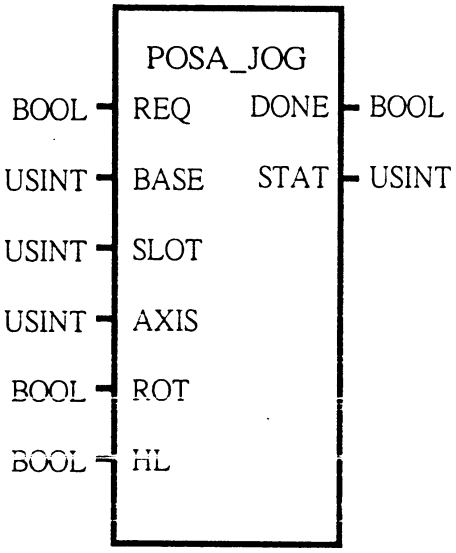
POSP_JOG

G3F-POPA, G4F-POPA(AXIS=0) JOG Operation

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●	●	

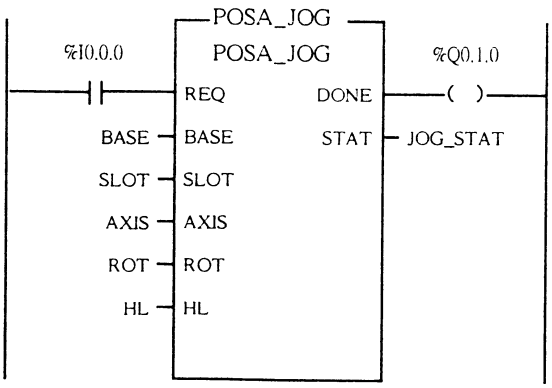
Function block	Description
	**Input** REQ : Function block execution request BASE : G3F-POPA or G4F-POPA module installation base location number SLOT : Slot location number of G3F-POPA or G4F-POPA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation(G3F-POPA only) ROT : Set the rotation direction of JOG operation ('0: FWD, '1': BWD) HL : Set the high-speed/low-speed of JOG operation. ('0': Low-speed, '1': High-speed) **Output** DONE : On if the function block is executed without error and hold on till next execution. STAT : Display the error code generated during the function block execution.

■ Function

Instruction for G3F-POPA or G4F-POPA module to execute JOG operation which is used for manual operation and test run. JOG operation is executed when REQ input is on and stopped when REQ input is off.

■ Program example

LD



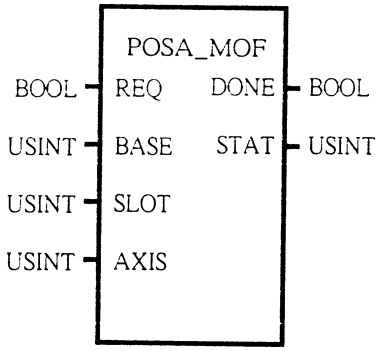
IL

```
CAL   POSP_JOG    POSP_JOG
      REQ :=      %I0.0.0
      BASE :=     BASE
      SLOT :=     SLOT
      AXIS :=     AXIS
      ROT :=      ROT
      HL :=       HL
LD                POSP_JOG.DONE
ST                %Q 0.1.0
LD                POSP_JOG.STAT
ST                JOG_STAT
```

POSP_MOF

G3F-POPA, G4F-POPA(AXIS=0) M Code Off

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●	●	

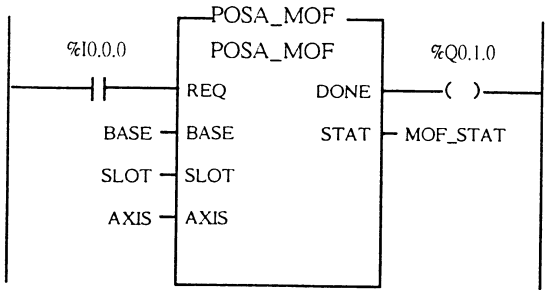
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POPA or G4F-POPA module installation base location number SLOT : Slot location number of G3F-POPA or G4F-POPA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation(G3F-POPA only) **Output** DONE : On if the function block is executed without error and hold on till next execution. STAT : Display the error code generated during the function block execution.

■ Function

Instruction to switch off M Code On signal which is set during positioning operation as the M code mode (with, after) in parameter.

■ Program example

LD



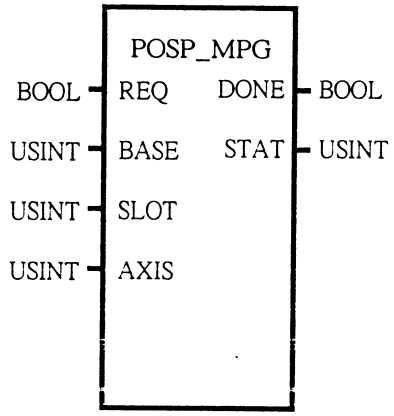
IL

```
CAL   POSP_MOF      POSP_MOF
      REQ :=        %I0.0.0
      BASE :=       BASE
      SLOT :=       SLOT
      AXIS :=       AXIS
LD                  POSP_MOF.DONE
ST                  %Q 0.1.0
LD                  POSP_MOF.STAT
ST                  JOG_STAT
```

POSP_MPG

G3F-POPA MPG operation enable

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

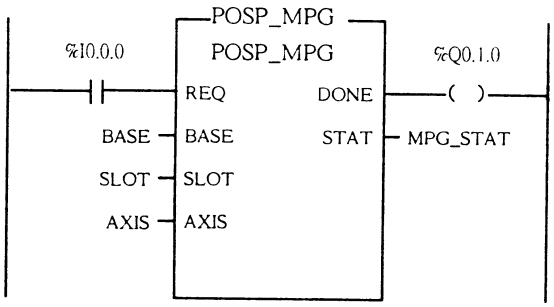
Function block	Description
	**Input** REQ : Function block execution request BASE : G3F-POPA module installation base location number SLOT : Slot location number of G3F-POPA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation(G3F-POPA only) **Output** DONE : On if the function block is executed without error and hold on till REQ condition is off. STAT : Display the error code generated during the function block execution.

■ Function

Instruction to enable operation of external manual pulse generator.

■ Program example

LD



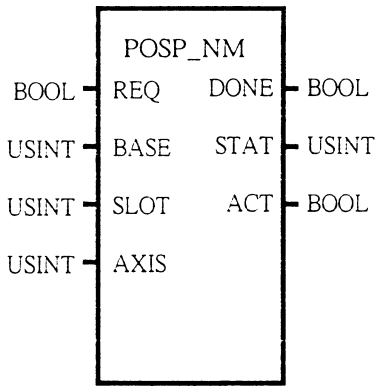
IL

```
CAL   POSP_MPG    POSP_MPG
      REQ :=      %I0.0.0
      BASE :=     BASE
      SLOT :=     SLOT
      AXIS :=     AXIS
LD                POSP_MPG.DONE
ST                %Q 0.1.0
LD                POSP_MPG.STAT
ST                JOG_STAT
```

POSP_NM

G3F-POPA, G4F-POPA(AXIS=0) Next Move

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●	●	

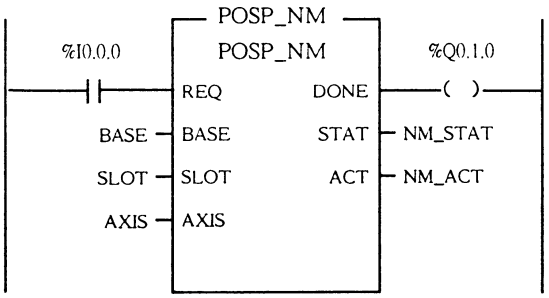
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POPA or G4F-POPA module installation base location number SLOT : Slot location number of G3F-POPA or G4F-POPA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation(G3F-POPA only) **Output** DONE : On if the function block is executed without error and off till ACT is on. STAT : Display the error code generated during the function block execution. ACT : On if the order processing complete signal is received from G3F-POPA or G4F-POPA module and off if the instruction is used according to REQ condition.

■ Function

Instruction to operate continuously without stop from current operation speed to next operation speed. Available only when current operation is constant speed operation.

■ Program example

LD



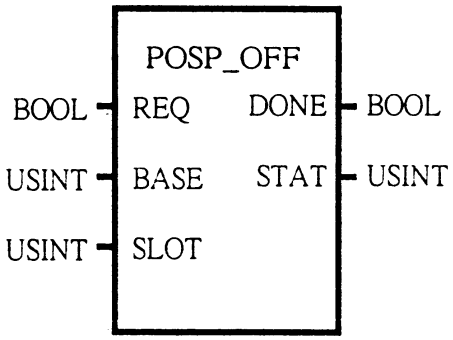
IL

```
CAL   POSP_NM     POSP_NM
      REQ : =     %I0.0.0
      BASE : =    BASE
      SLOT : =    SLOT
      AXIS : =    AXIS
LD                POSP_NM.DONE
ST                %Q 0.1.0
LD                POSP_NM.STAT
ST                NM_STAT
LD                POSP_NM.ACT
ST                NM_ACT
```

POSP_OFF

G3F-POPA, G4F-POPA(AXIS=0) Output prohibit release

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●	●	

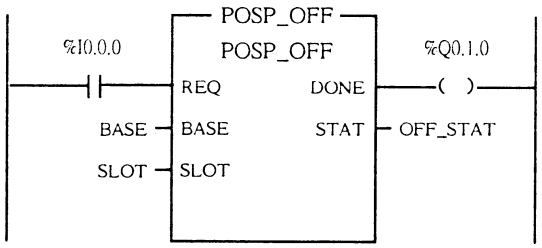
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POPA or G4F-POPA module installation base location number SLOT : Slot location number of G3F-POPA or G4F-POPA module installation base **Output** DONE : On if the function block is executed without error and off till ACT is on. STAT : Display the error code generated during the function block execution and the error of G3F-POPA or G4F-POPA module.

