type	(AT Address) (Initial Value)
INPUT	: VAR	: DINT	
OUTPUT	: VAR	: INT	
DA_WR	: VAR	: FB Instance	
WR_STAT	: VAR	: USINT	
DATA	: VAR	: ARRAY[0..3] OF INT	: = {0,0,0,0}