MITSUBISHI ELECTRIC

Programmable Controller

MELSEC iQ-F series

MELSEC iQ-F
FX5 Positioning Module Function Block Reference

CONTENTS

1 FUNCTION BLOCK (FB) LIST

This chapter lists the FBs for the MELSEC iQ-F series positioning module.

Name*1	Description
M+FX5PG_SetPositioningData	Sets positioning data (Da.1 to Da.10, Da.27 to Da.29).
M+FX5PG_StartPositioning	Starts the positioning operation.
M+FX5PG_JOG	Performs the JOG operation or inching operation.
M+FX5PG_MPG	Performs the manual pulse generator operation.
M+FX5PG_ChangeSpeed	Changes the speed.
M+FX5PG_ChangeAccDecTime	Changes the acceleration/deceleration time during speed change.
M+FX5PG_ChangePosition	Changes the target position.
M+FX5PG_Restart	Restarts an axis that has stopped.
M+FX5PG_OperateError	Monitors errors and warnings, and resets errors.
M+FX5PG_InitializeParameter	Initializes parameters.
M+FX5PG_WriteFlash	Writes positioning data and block start data in the buffer memory to the flash ROM.
M+FX5PG_ABRST	Restores the absolute position.
M+FX5PG_StartAddressOffsetPositioning	The following axis starts after the preceding axis has started and moved the set movement amount.
M+FX5PG_SetTimeOffsetPositioning	The following axis starts after the set time has elapsed from the start of the preceding axis.

*1 Note that this reference does not describe the FB version information which is displayed such as "_00A" at the end of FB name.

MEMO

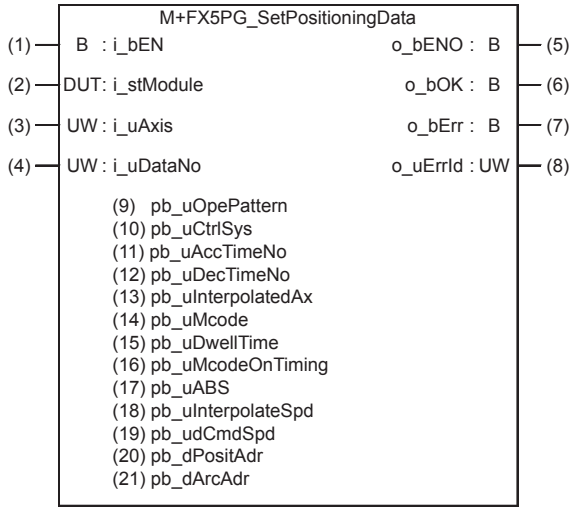
2 POSITIONING MODULE FB

2.1 M+FX5PG_SetPositioningData

Name

M+FX5PG_SetPositioningData

Overview

Item	Description
Overview	Sets positioning data (Da.1 to Da.10, Da.27 to Da.29).
Symbol	

Labels

■Input label

No.	Variable name	Name	Data type	Range	Description
(1)	i_bEN	Execution command	Bit	ON, OFF	ON: The FB is activated. OFF: The FB is not activated.
(2)	i_stModule	Module label	Structure	The setting range differs depending on the module label.	Specifies the module label for the positioning module.
(3)	i_uAxis	Target axis	Word [Unsigned]	1 to 4	Specify the axis number. The setting range varies according to the positioning module in use.
(4)	i_uDataNo	Positioning data No.	Word [Unsigned]	1 to 600	Specify the positioning data No.

■Output label

No.	Variable name	Name	Data type	Default value	Description
(5)	o_bENO	Execution status	Bit	OFF	ON: The execution command is ON. OFF: The execution command is OFF.
(6)	o_bOK	Normal completion	Bit	OFF	When this label is ON, it indicates that the positioning data setting has been completed.
(7)	o_bErr	Error completion	Bit	OFF	When this label is ON, it indicates that an error has occurred in the FB.
(8)	o_uErrId	Error code	Word [Unsigned]	0	Stores the error code that occurred in the FB.

■Public label

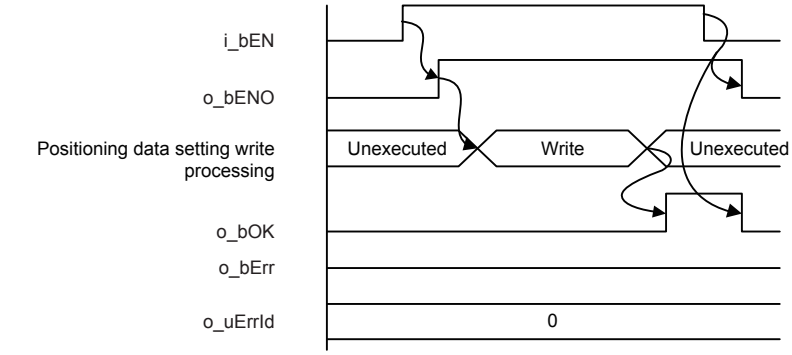
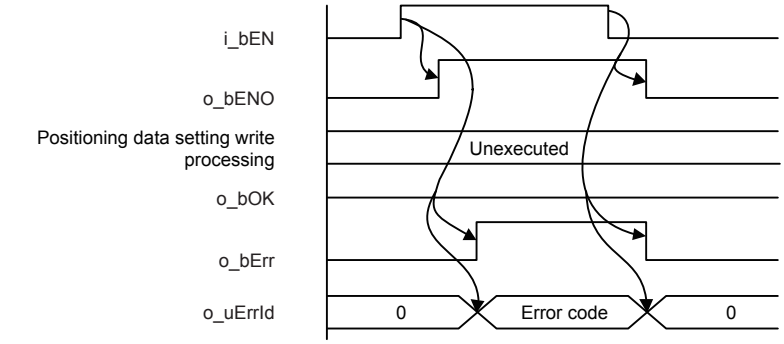
No.	Variable name	Name	Data type	Range	Description
(9)	pb_uOpePattern	Da.1: Operation pattern	Word [Unsigned]	0 to 1, 3	Specify whether the positioning is completed with the data being executed, or continues with the following data. When 4 or higher, which is out of the setting range, is specified, b0 and 1 are enabled. For example, when 4 is set, 0 is applied. 0: Positioning complete 1: Continuous positioning control 3: Continuous path control
(10)	pb_uCtrlSys	Da.2: Control method	Word [Unsigned]	01H to 14H, 80H to 84H	Set the control method for performing the positioning control. 01H: ABS1 1-axis linear control (ABS) 02H: INC1 1-axis linear control (INC) 03H: FEED1 1-axis fixed-feed control 04H: VF1 1-axis speed control (forward run) 05H: VR1 1-axis speed control (reverse run) 06H: VPF Speed-position switching control (forward run) 07H: VPR Speed-position switching control (reverse run) 08H: PVF Position-speed switching control (forward run) 09H: PVR Position-speed switching control (reverse run) 0AH: ABS2 2-axis linear interpolation control (ABS) 0BH: INC2 2-axis linear interpolation control (INC) 0CH: FEED2 Fixed-feed control by 2-axis linear interpolation 0DH: ABS⌒; Circular interpolation control with sub point specified (ABS) 0EH: INC⌒; Circular interpolation control with sub point specified (INC) 0FH: ABS. Circular interpolation control with center point specified (ABS, CW) 10H: ABS. Circular interpolation control with center point specified (ABS, CCW) 11H: INC. Circular interpolation control with center point specified (INC, CW) 12H: INC. Circular interpolation control with center point specified (INC, CCW) 13H: VF2 2-axis speed control (forward run) 14H: VR2 2-axis speed control (reverse run) 80H: NOP NOP instruction 81H: POS Current value change 82H: JUMP JUMP instruction 83H: LOOP Beginning of LOOP-to-LEND processing 84H: LEND End of LOOP-to-LEND processing
(11)	pb_uAccTimeNo	Da.3: Acceleration time No.	Word [Unsigned]	0 to 3	Set which of Acceleration time 0 to 3 to use for the acceleration time during positioning. When 4 or higher, which is out of the setting range, is specified, b0 and 1 are enabled. For example, when 4 is set, 0 is applied. 0: Acceleration time 0 1: Acceleration time 1 2: Acceleration time 2 3: Acceleration time 3
(12)	pb_uDecTimeNo	Da.4: Deceleration time No.	Word [Unsigned]	0 to 3	Set which of Deceleration time 0 to 3 to use for the deceleration time during positioning. When 4 or higher, which is out of the setting range, is specified, b0 and 1 are enabled. For example, when 4 is set, 0 is applied. 0: Deceleration time 0 1: Deceleration time 1 2: Deceleration time 2 3: Deceleration time 3

No.	Variable name	Name	Data type	Range	Description
(13)	pb_uInterpolatedAx	Da.5: Axis to be interpolated	Word [Unsigned]	0 to 1	Set the axis to be interpolated for performing the 2-axis interpolation operation. Values out of the setting range or the self-axis cannot be set as the axis to be interpolated. Set 0 when not using interpolation. 0: Axis 1 specification 1: Axis 2 specification
(14)	pb_uMcode	Da.10: M code	Word [Unsigned]	0 to 10, 1 to 65535, 0 to 65535	Set the condition data No., number of repetitions, or M code for the control method. • Da.2: Control method 82H: JUMP instruction 0 to10 • Da.2: Control method 83H: LOOP 1 to 65535 • Da.2: Control method Other than above 0 to 65535
(15)	pb_uDwellTime	Da.9: Dwell time	Word [Unsigned]	1 to 600, 0 to 65535	Set the positioning data No. or dwell time for the control method. • Da.2: Control method 82H: JUMP instruction 1 to 600 • Da.2: Control method Other than JUMP instruction 0 to 65535
(16)	pb_uMcodeOnTiming	Da.27: M code On signal output timing	Word [Unsigned]	0 to 2	Set the timing of outputting the M code On signal. When 4 or higher is set, b0 and 1 are enabled. For example, when 4 is set, 0 is applied. 0: Setting value of Pr.18: M code On signal output timing 1: WITH mode 2: AFTER mode
(17)	pb_uABS	Da.28: ABS direction in degrees	Word [Unsigned]	0 to 3	Set the ABS movement direction for the position control when the unit is degree. When 4 or higher, which is out of the setting range, is specified, b0 and 1 are enabled. For example, when 4 is set, 0 is applied. 0: Setting value of Cd.40: ABS direction in degrees 1: ABS clockwise 2: ABS counterclockwise 3: Shortcut (the direction setting is invalid)
(18)	pb_uInterpolateSpd	Da.29: Interpolation speed specification method	Word [Unsigned]	0 to 2	When performing linear interpolation/circular interpolation, set whether to specify the composite speed or the speed for the reference axis. When 8 or higher is set, only b0, b1, and b2 are valid. For example, when 8 is set, 0 is applied. 0: Setting value of Pr.20: Interpolation speed specification method 1: Composite speed 2: Reference axis speed
(19)	pb_udCmdSpd	Da.8: Command speed	Double word [Unsigned]	1 to 2000000000, 1 to 3000000000, 1 to 5000000	Set the command speed for positioning. • Pr.1: Unit setting 0, 1 1 to 2000000000 • Pr.1: Unit setting 2 1 to 3000000000 • Pr.1: Unit setting 3 1 to 5000000
				FFFFFFFFH	The speed set for the previous positioning data No. is used for the positioning control. • Current speed FFFFFFFFH (Speed set for the previous positioning data No.)

No.	Variable name	Name	Data type	Range	Description
(20)	pb_dPositAdr	Da.6: Positioning address	Double word [Signed]	-2147483648 to 2147483647, 0 to 35999999, 0 to 2147483647	Specify the target position or movement amount for the positioning control. The setting value differs depending on the control method. • Pr.1: Unit setting 0, 1, 3 • Da.2: Control method 06H to 09H 0 to 2147483647 • Da.2: Control method Other than 06H to 09H -2147483648 to 2147483647 • Pr.1: Unit setting 2 • Da.2: Control method 01H, 0AH, 81H 0 to 35999999 • Da.2: Control method 02H, 0BH, 03H, 0CH -2147483648 to 2147483647 • Da.2: Control method 06H, 07H 0 to 2147483647 (INC mode) 0 to 35999999 (ABS mode) • Da.2: Control method 08H, 09H 0 to 2147483647
(21)	pb_dArcAdr	Da.7: Arc address	Double word [Signed]	-2147483648 to 2147483647, 0	Use this label only when performing the circular interpolation control. For the sub point specification, set the sub point address. For the center point specification, set the center point address of the arc. • Pr.1: Unit setting 0, 1, 3 -2147483648 to 2147483647 • Pr.1: Unit setting 2 Not used (Set 0.)

FB details

Item	Description	
Available device	Target module	FX5-20PG-P
	Target CPU	FX5U CPU, FX5UC CPU
	Engineering tool	GX Works3 Version 1.035M or later
Language	Ladder diagram	
Number of basic steps	274 steps The number of FB steps integrated in the program varies depending on the CPU module used, the input/output definition, and the setting options of GX Works3. For the setting options of GX Works3, refer to GX Works3 Operating Manual.	
Processing	• By turning on i_bEN (Execution command), the set positioning data is written to the buffer memory. • If the setting value of the target axis is out of the setting range, o_bErr (Error completion) turns on and the processing of this FB is interrupted. In addition, the error code 100 (hexadecimal) is stored in o_uErrId (Error code). For the error code, refer to ☞ Page 8 Error code. • If the setting value of the positioning data No. is out of the setting range, o_bErr (Error completion) turns on and the processing of this FB is interrupted. In addition, the error code 101 (hexadecimal) is stored in o_uErrId (Error code). For the error code, refer to ☞ Page 8 Error code.	
FB compilation method	Macro type	
FB operation	Pulsed execution (single scan execution type)	

Item	Description
Timing chart of I/O signals	[For normal completion]  [For error completion] 
Restrictions or precautions	• This FB does not include the error recovery processing. Program the error recovery processing separately in accordance with the required system operation. • This FB cannot be used in an interrupt program. • Do not use this FB in programs that are executed only once, such as a subroutine program or FOR-NEXT loop, because i_bEN (Execution command) cannot be turned off and the normal operation cannot be acquired. Always use this FB in programs that can turn off i_bEN (Execution command). • When this FB is used twice or more, precaution must be taken to avoid duplication of the target axis. • Every input must be provided with a value for proper FB operation. • The pulse output mode and external input/output signal logic, etc. must be set according to the connected devices and system before operating the positioning module. Set the GX Works3 module parameters according to the application. Refer to the MELSEC iQ-F FX5 User's Manual (Positioning Control - Intelligent function module) for details on setting the module parameters.

Error code

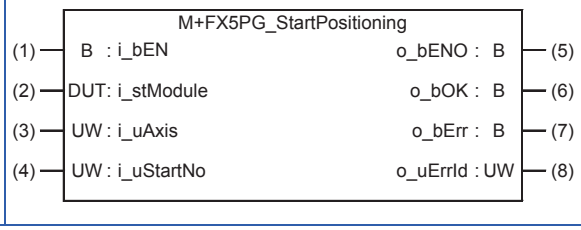
Error code (hexadecimal)	Description	Action
100	The set value of i_uAxis (Target axis) is out of the range. The target axis is not within the range of 1 to 4.	Try again after checking the setting.
101	The set value of i_uDataNo (Positioning data No.) is out of the range. The positioning data No. is not within the range of 1 to 600.	Try again after checking the setting.