■ Function

Instruction to release the output prohibit after the output is prohibited by emergency stop or upper/lower limit error.

■ Program example

LD



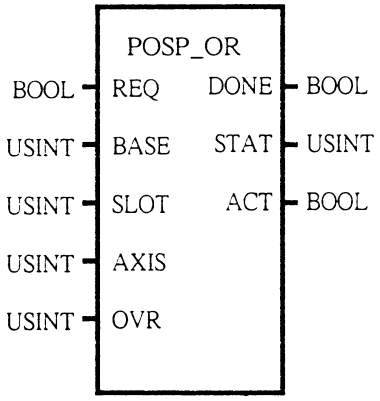
IL

```
CAL   POSP_OFF    POSP_OFF
      REQ :=      %I0.0.0
      BASE :=     BASE
      SLOT :=     SLOT
LD                POSP_OFF.DONE
ST                %Q 0.1.0
LD                POSP_OFF.STAT
ST                OFF_STAT
```

POSP_OR

G3F-POPA, G4F-POPA(AXIS=0) Override

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●	●	

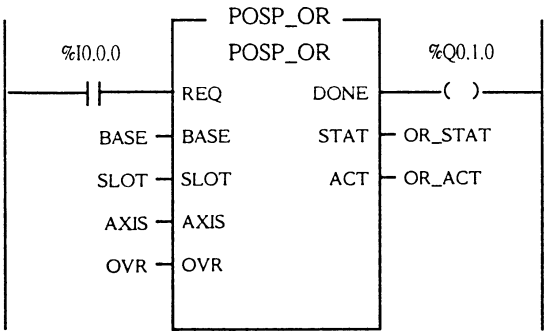
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POPA or G4F-POPA module installation base location number SLOT : Slot location number of G3F-POPA or G4F-POPA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation(G3F-POPA only) OVR : Change the speed from 10 to 150% based on original operation speed and set 1~15 value(Preset value x 10% speed change) **Output** DONE : On if the function block is executed without error and off if ACT is on. STAT : Display the error code generated during the function block execution. ACT : On if the location order processing complete is received from G3F-POPA or G4F-POPA and off if the instruction is used according to REQ condition.

■ Function

Instruction to change the speed during the operation that can change the speed from 10 to 150% by 10%.

■ Program example

LD



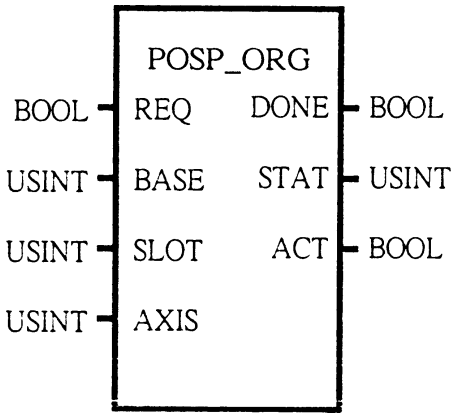
IL

```
CAL   POSP_OR      POSP_OR
      REQ :=       %I0.0.0
      BASE :=      BASE
      SLOT :=      SLOT
      AXIS :=      AXIS
      OVR :=       OVR
LD                 POSP_OR.DONE
ST                 %Q 0.1.0
LD                 POSP_OR.STAT
ST                 OR_STAT
LD                 POSP_OR.ACT
ST                 OR_ACT
```

POSP_ORG

G3F-POPA, G4F-POPA(AXIS=0) Zero point return

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●	●	

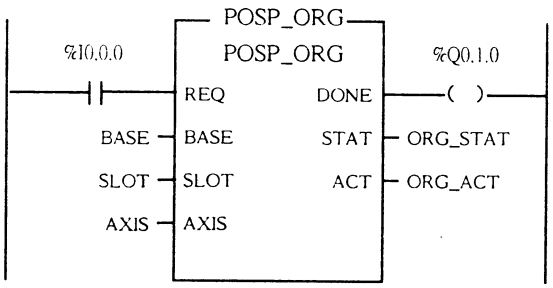
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POPA or G4F-POPA module installation base location number SLOT : Slot location number of G3F-POPA or G4F-POPA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation(G3F-POPA only) **Output** DONE : On if the function block is executed without error and off if ACT is on. STAT : Display the error code generated during the function block execution. ACT : On if the instruction completion signal is received from G3F-POPA or G4F-POPA and off if the instruction is used according to REQ condition.

■ Function

Instruction to find the machine zero point as the direction and speed set by parameter. The machine zero point return operation is completed when receives the zero point return completion signal.

■ Program example

LD



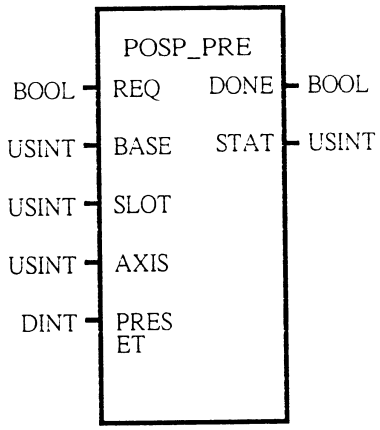
IL

```
CAL   POSP_ORG     POSP_ORG
      REQ :=       %I0.0.0
      BASE :=      BASE
      SLOT :=      SLOT
      AXIS :=      AXIS
LD                 POSP_ORG.DONE
ST                 %Q 0.1.0
LD                 POSP_ORG.STAT
ST                 ORG_STAT
LD                 POSP_ORG.ACT
ST                 ORG_ACT
```

POSP_PRE

G3F-POPA, G4F-POPA(AXIS=0) Preset

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●	●	

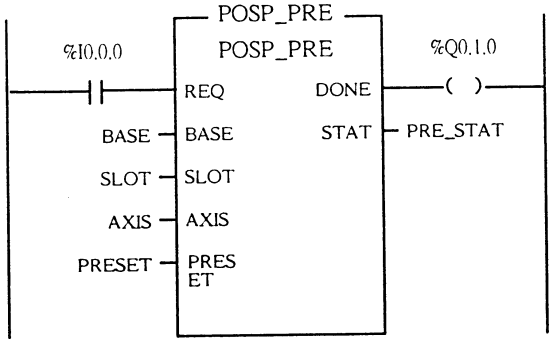
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POPA or G4F-POPA module installation base location number SLOT : Slot location number of G3F-POPA or G4F-POPA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation(G3F-POPA only) PRESET: Set the data including sign(-16,744,447 ~ +16,744,447) to change current position to certain value. **Output** DONE : On if the function block is executed without error and hold on till next function block is executed. STAT : Display the error code generated during the function block execution.

■ Function

Instruction to change current position to certain value within the range of -16,744,447 ~ +16,744,447.

■ Program example

LD



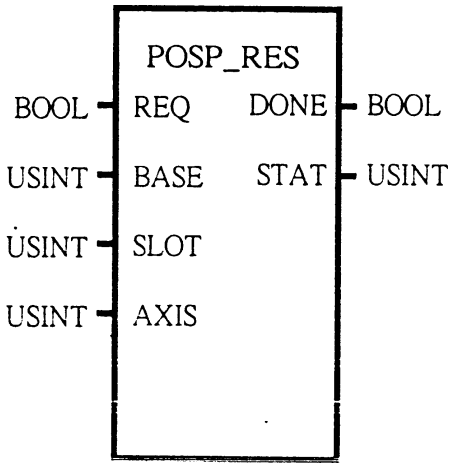
IL

```
CAL   POSP_PRE      POSP_PRE
      REQ :=        %I0.0.0
      BASE :=       BASE
      SLOT :=       SLOT
      AXIS :=       AXIS
      PRESET :=     PRESET
LD                  POSP_PRE.DONE
ST                  %Q 0.1.0
LD                  POSP_PRE.STAT
ST                  PRE_STAT
```

POSP_RES

G3F-POPA, G4F-POPA(AXIS=0) Error Reset

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●	●	

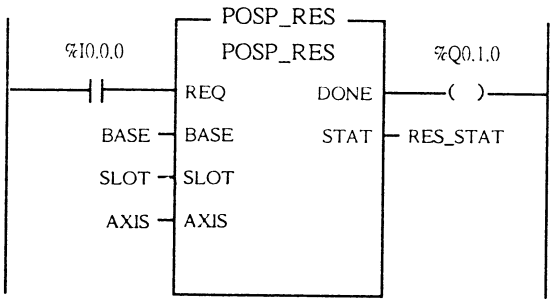
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POPA or G4F-POPA module installation base location number SLOT : Slot location number of G3F-POPA or G4F-POPA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation(G3F-POPA only) **Output** DONE : On if the function block is executed without error and off if ACT is on. STAT : Display the error code generated during the function block execution.

