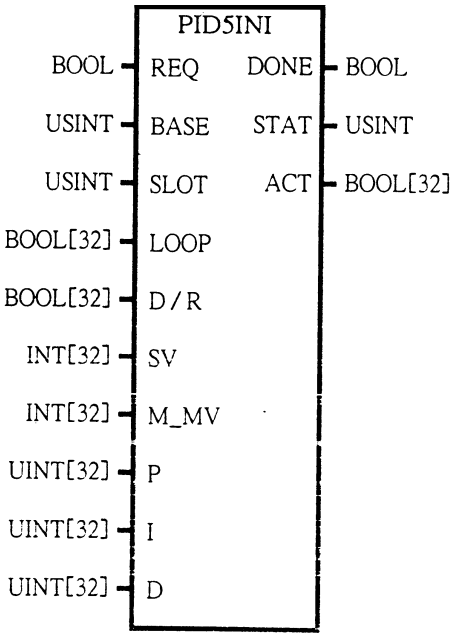
PID5INI

G3F-PIDA module initialization

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

Function block



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

Description

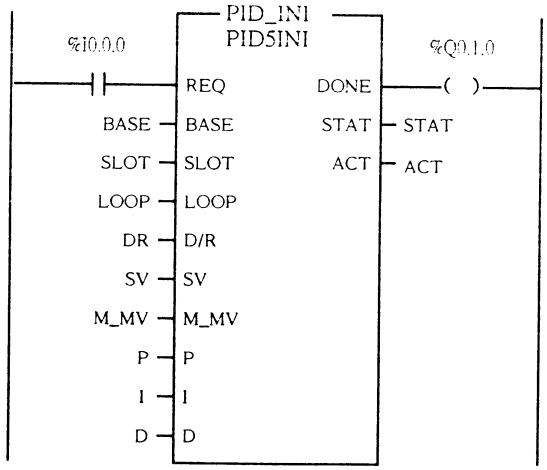
Input	REQ	:	Function block execution request at rising edge
	BASE	:	G3F-PIDA module installation base location number
	SLOT	:	Slot location number of G3F-PIDA module installation base
Note 1)	LOOP	:	Loop assignment to read handling value. Assign '1' of respective element value for loop assignment.
Note 1)	D/R	:	Normal/Reverse operation selection assignment for the operation loop. ('0': Normal, '1': Reverse)
Note 1)	SV	:	Control target value input for operation loop (Input value range: 0~16000)
Note 1)	M_MV	:	Manual handling value for the operation loop (Input value range: 0~16000)
Note 1)	P	:	Propotional constant of the operation loop (0.01~100.00%) (Input value range: 0~10000)
Note 1)	I	:	Integral constant of the operation loop (0.0~3000.0 sec.) (Input value range: 0~30000) Integral operation disable in case of I=0.
Note 1)	D	:	Differential constant of the operation Loop (0.0~3000.0 sec.) (Input value range: 0~30000) Integral operation disable in case of D=0.
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 the function block execution.
	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'.

■ Function

Assign the preset value for each loop to operate G3F-PIDA module.

■ Program example

LD



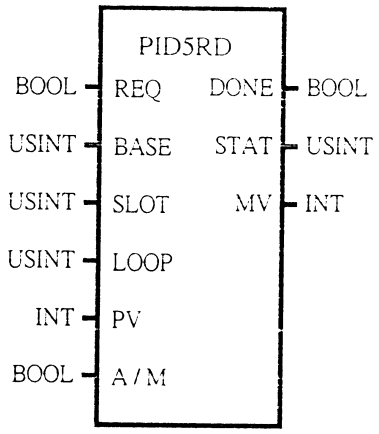
IL

```
CAL   PID5INI      PID_ARD
      REQ :=       %I0.0.0
      BASE :=      BASE
      SLOT :=      SLOT
      LOOP :=      LOOP
      D/R :=       DR
      SV :=        SV
      M_MV :=      M_MV
      P :=         P
      I :=         I
      D :=         D
LD                 PID_INI.DONE
ST                 %Q0.1.0
LD                 PID_INI.STAT
ST                 STAT
LD                 PID_INI.ACT
ST                 ACT
```

PID5RD

G3F-PIDA handling value reading(Single type)

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

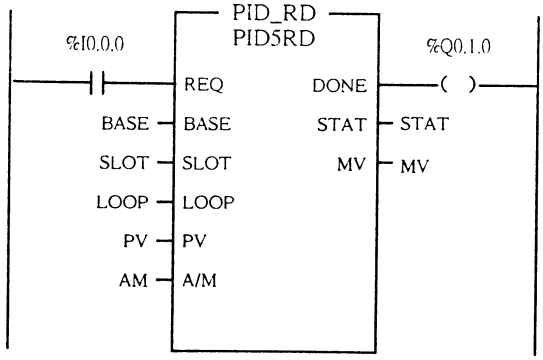
Function block	Description
	**Input** REQ : Function block execution request BASE : G3F-PIDA module installation base location number SLOT : Slot location number of G3F-PIDA module installation base LOOP : Loop assignment to be operated PV : Current value input for the operation loop control. (Input value range: 0~16000) A/M : Handling value assignment for the operation loop control. ('0': Automatic operation(PID operation) handling value assignment) ('1': Manual(compulsive) handling value assignment) **Output** DONE : On if the function block is executed without error and off if the error occurs or the function block execution is not requested. Note 1) STAT : Error status display during the function block execution. Note 1) MV : Handling value data of each loop assigned by operation loop. (Handling value range: 0~16000)

■ Function

Input the current value(PV) of operating loop control and read the handling value(MV), Also, the handling value can be selected to PID automatic handling value or manual(compulsive) handling value.

■ Program example

LD



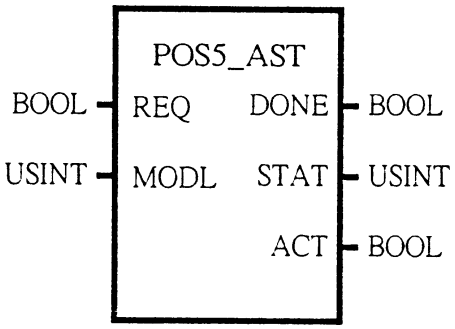
IL

```
CAL   PID5RD      PID_RD
      REQ :=      %I0.0.0
      BASE :=     BASE
      SLOT :=     SLOT
      LOOP :=     LOOP
      PV :=       PV
      A / M :=    AM
LD                PID_RD.DONE
ST                %Q 0.1.0
LD                PID_RD.STAT
ST                STAT
LD                PID_RD.MV
ST                MV
```

POS5_AST

G5F-POPA General automatic positioning operation

Product	GM1	GM2	GM3	GM4	GM5
Applicable					●

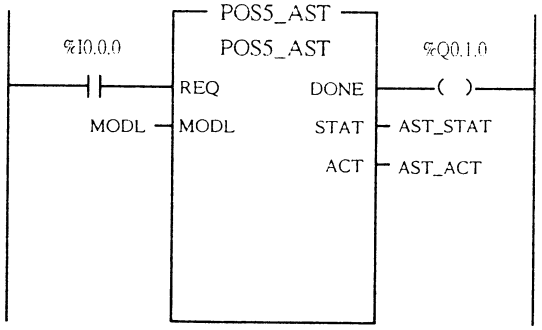
Function block	Description
	**Input** REQ : Function block execution request at rising edge MODL : G5F-POPA module location number **Output** DONE : On if the function block is executed without error and off if ACT is on. STAT : Display the error code generated during the function block execution. ACT : On if the positioning complete signal is received from G5F-POPA and off if the instruction is used according to REQ condition.

■ Function

Instruction to start the positioning operation of G5F-POPA. Check the status of G5F-POPA and use the instruction if the positioning is completed, ACT is ON.

■ Program example

LD



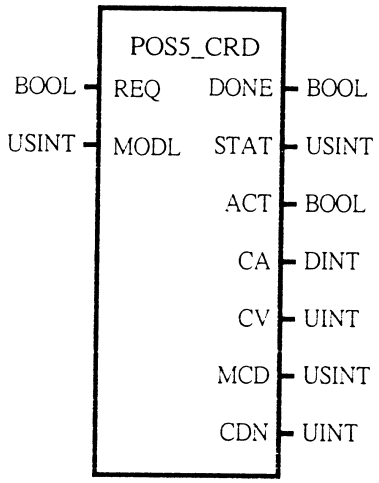
IL

```
CAL   POS5_AST      POS5_AST
      REQ :=        %I0.0.0
      MODL :=       MODL
LD                  POS5_AST.DONE
ST                  %Q 0.1.0
LD                  POS5_AST.STAT
ST                  AST_STAT
LD                  POS5_AST.ACT
ST                  AST_ACT
```

POS5_CRD

G5F-POPA Current status reading

Product	GM1	GM2	GM3	GM4	GM5
Applicable					●

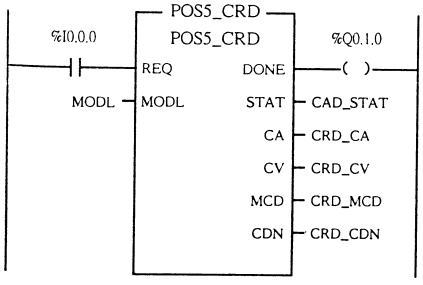
Function block	Description
	**Input** REQ : Function block execution request MODL : G5F-POPA module location number **Output** DONE : On if the function block is executed without error and hold on till next function block is executed. STAT : Display the error code generated during the function block execution. CA : Current location address display CV : Current operation speed display MCD : Current M Code value display CDN : Current operation Data No. display

■ Function

Function block to monitor current operation status of G5F-POPA module.

■ Program example

LD



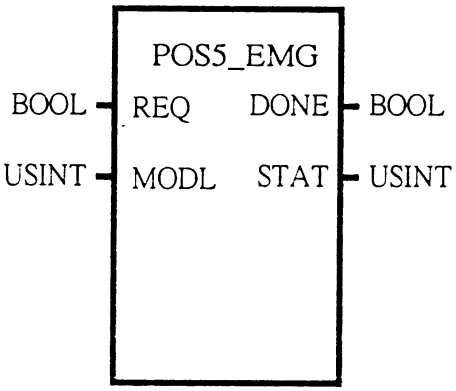
IL

```
CAL   POS5_CRD      POS5_CRD
      REQ :=        %I0.0.0
      MODL :=       MODL
LD                  POS5_CRD.DONE
ST                  %Q0.1.0
LD                  POS5_CRD.STAT
ST                  CRD_STAT
LD                  POS5_CRD.CA
ST                  CRD_CA
LD                  POS5_CRD.CV
ST                  CRD_CV
LD                  POS5_CRD.MCD
ST                  CRD_MCD
LD                  POS5_CRD.CDN
ST                  CRD_CDN
```

POS5_EMG

G5F-POPA Emergency stop

Product	GM1	GM2	GM3	GM4	GM5
Applicable					●

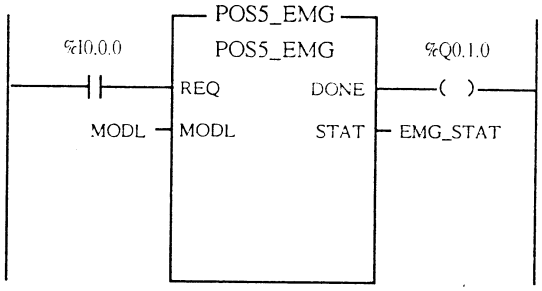
Function block	Description
	**Input** REQ : Function block execution request at rising edge MODL : G5F-POPA module location number **Output** DONE : On if the function block is executed without error and hold on till next function block is executed. STAT : Display the error code generated during the function block execution.

