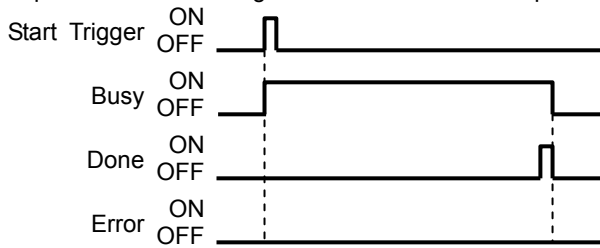
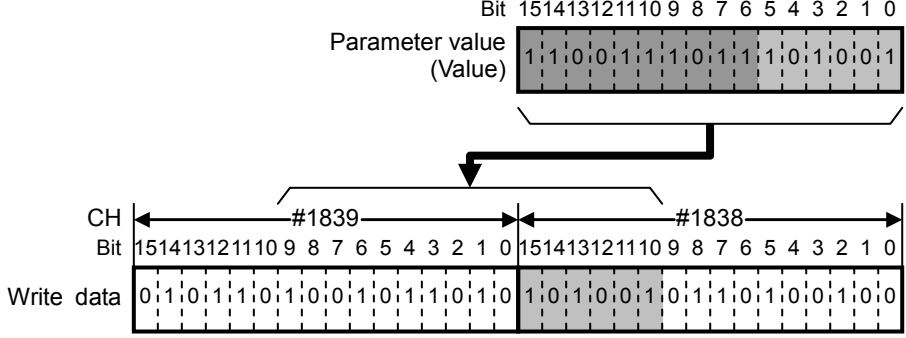


