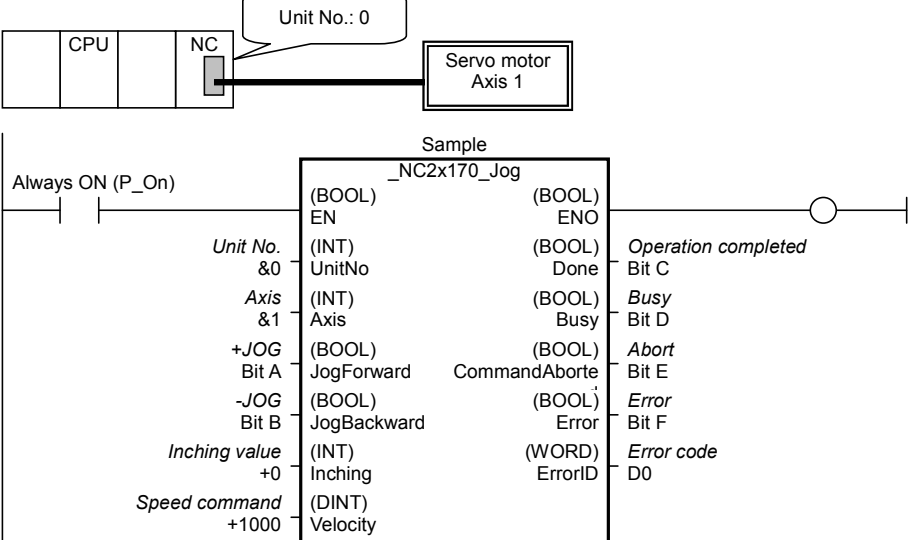


<b>NC2x 170</b>	<b>Jogging / Inching _NC2x170_Jog</b>
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<b>Basic function</b>	Performs JOG / Inching operation.														
<b>Symbol</b>	<div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> <p>Always ON (P_On)</p> <p>Unit No.</p> <p>Axis</p> <p>+JOG</p> <p>-JOG</p> <p>Inching value</p> <p>Speed command</p> </div> <div style="border: 1px solid black; padding: 5px; margin-right: 20px;"> <p style="text-align: center;">_NC2x170_Jog</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;">(BOOL) EN</td> <td style="width: 50%; padding: 2px;">(BOOL) ENO</td> </tr> <tr> <td style="padding: 2px;">(INT) UnitNo</td> <td style="padding: 2px;">(BOOL) Done</td> </tr> <tr> <td style="padding: 2px;">(INT) Axis</td> <td style="padding: 2px;">(BOOL) Busy</td> </tr> <tr> <td style="padding: 2px;">(BOOL) JogForward</td> <td style="padding: 2px;">(BOOL) CommandAborted</td> </tr> <tr> <td style="padding: 2px;">(BOOL) JogBackward</td> <td style="padding: 2px;">(BOOL) Error</td> </tr> <tr> <td style="padding: 2px;">(INT) Inching</td> <td style="padding: 2px;">(WORD) ErrorID</td> </tr> <tr> <td style="padding: 2px;">(DINT) Velocity</td> <td></td> </tr> </table> </div> <div style="margin-left: 20px;"> </div> </div>	(BOOL) EN	(BOOL) ENO	(INT) UnitNo	(BOOL) Done	(INT) Axis	(BOOL) Busy	(BOOL) JogForward	(BOOL) CommandAborted	(BOOL) JogBackward	(BOOL) Error	(INT) Inching	(WORD) ErrorID	(DINT) Velocity	
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<b>File name</b>	Lib\FBL\omronlib\PositionController\NC2x\ NC2x170_Jog10.cxf														
<b>Applicable models</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">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								
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CX-Programmer	Version 5.0 or later														
<b>Languages in function block definitions</b>	Ladder programming														
<b>Conditions for usage</b>	None.														
<b>Function description</b>	<ul style="list-style-type: none"> <li>• For the axis specified in "Unit No. (UnitNo)" and "Axis No. (Axis)", JOG operation or inching operation will be started by the input value of "Speed command (Velocity)" when "+JOG (JogForward)" or "-JOG (JogBackward)" turns ON.</li> <li>• JOG operation is performed when 0 is set in "Inching value (Inching)". Inching operation is performed when the value other than 0 is set.</li> <li>• "Operation completed (Done)" is turned ON when the jogging operation or the inching operation for the FB has been completed.</li> <li>• "Busy (Busy)" will be set when "+JOG (JogForward)" or "-JOG (JogBackward)" is turned ON. "Busy (Busy)" will be reset when any of "Operation 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.</li> <li>• "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.</li> <li>• These statuses (Done/CommandAborted/Error/ErrorID) will be reset when "+JOG (JogForward)" or "-JOG (JogBackward)" turns OFF. If "+JOG (JogForward)" or "-JOG (JogBackward)" turns OFF before the positioning operation has been completed, the status will be set for at least one cycle when corresponding conditions have occurred.</li> </ul> <div style="margin-top: 10px;"> </div>														
<b>Kind of FB definition</b>	<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>														
<b>EN input condition</b>	<ul style="list-style-type: none"> <li>• Connect the EN input to the Always ON Flag (P_On).</li> <li>If another bit is connected to EN, the FB outputs will be held when the connected bit turns OFF.</li> </ul>														

<p><b>Restrictions</b> <b>Other</b></p>	<ul style="list-style-type: none"> <li>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.</li> <li>This FB changes the following axis parameters.</li> </ul> <table border="1" data-bbox="371 241 1209 327"> <thead> <tr> <th>Address</th> <th>Name</th> <th>Size</th> <th>Range</th> </tr> </thead> <tbody> <tr> <td>+88</td> <td>Inching Width</td> <td>1 channel</td> <td>+0 to +65535</td> </tr> <tr> <td>+89</td> <td>JOG / Inching Speed 1</td> <td>2 channel</td> <td>+1 to +2147483647</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>This FB always selects JOG Speed 1 of the Position Control Unit, and uses the value of "Speed command (Velocity)" for the operation.</li> <li>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.</li> </ul>	Address	Name	Size	Range	+88	Inching Width	1 channel	+0 to +65535	+89	JOG / Inching Speed 1	2 channel	+1 to +2147483647
Address	Name	Size	Range										
+88	Inching Width	1 channel	+0 to +65535										
+89	JOG / Inching Speed 1	2 channel	+1 to +2147483647										
<p><b>Application example</b></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 jogging command.</p> 												
<p><b>Related manuals</b></p>	<p>CJ-series Position Control Unit Operation Manual (W477)          3-2 JOG Operation          3-3 Inching Operation          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.
+JOG	JogForward	BOOL	0(OFF)		⬆: Starts the forward jogging or the inching. ⬇: Stops the forward jogging.
-JOG	JogBackward	BOOL	0(OFF)		⬆: Starts the backward jogging or the inching. ⬇: Stops the backward jogging.
Inching value	Inching	INT	+0	+0 to +65535	Specify the inching value. Unit: Command units. Perform JOG operation when 0 is specified.
Speed command	Velocity	DINT	+1	+1 to +2147483647	Specify the target speed. Unit: Command units/s.

**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
Operation completed	Done	BOOL		Turns ON when the jogging operation or the inching operation has been completed.
Busy flag	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 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
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.
Forward direction JOG / inching	#3107	"Forward direction JOG / inching" 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
Reverse direction JOG / inching	#3108	"Reverse direction JOG / inching" 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
Manual Operation Command Memory area	JOG / inching speed selection	BOOL	A+00.06	
	Forward direction JOG / inching	BOOL	A+00.07	
	Reverse direction JOG / inching	BOOL	A+00.08	

**■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.