■ Function

Execute emergency stop during operating G5F-POPA module. Emergency stop is seperated with external emergency stop by external signal and internal emergency stop by function block. In case of internal emergency stop, external emergency stop signal must be always B contact(NC: Normal Close) status. This instruction has priority for other function block.

■ Program example

LD



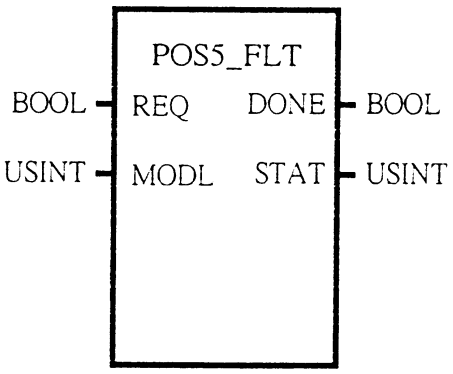
IL

```
CAL   POS5_EMG    POS5_EMG
      REQ := =    %I0.0.0
      MODL : =    MODL
LD                POS5_EMG.DONE
ST                %Q0.1.0
LD                POS5_EMG.STAT
ST                EMG_STAT
```

POS5_FLT

G5F-POPA Floating zero point set

Product	GM1	GM2	GM3	GM4	GM5
Applicable					●

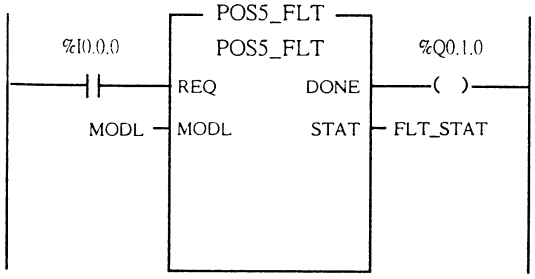
Function block	Description
	**Input** REQ : Function block execution request at rising edge MODL : G5F-POPA module location number **Output** DONE : On if the function block is executed without error and hold on till next function block is executed. STAT : Display the error code generated during the function block execution.

■ Function

Instruction to use current position as zero compulsively instead of machine zero. Current position will be the value of zero address at the parameter.

■ Program example

LD



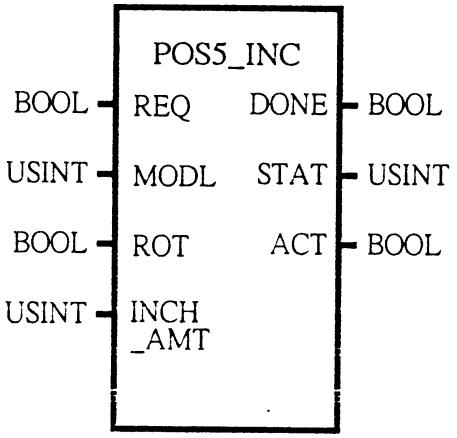
IL

```
CAL   POS5_FLT      POS5_FLT
      REQ :=        %I0.0.0
      MODL :=       MODL
LD                  POS5_FLT.DONE
ST                  %Q0.1.0
LD                  POS5_FLT.STAT
ST                  FLT_STAT
```

POS5_INC

G5F-POPA Inching

Product	GM1	GM2	GM3	GM4	GM5
Applicable					●

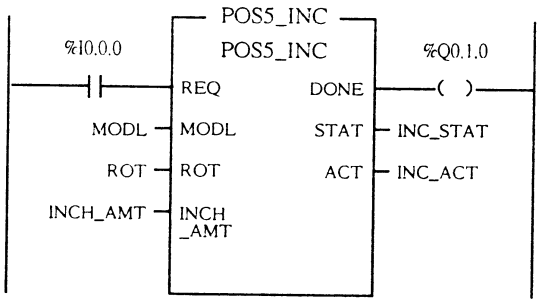
Function block	Description
	**Input** REQ : Function block execution request at rising edge MODL : G5F-POPA module location number ROT : Set the rotational direction of inching operation ('0': FWD, '1': BWD) INCH_AMT : Set the pulse amount to output (1~99) **Output** DONE : On if the function block is execute without error and off if 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 G5F-POPA and off if the instruction is used according to REQ condition.

■ Function

As the manual operation, output the pulse of the value set by rotational direction and INCH_AMT whenever REQ input signal is toggled.

■ Program example

LD



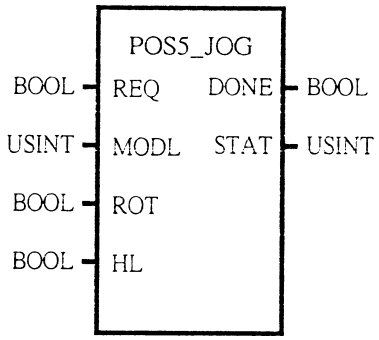
IL

```
CAL   POS5_INC      POS5_INC
      REQ :=        %I0.0.0
      MODL :=       MODL
      ROT :=        ROT
      INCH_AMT :=   INCH_AMT
LD                  POS5_INC.DONE
ST                  %Q0.1.0
LD                  POS5_INC.STAT
ST                  FLT_STAT
LD                  POS5_INC.ACT
ST                  INC_ACT
```

POS5_JOG

G5F-POPA JOG Operation

Product	GM1	GM2	GM3	GM4	GM5
Applicable					●

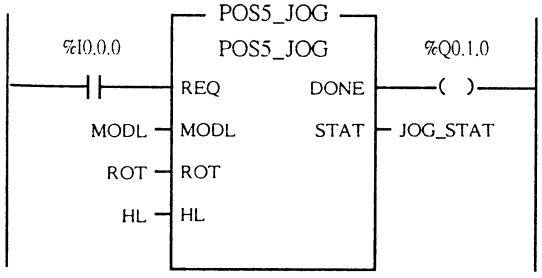
Function block	Description
	**Input** REQ : Function block execution request MODL : G5F-POPA module location number ROT : Set the rotational direction of JOG operation ('0': FWD, '1': BWD) HL : Set the high-speed/low-speed of JOG operation. ('0': Low-speed, '1': High-speed) **Output** DONE : On if the function block is executed without error and hold on till REQ condition is off. STAT : Display the error code generated during the function block execution.

■ Function

Instruction for G5F-POPA module to execute JOG operation which is used for manual operation and test operation. JOG operation is executed when REQ input is on and stopped when REQ input is off.

■ Program example

LD



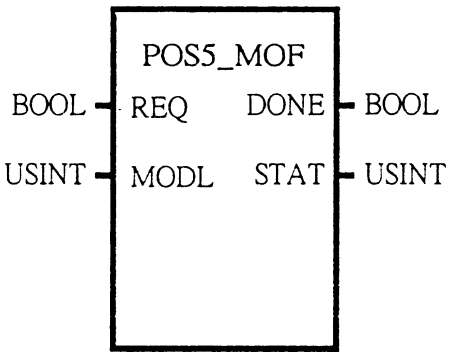
IL

```
CAL   POS5_JOG     POS5_JOG
      REQ :=       %I0.0.0
      MODL :=      MODL
      ROT :=       ROT
      HL :=        HL
LD                 POS5_JOG.DONE
ST                 %Q0.1.0
LD                 POS5_JOG.STAT
ST                 JOG_STAT
```

POS5_MOF

G5F-POPA M Code Off

Product	GM1	GM2	GM3	GM4	GM5
Applicable					●

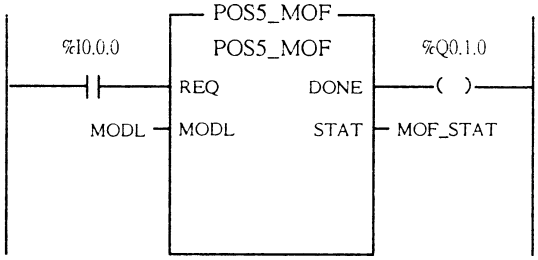
Function block	Description
	**Input** REQ : Function block execution request at rising edge MODL : G5F-POPA module location number **Output** DONE : On if the function block is executed without error and hold on till next function block is executed. STAT : Display the error code generated during the function block execution.

■ Function

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

■ Program example

LD



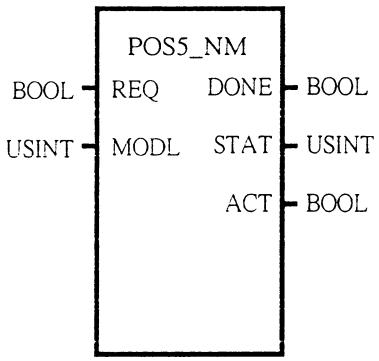
IL

```
CAL   POS5_MOF    POS5_MOF
      REQ :=      %I0.0.0
      MODL :=     MODL
LD                POS5_MOF.DONE
ST                %Q0.1.0
LD                POS5_MOF.STAT
ST                MOF_STAT
```

POS5_NM

G5F-POPA Next Move

Product	GM1	GM2	GM3	GM4	GM5
Applicable					●

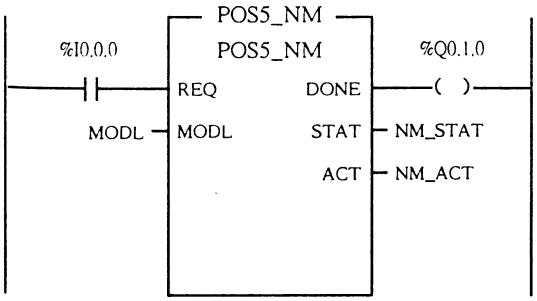
Function block	Description
	**Input** REQ : Function block execution request at rising edge MODL : G5F-POPA module location number **Output** DONE : On if the function block is executed without error and off if ACT is on. STAT : Display the error code generated during the function block execution. ACT : On if the order processing complete signal is received from G5F-POPA 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.

■ Program example

LD



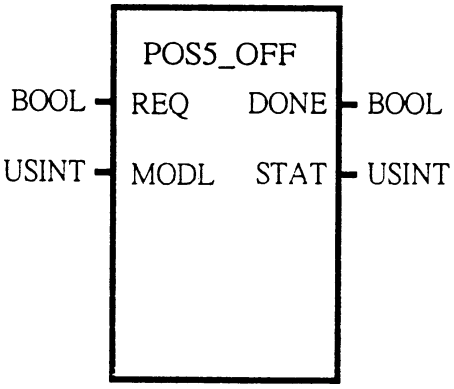
IL

```
CAL   POS5_NM      POS5_NM
      REQ :=       %I0.0.0
      MODL :=      MODL
LD                 POS5_NM.DONE
ST                 %Q 0.1.0
LD                 POS5_NM.STAT
ST                 NM_STAT
LD                 POS5_NM.ACT
ST                 NM_ACT
```

POS5_OFF

G5F-POPA Output prohibit release

Product	GM1	GM2	GM3	GM4	GM5
Applicable					●

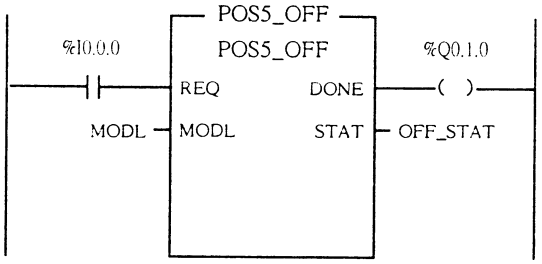
Function block	Description
	**Input** REQ : Function block execution request at rising edge MODL : G5F-POPA module location number **Output** DONE : On if the function block is executed without error and hold on till next function block is executed. STAT : Display the error code generated during the function block execution.