2.2 M+FX5PG_StartPositioning

Name

M+FX5PG_StartPositioning

Overview

Item	Description
Overview	Starts the positioning operation.
Symbol	

Labels

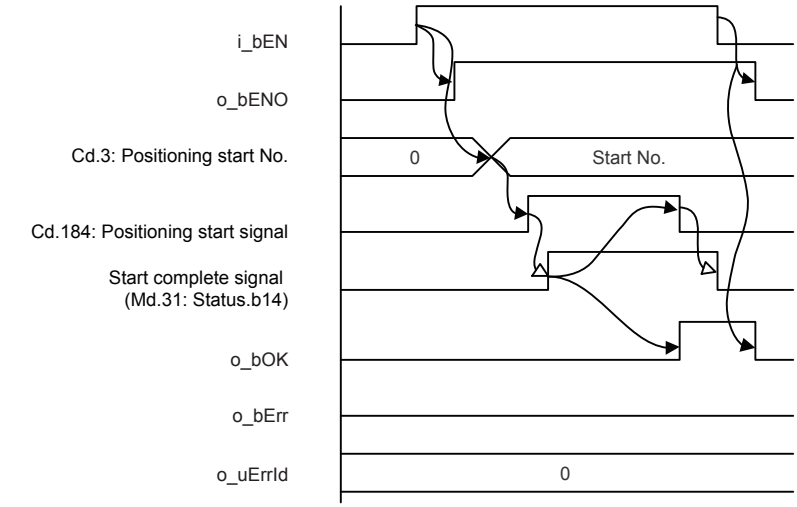
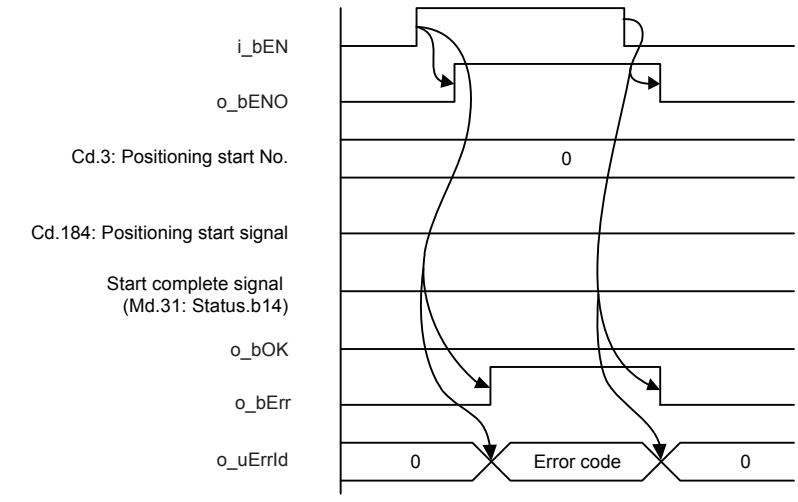
■Input label

No.	Variable name	Name	Data type	Range	Description
(1)	i_bEN	Execution command	Bit	ON, OFF	ON: The FB is activated. OFF: The FB is not activated.
(2)	i_stModule	Module label	Structure	The setting range differs depending on the module label.	Specifies the module label for the positioning module.
(3)	i_uAxis	Target axis	Word [Unsigned]	1 to 4	Specify the axis number. The setting range varies according to the positioning module in use.
(4)	i_uStartNo	Cd.3: Positioning start No.	Word [Unsigned]	1 to 600, 7000 to 7004, 9001 to 9004	Set the positioning start No. corresponding to the control to be started in Cd.3: Positioning start No. 1 to 600: Positioning data No. 7000 to 7004: Block start specification 9001: Machine OPR 9002: Fast OPR 9003: Current value change 9004: Multiple axes simultaneous start

■Output label

No.	Variable name	Name	Data type	Default value	Description
(5)	o_bENO	Execution status	Bit	OFF	ON: The execution command is ON. OFF: The execution command is OFF.
(6)	o_bOK	Normal completion	Bit	OFF	When this label is ON, it indicates that the positioning operation has been completed. However, this label does not turn on when a module error occurs at the start.
(7)	o_bErr	Error completion	Bit	OFF	When this label is ON, it indicates that an error has occurred in the FB.
(8)	o_uErrId	Error code	Word [Unsigned]	0	Stores the error code that occurred in the FB.

FB details

Item	Description	
Available device	Target module	FX5-20PG-P
	Target CPU	FX5U CPU, FX5UC CPU
	Engineering tool	GX Works3 Version 1.035M or later
Language	Ladder diagram	
Number of basic steps	263 steps The number of FB steps integrated in the program varies depending on the CPU module used, the input/output definition, and the setting options of GX Works3. For the setting options of GX Works3, refer to 📖GX Works3 Operating Manual.	
Processing	• By turning on i_bEN (Execution command), the control corresponding to i_uStartNo (Cd.3: Positioning start No.) is started. • This FB is activated by turning on Positioning start signal (Cd.184: Positioning start signal). • Only when the following conditions are satisfied, Positioning start signal (Cd.184: Positioning start signal) is turned on by turning on i_bEN (Execution command). If any of the conditions is not satisfied, o_bErr (Error completion) turns on and the processing of this FB is interrupted. In addition, the error code 200 (hexadecimal) is stored in o_uErrId (Error code). For the error code, refer to ☞ Page 11 Error code. (The conditions are Positioning module ready signal (Md.140: Module status.b0): ON, Positioning start signal (Cd.184: Positioning start signal): OFF, Start complete signal (Md.31: Status.b14): OFF, BUSY signal (Md.141: BUSY.b0, b1): OFF) • When Start complete signal (Md.31: Status.b14) turns on or i_bEN (Execution command) is turned off, Positioning start signal (Cd.184: Positioning start signal) is turned off. • If the setting value of the target axis is out of the setting range, o_bErr (Error completion) turns on and the processing of this FB is interrupted. In addition, the error code 100 (hexadecimal) is stored in o_uErrId (Error code). For the error code, refer to ☞ Page 11 Error code. • If the setting value of the positioning start No. is out of the setting range, o_bErr (Error completion) turns on and the processing of this FB is interrupted. In addition, the error code 102 (hexadecimal) is stored in o_uErrId (Error code). For the error code, refer to ☞ Page 11 Error code.	
FB compilation method	Macro type	
FB operation	Pulsed execution (multiple scan execution type)	
Timing chart of I/O signals	[For normal completion]  [For error completion]  	

Item	Description
Restrictions or precautions	• This FB does not include the error recovery processing. Program the error recovery processing separately in accordance with the required system operation. • This FB cannot be used in an interrupt program. • Do not use this FB in programs that are executed only once, such as a subroutine program or FOR-NEXT loop, because i_bEN (Execution command) cannot be turned off and the normal operation cannot be acquired. Always use this FB in programs that can turn off i_bEN (Execution command). • This FB turns on and off Positioning start signal (Cd.184: Positioning start signal). Thus, do not turn on and off Positioning start signal (Cd.184: Positioning start signal) by other means while this FB is being executed. • When this FB is used twice or more, precaution must be taken to avoid duplication of the target axis. • This FB does not set the data when started. Data required for controlling the start No. must be set on the parameter or buffer memory. • Every input must be provided with a value for proper FB operation. • The pulse output mode and external input/output signal logic, etc. must be set according to the connected devices and system before operating the positioning module. Set the GX Works3 module parameters according to the application. Refer to the MELSEC iQ-F FX5 User's Manual (Positioning Control - Intelligent function module) for details on setting the module parameters.

Error code

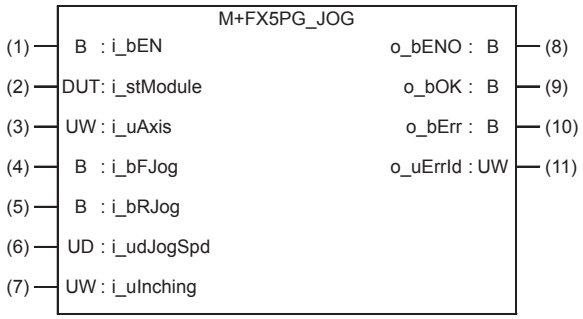
Error code (hexadecimal)	Description	Action
100	The set value of i_uAxis (Target axis) is out of the range. The target axis is not within the range of 1 to 4.	Try again after checking the setting.
102	The set value of i_uStartNo (Cd.3: Positioning start No.) is out of the range. The positioning start No. is not within the range of 1 to 600, 7000 to 7004, and 9001 to 9004.	Try again after checking the setting.
200	The conditions for positioning start are not satisfied. Any of the following conditions is not satisfied. • Ready: ON • Positioning start signal: OFF • Start complete signal: OFF • BUSY signal: OFF	Execute the FB again when all of the following conditions are satisfied. • Ready: ON • Positioning start signal: OFF • Start complete signal: OFF • BUSY signal: OFF

2.3 M+FX5PG_JOG

Name

M+FX5PG_JOG

Overview

Item	Description
Overview	Performs the JOG operation or inching operation.
Symbol	

Labels

■Input label

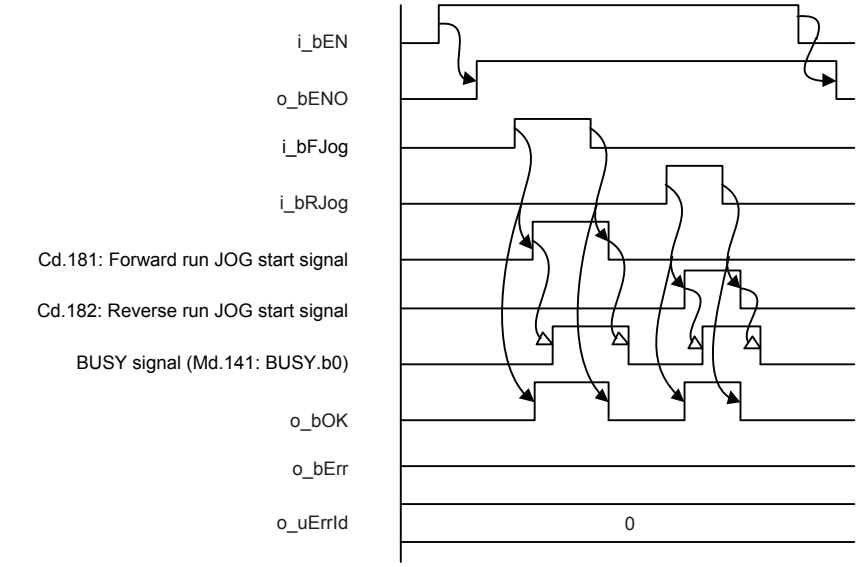
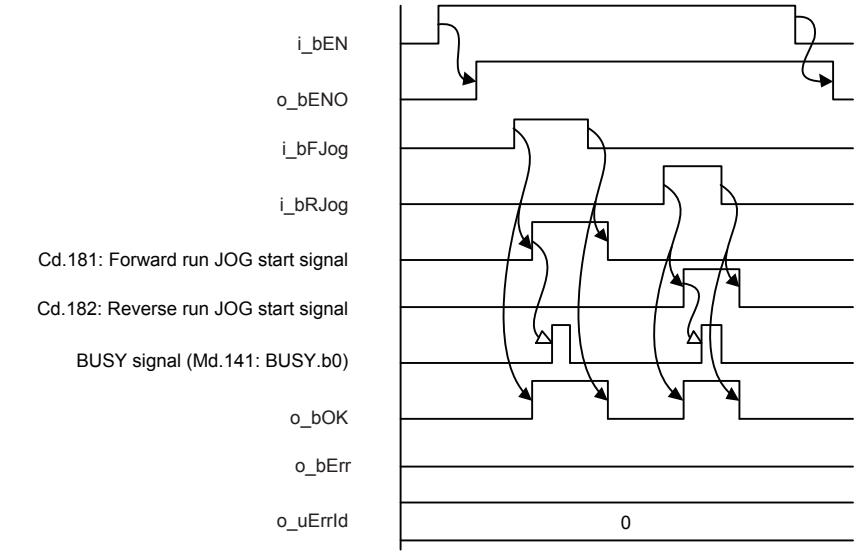
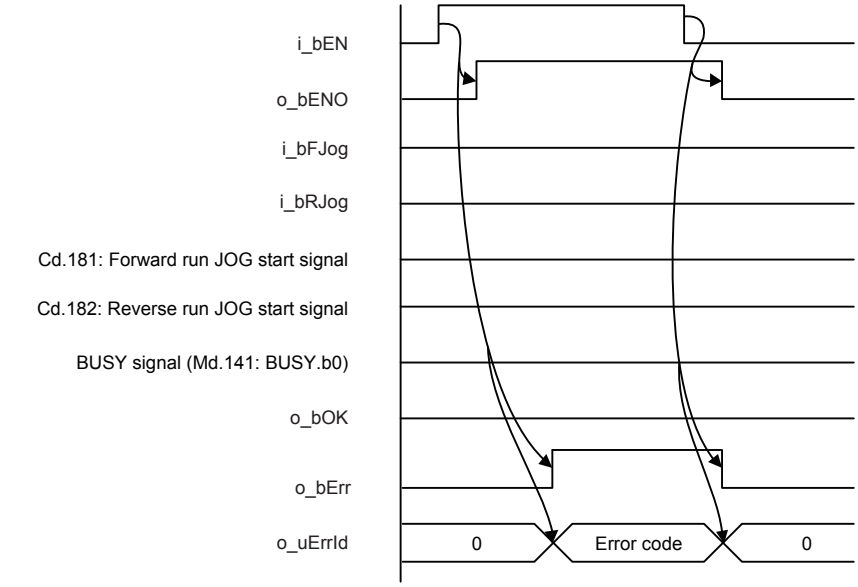
No.	Variable name	Name	Data type	Range	Description
(1)	i_bEN	Execution command	Bit	ON, OFF	ON: The FB is activated. OFF: The FB is not activated.
(2)	i_stModule	Module label	Structure	The setting range differs depending on the module label.	Specifies the module label for the positioning module.
(3)	i_uAxis	Target axis	Word [Unsigned]	1 to 4	Specify the axis number. The setting range varies according to the positioning module in use.
(4)	i_bFJog	Forward run JOG command	Bit	ON, OFF	Turn on this label to perform the forward run JOG operation or forward inching operation.
(5)	i_bRJog	Reverse run JOG command	Bit	ON, OFF	Turn on this label to perform the reverse run JOG operation or reverse inching operation.
(6)	i_udJogSpd	Cd.17: JOG speed	Double Word [Unsigned]	0 to 2000000000, 0 to 3000000000, 0 to 5000000	Specify the JOG speed. Set 0 for the inching operation. • Pr.1: Unit setting 0: mm 0 to 2000000000 ($\times 10^{-2}$ mm/min) • Pr.1: Unit setting 1: inch 0 to 2000000000 ($\times 10^{-3}$ inch/min) • Pr.1: Unit setting 2: degree 0 to 3000000000 ($\times 10^{-3}$ degree/min) • Pr.1: Unit setting 3: pulse 0 to 5000000 (pulse/s)
(7)	i_uInching	Cd.16: Inching movement amount	Word [Unsigned]	0 to 65535 0: JOG operation	Specify the inching movement amount. Set 0 for the JOG operation.

■Output label

No.	Variable name	Name	Data type	Default value	Description
(8)	o_bENO	Execution status	Bit	OFF	ON: The execution command is ON. OFF: The execution command is OFF.
(9)	o_bOK	Normal completion	Bit	OFF	ON: The JOG command is ON. OFF The JOG command is OFF.
(10)	o_bErr	Error completion	Bit	OFF	When this label is ON, it indicates that an error has occurred in the FB.
(11)	o_uErrId	Error code	Word [Unsigned]	0	Stores the error code that occurred in the FB.

FB details

Item	Description	
Available device	Target module	FX5-20PG-P
	Target CPU	FX5U CPU, FX5UC CPU
	Engineering tool	GX Works3 Version 1.035M or later
Language	Ladder diagram	
Number of basic steps	238 steps The number of FB steps integrated in the program varies depending on the CPU module used, the input/output definition, and the setting options of GX Works3. For the setting options of GX Works3, refer to 📖GX Works3 Operating Manual.	
Processing	• By turning on i_bFJog (Forward run JOG command) or i_bRJog (Reverse run JOG command) after i_bEN (Execution command) is turned on, the JOG operation or inching operation is performed. • When i_bFJog (Forward run JOG command) and i_bRJog (Reverse run JOG command) are on at the same time, the operation stops. • When i_bEN (Execution command) is turned off during the operation that has been started by i_bFJog (Forward run JOG command) or i_bRJog (Reverse run JOG command), the operation stops. • When i_bRJog (Reverse run JOG command) is turned on during the forward run JOG operation, the operation stops. However, when i_bRJog (Reverse run JOG command) is turned on and off, the forward JOG operation restarts. (This relation is also applied to the reverse run JOG operation and i_bFJog (Forward run JOG command).) • If the setting value of the target axis is out of the setting range, o_bErr (Error completion) turns on and the processing of this FB is interrupted. In addition, the error code 100 (hexadecimal) is stored in o_uErrId (Error code). For the error code, refer to ☞ Page 15 Error code.	
FB compilation method	Macro type	
FB operation	Always executed	

Item	Description
Timing chart of I/O signals	[For normal completion (Axis 1)] • Forward run JOG operation (Inching movement amount 0)  • Forward run inching operation (Inching movement amount other than 0)  [For error completion (Axis 1)] 

Item	Description
Restrictions or precautions	• This FB does not include the error recovery processing. Program the error recovery processing separately in accordance with the required system operation. • This FB cannot be used in an interrupt program. • Do not use this FB in programs that are executed only once, such as a subroutine program or FOR-NEXT loop, because i_bEN (Execution command) cannot be turned off and the normal operation cannot be acquired. Always use this FB in programs that can turn off i_bEN (Execution command). • This FB turns on and off Forward run JOG start signal (Cd.181: Forward run JOG start signal) and Reverse run JOG start signal (Cd.182: Reverse run JOG start signal) Thus, do not turn on or off Forward run JOG start signal (Cd.181: Forward run JOG start signal) and Reverse run JOG start signal (Cd.182: Reverse run JOG start signal) by other means while this FB is being executed. • When this FB is used twice or more, precaution must be taken to avoid duplication of the target axis. • Setting a large value for the JOG speed from the beginning is dangerous. For safety, set a small value first, and increase the value gradually while checking the operation to determine the value optimal for the control. • When values other than 0 are set in both i_uInching (Cd.16: Inching movement amount) and i_udJogSpd (Cd.17: JOG speed), the inching operation is performed. • Every input must be provided with a value for proper FB operation. • The pulse output mode and external input/output signal logic, etc. must be set according to the connected devices and system before operating the positioning module. Set the GX Works3 module parameters according to the application. Refer to the MELSEC iQ-F FX5 User's Manual (Positioning Control - Intelligent function module) for details on setting the module parameters.

