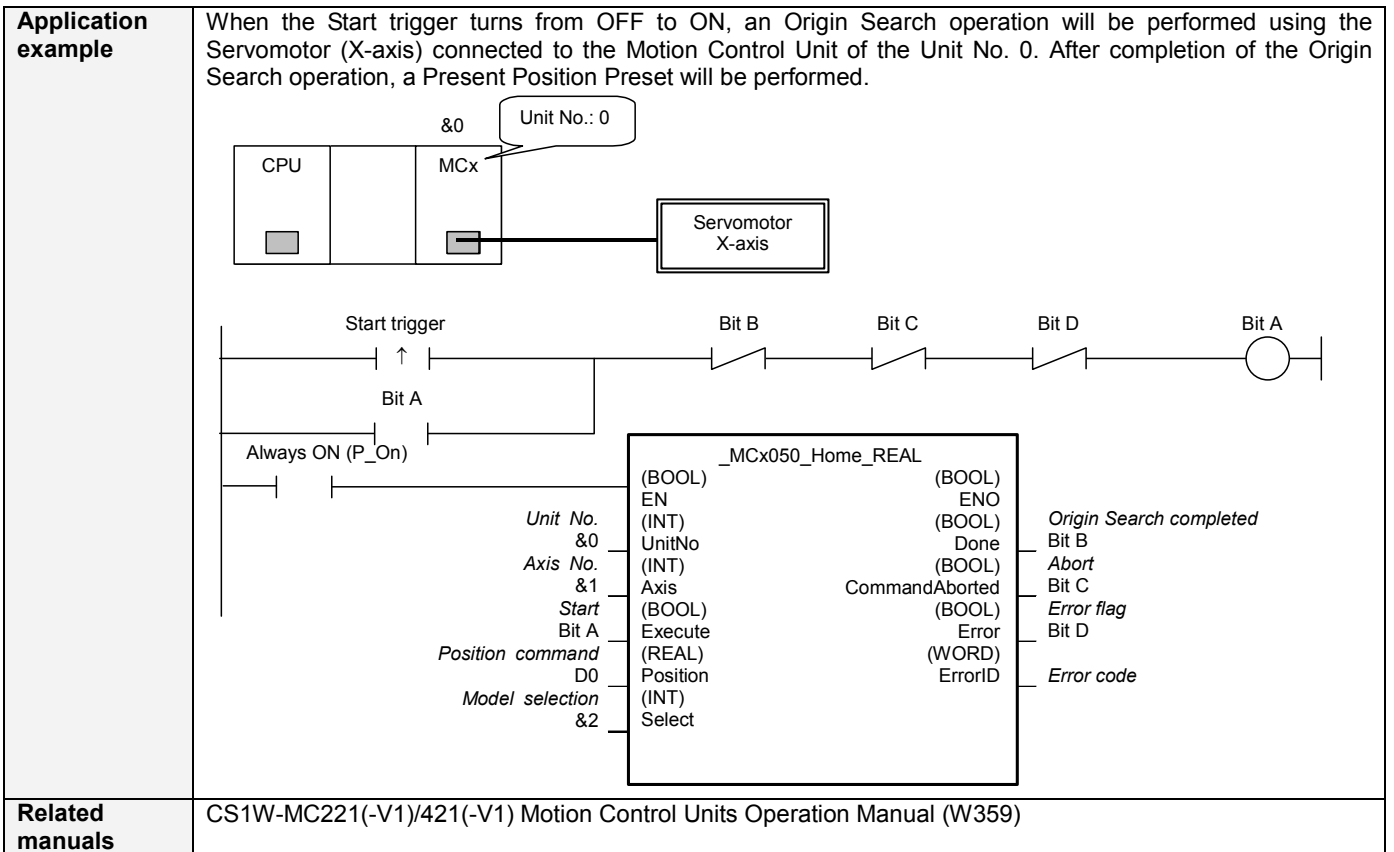


MCx050	Origin Search(REAL): _MCx050_Home_REAL
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Basic function	Performs an origin search operation to establish the origin.						
Symbol	<div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> <p>Always ON (P_On)</p> <p>Unit No.</p> <p>Axis No.</p> <p>Start</p> <p>Position command</p> <p>Model selection</p> </div> <div style="border: 1px solid black; padding: 5px; margin-right: 20px;"> <p style="text-align: center;">_MCx050_Home_REAL</p> <p>(BOOL) EN</p> <p>(INT) UnitNo</p> <p>(INT) Axis</p> <p>(BOOL) Execute</p> <p>(REAL) Position</p> <p>(INT) Select</p> </div> <div> <p>(BOOL) ENO</p> <p>(BOOL) Done</p> <p>(BOOL) CommandAborted</p> <p>(BOOL) Error</p> <p>(WORD) ErrorID</p> </div> <div style="margin-left: 20px;"> <p>Origin Search completed</p> <p>Abort</p> <p>Error flag</p> <p>Error code</p> </div> </div>						
File name	Lib\FBL\omronlib\PositionController\MCx\ MCx050_Home_REAL10.cxf						
Applicable models	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Motion Control Unit</td> <td>CS1W-MC221(-V1)/421(-V1)</td> </tr> <tr> <td>CPU Unit</td> <td>CS1*-CPU**H Unit version 3.0 or higher CJ1*-CPU**H Unit version 3.0 or higher CJ1M-CPU** Unit version 3.0 or higher CP1H</td> </tr> <tr> <td>CX-Programmer</td> <td>Version 5.0 or higher</td> </tr> </table>	Motion Control Unit	CS1W-MC221(-V1)/421(-V1)	CPU Unit	CS1*-CPU**H Unit version 3.0 or higher CJ1*-CPU**H Unit version 3.0 or higher CJ1M-CPU** Unit version 3.0 or higher CP1H	CX-Programmer	Version 5.0 or higher
Motion Control Unit	CS1W-MC221(-V1)/421(-V1)						
CPU Unit	CS1*-CPU**H Unit version 3.0 or higher CJ1*-CPU**H Unit version 3.0 or higher CJ1M-CPU** Unit version 3.0 or higher CP1H						
CX-Programmer	Version 5.0 or higher						
Conditions for usage	None						
Function description	<p>When Start (Execute) turns ON, an origin search is performed on the axis specified with Unit No. (UnitNo) and Axis No. (Axis). After the origin search is completed, Present Position Preset will be executed to make a value set for Position command (Position) the present position. Present Position Preset will be executed even when the value 0 is set for Position command (Position).</p> <p>The Origin search completed (Done) turns ON at completion of the Present Position Preset by this FB. It does not turn ON for interruption due to a deceleration stop or error.</p> <p>The Abort (CommandAborted) will turn ON for a deceleration stop during operation or when the Origin Search Bit is manually turned OFF. It will not turn ON for operations stopped due to errors.</p> <p>The Error Flag (Error) will be turned ON and the Error Code (Error code) will be output if an error occurs for this FB. These statuses are not output for errors of other FBs or instances.