■ Function

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

■ Program example

LD



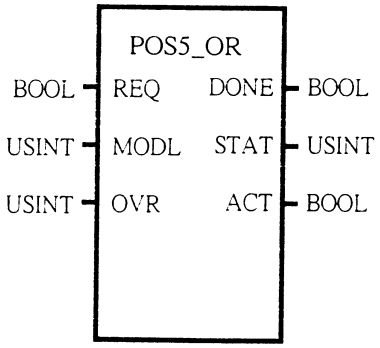
IL

```
CAL   POS5_OFF      POS5_OFF
      REQ :=        %I0.0.0
      MODL :=       MODL
LD                  POS5_OFF.DONE
ST                  %Q 0.1.0
LD                  POS5_OFF.STAT
ST                  OFF_STAT
```

POS5_OR

G5F-POPA Override

Product	GM1	GM2	GM3	GM4	GM5
Applicable					●

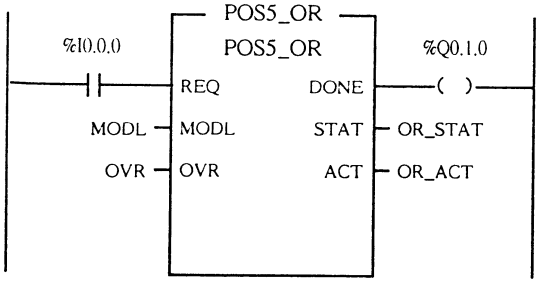
Function block	Description
	**Input** REQ : Function block execution request at rising edge MODL : G5F-POPA module location number OVR : Change the speed from 10 to 150% based on predefined speed and set 1~15 value(Override value x 10% speed change) **Output** DONE : On if the function block is executed without error and off if ACT is on. STAT : Display the error code generated during the function block execution. ACT : On if receives the order processing complete signal from G5F-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



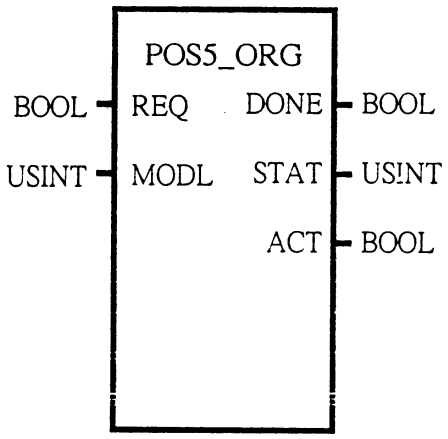
IL

```
CAL   POS5_OR      POS5_OR
      REQ :=       %I0.0.0
      MODL :=      MODL
      OVR :=       OVR
LD                 POS5_OR.DONE
ST                 %Q 0.1.0
LD                 POS5_OR.STAT
ST                 OR_STAT
LD                 POS5_OR.ACT
ST                 OR_ACT
```

POS5_ORG

G5F-POPA Zero point return

Product	GM1	GM2	GM3	GM4	GM5
Applicable					●

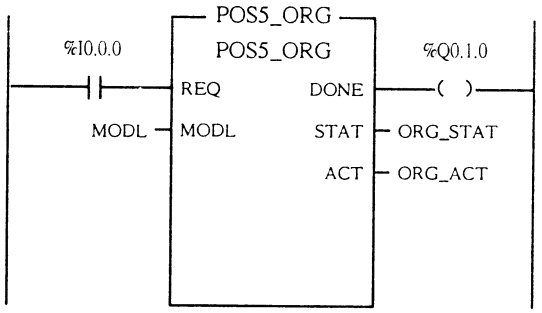
Function block	Description
	**Input** REQ : Function block execution request at rising edge MODL : G5F-POPA module location number **Output** DONE : On if the function block is executed without error and off if ACT is on. STAT : Display the error code generated during the function block execution. ACT : On if receives the zero point return complete signal from G5F-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 complete signal.

■ Program example

LD



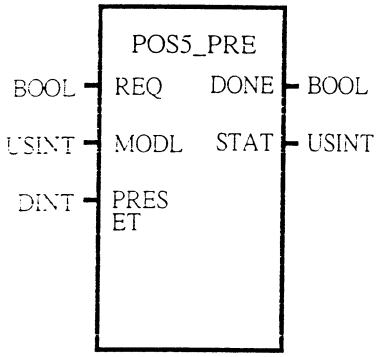
IL

```
CAL   POS5_ORG     POS5_ORG
      REQ : =      %I0.0.0
      MODL : =     MODL
LD                 POS5_OR.DONE
ST                 %Q 0.1.0
LD                 POS5_ORG.STAT
ST                 ORG_STAT
LD                 POS5_ORG.ACT
ST                 ORG_ACT
```

POS5_PRE

G5F-POPA Preset

Product	GM1	GM2	GM3	GM4	GM5
Applicable					●

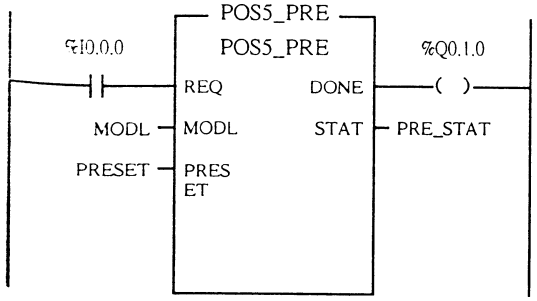
Function block	Description
	**Input** REQ : Function block execution request at rising edge MODL : G5F-POPA module location number PRESET : Set the data including sign(-16,744,447~+16,744,447) to change current position to certain value. **Output** DONE : On if the function block is executed without 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



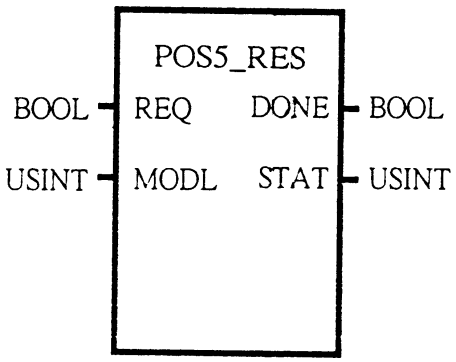
IL

```
CAL   POS5_PRE     POS5_PRE
      REQ :=       %I0.0.0
      MODL :=      MODL
      PRESET :=    PRESET
LD                 POS5_PRE.DONE
ST                 %Q 0.1.0
LD                 POS5_PRE.STAT
ST                 PRE_STAT
```

POS5_RES

G5F-POPA Error Reset

Product	GM1	GM2	GM3	GM4	GM5
Applicable					●

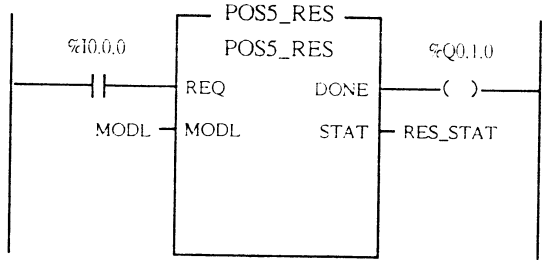
Function block	Description
	**Input** REQ : Function block execution request at rising edge MODL : G5F-POPA module location number **Output** DONE : On if the function block is executed without error and hold on till next function block is executed. STAT : Display the error code generated during the function block execution.

■ Function

Instruction to reset the error generated at G5F-POPA module. However, the ouput prohibit status cannot be released. For this, use the POS5_OFF.

■ Program example

LD



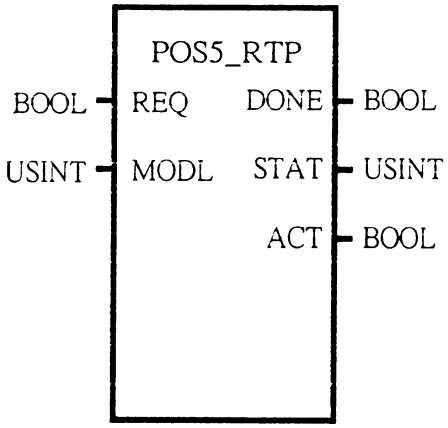
IL

```
CAL   POS5_RES      POS5_RES
      REQ :=        %I0.0.0
      MODL :=       MODL
LD                  POS5_RES.DONE
ST                  %Q 0.1.0
LD                  POS5_RES.STAT
ST                  PRE_STAT
```

POS5_RTP

G5F-POPA Return to Position

Product	GM1	GM2	GM3	GM4	GM5
Applicable					●

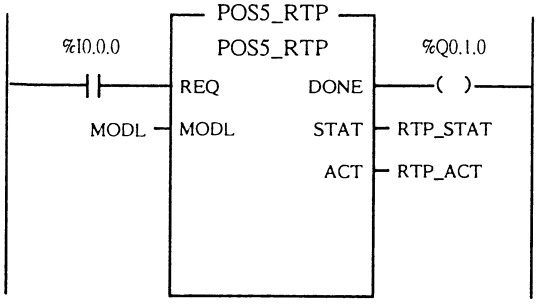
Function block	Description
	**Input** REQ : Function block execution request at rising edge MODL : G5F-POPA module location number **Output** DONE : On if the function block is executed without error and off if ACT is on. STAT : Display the error code generated during the function block execution. ACT : On if receives the order processing complete signal from G5F-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



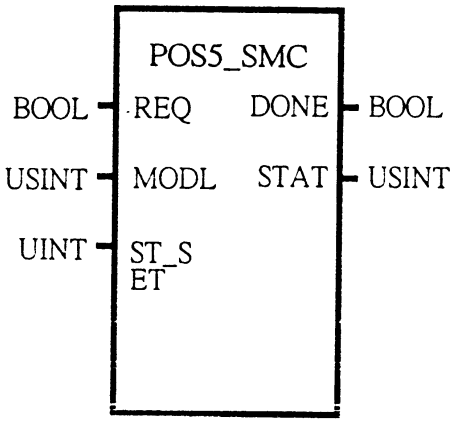
IL

```
CAL   POS5_RTP     POS5_RTP
      REQ :=       %I0.0.0
      MODL :=      MODL
LD                 POS5_RTP.DONE
ST                 %Q 0.1.0
LD                 POS5_RTP.STAT
ST                 RTP_STAT
LD                 POS5_RTP.ACT
ST                 RTP_ACT
```

POS5_SMC

G5F-POPA Next execution data number change

Product	GM1	GM2	GM3	GM4	GM5
Applicable					●

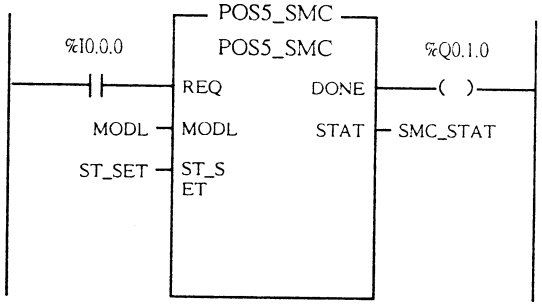
Function block	Description
	**Input** REQ : Function block execution request at rising edge MODL : G5F-POPA module location number ST_SET : Change the operation data no. at next instruction within the range of 0~299. **Output** DONE : On if the function block is executed without error and off if hold on till next function block is executed. 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

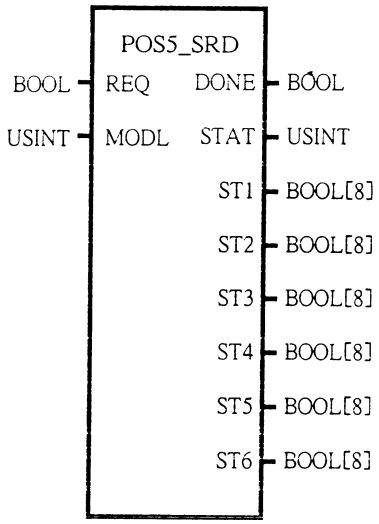
```
CAL   POS5_SMC      POS5_SMC
      REQ :=        %I0.0.0
      MODL :=       MODL
      ST_SET :=     ST_SET
LD                  POS5_SMC.DONE
ST                  %Q 0.1.0
LD                  POS5_SMC.STAT
ST                  SET_STAT
```

POS5_SRD

G5F-POPA 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
MODL : G5F-POPA module location number

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.