■ Function

Instruction to reset the error generated at G3F-POPA or G4F-POPA module. However, the output prohibit status can not be released. For this, use the POSP_OFF.

■ Program example

LD



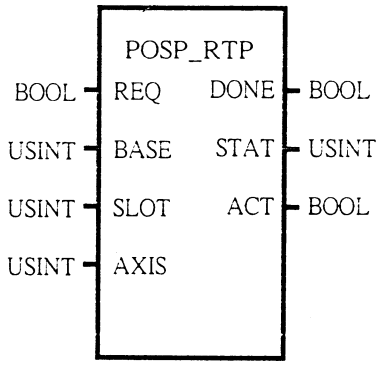
IL

```
CAL   POSP_RES     POSP_RES
      REQ :=       %I0.0.0
      BASE :=      BASE
      SLOT :=      SLOT
      AXIS :=      AXIS
LD                 POSP_RES.DONE
ST                 %Q 0.1.0
LD                 POSP_RES.STAT
ST                 RES_STAT
```

POSP_RTP

G3F-POPA, G4F-POPA(AXIS=0) Return to Position

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●	●	

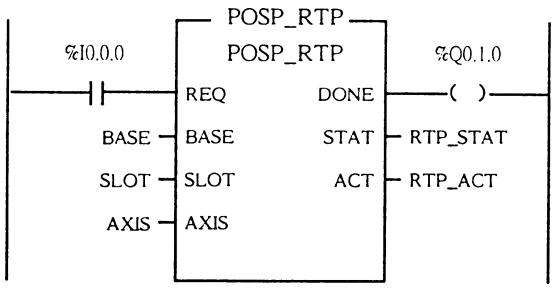
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POPA or G4F-POPA module installation base location number SLOT : Slot location number of G3F-POPA or G4F-POPA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation(G3F-POPA only) **Output** DONE : On if the function block is executed without error and off if ACT is on. STAT : Display the error code generated during the function block execution. ACT : On if receives the order processing complete signal from G3F-POPA or G4F-POPA and off if the instruction is used according to REQ condition.

■ Function

Instruction to return the position before manual operation start when the position is changed by manual operation.

■ Program example

LD



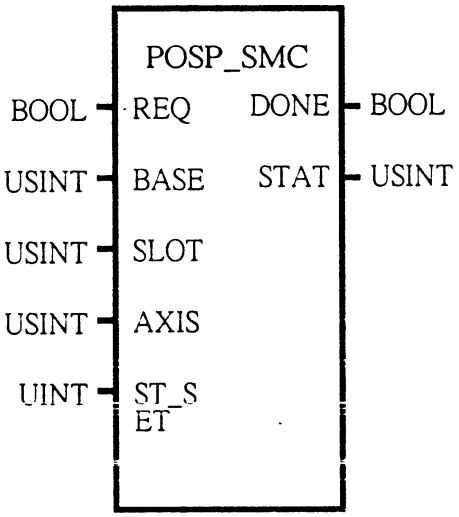
IL

```
CAL   POSP_RTP    POSP_RTP
      REQ :=      %I0.0.0
      BASE :=     BASE
      SLOT :=     SLOT
      AXIS :=     AXIS
LD                POSP_RTP.DONE
ST                %Q 0.1.0
LD                POSP_RTP.STAT
ST                RTP_STAT
LD                POSP_RTP.ACT
ST                RTP_ACT
```

POSP_SMC

G3F-POPA, G4F-POPA(AXIS=0) Next execution data number change

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●	●	

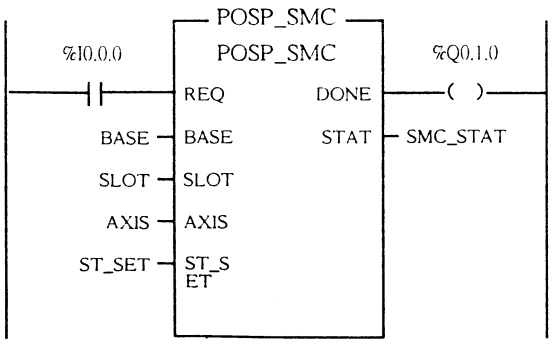
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POPA or G4F-POPA module installation base location number SLOT : Slot location number of G3F-POPA or G4F-POPA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation(G3F-POPA only) ST_SET : Change the operation data no. at next instruction within the range of 0~299. **Output** DONE : On if the function block is executed without error and on till next execution. STAT : Display the error code generated during the function block execution.

■ Function

Instruction to change the operation data No. that will be processed by the next instruction within the range of 0~299.

■ Program example

LD



IL

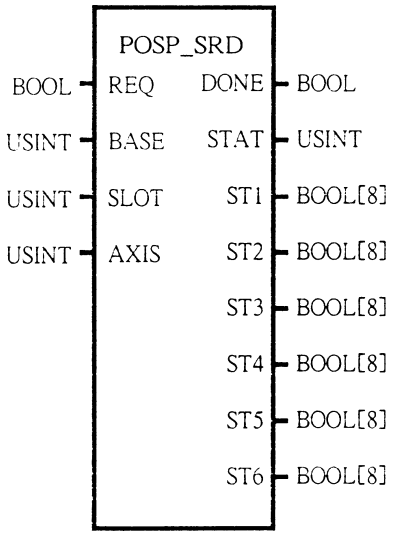
```
CAL   POSP_SMC      POSP_SMC
      REQ :=        %I0.0.0
      BASE :=       BASE
      SLOT :=       SLOT
      AXIS :=       AXIS
      ST_SET :=     ST_SET
LD                  POSP_SMC.DONE
ST                  %Q 0.1.0
LD                  POSP_SMC.STAT
ST                  SMC_STAT
```

POSP_SRD

G3F-POPA, G4F-POPA(AXIS=0) Bit information reading of current operation status

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●	●	

Function block



[ ] : Indicate ARRAY variable and number in the parenthesis is the element number.

Description

Input REQ : Function block execution request at rising edge
BASE : G3F-POPA or G4F-POPA module installation base location number
SLOT : Slot location number of G3F-POPA or G4F-POPA module installation base
AXIS : 0: X-axis operation, 1: Y-axis operation(G3F-POPA only)

Output DONE : On if the function block is executed without error and off if hold on till next function block is executed.
STAT : Display the error code generated during the function block execution.

ST

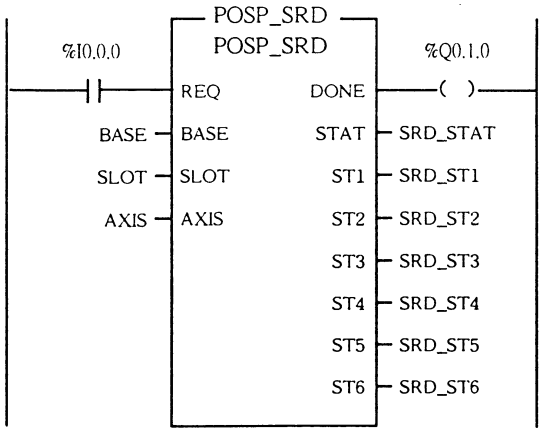
	ST1 content	ST2 content	ST3 content
[0]	Dwell state	Upper limit	Not used
[1]	Decel state	Lower limit	FWD/BWD
[2]	Static state	Emergency stop	ZONE#1
[3]	Accel state	Pulse output prohibit	ZONE#2
[4]	Stop state	Inching completion	ZONE#3
[5]	Zero state	Teaching completion	Repeat operation completion
[6]	Positioning state	JOG low-speed operation	Positioning stat completion
[7]	Interpolation state(G4F-POPA is not used)	JOG high-speed operation	M Code On
	ST4 content	**ST5 content**	**ST6 content**
[0]	Zero compensation	Stop	Not used
[1]	Backlash compensation	Upper limit(H/W)	Error
[2]	Next Move processing	Lower limit(H/W)	Position passing signal
[3]	Override processing	Dog signal(H/W)	Busy
[4]	Not used	Zero point signal(H/W)	Positioning completion
[5]	Decel stop and completion	Not used	Zero point return completion
[6]	Speed teaching completion	Not used	Zero point not defined
[7]	Speed change completion	Emergency stop(H/W)	Not used

■ Function

Function block to monitor current operation status of G3F-POPA or G4F-POPA module by bit information.

