



Programmable Automation Controllers
MELSEC MX Controller



Ezi-ROBO® CC-Link IE TSN
Precise Actuator System **IGS**

Ezi-SERVO® CC-Link IE TSN
Closed Loop Stepping System **ALL**

Connection Guide

MELSEC MX Controller and

Ezi-ROBO® CC-Link IE TSN - **Ezi-SERVO**® CC-Link IE TSN
Precise Actuator System **IGS** Closed Loop Stepping System **ALL**

Mitsubishi Electric Products
MXR300-16 / MXR300-32 / MXR300-64
MXR300-128 / MXR300-256 / MXF100-8
MXF100-16

FASTECH Products
Ezi-ROBO CC-Link IE TSN IGS
(Ezi-SERVO CC-Link IE TSN ALL)

Before you begin

- Thank you for using our company's products.
- The control unit of the Ezi-ROBO IGS is interfaced with the Ezi-SERVO CC-Link IE TSN ALL. The following connection guide is based on the Ezi-SERVO CC-Link IE TSN ALL.
- The Ezi-SERVO CC-Link IE TSN ALL is a stepping motor unit consisting of a driver equipped with a 32-bit high-performance ARM processor and various motors. It is used as a remote station in a CC-Link IE TSN network.
- Ezi-SERVO CC-Link IE TSN ALL is an industrial product. Do not use it for any other purpose. Our company assumes no responsibility for any damages incurred due to non-compliance with this instruction.
- This connection guide provided by our company explains how to connect the Ezi-SERVO CC-Link IE TSN ALL to Mitsubishi Electric's MELSEC MX controller. It covers CSP+ file registration, system configuration, parameter settings, and programming methods.
- Before writing the PLC program, be sure to read this connection guide, understand its contents accurately, and use the product correctly.
- This connection guide is subject to change without notice. For the latest version, please refer to our company's CC-Link IE TSN website (<https://cltsn.fastech-motions.com/en>).

Manual Information

- Ezi-SERVO CC-Link IE TSN ALL manuals can be downloaded from the FASTECH website.

<https://cltsn.fastech-motions.com/en/download/quick>

Manual Name	Manual Number
[Manual][CC-Link IE TSN][Ezi-SERVO ALL] Closed Loop Stepping System	
[Connection Guide][CC-Link IE TSN][MELSEC MX Controller][Ezi-ROBO IGS Ezi-SERVO ALL]	

- The MELSEC MX Controller Manual can be downloaded from the Mitsubishi Electric website.

<https://www.mitsubishielectric.com/fa/index.html>

Manual Name	Manual Number
MELSEC MX Controller (MX-R Model) User's Manual	SH-082640
MELSEC MX Controller (MX-R Model) Programming Manual	SH-082643
GX Works3 Operating Manual	SH-081214

Terminology

- This section covers terms used in the connection guide.

Terminology	Description
CC-Link IE TSN	An open network that adopts 'TSN (Time-Sensitive Networking)', an extension of the standard Ethernet specification, enabling simultaneous processing of real-time control and information from other open networks.
Master station (Manager station)	The station that manages the entire network, capable of performing cyclic and transient transmission with all stations. The MELSEC MX controller corresponds to this role.
Remote station	A station that performs cyclic transmission of bit-level I/O signals and word-level I/O data, and also supports transient transmission. Ezi-SERVO CC-Link IE TSN ALL corresponds to this.
PDO	Abbreviation for Process Data Object. A collection of application objects periodically transmitted between multiple CANopen nodes.
Object	Various data held by device stations corresponding to CANopen.

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1. Overview

1-1. Overview

- **MELSEC MX Controller and Ezi-SERVO CC-Link IE TSN ALL Connection Guide**

- ◆ **Master station: MXR300-16 / MXR300-32 / MXR300-64 / MXR300-128 / MXR300-256
MXF100-8 / MXF100-16**

- ◆ **PLCopen® Motion Control FB (Function Block)**

- Control programs can be easily written using the PLCopen Motion Control FB library, an international standard specification.
 - This program allows third parties to easily understand its contents, significantly reducing design and maintenance time.

- ◆ **Engineering software**

- GX Works3: Ver. 1.105K or higher
 - For the latest files, please refer to the Mitsubishi Electric website.
(<https://www.mitsubishielectric.com/fa/download/index.html>)

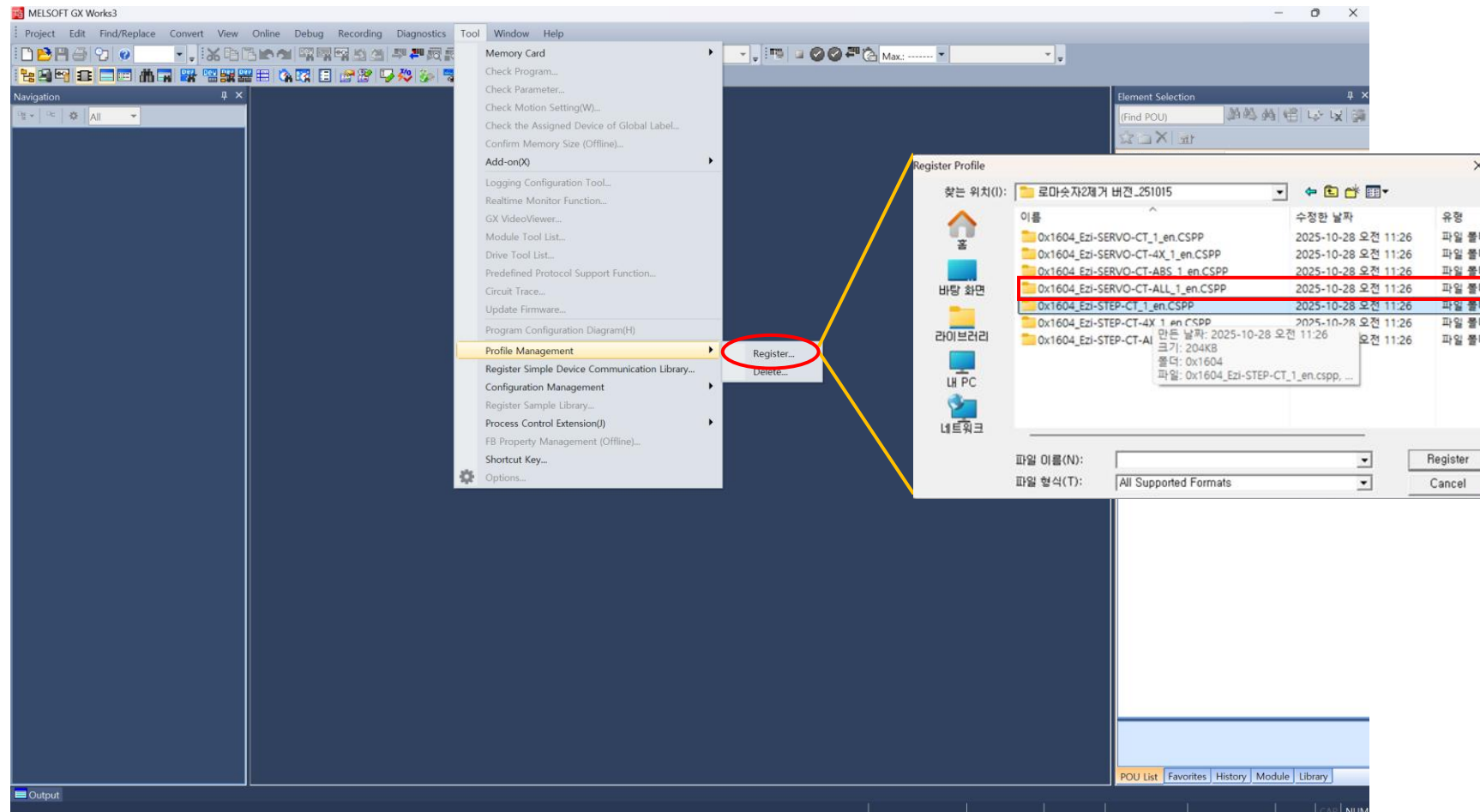
- ◆ **Remote station: Ezi-SERVO CC-Link IE TSN ALL**

- CSP+ File Download address: <https://cltsn.fastech-motions.com/en/download/quick>
File Name: 0x1604_Ezi-SERVO-CT_ALL_1_en_CSPP

1-2. Ezi-SERVO CC-Link IE TSN ALL CSP+ File Registration

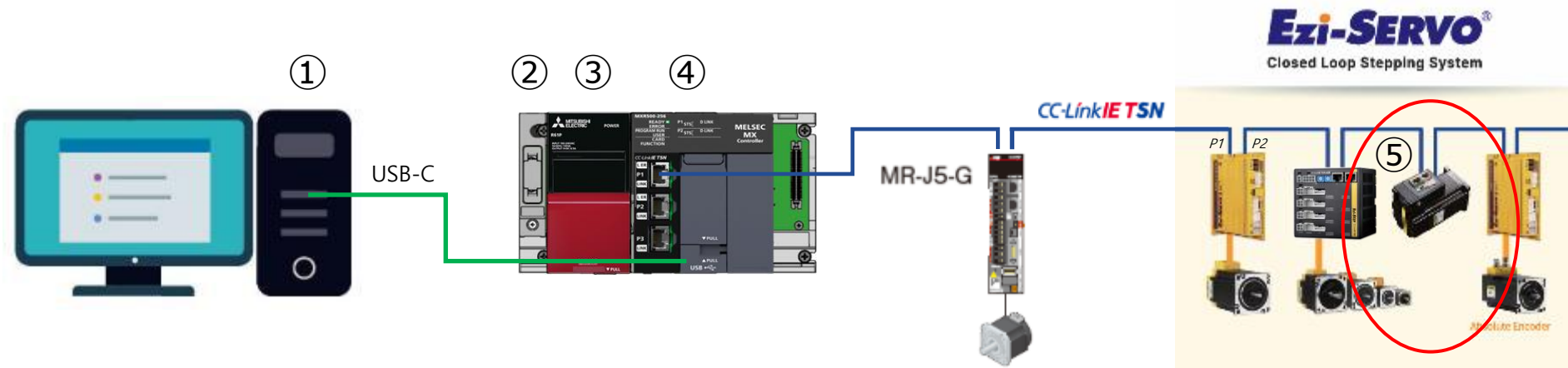
● CSP+ Registration

- [GX Works3] Tool / Profile Management / Register ※ Registration is only possible before opening a project.



1-3. CC-Link IE TSN Configuration

- System Configuration



Configuration		Product name	IP address
①	Engineering software	GX Works3	-
②	Main base	R33B	-
③	Power supply module	R61P	-
④	Controller	MXR300-16	192.168.3.253
⑤	Driver + Motor	Ezi-SERVO-CT-ALL-42S-A-R	192.168.3.1

1-3. CC-Link IE TSN Configuration

- **Ezi-SERVO Specifications**

Item		Specifications
Communication protocol		CC-Link IE TSN Class B
Communication speed		1Gbps / 100Mbps
Modes of operation		CiA402 drive profile: cyclic Synchronous position Mode (CSP) / Profile position mode (PP) / Homing mode (HM)
Synchronizat ion method	Time synchronization method	IEEE1588 / IEEE802.1AS
	Communication cycle	Minimum 250 μ s
	Network synchronization communication	Synchronous Communication (CSP, PP, HM) / Asynchronous Communication (PP, HM)
Encoder type		Incremental type

1-4. Setup Flow

- Ezi-SERVO, MX Controller Parameter Settings

No	Item	Description
1	Ezi-SERVO Settings 	Configure parameters using the driver configuration program (Ezi-CT Manager). Please download the configuration program and its usage guide from the <u>FASTECH Co., Ltd.</u> website. ※ Address: https://cltsn.fastech-motions.com/en/download/quick
2	MX Controller Settings 	Create a project for the MX controller using GX-Works3, then configure the unit parameters (communication method, connection target) and axis parameters (for motion control).
3	Verify MX Controller + Ezi-SERVO Operation 	Write a program to verify that the MX Controller and Ezi-SERVO are configured correctly. Manipulate labels to verify the motor operates normally.

1-4. Setup Flow

● Ezi-SERVO Setup Notes

Item	Details
IP address setting	① Set using the driver's rotary switch ② Rotary Switch → Setting value: '00', IP address (Index: 2101h, Subindex: 01~04h)
Driver homing method setting	① Set the homing method (Index: 6098h, Subindex: 00h) - Set homing method: '0' (default) → '33', etc. ※ Refer to [Appendix] Homing Method ② Home offset (Index: 607Ch, Subindex:00h) → Set to '0' Caution) Setting a value other than 0 may cause rapid acceleration or deceleration upon homing completion.
Limit stop method setting	① Limit stop method (Index:2003h, Subindex:00h) setting - 0: PP, HM → Quick stop / CSP → No stop - 1: PP, HM → Deceleration stop / CSP → Does not stop ② Setting a value other than '0' or '1' may cause '1ED0H: Drive error' when detecting the hardware stroke limit.
In-position range	① In-position range (Index:2B21h, Subindex:00h, Data type:Unsigned32) setting - Register a value within the In-position range (5 to 20000 pulses) considering the operating environment ② If [Md.102: Deviation counter value] is less than the setting value, [Md.108: Servo status 1: In-position] turns ON. As a rule, this object should not be made public. Please configure it using the servo transient transmission function of the FX5 CPU module.

1-5. Restrictions

● Motion Control Function Constraints (MX Controller and Ezi-SERVO)

Item	Restriction
Torque limit function	The driver does not support the following object, so the Torque limit function cannot be used. • Positive torque limit value (Index:60E0h, Subindex:00h) • Negative torque limit value (Index:60E1h, Subindex:00h)
Absolute position system	The encoder is of the incremental type, so the absolute position system cannot be used.
Virtual servo amplifier function	Emulated by MR-J5-G.
Mark detection function	TPR1 (Touch Probe 1) of the driver cannot be used for [Pr.800: Mark detection signal setting].
Optional data monitor function	When using the optional data monitor function, set the objects to monitor in [Pr.91~94: Optional data monitor: Data type setting 1~4] and [Pr.591~594: Optional data monitor: Data type expansion setting 1~4]. The default value is "0: Not set". Therefore, [Md.109~112: Optional data monitor output 1~4] will be '0'.