NCF 402	Write Boolean Parameter _NCF402_WriteBoolParameter
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Basic function	Writes a Boolean parameter.																																																
Symbol	<div style="border: 1px solid black; padding: 5px; margin: 5px auto; width: fit-content;"> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; padding: 2px;">_NCF402_WriteBoolParameter</td> <td style="width:50%; padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;">(BOOL) EN</td> <td style="padding: 2px;">(BOOL) ENO</td> </tr> <tr> <td style="padding: 2px;">(INT) UnitNo</td> <td style="padding: 2px;">(BOOL) Busy</td> </tr> <tr> <td style="padding: 2px;">(WORD) ParameterNo</td> <td style="padding: 2px;">(BOOL) Done</td> </tr> <tr> <td style="padding: 2px;">(INT) StartBitNo</td> <td style="padding: 2px;">(BOOL) Error</td> </tr> <tr> <td style="padding: 2px;">(INT) Size</td> <td style="padding: 2px;">(WORD) ErrorID</td> </tr> <tr> <td style="padding: 2px;">(WORD) Value</td> <td style="padding: 2px;"></td> </tr> </table> </div>	_NCF402_WriteBoolParameter		(BOOL) EN	(BOOL) ENO	(INT) UnitNo	(BOOL) Busy	(WORD) ParameterNo	(BOOL) Done	(INT) StartBitNo	(BOOL) Error	(INT) Size	(WORD) ErrorID	(WORD) Value																																			
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Applicable models	<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:20%; padding: 2px;">Position Unit</td> <td style="padding: 2px;">CJ1W-NCF71, CS1W-NCF71</td> </tr> <tr> <td style="padding: 2px;">CPU Unit</td> <td style="padding: 2px;">CS1*-CPU**H Unit Version 3.0 or later CJ1*-CPU**H Unit Version 3.0 or later CJ1M-CPU** Unit Version 3.0 or later CP1H</td> </tr> <tr> <td style="padding: 2px;">CX-Programmer</td> <td style="padding: 2px;">Version 5.0 or later</td> </tr> </table>	Position Unit	CJ1W-NCF71, CS1W-NCF71	CPU Unit	CS1*-CPU**H Unit Version 3.0 or later CJ1*-CPU**H Unit Version 3.0 or later CJ1M-CPU** Unit Version 3.0 or later CP1H	CX-Programmer	Version 5.0 or later																																										
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Languages in function block definitions	Ladder programming																																																
Conditions for usage	<p>The following conditions for usage should be the Position Control Unit version 1.2 or earlier. (It will not be required in the Position Control Unit version 1.3 or later)</p> <p>■CX-Programmer Setting</p> <p>The function blocks related to the Position Control Units will not operate if the area H512 or higher (default setting) is specified as the Non Retain Area through the Function block memory allocation. Make sure to change the memory area to unused area (DM or EM, for example) from the CX-Programmer. To change this value, click PLC/Function Block Memory/Function Block Memory Allocation from the Menu Bar.</p> <div style="border: 1px solid gray; padding: 5px; margin: 5px auto; width: fit-content;"> <table style="width:100%; border-collapse: collapse;"> <tr> <th colspan="4" style="text-align: left; padding: 2px;">Function Block Memory Allocation [NewPLC1]</th> </tr> <tr> <th style="padding: 2px;">FB Instance Area</th> <th style="padding: 2px;">Start Address</th> <th style="padding: 2px;">End Address</th> <th style="padding: 2px;">Size</th> </tr> <tr> <td style="padding: 2px;">No Retain</td> <td style="padding: 2px;">H512</td> <td style="padding: 2px;">H1407</td> <td style="padding: 2px;">896</td> </tr> <tr> <td style="padding: 2px;">Retain</td> <td style="padding: 2px;">H1408</td> <td style="padding: 2px;">H1535</td> <td style="padding: 2px;">128</td> </tr> <tr> <td style="padding: 2px;">Timers</td> <td style="padding: 2px;">T3072</td> <td style="padding: 2px;">T4095</td> <td style="padding: 2px;">1024</td> </tr> <tr> <td style="padding: 2px;">Counters</td> <td style="padding: 2px;">C3072</td> <td style="padding: 2px;">C4095</td> <td style="padding: 2px;">1024</td> </tr> </table> </div> <div style="border: 1px solid gray; padding: 5px; margin: 5px auto; width: fit-content;"> <p style="text-align: center;">Specify unused area.</p> <p style="text-align: center;">The required size varies depending on the used FB and the number of FBs. If an area being used in the ladder program is specified or sufficient free space cannot be found, the CX-Programmer will display a compile error.</p> </div> <div style="border: 1px solid gray; padding: 5px; margin: 5px auto; width: fit-content;"> <table style="width:100%; border-collapse: collapse;"> <tr> <th colspan="4" style="text-align: left; padding: 2px;">Function Block Memory Allocation [NewPLC1]</th> </tr> <tr> <th style="padding: 2px;">FB Instance Area</th> <th style="padding: 2px;">Start Address</th> <th style="padding: 2px;">End Address</th> <th style="padding: 2px;">Size</th> </tr> <tr> <td style="padding: 2px;">No Retain</td> <td style="padding: 2px;">D32020</td> <td style="padding: 2px;">D32767</td> <td style="padding: 2px;">748</td> </tr> <tr> <td style="padding: 2px;">Retain</td> <td style="padding: 2px;">H1408</td> <td style="padding: 2px;">H1535</td> <td style="padding: 2px;">128</td> </tr> <tr> <td style="padding: 2px;">Timers</td> <td style="padding: 2px;">T3072</td> <td style="padding: 2px;">T4095</td> <td style="padding: 2px;">1024</td> </tr> <tr> <td style="padding: 2px;">Counters</td> <td style="padding: 2px;">C3072</td> <td style="padding: 2px;">C4095</td> <td style="padding: 2px;">1024</td> </tr> </table> </div> <p style="margin-top: 10px;">For example, to use the memory area from D32020 to D32767 (748 words), specify the addresses as shown in the left.</p>	Function Block Memory Allocation [NewPLC1]				FB Instance Area	Start Address	End Address	Size	No Retain	H512	H1407	896	Retain	H1408	H1535	128	Timers	T3072	T4095	1024	Counters	C3072	C4095	1024	Function Block Memory Allocation [NewPLC1]				FB Instance Area	Start Address	End Address	Size	No Retain	D32020	D32767	748	Retain	H1408	H1535	128	Timers	T3072	T4095	1024	Counters	C3072	C4095	1024
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Function description	<p>When the <i>Start Trigger</i> turns ON, for the axis of the specified Unit No. and Axis No., the Parameter value (Value) is written from the specified Parameter number (ParameterNo), Write start bit (StartBitNo) for the number of No. of bits to write (Size) for the axis of the specified Unit No. (UnitNo) and Axis No. (Axis). Only common parameters or individual axis parameters can be read.</p> <p>Parameters that are written are valid when the power is cycled or the Unit is restarted after first saving the parameters to nonvolatile memory in the Unit using separate processing.</p> <p>If the FB execution ends in an error, an error code will be output to the "Error code (ErrorID)".</p> <p>■Reference</p> <p>This FB executes the parameter transfer function of the Position Control Unit. Refer to the <i>Related Manuals</i> for details.</p>																																																
Kind of FB definition	<p>Multiple cycles execution type.</p> <p>This FB is processed over multiple cycles.</p> <p>The same instance cannot be used in two or more places in order to keep the internal state.</p>																																																