Error code

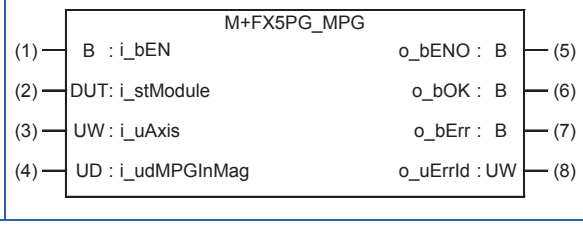
Error code (hexadecimal)	Description	Action
100	The set value of i_uAxis (Target axis) is out of the range. The target axis is not within the range of 1 to 4.	Try again after checking the setting. Turn off the forward run JOG command or reverse run JOG command, turn on i_bEN from off, and turn on the forward run JOG command or reverse run JOG command again.

2.4 M+FX5PG_MPG

Name

M+FX5PG_MPG

Overview

Item	Description
Overview	Performs the manual pulse generator operation.
Symbol	

Labels

■Input label

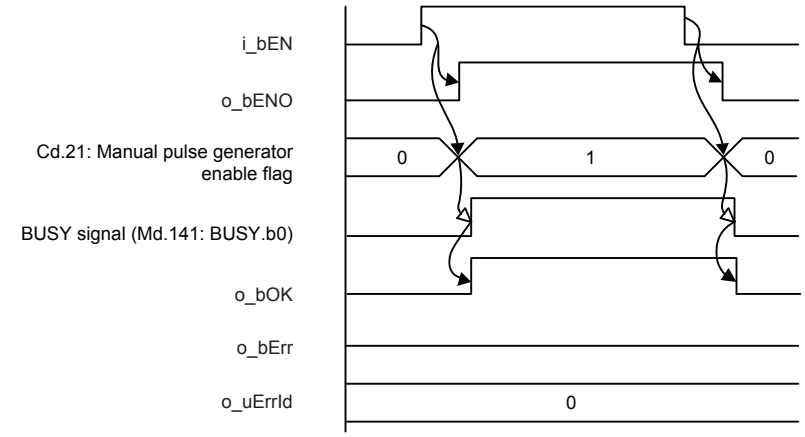
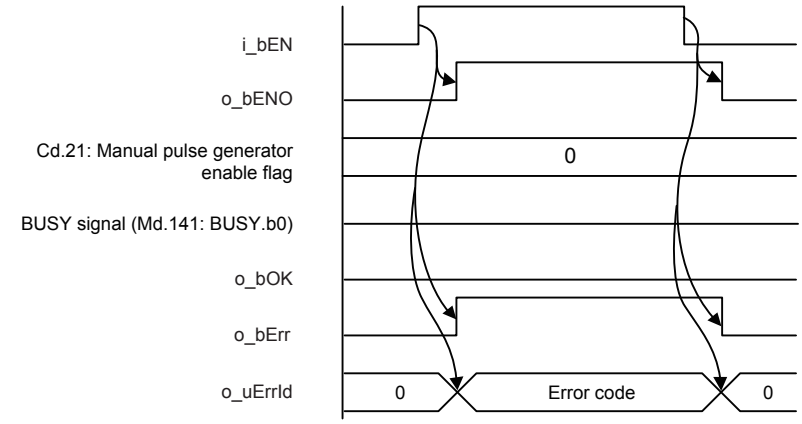
No.	Variable name	Name	Data type	Range	Description
(1)	i_bEN	Execution command	Bit	ON, OFF	ON: The FB is activated. OFF: The FB is not activated.
(2)	i_stModule	Module label	Structure	The setting range differs depending on the module label.	Specifies the module label for the positioning module.
(3)	i_uAxis	Target axis	Word [Unsigned]	1 to 4	Specify the axis number. The setting range varies according to the positioning module in use.
(4)	i_udMPGInMag	Cd.20: Manual pulse generator 1 pulse input magnification	Double Word [Unsigned]	1 to 10000	Set the input magnification of the manual pulse generator 1 pulse. • When the set value is 0, the magnification is 1. • When the set value is 10001 or higher, the magnification is 10000.

■Output label

No.	Variable name	Name	Data type	Default value	Description
(5)	o_bENO	Execution status	Bit	OFF	ON: The execution command is ON. OFF: The execution command is OFF.
(6)	o_bOK	Normal completion	Bit	OFF	When this label is ON, it indicates that the manual pulse generator operation has been enabled.
(7)	o_bErr	Error completion	Bit	OFF	When this label is ON, it indicates that an error has occurred in the FB.
(8)	o_uErrId	Error code	Word [Unsigned]	0	Stores the error code that occurred in the FB.

FB details

Item	Description	
Available device	Target module	FX5-20PG-P
	Target CPU	FX5U CPU, FX5UC CPU
	Engineering tool	GX Works3 Version 1.035M or later
Language	Ladder diagram	
Number of basic steps	160 steps The number of FB steps integrated in the program varies depending on the CPU module used, the input/output definition, and the setting options of GX Works3. For the setting options of GX Works3, refer to GX Works3 Operating Manual.	

Item	Description
Processing	• By turning ON or OFF i_bEN (Execution command), the manual pulse generator operation is enabled or disabled. • This FB is constantly executed after i_bEN (Execution command) is turned on. • The workpiece moves for the number of pulses input from the manual pulse generator while o_bOK (Normal completion) is ON. • If the setting value of the target axis is out of the setting range, o_bErr (Error completion) turns on and the processing of this FB is interrupted. In addition, the error code 100 (hexadecimal) is stored in o_uErrId (Error code). For the error code, refer to ☞ Page 17 Error code.
FB compilation method	Macro type
FB operation	Always executed
Timing chart of I/O signals	[For normal completion (Axis 1)]  [For error completion (Axis 1)] 
Restrictions or precautions	• This FB does not include the error recovery processing. Program the error recovery processing separately in accordance with the required system operation. • This FB cannot be used in an interrupt program. • Do not use this FB in programs that are executed only once, such as a subroutine program or FOR-NEXT loop, because i_bEN (Execution command) cannot be turned off and the normal operation cannot be acquired. Always use this FB in programs that can turn off i_bEN (Execution command). • Do not change i_uAxis (Target axis) while i_bEN (Execution command) is ON. • When this FB is used twice or more, precaution must be taken to avoid duplication of the target axis. • Every input must be provided with a value for proper FB operation. • The pulse output mode and external input/output signal logic, etc. must be set according to the connected devices and system before operating the positioning module. Set the GX Works3 module parameters according to the application. Refer to the 📖MELSEC iQ-F FX5 User's Manual (Positioning Control - Intelligent function module) for details on setting the module parameters.

Error code

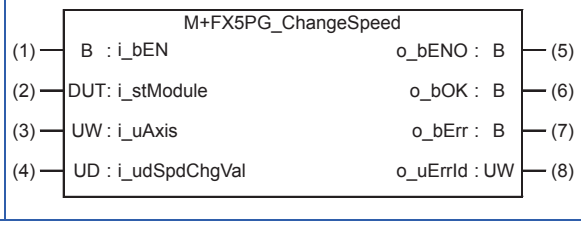
Error code (hexadecimal)	Description	Action
100	The set value of i_uAxis (Target axis) is out of the range. The target axis is not within the range of 1 to 4.	Try again after checking the setting.

2.5 M+FX5PG_ChangeSpeed

Name

M+FX5PG_ChangeSpeed

Overview

Item	Description
Overview	Changes the speed.
Symbol	

Labels

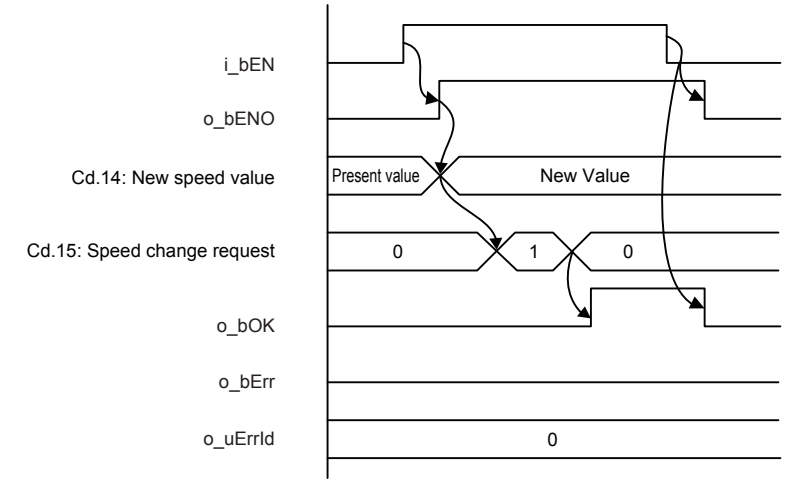
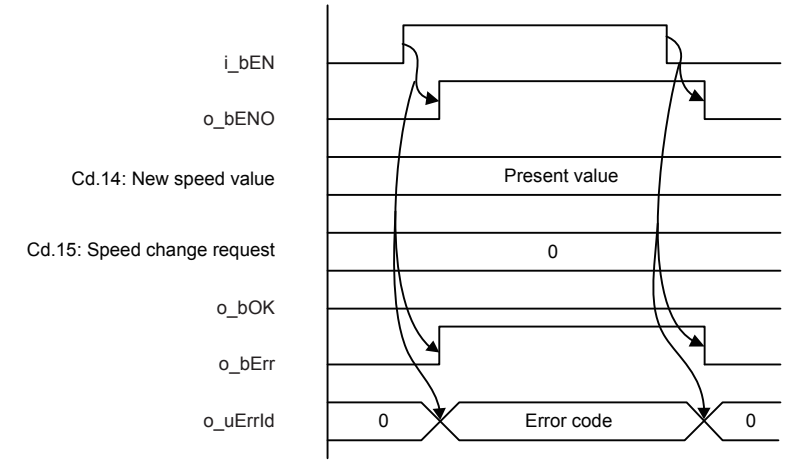
■Input label

No.	Variable name	Name	Data type	Range	Description
(1)	i_bEN	Execution command	Bit	ON, OFF	ON: The FB is activated. OFF: The FB is not activated.
(2)	i_stModule	Module label	Structure	The setting range differs depending on the module label.	Specifies the module label for the positioning module.
(3)	i_uAxis	Target axis	Word [Unsigned]	1 to 4	Specify the axis number. The setting range varies according to the positioning module in use.
(4)	i_udSpdChgVal	Cd.14: New speed value	Double Word [Unsigned]	0 to 2000000000, 0 to 3000000000, 0 to 5000000	Set a new speed. • Pr.1: Unit setting 0: mm 0 to 2000000000 ($\times 10^{-2}$ mm/min) • Pr.1: Unit setting 1: inch 0 to 2000000000 ($\times 10^{-3}$ inch/min) • Pr.1: Unit setting 2: degree 0 to 3000000000 ($\times 10^{-3}$ degree/min) • Pr.1: Unit setting 3: pulse 0 to 5000000 (pulse/s)

■Output label

No.	Variable name	Name	Data type	Default value	Description
(5)	o_bENO	Execution status	Bit	OFF	ON: The execution command is ON. OFF: The execution command is OFF.
(6)	o_bOK	Normal completion	Bit	OFF	When this label is ON, it indicates that the speed change has been completed.
(7)	o_bErr	Error completion	Bit	OFF	When this label is ON, it indicates that an error has occurred in the FB.
(8)	o_uErrId	Error code	Word [Unsigned]	0	Stores the error code that occurred in the FB.

FB details

Item	Description	
Available device	Target module	FX5-20PG-P
	Target CPU	FX5U CPU, FX5UC CPU
	Engineering tool	GX Works3 Version 1.035M or later
Language	Ladder diagram	
Number of basic steps	136 steps The number of FB steps integrated in the program varies depending on the CPU module used, the input/output definition, and the setting options of GX Works3. For the setting options of GX Works3, refer to 📖GX Works3 Operating Manual.	
Processing	• By turning on i_bEN (Execution command), the speed used for the control is changed to a new speed. • If the setting value of the target axis is out of the setting range, o_bErr (Error completion) turns on and the processing of this FB is interrupted. In addition, the error code 100 (hexadecimal) is stored in o_uErrId (Error code). For the error code, refer to ☞ Page 20 Error code.	
FB compilation method	Macro type	
FB operation	Pulse execution (multiple scan execution type)	
Timing chart of I/O signals	[For normal completion]  [For error completion]  	

Item	Description
Restrictions or precautions	• This FB does not include the error recovery processing. Program the error recovery processing separately in accordance with the required system operation. • This FB cannot be used in an interrupt program. • Do not use this FB in programs that are executed only once, such as a subroutine program or FOR-NEXT loop, because i_bEN (Execution command) cannot be turned off and the normal operation cannot be acquired. Always use this FB in programs that can turn off i_bEN (Execution command). • When this FB is used twice or more, precaution must be taken to avoid duplication of the target axis. • Every input must be provided with a value for proper FB operation. • When i_bEN (Execution command) is turned on while BUSY signal (Md.141: BUSY.b0, b1) is OFF, o_bErr (Error completion) turns on and the processing of this FB is interrupted. In addition, the error code 201 (hexadecimal) is stored in o_uErrId (Error code). For the error code, refer to ☞ Page 20 Error code. • The pulse output mode and external input/output signal logic, etc. must be set according to the connected devices and system before operating the positioning module. Set the GX Works3 module parameters according to the application. Refer to the 📖MELSEC iQ-F FX5 User's Manual (Positioning Control - Intelligent function module) for details on setting the module parameters.

Error code

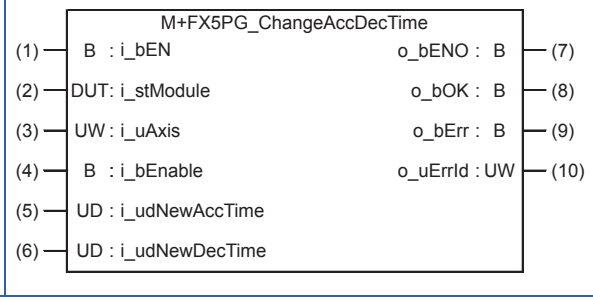
Error code (hexadecimal)	Description	Action
100	The set value of i_uAxis (Target axis) is out of the range. The target axis is not within the range of 1 to 4.	Try again after checking the setting.
201	This FB is executed before the positioning operation starts.	Please try again during the positioning operation.