1-5. Restrictions

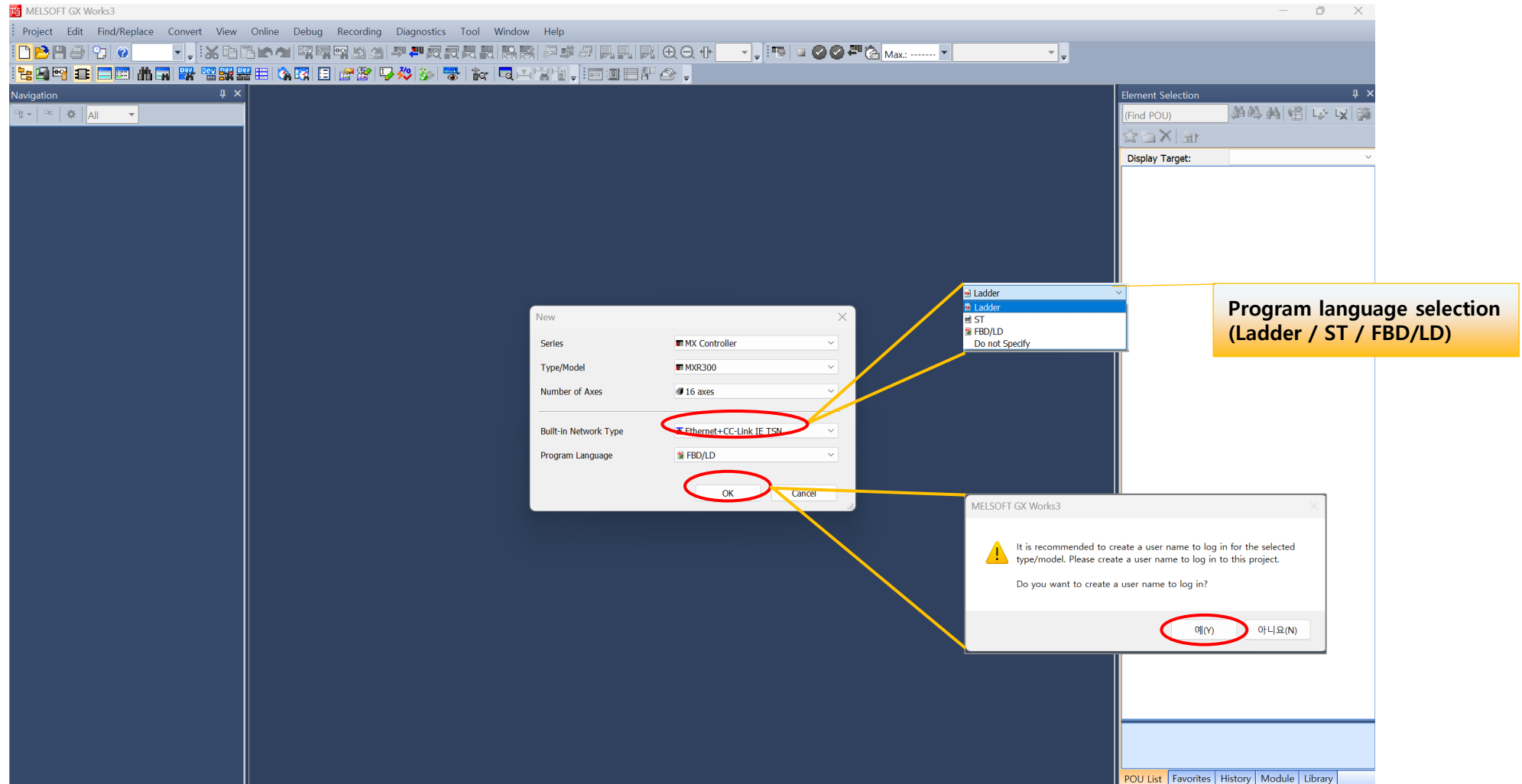
● Motion Control Function Constraints (MX Controller and Ezi-SERVO)

Item	Restriction
Md.103: Motor rotation speed	Since the driver does not support 'SI unit velocity (Index:60A9h, Subindex:00h)', it outputs the motor rotation speed in pulses per second.
Md.104: Motor current value	Since the driver does not support 'Torque actual value (Index:6077h, Subindex:00h)', it always displays "0".
Md.108: Servo status 1	The following bits in the monitor data are always in the 'OFF' state. · Gain switching (b4) · Fully closed control switching (b5) · Torque limit active (b13) · Absolute position lost (b14) · Servo warning (b15)
Md.119: Servo status 2	The following bits in the monitor data are always in the 'OFF' state. · Zero point pass (b0) · Zero speed (b3) · Speed limit active (b4) · PID control active (b8)
Md.115: Servo alarm detail number	Not supported. This monitor data is always displayed as '0'.
Cd.108: Gain switching command flag	Not supported. Only MELSERVO responds to this data.
Cd.133: Semi/Fully closed loop switching request	Not supported. Only MELSERVO responds to this data.
Cd.136: PI-PID switching request	Not supported. Only MELSERVO supports this data.

2. MX Controller Settings

2-1. Project Creation

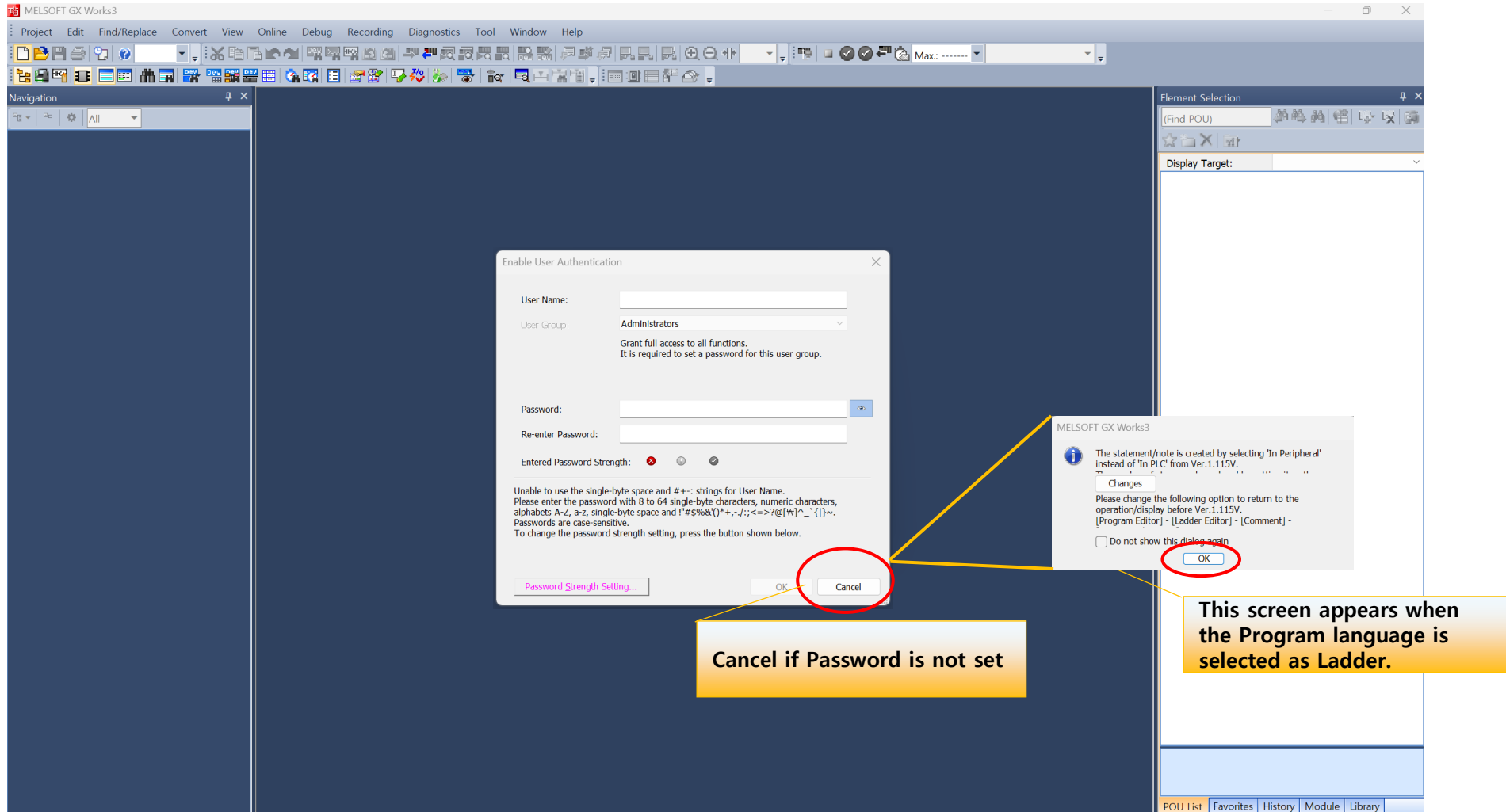
- When creating a new project, select the MX Controller, model name, number of axes used, and programming language.



2-2. User Authentication Settings

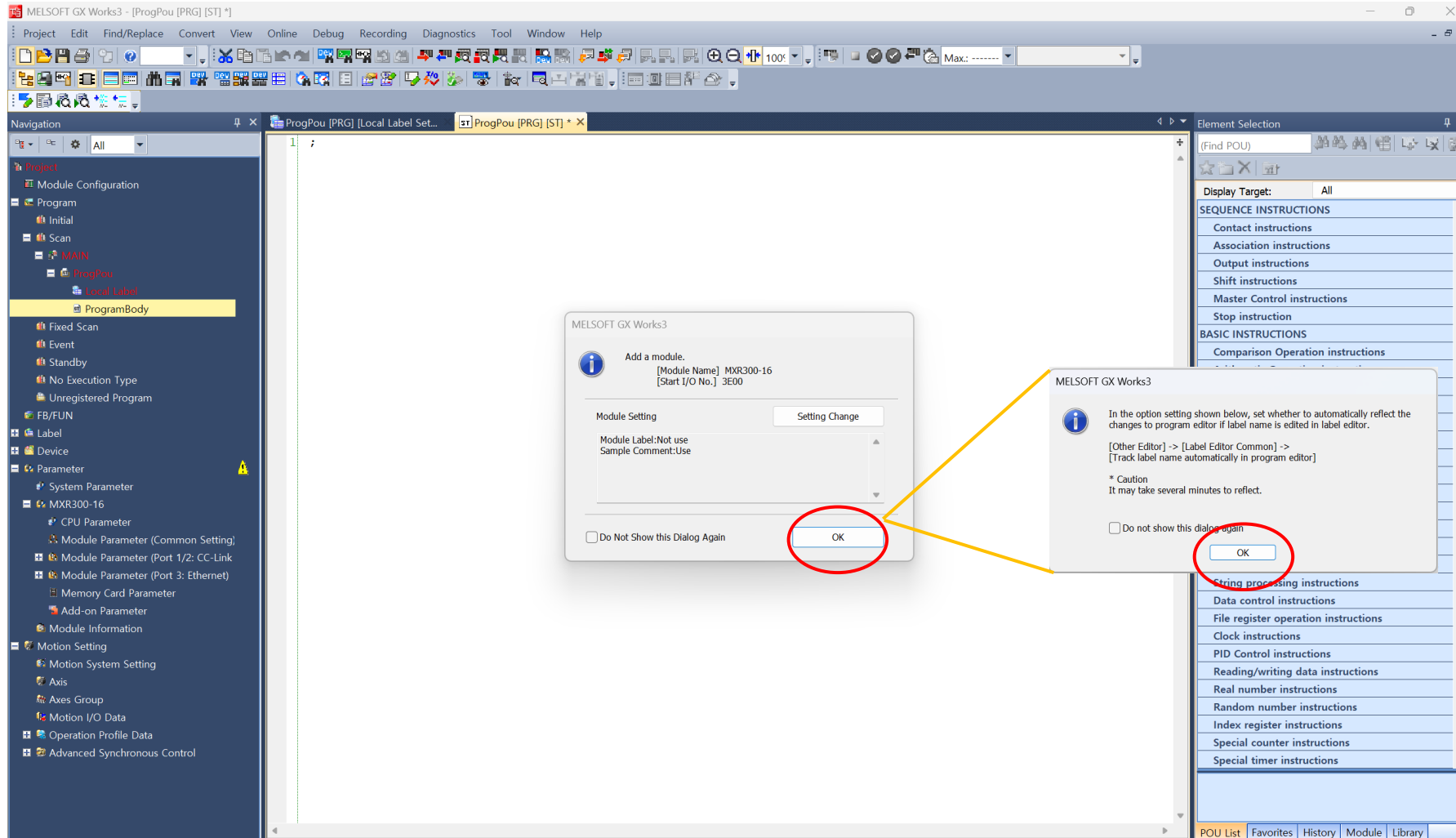
● Password Setting

※ In this chapter, Cancel is selected when no password is set.



