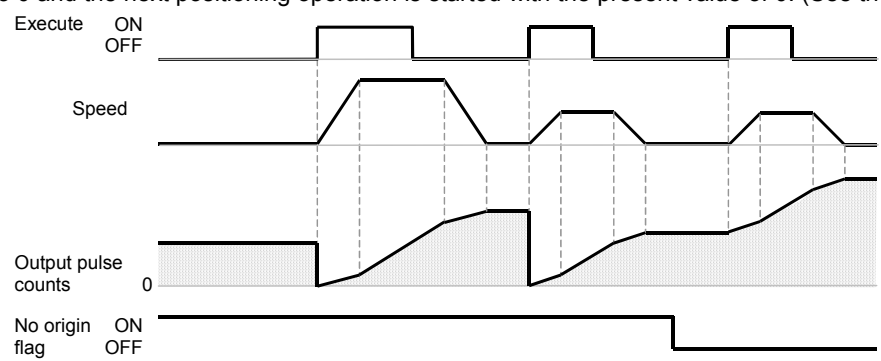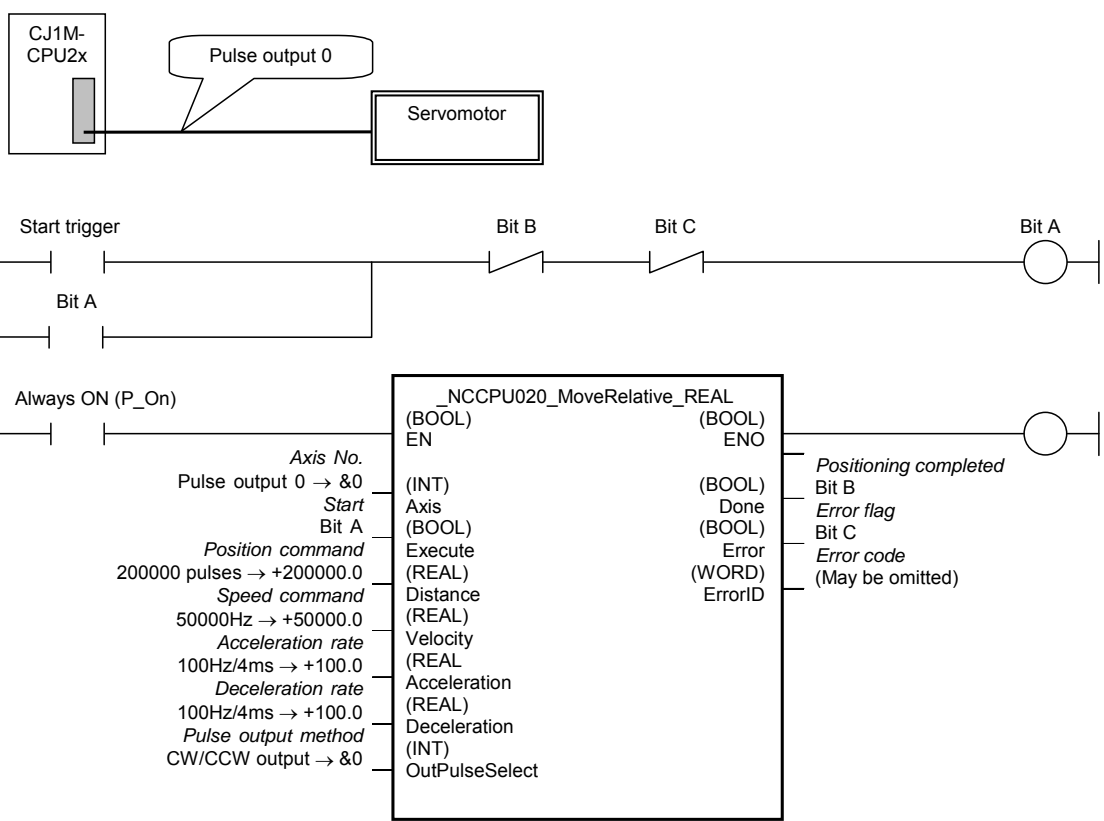| NCCPU 020	Move Relative(REAL): _NCCPU020_MoveRelative_REAL

Basic function	Executes positioning using relative movement.
Symbol	
File name	Lib\FBL\omronlib\ PositionController \NC-CPU(CJ1MCPU2x)_ NCCPU020_MoveRelative_REAL10.cxf
Applicable	CPU Unit
	CX-Programmer
Conditions for usage	None
Function description	Executes positioning on the axis of the specified Axis No. (Axis) with the specified Position command (Position), Speed command (Velocity), Acceleration rate (Acceleration), and Deceleration rate (Deceleration) when Start (Execute) is turned ON (using the selected Pulse output method).
Kind of FB definition	Connect Always ON type

Applicable models (detail):

CPU Unit	CJ1M-CPU21/22/23 Unit version 3.0 or higher CP1L-***DT-* CP1L-***DT1-*
CX-Programmer	Version 5.0 or higher