■ Program example

LD



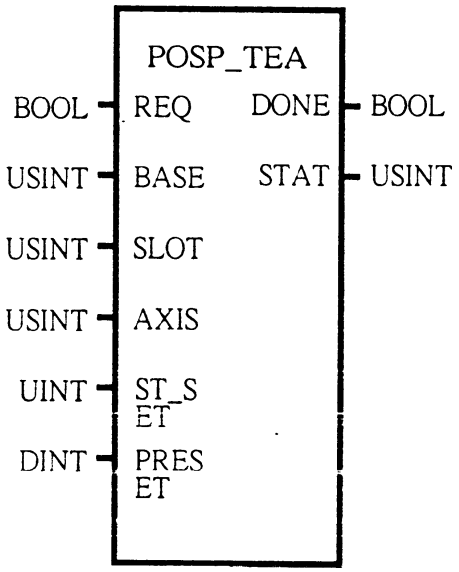
IL

```
CAL   POSP_SRD      POSP_SRD
      REQ :=        %I0.0.0
      BASE :=       BASE
      SLOT :=       SLOT
      AXIS :=       AXIS
LD                  POSP_SRD.DONE
ST                  %Q0.1.0
LD                  POSP_SRD.STAT
ST                  SRD_STAT
LD                  POSP_SRD.ST1
ST                  SRD_ST1
LD                  POSP_SRD.ST2
ST                  SRD_ST2
LD                  POSP_SRD.ST3
ST                  SRD_ST3
LD                  POSP_SRD.ST4
ST                  SRD_ST4
LD                  POSP_SRD.ST5
ST                  SRD_ST5
LD                  POSP_SRD.ST6
ST                  SRD_ST6
```

POSP_TEA

G3F-POPA, G4F-POPA(AXIS=0) Position Teaching

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●	●	

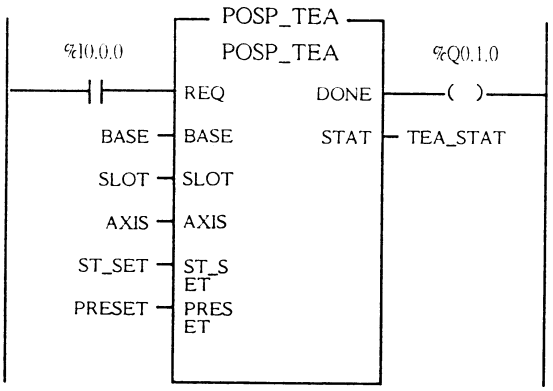
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POPA or G4F-POPA module installation base location number SLOT : Slot location number of G3F-POPA or G4F-POPA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation(G3F-POPA only) ST_SET : Set the operation data no. for position teaching.(0~299) PRESET: Set the position address for position teaching(-16,744,447 ~ +16,744,447). **Output** DONE : On if the function block is executed without error and hold on till next function block is executed. STAT : Display the error code generated during the function block execution.

■ Function

Set the position address of certain operation data. The zero point must have defined before.

■ Program example

LD



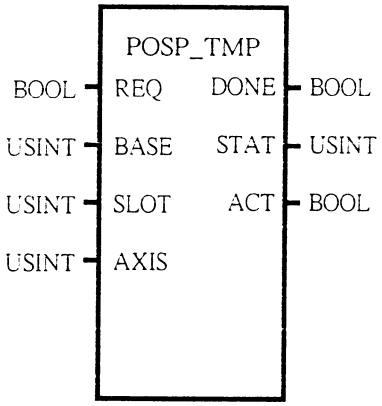
IL

```
CAL   POSP_TEA      POSP_TEA
      REQ :=        %I0.0.0
      BASE :=       BASE
      SLOT :=       SLOT
      AXIS :=       AXIS
      ST_SET :=     ST_SET
      PRESET :=     PRESET
LD                  POSP_TEA.DONE
ST                  %Q 0.1.0
LD                  POSP_TEA.STAT
ST                  TEA_STAT
```

POSP_TMP

Deceleration stop

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●	●	

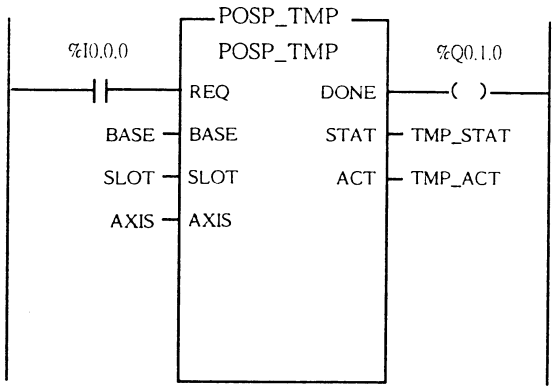
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POPA or G4F-POPA module installation base location number SLOT : Slot location number of G3F-POPA or G4F-POPA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation(G3F-POPA only) **Output** DONE : On if the function block is executed without error and off if ACT is ON. STAT : Display the error code generated during the function block execution or the error of G3F-POPA or G4F-POPA. ACT : On if receives the order processing complete signal from G3F-POPA or G4F-POPA and off if the instruction is used according to REQ condition.

■ Function

Instruction to stop G3F-POPA during operation. If the function block relating stop is processed by POSP_AST, DONE condition of POSP_AST function block is not on. The machine will be operated again by toggling the function block input REQ of POSP_AST.

■ Program example

LD



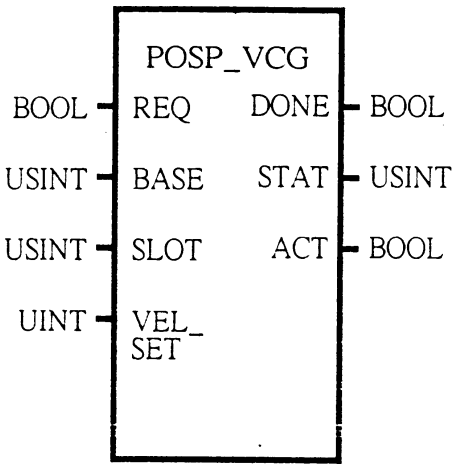
IL

```
CAL   POSP_TMP     POSP_TMP
      REQ :=       %I0.0.0
      BASE :=      BASE
      SLOT :=      SLOT
      AXIS :=      AXIS
                   POSP_TMP.DONE
                   %Q 0.1.0
LD                 POSP_TMP.STAT
ST                 TMP_STAT
LD                 POSP_TMP.STAT
ST                 TMP_ACT
```

POSP_VCG

Speed change G3F-POPA, G4F-POPA(AXIS=0)

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●	●	

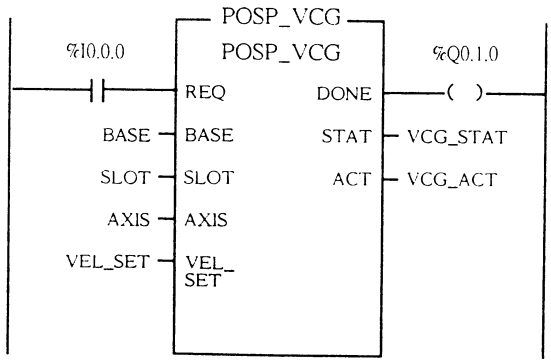
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POPA or G4F-POPA module installation base location number SLOT : Slot location number of G3F-POPA or G4F-POPA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation(G3F-POPA only) VEL_SET: Set current speed to the speed value to be changed. **Output** DONE : On if the function block is executed without error and off if ACT is ON. STAT : Display the error code generated during the function block execution. ACT : On if receives the order processing complete signal from G3F-POPA or G4F-POPA and off if the instruction is used according to REQ condition.

■ Function

Instruction to change the speed during operation under the static speed only. Available at single operation, repeat operation, JOG and zero point return in high-speed operation.

■ Program example

LD



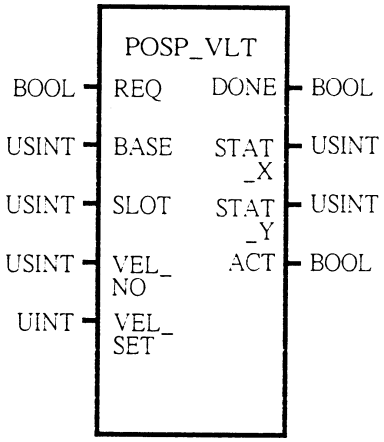
IL

```
CAL   POSP_VCG      POSA_VCG
      REQ : =       %I0.0.0
      BASE : =      BASE
      SLOT : =      SLOT
      AXIS : =      AXIS
      VEL_SET : =   VEL_SET
LD                  POSP_VCG.DONE
ST                  %Q 0.1.0
LD                  POSP_VCG.STAT
ST                  VCG_STAT
LD                  POSP_VCG.ACT
ST                  VCG_ACT
```

POSP_VLT

Speed Teaching

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●	●	

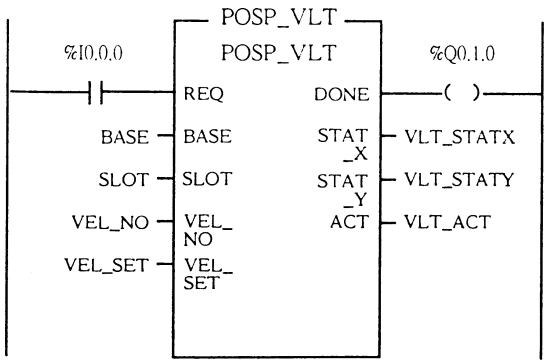
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POPA or G4F-POPA module installation base location number SLOT : Slot location number of G3F-POPA or G4F-POPA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation(G3F-POPA only) VEL_NO: Set the speed data no. for speed teaching.(0~129) VEL_SET:Set the speed value for speed teaching. (1~20,000: Pulse unit) **Output** DONE : On if the function block execution is finished without error and off if hold on till next function block is executed. STAT_X : Display the error code generated during the function block execution. STAT_Y : Status display, or display the error of G3F-POPA module. ACT : On if receives the order processing complete signal from G3F-POPA and G4F-POPA and off if the instruction is used according to REQ condition.