2-3. Module Registration

- MXR300-xx Registration



2-4. Module Configuration – H/W

- Configure the Main Base, CPU Module, and Power Supply by clicking and dragging with the mouse

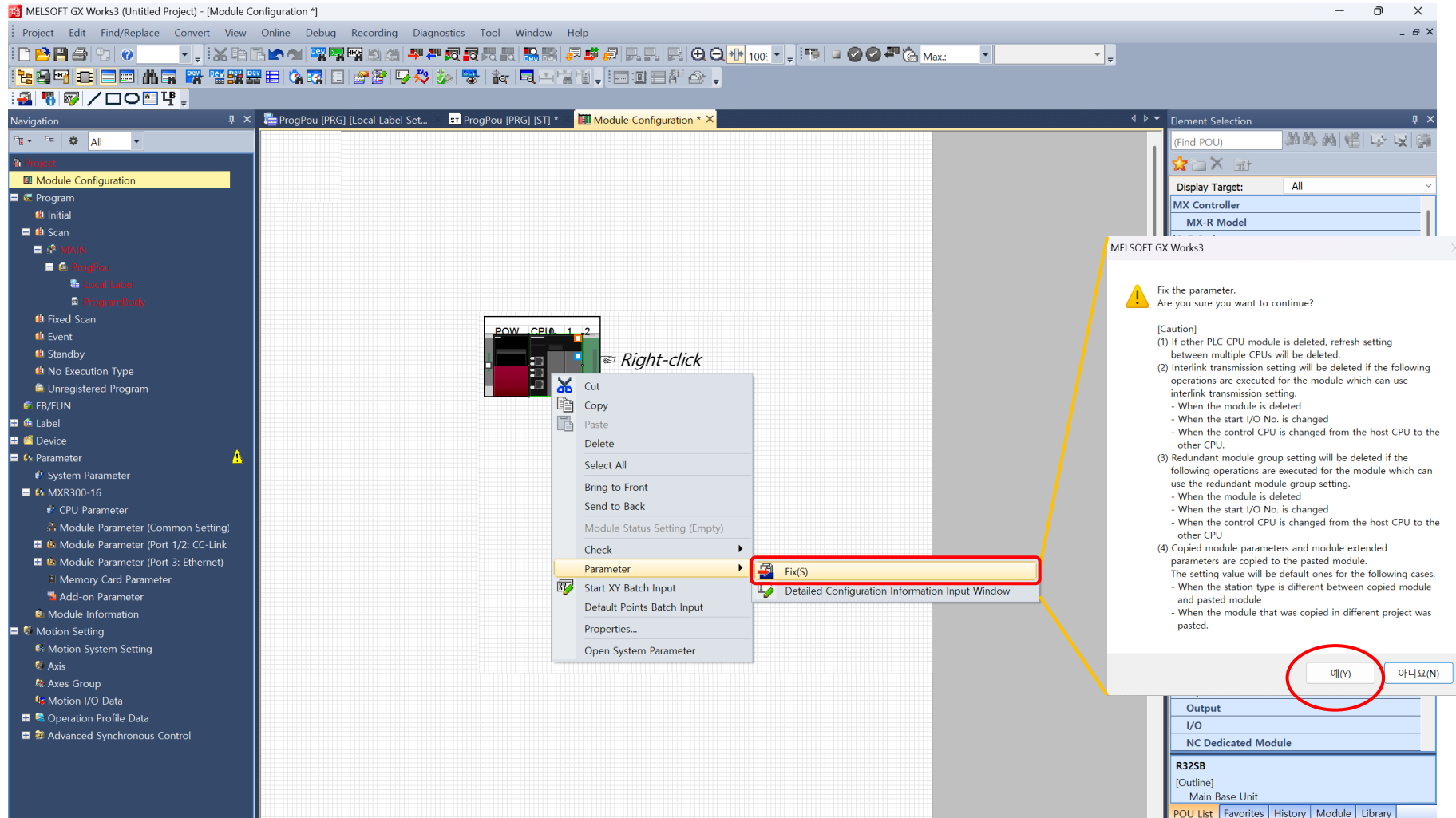
The screenshot shows the MELSOFT GX Works3 interface for Module Configuration. The 'Module Configuration' tab is active in the left sidebar (callout 1). The main workspace shows a rack configuration with a 'Main Base' (callout 4) and a 'CPU' module. A 'Click & Drag' instruction box (callout 3) lists the steps: 1. Main Base, 2. Power Supply, 3. Install MX Controller. The right sidebar shows the 'Element Selection' list. The 'Main Base' section is expanded, showing various R32SB, R33SB, R35SB, R38B, R38RB-HT, R310B-HT, R310RB, and R312B modules. The 'Power Supply' section is also expanded, showing R61SP, R62P, R61P, R63P, R63RP, R64P, R64RP, R69P, and R69RP modules. The 'R61P' module is highlighted in the 'Power Supply' list (callout 2). A 'Mouse Click & Drag' label is placed over the main workspace area.

[Click & Drag]

1. Main Base
2. Power Supply
3. Install MX Controller

2-4. Module Configuration – H/W

- Right-click the mouse and select Fix(S) to complete the module configuration



2-5. Module Parameters

- Station No./IP Address Setting: Example) IP Address → 192.168.3.253

MELSOFT GX Works3 (Untitled Project) - [MXR300-16 Module Parameter (Port 1/2: CC-Link IE TSN)]

Navigation: Project, Edit, Find/Replace, Convert, View, Online, Debug, Recording, Diagnostics, Tool, Window, Help

Setting Item List: Input the Setting Item to Search

Setting Item Table:

Item	Setting
Station Type	Master Station
Network No.	1
Parameter Setting Method	Parameter Editor
Station No./IP Address Setting Method	Parameter Editor
Station No.	0
IP Address Setting	192.168.3.253
IP Address	192.168.3.253
Subnet Mask	
Default Gateway	

Element Selection: (Find POU), Display Target: All

IP Address: 192.168.3.253
※ Note: Ezi-SERVO CC-Link IE TSN ALL
Default IP: 192.168.3.xxx

Explanation: Set the IP address for the own node. Ensure that the own node and the external device to be communicated with have the same class and subnet address. Set the IP address to use for CC-Link IE TSN communication.

[Setting Range] 0.0.0.1 to 223.255.255.254 (00.00.00.01 to FF.FF.FF.FE)

Buttons: Check, Restore the Default, Apply

2-5. Module Parameter – Network Configuration

● Network Configuration Settings

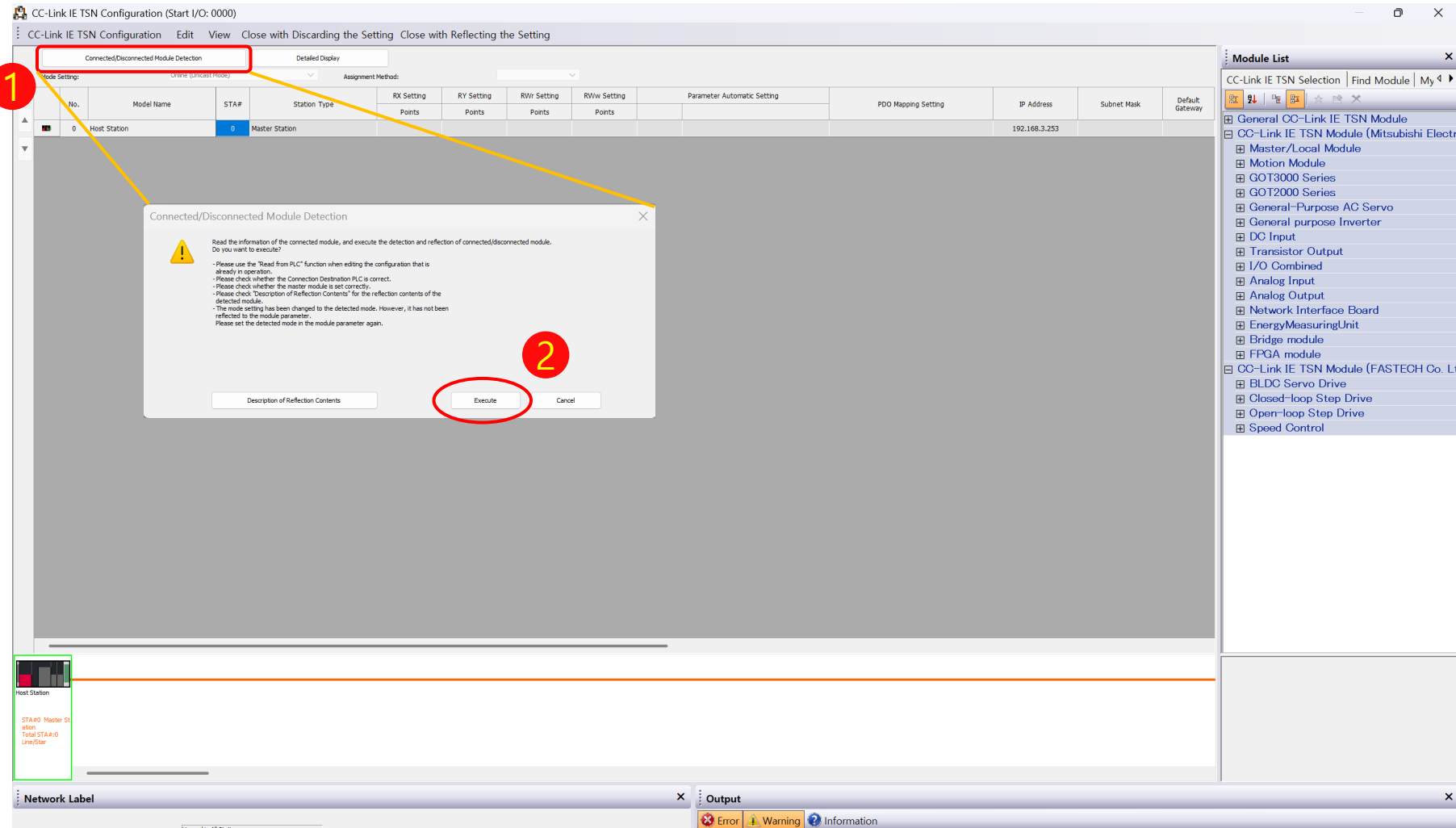
The screenshot displays the MELSOFT GX Works3 interface for configuring the MXR300-16 module. The main window is titled 'MELSOFT GX Works3 (Untitled Project) - [MXR300-16 Module Parameter (Port 1/2: CC-Link IE TSN)]'. The left sidebar shows the 'Project' tree with 'Module Configuration' expanded, and 'Module Parameter (Port 1/2: CC-Link)' selected. The central 'Setting Item List' shows 'Network Configuration Settings (CC-Link IE TSN Configuration)' expanded. The right pane displays the configuration table for 'Network Configuration Settings (CC-Link IE TSN Configuration)'.

Item	Setting
Network Configuration Settings (CC-Link IE TSN Configuration)	
Refresh Settings	<Detailed Setting>
Network Topology	<Detailed Setting>
Communication Period Setting	
Basic Period Setting	
Setting in Units of 1us	Not Set
Communication Period Interval Setting (Do not Set it in Units of 1us)	2000.00 us
Communication Period Interval Setting (Set it in Units of 1us)	2000.00 us
System Reservation Time	20.00 us
Cyclic Transmission Time	1000.00 us
Transient Transmission Time	980.00 us
Multiple Period Setting	
Normal-Speed	x4
Low-Speed	x16
Connection Device Information	
CC-Link IE TSN Class Setting	CC-Link IE TSN Class B Only
CC-Link IE TSN Class A Group Send Upper Limit Size Setting	2K bytes
TSN HUB Setting	Not to Use TSN HUB
Device Station Setting	
Disconnection Detection Setting	4 times

The 'CC-Link IE TSN Configuration (Start I/O: 0000)' dialog box is open, showing 'Mode Settings' and 'Module List'. The 'Module List' includes 'General CO-Link IE TSN Module' and 'CC-Link IE TSN Module (Mitsubishi Ele)'. The 'Network Label' dialog box at the bottom shows 'Network Label Usage Status' as 'Unused in All Stations'.

2-5. Module Parameter – CC-Link IE TSN Configuration

- **Network Connected Status:** Automatically detects and configures the CC-Link IE TSN Module



2-5. Module Parameter – CC-Link IE TSN Configuration

- **Network-connected state:** Automatically detects and configures the CC-Link IE TSN Module with Ezi-SERVO CC-Link IE TSN ALL

The screenshot displays the 'CC-Link IE TSN Configuration' window in MELSOFT GX Works3. The 'Connected/Disconnected Module Detection' tab is active, showing a table of detected modules. A red box highlights the first three rows, which are Ezi-SERVO-ALL-CT modules. A yellow starburst callout points to the first row with the text 'Automatically Found Module'. A 'Module List' panel on the right shows the 'CC-Link IE TSN Selection' tree. A 'MELSOFT GX Works3' dialog box is open in the center, displaying a message about module detection completion and a '확인' (OK) button circled in red. At the bottom, a 'Network Label' panel shows a diagram of the network topology with three Ezi-SERVO-ALL-CT modules connected to the Host Station.

