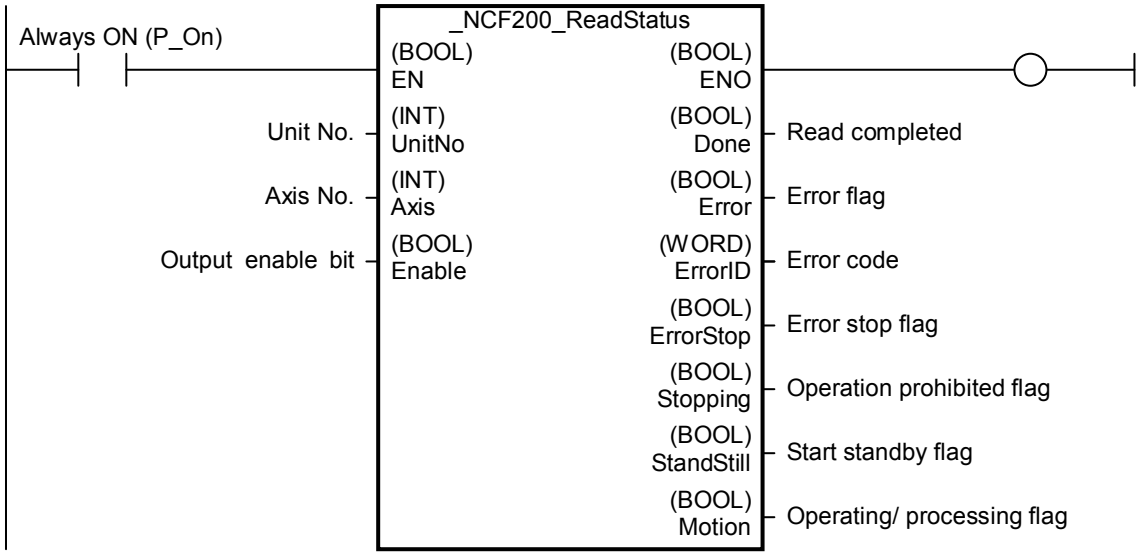
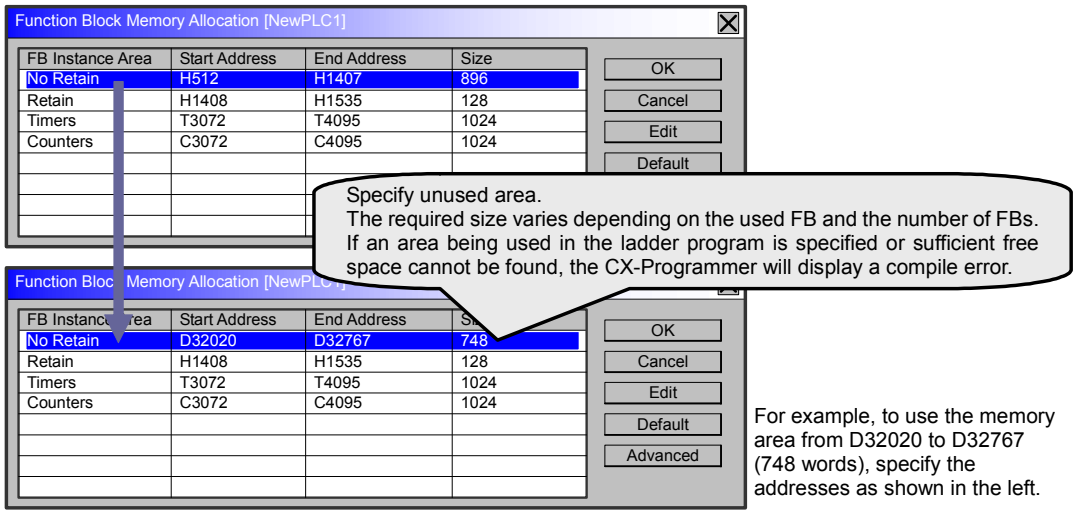
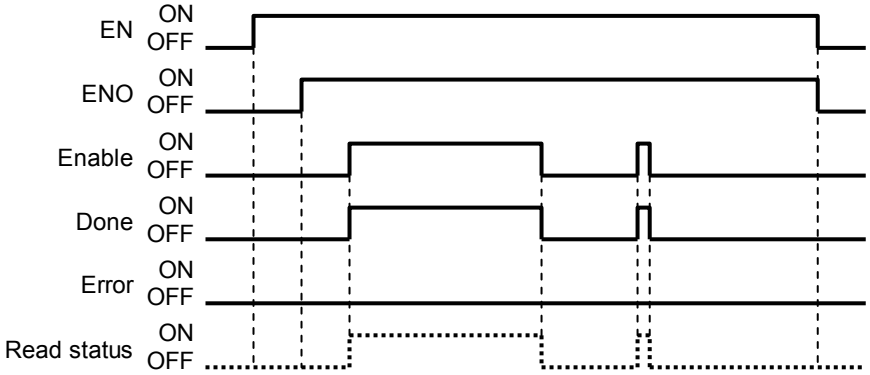
NCF 200	Read Status _NCF200_ReadStatus