2.6 M+FX5PG_ChangeAccDecTime

Name

M+FX5PG_ChangeAccDecTime

Overview

Item	Description
Overview	Changes the acceleration/deceleration time during speed change.
Symbol	

Labels

■Input label

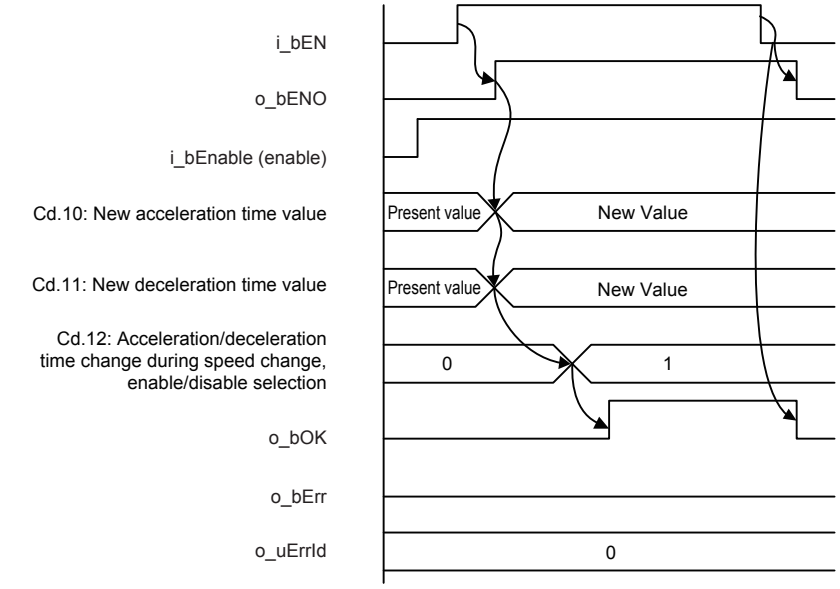
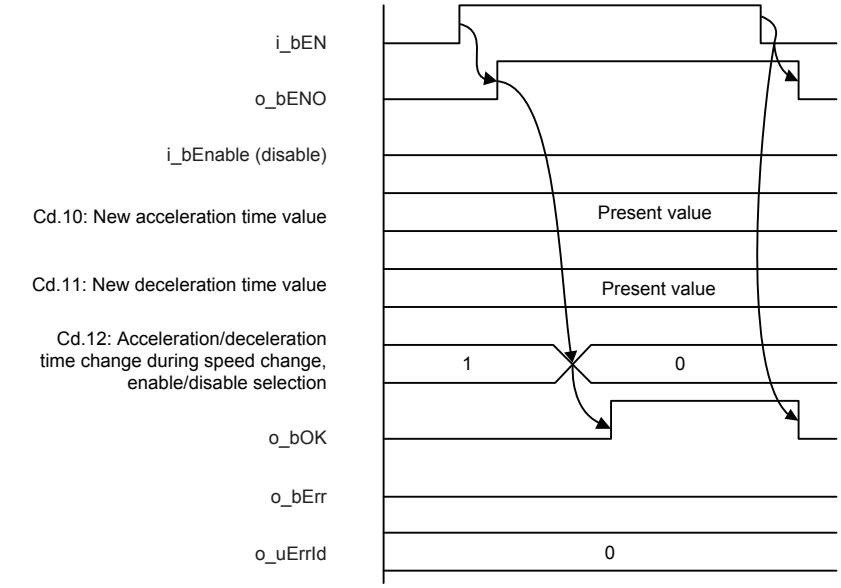
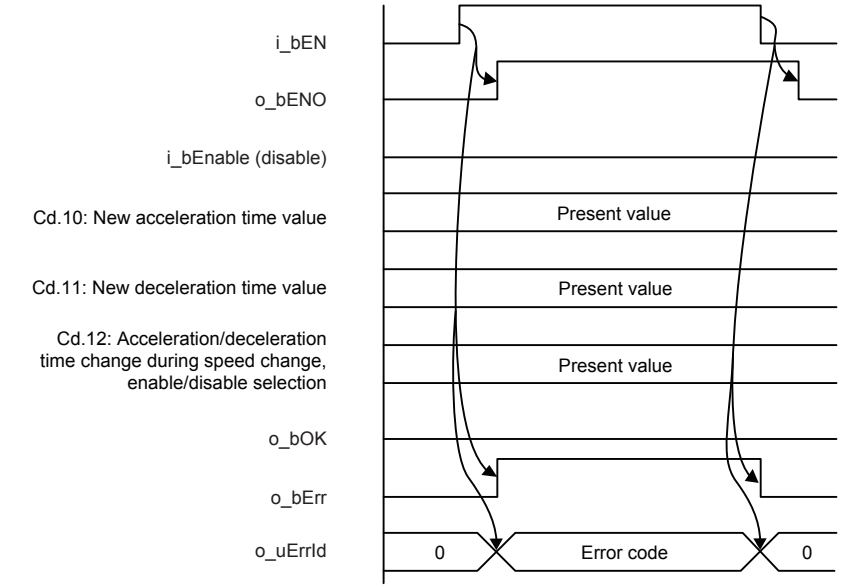
No.	Variable name	Name	Data type	Range	Description
(1)	i_bEN	Execution command	Bit	ON, OFF	ON: The FB is activated. OFF: The FB is not activated.
(2)	i_stModule	Module label	Structure	The setting range differs depending on the module label.	Specifies the module label for the positioning module.
(3)	i_uAxis	Target axis	Word [Unsigned]	1 to 4	Specify the axis number. The setting range varies according to the positioning module in use.
(4)	i_bEnable	Acceleration/ deceleration time change enabled flag	Bit	ON: Enabled OFF: Disabled	Set this label to enable or disable the acceleration/ deceleration time change.
(5)	i_udNewAccTime	Cd.10: New acceleration time value	Double Word [Unsigned]	0 to 8388608 ms	Set a new acceleration time. When 0 is set, the acceleration time is not changed after the speed is changed. In this case, the operation is controlled at the previously set acceleration time.
(6)	i_udNewDecTime	Cd.11: New deceleration time value	Double Word [Unsigned]	0 to 8388608 ms	Set a new deceleration time. When 0 is set, the deceleration time is not changed after the speed is changed. In this case, the operation is controlled at the previously set deceleration time.

■Output label

No.	Variable name	Name	Data type	Default value	Description
(7)	o_bENO	Execution status	Bit	OFF	ON: The execution command is ON. OFF: The execution command is OFF.
(8)	o_bOK	Normal completion	Bit	OFF	When this label is ON, it indicates that setting the acceleration/deceleration time change has been completed.
(9)	o_bErr	Error completion	Bit	OFF	When this label is ON, it indicates that an error has occurred in the FB.
(10)	o_uErrId	Error code	Word [Unsigned]	0	Stores the error code that occurred in the FB.

FB details

Item	Description	
Available device	Target module	FX5-20PG-P
	Target CPU	FX5U CPU, FX5UC CPU
	Engineering tool	GX Works3 Version 1.035M or later
Language	Ladder diagram	
Number of basic steps	123 steps The number of FB steps integrated in the program varies depending on the CPU module used, the input/output definition, and the setting options of GX Works3. For the setting options of GX Works3, refer to 📖GX Works3 Operating Manual.	
Processing	• By turning on i_bEN (Execution command), the setting of acceleration/deceleration time is changed according to i_bEnable (Acceleration/deceleration time change enabled flag). When i_bEnable (Acceleration/deceleration time change enabled flag) is ON, i_udNewAccTime (Cd.10: New acceleration time value) and i_udNewDecTime (Cd.11: New deceleration time value) are set and Cd.12: Acceleration/deceleration time change during speed change, enable/disable selection is changed to 1: Acceleration/deceleration time change enabled. When i_bEnable (Acceleration/deceleration time change enabled flag) is OFF, i_udNewAccTime (Cd.10: New acceleration time value) and i_udNewDecTime (Cd.11: New deceleration time value) are not changed and Cd.12: Acceleration/deceleration time change during speed change, enable/disable selection is changed to 0: Acceleration/deceleration time change disabled. • If the setting value of the target axis is out of the setting range, o_bErr (Error completion) turns on and the processing of this FB is interrupted. In addition, the error code 100 (hexadecimal) is stored in o_uErrId (Error code). For the error code, refer to, ☞ Page 24 Error code.	
FB compilation method	Macro type	
FB operation	Pulsed execution (single scan execution type)	

Item	Description
Timing chart of I/O signals	[For normal completion] • Cd.12: Acceleration/deceleration time change during speed change, enable/disable selection is enabled  • Cd.12: Acceleration/deceleration time change during speed change, enable/disable selection is disabled  [For error completion] 

Item	Description
Restrictions or precautions	• This FB does not include the error recovery processing. Program the error recovery processing separately in accordance with the required system operation. • This FB cannot be used in an interrupt program. • Do not use this FB in programs that are executed only once, such as a subroutine program or FOR-NEXT loop, because i_bEN (Execution command) cannot be turned off and the normal operation cannot be acquired. Always use this FB in programs that can turn off i_bEN (Execution command). • When this FB is used twice or more, precaution must be taken to avoid duplication of the target axis. • Every input must be provided with a value for proper FB operation. • The pulse output mode and external input/output signal logic, etc. must be set according to the connected devices and system before operating the positioning module. Set the GX Works3 module parameters according to the application. Refer to the MELSEC iQ-F FX5 User's Manual (Positioning Control - Intelligent function module) for details on setting the module parameters.

Error code

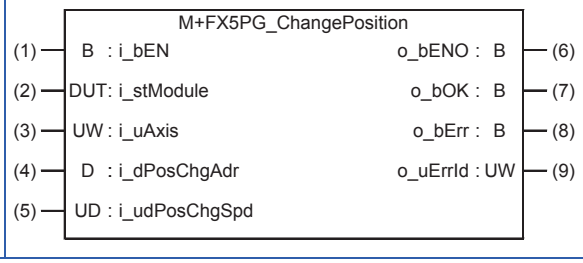
Error code (hexadecimal)	Description	Action
100	The set value of i_uAxis (Target axis) is out of the range. The target axis is not within the range of 1 to 4.	Try again after checking the setting.

2.7 M+FX5PG_ChangePosition

Name

M+FX5PG_ChangePosition

Overview

Item	Description
Overview	Changes the target position.
Symbol	

Labels

■Input label

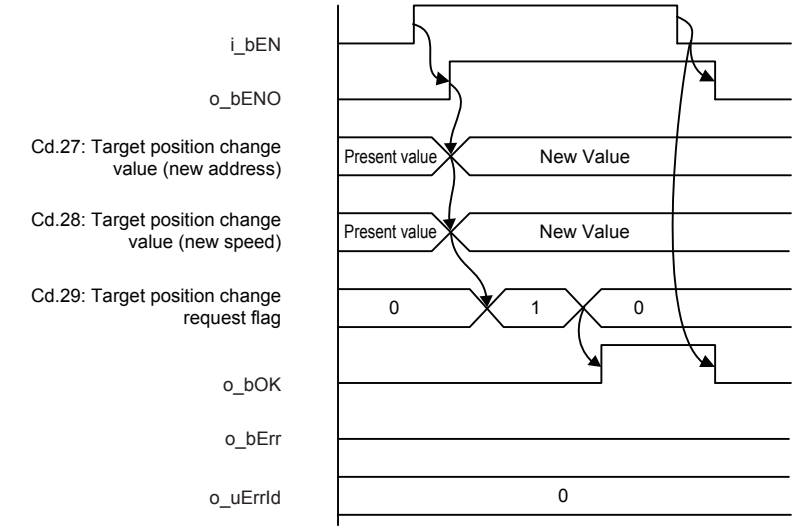
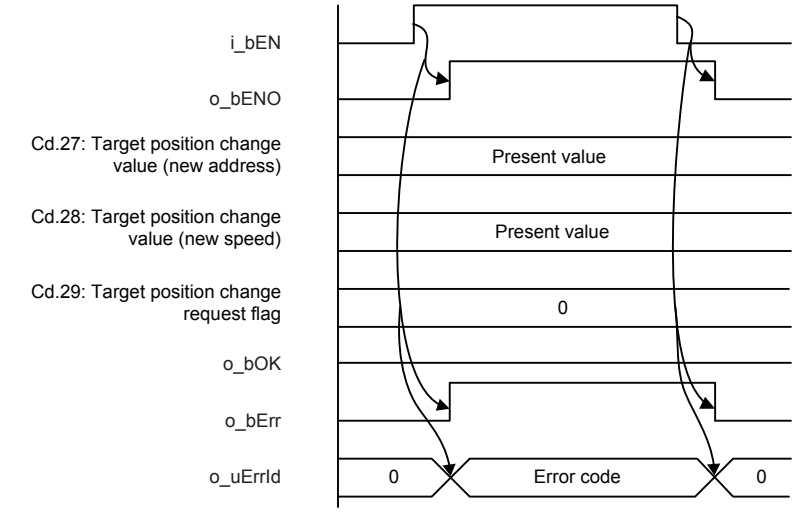
No.	Variable name	Name	Data type	Range	Description
(1)	i_bEN	Execution command	Bit	ON, OFF	ON: The FB is activated. OFF: The FB is not activated.
(2)	i_stModule	Module label	Structure	The setting range differs depending on the module label.	Specifies the module label for the positioning module.
(3)	i_uAxis	Target axis	Word [Unsigned]	1 to 4	Specify the axis number. The setting range varies according to the positioning module in use.
(4)	i_dPosChgAdr	Cd.27: Target position change value (new address)	Double Word [Signed]	-2147483648 to 2147483647, 0 to 35999999	Set a new positioning address to change the target position during positioning. [ABS] • Pr.1: Unit setting 0: mm -2147483648 to 2147483647 ($\times 10^{-1}$ μm) • Pr.1: Unit setting 1: inch -2147483648 to 2147483647 ($\times 10^{-5}$ inch) • Pr.1: Unit setting 2: degree 0 to 35999999 ($\times 10^{-5}$ degree) • Pr.1: Unit setting 3: pulse -2147483648 to 2147483647 (pulse) [INC] • Pr.1: Unit setting 0: mm -2147483648 to 2147483647 ($\times 10^{-1}$ μm) • Pr.1: Unit setting 1: inch -2147483648 to 2147483647 ($\times 10^{-5}$ inch) • Pr.1: Unit setting 2: degree -2147483648 to 2147483647 ($\times 10^{-5}$ degree) • Pr.1: Unit setting 3: pulse -2147483648 to 2147483647 (pulse)
(5)	i_udPosChgSpd	Cd.28: Target position change value (new speed)	Double Word [Unsigned]	0 to 2000000000, 0 to 3000000000, 0 to 5000000	Set a new speed to change the target position during positioning. When 0 is set, the speed is not changed. • Pr.1: Unit setting 0: mm 0 to 2000000000 ($\times 10^{-2}$ mm/min) • Pr.1: Unit setting 1: inch 0 to 2000000000 ($\times 10^{-3}$ inch/min) • Pr.1: Unit setting 2: degree 0 to 3000000000 ($\times 10^{-3}$ degree/min) • Pr.1: Unit setting 3: pulse 0 to 5000000 (pulse/s)

■Output label

No.	Variable name	Name	Data type	Default value	Description
(6)	o_bENO	Execution status	Bit	OFF	ON: The execution command is ON. OFF: The execution command is OFF.
(7)	o_bOK	Normal completion	Bit	OFF	When this label is ON, it indicates that the module has accepted the target position change request values.
(8)	o_bErr	Error completion	Bit	OFF	When this label is ON, it indicates that an error has occurred in the FB.
(9)	o_uErrId	Error code	Word [Unsigned]	0	Stores the error code that occurred in the FB.

FB details

Item	Description	
Available device	module	FX5-20PG-P
	Target CPU	FX5U CPU, FX5UC CPU
	Engineering tool	GX Works3 Version 1.035M or later
Language	Ladder diagram	
Number of basic steps	150 steps The number of FB steps integrated in the program varies depending on the CPU module used, the input/output definition, and the setting options of GX Works3. For the setting options of GX Works3, refer to 📖GX Works3 Operating Manual.	
Processing	• By turning on i_bEN (Execution command), the target position is changed according to the value set in i_dPosChgAdr (Cd.27: Target position change value (new address)) and the command speed is changed according to the value set in i_udPosChgSpd (Cd.28: Target position change value (new speed)) during the position control. • If the setting value of the target axis is out of the setting range, o_bErr (Error completion) turns on and the processing of this FB is interrupted. In addition, the error code 100 (hexadecimal) is stored in o_uErrId (Error code). For the error code, refer to ☞ Page 27 Error code.	
FB compilation method	Macro type	
FB operation	Pulsed execution (multiple scan execution type)	

Item	Description
Timing chart of I/O signals	[For normal completion]  [For error completion] 
Restrictions or precautions	• This FB does not include the error recovery processing. Program the error recovery processing separately in accordance with the required system operation. • This FB cannot be used in an interrupt program. • Do not use this FB in programs that are executed only once, such as a subroutine program or FOR-NEXT loop, because i_bEN (Execution command) cannot be turned off and the normal operation cannot be acquired. Always use this FB in programs that can turn off i_bEN (Execution command). • When this FB is used twice or more, precaution must be taken to avoid duplication of the target axis. • Every input must be provided with a value for proper FB operation. • When i_bEN (Execution command) is turned on while BUSY signal (Md.141: BUSY.b0, b1) is OFF, o_bErr (Error completion) turns on and the processing of this FB is interrupted. In addition, the error code 201 (hexadecimal) is stored in o_uErrId (Error code). For the error code, refer to ☞ Page 27 Error code. • The pulse output mode and external input/output signal logic, etc. must be set according to the connected devices and system before operating the positioning module. Set the GX Works3 module parameters according to the application. Refer to the 📖MELSEC iQ-F FX5 User's Manual (Positioning Control - Intelligent function module) for details on setting the module parameters.