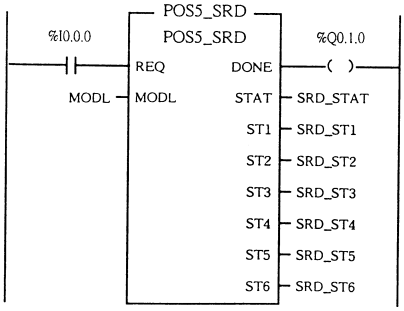
	ST1 content	ST2 content	ST3 content
[0]	Dwell state	Upper limit	Not used
[1]	Decel state	Lower limit	FWD/BWD
[2]	Static state	Emergency stop	ZONE#1
[3]	Accel state	Pulse output prohibit	ZONE#2
[4]	Stop state	Inching completion	ZONE#3
[5]	Zeroing state	Teaching completion	Repeat operation completion
[6]	Positioning state	JOG low-speed operation	Positioning start completion
[7]	Not used	JOG high-speed operation	M Code On
	ST4 content	**ST5 content**	**ST6 content**
[0]	Zeroing 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 G5F-POPA module by bit information.

■ Program example

LD



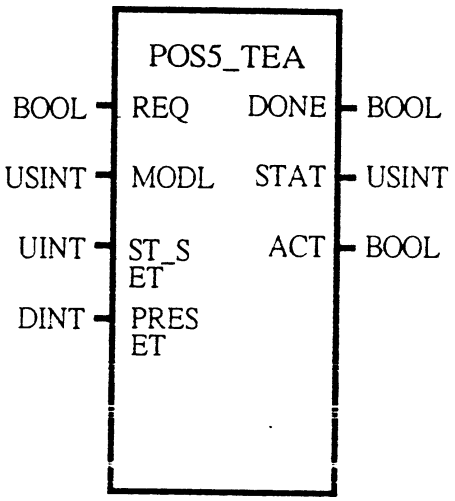
IL

```
CAL   POS5_SRD      POS5_SRD
      REQ :=        %I0.0.0
      MODL :=       MODL
LD                  POS5_SRD.DONE
ST                  %Q0.1.0
LD                  POS5_SRD.STAT
ST                  SRD_STAT
LD                  POS5_SRD.ST1
ST                  SRD_ST1
LD                  POS5_SRD.ST2
ST                  SRD_ST2
LD                  POS5_SRD.ST3
ST                  SRD_ST3
LD                  POS5_SRD.ST4
ST                  SRD_ST4
LD                  POS5_SRD.ST5
ST                  SRD_ST5
LD                  POS5_SRD.ST6
ST                  SRD_ST6
```

POS5_TEA

G5F-POPA Position Teaching

Product	GM1	GM2	GM3	GM4	GM5
Applicable					●

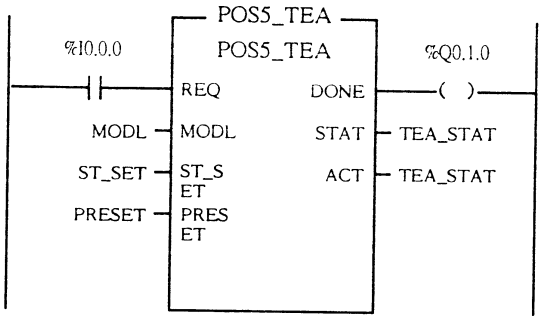
Function block	Description
	**Input** REQ : Function block execution request at rising edge MODL : G5F-POPA module location number ST_SET : Set the operation data no. for position teaching.(0~299) PRESET : Set the position address for position teaching.(-16,744,447~ +16,744,447) **Output** DONE : On if the function block is executed without error and off if hold on till next function block is executed. STAT : Display the error code generated during the function block execution. ACT : On if receives the order processing complete signal from G5F-POPA and off if the instruction is used according to REQ condition.

■ Function

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

■ Program example

LD



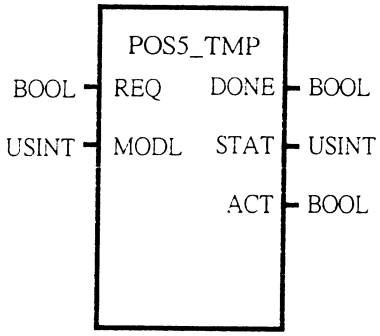
IL

```
CAL   POS5_TEA      POS5_TEA
      REQ :=        %I0.0.0
      MODL :=       MODL
      ST_SET :=     ST_SET
      PRESET :=     PRESET
LD                  POS5_TEA.DONE
ST                  %Q0.1.0
LD                  POS5_TEA.STAT
ST                  TEA_STAT
LD                  POS5_TEA.ACT
ST                  TEA_ACT
```

POS5_TMP

Deceleration stop

Product	GM1	GM2	GM3	GM4	GM5
Applicable					●

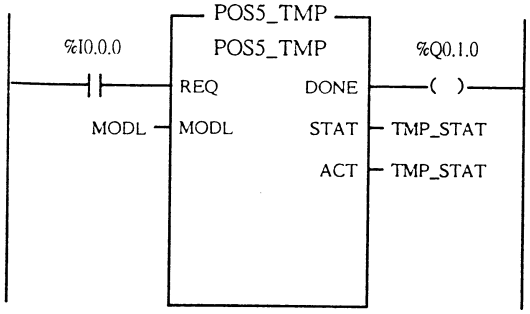
Function block	Description
	**Input** REQ : Function block execution request at rising edge MODL : G5F-POPA module location number **Output** DONE : On if the function block is executed without error and off when ACT is on. STAT : Display the error code generated during the function block execution. ACT : On if receives the order processing complete signal from G5F-POPA and off if the instruction is used according to REQ condition.

■ Function

Instruction to stop G5F-POPA during operation. if the function block relating stop is processed by POS5_AST, ACT condition of POS5_AST function block is not on. The machine will be operated again by toggling the function block input REQ of POS5_AST,

■ Program example

LD



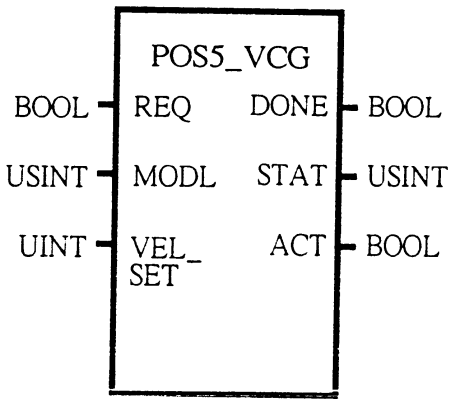
IL

```
CAL   POS5_TMP      POS5_TMP
      REQ :=        %I0.0.0
      MODL :=       MODL
LD                  POS5_TMP.DONE
ST                  %Q0.1.0
LD                  POS5_TMP.STAT
ST                  TMP_STAT
LD                  POS5_TMP.ACT
ST                  TMP_ACT
```

POS5_VCG

Speed change

Product	GM1	GM2	GM3	GM4	GM5
Applicable					●

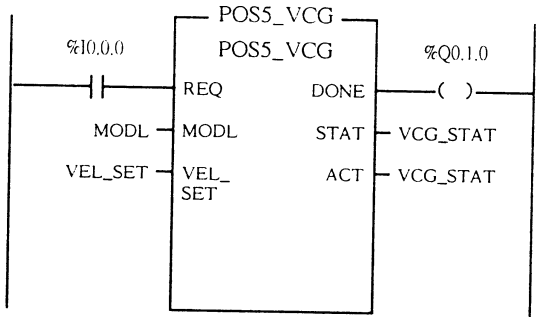
Function block	Description
	**Input** REQ : Function block execution request at rising edge MODL : G5F-POPA module location number VEL_SET : Set current speed to the speed value to be changed. **Output** DONE : On if the function block is executed without error and off when ACT is on. STAT : Display the error code generated during the function block execution. ACT : On if receives the order processing complete signal from G5F-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



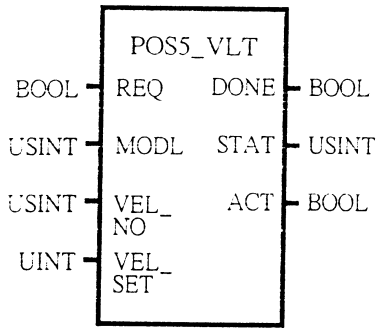
IL

```
CAL   POS5_VCG      POS5_VCG
      REQ :=        %I0.0.0
      MODL :=       MODL
      VER_SET :=    VER_SET
LD                  POS5_VCG.DONE
ST                  %Q0.1.0
LD                  POS5_VCG.STAT
ST                  VCG_STAT
LD                  POS5_VCG.ACT
ST                  VCG_ACT
```

POS5_VLT

Speed Teaching

Product	GM1	GM2	GM3	GM4	GM5
Applicable					●

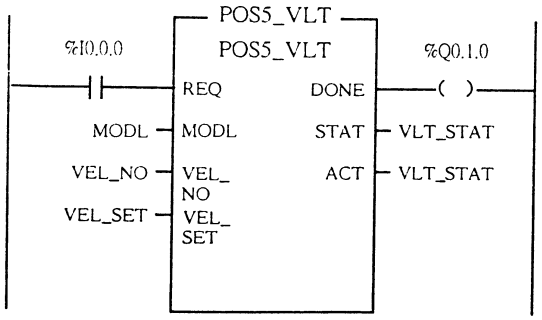
Function block	Description
	**Input** REQ : Function block execution request at rising edge MODL : G5F-POPA module location number VEL_NO : Set the speed data no. for speed teaching.(0~127) VEL_SET : Set the speed value for speed teaching (1~20,000) **Output** DONE : On if the function block is executed without error and off till next function block is executed. STAT : Display the error code generated during the function block execution. ACT : On if receives the order processing complete signal from G5F-POPA and off if the instruction is used according to REQ condition.

■ Function

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

■ Program example

LD



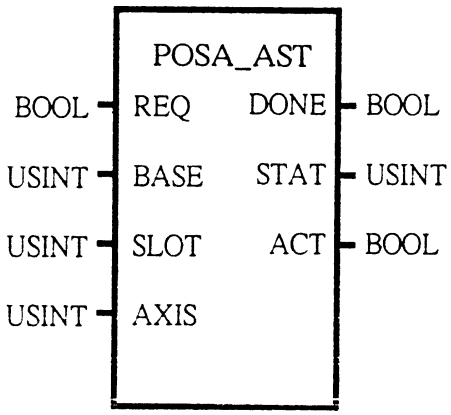
IL

```
CAL   POS5_VLT      POS5_VLT
      REQ :=        %I0.0.0
      MODL :=       MODL
      VER_NO :=     VER_NO
      VER_SET :=    VER_SET
LD                  POS5_VLT.DONE
ST                  %Q0.1.0
LD                  POS5_VLT.STAT
ST                  VLT_STAT
LD                  POS5_VLT.ACT
ST                  VLT_ACT
```

POSA_AST

G3F-POAA General automatic positioning operation

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

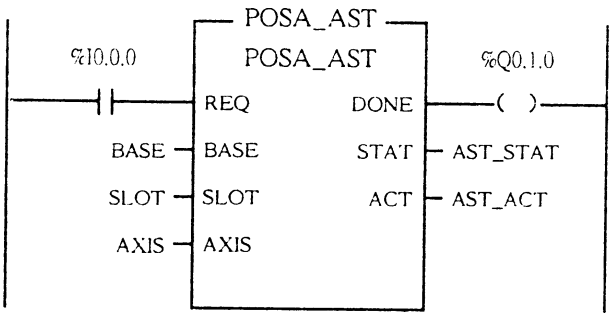
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POPA and G4F-POPA module installation base location number SLOT : Slot location number of G3F-POPA and G4F-POPA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation **Output** DONE : 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 positioning completion signal from G3F-POAA and off if the instruction is used according to REQ condition.

