NC2x 610	Present Position Preset _NC2x610_SetPosition

Basic function	Changes the present position to the specified position data.
Symbol	
File name	Lib\FBL\omronlib\PositionController\NC2x_NC2x610_SetPosition10.cxf
Applicable models	Position Control Units	CJ1W-NC214/234/414/434
	CPU Unit	CJ1*-CPU**H Version 3.0 or later CJ1M-CPU** Version 3.0 or later CP1H CJ2H-CPU**(-EIP)
	CX-Programmer	Version 5.0 or later
Languages in function block definitions	Ladder programming
Conditions for usage	None.
Function description	・ For the axis or the external encoder specified in "Unit No. (UnitNo)" and "Axis No. (Axis)", the present position preset of the input value of "Position command (Position)" will be executed when "Start (Execute)" turns ON. ・ The preset target (command position/feedback position/both) will be specified in "Preset target (Target)". ・ "Preset completed (Done)" is turned ON when the teaching operation for the FB has been completed. ・ "Busy (Busy)" will be set when the "Start (Execute)" is turned ON. "Busy (Busy)" will be reset when any of "Preset completed (Done)" or "Error (Error)" is turned ON. Even if an error occurs when the input variable is out of the range, etc., "Busy (Busy)" will be set for at least one cycle. ・ "Error (Error)" will be turned ON and "Error code (ErrorID)" will be output if an error occurs for the FB. This will not occur for error in other FBs or other instances of the FB. ・ These statuses (Done/Error/ErrorID) will be reset when "Start (Execute)" turns OFF. If "Start (Execute)" turns OFF before the positioning operation has been completed, the status will be set for at least one cycle when corresponding conditions have occurred.
Kind of FB definition	Always execution type. Connect the EN input to the Always ON Flag (P_On). The same instance cannot be used in two or more places.
EN input condition	・ Connect the EN input to the Always ON Flag (P_On). If another bit is connected to EN, the FB outputs will be held when the connected bit turns OFF.
Restrictions Other	・ This FB does not recognize the existence of the axis specified in "Unit No. (UnitNo)" and "Axis (Axis)". If these input variables have not been set correctly, the FB may not work normally. ・ Under this FB, execution results vary depending on the combination of the axis parameter "+98.02: Feedback Pulse Input Position Monitoring Enable ", "Axis No. (Axis)" and "Preset target (Target)". Refer to the "■Combination of Input Variables and Axis Parameter" for the details. ・ This FB uses bits of the Position Control Unit. Therefore, do not turn these bits ON or OFF. For the same reason, do not use these bits for coil outputs (OUT commands). Refer to the "■Used bits list" for the bits used by this FB.

Application example	Turning OFF bit A and then ON will change the present position of the axis (Axis 1) connected to the Position Control Unit of unit number 0.

Related manuals	CJ-series Position Control Unit Operation Manual (W477) 4-4 Present Position Preset 12-6 Error Code List

■Variable Tables

Input Variables

Name	Variable name	Data type	Default	Range	Description
EN	EN	BOOL			1(ON): FB started 0(OFF): FB not started
Unit No.	UnitNo	INT	&0	&0 to &94	Specify the unit number.
Axis No.	Axis	INT	&1	&1 to &4, &241(#F1)	Specify the axis or external encoder. &1 to&4: Specify the axis number. &241(#F1): Specify an external encoder
Start	Execute	BOOL	0(OFF)		⤒: Starts the present position preset.
Position command	Position	DINT	+0	-2147483648 to +2147483647	Specify the target position. Unit: Command units.
Preset target	Target	INT	&0	&0 to &2	Select the command position or feedback position for the preset target. &0: Command position &1: Feedback position &2: Command position/Feedback position (both)

Output Variables

Name	Variable name	Data type	Range	Description
ENO	ENO	BOOL		1(ON): FB operating normally 0(OFF): FB not started / FB ended with error
Positioning completed	Done	BOOL		Turns ON when the present position preset operation has been completed.
Busy	Busy	BOOL		Turns ON when FB is in the process.
Error	Error	BOOL		Turns ON when an error has occurred in the FB. Refer to "Error code (ErrorID)" for details.
Error code	ErrorID	WORD		Returns the error code when an error occurred in the FB. Refer to "■Error code list" for details.

■Combination of Input Variables and Axis Parameter

Condition			Execution Results		
Axis parameter	Input Variables				
Feedback Pulse Input Position Monitoring Enable	Axis No. (Axis)	Preset target (Target)	Command position	Feedback position	Operation Results of FB
0: Not reflect	&1 to &4	&0	Preset	No change	Done
		&1	No change	Preset	Done
		&2	Preset	Preset	Done
	&241(#F1)	&0	No change	No change	Input variable out of range
		&1, &2	No change	Preset	Done
1: Reflect	&1 to &4	&0	Preset	Preset	Done
		&1, &2	No change	No change	Parameter setting error
	&241(#F1)	&0	No change	No change	Input variable out of range
		&1, &2	No change	Preset	Done

■**Error code list**

Error name	Error code	Probable cause	Clearing method
Input variable out of range	#0001	The value of input variable of this FB is out of valid range.	Set the value of input variable within the specified range.
Operating memory area allocation out of range	#0002	The allocation of Axis Operating Memory Area of Common Parameter is out of allowable setting range.	Correct the allocation of Axis Operating Memory Area of Common Parameter so that it falls within the allowable setting range of data.
Unit error	#1001	An error in individual unit has occurred.	Check "Unit common error code". Identify the error cause from the Operation Manual of the Position Control Unit.
Axis error	#1002	An error in individual axis has occurred.	Check "Axis error code". Identify the error cause from the Operation Manual of the Position Control Unit.
Parameter setting error	#1100	Parameter transfer via the data transfer command has not been completed normally.	Check that the Position Control Unit status and parameter set values are within the range of the specifications.
Unit setup	#2000	The Position Control Unit is not in unit ready status.	Execute the FB after putting the Position Control Unit in unit ready status.
Command disabled	#2300	FB commands have not been accepted.	Execute the FB after putting the unit in status that can accept commands.
Present position preset	#3207	"Present position preset" of the Direct Operation Command Memory area has been operated by the outside of the FB.	Do not operate each bit which the active FB is operating, by the external unit of the FB. Do not use it on OUT command.

■**Used bits list**

Memory area	Name	Data type	Address	Note
Direct Operation Command Memory area	Present position preset	BOOL	B+00.07	
	Command position	DINT	B+02	

■**Version History**

Version	Date	Contents
1.00	2009.06.	Original production.

■**Note**
This document explains the function of the function block.
It does not provide information of restrictions on the use of Units and Components or combination of them. For actual applications, make sure to read the operation manuals of the applicable products.