Error code

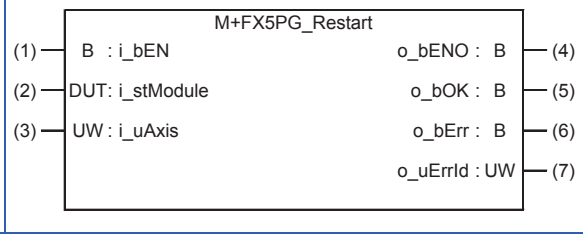
Error code (hexadecimal)	Description	Action
100	The set value of i_uAxis (Target axis) is out of the range. The target axis is not within the range of 1 to 4.	Try again after checking the setting.
201	This FB is executed before the positioning operation starts.	Please try again during the positioning operation.

2.8 M+FX5PG_Restart

Name

M+FX5PG_Restart

Overview

Item	Description
Overview	Restarts an axis that has stopped.
Symbol	

Labels

■Input label

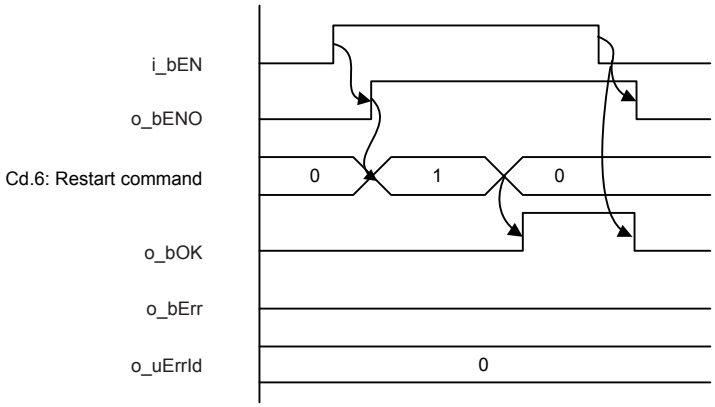
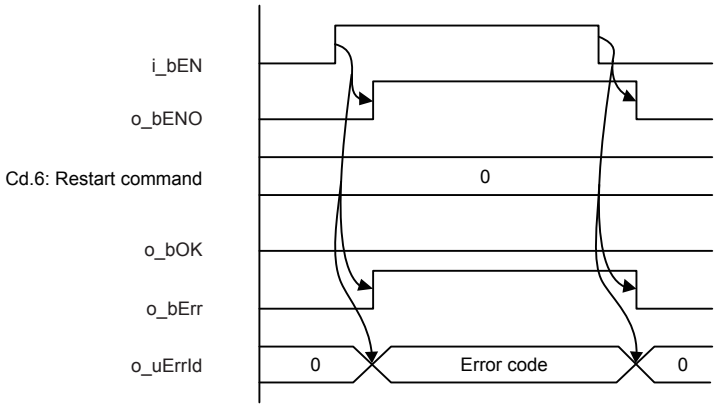
No.	Variable name	Name	Data type	Range	Description
(1)	i_bEN	Execution command	Bit	ON, OFF	ON: The FB is activated. OFF: The FB is not activated.
(2)	i_stModule	Module label	Structure	The setting range differs depending on the module label.	Specifies the module label for the positioning module.
(3)	i_uAxis	Target axis	Word [Unsigned]	1 to 4	Specify the axis number. The setting range varies according to the positioning module in use.

■Output label

No.	Variable name	Name	Data type	Default value	Description
(4)	o_bENO	Execution status	Bit	OFF	ON: The execution command is ON. OFF: The execution command is OFF.
(5)	o_bOK	Normal completion	Bit	OFF	When this label is ON, it indicates that the module has accepted the restart command request.
(6)	o_bErr	Error completion	Bit	OFF	When this label is ON, it indicates that an error has occurred in the FB.
(7)	o_uErrId	Error code	Word [Unsigned]	0	Stores the error code that occurred in the FB.

FB details

Item	Description	
Available device	Target module	FX5-20PG-P
	Target CPU	FX5U CPU, FX5UC CPU
	Engineering tool	GX Works3 Version 1.035M or later
Language	Ladder diagram	
Number of basic steps	148 steps The number of FB steps integrated in the program varies depending on the CPU module used, the input/output definition, and the setting options of GX Works3. For the setting options of GX Works3, refer to 📖GX Works3 Operating Manual.	
Processing	• Only when the following conditions are satisfied, the positioning operation that is stopped due to an error is restarted by turning on i_bEN (Execution command). If any of the conditions are not satisfied, o_bErr (Error completion) turns on and the processing of this FB is interrupted. In addition, the error code 202 (hexadecimal) is stored in o_uErrId (Error code). For the error code, refer to ☞ Page 29 Error code. (The conditions are positioning module complete signal (Md.31: Status.b15): OFF, Axis operation status (Md.26: Axis operation status): Stopped) • If the setting value of the target axis is out of the setting range, o_bErr (Error completion) turns on and the processing of this FB is interrupted. In addition, the error code 100 (hexadecimal) is stored in o_uErrId (Error code). For the error code, refer to ☞ Page 29 Error code.	

Item	Description
FB compilation method	Macro type
FB operation	Pulsed execution (multiple scan execution type)
Timing chart of I/O signals	[For normal completion]  [For error completion] 
Restrictions or precautions	• This FB does not include the error recovery processing. Program the error recovery processing separately in accordance with the required system operation. • This FB cannot be used in an interrupt program. • Do not use this FB in programs that are executed only once, such as a subroutine program or FOR-NEXT loop, because i_bEN (Execution command) cannot be turned off and the normal operation cannot be acquired. Always use this FB in programs that can turn off i_bEN (Execution command). • When this FB is used twice or more, precaution must be taken to avoid duplication of the target axis. • Every input must be provided with a value for proper FB operation. • The pulse output mode and external input/output signal logic, etc. must be set according to the connected devices and system before operating the positioning module. Set the GX Works3 module parameters according to the application. Refer to the MELSEC iQ-F FX5 User's Manual (Positioning Control - Intelligent function module) for details on setting the module parameters.

Error code

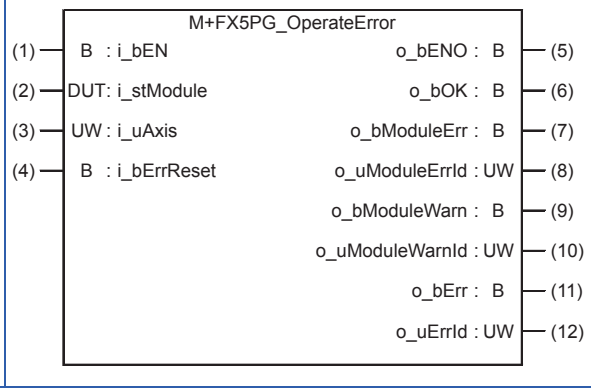
Error code (hexadecimal)	Description	Action
100	The set value of i_uAxis (Target axis) is out of the range. The target axis is not within the range of 1 to 4.	Try again after checking the setting.
202	The conditions for positioning restart are not satisfied. Any of the following conditions is not satisfied. • Positioning complete signal: OFF • Axis operation status: Stopped	Execute the FB again when all of the following conditions are satisfied. • Positioning complete signal: OFF • Axis operation status: Stopped

2.9 M+FX5PG_OperateError

Name

M+FX5PG_OperateError

Overview

Item	Description
Overview	Monitors errors and warnings, and resets errors.
Symbol	

Labels

■Input label

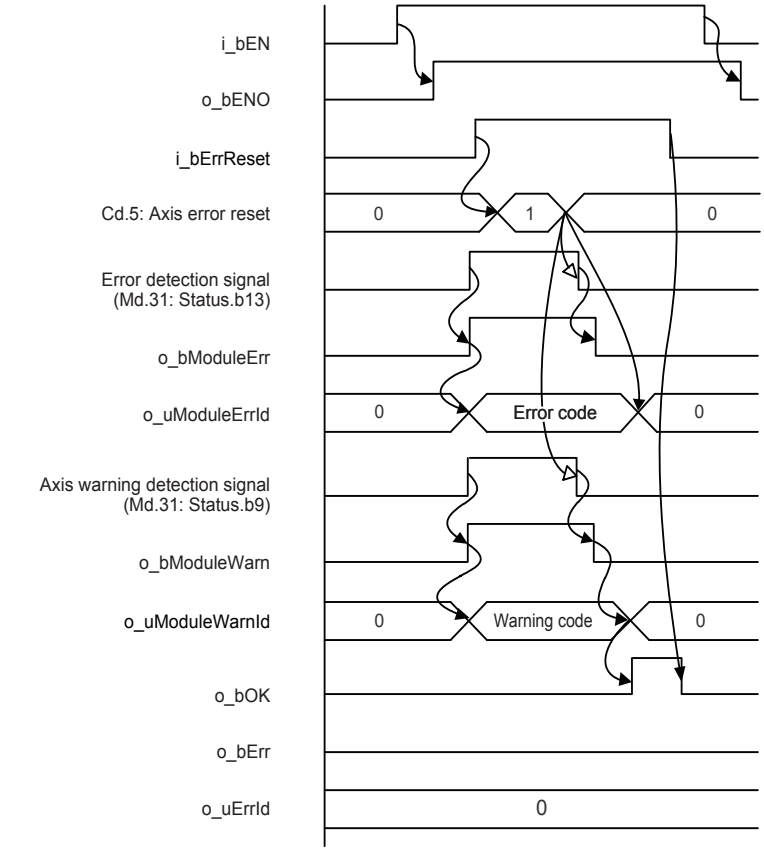
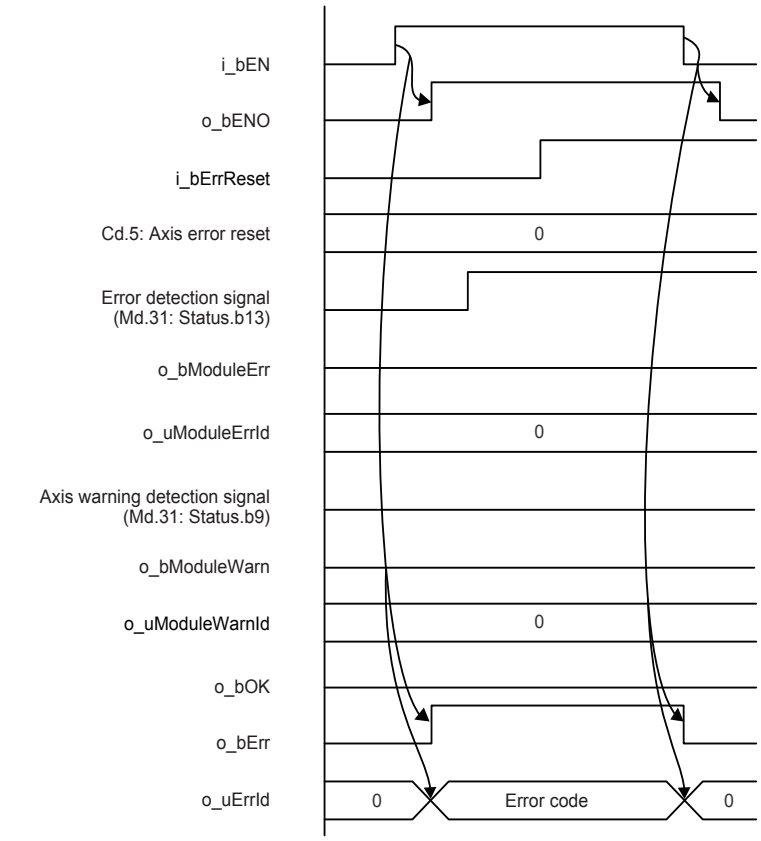
No.	Variable name	Name	Data type	Range	Description
(1)	i_bEN	Execution command	Bit	ON, OFF	ON: The FB is activated. OFF: The FB is not activated.
(2)	i_stModule	Module label	Structure	The setting range differs depending on the module label.	Specifies the module label for the positioning module.
(3)	i_uAxis	Target axis	Word [Unsigned]	1 to 4	Specify the axis number. The setting range varies according to the positioning module in use.
(4)	i_bErrReset	Error reset command	Bit	ON, OFF	ON: Errors are reset. OFF: Errors are not reset.

■Output label

No.	Variable name	Name	Data type	Default value	Description
(5)	o_bENO	Execution status	Bit	OFF	ON: The execution command is ON. OFF: The execution command is OFF.
(6)	o_bOK	Normal completion	Bit	OFF	When this label is ON, it indicates that error reset has been completed.
(7)	o_bModuleErr	Axis error detection	Bit	OFF	When this label is ON, it indicates that an axis error has occurred.
(8)	o_uModuleErrId	Axis error code	Word [Unsigned]	0	The error code of the error that has occurred in the module of the specified axis is stored.
(9)	o_bModuleWarn	Axis warning detection	Bit	OFF	When this label is ON, it indicates that an axis warning has occurred.
(10)	o_uModuleWarnId	Axis warning code	Word [Unsigned]	0	The warning code of the warning that has occurred in the module of the specified axis is stored.
(11)	o_bErr	Error completion	Bit	OFF	When this label is ON, it indicates that an error has occurred in the FB.
(12)	o_uErrId	Error code	Word [Unsigned]	0	Stores the error code that occurred in the FB.

FB details

Item	Description	
Available device	Target module	FX5-20PG-P
	Target CPU	FX5U CPU, FX5UC CPU
	Engineering tool	GX Works3 Version 1.035M or later
Language	Ladder diagram	
Number of basic steps	198 steps The number of FB steps integrated in the program varies depending on the CPU module used, the input/output definition, and the setting options of GX Works3. For the setting options of GX Works3, refer to 📖GX Works3 Operating Manual.	
Processing	• By turning on i_bEN (Execution command), errors of the target axis are monitored. • When a module error occurs, an error code is stored in o_uModuleErrId (Axis error code). • After i_bEN (Execution command) is turned ON, the generated error is reset by turning on i_bErrReset (Error reset command). • When a warning occurs in the module, the warning can be reset by turning on i_bErrReset (Error reset command). • If the setting value of the target axis is out of the setting range, o_bErr (Error completion) turns on and the processing of this FB is interrupted. In addition, the error code 100 (hexadecimal) is stored in o_uErrId (Error code). For the error code, refer to ☞ Page 33 Error code.	
FB compilation method	Macro type	
FB operation	Always executed	

Item	Description
Timing chart of I/O signals	[For normal completion]  [For error completion] 

Item	Description
Restrictions or precautions	• This FB does not include the error recovery processing. Program the error recovery processing separately in accordance with the required system operation. • This FB cannot be used in an interrupt program. • Do not use this FB in programs that are executed only once, such as a subroutine program or FOR-NEXT loop, because i_bEN (Execution command) cannot be turned off and the normal operation cannot be acquired. Always use this FB in programs that can turn off i_bEN (Execution command). • When this FB is used twice or more, precaution must be taken to avoid duplication of the target axis. • Do not change i_uAxis (Target axis) while i_bEN (Execution command) is ON. • Every input must be provided with a value for proper FB operation. • The pulse output mode and external input/output signal logic, etc. must be set according to the connected devices and system before operating the positioning module. Set the GX Works3 module parameters according to the application. Refer to the MELSEC iQ-F FX5 User's Manual (Positioning Control - Intelligent function module) for details on setting the module parameters.