Function description (continued):

Executes positioning on the axis of the specified Axis No. (Axis) with the specified Position command (Position), Speed command (Velocity), Acceleration rate (Acceleration), and Deceleration rate (Deceleration) when Start (Execute) is turned ON (using the selected Pulse output method).
The Positioning completed (Done) is turned ON when positioning by this FB is completed (i.e., target position reached).
The Error flag (Error) will be turned ON and Error code (ErrorID) will be output when an error related to this FB occurs.
These statuses, Positioning completed (Done)/ Error flag (Error)/ Error code (ErrorID), will be reset when Start (Execute) is turned OFF. If Start (Execute) was turned OFF before positioning is completed, the status will be set for at least one cycle when a corresponding condition occurs.

Kind of FB definition (continued):

Connect Always ON type
  Connect the EN input to the Always ON Flag (P_ON).
  The same instance cannot be used in two or more places.

FB precautions	• CW output is taken as + direction and CCW output is taken as – direction. • When using the Pulse ouput 0 and 1 simultaneously, use the same Pulse output method for them. • If Start (Execute) is turned ON with no origin defined, the present value of output pulse counts will be cleared to 0 and the next positioning operation is started with the present value of 0. (See the diagram below.) Execute ON/OFF Speed Output pulse counts 0 No origin flag ON/OFF
EN input condition	• Connect the EN input to the Always ON Flag (P_On). • If a different type of bit is connected to EN, the FB outputs will be maintained when the connected bit is turned OFF.
Application example	Turning the start trigger from OFF to ON will start operating the Servomotor connected to the Pulse output 0 on the CJ1M-CPU Unit with relative movement. CJ1M-CPU2x — Pulse output 0 — Servomotor Start trigger ── Bit B ── Bit C ── Bit A Bit A Always ON (P_On) _NCCPU020_MoveRelative_REAL (BOOL) EN — ENO (BOOL) *Axis No.* Pulse output 0 → &0 — (INT) Axis — Done (BOOL) *Positioning completed* Bit B *Start* Bit A — (BOOL) Execute — Error (BOOL) *Error flag* Bit C *Position command* 200000 pulses → +200000.0 — (REAL) Distance — ErrorID (WORD) *Error code* (May be omitted) *Speed command* 50000Hz → +50000.0 — (REAL) Velocity *Acceleration rate* 100Hz/4ms → +100.0 — (REAL) Acceleration *Deceleration rate* 100Hz/4ms → +100.0 — (REAL) Deceleration *Pulse output method* CW/CCW output → &0 — (INT) OutPulseSelect

Related manuals	CJ1M CPU Units Operation Manual (W395)
	  5-7 PULSE OUTPUT: PLS2(887)
	  6-3-3 Origin Search Error Processing（Pulse Output Stop Error Codes）
	SYSMAC CP Series CP1L CPU Unit Operation Manual (W462)

■ Variable Table

Input Variables

Name	Variable name	Data type	Default	Range	Description
EN	EN	BOOL			1 (ON): Starts FB 0 (OFF): Does not start FB
Axis No.	Axis	INT	&0	&0 to &1	&0: Pulse output 0 &1: Pulse output 1
Start	Execute	BOOL	0(OFF)		↑ : Starts relative movement
Position command	Distance	REAL	+0.0	-2.147483e+009 to +2.147483e+009	Specifies the relative travel distance. Unit: Pulses
Speed command	Velocity	REAL	+1.0	+1.0 to +100000.0	Specifies the target speed. Unit: Hz
Acceleration rate	Acceleration	REAL	+1.0	+1.0 to +65535.0	Specifies the acceleration rate. Unit: Hz/4ms (Increase (Hz) in frequency per Pulse control period (4ms))
Deceleration rate	Deceleration	REAL	+1.0	+1.0 to +65535.0	Specifies the deceleration rate. Unit: Hz/4ms (Decrease (Hz) in frequency per Pulse control period (4ms))
Pulse output method	OutPulseSelect	INT	&0	&0 to &1	&0: CW/CCW output &1: Pulse + direction output

Output Variables

Name	Variable name	Data type	Range	Description
ENO	ENO	BOOL		1(ON) :FB operating normally 0(OFF): FB not operating normally
Positioning completed	Done	BOOL		1 (ON) indicates that positioning has been completed.
Error flag	Error	BOOL		1 (ON) indicates that an error has occurred in the FB.
Error code (May be omitted)	ErrorID	WORD		The error code of the error occurred in the FB will be output. For details of the errors, refer to the sections of the manual listed in the Related manuals above. When Unit No. or Axis. No. is out of the range, #0000 will be output.

Revision History

Version	Date	Contents
1.00	2005.2.	Original production

Note

This manual is a reference that explains the function block functions.

It does not explain the operational limitations of Units, components, or combinations of Units and components. Always read and understand the Operation Manuals for the system's Units and other components before using them.