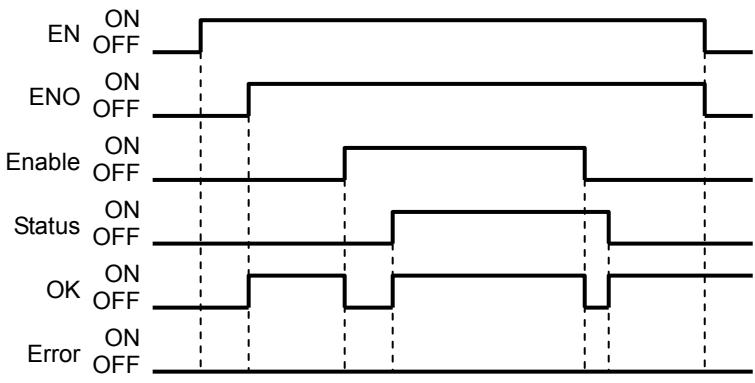
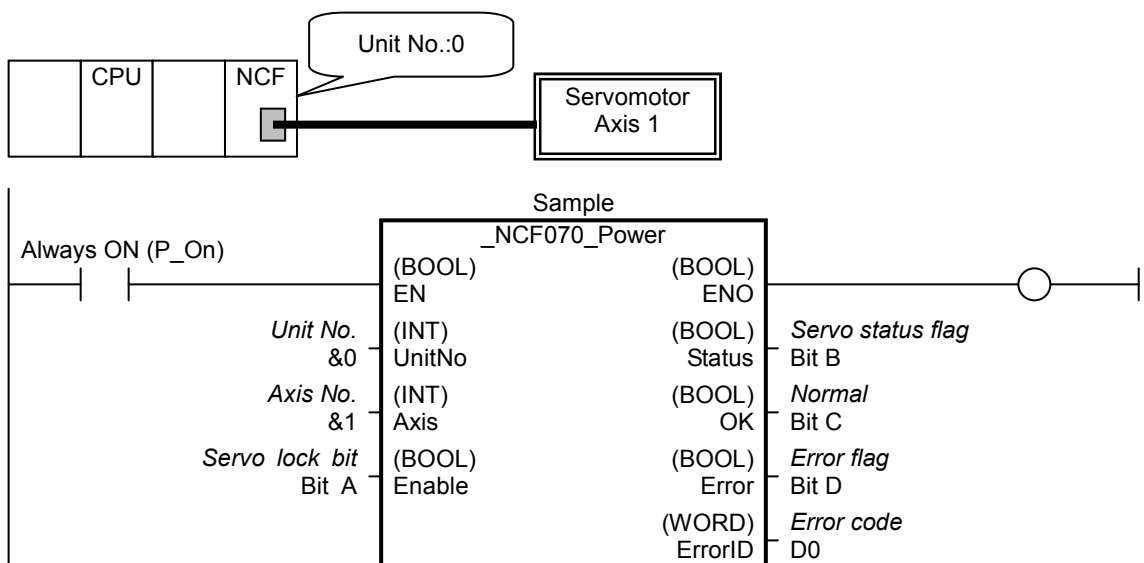