■ Function

Instruction to start the positioning operation of G3F-POAA. Check the status of G3F-POAA and use the instruction. If the positioning is completed, ACT is ON.

■ Program example

LD



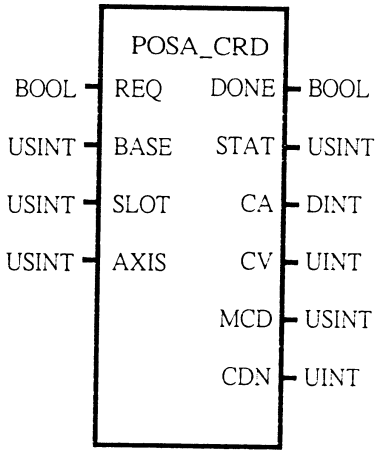
IL

```
CAL   POSA_AST     POSA_AST
      REQ :=       %I0.0.0
      BASE :=      BASE
      SLOT :=      SLOT
      AXIS :=      AXIS
LD                 POSA_AST.DONE
ST                 %Q 0.1.0
LD                 POSA_AST.STAT
ST                 AST_STAT
LD                 POSA_AST.ACT
ST                 AST_ACT
```

POSA_CRD

G3F-POAA current status reading operation

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

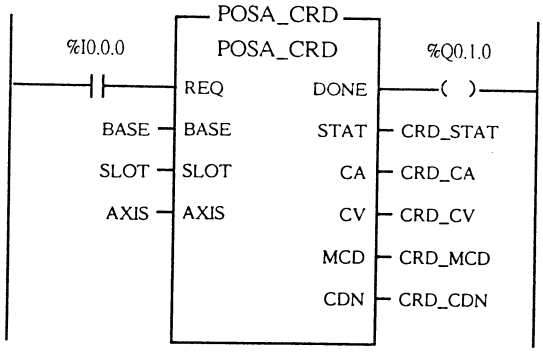
Function block	Description
	**Input** REQ : Function block execution request BASE : G3F-POAA module installation base location number SLOT : Slot location number of G3F-POAA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation **Output** DONE : On if the function block is executed without error and off till next function block is executed. STAT : Display the error code generated during the function block execution. CA : Current position address display CV : Current operation speed display MCD : Current M Code value display CDN : Current operation data No. display

■ Function

Function block to monitor current operation status of G3F-POAA module.

■ Program example

LD



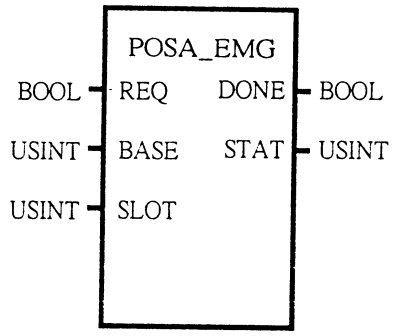
IL

```
CAL   POSA_CRD      POSA_CRD
      REQ :=        %I0.0.0
      BASE :=       BASE
      SLOT :=       SLOT
      AXIS :=       AXIS
LD                  POSA_CRD.DONE
ST                  %Q 0.1.0
LD                  POSA_CRD.STAT
ST                  CRD_STAT
LD                  POSA_CRD.CA
ST                  CRD_CA
LD                  POSA_CRD.CV
ST                  CRD_CV
LD                  POSA_CRD.MCD
ST                  CRD_MCD
LD                  POSA_CRD.CDN
ST                  CRD_CDN
```

POSA_EMG

G3F-POAA Emergency stop

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

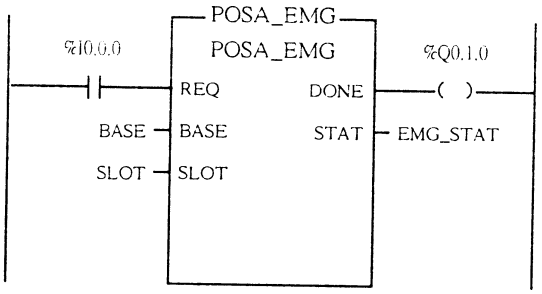
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POAA module installation base location number SLOT : Slot location number of G3F-POAA module installation base **Output** DONE : On if the function block is executed without error and off till next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

■ Function

Execute emergency stop during operating G3F-POAA and module. Emergency stop is seperated with external emergency stop by external signal and internal emergency stop by function block. In case of internal emergency stop, external emergency stop signal shall be always B contact(NC: Normal Close) status. This instruction has priority for other function block.

■ Program example

LD



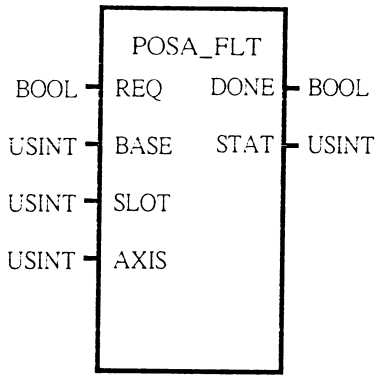
IL

```
CAL   POSA_EMG    POSA_EMG
      REQ :=      %I0.0.0
      BASE :=     BASE
      SLOT :=     SLOT
LD                POSA_EMG.DONE
ST                %Q0.1.0
LD                POSA_EMG.STAT
ST                EMG_STAT
```

POSA_FLT

G3F-POAA Floating zero point set

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

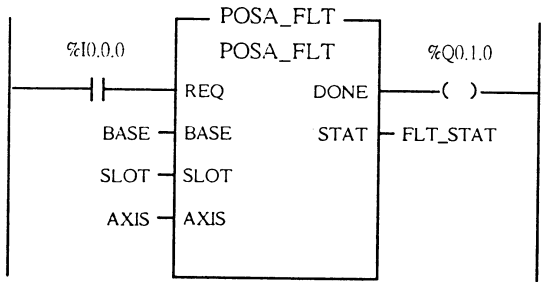
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POAA module installation base location number SLOT : Slot location number of G3F-POAA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation **Output** DONE : On if the function block 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 use current position as zero point compulsively instead of machine zero point. Current position will be the value of zero point address at the parameter.

■ Program example

LD



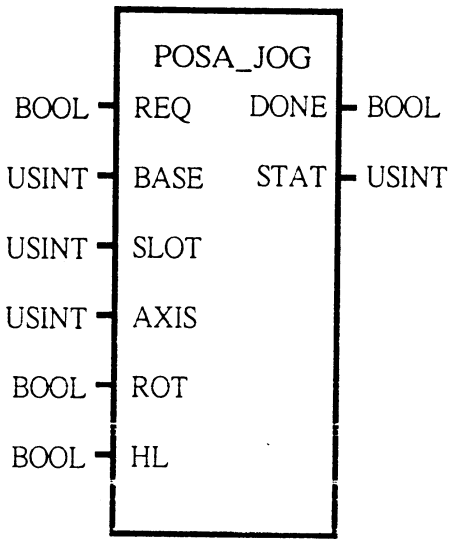
IL

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

POSA_JOG

G3F-POAA JOG Operation

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

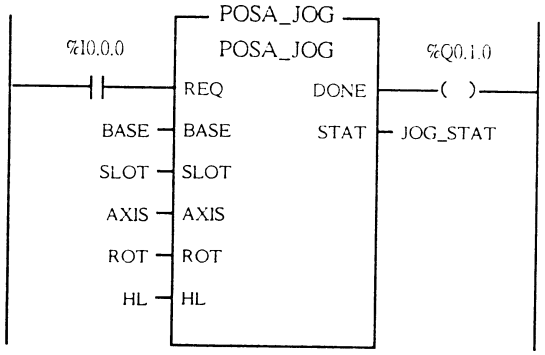
Function block	Description
	**Input** REQ : Function block execution request BASE : G3F-POAA module installation base location number SLOT : Slot location number of G3F-POAA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation ROT : Set the rotational direction of JOG operation ('0': Normal, '1': Reversal) 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 REQ condition is off. STAT : Display the error code generated during the function block execution.

■ Function

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

■ Program example

LD



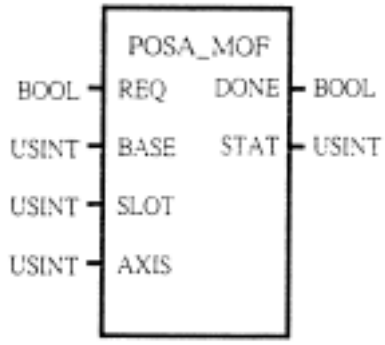
IL

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

POSA_MOF

G3F-POAA M Code Off

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

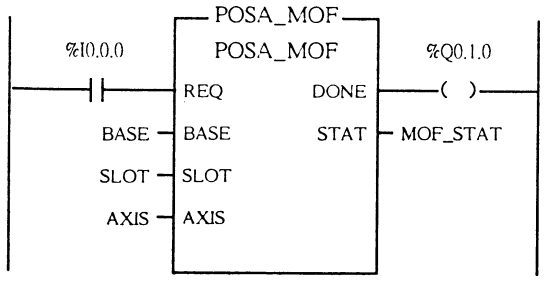
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POAA module installation base location number SLOT : Slot location number of G3F-POAA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation **Output** DONE : On if the function block 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 switch off M Code On signal which is set during positioning operation as the M code mode (with, after) in parameter.

■ Program example

LD



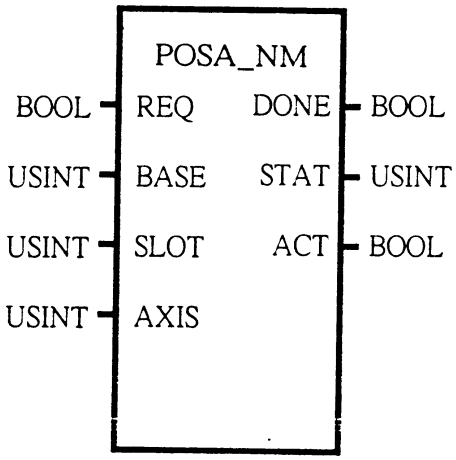
IL

```
CAL   POSA_MOF    POSA_MOF
      REQ :=      %I0.0.0
      BASE :=     BASE
      SLOT :=     SLOT
      AXIS :=     AXIS
LD                POSA_MOF.DONE
ST                %Q0.1.0
LD                POSA_MOF.STAT
ST                MOF_STAT
```

POSA_NM

G3F-POAA Next Move

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

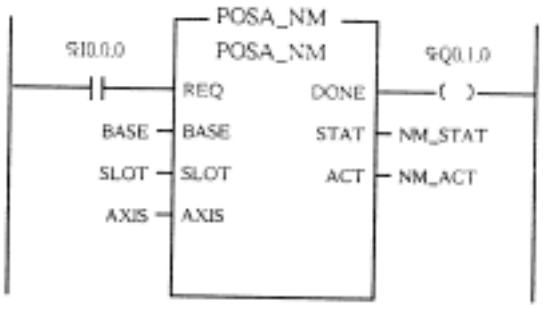
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POAA module installation base location number SLOT : Slot location number of G3F-POAA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation **Output** DONE : On if the function block is executed without error and off when ACT is on. STAT : Display the error code generated during the function block execution. ACT : On if the location define completion signal is received from G3F-POAA 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.

