

## Chapter 5. PROGRAMMING

### 5.1 Programming for Distinction of A/D Conversion Value

#### 1) System Configuration

GM6-PAFB	GM6-CPUA	G6F-AD2A	G6Q-RY2A
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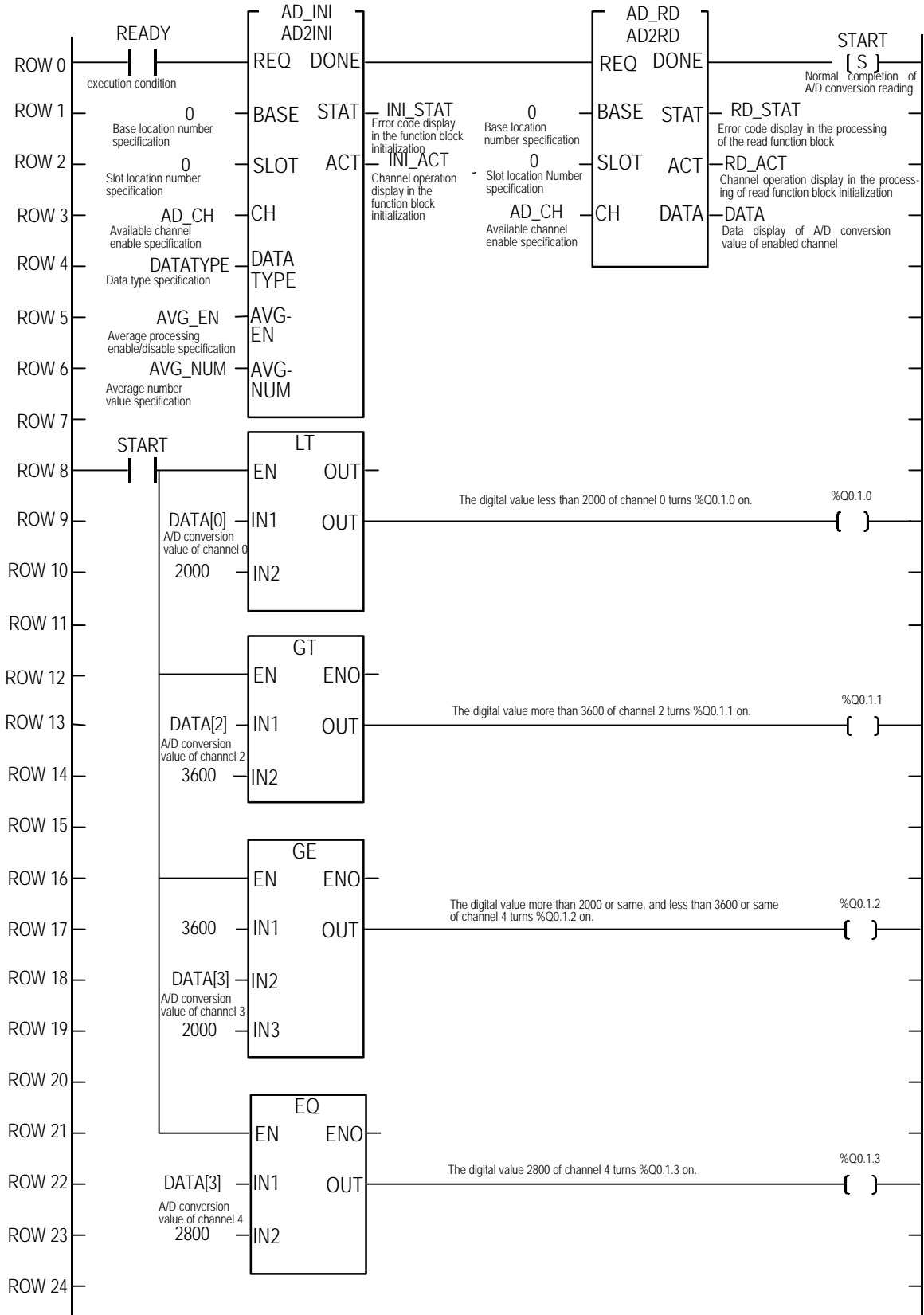
#### 2) Initial Settings

- (1) Available channel enable : channel 0, 2, 3
- (2) Analog input : current input(DC4 ~ 20 mA)
- (3) Average processing setting : channel 2(100 times), channel 3(50 times)