NCF070	Operation Command _NCF070_Power
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Basic function	Turns the main circuit ON or OFF.																																								
Symbol	<div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> <p>Always ON (P_On)</p> </div> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>_NCF070_Power</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">(BOOL) EN</td> <td style="width: 50%;">(BOOL) ENO</td> </tr> <tr> <td>(INT) UnitNo</td> <td>(BOOL) Status</td> </tr> <tr> <td>(INT) Axis</td> <td>(BOOL) OK</td> </tr> <tr> <td>(BOOL) Enable</td> <td>(BOOL) Error</td> </tr> <tr> <td></td> <td>(WORD) ErrorID</td> </tr> </table> </div> <div style="margin-left: 20px;"> </div> </div> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Unit No.</td> <td style="width: 30%;">UnitNo</td> <td style="width: 30%;">Servo status flag</td> </tr> <tr> <td>Axis No.</td> <td>Axis</td> <td>Normal</td> </tr> <tr> <td>Servo lock bit</td> <td>Enable</td> <td>Error flag</td> </tr> <tr> <td></td> <td></td> <td>Error code</td> </tr> </table>	(BOOL) EN	(BOOL) ENO	(INT) UnitNo	(BOOL) Status	(INT) Axis	(BOOL) OK	(BOOL) Enable	(BOOL) Error		(WORD) ErrorID	Unit No.	UnitNo	Servo status flag	Axis No.	Axis	Normal	Servo lock bit	Enable	Error flag			Error code																		
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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: 10px 0;"> <table border="1" style="width: 100%; border-collapse: collapse; font-size: 8px;"> <thead> <tr> <th>FB Instance Area</th> <th>Start Address</th> <th>End Address</th> <th>Size</th> </tr> </thead> <tbody> <tr style="background-color: #e0e0e0;"> <td>No Retain</td> <td>H512</td> <td>H1407</td> <td>896</td> </tr> <tr> <td>Retain</td> <td>H1408</td> <td>H1535</td> <td>128</td> </tr> <tr> <td>Timers</td> <td>T3072</td> <td>T4095</td> <td>1024</td> </tr> <tr> <td>Counters</td> <td>C3072</td> <td>C4095</td> <td>1024</td> </tr> </tbody> </table> </div> <div style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <table border="1" style="width: 100%; border-collapse: collapse; font-size: 8px;"> <thead> <tr> <th>FB Instance Area</th> <th>Start Address</th> <th>End Address</th> <th>Size</th> </tr> </thead> <tbody> <tr style="background-color: #e0e0e0;"> <td>No Retain</td> <td>D32020</td> <td>D32767</td> <td>748</td> </tr> <tr> <td>Retain</td> <td>H1408</td> <td>H1535</td> <td>128</td> </tr> <tr> <td>Timers</td> <td>T3072</td> <td>T4095</td> <td>1024</td> </tr> <tr> <td>Counters</td> <td>C3072</td> <td>C4095</td> <td>1024</td> </tr> </tbody> </table> </div> <div style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <p style="font-size: 10px;">Specify unused area. 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> <p style="font-size: 10px;">For example, to use the memory area from D32020 to D32767 (748 words), specify the addresses as shown in the left.</p>	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	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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<p>Function description</p>	<p>For the axis of the specified Unit No. (UnitNo) and Axis No. (Axis), the Servo Lock operation is started when the Servo lock bit (Enable) turns ON and the Servo Unlock operation is started when it turns OFF. Refer to the manual in Related manuals for details.</p> <p>The Servo status flag (Status) will reflect the status of the applicable axis when the EN is turned ON.</p> <p>The Normal (OK) will be turned ON if the status of the Servo lock bit (Enable) and Servo status flag (Status) is consistent after EN turns ON.</p> <p>The Error flag (Error) will be turned ON and Error code (ErrorID) will be output if an error occurs for the EB.</p> <p>This will not occur for error in other FBs or other instances of the FB.</p>  <p>Note: The Servo Lock and the Servo Unlock of Position Control Units is used in this FB. Refer to the manual in are Related manuals for details.</p>
<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>	<p>• 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>
<p>FB precautions</p>	<ul style="list-style-type: none"> • This FB uses Unit Error Reset, Write Data, Read 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). • The output variable of FB may not change even if EN is turned ON. In that case, check if any of Unit Error Reset, Write Data, Read Data and Save Data Bit is left ON. • This FB uses the Servo Lock/ Servo Unlock Bit in the Axis Operating Output Memory Areas. Therefore, do not turn these bits ON or OFF until the operation is completed. For the same reason, do not use these bits for coil outputs (OUT commands). <p>Note: For calculation of bit addresses, these bits are referenced in this FB in the first execution of each instance, and when changing "Unit No. (UnitNo)", "Axis No. (Axis)" of the input variable and set "Servo lock bit (Enable)".</p>
<p>Application example</p>	<p>Turning Bit A ON from OFF will servo lock the Servomotor (axis1) connected to the Position Control Unit with a unit number 0.</p> 
<p>Related manuals</p>	<p>Position Control Units OPERATION MANUAL (W426-E1) 10-1 Servo Lock/ Servo Unlock 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.
Axis No.	Axis	INT	&1	&1 to &16	Specify the axis number.
Servo lock bit	Enable	BOOL	0(OFF)		↑ : Servo lock started ↓ : Servo unlock started

Output Variables

Name	Variable name	Data type	Range	Description
ENO	ENO	BOOL		1 (ON): FB operating normally 0 (OFF): FB not operating normally <ul style="list-style-type: none"> •FB not started •Connection not confirmed •Input variable out of the range •FB ended with error •Common Parameters could not be read
Servo status flag	Status	BOOL		1 (ON): During Servo Lock (Servo ON) 0 (OFF): During Servo Unlock (Servo OFF)
Normal	OK	BOOL		Turns ON when the status agrees with the status specified by the command.
Error flag	Error	BOOL		Turns ON when an error has occurred in the FB.
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. <ul style="list-style-type: none"> • 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
1.10	2005.04.	Error conditions have been changed.

■ Upgrade Details

Version	Detailed Contents
1.10	In the version 1.0x, "Error flag (Error)" was always output while a connection is released. In the version 1.10, "Error flag (Error)" is not output while a connection is released except when a communication error occurs.

■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.