■ Program example

LD



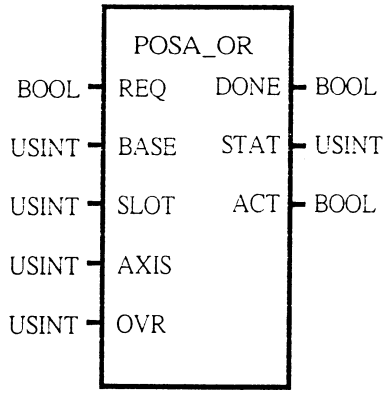
IL

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

POSA_OR

G3F-POAA Override

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

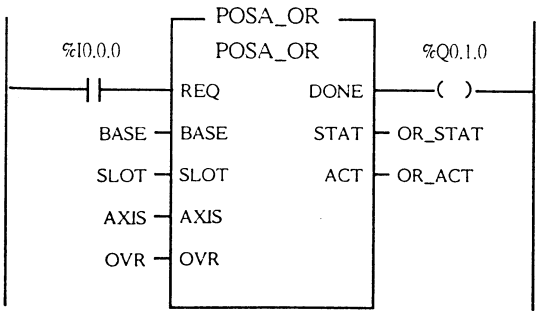
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POAA module installation base location number SLOT : Slot location number of G3F-POAA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation OVR : Change the speed from 10 to 150% 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 generated during the function block execution and the error of G3F-POAA module. ACT : On if the location order processing complete signal is received from G3F-POAA 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



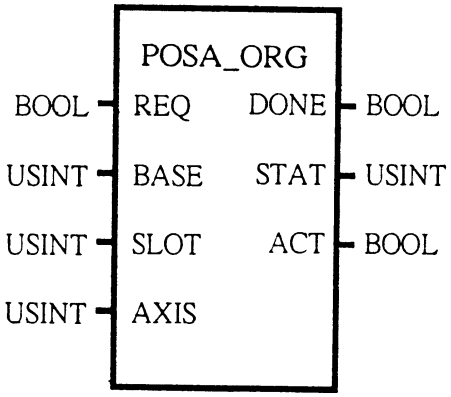
IL

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

POSA_ORG

G3F-POAA zero point return

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

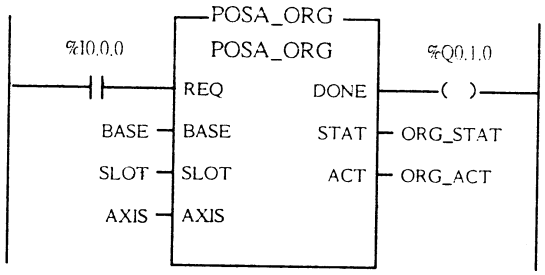
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POAA module installation base location number SLOT : Slot location number of G3F-POAA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation **Output** DONE : On if the function block is executed without error and off if ACT is on. STAT : Display the error generated during the function block execution and the error of G3F-POAA module. ACT : On if the positioning complete signal is received from G3F-POAA 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



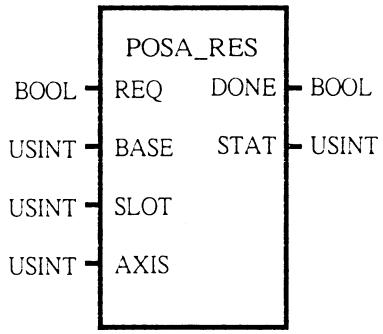
IL

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

POSA_RES

G3F-POAA Error Reset

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

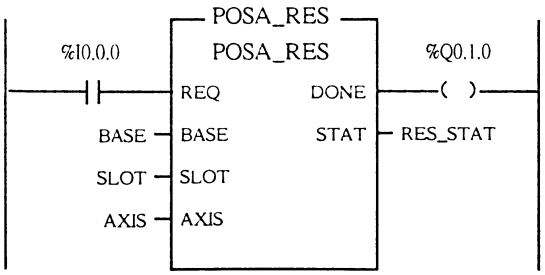
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POAA module installation base location number SLOT : Slot location number of G3F-POAA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation **Output** DONE : On if the function block 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 module.

■ Program example

LD



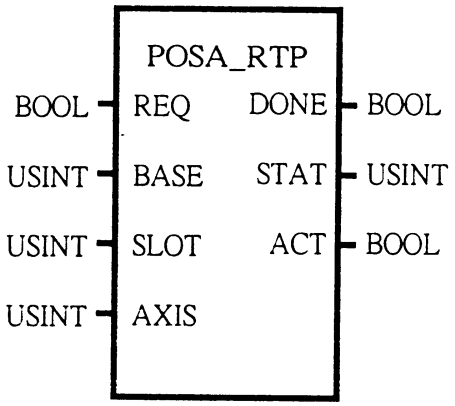
IL

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

POSA_RTP

G3F-POAA Return to Position

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

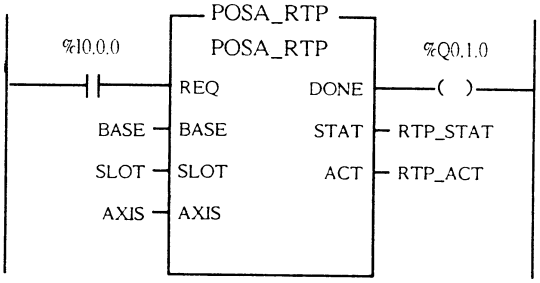
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POAA module installation base location number SLOT : Slot location number of G3F-POAA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation **Output** DONE : On if the function block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



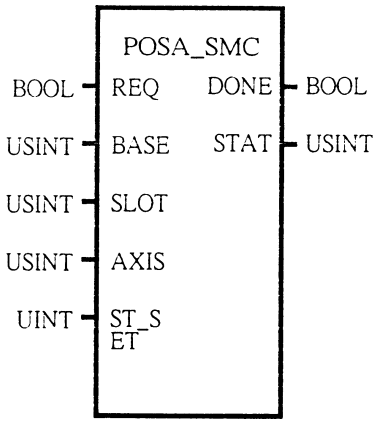
IL

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

POSA_SMC

G3F-POAA Next execution data number change

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

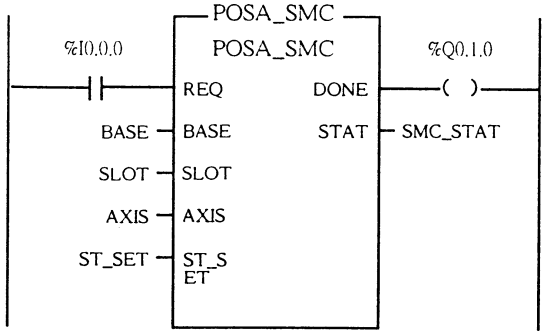
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POAA module installation base location number SLOT : Slot location number of G3F-POAA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation ST_SET : Change the operation data no. at next instruction within the range of 0~299. **Output** DONE : On if the function block is executed without error and hold on till next function block is executed. 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 0~149.

■ Program example

LD



IL

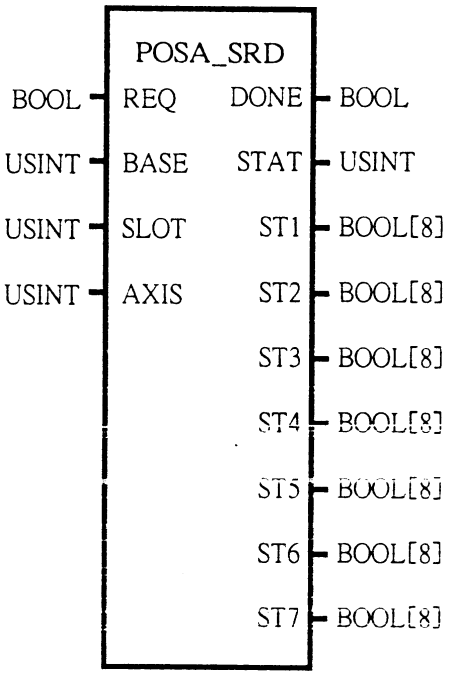
```
CAL   POSA_SMC      POSA_SMC
      REQ :=        %I0.0.0
      BASE :=       BASE
      SLOT :=       SLOT
      AXIS :=       AXIS
      ST_SET :=     ST_SET
LD                  POSA_SMC.DONE
ST                  %Q 0.1.0
LD                  POSA_SMC.STAT
ST                  SMC_STAT
```

POSA_SRD

G3F-POAA 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-POAA module installation base location number
SLOT : Slot location number of G3F-POAA module installation base
AXIS : 0: X-axis operation, 1: Y-axis operation
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.

ST	ST1 content	ST2 content	ST3 content
[0]	Stop state	Synchronization operation waiting	Upper limit
[1]	Dwell state	Linear interpolation	Lower limit
[2]	Decel state	Circular interpolation	Emergency stop
[3]	Static state	Not used	Output prohibit status
[4]	Accel state	General synchronization driving	Teaching completion
[5]	Zeroing state	Ratio operation	TPB operation
[6]	Positioning state	General synchronization driving(Synchronization)	JOG low-speed operation
[7]	Interpolation state	Ratio operation	JOG high-speed operation
	ST4 content	**ST5 content**	**ST6 content**
[0]	Communicating	Not used	Dog signal(H/W)
[1]	FWD/BWD	Zero point return compensation	Zero point signal(H/W)
[2]	ZONE#1	Backlash compensation	Not used
[3]	ZONE#2	Next Move process	Upper limit(H/W)
[4]	ZONE#3	Override process	Lower limit(H/W)
[5]	Repeat operation completion	Decel stop and completion	Emergency stop(H/W)
[6]	Positioning start completion	Speed teaching completion	Not used
[7]	Not used	Speed change completion	Not used

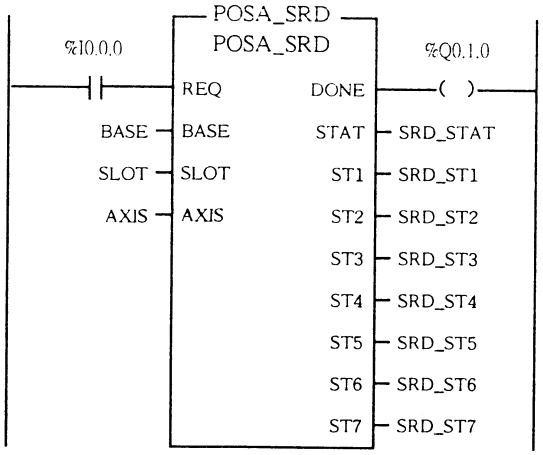
	ST7 content				
[0]	H/W Error	[3]	Busy	[6]	Zero point not defined
[1]	Error	[4]	Positioning completion	[7]	Inposition signal
[2]	Position passing signal	[5]	M Code On		

■ Function

Function block to monitor current operation status of G3F-POAA module by bit information.