<p>FB precautions</p>	<ul style="list-style-type: none"> The FB is processed over multiple cycles. The “Busy flag (Busy)” can be used to check whether the FB is being processed. “Write completed (Done)” or “Error flag (Error)” will be turned ON for one cycle only after processing is completed. Use these flags to detect the end of FB processing. 
<p>EN input condition</p>	<ul style="list-style-type: none"> Connect EN to an OR between an upwardly differentiated condition for the start trigger and the “Busy flag (Busy)” output from the FB.
<p>Restrictions Input variables</p>	<ul style="list-style-type: none"> Always use an upwardly differentiated condition for EN. Set the value to which the parameter is to be set in lowest bits of Parameter value (Value). If the input variables are out of range, the ENO Flag will turn OFF and the FB will not be processed. The data exceeding 1 channel (16 bits) is not written when specifying data over more than one channel. Ex.) When specifying #1838 to Parameter No. (ParameterNo), &10 to Write start bit (StartBitNo) and &16 to No. of bits to write (Size)  <p>The data exceeding the channel specified in “Parameter No. (ParameterNo)” is not written.</p> <ul style="list-style-type: none"> This FB uses Unit Error Reset, READ DATA, WRITE DATA, and SAVE DATA Bits of the Position Control Unit (see note). Therefore, do not turn these bits ON or OFF between the period from the rising edge of EN to the rising edge of ENO. For the same reason, do not use these bits for coil outputs (OUT commands). There may be a case where the output variable of FB will not change even if EN is turned ON. In that case, check if Unit Error Reset, READ DATA, WRITE DATA, or SAVE DATA Bit is left ON. <p>Note: For calculation of bit addresses, these bits are referenced in this FB when executing each instance for the first time.</p>
<p>Output variables</p>	<ul style="list-style-type: none"> The “Busy flag (Busy)” must be inserted to OR of input conditions to Input variable EN in order to complete this process as it should be executed over multiple cycles. (Refer to “Symbol”) Do not turn the “Busy flag (Busy)” ON/OFF outside of the FB.

<p>Application example</p>	<p>When turning the Bit A ON from OFF, a parameter (Common Parameter Area, Axis Parameter Areas) in the Position Control Unit with unit number 0 is changed.</p>
<p>Related manuals</p>	<p>Position Control Units OPERATION MANUAL (W426-E1) 5-2 Transferring Unit Parameters 12-4 Error Codes</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 &15	Specify the unit number.
Parameter No.	ParameterNo	WORD	#0000	#1838 to #199F	Specify the address inside the Position Control Unit.
Write start bit	StartBitNo	INT	&0	&0 to &15	Specify the first bit to write in the specified parameter.
No. of bits to write	Size	INT	&4	&1 to &16	Specify the number of bits to write.
Parameter value	Value	WORD	#0000		Set the value to which the parameter is to be set in lowest bits of Parameter value (Value).

Output Variable

Name	Variable name	Data type	Range	Description
ENO	ENO	BOOL		1 (ON): FB operating normally 0 (OFF): FB not operating normally •FB not started •Input variable out of the range •FB ended with error
Busy flag	Busy	BOOL		Automatically turns OFF when processing is completed.
Write completed	Done	BOOL		Turns ON for one cycle when processing ends normally.
Error flag	Error	BOOL		Turns ON for one cycle when processing ends in an error.
Error code	ErrorID	WORD		Returns the error code when an error has occurred in the FB. Refer to the <i>Related Manuals</i> for details on errors. A code of #0000 will be returned if any of the following conditions is satisfied. •Input variable is out of range. •The common parameters of the Position Control Units are out of range. •Not established communications with a specified axis.

Version History

Version	Date	Contents
1.00	2004.06.	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.