■ Function

The speed teaching instruction sets certain speed to the preset value of speed data no.

■ Program example

LD



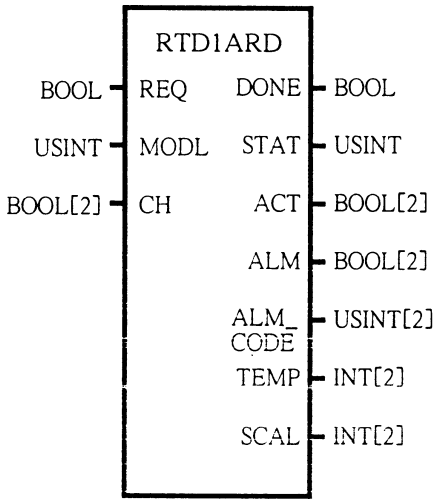
IL

```
CAL   POSP_VLT      POSA_VLT
      REQ : =       %I0.0.0
      BASE : =      BASE
      SLOT : =      SLOT
      VEL_NO : =    VEL_NO
      VEL_SET : =   VEL_SET
                    POSP_VLT.DONE
LD                  %Q 0.1.0
ST                  POSP_VLT.STAT_X
LD                  VLT_STAT_X
ST                  POSP_VLT.STAT_Y
LD                  VLT_STAT_Y
ST                  POSP_VLT.ACT
                    VLT_ACT
```

RTD1ARD

G5F-RD1A Temperature change value reading(Array type)

Product	GM1	GM2	GM3	GM4	GM5
Applicable					●

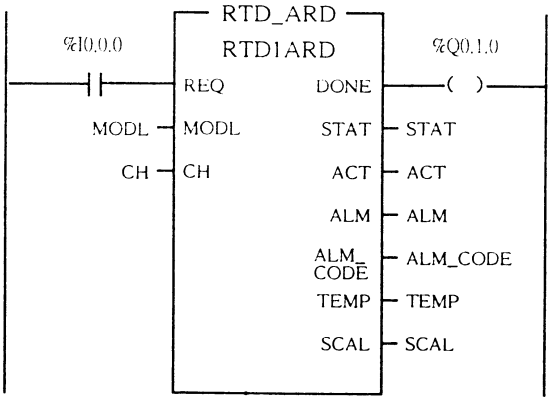
Function block	Description
 [ ] : Indicate ARRAY variable and number in the parenthesis is the element number.	**Input** REQ : Function block execution request MODL : G5F-RD1A module location number Note 1) CH : Assign the channel to read the temperature change value. Assign the respective element value to '1' for channel. **Output** DONE : On if the function block is executed without error and Off if the error occurs or function block execution request is not generated. Note 2) STAT : Error status during the function block execution. Note 3) ACT : Channel display that read the conversion value after completing the function block. The element value of the channel will be '1'. Note 3) ALM : Error mark display of each channel during operation. The element value of the channel, which the error occurs, will be '1'. Note 3) ALM_CODE: Error status display of each channel during operation. Note 3) TEMP : Temperature change value (-200.0 ~ +600.0℃). Read 10 times of actual temperature for each channel's conversion value. Note 3) SCAL : Convert the temperature change value (-200.0 ~ +600.0℃) to the scaling of 0~16000 range.

■ Function

Read the operation status of each channel and temperature change value that G5F-RD1A module outputs during operation.

■ Program example

LD



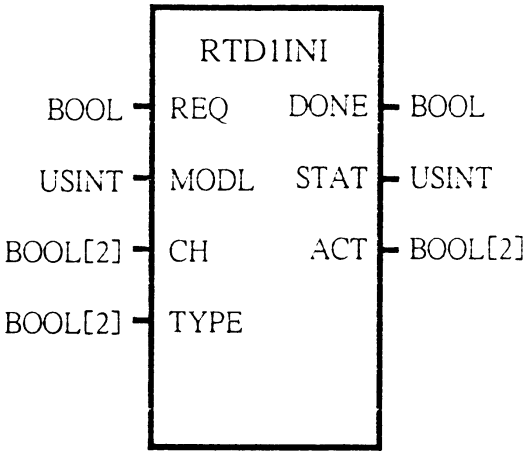
IL

```
CAL   RTD1ARD      RTD_ARD
      REQ :=       %I0.0.0
      MODL :=      MODL
      CH :=        CH
LD                 RTD_ARD.DONE
ST                 %Q 0.1.0
LD                 RTD_ARD.STAT
ST                 STAT
LD                 RTD_ARD.ACT
ST                 ACT
LD                 RTD_ARD.ALM
ST                 ALM
LD                 RTD_ARD.ALM_CODE
ST                 ALM_CODE
LD                 RTD_ARD.TEMP
ST                 TEMP
LD                 RTD_ARD.SCAL
ST                 SCAL
```

RTD1INI

G5F-RD1A Module initialization

Product	GM1	GM2	GM3	GM4	GM5
Applicable					●

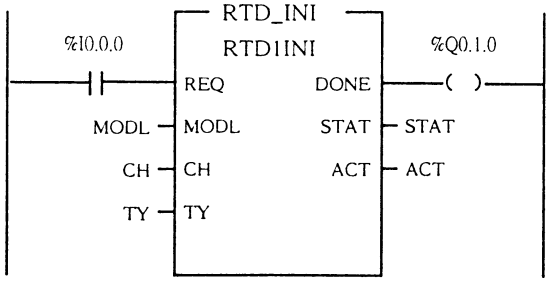
Function block	Description
	**Input** REQ : Function block execution request at rising edge MODL : G5F-RD1A module location number Note 1) CH : Assign respective channel. Assign the respective element value to '1' for channel. Note 1) TYPE : Assign the sensor type of each channel. ('0':Pt100, '1':Jpt100) **Output** DONE : On if the function block is executed without error and holds on till next function block execution is requested. However, Off if the error occurs during executing the function block. STAT : Error status display during the function block execution. Note 1) ACT : Channel display that executed the data writing after completing the function block. The element value of the channel will be '1'.
[ ] : Indicate ARRAY variable and number in the parenthesis is the element number.	

■ Function

Set the preset value for each channel and arrange the operation to operate G5F-RD1A module.

■ Program example

LD



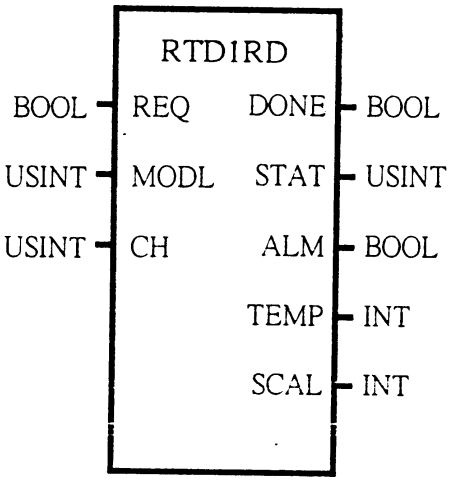
IL

```
CAL   RTD1INI     RTD_INI
      REQ :=      %I0.0.0
      MODL :=     MODL
      CH :=       CH
      TYPE :=     TY
LD                RTD_INI.DONE
ST                %Q 0.1.0
LD                RTD_INI.STAT
ST                STAT
LD                RTD_INI.ACT
ST                ACT
```

RTD1RD

G5F-RD1A Temperature change value reading(Single type)

Product	GM1	GM2	GM3	GM4	GM5
Applicable					●

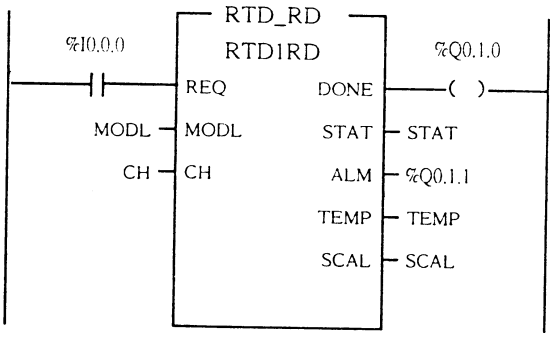
Function block	Description
	**Input** REQ : Function block execution request MODL : G5F-RD1A module location number CH : Assign the channel number to read the temperature change value(0,1). **Output** DONE : On if the function block is executed without error and Off if the error occurs or function block execution request is not generated. Note 2) STAT : Error status during the function block execution. Note 2) ALM : Error mark display of each channel during operation. Note 2) TEMP : Temperature change value(-200.0 ~ +600.0℃). Read 10 times of actual temperature for each channel's conversion value. Note 2) SCAL : Convert the temperature change value (-200.0 ~ +600.0℃) to the scaling of 0~16000 range.

