

NC2x204	Read Present Position _NC2x204_ReadActualPosition
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Basic function	Reads the present position of an axis.								
Symbol									
File name	Lib\FBL\omronlib\PositionController\NC2x\ NC2x204_ReadActualPosition10.cxf								
Applicable models	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Position Control Units</td> <td>CJ1W-NC214/234/414/434</td> </tr> <tr> <td>CPU Unit</td> <td>CJ1*-CPU**H Version 3.0 or later CJ1M-CPU** Version 3.0 or later CP1H CJ2H-CPU**(-EIP)</td> </tr> <tr> <td>CX-Programmer</td> <td>Version 5.0 or later</td> </tr> </table>	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		
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	<ul style="list-style-type: none"> • For the axis specified in "Unit No. (UnitNo)" and "Axis No. (Axis)", the command present position and the monitor value will be continuously reflected in "Command present position (Position)" and "Present monitor value (Monitor)" while "Output enable (Enable)" turns ON. • The type of output value for "Present monitor value (Monitor)" will be specified in "Monitor type (MonitorType)". • "Read completed (Valid)" will turn ON when the valid present position is output. • "Error flag (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. "Command present position (Position)" will be cleared to 0 when the above occurs. • These statuses (Error/ErrorID) will be reset when "Output enable (Enable)" turns OFF. 								
Kind of FB definition	<p>Always execution type.</p> <p>Connect the EN input to the Always ON Flag (P_On).</p> <p>The same instance cannot be used in two or more places.</p>								
EN input condition	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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. • This FB changes the following axis parameters. <table border="1" style="width: 100%; border-collapse: collapse; margin: 5px 0;"> <thead> <tr> <th style="text-align: left;">Address</th> <th style="text-align: left;">Name</th> <th style="text-align: left;">Size</th> <th style="text-align: left;">Range</th> </tr> </thead> <tbody> <tr> <td>+104</td> <td>Expanded Monitor Type</td> <td>1 channel</td> <td>&0 to &4</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • This FB outputs the status by referring to the axis in appropriate memory area and "Read completed (Done)" is turned ON, even when the target axis is not connected. 	Address	Name	Size	Range	+104	Expanded Monitor Type	1 channel	&0 to &4
Address	Name	Size	Range						
+104	Expanded Monitor Type	1 channel	&0 to &4						

Application example

When bit A is turned ON, the command present position and the feedback position of the axis (Axis 1) connected to the Position Control Unit of unit number 0 will be read out, and output for D1000 and D1002.

Related manuals

CJ-series Position Control Unit Operation Manual (W477)
5-5 Operating Memory Area

■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	Axis	INT	&1	&1 to &4	Specify the axis number.
Output enable	Enable	BOOL	0(OFF)		↑: Present position read enabled ↓: Present position read disabled
Monitor type	MonitorType	INT	&0	&0 to &4	The type of control data to be output for "Present monitor value (Monitor)" will be specified. &0: Feedback present position (The command position will be displayed if there's no feedback position.) &1: Command present position &2: Position deviation (0 will be displayed if there's no feedback position.) &3: Feedback speed (Calculated with the feedback position. The command speed will be displayed if there's no feedback position.) &4: Command speed

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
Read completed	Valid	BOOL		Turns ON when the valid present position of axes is output.
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.
Command present position	Position	DINT		Returns the command present position of axes controlled by the Position Control Unit.
Present monitor value	Monitor	DINT		Returns the present monitor value of axes controlled by the Position Control Unit.

■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.
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.

■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.