No.	Model Name	STA#	Station Type	RX Setting	RY Setting	RWr Setting	RWw Setting	Parameter Automatic Setting	PDO Mapping Setting	IP Address	Subnet Mask	Default Gateway
0	Host Station	0	Master Station							192.168.3.253		
1	Ezi-SERVO-ALL-CT	1	Remote Station			16	16		<Detail Setting>	192.168.3.1		
2	Ezi-SERVO-ALL-CT	3	Remote Station			16	16		<Detail Setting>	192.168.3.18		
3	Ezi-SERVO-ALL-CT	6	Remote Station			16	16		<Detail Setting>	192.168.3.19		

**[Example of Ezi-SERVO CC-Link IE TSN ALL 3-axis configuration]
[IP Address Set in Ezi-SERVO CC-Link IE TSN ALL Driver]**

1. 192.168.3.1

2-5. Module Parameter – CC-Link IE TSN Configuration

- **N/W Not Connected:** **Manually** configure the CC-Link IE TSN Module (**click & drag**)

CC-Link IE TSN Configuration (Start I/O: 0000)

CC-Link IE TSN Configuration Edit View Close with Discarding the Setting Close with Reflecting the Setting

Mode Setting: Online (Unicast Mode) Assignment Method:

No.	Model Name	STA#	Station Type	RX Setting	RY Setting	RW Setting	RWw Setting	Parameter Automatic Setting	PDO Mapping Setting	IP Address	Subnet Mask	Default Gateway
0	Host Station	0	Master Station							192.168.3.253		
1	Ezi-SERVO-ALL-CT	1	Remote Station			16	16		<Detail Setting>	192.168.3.1		
2	Ezi-SERVO-ALL-CT	2	Remote Station			16	16		<Detail Setting>	192.168.3.2		
3	Ezi-SERVO-ALL-CT	3	Remote Station			16	16		<Detail Setting>	192.168.3.3		

Created upon registration

2

[Ezi-SERVO CC-Link IE TSN ALL IP Address arbitrarily modified]

1. 192.168.3.1
2. 192.168.3.2
3. 192.168.3.3

※ Power reset is required after changing the IP address

1

Mouse click & drag (repeated)

Module List

- CC-Link IE TSN Selection Find Module My
- General CC-Link IE TSN Module
- CC-Link IE TSN Module (Mitsubishi Electr
- Master/Local Module
- Motion Module
- GOT3000 Series
- GOT2000 Series
- General-Purpose AC Servo
- General purpose Inverter
- DC Input
- Transistor Output
- I/O Combined
- Analog Input
- Analog Output
- Network Interface Board
- EnergyMeasuringUnit
- Bridge module
- FPGA module
- CC-Link IE TSN Module (FASTECH Co. L
- BLDC Servo Drive
- Closed-loop Step Drive
- Ezi-SERVO-CT
- Ezi-SERVO-CT-4X
- Ezi-SERVO-CT-ABS
- Ezi-SERVO-CT-ALL
- Open-loop Step Drive
- Speed Control

[Note] Ezi-SERVO CC-Link IE TSN ALL IP Address Settings Hexadecimal Rotary Switch

(x16) (x1)

[Station Type]
Remote Station

Network Label

Output

Error Warning Information

2-5. Module Parameter – CC-Link IE TSN Configuration

- CC-Link IE TSN Module PDO Mapping Setting (Per-Axis Setting)

CC-Link IE TSN Configuration (Start I/O: 0000)

Connected/Disconnected Module Detection Detailed Display

Mode Setting: Online (Unicast Mode) Assignment Method:

No.	Model Name	STA#	Station Type	RX Setting Points	RY Setting Points	RW Setting Points	RWw Setting Points	Parameter Automatic Setting	PDO Mapping Setting	IP Address	Subnet Mask	Default Gateway
0	Host Station	0	Master Station							192.168.3.253		
1	Esi-SERVO-ALL-CT	1	Remote Station			16	16		<Detail Setting>	192.168.3.17		
2	Esi-SERVO-ALL-CT	2	Remote Station			16	16		<Detail Setting>	192.168.3.18		
3	Esi-SERVO-ALL-CT	3	Remote Station			16	16		<Detail Setting>	192.168.3.19		

Generated upon registration

PDO Mapping Setting

Link Device Points

PDO Mapping Parameter

Link Device (RWw) Points: 16

PDO Mapping Pattern Selection (1/2)

Please select the TPDO mapping pattern assigned in link device (RWw).

No.	Pattern Name	Used Points
1	1st TPDO (CSP Mode)	8 Points
2	2nd TPDO (ProfilePosition Mode)	10 Points

Back Next Cancel

PDO Mapping Pattern Selection (2/2)

Please select the RPDO mapping pattern assigned in link device (RWw).

No.	Pattern Name	Used Points
1	1st RPDO (CSP Mode)	7 Points
2	2nd RPDO (ProfilePosition Mode)	13 Points

Back OK Cancel

Network Label

Output

Error:0 Warning:0 Information:0

[Outline]
Step Drive
[Specification]
Closed-Loop Step Drive
Motor: Max. NEMA 24
Mode: Homing, CSP, PP
CC-Link IE TSN Class B
[Manufacturer Name]
FASTECH Co. Ltd
[Station Type]
Remote Station

2-5. Module Parameter – CC-Link IE TSN Configuration

- CC-Link IE TSN Module PDO Mapping Setting (Per-Axis Setting)

Generated upon registration

PDO Mapping Setting

Link Device Points: 16

PDO Mapping Parameter

Link Device	Index [Hexadecimal]	Sub-Index [Hexadecimal]	Entry Name	Comment	Data Type
RW0000	1002	01	Watchdog counter UL 1		UNSIGNED16
RW0001	6041	00	Status word		UNSIGNED16
RW0002	6061	00	Modes of operation display		INTEGER8
RW0003	603F	00	Error code		UNSIGNED16
RW0004	6064	00	Position actual value		INTEGER32
RW0005	6064	00	Position actual value		INTEGER32
RW0006	60F2	00	Digital Inputs		UNSIGNED32
RW0007	60F2	00	Digital Inputs		UNSIGNED32
RW0008					
RW0009					
RW000a					
RW000b					
RW000c					
RW000d					
RW000e					
RW000f					

Turns black when PDO setting is complete
<Detail Setting> → <Detail Setting>
Repeat for all axis PDO settings

Module List

- CC-Link IE TSN Selection
- Find Module
- My 4
- General CC-Link IE TSN Module
- CC-Link IE TSN Module (Mitsubishi Electr
- Master/Local Module
- Motion Module
- GOT3000 Series

CC-Link IE TSN Configuration (Start I/O: 0000)

Connected/Disconnected Module Detection

Detailed Display

Mode Setting: Online (Unicast Mode)

Assignment Method:

No.	Model Name	STA#	Station Type	RX Setting	RY Setting	RW Setting	RWw Setting	Parameter Automatic Setting	PDO Mapping Setting	IP Address	Subnet Mask	Default Gateway
0	Host Station	0	Master Station							192.168.3.253		
1	Ezi-SERVO-ALL-CT	1	Remote Station			16	16		<Detail Setting>	192.168.3.17		
2	Ezi-SERVO-ALL-CT	2	Remote Station			16	16		<Detail Setting>	192.168.3.18		
3	Ezi-SERVO-ALL-CT	3	Remote Station			16	16		<Detail Setting>	192.168.3.19		

Network Label

Output

Error:0 Warning:0 Information:0

2-5. Module Parameter – CC-Link IE TSN Configuration

- CC-Link IE TSN Module Setting Applied

The screenshot displays the 'CC-Link IE TSN Configuration' software window. The main table lists the configuration for three stations:

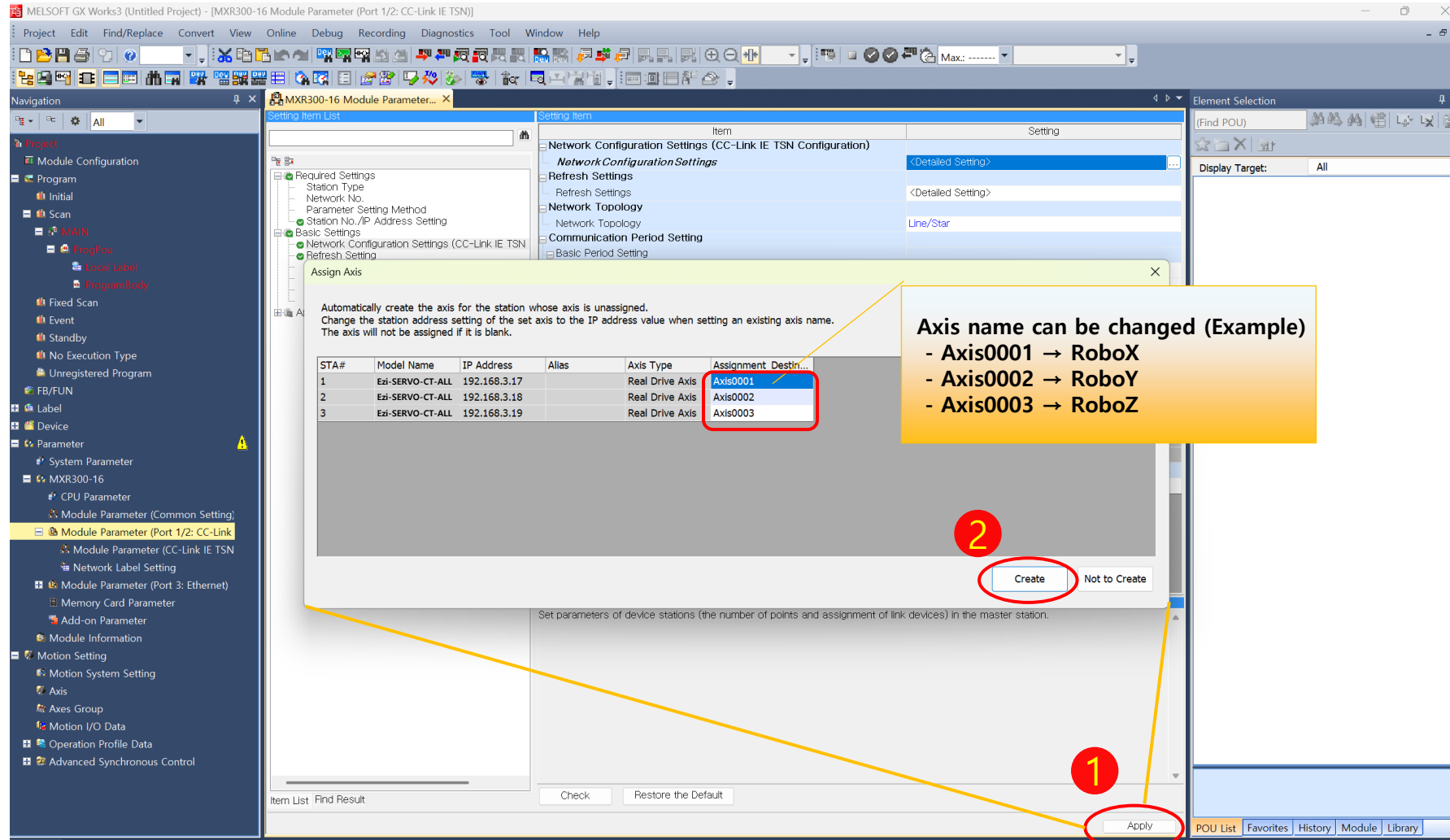
No.	Model Name	Station Type	RX Setting	RY Setting	RWr Setting	RWv Setting	Parameter Automatic Setting	PDO Mapping Setting	IP Address	Subnet Mask	Default Gateway
0	Host Station	Master Station							192.168.3.253		
1	Ezi-SERVO-ALL-CT	Remote Station				16		<Detail Setting>	192.168.3.17		
2	Ezi-SERVO-ALL-CT	Remote Station				16		<Detail Setting>	192.168.3.18		
3	Ezi-SERVO-ALL-CT	Remote Station				16		<Detail Setting>	192.168.3.19		

A warning dialog box from MELSOFT GX Works3 is displayed in the center, asking: "Warning(s) in the CC-Link IE TSN Configuration. Are you sure you want to close the CC-Link IE TSN Configuration window?". The '예(Y)' (Yes) button is circled in red. A red circle also highlights the 'Close with Reflecting the Setting' option in the software's menu bar.

At the bottom left, a network diagram shows the connection between the Host Station and three Remote Stations (STA#1, STA#2, STA#3) via a CC-Link IE TSN network. The bottom right panel shows the 'Output' status with 'Error:0', 'Warning:0', and 'Information:0'.

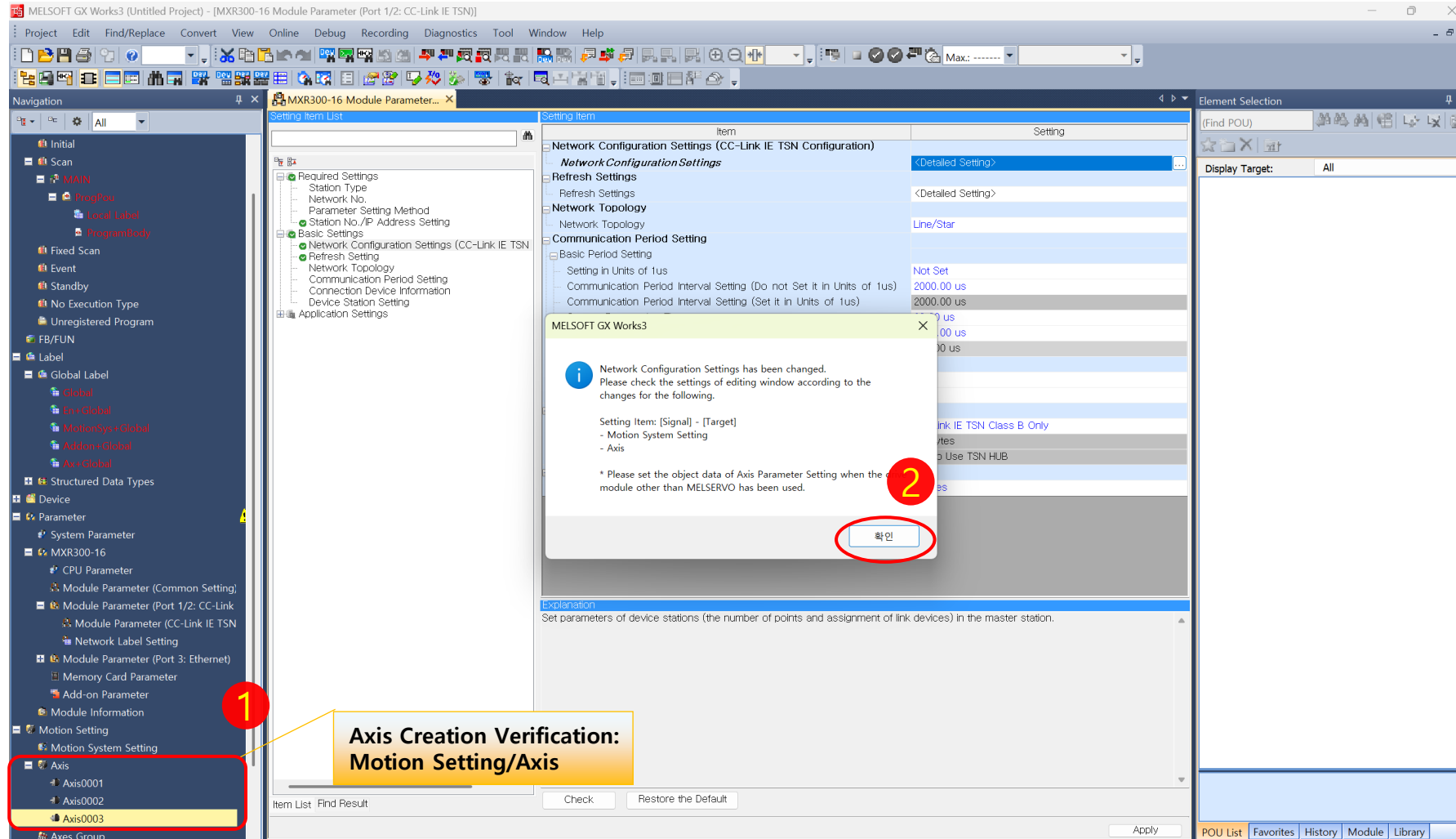
2-5. Module Parameter – CC-Link IE TSN Configuration