■ Program example

LD



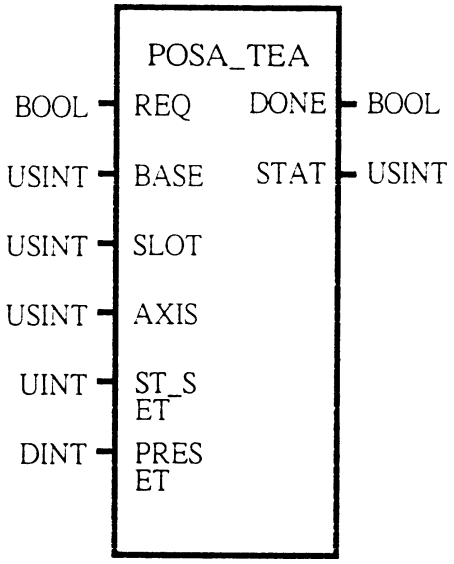
IL

```
CAL   POSA_SRD      POSA_SMC
      REQ :=        %I0.0.0
      BASE :=       BASE
      SLOT :=       SLOT
      AXIS :=       AXIS
LD                  POSA_SRD.DONE
ST                  %Q0.1.0
LD                  POSA_SRD.STAT
ST                  SRD_STAT
LD                  POSA_SRD.ST1
ST                  SRD_ST1
LD                  POSA_SRD.ST2
ST                  SRD_ST2
LD                  POSA_SRD.ST3
ST                  SRD_ST3
LD                  POSA_SRD.ST4
ST                  SRD_ST4
LD                  POSA_SRD.ST5
ST                  SRD_ST5
LD                  POSA_SRD.ST6
ST                  SRD_ST6
LD                  POSA_SRD.ST7
ST                  SRD_ST7
```

POSA_TEA

G3F-POAA Position Teaching

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

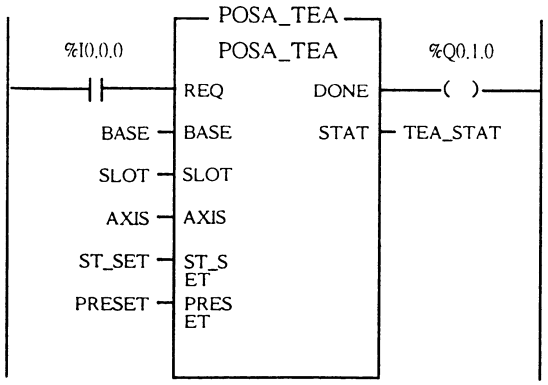
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POAA module installation base location number SLOT : Slot location number of G3F-POAA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation ST_SET : Set the operation data no. for position teaching.(0~149) PRESET: Set the position address for position teaching. **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 number and the zero point must have defined before.

■ Program example

LD



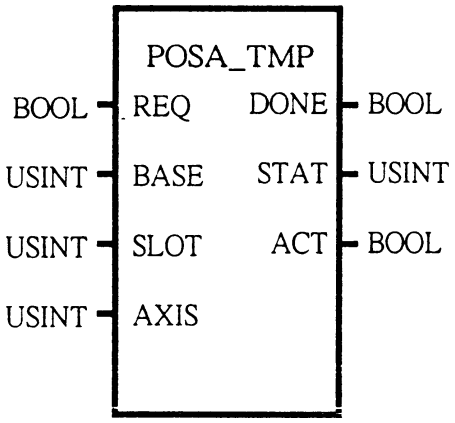
IL

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

POSA_TMP

Deceleration stop

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

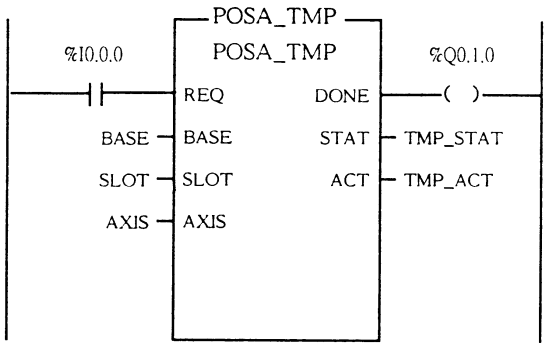
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POAA module installation base location number SLOT : Slot location number of G3F-POAA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation **Output** DONE : On if the function block is executed without error and off when 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-POAA and off if the instruction is used according to REQ condition.

■ Function

Instruction to stop G3F-POAA 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



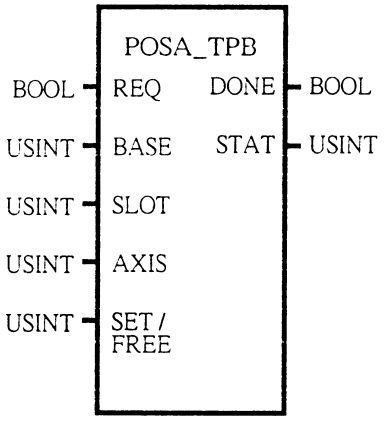
IL

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

POSA_TPB

G3F-POAA Teaching Play Back

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

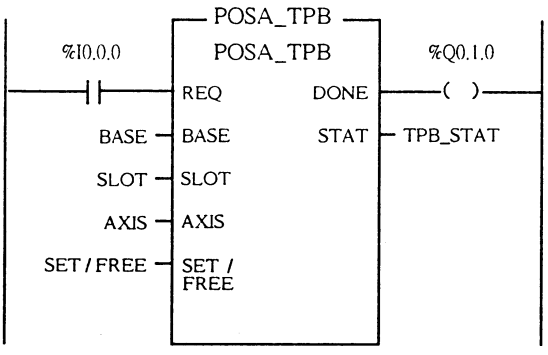
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POAA module installation base location number SLOT : Slot location number of G3F-POAA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation SET/FREE : TPB operation is available at SET status through Servo Off and is unable at Free status through Servo On so that normal operation is available. **Output** DONE : On if the function block is executed without error, holds it on until function block is executed. STAT : Display the error code generated during the function block execution.

■ Function

Place TPB SET instruction(1) to operate Teaching Play Back operation during normal operation at Servo On at initial step. Then, Servo Off status appears. After operation, place TPB Free instruction(0) for Servo On status so that normal operation is available.

■ Program example

LD



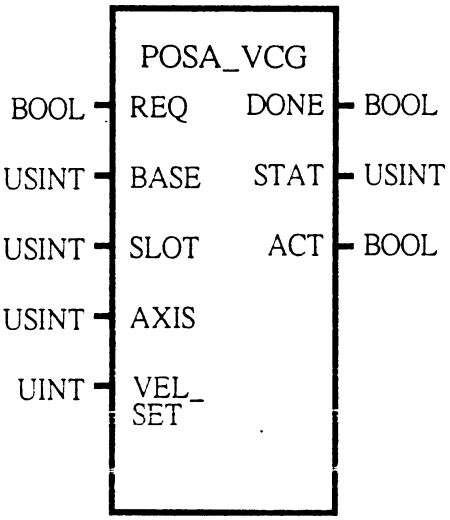
IL

```
CAL   POSA_TPB      POSA_TPB
      REQ :=        %I0.0.0
      BASE :=       BASE
      SLOT :=       SLOT
      AXIS :=       AXIS
      SET / FREE := SET / FREE
LD                  POSA_TPB.DONE
ST                  %Q 0.1.0
LD                  POSA_TPB.STAT
ST                  TPB_STAT
```

POSA_VCG

Speed change

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

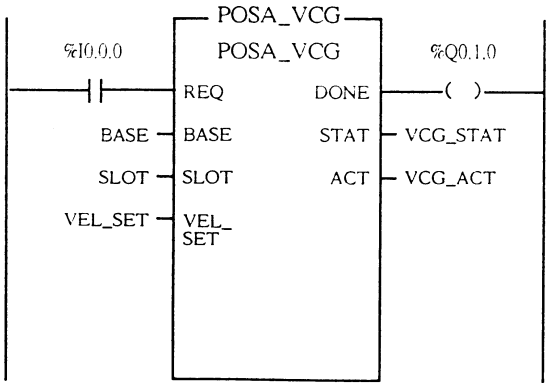
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POAA module installation base location number SLOT : Slot location number of G3F-POAA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation VEL_SET: Set current speed to the speed value to be changed. **Output** DONE : On if the function block is executed without error and off when 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-POAA 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



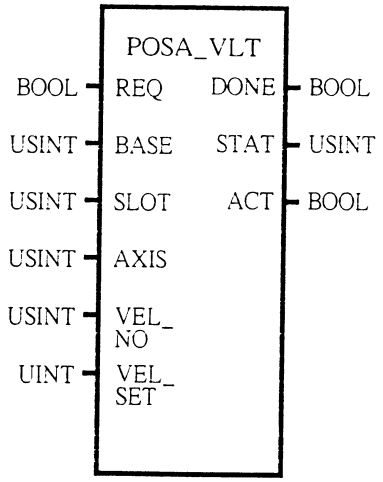
IL

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

POSA_VLT

Speed Teaching

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

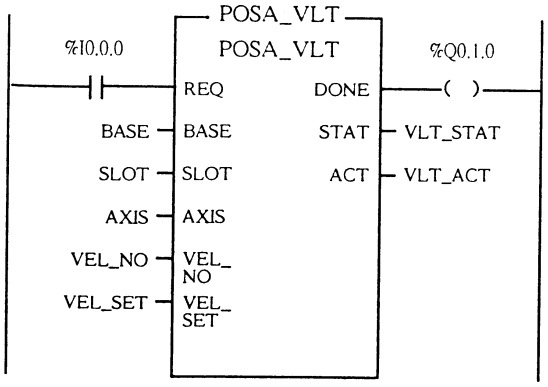
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POAA module installation base location number SLOT : Slot location number of G3F-POAA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation VEL_NO : Set the speed data no. for speed teaching.(0~149) VEL_SET : Set the speed value for speed teaching. (1~25,000: Pulse unit) **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. ACT : On if receives the order processing complete signal from G3F-POAA 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



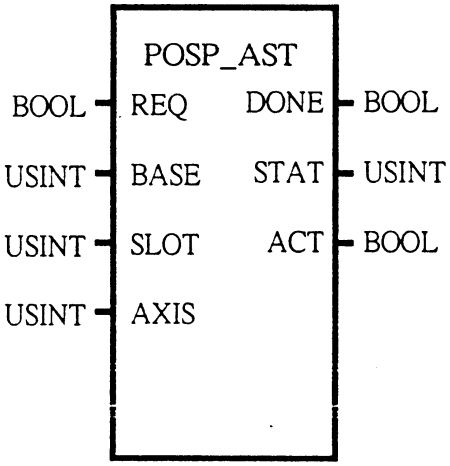
IL

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

POSP_AST

G3F-POPA, G4F-POPA(AXIS=0) General automatic positioning operation

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●	●	

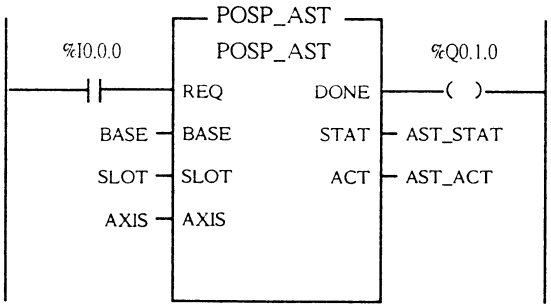
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POPA or G4F-POPA module installation base location number SLOT : Slot location number of G3F-POPA or G4F-POPA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation(G3F-POPA only) **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 positioning complete signal from G3F-POPA or G4F-POPA and off if the instruction is used according to REQ condition.

■ Function

Instruction to start the positioning operation of G3F-POPA or G4F-POPA. Check the status of G3F-POPA and G4F-POPA and use the instruction. If the positioning is completed, ACT is ON.