Error code

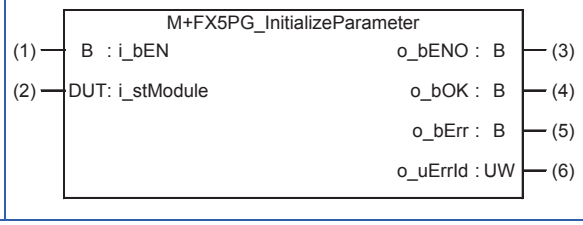
Error code (hexadecimal)	Description	Action
100	The set value of i_uAxis (Target axis) is out of the range. The target axis is not within the range of 1 to 4.	Try again after checking the setting.

2.10 M+FX5PG_InitializeParameter

Name

M+FX5PG_InitializeParameter

Overview

Item	Description
Overview	Initializes parameters.
Symbol	

Labels

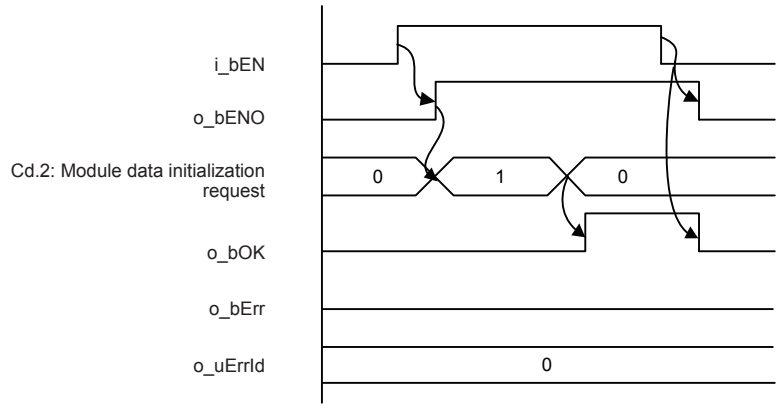
■Input label

No.	Variable name	Name	Data type	Range	Description
(1)	i_bEN	Execution command	Bit	ON, OFF	ON: The FB is activated. OFF: The FB is not activated.
(2)	i_stModule	Module label	Structure	The setting range differs depending on the module label.	Specifies the module label for the positioning module.

■Output label

No.	Variable name	Name	Data type	Default value	Description
(3)	o_bENO	Execution status	Bit	OFF	ON: The execution command is ON. OFF: The execution command is OFF.
(4)	o_bOK	Normal completion	Bit	OFF	When this label is ON, it indicates that parameter initialization has been completed.
(5)	o_bErr	Error completion	Bit	OFF	Always OFF
(6)	o_uErrId	Error code	Word [Unsigned]	0	Always 0

FB details

Item	Description	
Available device	Target module	FX5-20PG-P
	Target CPU	FX5U CPU, FX5UC CPU
	Engineering tool	GX Works3 Version 1.035M or later
Language	Ladder diagram	
Number of basic steps	67 steps The number of FB steps integrated in the program varies depending on the CPU module used, the input/output definition, and the setting options of GX Works3. For the setting options of GX Works3, refer to GX Works3 Operating Manual.	
Processing	By turning on i_bEN (Execution command), the setting data stored in the buffer memory and the flash ROM of the FX5-20PG-P is reset to the factory setting.	
FB compilation method	Macro type	
FB operation	Pulsed execution (multiple scan execution type)	
Timing chart of I/O signals		
Restrictions or precautions	• This FB does not include the error recovery processing. Program the error recovery processing separately in accordance with the required system operation. • This FB cannot be used in an interrupt program. • Do not use this FB in programs that are executed only once, such as a subroutine program or FOR-NEXT loop, because i_bEN (Execution command) cannot be turned off and the normal operation cannot be acquired. Always use this FB in programs that can turn off i_bEN (Execution command). • Every input must be provided with a value for proper FB operation. • Before using this FB, check that PLC READY signal (Cd.190: PLC READY signal) is OFF. • After the setting data is initialized, reset the CPU module or power on the programmable controller again. • The pulse output mode and external input/output signal logic, etc. must be set according to the connected devices and system before operating the positioning module. Set the GX Works3 module parameters according to the application. Refer to the MELSEC iQ-F FX5 User's Manual (Positioning Control - Intelligent function module) for details on setting the module parameters.	

Error code

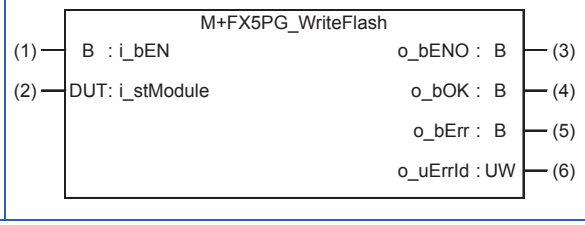
Error code (hexadecimal)	Description	Action
None	None	None

2.11 M+FX5PG_WriteFlash

Name

M+FX5PG_WriteFlash

Overview

Item	Description
Overview	Writes positioning data and block start data in the buffer memory to the flash ROM.
Symbol	

Labels

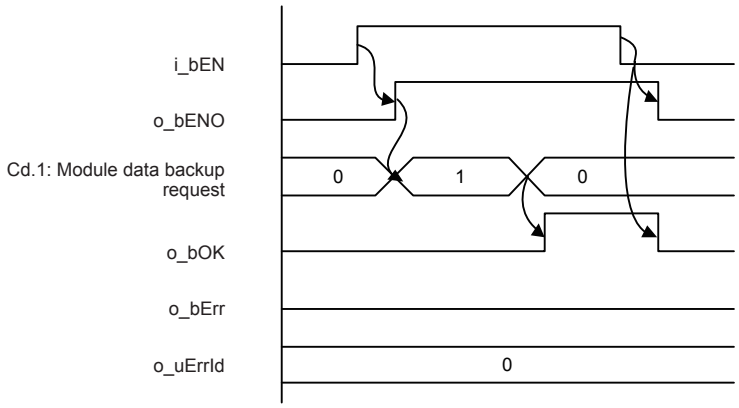
■Input label

No.	Variable name	Name	Data type	Range	Description
(1)	i_bEN	Execution command	Bit	ON, OFF	ON: The FB is activated. OFF: The FB is not activated.
(2)	i_stModule	Module label	Structure	The setting range differs depending on the module label.	Specifies the module label for the positioning module.

■Output label

No.	Variable name	Name	Data type	Default value	Description
(3)	o_bENO	Execution status	Bit	OFF	ON: The execution command is ON. OFF: The execution command is OFF.
(4)	o_bOK	Normal completion	Bit	OFF	When this label is ON, it indicates that writing the setting data to the flash ROM has been completed.
(5)	o_bErr	Error completion	Bit	OFF	Always OFF
(6)	o_uErrId	Error code	Word [Unsigned]	0	Always 0

FB details

Item	Description	
Available device	Target module	FX5-20PG-P
	Target CPU	FX5U CPU, FX5UC CPU
	Engineering tool	GX Works3 Version 1.035M or later
Language	Ladder diagram	
Number of basic steps	68 steps The number of FB steps integrated in the program varies depending on the CPU module used, the input/output definition, and the setting options of GX Works3. For the setting options of GX Works3, refer to 📖GX Works3 Operating Manual.	
Processing	By turning on i_bEN (Execution command), the setting data in the buffer memory is written to the flash ROM.	
FB compilation method	Macro type	
FB operation	Pulsed execution (multiple scan execution type)	
Timing chart of I/O signals		
Restrictions or precautions	• This FB does not include the error recovery processing. Program the error recovery processing separately in accordance with the required system operation. • This FB cannot be used in an interrupt program. • Do not use this FB in programs that are executed only once, such as a subroutine program or FOR-NEXT loop, because i_bEN (Execution command) cannot be turned off and the normal operation cannot be acquired. Always use this FB in programs that can turn off i_bEN (Execution command). • Every input must be provided with a value for proper FB operation. • Before using this FB, check that PLC READY signal (Cd.190: PLC READY signal) is OFF. • The pulse output mode and external input/output signal logic, etc. must be set according to the connected devices and system before operating the positioning module. Set the GX Works3 module parameters according to the application. Refer to the 📖MELSEC iQ-F FX5 User's Manual (Positioning Control - Intelligent function module) for details on setting the module parameters.	

Error code

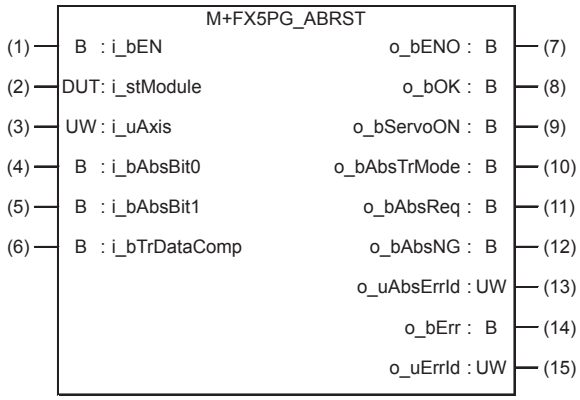
Error code (hexadecimal)	Description	Action
None	None	None

2.12 M+FX5PG_ABRST

Name

M+FX5PG_ABRST

Overview

Item	Description
Overview	Restores the absolute position.
Symbol	

Labels

■Input label

No.	Variable name	Name	Data type	Range	Description
(1)	i_bEN	Execution command	Bit	ON, OFF	ON: The FB is activated. OFF: The FB is not activated.
(2)	i_stModule	Module label	Structure	The setting range differs depending on the module label.	Specifies the module label for the positioning module.
(3)	i_uAxis	Target axis	Word [Unsigned]	1 to 4	Specify the axis number. The setting range varies according to the positioning module in use.
(4)	i_bAbsBit0	ABS data bit 0	Bit	ON, OFF	The lower bit of the data received from the servo amplifier.
(5)	i_bAbsBit1	ABS data bit 1	Bit	ON, OFF	The upper bit of the data received from the servo amplifier.
(6)	i_bTrDataComp	ABS transmission data ready	Bit	ON, OFF	The ready signal from the servo amplifier.

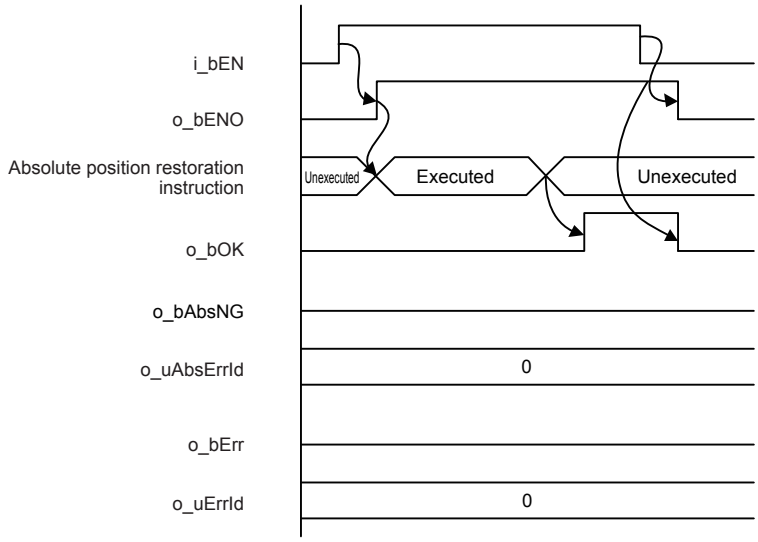
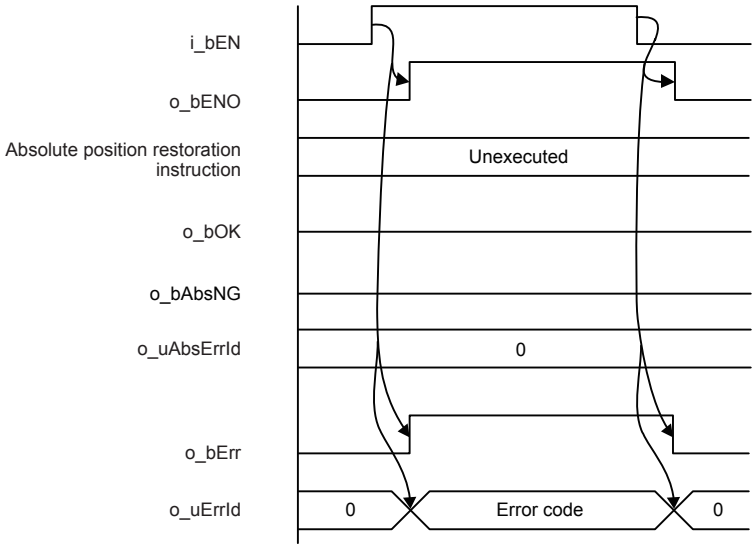
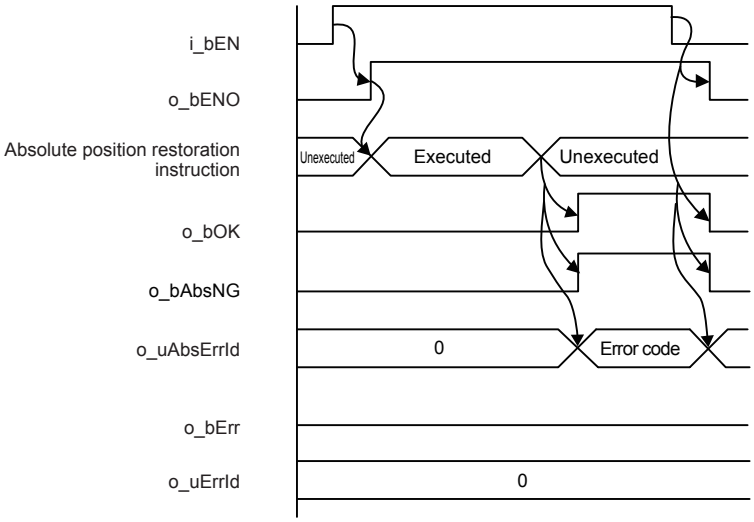
■Output label

No.	Variable name	Name	Data type	Default value	Description
(7)	o_bENO	Execution status	Bit	OFF	ON: The execution command is ON. OFF: The execution command is OFF.
(8)	o_bOK	Normal completion	Bit	OFF	When this label is ON, it indicates that the absolute position restoration request has been completed.
(9)	o_bServoOn	Servo ON signal	Bit	OFF	Servo ON signal is ON while this label is ON.
(10)	o_bAbsTrMode	ABS transmission mode	Bit	OFF	The servo amplifier is in the ABS transmission mode while this label is ON.
(11)	o_bAbsReq	ABS request flag	Bit	OFF	The ABS data is requested while this label is ON.
(12)	o_bAbsNG	ABS error	Bit	OFF	When this label is ON, it indicates that the absolute position restoration has been completed with an error.

No.	Variable name	Name	Data type	Default value	Description
(13)	o_uAbsErrId	ABS error code	Word [Unsigned]	0	The error code of the absolute position restoration instruction is stored. For the error codes, refer to 📖MELSEC iQ-F FX5 User's Manual (Positioning Control - Intelligent function module).
(14)	o_bErr	Error completion	Bit	OFF	When this label is ON, it indicates that an error has occurred in the FB.
(15)	o_uErrId	Error code	Word [Unsigned]	0	Stores the error code that occurred in the FB.