● Axis Creation



2-5. Module Parameter – CC-Link IE TSN Configuration

- Confirming axis creation



2-5. Module Parameter – CC-Link IE TSN Configuration

● Network Label Setting – Channel-Specific Digital Input/Output Settings

The screenshot displays the MELSOFT GX Works3 interface for Network Label Setting. The main table lists parameters for three channels (1, 2, and 3) with columns for IP Address, Model Name, Device Label/Structure, Data Type, Labeling Target, Arranged Target, Label Data Type, Label Name, and English Display. Red circles and numbers highlight key elements:

- 1**: Points to the 'Labeling Target' column, which contains checkboxes for selecting digital input/output labels.
- 2**: Points to the 'Create Label' button at the bottom of the window.
- 3**: Points to a confirmation dialog box titled 'Start creating the label on the basis of the editing content. Are you sure you want to continue?' with '예(Y)' (Yes) and '아니요(N)' (No) buttons.

Annotations on the right side of the image provide additional context:

- Digital Output Label Settings**: Points to the 'Labeling Target' column.
- Digital Input Label Setting - Limit +/-, ORG, Input**: Points to the 'Labeling Target' column.

At the bottom of the window, there are buttons for 'Structure Array Setting...', 'Update Network Configuration Info', and 'Create Label'. The bottom status bar shows 'POU List', 'Favorites', 'History', 'Module', and 'Library'.

2-5. Module Parameter – CC-Link IE TSN Configuration

- Network Label Setting – Digital In/Output Enable per Axis
*Limit SW, ORG SW, DIO Enable Settings

MELSOFT GX Works3 C:\Work\테스트샘플\connectionGuide.gx3 - [NW+Global1 [Global Label Setting]]

Navigation: Project, Module Configuration, Program, FB/FUN, Label, Global Label, En+Global, MotionSys+Global, Addon+Global, Ax+Global, NW+Global1, Structured Data Types, Device, Parameter, System Parameter, MXR300-16, Module Information, Motion Setting, Motion System Setting, Axis, Axis0001, Axis0002, Axis0003, Axes Group, Motion I/O Data, Operation Profile Data, Advanced Synchronous Control.

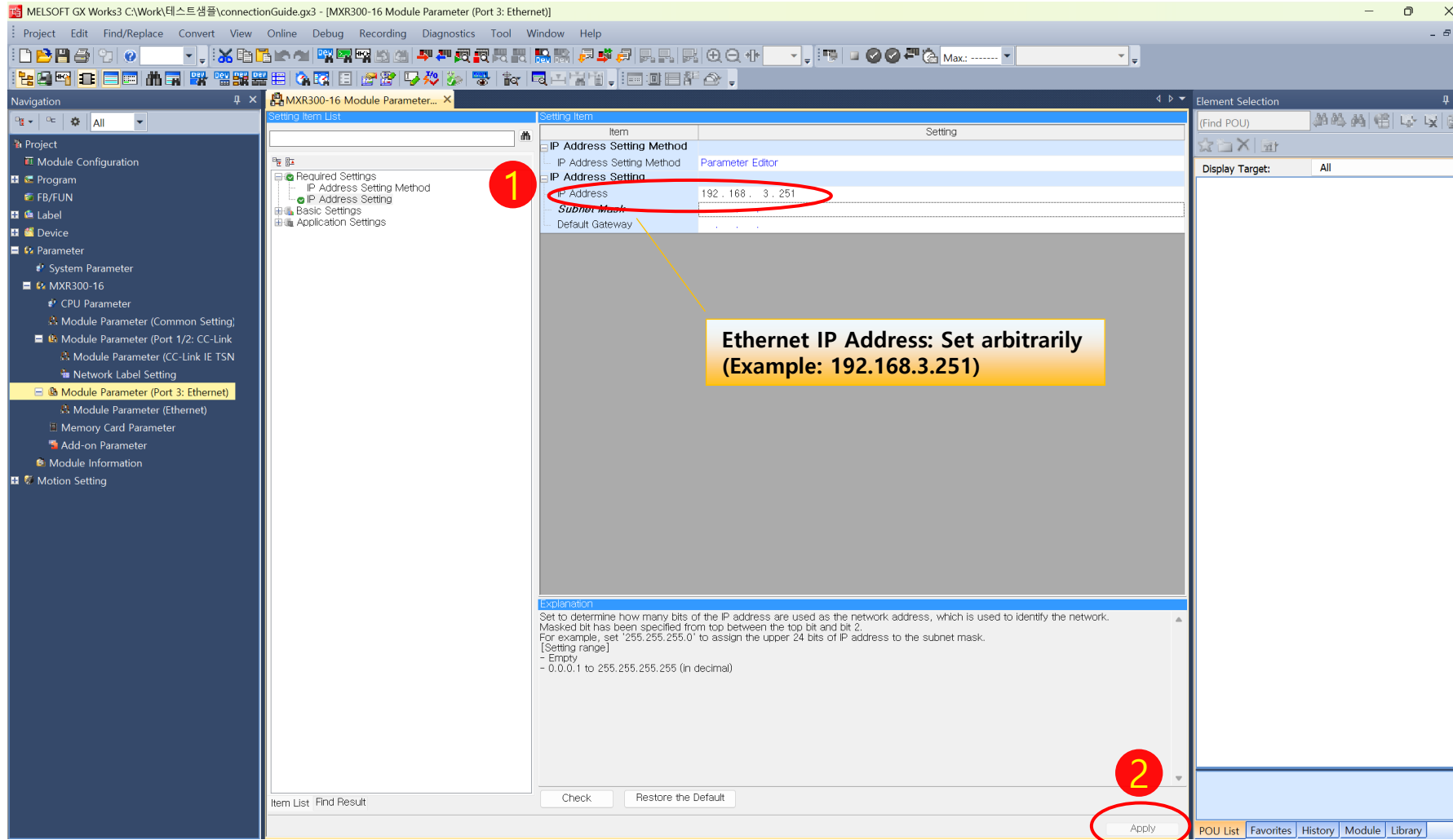
Label Name	Data Type	English(Display Target)	Axis from External Service
1. Ezi-SERVO_CT_001_PhysicalOutputs	Double Word (Unsigned) Bit String (32bit)	RWw5	☒
2. Ezi-SERVO_CT_001_DigitalInputs	Double Word (Unsigned) Bit String (32bit)	RWw5	☒
3. Ezi-SERVO_CT_002_PhysicalOutputs	Double Word (Unsigned) Bit String (32bit)	RWw5	☒
4. Ezi-SERVO_CT_002_DigitalInputs	Double Word (Unsigned) Bit String (32bit)	RWw5	☒
5. Ezi-SERVO_CT_003_PhysicalOutputs	Double Word (Unsigned) Bit String (32bit)	RWw5	☒
6. Ezi-SERVO_CT_003_DigitalInputs	Double Word (Unsigned) Bit String (32bit)	RWw5	☒
7.			

Extended Display: Do Not Show Always

POU List | Favorites | History | Module | Library

2-5. Module Parameter – Port 3: Ethernet

- Ethernet IP Address Setting



2-6. Motion Setting – Basic Parameter

- Real Drive Axis / Basic Parameter / Object Data Settings (1/3)
*Ezi-SERVO CC-Link IE TSN ALL Object Data Registration

1. In the left sidebar, under 'Motion Setting', select 'Axis' and then 'Axis0001'.

2. In the 'Basic Parameter' section, select 'Object Data'.

3. In the 'Object Data' section, select 'ControlWord'.

4. In the 'Object Data Setting (Axis0001)' dialog, select 'Restore the Default'.

5. In the 'Set default data. Are you sure you want to continue?' dialog, select '예(Y)'.

6. In the 'The specified station address refers to a non-MELSERVO device. Do you want to set to generic default values?' dialog, select '예(Y)'.

Ezi-SERVO CC-Link IE TSN ALL Object Data

MELSOFT GX Works3

The specified station address refers to a non-MELSERVO device. Do you want to set to generic default values?

Yes: Set to generic default values
No: Set to default values for MELSERVO

예(Y) 아니요(N) 취소

2-6. Motion Setting – Basic Parameter

- Real Drive Axis / Basic Parameter / Object Data Settings (2/3)
*Ezi-SERVO CC-Link IE TSN ALL Object Data Registration

MELSOFT GX Works3 C:\Work\테스트샘플\connectionGuide.gx3 - [Axis Parameter Setting]

Navigation: Project, Module Configuration, Program, FB/FUN, Label, Device, Parameter, System Parameter, MXR300-16, CPU Parameter, Module Parameter (Common Setting), Module Parameter (Port 1/2: CC-Link), Module Parameter (CC-Link IE TSN), Network Label Setting, Module Parameter (Port 3: Ethernet), Memory Card Parameter, Add-on Parameter, Module Information, Motion Setting, Motion System Setting, Axis, Axis0001, Axis0002, Axis0003, Axes Group, Motion I/O Data, Operation Profile Data, Advanced Synchronous Control.

Setting Item List: Input the Setting Item to Search

Setting Item: Select Folder, Display All Data

Item	Axis0001	Axis0002	Axis0003
Axis Information	Set Axis Information		
Axis No.	1	2	3
Station Address Setting	192.168.3.17	192.168.3.18	192.168.3.19
Axis Type Setting	0:Real Drive Axis	0:Real Drive Axis	0:Real Drive Axis
Axis Emulation Enabled	0:Disabled	0:Disabled	0:Disabled
Control Cycle Setting	0:Automatic settir	0:Automatic settir	0:Automatic settir
Object Data	[OBJ]0x60400010 [OBJ]0x60400020 [OBJ]0x60400030		
ControlWord	[OBJ]0x608F012C [OBJ]0x608F012C [OBJ]0x608F012C		

Object Data Setting (Axis0002)

Target Device: Ezi-SERVO-CT

Changing the object data is not required when MELSERVO has been used. Please set it to the generic default value by pressing the Default Settings button when the non-MELSERVO device has been used. It can be changed individually when the device's inherent object data has been set.

ControlWord	EncoderIncrements	FollowingErrActualValue	GearRatioMotorRevolutions	HomeOffset	MaxMotorSpeed	MaxTorque	ModesOfOp	ModesOfOpDiso	NegativeTorqueLimitValue	Polarity	PosActualValue
[OBJ]0x60400010	[OBJ]0x60800020	[OBJ]0x60800020	[OBJ]0x607C0020	[OBJ]0x60800020	[OBJ]0x60720010	[OBJ]0x60600008	[OBJ]0x60610008	[OBJ]0x60E10010	[OBJ]0x607E0008	[OBJ]0x60640000	[OBJ]0x60640000

7

8

[OBJ] Review Changes

Item List Find Result

Restore the Defa

Apply

POU List Favorites History Module Library

2-6. Motion Setting – Basic Parameter

- Real Drive Axis / Basic Parameter / Object Data Settings (3/3)
*Ezi-SERVO CC-Link IE TSN ALL Object Data Registration

MELSOFT GX Works3 C:\Work\테스트샘플\connectionGuide.gx3 - [Axis Parameter Setting]

Project Edit Find/Replace Convert View Online Debug Recording Diagnostics Tool Window Help

Navigation Project Module Configuration Program FB/FUN Label Device Parameter System Parameter MXR300-16 CPU Parameter Module Parameter (Common Setting) Module Parameter (Port 1/2: CC-Link) Module Parameter (CC-Link IE TSN) Network Label Setting Module Parameter (Port 3: Ethernet) Memory Card Parameter Add-on Parameter Module Information Motion Setting Motion System Setting Axis Axis0001 Axis0002 Axis0003 Axis Group Motion I/O Data Operation Profile Data Advanced Synchronous Control

Setting Item List Input the Setting Item to Search Select Folder Display All Data

Real Drive Axis Axis Information Basic Parameter Station Address Setting Axis Type Setting Axis Emulation Enabled Control Cycle Setting Object Data Absolute Position Control Setting Current Position Restore Reference Position Ring Counter Enabled Selection Ring Counter Upper Limit Value Ring Counter Lower Limit Value Position Command Unit Position Command Unit String Velocity Command Unit Velocity Bias Value Driver Unit Conversion Numerator Driver Unit Conversion Denominator Limit Parameter Velocity Limit Homing Stop Stroke Limit Driver Other Real Encoder Axis Virtual Drive Axis Virtual Encoder Axis Virtual Linked Axis