■ Function

Read the operation status and temperature change of each channel value that G5F-RD1A module outputs during operation.

■ Program example

LD



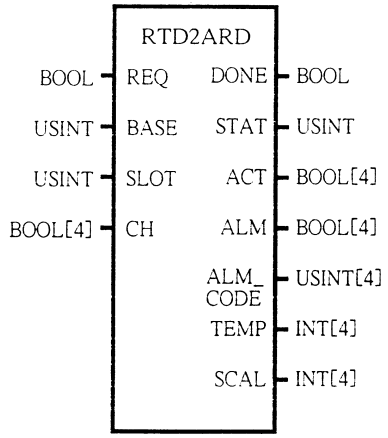
IL

```
CAL   RTD1RD      RTD_RD
      REQ :=      %I0.0.0
      MODL :=     MODL
      CH :=       CH
LD                RTD_RD.DONE
ST                %Q 0.1.0
LD                RTD_RD.STAT
ST                STAT
LD                RTD_RD.ALM
ST                %Q 0.1.1
LD                RTD_RD.TEMP
ST                TEMP
LD                RTD_RD.SCAL
ST                SCAL
```

RTD2ARD

G4F-RD2A Temperature change value reading(Array type)

Product	GM1	GM2	GM3	GM4	GM5
Applicable				●	

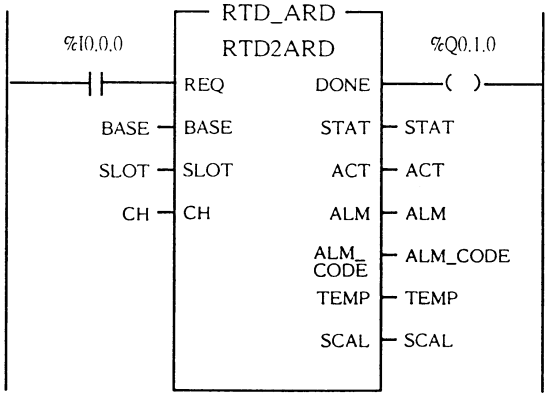
Function block	Description
 [ ] : Indicate ARRAY variable and number in the parenthesis is the element number.	**Input** REQ : Function block execution request BASE : G4F-RD2A module installation base location number SLOT : Slot location number of G4F-RD2A module installation base Note 1) CH : Assign the channel to be used.Assign the respective element value to '1' for channel. **Output** DONE : On if the function block is executed without error and Off if the error occurs or function block execution request is not generated. Note 2) STAT : Error status during the function block execution. Note 3) ACT : Channel display that read the conversion value after completing the function block. The element value of the channel will be '1'. Note 3) ALM : Error mark display of each channel during operation. The element value of the channel, which the error occurs, will be '1'. Note 3) ALM_CODE: Error status display of each channel during operation. Note 3) TEMP : Temperature change value (-200.0 ~ +600.0℃). Read 10 times of actual temperature for each channel's conversion value. Note 3) SCAL : Convert the temperature change value (-200.0 ~ +600.0℃) to the scaling of 0~16000 range.

■ Function

Read the operation status and temperature change of each channel value that G4F-RD2A module outputs during operation.

■ Program example

LD



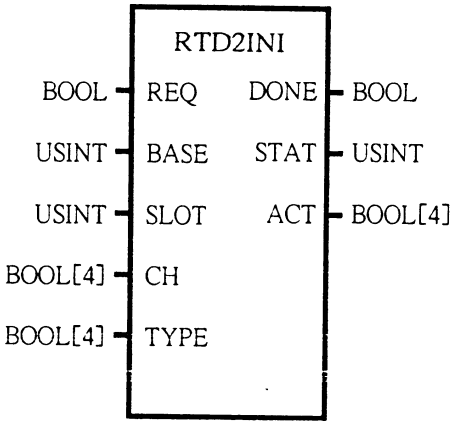
IL

```
CAL   RTD2ARD      RTD_ARD
      REQ := 
      BASE := 
      SLOT := 
      CH :=
LD                 RTD_ARD.DONE
ST                 %Q 0.1.0
LD                 RTD_ARD.STAT
ST                 STAT
LD                 RTD_ARD.ACT
ST                 ACT
LD                 RTD_ARD.ALM
ST                 ALM
LD                 RTD_ARD.ALM_CODE
ST                 ALM_CODE
LD                 RTD_ARD.TEMP
ST                 TEMP
LD                 RTD_ARD.SCAL
ST                 SCAL
```

RTD2INI

G4F-RD2A Module initialization

Product	GM1	GM2	GM3	GM4	GM5
Applicable				●	

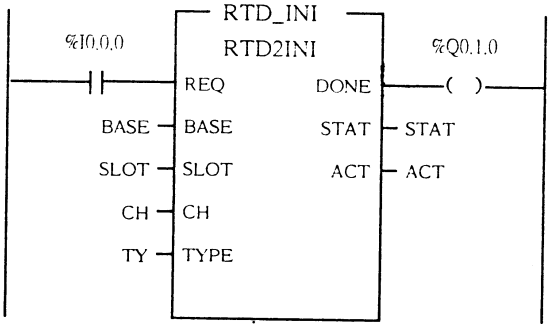
Function block	Description
 [ ] : Indicate ARRAY variable and number in the parenthesis is the element number.	**Input** REQ : Function block execution request at rising edge BASE : G4F-RD2A module installation base location number SLOT : Slot location number of G4F-RD2A module installation base Note 1) CH : Assign the channel to be used. Assign the respective element value to '1' for channel. Note 1) TYPE : Assign the sensor type of each channel. ('0':Pt100, '1':Jpt100) **Output** DONE : On if the function block is executed without error and holds on till next function block execution is requested. However, Off if the error occurs during executing the function block. STAT : Error status display during the function block execution. Note 1) ACT : Channel display that executed the data writing after completing the function block. The element value of the channel will be '1'.

■ Function

Set the preset value for each channel and arrange the operation to operate G4F-RD2A module.

■ Program example

LD



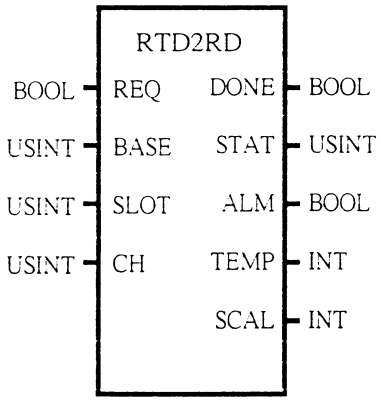
IL

```
CAL   RTD2INI      RTD_INI
      REQ :=       %I0.0.0
      BASE :=      BASE
      SLOT :=      SLOT
      CH :=        CH
      TYPE :=      TY
LD                 RTD_INI.DONE
ST                 %Q 0.1.0
LD                 RTD_INI.STAT
ST                 STAT
LD                 RTD_INI.ACT
ST                 ACT
```

RTD2RD

G4F-RD2A Temperature change value reading(Single type))

Product	GM1	GM2	GM3	GM4	GM5
Applicable				●	

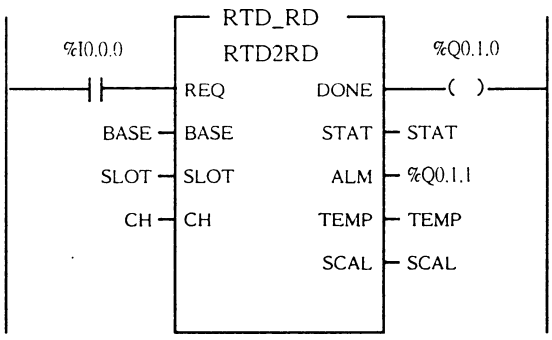
Function block	Description
	**Input** REQ : Function block execution request BASE : G4F-RD2A module installation base location number SLOT : Slot location number of G4F-RD2A module installation base Note 1) CH : Assign the channel to be used(0~3). **Output** DONE : On if the function block is executed without error and Off if the error occurs or function block execution request is not generated. Note 2) STAT : Error status display during the function block execution. Note 2) ALM : Error mark display of each channel during operation. Note 2) TEMP : Temperature change value(-200.0 ~ +600.0℃). Read 10 times of actual temperature for each channel's conversion value. Note 2) SCAL : Convert the temperature change value (-200.0 ~ +600.0℃) to the scaling of 0~16000 range.

■ Function

Read the operation status and temperature change of each channel value that G4F-RD2A module outputs during operation.