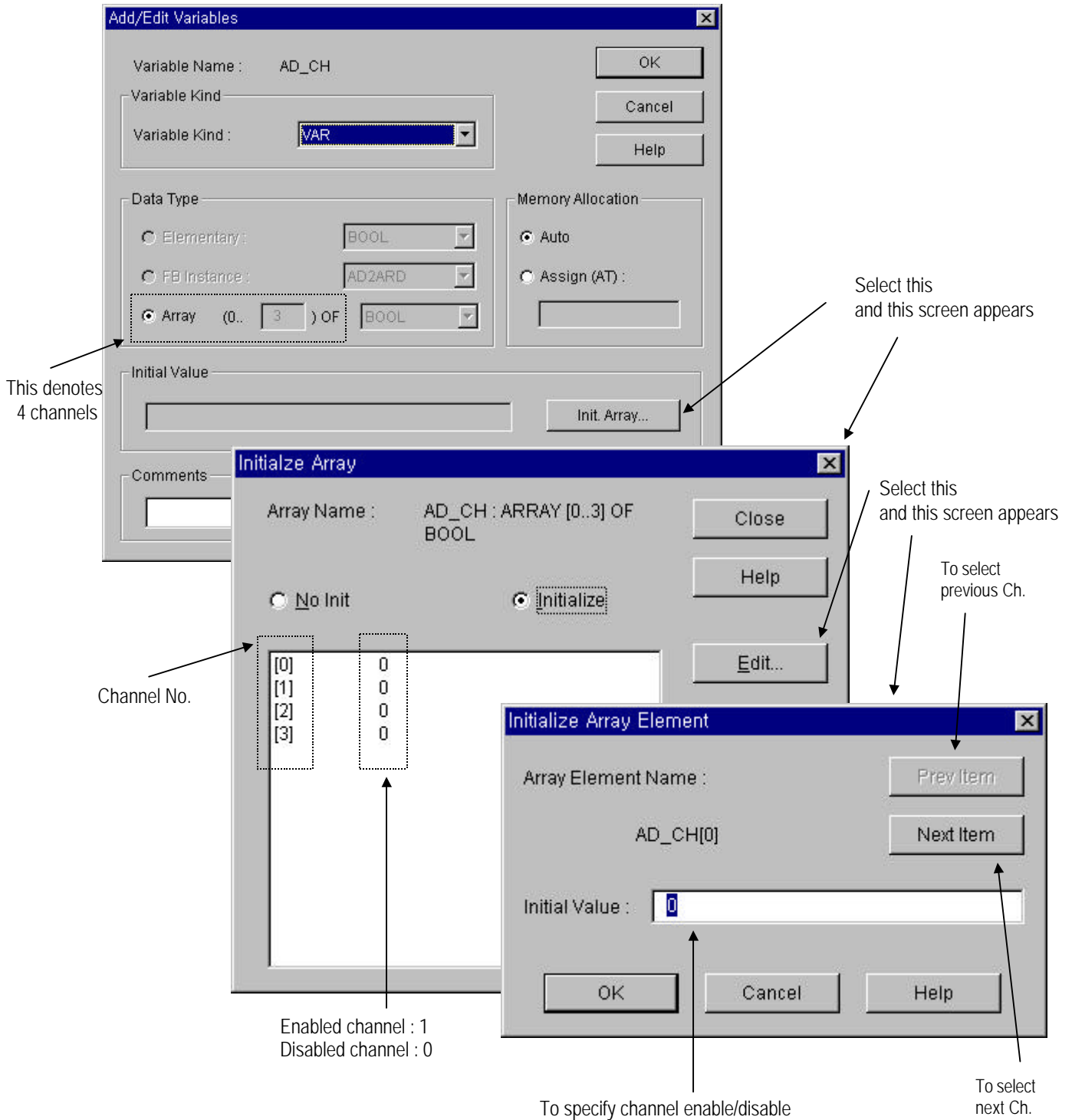
#### 3) Descriptions of the Program

- (1) The digital value less than 2,000 of channel 0 turns %Q0.1.0 on.
- (2) The digital value more than 3,600 of channel 2 turns %Q0.1.1 on.
- (3) The digital value more than 2,000 or same, and less than 3,600 or same of channel 3 turns %Q0.1.2 on.
- (4) The digital value of the same as 2,800 of channel 3 turns %Q0.1.3 on.