Basic function	Reads the status of an axis.	
Symbol		
File name	Lib\FBL\omronlib\PositionController\NCF_NCF200_ReadStatus12.cxf	
Applicable models	Position Control 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
Languages in function block definitions	Ladder programming	
Conditions for usage	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) ■CX-Programmer Setting 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.  For example, to use the memory area from D32020 to D32767 (748 words), specify the addresses as shown in the left.	

Function description

The status of the axis of the specified Unit No. (UnitNo) and Axis No. (Axis) is continuously updated while the Output enable bit (Enable) is ON. When the Output enable bit (Enable) turns OFF, the status is reset.
The Read completed (Done) turns ON when the status data is valid.
The Error flag (Error) will be turned ON and the Error code (ErrorID) will be output if an error occurs for the FB. (They will not be turned ON when axis errors occurs.)
The status for this FB is output combining the status of the CIO Area bits and words allocated to the Position Control Unit.
These status(Done/Error/ErrorID) will be reset then the Output enable bit (Enable) turns OFF.



Output variable	Status
ErrorStop	Stopped for an error.
Stopping	Stopped for a deceleration stop or emergency stop and operation prohibited.
StandStill	Waiting for start command.
Motion	Operating or processing command. (Including processing present position preset command, error reset command, etc.)

Output variable	Output conditions							
	Axis Operating Output Memory Area				Axis Operating Input Memory Area			
	Deceler-ation Stop	Emerge-ncy Stop	Servo Unlock	Deviati-on Counter Reset	Busy Flag	Positio-ning Comple-ted Flag	Error Flag	Stop Executi-on Flag
ErrorStop	---	---	---	---	---	---	ON	---
Stopping	ON	*	---	---	---	---	OFF	ON
	*	ON	---	---	---	---	OFF	ON
StandStill	OFF	OFF	OFF	OFF	OFF	---	OFF	---
Motion	---	---	---	---	ON	OFF	-	-

*: Either is OK ---: Not affected on operation

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

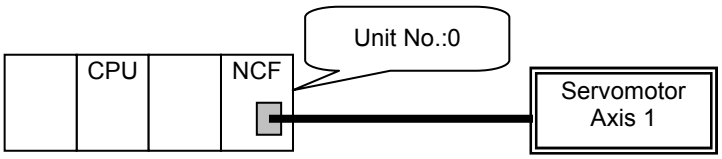
・Connect the EN input to the Always ON Flag (P_On).
If another bit is connected to EN, the FB outputs will be held when the connected bit turns OFF.