■ Program example

LD



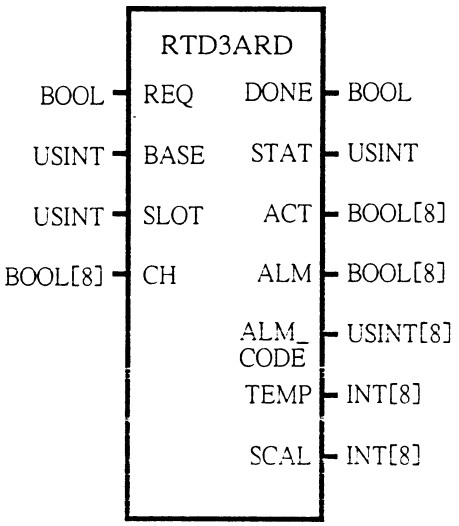
IL

```
CAL   RTD2RD      RTD_RD
      REQ :=      %I0.0.0
      BASE :=     BASE
      SLOT :=     SLOT
      CH :=       CH
LD                RTD_RD.DONE
ST                %Q 0.1.0
LD                RTD_RD.STAT
ST                STAT
LD                RTD_RD.ALM
ST                %Q0.1.1
LD                RTD_RD.TEMP
ST                TEMP
LD                RTD_RD.SCAL
ST                SCAL
```

RTD3ARD

G3F-RD3A Temperature change value reading(Array type)

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

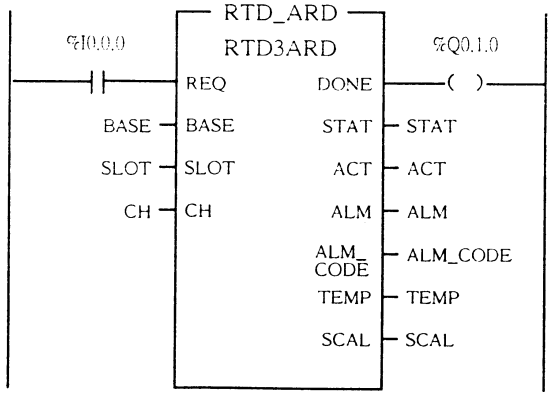
Function block	Description
 [ ] : Indicate ARRAY variable and number in the parenthesis is the element number.	**Input** REQ : Function block execution request BASE : G3F-RD3A module installation base location number SLOT : Slot location number of G3F-RD3A module installation base Note 1) CH : Assign the channel to be used. Assign the respective element value to '1' for channel. **Output** DONE : On if the function block is executed without error and Off if the error occurs or function block execution request is not generated. Note 2) STAT : Error status during the function block execution. Note 3) ACT : Channel display that executed the data reading after completing the function block. The element value of the channel will be '1'. Note 3) ALM : Error mark display of each channel during operation. Note 3) ALM_CODE: Error status display of each channel during operation. Note 3) TEMP : Temperature change value(-200.0 ~ +600.0℃). Read 10 times of actual temperature for each channel's conversion value. Note 3) SCAL : Convert the temperature change value (-200.0 ~ +600.0℃) to the scaling of 0~16000 range.

■ Function

Read the operation status and temperature change of each channel value that G3F-RD3A module Outputs during operation.

■ Program example

LD



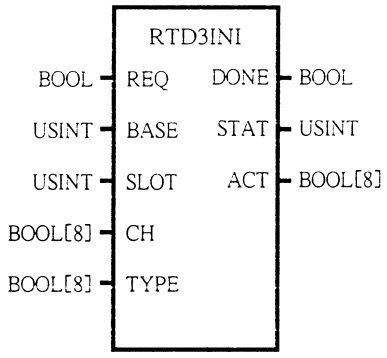
IL

```
CAL   RTD3ARD     RTD_ARD
      REQ :=      %I0.0.0
      BASE :=     BASE
      SLOT :=     SLOT
      CH :=       CH
LD                RTD_ARD.DONE
ST                %Q 0.1.0
LD                RTD_ARD.STAT
ST                STAT
LD                RTD_ARD.ACT
ST                ACT
LD                RTD_ARD.ALM
ST                ALM
LD                RTD_ARD.ALM_CODE
ST                ALM_CODE
LD                RTD_ARD.TEMP
ST                TEMP
LD                RTD_ARD.SCAL
ST                SCAL
```

RTD3INI

G3F-RD3A Module initialization

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

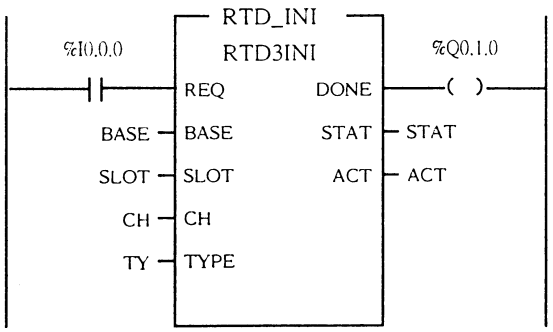
Function block	Description
 [ ] : Indicate ARRAY variable and number in the parenthesis is the element number.	**Input** REQ : Function block execution request at rising edge BASE : G3F-RD3A module installation base location number SLOT : Slot location number of G3F-RD3A module installation base Note 1) CH : Assign the channel to be used. Assign the respective element value to '1' for channel. Note 1) TYPE : Assign the sensor type of each channel. ('0':Pt100, '1':Jpt100) **Output** DONE : On if the function block is executed without error and holds on till next function block execution is requested. However, Off if the error occurs during executing the function block. STAT : Error status display during the function block execution. Note 1) ACT : Channel display that executed the data writing after completing the function block. The element value of the channel will be '1'.

■ Function

Set the preset value for each channel and arrange the operation to operate G3F-RD3A module.

■ Program example

LD



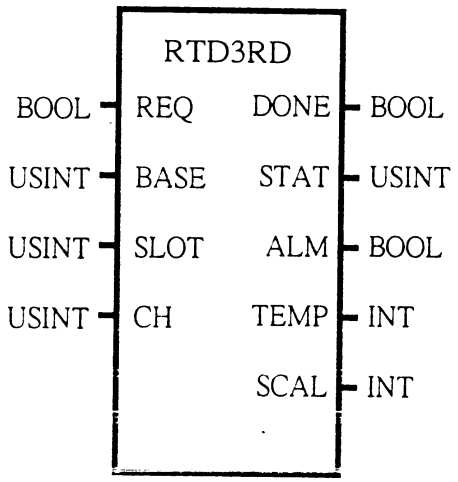
IL

```
CAL   RTD3INI      RTD_INI
      REQ :=       %I0.0.0
      BASE :=      BASE
      SLOT :=      SLOT
      CH :=        CH
      TYPE :=      TY
LD                 RTD_INI.DONE
ST                 %Q 0.1.0
LD                 RTD_INI.STAT
ST                 STAT
LD                 RTD_INI.ACT
ST                 ACT
```

RTD3RD

G3F-RD3A Temperature change value reading(Single type)

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

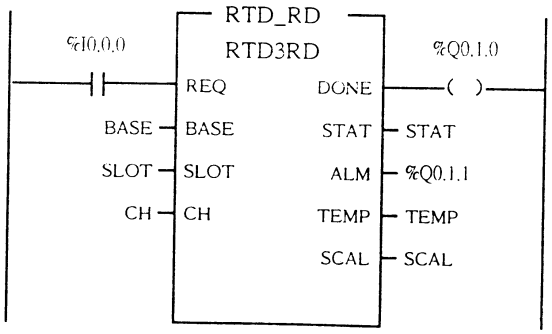
Function block	Description
	**Input** REQ : Function block execution request BASE : G3F-RD3A module installation base location number SLOT : Slot location number of G3F-RD3A module installation base CH : Assign the channel to be used(0~7). **Output** DONE : On if the function block is executed without error and Off if the error occurs or function block execution request is not generated. STAT : Error status during the function block execution. Note 2) ALM : Error mark display of each channel during operation. Note 2) TEMP : Temperature change value (-200.0 ~ +600.0℃). Read 10 times of actual temperature for each channel's conversion value. Note 2) SCAL : Convert the temperature change value (-200.0 ~ +600.0℃) to the scaling of 0~16000 range.

■ Function

Read the operation status and temperature change of each channel value that G3F-RD3A module outputs during operation.