4) Programming Example



5) Specifying initial value of input/output variables on the program.(Specifying channels)

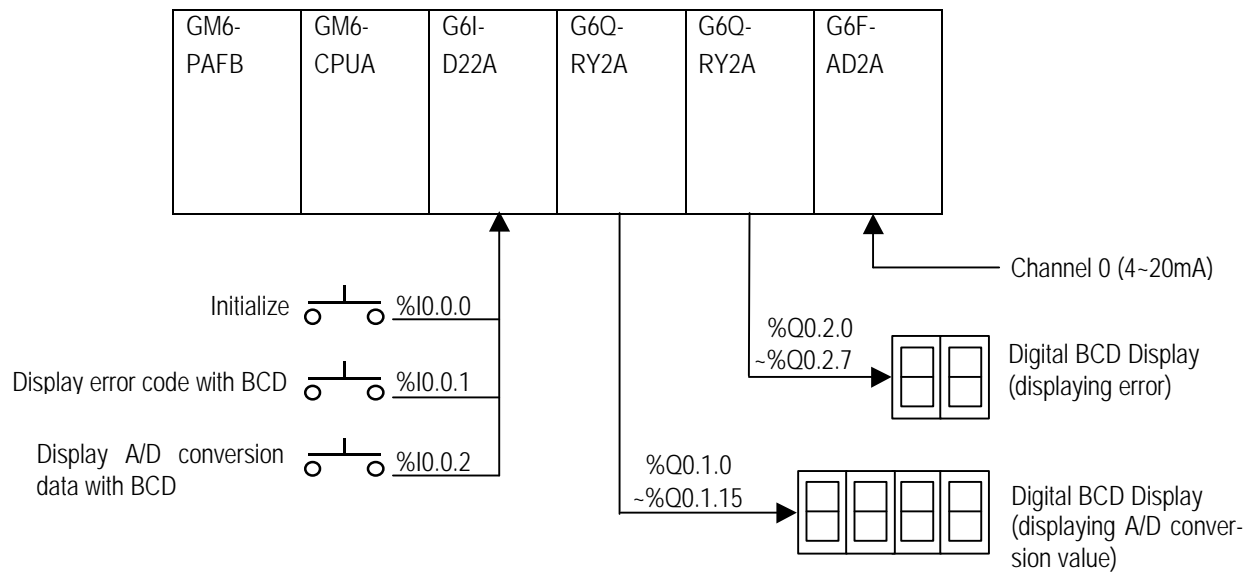


6) Input/output variables on Programming

Variable Name	Var_Kind	Data Type	(AT Address) (Initial Value)
AD_CH	: VAR	: ARRAY [0..3] OF BOOL	: = { 1,0,1,1 }
AD_INI	: VAR	: FB instance	
AD_RD	: VAR	: FB instance	
AVG_EN	: VAR	: ARRAY [0..3] OF BOOL	: = { 0,1,0,1 }
AVG_NUM	: VAR	: ARRAY [0..3] OF USINT	: = { 0,0,100,50 }
DATA	: VAR	: ARRAY [0..3] OF INT	
DATATYPE	: VAR	: ARRAY [0..3] OF BOOL	: = { 0,0,0,0,0,0,0,0,0,0,0,0,0 }
INI_ACT	: VAR	: ARRAY [0..3] OF BOOL	
INI_STAT	: VAR	: USINT	
RD_ACT	: VAR	: ARRAY [0..3] OF BOOL	
RD_STAT	: VAR	: USINT	
READY	: VAR	: BOOL	
START	: VAR	: BOOL	