FB details

Item	Description	
Available device	Target module	FX5-20PG-P
	Target CPU	FX5U CPU, FX5UC CPU
	Engineering tool	GX Works3 Version 1.035M or later
Language	Ladder diagram	
Number of basic steps	225 steps The number of FB steps integrated in the program varies depending on the CPU module used, the input/output definition, and the setting options of GX Works3. For the setting options of GX Works3, refer to 📖GX Works3 Operating Manual.	
Processing	• By turning on i_bEN (Execution command), the absolute position is restored. • When the absolute position restoration is completed with an error, o_bAbsNG (ABS error) turns on and an error code is stored in o_uAbsErrId (ABS error code). For the error codes, refer to 📖MELSEC iQ-F FX5 User's Manual (Positioning Control - Intelligent function module). • If the setting value of the target axis is out of the setting range, o_bErr (Error completion) turns on and the processing of this FB is interrupted. In addition, the error code 100 (hexadecimal) is stored in o_uErrId (Error code). For the error code, refer to ☞ Page 41 Error code.	
FB compilation method	Macro type	
FB operation	Pulsed execution (multiple scan execution type)	

Item	Description
Timing chart of I/O signals	[For normal completion]  [For error completion] • Out of the target axis setting range  • The absolute position restoration instruction is completed with an error 

Item	Description
Restrictions or precautions	• This FB does not include the error recovery processing. Program the error recovery processing separately in accordance with the required system operation. • This FB cannot be used in an interrupt program. • Do not use this FB in programs that are executed only once, such as a subroutine program or FOR-NEXT loop, because i_bEN (Execution command) cannot be turned off and the normal operation cannot be acquired. Always use this FB in programs that can turn off i_bEN (Execution command). • When this FB is used twice or more, precaution must be taken to avoid duplication of the target axis. • Every input must be provided with a value for proper FB operation. • Before using this FB, check that PLC READY signal (Cd.190: PLC READY signal) is OFF. • When this FB is used, i_bEN (Execution command) is required to be on even after the absolute position restoration has been completed. • Do not turn off i_bEN (Execution command) during the absolute position restoration. If i_bEN (Execution command) is turned off before the absolute position restoration is completed, an error occurs when i_bEN (Execution command) is turned on, and the error 1861 (Dedicated instruction error) is stored in o_uAbsErrId (ABS error code). When the error 1861 (Dedicated instruction error) has occurred, reset the error and turn off and on i_bEN (Execution command) again. • The pulse output mode and external input/output signal logic, etc. must be set according to the connected devices and system before operating the positioning module. Set the GX Works3 module parameters according to the application. Refer to the MELSEC iQ-F FX5 User's Manual (Positioning Control - Intelligent function module) for details on setting the module parameters.

Error code

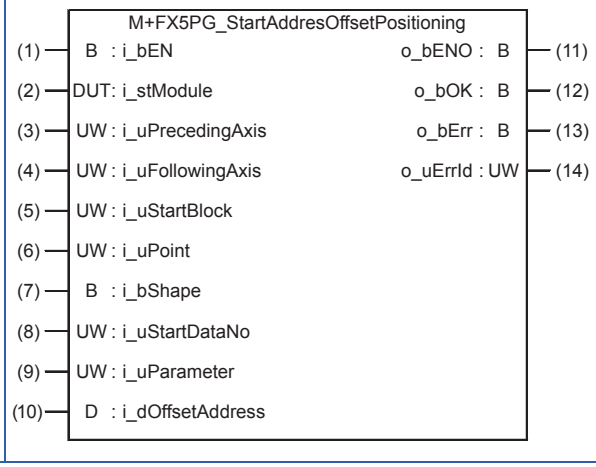
Error code (hexadecimal)	Description	Action
100	The set value of i_uAxis (Target axis) is out of the range. The target axis is not within the range of 1 to 4.	Try again after checking the setting.

2.13 M+FX5PG_StartAddressOffsetPositioning

Name

M+FX5PG_StartAddressOffsetPositioning

Overview

Item	Description
Overview	The following axis starts after the preceding axis has started and moved the set movement amount.
Symbol	

Labels

■Input label

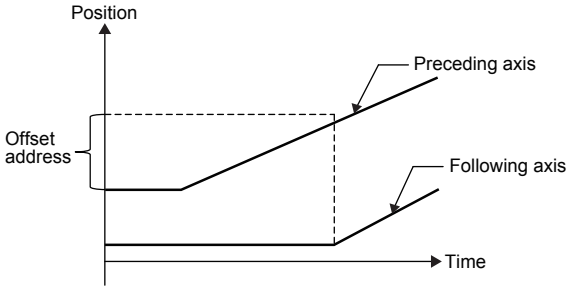
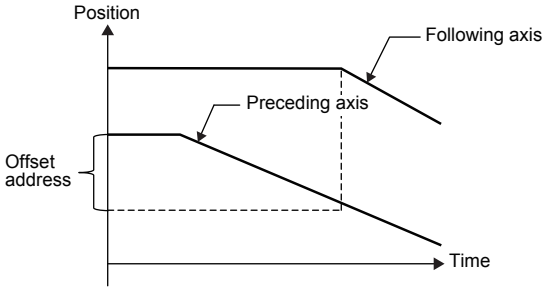
No.	Variable name	Name	Data type	Range	Description
(1)	i_bEN	Execution command	Bit	ON, OFF	ON: The FB is activated. OFF: The FB is not activated.
(2)	i_stModule	Module label	Structure	The setting range differs depending on the module label.	Specifies the module label for the positioning module.
(3)	i_uPrecedingAxis	Preceding axis	Word [Unsigned]	1 to 4	Specify the number of the preceding axis. The setting range varies according to the positioning module in use.
(4)	i_uFollowingAxis	Following axis	Word [Unsigned]	1 to 4	Specify the number of the following axis. The setting range varies according to the positioning module in use.
(5)	i_uStartBlock	Start block	Word [Unsigned]	0 to 4	Specify the start block. 0: Start block 0 1: Start block 1 2: Start block 2 3: Start block 3 4: Start block 4
(6)	i_uPoint	Point	Word [Unsigned]	1 to 50	Specify the point number.
(7)	i_bShape	Da.11: Shape	Bit	ON, OFF	Set the shape. OFF: End ON: Continuous
(8)	i_uStartDataNo	Da.12: Start data No.	Word [Unsigned]	1 to 600	Set the "positioning data No." specified with the "block starting data".
(9)	i_uParameter	Da.14: Parameter (condition data No.)	Word [Unsigned]	1 to 10	Set the condition data No.
(10)	i_dOffsetAddress	Offset address	Double word [Signed]	-2147483648 to 2147483647	Set the start timing offset movement amount. (When the preceding axis Pr. 1: unit setting is 2: degree -35999999 to 35999999)

■Output label

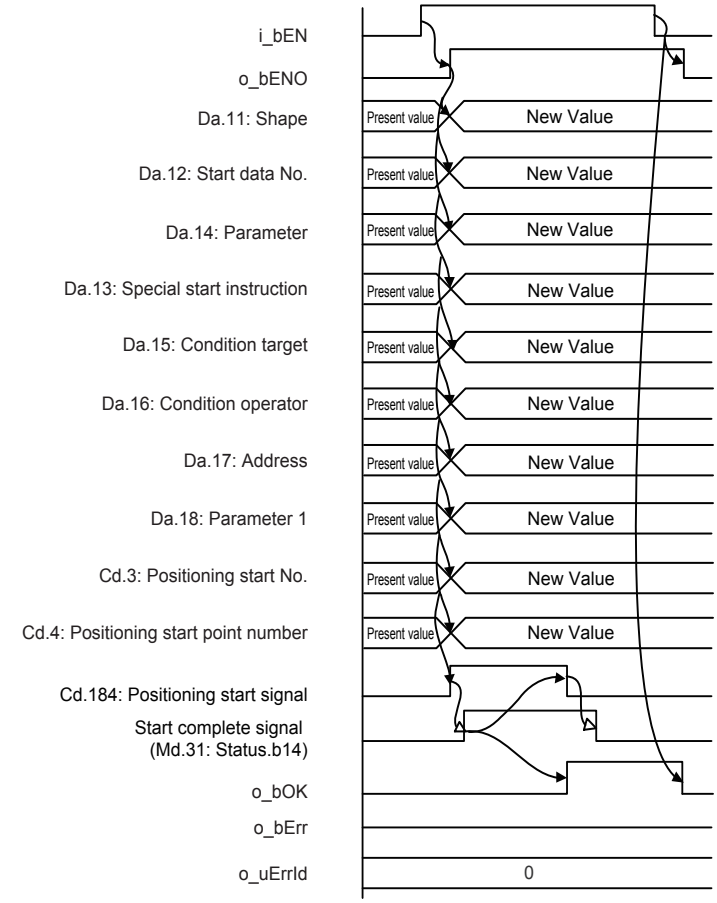
No.	Variable name	Name	Data type	Default value	Description
(11)	o_bENO	Execution status	Bit	OFF	ON: The execution command is ON. OFF: The execution command is OFF.
(12)	o_bOK	Normal completion	Bit	OFF	When this label is ON, it indicates that the block start for the following axis has finished. However, if a module error occurs when starting, this label will not turn ON.
(13)	o_bErr	Error completion	Bit	OFF	When this label is ON, it indicates that an error has occurred in the FB.
(14)	o_uErrId	Error code	Word [Unsigned]	0	Stores the error code that occurred in the FB.

FB details

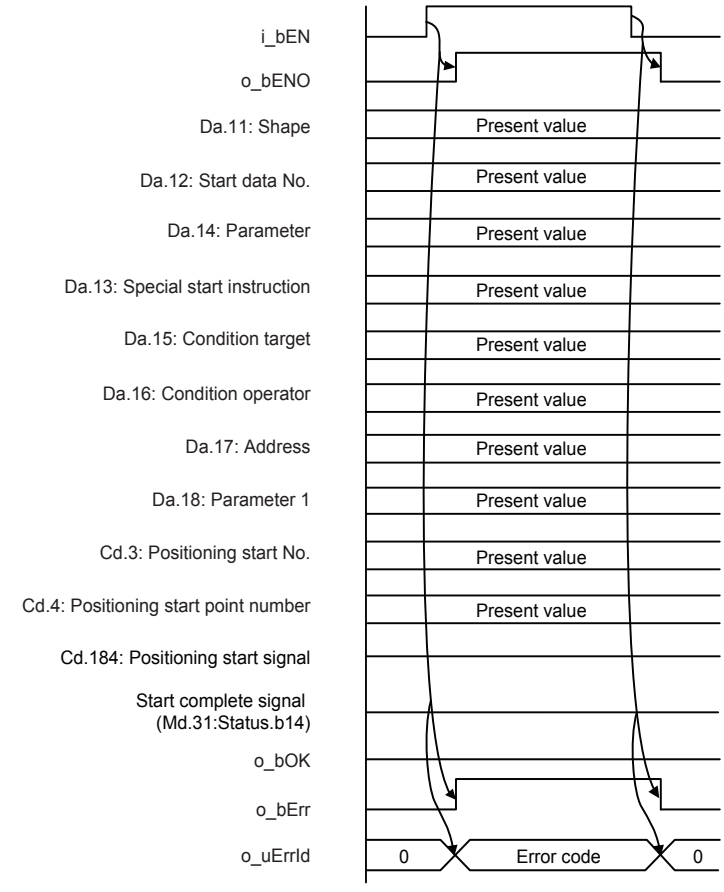
Item	Description	
Available device	Target module	FX5-20PG-P
	Target CPU	FX5U CPU, FX5UC CPU
	Engineering tool	GX Works3 Version 1.035M or later
Language	Ladder diagram	
Number of basic steps	671 steps The number of FB steps integrated in the program varies depending on the CPU module used, the input/output definition, and the setting options of GX Works3. For the setting options of GX Works3, refer to GX Works3 Operating Manual.	

Item	Description
Processing	• By turning i_bEN (Execution command) ON, the settings are made to start the following axis after the preceding axis has moved the set movement amount. When the offset address is a positive value.  When the offset address is a negative value.  • When i_bEN (Execution command) turns ON, the following axis will move only when all of the following conditions are satisfied. If the conditions are not satisfied, o_bErr (Error completion) turns ON and the processing of this FB is interrupted. In addition, error code 200 (hexadecimal) is stored in o_uErrId (Error code). For details on the error code, refer to the ☞ Page 46 Error code. (The conditions are Positioning module ready signal (Md.140: Module status.b0): ON, Positioning start signal (Cd.184: Positioning start signal): OFF, Start complete signal (Md.31: Status.b14): OFF, BUSY signal (Md.141: BUSY.b0, b1): OFF) • If the set value of the preceding axis is out of the range, o_bErr (Error completion) turns ON, and processing of this FB is interrupted. In addition, error code 103 (hexadecimal) is stored in o_uErrId (Error code). For details on the error code, refer to the ☞ Page 46 Error code. • If the set value of the following axis is out of the range, o_bErr (Error completion) turns ON, and processing of this FB is interrupted. In addition, error code 104 (hexadecimal) is stored in o_uErrId (Error code). For details on the error code, refer to the ☞ Page 46 Error code. • If the same axis number is set for the preceding axis and following axis, o_bErr (Error completion) turns ON, and processing of this FB is interrupted. In addition, error code 105 (hexadecimal) is stored in o_uErrId (Error code). For details on the error code, refer to the ☞ Page 46 Error code. • If the set value of the start block is out of the range, o_bErr (Error completion) turns ON, and processing of this FB is interrupted. In addition, error code 106 (hexadecimal) is stored in o_uErrId (Error code). For details on the error code, refer to the ☞ Page 46 Error code. • If the set value of the point is out of the range, o_bErr (Error completion) turns ON, and processing of this FB is interrupted. In addition, error code 107 (hexadecimal) is stored in o_uErrId (Error code). For details on the error code, refer to the ☞ Page 46 Error code. • If the set value of the start data No. is out of the range, o_bErr (Error completion) turns ON, and processing of this FB is interrupted. In addition, error code 108 (hexadecimal) is stored in o_uErrId (Error code). For details on the error code, refer to the ☞ Page 46 Error code. • If the set value of the condition data No. is out of the range, o_bErr (Error completion) turns ON, and processing of this FB is interrupted. In addition, error code 109 (hexadecimal) is stored in o_uErrId (Error code). For details on the error code, refer to the ☞ Page 46 Error code. • If the set value of the offset address is out of the range (only when preceding axis Pr. 1: unit setting is 2: degree), or when the value obtained by adding the preceding axis feed current value to the offset address is out of the range, o_bErr (Error completion) turns ON, and processing of this FB is interrupted. In addition, error code 10A (hexadecimal) is stored in o_uErrId (Error code). For details on the error code, refer to the ☞ Page 46 Error code.
FB compilation method	Macro type
FB operation	Pulsed execution (multiple scan execution type)

Item	Description
Timing chart of I/O signals	[For normal completion]



[For error completion]



Item	Description
Restrictions or precautions	• This FB does not include the error recovery processing. Program the error recovery processing separately in accordance with the required system operation. • This FB cannot be used in an interrupt program. • Do not use this FB in programs that are executed only once, such as a subroutine program or FOR-NEXT loop, because i_bEN (Execution command) cannot be turned off and the normal operation cannot be acquired. Always use this FB in programs that can turn off i_bEN (Execution command). • The positioning operation for the preceding axis is not started with this FB. Confirm that this FB o_bOK (Normal completion) turns ON, and then start operation of the preceding axis with the customer's program. • Do not move the preceding axis in the direction opposite the direction set with the i_dOffsetAddress (Offset address) after this FB is executed. • If the value obtained by adding the i_dOffset Address (Offset address) to the preceding axis feed current value is close to -2147483648 or 2147483647 (0 or 35999999 when preceding axis Pr. 1 unit setting is 2: degree), there may be cases when the following axis does not start even after the preceding axis moves by the i_dOffsetAddress (Offset address) amount. • When i_dOffsetAddress (Offset address) is set to 0, the following axis will start operation immediately after the preceding axis starts regardless of the direction that the preceding axis moves. (The preceding axis and following axis do not start at a simultaneous timing. Instead, the following axis starts with a delay.) • Every input must be provided with a value for proper FB operation. • The pulse output mode and external input/output signal logic, etc. must be set according to the connected devices and system before operating the positioning module. Set the GX Works3 module parameters according to the application. Refer to the MELSEC iQ-F FX5 User's Manual (Positioning Control - Intelligent function module) for details on setting the module parameters.

