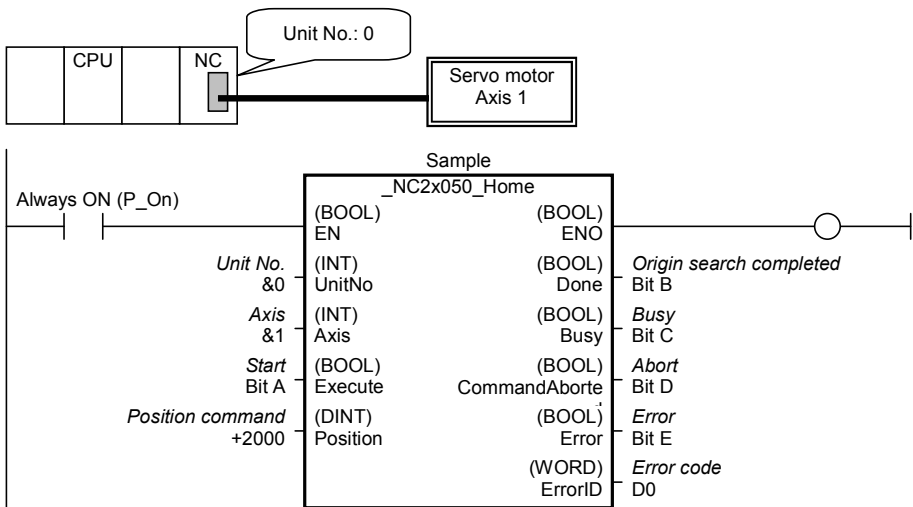


NC2x050	Origin Search _NC2x050_Home
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Basic function	Executes the origin search operation to establish the origin.								
Symbol									
File name	Lib\FBL\omronlib\PositionController\NC2x\ NC2x050_Home10.cxf								
Applicable models	<table border="1" 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)", set the value which was specified in "Position command (Position)" when "Start (Execute)" turned ON, to the axis parameter "Origin Position Offset ", and the origin search operation will start. When the origin search operation is completed, the value specified in "Position command (Position)" will become the present position. • "Origin search completed (Done)" is turned ON when the origin search operation for the FB has been completed. This flag will not be turned ON if the positioning operation is canceled because another operation has been started from a different instance, for a deceleration stop, or because an error has occurred. • "Busy (Busy)" will be set when the "Start (Execute)" is turned ON. "Busy (Busy)" will be reset when any of "Origin search completed (Done)", "Abort (CommandAborted)", 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/CommandAborted/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	<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-top: 5px;"> <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>+70</td> <td>Origin Position Offset</td> <td>2 channel</td> <td>-2147483648 to +2147483647</td> </tr> </tbody> </table> • 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. 	Address	Name	Size	Range	+70	Origin Position Offset	2 channel	-2147483648 to +2147483647
Address	Name	Size	Range						
+70	Origin Position Offset	2 channel	-2147483648 to +2147483647						

<p>Application example</p>	<p>Turning the bit A ON from OFF will operate the axis (Axis 1) connected to the Position Control Unit with a unit number 0 using the origin search command.</p> 
<p>Related manuals</p>	<p>CJ-series Position Control Unit Operation Manual (W477) 4 Defining the Origin 12-6 Error Code List</p>

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.
Start	Execute	BOOL	0(OFF)		↕ : Starts the origin search.
Position command	Position	DINT	+0	-2147483648 to +2147483647	Specify the numeric value of to set for the present position. Unit: Command units

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
Origin search completed	Done	BOOL		Turns ON when the origin search operation has been completed.
Busy	Busy	BOOL		Turns ON when FB is in the process.
Abort	CommandAborted	BOOL		Turns ON when an abort has occurred in the FB. Refer to "Error code (ErrorID)" for details.
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.

■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.
Deceleration stop	#2100	The deceleration stop (Deceleration stop / Synchronous group stop Selection / All Synchronous Unit stop) or the Error counter reset output was executed while the FB was active.	Due to the deceleration stop command, the active FB was interrupted. But this is normal operation. Check that the deceleration stop command has started correctly.
Servo unlock	#2102	The Servo unlock was executed while the FB was active.	Due to the servo unlock command, the active FB was interrupted. But this is normal operation. Check that the servo unlock command has started correctly.
Command disabled	#2300	FB commands have not been accepted.	Execute the FB after putting the unit in status that can accept commands.
Origin Search	#310A	"Origin Search" of the Manual 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
Manual Operation Command Memory area	Origin Search	BOOL	A+00.10	

■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.