OMRON

Sysmac Library for NJ/NX/NY Controller

SYSMAC-XR002

# MC Command Table Library

Sysmac Library

**Make programming for continuous positioning easy.**

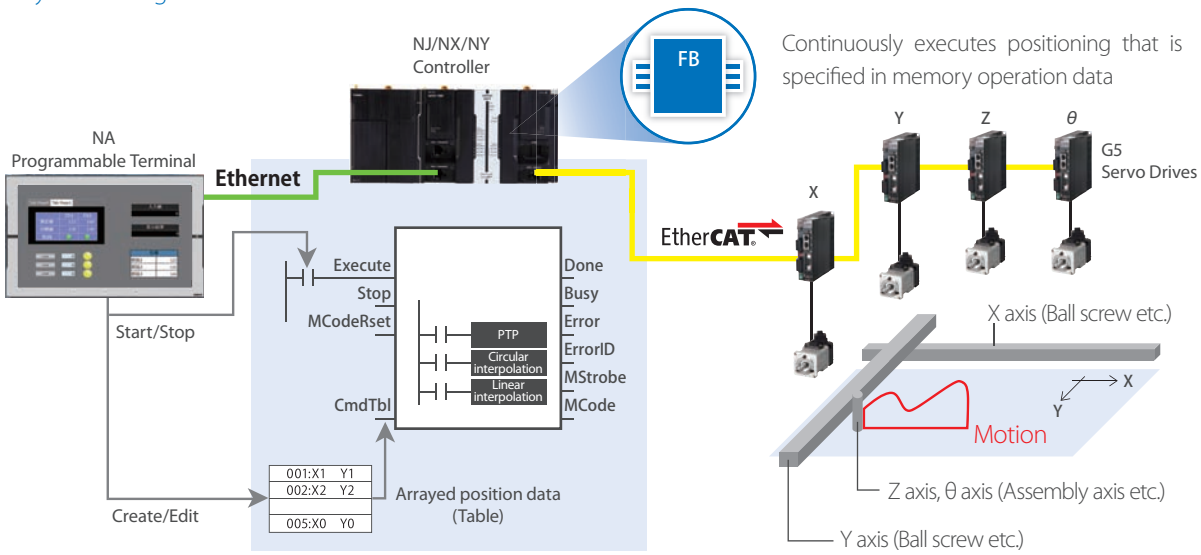
**Issue 1** PLCopen® Function Blocks for Motion Control do not support the familiar command table (memory operation) that is an efficient method for simple continuous operation

**Issue 2** The program must be modified to change the operation pattern.

## MC Command Table Library offers solution!

The Command Table (Memory Operation) Function Block allows you to program motion control using the familiar command table (memory operation). No program modification is required to change he operation pattern.

System configuration

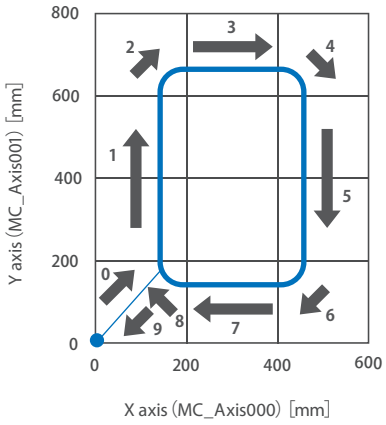



| Item | | Specification |
|---|---|---|
| Positioning points | | 600 points max. |
| Available functions | PTP | 4 axes max. |
| | Linear interpolation | 4 axes max. |
| | Circular interpolation | 2 axes |
| Auxiliary functions | Operation pattern | Independent Positioning/Consecutive Positioning/Consecutive Trajectory |
| | Others | M Code, Dwell Time, etc. |

SYSMAC always in control

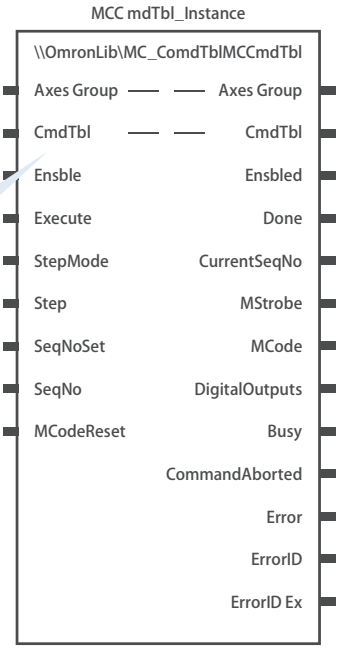
## [Example] Path control using the Command Table (Memory Operation) Function Block

With a single Command Table (Memory Operation) Function Block, you can perform path control with multi-execution of PTP, linear interpolation, and circular interpolation instructions as shown below.




Arrayed position data (Table)

| | | |
|---|---|---|
| 001: | X1 | Y1 |
| 002: | X2 | Y2 |
| | | |
| 005: | X0 | Y0 |




## Compatible Models

| Name | Model | Version |
|---|---|---|
| Machine Automation Controller<br>NJ/NX CPU Unit | NX701-□□□□/ NJ101-□□□□*1 *2 | Version 1.10 or later |
| | NJ501-□□□□/ NJ301-□□□□ | Version 1.10 or later |
| | NX1P2-□□□□□□(1) *3 *4 | Version 1.13 or later |
| Industrial PC Platform<br>NY IPC Machine Controller | NY5□□-1 | Version 1.12 or later |
| Automation Software<br>Sysmac Studio | SYSMAC-SE2□□□ | Version 1.14 or higher |
| G5 Servo Drive<br>with Built-in EtherCAT Communications | R88D-KN□□□-ECT | Version 2.10 or later |

*1. This Library is not available for NJ101-90□□ CPU Units.
*2. When you use this function block with NJ101-10□□, you can use a maximum of two real servo axes.
*3. This Library is not available for NX1P2-90□□□□ CPU Units.
*4. When you use this function block with NX1P2-10□□□□, you can use a maximum of two real servo axes.

## Function Block (FB) Specifications

| Name | FB name | Description |
|---|---|---|
| Command Table<br>(Memory Operation) | MCCmdTbl | Continuously executes positioning that is specified in memory operation data for axes groups that are defined in the MC Function Module. |



Note: Do not use this document to operate the Unit.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