</p> <p>These statuses will be reset when the Start (Execute) turns OFF.</p> <p>If Start (Execute) turns OFF before an origin search operation is completed, the status will be set for at least one cycle when a corresponding condition occurs.</p> <p>■ Reference This FB uses the Origin Search and Present Position Preset functions of the applicable Motion Control Units listed above. For details of the functions, refer to the manuals listed in Related manuals below.</p>						
FB precautions	This FB can be used only in Manual Mode. It cannot be used in Automatic Mode. For details, refer to the manuals listed in Related manuals below.						
EN input condition	<ul style="list-style-type: none"> 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. 						
Restrictions Other	<ul style="list-style-type: none"> This FB uses bits in the Bit Areas of the applicable Motion Control Units listed above. Do not use these bits as Output Bits connected directly to the right bus bar in the ladder programs. <p>Note For bit address calculation, these bits are read inside the FB when executing each instance for the first time, or when the Input Variables Unit No. (UnitNo), Axis No. (Axis), and Model selection (Select) are changed and then Start (Execute) is turned ON.</p>						



■ Variable Tables

Input Variables

Name	Variable name	Data type	Default	Range	Description
EN	EN	BOOL			1 (ON): Starts FB 0 (OFF): Does not start FB
Unit No.	UnitNo	INT	&0	&0 to &93 &0 to &91	Depends on the model of Motion Control Units. &0 to &95 (MC221) &0 to &91 (MC421)
Axis No.	Axis	INT	&1	&1 to &4	&1: X-axis &2: Y-axis &3: Z-axis &4: U-axis
Start	Execute	BOOL	0 (OFF)		↑: Starts origin search
Position command	Position	REAL	+0.0	-3.999999e+07 to +3.999999e+07	Specify a value to be used as the Present Position for Present Position Preset. Unit: Command units
Model selection	Select	INT	&4	&2, &4	&2: 2-axis Unit (MC221) &4: 4-axis Unit (MC421)

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 • One or more Input Variables set out of range • FB ended with an error • Parameter not read successfully
Origin Search completed	Done	BOOL		1 (ON) indicates that an origin search is completed.
Abort	CommandAborted	BOOL		1 (ON): Aborted • Origin Search Bit turned OFF. • Origin search stopped by STOP.
Error flag	Error	BOOL		1 (ON) indicates that an error has occurred in the FB.
Error code	ErrorID	WORD		The error code of the error occurred in the FB will be output. For details of the errors, refer to the manual listed in the Related manuals above. When Unit No. or Axis No. is out of the range or when a bit to be used by this FB is already ON, #0000 will be output.

Version History

Version	Date	Contents
1.00	2005.4	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.