■ Program example

LD



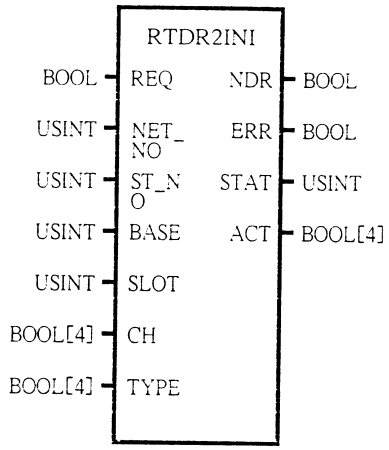
IL

```
CAL   RTD3RD     RTD_RD
      REQ :=     %I0.0.0
      BASE :=    BASE
      SLOT :=    SLOT
      CH :=      CH
LD                RTD_RD.DONE
ST                %Q 0.1.0
LD                RTD_RD.STAT
ST                STAT
LD                RTD_RD.ALM
ST                %Q 0.1.1
LD                RTD_RD.TEMP
ST                TEMP
LD                RTD_RD.SCAL
ST                SCAL
```

RTDR2INI

G4F-RD2A Module initialization(For remote)

Product	GM1	GM2	GM3	GM4	GM5
Applicable				●	

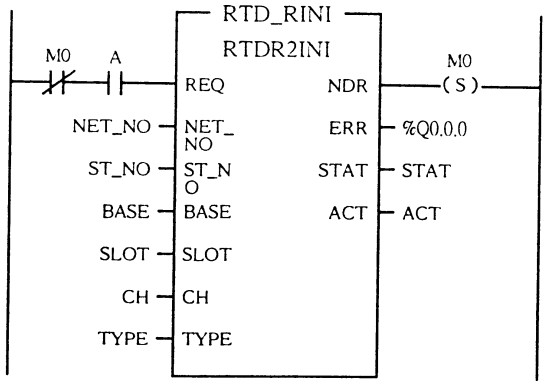
Function block	Description
 [ ] : Indicate ARRAY variable and number in the parenthesis is the element number.	**Input** REQ : Function block execution request at rising edge NET_NO: Slot location number(0~7) installed the communication module of local station(G4L-FUEA, G4L-FUOA) to send the function block ST_NO : Station number(0~63) of communication module (G4L-RBEA, G4L-RBOA) installed at remote I/O station BASE : G4F-RD2A module installation base location number SLOT : Slot location number of G4F-RD2A module installation base Note 1) CH : Assign the channel to be used. Set '1' for respective element value for channel setting. Note 1) TYPE : Assign the sensor type of each channel. ('0':Pt100, '1':Jpt100) **Output** NDR : On if the function block is executed without error and Off at next SCAN ERR : On when the error occurs during executing the function block. STAT : Error status display during the function block execution. Note 2) ACT : Channel display that execute data write after completing the function block. The element value of the channel will be '1'.

■ Function

Set the preset value for each channel and arrange the operation to operate G4F-RD2A module installed at remote station.

■ Program example

LD



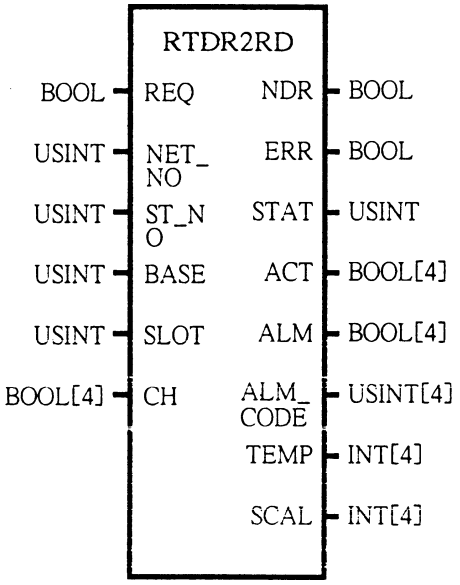
IL

```
LDN   M0
AND   A
ST    REQ
CAL   RTDR2INI   RTD_RINI
      REQ :=     REQ
      NET_NO :=  NET_NO
      ST_NO :=   ST_NO
      BASE :=    BASE
      SLOT :=    SLOT
      CH :=      CH
      TYPE :=    TYPE
LD    RTD_RINI.NDR
S     M0
LD    RTD_RINI.ERR
ST    %Q 0.0.0
LD    RTD_RINI.STAT
ST    STAT
LD    RTD_RINI.ACT
ST    ACT
```

RTDR2RD

G4F-RD2A Temperature change value reading(For remote)

Product	GM1	GM2	GM3	GM4	GM5
Applicable				●	

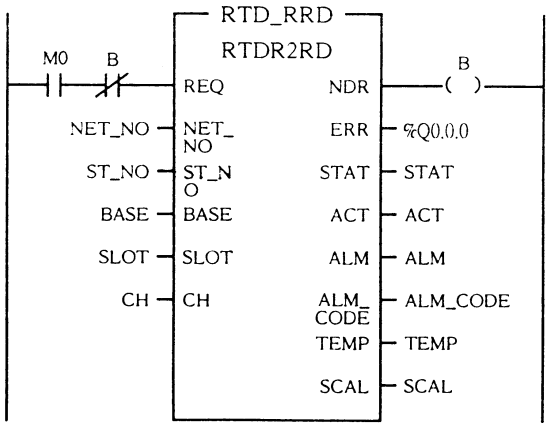
Function block	Description
	**Input** REQ : Function block execution request at rising edge NET_NO : Slot location number(0~7) installed the communication module of local station(G4L-FUEA, G4L-FUOA) to send the function block ST_NO : Station number(0~63) of communication module(G4L-RBEA, G4L-RBOA) installed at remote I/O station BASE : G4F-RD2A module installation base location number Note 1) SLOT : Slot location number of G4F-RD2A module installation base CH : Assign the channel to be used. Set '1' for respective element value for channel setting. **Output** NDR : On if the function block is executed without error and Off at next SCAN ERR : On when the error occurs during executing the function block. STAT : Error status display during the function block execution. Note 1) ACT : Channel display that read the conversion value after completing the function block. The element value of the channel will be '1'. Note 1) ALM : Error mark display of each channel during operation. The element value of the channel will be '1'. Note 1) ALM_CODE: Error status display of each channel during operation. Note 1) TEMP : Temperature change value (-200.0 ~ +600.0℃). Read 10 times of actual temperature for each channel's conversion value. Note 1) SCAL : Convert the temperature change value (-200.0 ~ +600.0℃) to the scaling of 0~16000 range.
[ ] : Indicate ARRAY variable and number in the parenthesis is the element number.	

■ Function

Read the operation status and temperature change value of each channel that G4F-RD2A at remote station outputs during operation.

■ Program example

LD



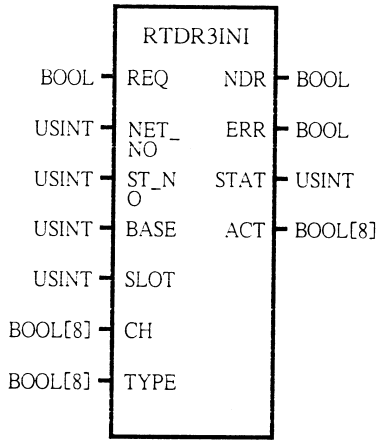
IL

```
LD    M0
ANDN  B
ST    REQ
CAL   RTDR2RD   RTD_RRD
        REQ :=  REQ
        NET_NO := NET_NO
        ST_NO := ST_NO
        BASE := BASE
        SLOT := SLOT
        CH := CH
LD    RTD_RRD.NDR
ST    B
LD    RTD_RRD.ERR
ST    %Q0.0.0
LD    RTD_RRD.STAT
ST    STAT
LD    RTD_RRD.ACT
ST    ACT
LD    RTD_RRD.ALM
ST    ALM
LD    RTD_RRD.ALM_CODE
ST    ALM_CODE
LD    RTD_RRD.TEMP
ST    TEMP
LD    RTD_RRD.SCAL
ST    SCAL
```

RTDR3INI

G3F-RD3A Module initialization(For remote)

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

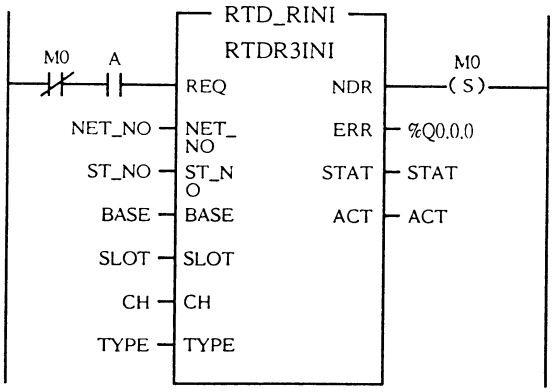
Function block	Description
 [ ] : Indicate ARRAY variable and number in the parenthesis is the element number.	**Input** REQ : Function block execution request at rising edge NET_NO : Slot location number(0~7) installed the communication module of local station(G3L-FUEA, G3L-FUOA) to send the function block ST_NO : Station number(0~63) of communication module(G3L-RBEA, G3L-RBOA) installed at remote I/O station BASE : G3F-RD3A module installation base location number SLOT : Slot location number of G3F-RD3A module installation base Note 1) CH : Assign the channel to be used. Set '1' for respective element value for channel setting. Note 1) TYPE : Assign the sensor type of each channel. ('0':Pt100, '1':Jpt100) **Output** NDR : On if the function block is executed without error and Off at next SCAN ERR : On when the error occurs during executing the function block. STAT : Error status display during the function block execution. Note 1) ACT : Channel display that execute data channel value after completing the function block. The element value of the channel will be '1'.

■ Function

Set the preset value for each channel and arrange the operation to operate G3F-RD3A module installed at remote station.

■ Program example

LD



IL

```
LDN   M0
AND   A
ST    REQ
CAL   RTDR3INI   RTD_RINI
      REQ :=     REQ
      NET_NO :=  NET_NO
      ST_NO :=   ST_NO
      BASE :=    BASE
      SLOT :=    SLOT
      CH :=      CH
      TYPE :=    TYPE
LD    RTD_RINI.NDR
S     M0
LD    RTD_RINI.ERR
ST    %Q 0.0.0
LD    RTD_RINI.STAT
ST    STAT
LD    RTD_RINI.ACT
ST    ACT
```