Axis Information Set Axis Information

Item	Axis0001	Axis0002	Axis0003
Axis No.	1	2	3
Station Address Setting	192.168.3.17	192.168.3.18	192.168.3.19
Axis Type Setting	0:Real Drive Axis	0:Real Drive Axis	0:Real Drive Axis
Axis Emulation Enabled	0:Disabled	0:Disabled	0:Disabled
Control Cycle Setting	0:Automatic setting	0:Automatic setting	0:Automatic setting
Object Data	[OBJ]0x6040001 [OBJ]0x6040001 [OBJ]0x6040001	[OBJ]0x6040001 [OBJ]0x6040001 [OBJ]0x6040001	[OBJ]0x6040001 [OBJ]0x6040001 [OBJ]0x6040001
EncoderIncrements	[OBJ]0x608F012 [OBJ]0x608F012 [OBJ]0x608F012	[OBJ]0x608F012 [OBJ]0x608F012 [OBJ]0x608F012	[OBJ]0x608F012 [OBJ]0x608F012 [OBJ]0x608F012
FollowingErrActualValue	[OBJ]0x60F4002 [OBJ]0x60F4002 [OBJ]0x60F4002	[OBJ]0x60F4002 [OBJ]0x60F4002 [OBJ]0x60F4002	[OBJ]0x60F4002 [OBJ]0x60F4002 [OBJ]0x60F4002
GearRatioMotorRevolutions	[OBJ]0x607C002 [OBJ]0x607C002 [OBJ]0x607C002	[OBJ]0x607C002 [OBJ]0x607C002 [OBJ]0x607C002	[OBJ]0x607C002 [OBJ]0x607C002 [OBJ]0x607C002
HomeOffset	[OBJ]0x6080002 [OBJ]0x6080002 [OBJ]0x6080002	[OBJ]0x6080002 [OBJ]0x6080002 [OBJ]0x6080002	[OBJ]0x6080002 [OBJ]0x6080002 [OBJ]0x6080002
MaxMotorSpeed	[OBJ]0x6072001 [OBJ]0x6072001 [OBJ]0x6072001	[OBJ]0x6072001 [OBJ]0x6072001 [OBJ]0x6072001	[OBJ]0x6072001 [OBJ]0x6072001 [OBJ]0x6072001
MaxTorque	[OBJ]0x6060000 [OBJ]0x6060000 [OBJ]0x6060000	[OBJ]0x6060000 [OBJ]0x6060000 [OBJ]0x6060000	[OBJ]0x6060000 [OBJ]0x6060000 [OBJ]0x6060000
ModesOfOpDisp	[OBJ]0x6061000 [OBJ]0x6061000 [OBJ]0x6061000	[OBJ]0x6061000 [OBJ]0x6061000 [OBJ]0x6061000	[OBJ]0x6061000 [OBJ]0x6061000 [OBJ]0x6061000
NegativeTorqueLimitValue	[OBJ]0x60E1001 [OBJ]0x60E1001 [OBJ]0x60E1001	[OBJ]0x60E1001 [OBJ]0x60E1001 [OBJ]0x60E1001	[OBJ]0x60E1001 [OBJ]0x60E1001 [OBJ]0x60E1001
Polarity	[OBJ]0x607E000 [OBJ]0x607E000 [OBJ]0x607E000	[OBJ]0x607E000 [OBJ]0x607E000 [OBJ]0x607E000	[OBJ]0x607E000 [OBJ]0x607E000 [OBJ]0x607E000
PosActualValue	[OBJ]0x6064002 [OBJ]0x6064002 [OBJ]0x6064002	[OBJ]0x6064002 [OBJ]0x6064002 [OBJ]0x6064002	[OBJ]0x6064002 [OBJ]0x6064002 [OBJ]0x6064002
PosEncoderResolution	[OBJ]0x608F000 [OBJ]0x608F000 [OBJ]0x608F000	[OBJ]0x608F000 [OBJ]0x608F000 [OBJ]0x608F000	[OBJ]0x608F000 [OBJ]0x608F000 [OBJ]0x608F000
PosEncoderResolutionMotorRevolutions	[OBJ]0x608F022 [OBJ]0x608F022 [OBJ]0x608F022	[OBJ]0x608F022 [OBJ]0x608F022 [OBJ]0x608F022	[OBJ]0x608F022 [OBJ]0x608F022 [OBJ]0x608F022
Request the drive unit to switch status.	[OBJ]0x60E0001 [OBJ]0x60E0001 [OBJ]0x60E0001	[OBJ]0x60E0001 [OBJ]0x60E0001 [OBJ]0x60E0001	[OBJ]0x60E0001 [OBJ]0x60E0001 [OBJ]0x60E0001
The setting values depending on the drive unit connected. Check the manual of object data settings.	[OBJ]0x60A8002 [OBJ]0x60A8002 [OBJ]0x60A8002	[OBJ]0x60A8002 [OBJ]0x60A8002 [OBJ]0x60A8002	[OBJ]0x60A8002 [OBJ]0x60A8002 [OBJ]0x60A8002
	[OBJ]0x60A9002 [OBJ]0x60A9002 [OBJ]0x60A9002	[OBJ]0x60A9002 [OBJ]0x60A9002 [OBJ]0x60A9002	[OBJ]0x60A9002 [OBJ]0x60A9002 [OBJ]0x60A9002
	[OBJ]0x6041001 [OBJ]0x6041001 [OBJ]0x6041001	[OBJ]0x6041001 [OBJ]0x6041001 [OBJ]0x6041001	[OBJ]0x6041001 [OBJ]0x6041001 [OBJ]0x6041001
	[OBJ]0x6502002 [OBJ]0x6502002 [OBJ]0x6502002	[OBJ]0x6502002 [OBJ]0x6502002 [OBJ]0x6502002	[OBJ]0x6502002 [OBJ]0x6502002 [OBJ]0x6502002

Item List Find Result Restore the Defa

Apply

POU List Favorites History Module Library

Ezi-SERVO CC-Link IE TSN ALL Axes [OBJ] Verify Changes

2-6. Motion Setting – Basic Parameter

- Real Drive Axis / Basic Parameter / Absolute Position Control Setting - Disable selected

The screenshot displays the MELSOFT GX Works3 interface for configuring motion parameters. The 'Axis Parameter Setting' window is open, showing the 'Absolute Position Control Setting' section for Axis0001. A red circle highlights the 'Disable Absolute Position System' option, which is selected. A yellow callout box states: "Ezi-SERVO CC-Link IE TSN ALL is selected as Disable Absolute Position System". The 'Apply' button at the bottom right is also circled in red.

Item	Axis0001	Axis0002	Axis0003
Set Axis Information			
Axis No.	1	2	3
Set Basic Parameter			
Station Address Setting	192.168.3.17	192.168.3.18	192.168.3.19
Axis Type Setting	0:Real Drive Axis	0:Real Drive Axis	0:Real Drive Axis
Axis Emulation Enabled	0:Disabled	0:Disabled	0:Disabled
Control Cycle Setting	0:Automatic Set	0:Automatic Set	0:Automatic Set
Absolute Position Control Setting			
Current Position Restore Reference Position	0:Disable Absc	-1:Automatic Set	-1:Automatic Set
Ring Counter Enabled Selection	0:Disable Absolute Position System	-1:Automatic Setting (Acquire from Connected Device)	-1:Automatic Setting (Acquire from Connected Device)
Ring Counter Upper Limit Value	-1000000000.0	-1000000000.0	-1000000000.0
Ring Counter Lower Limit Value	1 pulse	1 pulse	1 pulse
Position Command Unit	U/s	U/s	U/s
Position Command Unit String	0.0 pulse/s	0.0 pulse/s	0.0 pulse/s
Velocity Command Unit	1 pulse	1 pulse	1 pulse
Velocity Bias Value	1 pulse	1 pulse	1 pulse
Driver Unit Conversion Numerator	1000.0 %	1000.0 %	1000.0 %
Driver Unit Conversion Denominator	300.0 %	300.0 %	300.0 %
Set Limit Parameter			
Torque Limit Maximum Value	1000.0 %	1000.0 %	1000.0 %
Negative Direction Torque Limit Initial Value	300.0 %	300.0 %	300.0 %
Value	300.0 %	300.0 %	300.0 %
Explanation			
<Axis Parameter Constant> Axis.PrConst.PosRestoration_AbsPosEnable Set the absolute position control setting.			
[Setting Range] 0:Disable Absolute Position System 1:Enable Absolute Position System -1:Automatic Setting (Acquire from Connected Device)			

2-6. Motion Setting – Basic Parameter

- Real Drive Axis / Basic Parameter / Position Command Unit Settings (Ezi-SERVO CC-Link IE TSN ALL Encoder 10,000 ppr)

Ezi-SERVO CC-Link IE TSN ALL Encoder Resolution Setting Range is 10,000pulse/rev

The gear ratio setting method is the same as the existing method

1. Select the machine components, and enter the machine data to automatically set the axis parameters (position command unit, driver unit conversion numerator and driver unit conversion denominator).

2. Position Command Unit: degree

3. One Revolution: 360.0000 [degree]

4. Reduction Ratio (NL/NM) = 1 / 1

5. Calculate reduction ratio by teeth or diameters to S

6. Encoder Resolution: 10000 [pulse/rev]

7. Calculation Result

8. Axis Parameters: position Command Unit: degree, driver Unit Conversion Numerator: 1, driver Unit Conversion Denominator: 3

9. Movement Amount per Driver Unit Command: 0.0 [degree]

10. Error: 0.0 [degree]

11. Click OK to reflect to the axis parameters.

12. Reflects the calculation result to the axis parameters.

13. Values currently set will be deleted and updated to the values of calculation result.

14. Are you sure?

15. 예(Y) / 아니오(N)

2-6. Motion Setting – Basic Parameter

- Real Drive Axis / Basic Parameter / Position Command Unit Settings (Ezi-SERVO CC-Link IE TSN ALL Encoder 10,000 ppr)

MELSOFT GX Works3 C:\Work\테스트샘플\connectionGuide.gx3 - [Axis Parameter Setting]

Navigation: Project, Module Configuration, Program, FB/FUN, Label, Device, Parameter, System Parameter, MXR300-16, CPU Parameter, Module Parameter (Common Setting), Module Parameter (Port 1/2: CC-Link), Module Parameter (CC-Link IE TSN), Network Label Setting, Module Parameter (Port 3: Ethernet), Memory Card Parameter, Add-on Parameter, Module Information, Motion Setting, Motion System Setting, Axis.

Setting Item List: Input the Setting Item to Search, Select Folder, Display All Data.

Setting Item: Axis Information, Basic Parameter, Position Command Unit, Limit Parameter, Signal.

Item	Axis0001	Axis0002	Axis0003
Axis Information	Set Axis Information		
Axis No.	1	2	3
Station Address Setting	192.168.3.17	192.168.3.18	192.168.3.19
Axis Type Setting	0:Real Drive Axis	0:Real Drive Axis	0:Real Drive Axis
Axis Emulation Enabled	0:Disabled	0:Disabled	0:Disabled
Control Cycle Setting	0:Automatic settin	0:Automatic settin	0:Automatic settin
Object Data			
Absolute Position Control Setting	0:Disable Absolut	0:Disable Absolut	0:Disable Absolut
Current Position Restore Reference	-1:Automatic judg	-1:Automatic judg	-1:Automatic judg
Ring Counter Enabled Selection	0:Disabled	0:Disabled	0:Disabled
Ring Counter Upper Limit Value	10000000000.0	10000000000.0	10000000000.0
Ring Counter Lower Limit Value	10000000000.0	10000000000.0	10000000000.0
Position Command Unit	degree	mm	mm
Position Command Unit String			
Velocity Command Unit	U/s	U/s	U/s
Velocity Bias Value	0.0 degree/s	0.0 mm/s	0.0 mm/s
Driver Unit Conversion Numerator	10000 pulse	10000 pulse	10000 pulse
Driver Unit Conversion Denominator	360 degree	5 mm	10 mm
Limit Parameter	Set Limit Parameter		
Torque Limit Maximum Value	1000.0 %	1000.0 %	1000.0 %
Negative Direction Torque Limit Initial Value	300.0 %	300.0 %	300.0 %
Positive Direction Torque Limit Initial Value	300.0 %	300.0 %	300.0 %
Upper Limit Signal			
Signal			
Target			
Signal Detection Method	0:Detection at TRL	0:Detection at TRL	0:Detection at TRL
Compensation Time	0.0 s	0.0 s	0.0 s

Explanation: <Axis Parameter> Axis.Pr.Unit.Position Set the position command unit to use in motion control.

