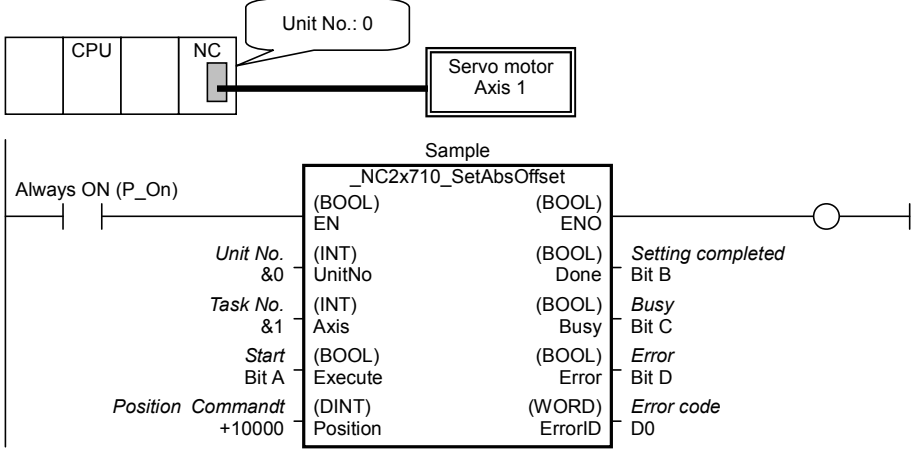


NC2x710	Absolute Encoder's Origin Position Offset Setting _NC2x710_SetAbsOffset
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Basic function	Sets an origin position offset of the absolute encoder.						
Symbol							
File name	Lib\FBL\omronlib\PositionController\NC2x\ _NC2x710_SetAbsOffset10.cxf						
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"> • Sets the origin offset of the absolute encoder for the axis specified with "Unit No. (UnitNo)" and "Axis No. (Axis)", when "Start (Execute)" is turned ON. • When the setting of the offset value for the absolute encoder is completed, data saving will be executed automatically. • "Setting completed (Done)" will turn ON when data saving is completed. • "Busy (Busy)" will be set when the "Start (Execute)" is turned ON. "Busy (Busy)" will be reset when any of "Setting 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	<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. 						

<p>Restrictions Other</p>	<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. When using this FB, set the encoder type of the axis parameter to the absolute encoder in advance. If this FB is executed with the incremental encoder being set, the FB will end normally, but the offset value of the absolute encoder will not be set. <table border="1" data-bbox="368 293 1513 439"> <thead> <tr> <th>Address</th> <th>Parameter name</th> <th>Size</th> <th>Setting range</th> </tr> </thead> <tbody> <tr> <td>+99</td> <td>Feedback Pulse Count per Motor Rotation</td> <td>2 channel</td> <td>&1 to &1048576</td> </tr> <tr> <td>+101</td> <td>Encoder Type</td> <td>1 channel</td> <td>&0: Incremental encoder &1: ABS encoder (W Series) &2: ABS encoder (G Series)</td> </tr> </tbody> </table> <ul style="list-style-type: none"> This FB uses the origin preset function of origin search. Therefore, this FB changes the following axis parameters. <table border="1" data-bbox="368 495 1501 663"> <thead> <tr> <th>Address</th> <th>Parameter name</th> <th>Size</th> <th>Setting range</th> <th>Changed Value</th> </tr> </thead> <tbody> <tr> <td>+61</td> <td>Origin Search Operation Mode</td> <td>1 channel</td> <td>&0 to &14</td> <td>&14</td> </tr> <tr> <td>+70</td> <td>Origin Position Offset</td> <td>2 channel</td> <td>-2147483648 to +2147483647</td> <td>"Position Command (Position)"</td> </tr> </tbody> </table> <ul style="list-style-type: none"> If this FB is executed for multiple axes of the same unit simultaneously, the FB will not work normally. For the axes of the same unit, execute the FB for the axis one by one. 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	Parameter name	Size	Setting range	+99	Feedback Pulse Count per Motor Rotation	2 channel	&1 to &1048576	+101	Encoder Type	1 channel	&0: Incremental encoder &1: ABS encoder (W Series) &2: ABS encoder (G Series)	Address	Parameter name	Size	Setting range	Changed Value	+61	Origin Search Operation Mode	1 channel	&0 to &14	&14	+70	Origin Position Offset	2 channel	-2147483648 to +2147483647	"Position Command (Position)"
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<p>Application example</p>	<p>Turning the bit A ON from OFF will set the origin offset of the absolute encoder on the axis (Axis 1) connected to the Position Control Unit with a unit number 0.</p> 																											
<p>Related manuals</p>	<p>CJ-series Position Control Unit Operation Manual (W477) 4-6 Absolute Encoder Origin Setting 8-7 Saving Data 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 absolute encoder's origin position offset setting

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
Setting completed	Done	BOOL		Turns ON when the absolute encoder's origin position offset setting operation has been completed.
Busy flag	Busy	BOOL		Turns ON when FB is in the process.
Error flag	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
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.
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.
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.
Save data	#300E	"Save data" of the PCU Control Output 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.
Origin Search	#310A	"Origin Search" of the Manual Operation Command Memory area has been operated by the outside of the FB.	

■Used bits list

Memory area	Name	Data type	Address	Note
PCU Control Output Area	Save data	BOOL	n+00.14	
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.