## 5.2 Programming for Display of A/D Conversion Value and Error Code on BCD Display

### 1) System Configuration



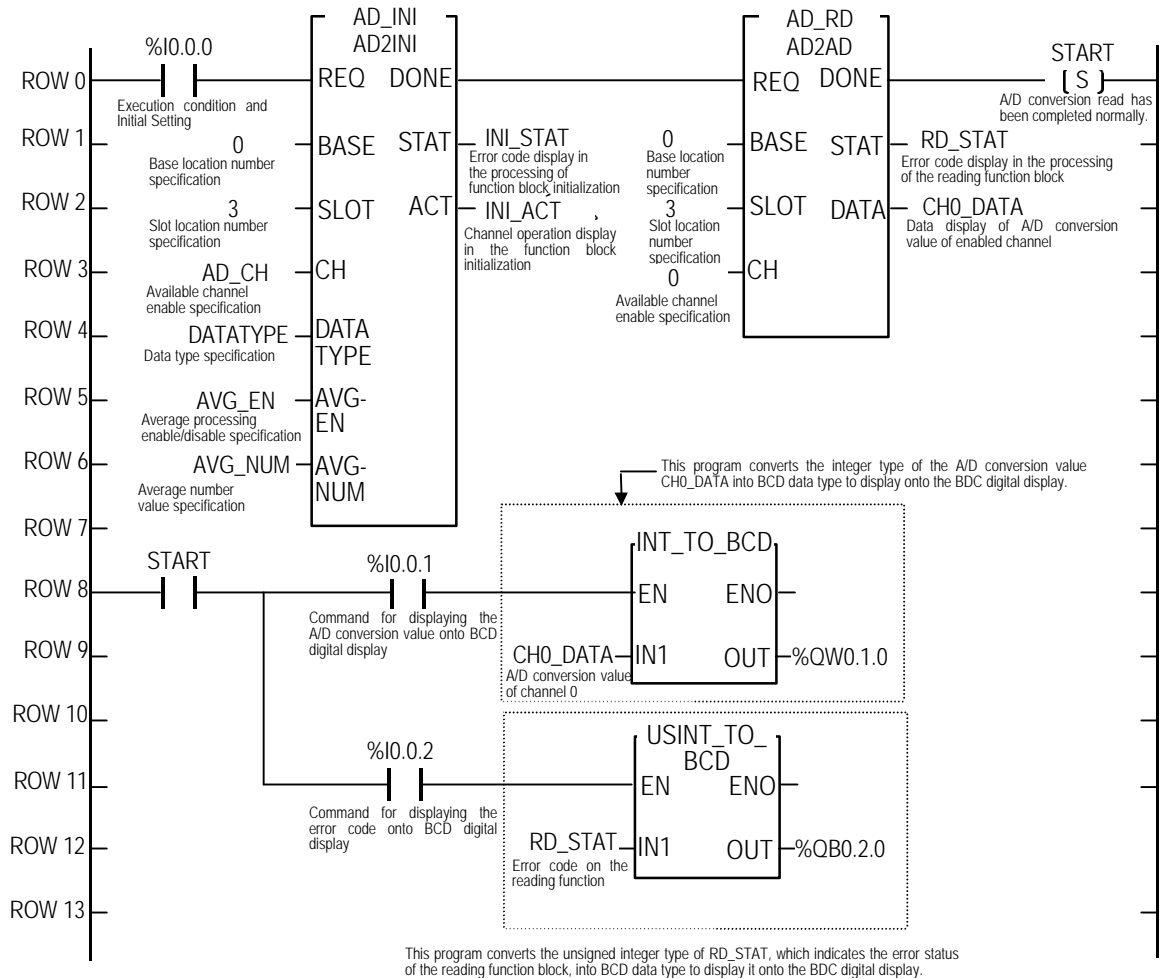
### 2) Initial Settings

- (1) Available channel enabled : channel 0,
- (2) Analog input : current input(DC 4 to 20 mA)
- (3) Average processing setting : 10 times

### 3) Descriptions of the Program

- (1) %I0.0.0 turning On leads to the initial setting of A/D conversion module.
- (2) %I0.0.1 turning On leads to displaying A/D conversion value on the BCD display.(%Q0.1.0 to %Q0.1.15)
- (3) %I0.0.2 turning On leads to displaying error code of function block on the BCD display, (%Q0.2.0 to %Q0.2.7)

4) Programming



5) Input/output variables on the programming

Variable Name	Var_Kind	Data Type	(AT Address) (Initial Value)
AD_CH	: VAR	: ARRAY [0..3] OF BOOL	:= {1,0,0,0}
AD_INI	: VAR	: FB Instance	
AD_RD	: VAR	: FB Instance	
AVG_EN	: VAR	: ARRAY [0..3] OF BOOL	:= {1,0,0,0}
CH0_DATA	: VAR	: INT	
DATA	: VAR	: DINT	
DATATYPE	: VAR	: ARRAY [0..3] OF BOOL	:= {0,0,0,0}
INI_ACT	: VAR	: ARRAY [0..3] OF BOOL	
INI_STAT	: VAR	: USINT	
NUM_TIME	: VAR	: ARRAY [0..3] OF UINT	:= {100,0,0,0}
RD_STAT	: VAR	: USINT	
START	: VAR	: BOOL	