Apply

POU List Favorites History Module Library

Select Robot or Stage Movement Unit

Ezi-SERVO CC-Link IE TSN ALL Encoder 10,000pulse/rev

Set Movement Distance/Angle per Motor Revolution

2-6. Motion Setting – Basic Parameter

- Real Drive Axis / Basic Parameter / Limit Parameter

Ezi-SERVO CC-Link IE TSN ALL + Limit Switch settings are Ezi_SERVO_CT_001_DigitalInputs.1

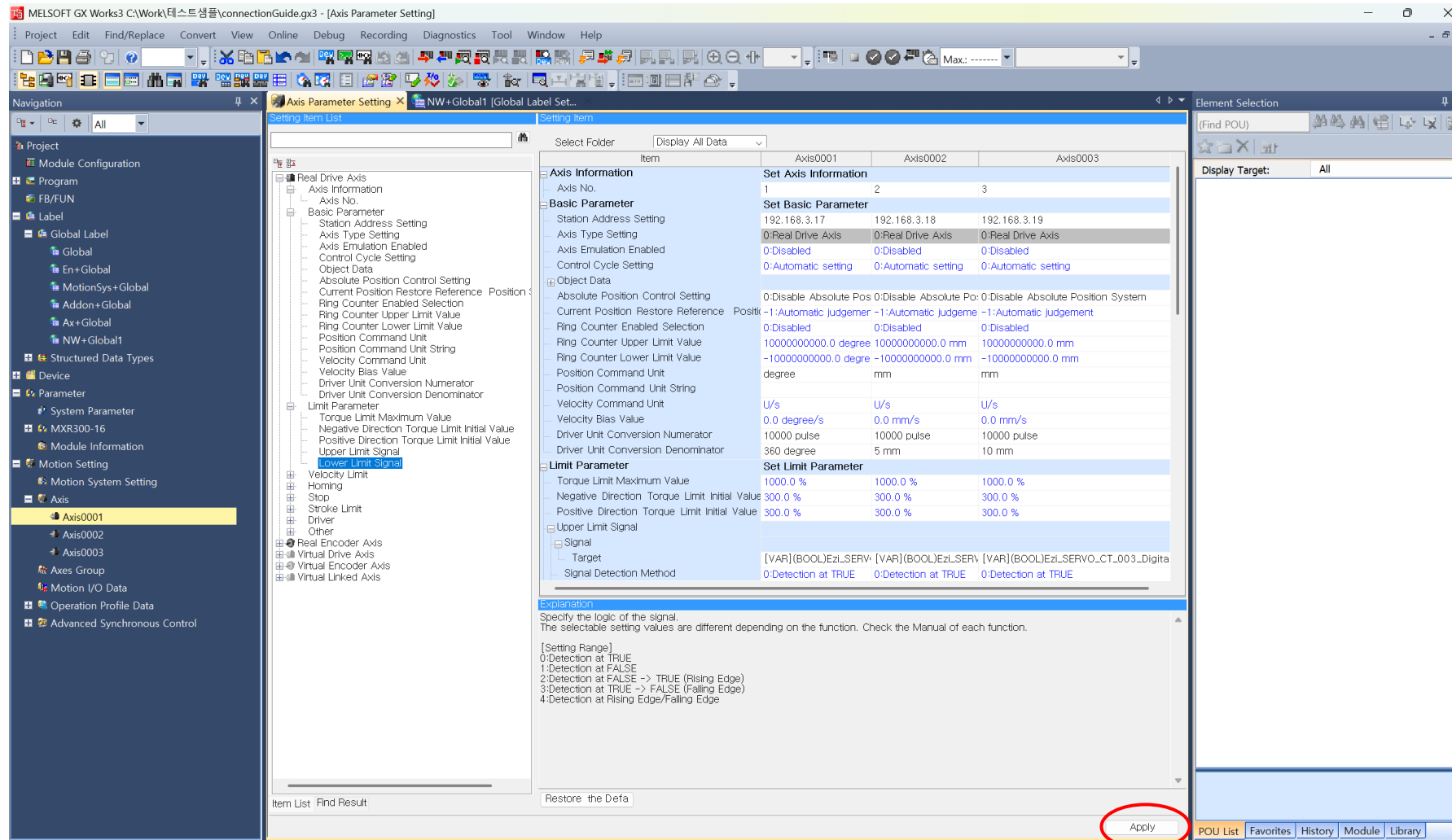
Ezi-SERVO CC-Link IE TSN ALL -Limit Switch settings are Ezi_SERVO_CT_001_DigitalInputs.0

Note) If the label setting for Ezi_SERVO_CT_xxx_DigitalInputs.x fails,
1. Check PDO Mapping Setting (pages 16-17)
2. Verify Network Label Setting (pages 21-22)

Apply

2-6. Motion Setting – Parameter Registration

- Complete Motion Setting by registering parameters



2-7. Convert

- Regarding parameter settings, etc., "Create Execution Programs after Conversion"

The screenshot shows the MELSOFT GX Works3 interface with the 'Convert' menu open. The 'Rebuild All' option is highlighted, and a red box with the number '1' is around it. The 'Rebuild All' dialog box is open, showing the 'Create Execution Programs' section. The 'Create Execution Programs after Conversion' radio button is selected, and a red box with the number '2' is around it. The 'OK' button is highlighted with a red box and the number '3'. A yellow callout box on the right contains the text: 'MX Controller must Create Execution Programs after Conversion'.

Rebuild All

Rebuild all programs in the Project.

The next time you Rebuild after writing data to PLC, last execution information of device/label and risk will be initialized.

Create Execution Programs

☐ Conversion Only

☒ Create Execution Programs after Conversion

Create an execution program after executing the Rebuild All.

Compared to not creating, the required time will be increased.

Conversion Setting

Execute rebuild with the following settings. Please check details in Options.

Do Not Use the Same Label Name in Global Label

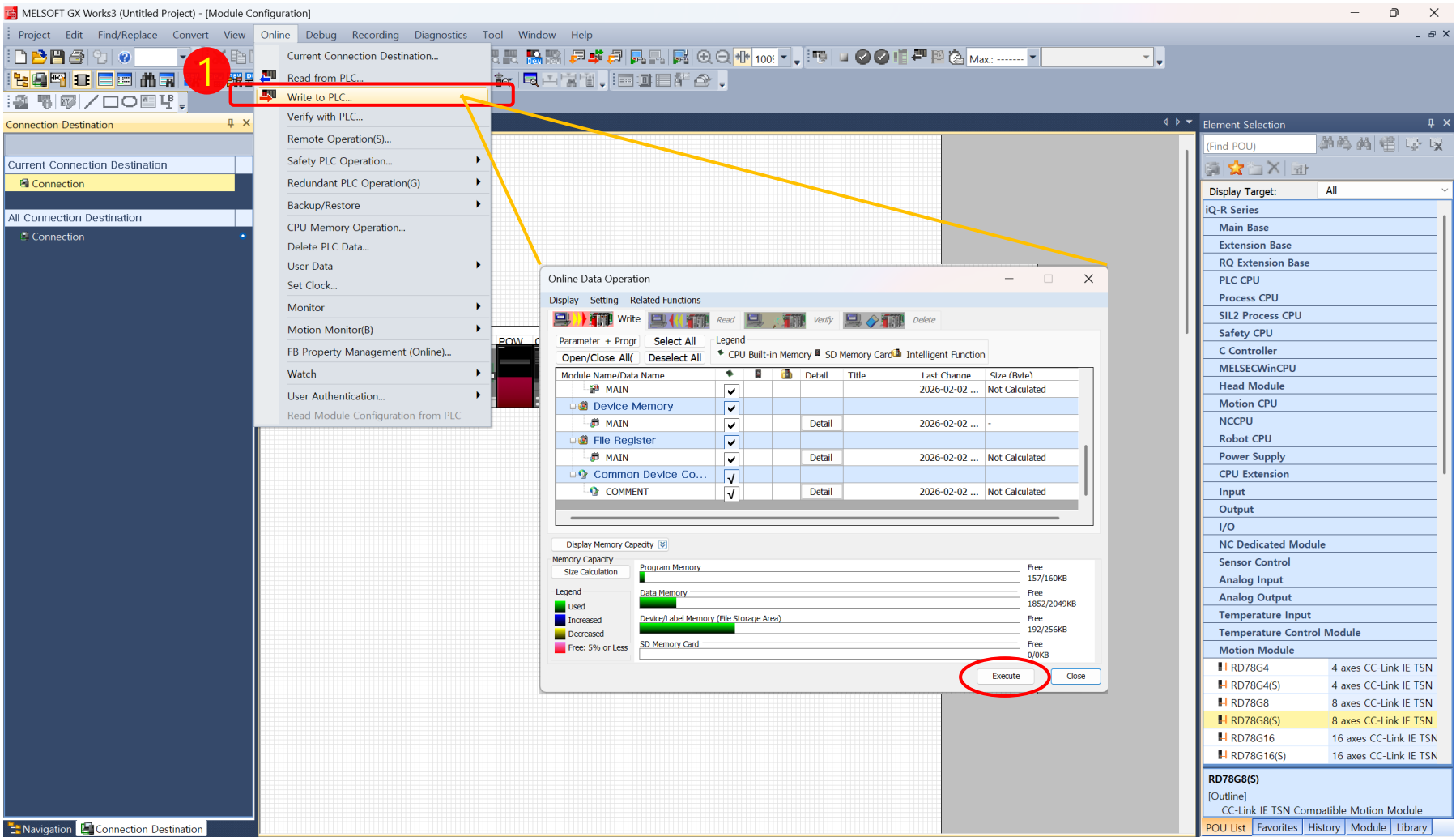
Options

OK Cancel

MX Controller must Create Execution Programs after Conversion

2-8. Write to PLC

- Online Data Operation



3. Follow the Program

3-1. Exploring Motion Control Commands

- Motion Control Function/Function Block Commands – Element Selection (Left Menu)

The screenshot displays the MELSOFT GX Works3 software interface. The main workspace shows a ladder logic diagram with a function block labeled 'MC_Power 1 (MC_Power)' being inserted. A yellow dotted arrow points from the 'MC_Power 1 (MC_Power)' block in the diagram to the 'MC_Power' entry in the 'Motion Control Function/Function Block' list on the right. The list is titled 'Motion Control Function/Function Block' and contains various commands such as 'MC_AbortTrigger', 'MC_CamTableSelect', 'MC_DigitalCamSwitch', 'MC_GroupDisable', 'MC_GroupEnable', 'MC_GroupReset', 'MC_GroupSetOverride', 'MC_Power', 'MC_ReadParameter', 'MC_Reset', 'MC_SetOverride', 'MC_SetPosition', 'MC_TouchProbe', 'MC_WriteParameter', 'MCv_AdvCamSetPos', 'MCv_AdvPositionPe', 'MCv_AllPower', 'MCv_ChangeCycle', 'MCv_MotionErrorRe', 'MCv_SetTorqueLimi', and 'MCv_SyncOperation'. The 'MC_Power' entry is highlighted. The left sidebar shows the project structure, including 'Project', 'Module Configuration', 'Program', 'Initial', 'Scan', 'MAIN', 'ProgPou', 'Local Label', 'ProgramBody', 'Fixed Scan', 'Event', 'Standby', 'No Execution Type', 'Unregistered Program', 'FB/FUN', 'Label', 'Device', 'Parameter', 'System Parameter', 'MXR300-16', 'CPU Parameter', 'Module Parameter (Common Setting)', 'Module Parameter (Port 1/2: CC-Link)', 'Module Parameter (CC-Link IE TSN)', 'Network Label Setting', 'Module Parameter (Port 3: Ethernet)', 'Memory Card Parameter', 'Add-on Parameter', 'Module Information', 'Motion Setting', 'Motion System Setting', 'Axis', 'Axis0001', 'Axis0002', 'Axis0003', 'Axes Group', 'Motion I/O Data', and 'Operation Profile Data'.

Mouse Click & Drag

3-2. [Ladder] SERVO Enable, SERVO ON

- Ezi-SERVO CC-Link IE TSN ALL Enable/SERVO ON Program

The screenshot displays the MELSOFT GX Works3 interface for a ladder logic program. The main workspace shows a ladder logic diagram with the following steps:

- Step 1: Read Mtr (0)
- Step 2: DUT: Axis (Axis001.A)
- Step 3: B: Enable (bAx1SrvEnbl)
- Step 4: B: ServoON (bAx1SrvOn)
- Step 5: MC_Power 1 (MC_Power)
- Step 6: MC_Power 1 (MC_Power)
- Step 7: MC_Power 1 (MC_Power)
- Step 8: MC_Power 1 (MC_Power)
- Step 9: MC_Power 1 (MC_Power)
- Step 10: MC_Power 1 (MC_Power)
- Step 11: MC_Power 1 (MC_Power)
- Step 12: MC_Power 1 (MC_Power)
- Step 13: END

A callout box highlights the following information:

SERVO ON/OFF FB: 2 types

- Individual On/Off: MC_Power
- Batch On/Off: MCv_AllPower

The right sidebar shows the Element Selection panel with the following categories:

- Display Target: All
- Selection
- String
- Bit Shift
- Edge Detection
- Counter
- Timer
- Bistable
- Motion Control Function/Function Block
- Administrative
- MC_AbortTrigger
- MC_CamTableSelect
- MC_DigitalCamSwitch
- MC_GroupDisable
- MC_GroupEnable
- MC_GroupReset
- MC_GroupSetOverride
- MC_Power
- MC_ReadParameter
- MC_Reset
- MC_SetOverride
- MC_SetPosition
- MC_TouchProbe
- MC_WriteParameter
- MCv_AdvCamSetPos
- MCv_AdvPositionPe
- MCv_AllPower
- MCv_ChangeCycle
- MCv_MotionErrorRe
- MCv_SetTorqueLimi
- MCv_SyncOperation
- Motion - Individual
- General FB
- MC_AbortTrigger
- [Version]
- 00A

3-3. [Ladder] Specifying the homing method

- Specifying the homing method (MC_WriteParameter, 33: Homing in

The homing method is classified as follows based on the setting value for the homing method (6098h).

설정값	내용
1	Homing on negative limit switch and index pulse
2	Homing on positive limit switch and index pulse
7	Homing on home switch (positive direction, negative edge) and index pulse
10	Homing on home switch (positive direction, positive edge) and index pulse
11	Homing on home switch (negative direction, positive edge) and index pulse
14	Homing on home switch (negative direction, negative edge) and index pulse
17	Homing on negative limit switch
18	Homing on positive limit switch
24	Homing on home switch (positive direction, negative edge)
25	Homing on home switch (positive direction, positive edge)
28	Homing on home switch (negative direction, positive edge)
29	Homing on home switch (negative direction, negative edge)
33	Homing index pulse (negative direction)
34	Homing index pulse (positive direction)
35	Set the current position origin
37	Set the current position origin and reset current position
-3	Homing on negative mechanical limit
-4	Homing on positive mechanical limit
-5	Homing on negative mechanical limit and index pulse
-6	Homing on positive mechanical limit and index pulse

[illegible]

3-4. [Ladder] Execute Ezi-SERVO homing

- Execute Homing (MC_Home)

The screenshot displays the MELSOFT GX Works3 interface with a ladder logic program for executing Ezi-SERVO homing. The program is organized into a sequence of steps (12 to 29) across 12 rungs. The left sidebar shows the project structure, including the 'ProgramBody' and 'Motion Setting' sections. The right sidebar shows the 'Element Selection' panel with various function blocks and parameters.