Error code

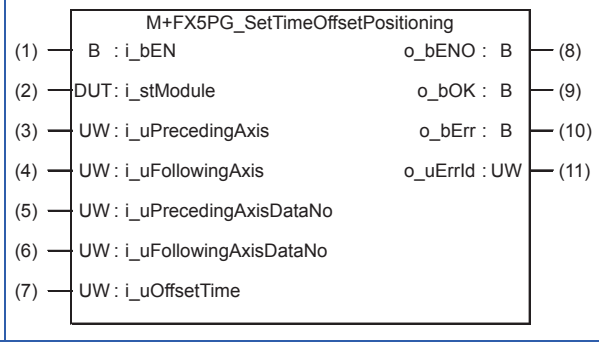
Error code (hexadecimal)	Description	Action
103	The i_uPrecedingAxis (Preceding axis) setting value is out of the setting range. The preceding axis is not set between 1 and 4.	Try again after checking the setting.
104	The i_uFollowingAxis (Following axis) setting value is out of the setting range. The following axis is not set between 1 and 4.	Try again after checking the setting.
105	The i_uPrecedingAxis (Preceding axis) and i_uFollowingAxis (Following axis) setting values are set to the same axis.	Try again after checking the setting.
106	The i_uStartBlock (Start block) setting value is out of the range. The start block is not set between 0 and 4.	Try again after checking the setting.
107	The i_uPoint (Point number) setting value is out of the range. The point number is not set between 1 and 50.	Try again after checking the setting.
108	i_uStartDataNo(Da.12: Start data No.) setting is out of the range. The start data is not set between 1 and 600.	Try again after checking the setting.
109	The i_uParameter (Condition data No.) setting value is out of the range. The condition data No. is not set between 1 and 10.	Try again after checking the setting.
10A	The i_dOffsetAddress (Offset address) setting value is out of the range. The value obtained by adding the offset address to the preceding axis feed current value is not set between -2147483648 to 2147483647(when Pr.1: unit setting is 2: unit setting is 2: degree, 0 to 35999999).	Try again after checking the setting.
200	The conditions for positioning start are not satisfied. Any of the following conditions are not satisfied. • Ready: ON • Positioning start signal: OFF • Start complete signal: OFF • BUSY signal: OFF	Execute the FB again when all of the following conditions are satisfied. • Ready: ON • Positioning start signal: OFF • Start complete signal: OFF • BUSY signal: OFF

2.14 M+FX5PG_SetTimeOffsetPositioning

Name

M+FX5PG_SetTimeOffsetPositioning

Overview

Item	Description
Overview	The following axis starts after the set time has elapsed from the start of the preceding axis.
Symbol	

Labels

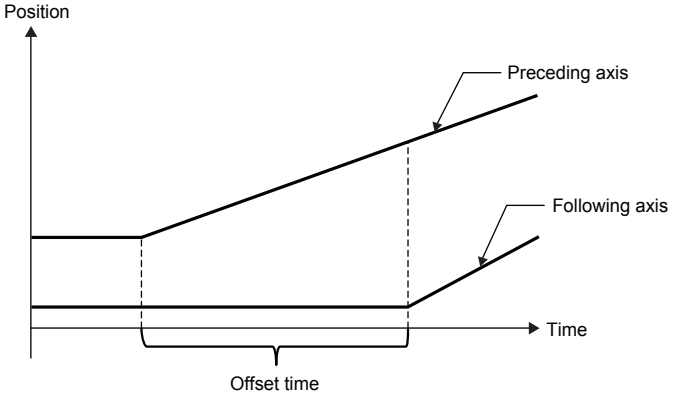
■Input label

No.	Variable name	Name	Data type	Range	Description
(1)	i_bEN	Execution command	Bit	ON, OFF	ON: The FB is activated. OFF: The FB is not activated.
(2)	i_stModule	Module label	Structure	The setting range differs depending on the module label.	Specifies the module label for the positioning module.
(3)	i_uPrecedingAxis	Preceding axis	Word [Unsigned]	1 to 4	Specify the number of the preceding axis. The setting range varies according to the positioning module in use.
(4)	i_uFollowingAxis	Following axis	Word [Unsigned]	1 to 4	Specify the number of the following axis. The setting range varies according to the positioning module in use.
(5)	i_uPrecedingAxisDataNo	Preceding axis data No.	Word [Unsigned]	1 to 600	Set the positioning data No. for the preceding axis.
(6)	i_uFollowingAxisDataNo	Following axis data No.	Word [Unsigned]	1 to 600	Set the positioning data No. for the following axis.
(7)	i_uOffsetTime	Offset time	Word [Unsigned]	0 to 65535	Set the start timing offset time.

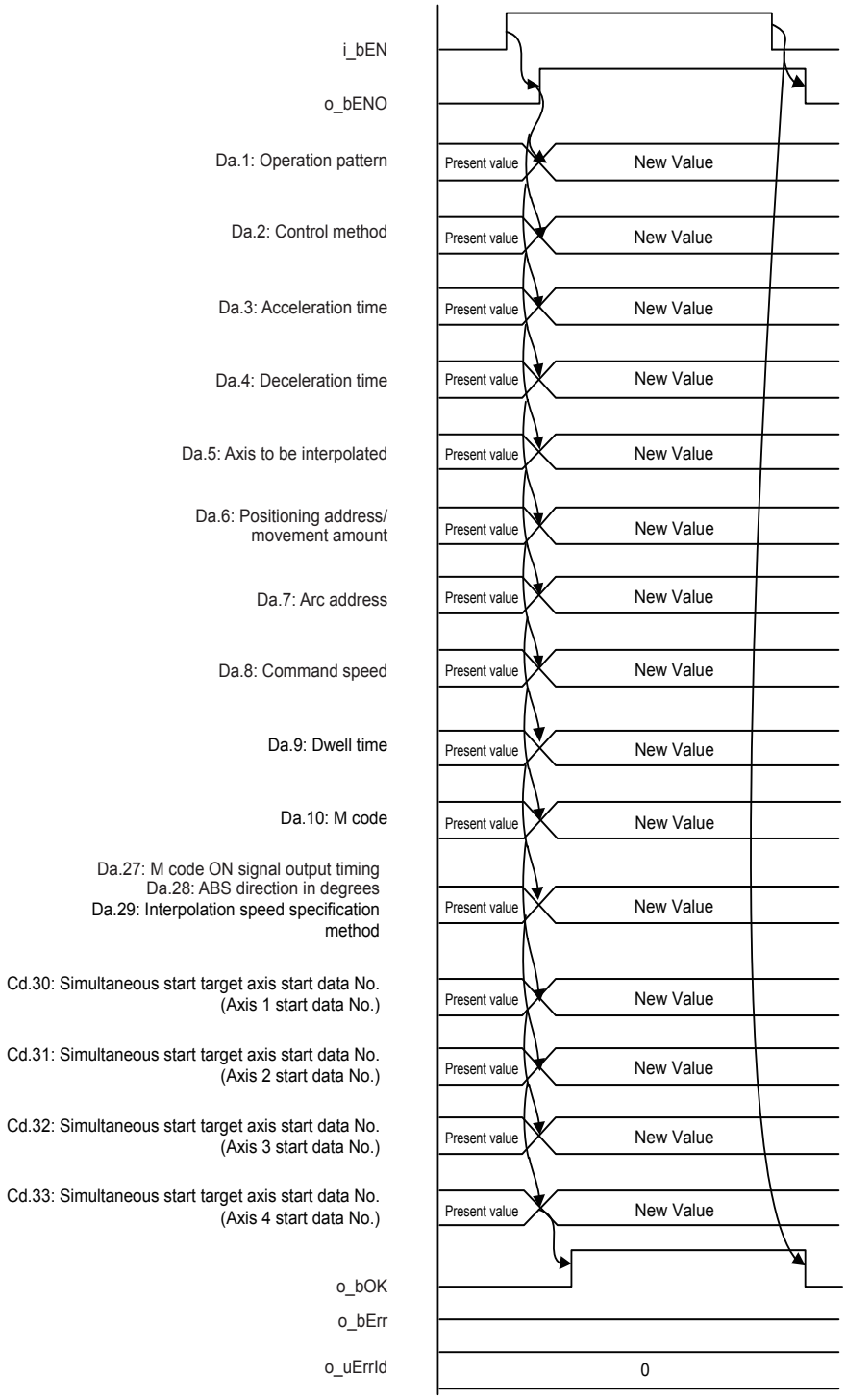
■Output label

No.	Variable name	Name	Data type	Default value	Description
(8)	o_bENO	Execution status	Bit	OFF	ON: The execution command is ON. OFF: The execution command is OFF.
(9)	o_bOK	Normal completion	Bit	OFF	When this label is ON, it indicates that the positioning data setting has been completed.
(10)	o_bErr	Error completion	Bit	OFF	When this label is ON, it indicates that an error has occurred in the FB.
(11)	o_uErrId	Error code	Word [Unsigned]	0	Stores the error code that occurred in the FB.

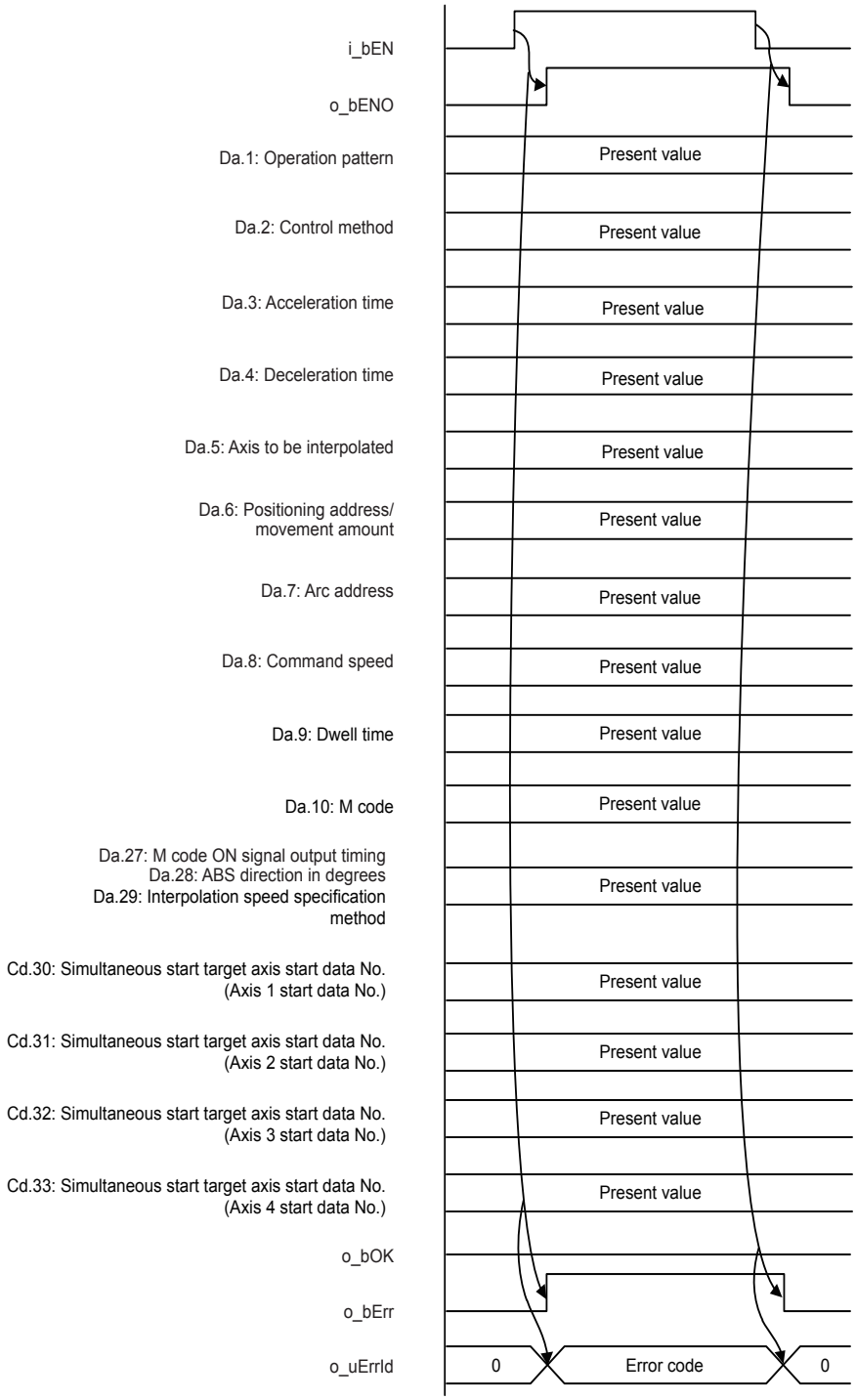
FB details

Item	Description	
Available device	Target module	FX5-20PG-P
	Target CPU	FX5U CPU, FX5UC CPU
	Engineering tool	GX Works3 Version 1.035M or later
Language	Ladder diagram	
Number of basic steps	384 steps The number of FB steps integrated in the program varies depending on the CPU module used, the input/output definition, and the setting options of GX Works3. For the setting options of GX Works3, refer to 📖GX Works3 Operating Manual.	
Processing	• By turning i_bEN (Execution command) ON, the settings are made to start the following axis (Following axis) after the set time since the preceding axis (Preceding axis) has started.  • If the set value of the preceding axis is out of the range, o_bErr (Error completion) turns ON, and processing of this FB is interrupted. In addition, error code 103 (hexadecimal) is stored in o_uErrId (Error code). For details on the error code, refer to the ☞ Page 51 Error code. • If the set value of the following axis is out of the range, o_bErr (Error completion) turns ON, and processing of this FB is interrupted. In addition, error code 104 (hexadecimal) is stored in o_uErrId (Error code). For details on the error code, refer to the ☞ Page 51 Error code. • If the same axis number is set for the preceding axis and following axis, o_bErr (Error completion) turns ON, and processing of this FB is interrupted. In addition, error code 105 (hexadecimal) is stored in o_uErrId (Error code). For details on the error code, refer to the ☞ Page 51 Error code. • If the set value of the preceding axis positioning data No. is out of the range, o_bErr (Error completion) turns ON, and processing of this FB is interrupted. In addition, error code 10B (hexadecimal) is stored in o_uErrId (Error code). For details on the error code, refer to the ☞ Page 51 Error code. • If the set value of the following axis positioning data No. is out of the range, o_bErr (Error completion) turns ON, and processing of this FB is interrupted. In addition, error code 10C (hexadecimal) is stored in o_uErrId (Error code). For details on the error code, refer to the ☞ Page 51 Error code.	
FB compilation method	Macro type	
FB operation	Pulsed execution (single scan execution type)	

Item	Description
Timing chart of I/O signals	[For normal completion]



Item	Description
Timing chart of I/O signals	[For error completion]



Item	Description
Restrictions or precautions	• This FB does not include the error recovery processing. Program the error recovery processing separately in accordance with the required system operation. • This FB cannot be used in an interrupt program. • Do not use this FB in programs that are executed only once, such as a subroutine program or FOR-NEXT loop, because i_bEN (Execution command) cannot be turned off and the normal operation cannot be acquired. Always use this FB in programs that can turn off i_bEN (Execution command). • The positioning operation is not started with this FB. Confirm that o_bOK (Normal completion) for this FB has turned ON, and then set 9004 (multiple axis simultaneous start) in the preceding axis Cd.3: Positioning start No. using the customer's program. Then, start operation. • With this FB, the positioning data of the one before the positioning data No. of the following axis is used, so do not change the positioning data for the corresponding data after this FB has been executed. (If 1 is set for the following axis positioning data No., the No. 600 positioning data will be used.) • If i_uOffsetTime (Offset time) is set to 0, the following axis will start movement immediately after the preceding axis starts. (The preceding axis and following axis do not start at a simultaneous timing. Instead, the following axis starts with a delay.) • Every input must be provided with a value for proper FB operation. • The pulse output mode and external input/output signal logic, etc., must be set according to the connected devices and system before operating the positioning module. Set the GX Works3 module parameters according to the application. Refer to the MELSEC iQ-F FX5 User's Manual (Positioning Control - Intelligent function module) for details on setting the module parameters.

Error code

Error code (hexadecimal)	Description	Action
103	The i_uPrecedingAxis (Preceding axis) setting value is out of the setting range. The preceding axis is not set between 1 and 4.	Try again after checking the setting.
104	The i_uFollowingAxis (Following axis) setting value is out of the setting range. The following axis is not set between 1 and 4.	Try again after checking the setting.
105	The i_uPrecedingAxis (Preceding axis) and i_uFollowingAxis (following axis) setting values are set to the same axis.	Try again after checking the setting.
10B	The i_uPrecedingAxisDataNo (Preceding axis data No.) setting value is out of the setting range. The preceding axis positioning data No. is not set between 1 and 600.	Try again after checking the setting.
10C	The i_uPrecedingAxisDataNo (Following axis data No.) setting value is out of the setting range. The following axis positioning data No. is not set between 1 and 600.	Try again after checking the setting.

INDEX

M

MEMO

REVISIONS

Revision date	Revision	Description
April 2017	A	First Edition

Manual number: JY997D75101A

MITSUBISHI ELECTRIC CORPORATION

HEAD OFFICE: TOKYO BUILDING, 2-7-3 MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN