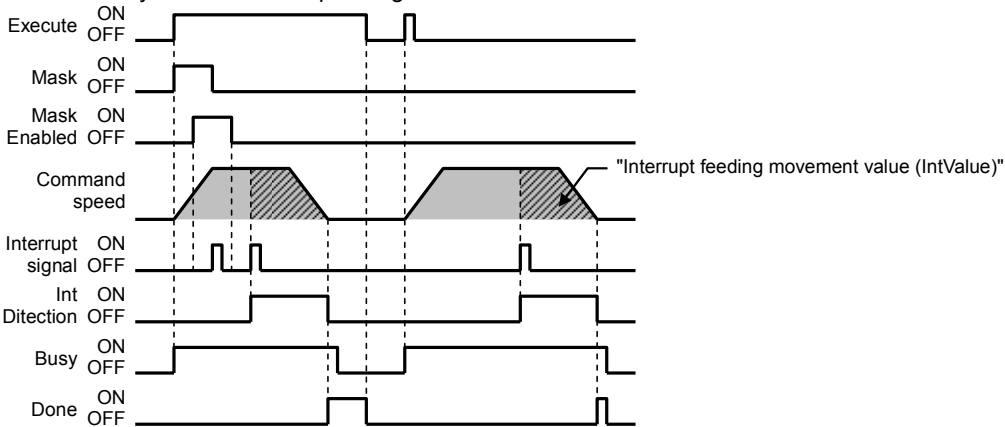
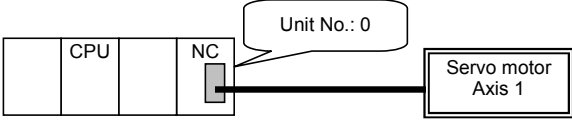


NC2x110	Interrupt Feeding _NC2x110_MoveInterrupt
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Basic function	Executes Interrupt feeding.																													
Symbol	<p>Always ON (P_On)</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">_NC2x110_MoveInterrupt</th> </tr> <tr> <td style="width: 50%;">(BOOL) EN</td> <td style="width: 50%;">(BOOL) ENO</td> </tr> <tr> <td>(INT) UnitNo</td> <td>(BOOL) Done</td> </tr> <tr> <td>(INT) Axis</td> <td>(BOOL) Busy</td> </tr> <tr> <td>(BOOL) Execute</td> <td>(BOOL) CommandAborted</td> </tr> <tr> <td>(BOOL) Mask</td> <td>(BOOL) Error</td> </tr> <tr> <td>(INT) Mode</td> <td>(WORD) ErrorID</td> </tr> <tr> <td>(DINT) Position</td> <td>(BOOL) MaskEnabled</td> </tr> <tr> <td>(DINT) Velocity</td> <td>(BOOL) IntDetection</td> </tr> <tr> <td>(DINT) Acceleration</td> <td></td> </tr> <tr> <td>(DINT) Deceleration</td> <td></td> </tr> <tr> <td>(WORD) IntSetting</td> <td></td> </tr> <tr> <td>(DINT) IntValue</td> <td></td> </tr> </table>	_NC2x110_MoveInterrupt		(BOOL) EN	(BOOL) ENO	(INT) UnitNo	(BOOL) Done	(INT) Axis	(BOOL) Busy	(BOOL) Execute	(BOOL) CommandAborted	(BOOL) Mask	(BOOL) Error	(INT) Mode	(WORD) ErrorID	(DINT) Position	(BOOL) MaskEnabled	(DINT) Velocity	(BOOL) IntDetection	(DINT) Acceleration		(DINT) Deceleration		(WORD) IntSetting		(DINT) IntValue			<p>Positioning completed</p> <p>Busy</p> <p>Abort</p> <p>Error</p> <p>Error code</p> <p>Interrupt mask enabled</p> <p>Interrupt signal detection</p>
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File name	Lib\FBL\omronlib\PositionController\NC2x\ NC2x110_MoveInterrupt10.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	<ul style="list-style-type: none"> When using this FB, the following setting is required for the axis parameter of the Position Control Unit. <table border="1" style="width: 100%; border-collapse: collapse; margin: 5px 0;"> <thead> <tr> <th style="width: 15%;">Address</th> <th style="width: 40%;">Name</th> <th style="width: 10%;">Size</th> <th style="width: 10%;">Range</th> <th style="width: 25%;">Setting value</th> </tr> </thead> <tbody> <tr> <td>+2.12</td> <td>I/O Function Selection Interrupt input Function</td> <td>1 bit</td> <td>0, 1</td> <td>0: Use as interrupt feeding trigger</td> </tr> </tbody> </table> <ul style="list-style-type: none"> If the setting is not made correctly, the FB will not work normally. 				Address	Name	Size	Range	Setting value	+2.12	I/O Function Selection Interrupt input Function	1 bit	0, 1	0: Use as interrupt feeding trigger																
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+2.12	I/O Function Selection Interrupt input Function	1 bit	0, 1	0: Use as interrupt feeding trigger																										
Function description	<ul style="list-style-type: none"> When "Start (Execute)" turns ON, the interrupt feeding operation for the axis specified in "Unit No. (UnitNo)" and "Axis (Axis)" is started. The operation before feeding (before the interrupt signal input) is specified in "Operation selection before interruption (Mode)". The operation before feeding can be selected from among absolute movement, relative movement and speed control. The operation before interrupt feeding will be the positioning operation and speed control as specified in "Position command before interruption (Position)", "Speed command (Velocity)", "Acceleration time (Acceleration)" and "Deceleration time (Deceleration)". The movement amount after the input of the interrupt input signal, the type of target position (command position/feedback position) and error conditions are specified in "Interrupt feeding movement value (IntValue)" and "Interrupt setting (IntSetting)". The mask of the interrupt input signal is controlled by "Interrupt mask (Mask)". The interrupt mask status will be output in "Interrupt mask enabled (MaskEnabled)". The interrupt input signal for the Position Control Unit will not be accepted while "Interrupt mask enabled (MaskEnabled)" turns ON. "Interrupt signal detection (IntDetection)" will turn ON when shifting to the feeding status by the interrupt signal input. "Positioning completed (Done)" is turned ON when the positioning 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 "Positioning 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. 																													

	<ul style="list-style-type: none"> 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. 																																																				
<p>Kind of FB definition</p>	<p>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.</p>																																																				
<p>EN input condition</p>	<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. This FB changes the following Axis parameters. <table border="1" data-bbox="370 898 1506 1043"> <thead> <tr> <th>Address</th> <th>Name</th> <th>Size</th> <th>Range</th> </tr> </thead> <tbody> <tr> <td>+58.00</td> <td>Interrupt Feeding Reference Position / Latch Target Position Selection</td> <td>1 bit</td> <td>0, 1</td> </tr> <tr> <td>+58.01</td> <td>Interrupt Input Undetected Error Enable</td> <td>1 bit</td> <td>0, 1</td> </tr> <tr> <td>+59</td> <td>Interrupt Feeding Amount</td> <td>2 channel</td> <td>-2147483648 to +2147483647</td> </tr> </tbody> </table> <ul style="list-style-type: none"> 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	+58.00	Interrupt Feeding Reference Position / Latch Target Position Selection	1 bit	0, 1	+58.01	Interrupt Input Undetected Error Enable	1 bit	0, 1	+59	Interrupt Feeding Amount	2 channel	-2147483648 to +2147483647																																				
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<p>Application example</p>	<p>Turning the bit A Trigger ON from OFF will operate the axis (Axis 1) connected to the Position Control Unit with a unit number 0 using the absolute movement command with the interrupt feeding enabled.</p>  <table border="1" data-bbox="354 1339 1412 2004"> <thead> <tr> <th colspan="2">Sample</th> <th colspan="2">_NC2x110_MoveInterrupt</th> </tr> </thead> <tbody> <tr> <td>Always ON (P_On)</td> <td>(BOOL)</td> <td>EN</td> <td>(BOOL) ENO</td> </tr> <tr> <td>Unit No. &0</td> <td>(INT) UnitNo</td> <td>Done</td> <td>(BOOL) Bit C</td> </tr> <tr> <td>Axis &1</td> <td>(INT) Axis</td> <td>Busy</td> <td>(BOOL) Bit D</td> </tr> <tr> <td>Start Bit A</td> <td>(BOOL) Execute</td> <td>CommandAborte</td> <td>(BOOL) Bit E</td> </tr> <tr> <td>Interrupt mask Bit B</td> <td>(BOOL) Mask</td> <td>Error</td> <td>(BOOL) Bit F</td> </tr> <tr> <td>Operation selection before interruption Absolute movement -> &0</td> <td>(INT) Mode</td> <td>ErrorID</td> <td>(WORD) Error code D0</td> </tr> <tr> <td>Position command before interruption +10000</td> <td>(DINT) Position</td> <td>MaskEnabled</td> <td>(BOOL) Interrupt mask enabled Bit G</td> </tr> <tr> <td>Speed command +20000</td> <td>(DINT) Velocity</td> <td>IntDitection</td> <td>(BOOL) Interrupt signal detection Bit H</td> </tr> <tr> <td>Acceleration time +100</td> <td>(DINT) Acceleration</td> <td></td> <td></td> </tr> <tr> <td>Deceleration time +200</td> <td>(DINT) Deceleration</td> <td></td> <td></td> </tr> <tr> <td>Interrupt setting &0</td> <td>(WORD) IntSetting</td> <td></td> <td></td> </tr> <tr> <td>Interrupt feeding movement value +5000</td> <td>(DINT) IntValue</td> <td></td> <td></td> </tr> </tbody> </table>	Sample		_NC2x110_MoveInterrupt		Always ON (P_On)	(BOOL)	EN	(BOOL) ENO	Unit No. &0	(INT) UnitNo	Done	(BOOL) Bit C	Axis &1	(INT) Axis	Busy	(BOOL) Bit D	Start Bit A	(BOOL) Execute	CommandAborte	(BOOL) Bit E	Interrupt mask Bit B	(BOOL) Mask	Error	(BOOL) Bit F	Operation selection before interruption Absolute movement -> &0	(INT) Mode	ErrorID	(WORD) Error code D0	Position command before interruption +10000	(DINT) Position	MaskEnabled	(BOOL) Interrupt mask enabled Bit G	Speed command +20000	(DINT) Velocity	IntDitection	(BOOL) Interrupt signal detection Bit H	Acceleration time +100	(DINT) Acceleration			Deceleration time +200	(DINT) Deceleration			Interrupt setting &0	(WORD) IntSetting			Interrupt feeding movement value +5000	(DINT) IntValue		
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<p>Related manuals</p>	<p>CJ-series Position Control Unit Operation Manual (W477) 6 Direct Operation 9-2 Interrupt Feeding 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 interrupt feeding.										
Interrupt mask	Mask	BOOL	0(OFF)		↕: Interrupt mask enabled ↘: Interrupt mask disabled										
Operation selection before interruption	Mode	INT	&0	&0 to &2	Specify the axis operation before feeding. &0: Absolute movement &1: Relative movement &2: Speed control										
Position command before interruption	Position	DINT	+0	-2147483648 to +2147483647	Specify the target position before interrupt feeding. Used only during the positioning operation. Unit: Command unit.										
Speed command	Velocity	DINT	+0	-2147483648 to +2147483647	Specify the target speed. Unit: Command units/s. The effective range is +1 to +2147483647 when absolute movement or relative movement is selected for the operation before interruption. Changing the value while this FB is in operation will change the actual operating speed.										
Acceleration time	Acceleration	DINT	+0	+0 to +250000	Specify the acceleration time. Unit: ms.										
Deceleration time	Deceleration	DINT	+0	+0 to +250000	Specify the deceleration time. Unit: ms.										
Interrupt setting	IntSetting	WORD	#0000	#0000, #0001, #0010, #0011	Set interrupt feeding. <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Bit 15</td> <td style="text-align: center;">12 11</td> <td style="text-align: center;">08 07</td> <td style="text-align: center;">04 03</td> <td style="text-align: center;">00</td> </tr> <tr> <td style="text-align: center;">No use.</td> <td style="text-align: center;">No use.</td> <td style="text-align: center;">Error conditions</td> <td colspan="2" style="text-align: center;">Interrupt conditions</td> </tr> </table> </div> <ul style="list-style-type: none"> Interrupt conditions (Bit 00 to 03) Select the command position or feedback position for the target value of interrupt feeding. #0: Command position #1: Feedback position Error conditions (Bit 04 to 07) Choose whether to detect an error if the interrupt input signal has not been input before positioning is completed when absolute movement or relative movement is selected for the operation before interruption. #0: Not detect an error. #1: Detect an error. 	Bit 15	12 11	08 07	04 03	00	No use.	No use.	Error conditions	Interrupt conditions	
Bit 15	12 11	08 07	04 03	00											
No use.	No use.	Error conditions	Interrupt conditions												
Interrupt feeding movement value	IntValue	DINT	+0	-2147483648 to +2147483647	Specify the interrupt feeding value. Unit: Command unit.										

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 positioning 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.
Interrupt mask enabled	MaskEnabled	BOOL		1(ON): Interrupt mask enabled 0(OFF): Interrupt mask disabled
Interrupt signal detection	IntDitection	BOOL		1(ON): Interrupt signal detection completed (while feeding) 0(OFF): Interrupt signal not detected (before feeding)

■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.
Absolute movement	#3200	"Absolute movement" 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.
Relative movement	#3201	"Relative movement" of the Direct Operation Command Memory area has been operated by the outside of the FB.	
Speed control	#3202	"Speed control" of the Direct Operation Command Memory area has been operated by the outside of the FB.	
Interrupt feeding specification	#3205	"Interrupt feeding specification" of the Direct Operation Command Memory area has been operated by the outside of the FB.	

■Used bits list

Memory area	Name	Data type	Address	Note
Direct Operation Command Memory area	Absolute movement	BOOL	B+00.00	
	Relative movement	BOOL	B+00.01	
	Speed control	BOOL	B+00.02	
	Interrupt feeding specification	BOOL	B+00.05	
	Interrupt input mask enable / Present position latch enable	BOOL	B+00.06	
	Command position	DINT	B+02	
	Command speed	DINT	B+04	
	Acceleration time	DINT	B+08	
Deceleration time	DINT	B+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.