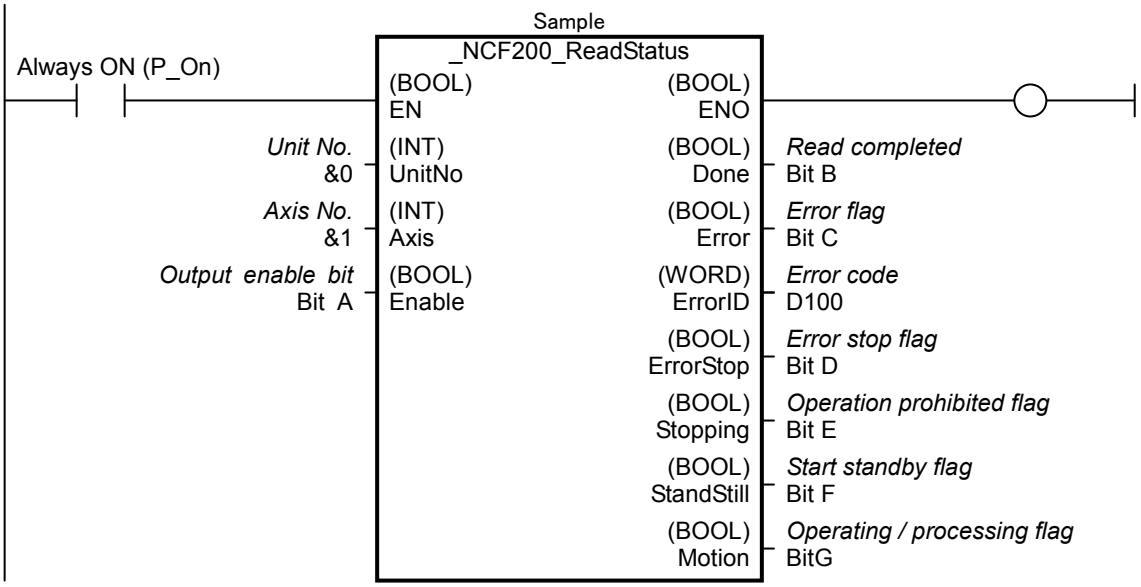
Restrictions Other

・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.

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 turning ON "Output enable bit (Enable)".

Application example	When the Bit A is turned ON, status is read from axis 1 of the Servomotor connected to the Position Control Unit with unit number 0.
Related manuals	Position Control Units OPERATION MANUAL (W426-E1) 12-4 Error Codes





■**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.
Output enable bit	Enable	BOOL	0(OFF)		Turn ON to enable output. Turn OFF to reset the output.

Output Variables

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 ・Common Parameters could not be read
Read completed	Done	BOOL		Turns ON when the status data is valid.
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 *Related Manuals* 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.
Error stop flag	ErrorStop	BOOL		Turns ON when operation has been stopped for an error.
Operation prohibited flag	Stopping	BOOL		Turns ON when operation has been stopped for a deceleration stop and operation is prohibited.
Start standby flag	Standstill	BOOL		Turns ON when waiting for a start command.
Operating / processing flag	Motion	BOOL		Turns ON when an axis is moving or processing is being performed for a present position preset command, error reset command, etc.

■**Version History**

Version	Date	Contents
1.00	2004.06.	Original production
1.10	2005.01.	Limitation about the setting timing with " Unit No. (UnitNo)" and " Axis No. (Axis)" was removed.
1.20	2007.11.	The output conditions of Output Variable “Start standby flag (Standstill)” have been changed.

■**Upgrade Details**

Version	Contents
1.10	In version 1.0x, “Unit No. (UnitNo)" and "Axis No. (Axis)" must be set when EN was ON and "Output enable bit (Enable)" was OFF. This means not sometimes working normally when "Unit No. (UnitNo)" and "Axis No. (Axis)" are changed simultaneously with ON of "Output enable bit (Enable)". In version 1.10, this limitation was removed.
1.20	In the version 1.1x, the Output Variable “Start standby flag (Standstill)” was created according to the status of Deceleration Stop, Emergency Stop, Busy flag or Error flag of the Axis Operating Memory Areas. Therefore, “Start standby flag (Standstill)” was ON even when commands cannot be executed during the Servo Unlock or Deviation Counter Reset. In the version 1.20, the Servo Unlock and Deviation Counter Reset have been added to output conditions of “Start standby flag (Standstill)”.

■**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.