■ Program example

LD



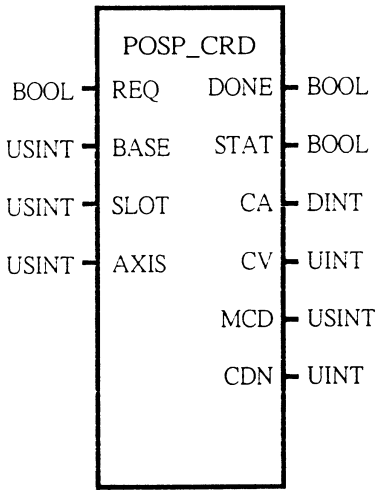
IL

```
CAL   POSP_AST      POSP_AST
      REQ :=        %I0.0.0
      BASE :=       BASE
      SLOT :=       SLOT
      AXIS :=       AXIS
LD                  POSP_AST.DONE
ST                  %Q 0.1.0
LD                  POSP_AST.STAT
ST                  AST_STAT
LD                  POSP_AST.ACT
ST                  AST_ACT
```

POSP_CRD

G3F-POPA, G4F-POPA(AXIS=0) Current status reading

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●	●	

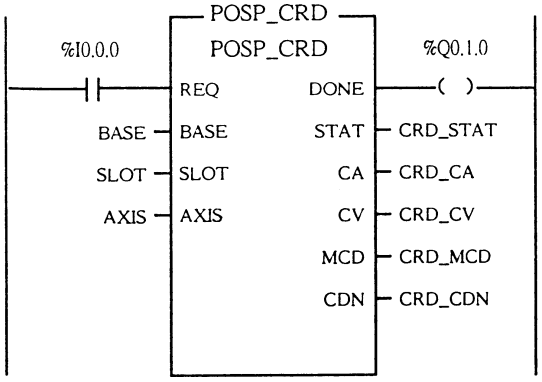
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POPA or G4F-POPA module installation base location number SLOT : Slot location number of G3F-POPA or G4F-POPA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation(G3F-POPA only) **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. CA : Current position address display CV : Current operation speed display MCD : Current M Code value display CDN : Current operation data No. display

■ Function

Function block to monitor current operation status of G3F-POPA or G4F-POPA modules.

■ Program example

LD



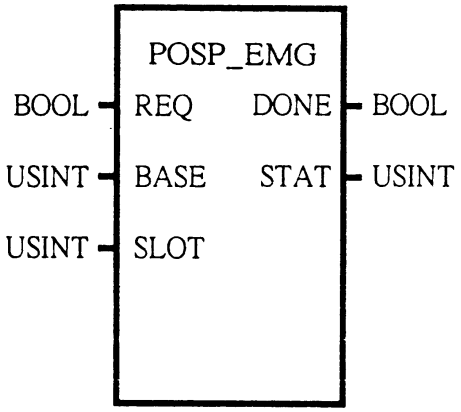
IL

```
CAL   POSP_CRD      POSP_CRD
      REQ :=        %I0.0.0
      BASE :=       BASE
      SLOT :=       SLOT
      AXIS :=       AXIS
LD                  POSP_CRD.DONE
ST                  %Q0.1.0
LD                  POSP_CRD.STAT
ST                  CRD_STAT
LD                  POSP_CRD.CA
ST                  CRD_CA
LD                  POSP_CRD.CV
ST                  CRD_CV
LD                  POSP_CRD.MCD
ST                  CRD_MCD
LD                  POSP_CRD.CDN
ST                  CRD_CDN
```

POSP_EMG

G3F-POPA, G4F-POPA(AXIS=0) Emergency stop

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●	●	

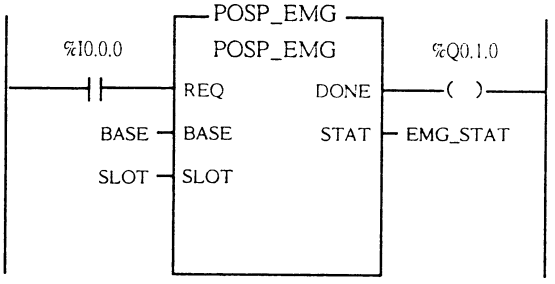
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POPA or G4F-POPA module installation base location number SLOT : Slot location number of G3F-POPA or G4F-POPA module installation base **Output** DONE : On if the function block is executed without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

■ Function

Execute emergency stop during operating G3F-POPA or G4F-POPA module. Emergency stop is seperated with external emergency stop by external signal and internal emergency stop by function block. In case of internal emergency stop, external emergency stop signal shall be always B contact(NC: Normal close) status. This instruction has priority for other function block.

■ Program example

LD



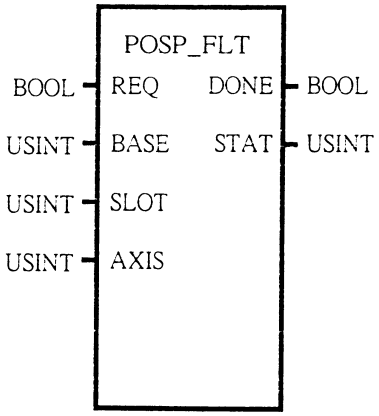
IL

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

POSP_FLT

G3F-POPA, G4F-POPA(AXIS=0) Floating zero point set

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●	●	

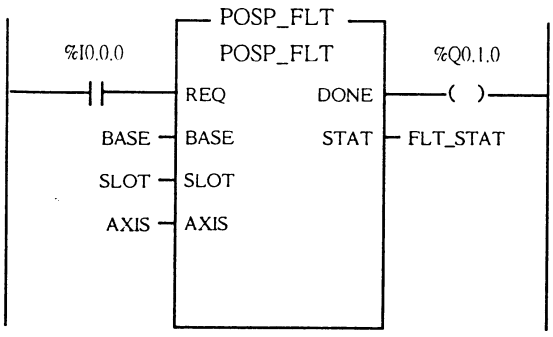
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POPA and G4F-POPA module installation base location number SLOT : Slot location number of G3F-POPA and G4F-POPA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation(G3F-POPA only)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

■ Function

Instruction to use current position as zero point compulsively instead of machine zero point. Current position will be the value of zero point address at the parameter.

■ Program example

LD



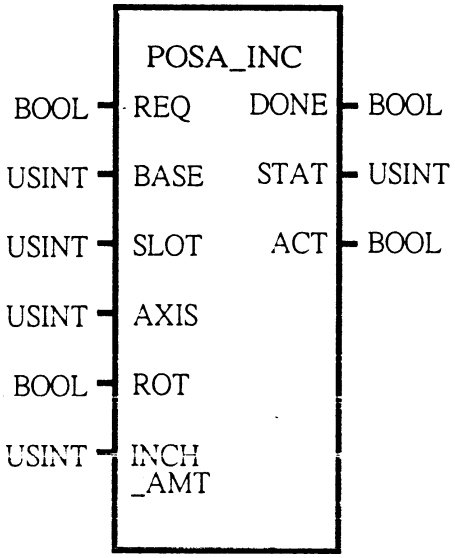
IL

```
CAL   POSP_FLT     POSP_FLT
      REQ :=       %I0.0.0
      BASE :=      BASE
      SLOT :=      SLOT
      AXIS :=      AXIS
LD                 POSP_FLT.DONE
ST                 %Q0.1.0
LD                 POSP_FLT.STAT
ST                 EMG_STAT
```

POSP_INC

G3F-POPA, G4F-POPA(AXIS=0) Inching operation

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●	●	

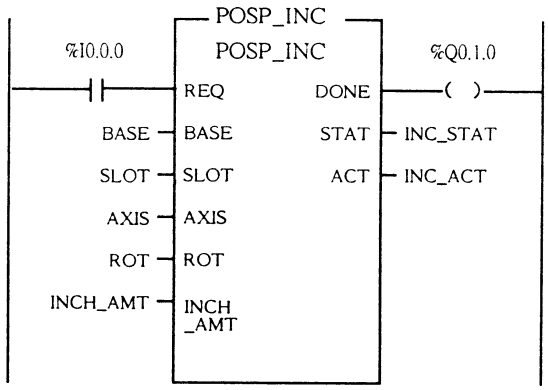
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POPA or G4F-POPA module installation base location number SLOT : Slot location number of G3F-POPA or G4F-POPA module installation base AXIS : 0: X-axis operation, 1: Y-axis operation(G3F-POPA only) ROT : Set the rotational direction of inching operation ('0': FWD, '1': BWD) INCH_AMT : Set the pulse amount to output (1~99) **Output** DONE : On if the function block is executed without error and off if ACT is on. STAT : Display the error code generated during execution. ACT : On if the order processing complete signal is received from G3F-POPA or G4F-POPA and off if the instruction is used according to REQ condition.

■ Function

As the manual operation, output the pulse of the value set by rotational direction and INCH_AMT whenever REQ Input signal is toggled.

■ Program example

LD



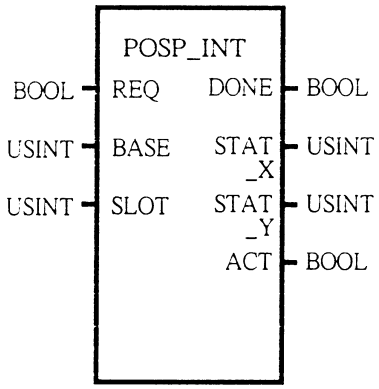
IL

```
CAL   POSP_INC      POSP_INC
      REQ :=        %I0.0.0
      BASE :=       BASE
      SLOT :=       SLOT
      AXIS :=       AXIS
      ROT :=        ROT
      INCH_AMT :=   INCH_AMT
LD                  POSP_INC.DONE
ST                  %Q 0.1.0
LD                  POSP_INC.STAT
ST                  INC_STAT
LD                  POSP_INC.ACT
ST                  INC_ACT
```

POSP_INT

G3F-POPA Linear interpolation

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

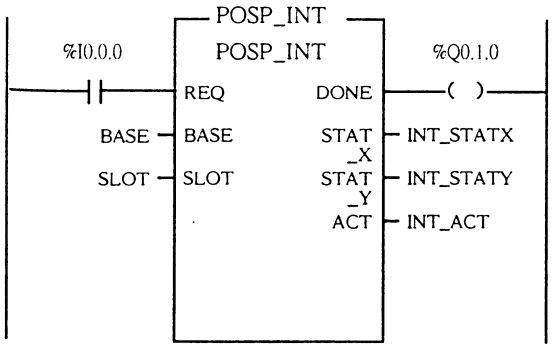
Function block	Description
	**Input** REQ : Function block execution request at rising edge BASE : G3F-POPA module installation base location number SLOT : Slot location number of G3F-POPA module installation base **Output** DONE : On if the function block is executed without error and off if ACT is on. STAT_X : Display the error of the function block or the error of G3F-POPA X axis. STAT_Y : Display the error of the function block or the error of G3F-POPA Y axis. ACT : On if the positioning completion signal is received from G3F-POPA and off if the instruction is used according to REQ condition.

■ Function

Instruction for 2-axis's linear interpolation.

■ Program example

LD



IL

```
CAL   POSP_INT     POSP_INT
      REQ :=       %I0.0.0
      BASE :=      BASE
      SLOT :=      SLOT
LD                 POSP_INT.DONE
ST                 %Q 0.1.0
LD                 POSP_INT.STAT
ST                 INT_STAT_X
LD                 POSP_INT.STAT
ST                 INT_STAT_Y
LD                 POSP_INT.ACT
ST                 INT_ACT
```