

<b>NCCPU 051</b>	<b>Origin Search(DINT): _NCCPU051_Home_DINT</b>
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<b>Basic function</b>	Executes origin search to define an origin.						
<b>Symbol</b>							
<b>File name</b>	Lib\FBL\omronlib\ PositionController \NC-CPU(CJ1MCP2x)\_NCCPU051_Home_DINT10.cxf						
<b>Applicable</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">CPU Unit</td> <td>CJ1M-CPU21/22/23 Unit version 3.0 or higher</td> </tr> <tr> <td></td> <td>CP1L-***DT-*</td> </tr> <tr> <td></td> <td>CP1L-***DT1-*</td> </tr> </table>	CPU Unit	CJ1M-CPU21/22/23 Unit version 3.0 or higher		CP1L-***DT-*		CP1L-***DT1-*
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<b>models</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">CX-Programmer</td> <td>Version 5.0 or higher</td> </tr> </table>	CX-Programmer	Version 5.0 or higher				
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<b>Conditions for usage</b>	None						
<b>Function description</b>	<p>Executes origin search for the output specified with Axis No. (Axis), based on the PLC Setup Settings in the CPU Unit when Start (Execute) is turned ON (using the selected Pulse output method). After the origin search is completed, Present Position Change will be executed (the value specified in Position data (Position) will become the present position). Even when 0 is specified in Position data (Position), Present Position Change will be executed.</p> <p>The Origin search completed (Done) will be turned ON when Present Position Change by this FB is completed. When an origin search is interrupted by a deceleration stop or error, the Origin search completed (Done) will not be turned ON.</p> <p>The Error flag (Error) and Error code (ErrorID) will be output when an error related to this FB occurs. They will be turned OFF when Start (Execute) is turned OFF. If Start (Execute) was turned OFF before origin search is completed, they will be turned ON at least for one cycle when a corresponding condition occurs.</p> <p>Note: This FB uses the Origin Search Function of the CPU Unit. For details, refer to the manual listed in the Related manuals.</p>						
<b>Kind of FB definition</b>	<p>Connect Always ON type</p> <p>Connect the EN input to the Always ON Flag (P_ON).</p> <p>The same instance cannot be used in two or more places.</p>						
<b>FB precautions</b>	<ul style="list-style-type: none"> <li>When using the Pulse output 0 and 1 simultaneously, use the same Pulse output method for them.</li> </ul>						
<b>EN input condition</b>	<ul style="list-style-type: none"> <li>Connect the EN input to the Always ON Flag (P_ON).</li> <li>If a different type of bit is connected to EN, the FB outputs will be maintained when the connected bit is turned OFF.</li> </ul>						
<b>Restrictions Other</b>	<ul style="list-style-type: none"> <li>This FB does not use Acceleration/deceleration curve designation, Origin search high-speed, Origin search proximity speed, Origin search acceleration rate, Origin search deceleration rate, and Origin compensation. To use these, specify them outside of the FB.</li> <li>After the pulse stops, when Present Value Preset is not executed in FB, due to command errors or others, it becomes an error.</li> </ul>						

**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 to perform origin search. After the origin search is completed, Present Position Change will be executed.

**Related manuals**

CJ1M CPU Units Operation Manual (W395)  
 5-9 ORIGIN SEARCH: ORG(889)  
 6-3 Origin Search and Origin Return Functions  
 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 origin search
Position data	Position	DINT	+0	-2147483648 to +2147483648	Specifies the position data to be used in the Present Position Change. Unit: Pulses
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
Origin search completed	Done	BOOL		1 (ON) indicates that an origin search 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.