Program Structure:

- Step 12:** Initial setup, including writing parameters (bAx1WParam) and setting up the MC_WriteParameter_1 block.
- Step 13:** Execution of the homing process (bAx1HomeSL, bAx1HomeDo).
- Step 14:** Setting up the MC_Home_1 block (MC_Home).
- Step 15:** Setting up the MC_Home_1 block (MC_Home).
- Step 16:** Setting up the MC_Home_1 block (MC_Home).
- Step 17:** Setting up the MC_Home_1 block (MC_Home).
- Step 18:** Setting up the MC_Home_1 block (MC_Home).
- Step 19:** Setting up the MC_Home_1 block (MC_Home).
- Step 20:** Setting up the MC_Home_1 block (MC_Home).
- Step 21:** Setting up the MC_Home_1 block (MC_Home).
- Step 22:** Setting up the MC_Home_1 block (MC_Home).
- Step 23:** Setting up the MC_Home_1 block (MC_Home).
- Step 24:** Setting up the MC_Home_1 block (MC_Home).
- Step 25:** Setting up the MC_Home_1 block (MC_Home).
- Step 26:** Setting up the MC_Home_1 block (MC_Home).
- Step 27:** Setting up the MC_Home_1 block (MC_Home).
- Step 28:** Setting up the MC_Home_1 block (MC_Home).
- Step 29:** Setting up the MC_Home_1 block (MC_Home).

MC_Home_1 (MC_Home) Block Details:

Parameter	Value
DUT: Axis	Axis 0001 A
B: Execute	Done B
L: Position	0.0
DUT: AbsSwit	Active B
UD: Options	Command B
ErrorID	Error B

MC_Home_1 (MC_Home) Block Details:

Parameter	Value
DUT: Axis	Axis 0001 A
B: Execute	Done B
L: Position	0.0
DUT: AbsSwit	Active B
UD: Options	Command B
ErrorID	Error B

3-5. [Ladder] Execute Ezi-SERVO Operation

- Execute Move Operation (MC_MoveAbsolute)

Move to Arbitrary Position

- bAx1PosPos1 ON → 3600.0
- bAx1PosPos1 ON → 0.0
- ※ 3,600 – 10 revolutions

The screenshot shows the MELSOFT GX Works3 interface with a ladder logic program for MC_MoveAbsolute. The program is organized into steps (1-12) and includes various logic elements like bAx1Pos1, bAx1Pos2, bAx1Run, and bAx1MoveDone. A red circle highlights the EDMOV instruction in step 11, which is set to 3600.0 and edAx1Pos1. A yellow callout box provides details about the move operation.

MC_MoveAbsolute

Parameter	Value	Unit	Comment
DUT: Axis	Axis : DUT		
B: Execute	Done	B	
B: Continuou...	Busy	B	
L: Position	Active	B	
L: Velocity	Command	B	
L: Accelerati...	Error	B	
L: Decelerati...	ErrorID	UD	
L: Jerk			
W: Direction	K3		
W: BufferMo...			
UD: Options			

MC_MoveAbsolute

Version	00A
POU List	Favorites
History	Module
Library	

3-6. [Ladder] Ezi-SERVO DIO Operation

- Digital Input, Output Operation Execution

The screenshot displays the MELSOFT GX Works3 interface. The main window shows a ladder logic program for 'MoveProgram [PRG] [LD] 57Byte'. The program is organized into a table with columns for 'Write' and 'Ladder'.

Write	1	2	3	4	5	6	7	8	9	10	11	12
13					180000.0	L: Decelerati...	ErrorID :UW					
14					0.0	L: Jerk						
15					K3	W: Direction						
16						W: BufferMode						
17						UD: Options						

The ladder logic diagram shows a sequence of instructions. A dashed yellow box highlights the 'Ezi_SERVO_CT_001_DigitalInputs' section, which includes instructions for digital input (D1.4 to D1.9) and output (bAx1h[0] to bAx1h[5]). The 'Ezi_SERVO_CT_001_PhysicalOutputs' section is also highlighted, showing instructions for physical outputs (D3.1 to D3.5).

The right sidebar shows the 'Element Selection' panel, which lists various modules and instructions. The 'Ezi_SERVO_CT_001_DigitalInputs' and 'Ezi_SERVO_CT_001_PhysicalOutputs' sections are highlighted in the sidebar.

3-6. [Ladder] Ezi-SERVO DIO Map - Reference

- Digital Inputs

Bit 31	Bit 30	Bit 29	Bit 28	Bit 27	Bit 26	Bit 25	Bit 24
-	Motor Power	TQOFF2	TQOFF1	-	-	User input 6	User input 5
Bit 23	Bit 22	Bit 21	Bit 20	Bit 19	Bit 18	Bit 17	Bit 16
User input 4	User input 3	User input 2	User input 1	Reserved	Reserved	Reserved	
Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8
-	-	-	-	-	-	-	-
Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
-	-	-	-	-	Origin switch	Positive limit switch	Negative limit switch

- Physical Outputs

Bit 31	Bit 30	Bit 29	Bit 28	Bit 27	Bit 26	Bit 25	Bit 24
-	-	-	-	-	-	-	-
Bit 23	Bit 22	Bit 21	Bit 20	Bit 19	Bit 18	Bit 17	Bit 16
-	-	-	User output 5	User output 4	User output 3	User output 2	User output 1
Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8
-	-	-	-	-	-	-	-
Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
-	-	-	-	-	-	-	Set brake

Appendix

[Operation Verification] Axis Monitor

- Monitor the status, position, homing, and error of each axis.

The screenshot displays the MELSOFT GX Works3 interface. On the left, the Project tree shows the 'ProgramBody' folder selected. The main window shows a ladder logic program with a red box highlighting the 'Motion Monitor(B)' menu item, which has a sub-menu 'Axis Monitor...'. The 'Axis Monitor' window is open, showing a table of axis data for five axes (Axis #1 to Axis #5). The table includes columns for Axis Name, Axis Status, Control Cycle, Position Command Unit Display, Velocity Command Unit Display, Set Position, Actual Position, Commanded Position, Set Velocity, Actual Velocity, Commanded Velocity, Negative Direction Velocity Limit Value, Positive Direction Velocity Limit Value, Automatically Decelerating Command In-position, Negative Direction Torque Limit Value, Positive Direction Torque Limit Value, Execution Profile ID No., Homing Request, Start Permission at Homing Uncompleted, Upper Limit Signal Status, Lower Limit Signal Status, Forced Stop Cancelling, Axis Error Detection, Axis Error Code, Axis Warning Detection, Axis Warning Code, Driver Ready On Status, Driver Servo On Status, Driver Status, Drive Unit Error Detection, Drive Unit Error Code, and Drive Unit Error Detail Code. The 'Homing Request' row is highlighted in green, and the 'Driver Ready On Status' and 'Driver Servo On Status' rows are also highlighted in green. The 'Motion Common Monitor' window is open on the right, showing a table of motion data for three monitors (Monitor [1], Monitor [2], and Monitor [3]). The table includes columns for Monitor Item Selection, Ready, Synchronization flag, Operation Cycle Monitor[1].Processing Time, Operation Cycle Monitor[1].Maximum Processing Time, Operation Cycle Monitor[1].Setting Cycle, Operation Cycle Monitor[1].Cycle Over, Operation Cycle Monitor[2].Processing Time, Operation Cycle Monitor[2].Maximum Processing Time, Operation Cycle Monitor[2].Setting Cycle, Operation Cycle Monitor[2].Cycle Over, Operation Cycle Monitor[3].Processing Time, Operation Cycle Monitor[3].Maximum Processing Time, Operation Cycle Monitor[3].Setting Cycle, Operation Cycle Monitor[3].Cycle Over, Forced Stop Cancelling, Motion Area System Error Detection, Latest Motion Area System Error Code, Motion Area System Warning Detection, and Latest Motion Area System Warning Code. The 'Motion Area System Error Detection' row is highlighted in green.

	Axis #1	Axis #2	Axis #3	Axis #4	Axis #5
Axis Name	Axis0001	Axis0002	Axis0003	Axis0004	Axis0005
Axis Status	4:Standstill	4:Standstill	4:Standstill	4:Standstill	4:Standstill
Control Cycle	1	1	1	1	1
Position Command Unit Display	degree	degree	degree	degree	degree
Velocity Command Unit Display	degree/s	degree/s	degree/s	degree/s	degree/s
Set Position	0.10058283805847 d...	0.0 degree	0.0 degree	0.0 degree	0.0 degree
Actual Position	0.1003303527832 de...	0.0 degree	0.0 degree	0.0 degree	0.0 degree
Commanded Position	0.0 degree	0.0 degree	0.0 degree	0.0 degree	0.0 degree
Set Velocity	0.0 degree/s	0.0 degree/s	0.0 degree/s	0.0 degree/s	0.0 degree/s
Actual Velocity	-0.31650066375732 d...	0.0 degree/s	0.0 degree/s	0.0 degree/s	0.0 degree/s
Commanded Velocity	0.0 degree/s	0.0 degree/s	0.0 degree/s	0.0 degree/s	0.0 degree/s
Negative Direction Velocity Limit Value	2500000000.0 degree/s	2500000000.0 degree/s	2500000000.0 degree/s	2500000000.0 degree/s	2500000000.0 degree/s
Positive Direction Velocity Limit Value	2500000000.0 degree/s	2500000000.0 degree/s	2500000000.0 degree/s	2500000000.0 degree/s	2500000000.0 degree/s
Automatically Decelerating Command In-position	FALSE	FALSE	FALSE	FALSE	FALSE
Negative Direction Torque Limit Value	300.0 %	300.0 %	300.0 %	300.0 %	300.0 %
Positive Direction Torque Limit Value	300.0 %	300.0 %	300.0 %	300.0 %	300.0 %
Execution Profile ID No.	0	0	0	0	0
Homing Completed	FALSE	FALSE	FALSE	FALSE	FALSE
Homing Request	TRUE	TRUE	TRUE	TRUE	TRUE
Start Permission at Homing Uncompleted	FALSE	FALSE	FALSE	FALSE	FALSE
Upper Limit Signal Status	FALSE	FALSE	FALSE	FALSE	FALSE
Lower Limit Signal Status	FALSE	FALSE	FALSE	FALSE	FALSE
Forced Stop Cancelling	TRUE	TRUE	TRUE	TRUE	TRUE
Axis Error Detection	FALSE	FALSE	FALSE	FALSE	FALSE
Axis Error Code	H0000	H0000	H0000	H0000	H0000
Axis Warning Detection	FALSE	FALSE	FALSE	FALSE	FALSE
Axis Warning Code	H0000	H0000	H0000	H0000	H0000
Driver Ready On Status	TRUE	TRUE	TRUE	TRUE	TRUE
Driver Servo On Status	TRUE	TRUE	TRUE	TRUE	TRUE
Driver Status	6:Operation Enable	6:Operation Enable	6:Operation Enable	6:Operation Enable	6:Operation Enable
Drive Unit Error Detection	FALSE	FALSE	FALSE	FALSE	FALSE
Drive Unit Error Code	H0000	H0000	H0000	H0000	H0000
Drive Unit Error Detail Code	H0000	H0000	H0000	H0000	H0000

	Monitor [1]	Monitor [2]	Monitor [3]
Ready	Ready	Ready	Ready
Synchronization flag	Synchronization flag	Synchronization flag	Synchronization flag
Operation Cycle Monitor[1].Processing Time	41000 ns	36800 ns	44440 ns
Operation Cycle Monitor[1].Maximum Processing Time	69960 ns	73120 ns	95960 ns
Operation Cycle Monitor[1].Setting Cycle	2000000 ns	8000000 ns	32000000 ns
Operation Cycle Monitor[1].Cycle Over	Operation Cycle Monitor[1].Cycle Over	Operation Cycle Monitor[2].Cycle Over	Operation Cycle Monitor[3].Cycle Over
Operation Cycle Monitor[2].Processing Time	36800 ns	73120 ns	44440 ns
Operation Cycle Monitor[2].Maximum Processing Time	73120 ns	95960 ns	95960 ns
Operation Cycle Monitor[2].Setting Cycle	8000000 ns	8000000 ns	32000000 ns
Operation Cycle Monitor[2].Cycle Over	Operation Cycle Monitor[2].Cycle Over	Operation Cycle Monitor[3].Cycle Over	Operation Cycle Monitor[3].Cycle Over
Operation Cycle Monitor[3].Processing Time	44440 ns	95960 ns	95960 ns
Operation Cycle Monitor[3].Maximum Processing Time	95960 ns	95960 ns	95960 ns
Operation Cycle Monitor[3].Setting Cycle	32000000 ns	32000000 ns	32000000 ns
Operation Cycle Monitor[3].Cycle Over	Operation Cycle Monitor[3].Cycle Over	Operation Cycle Monitor[3].Cycle Over	Operation Cycle Monitor[3].Cycle Over
Forced Stop Cancelling	Forced Stop Cancelling	Forced Stop Cancelling	Forced Stop Cancelling
Motion Area System Error Detection	Motion Area System Error Detection	Motion Area System Error Detection	Motion Area System Error Detection
Latest Motion Area System Error Code	H0000	H0000	H0000
Motion Area System Warning Detection	Motion Area System Warning Detection	Motion Area System Warning Detection	Motion Area System Warning Detection
Latest Motion Area System Warning Code	H0000	H0000	H0000

[Operation Verification] Changing the Homing Method

- Change the homing method using Motion Control FB

- ① Specify Parameter Number: H60980008
- ② Value (Homing Method) Specified: 33.0
- ③ Execution Mode: TRUE (Write)
- ④ Done: Becomes TRUE

The homing method is classified as follows based on the setting value for Homing method (6098h).

설정값	내용
1	Homing on negative limit switch and index pulse
2	Homing on positive limit switch and index pulse
7	Homing on home switch (positive direction, negative edge) and index pulse
10	Homing on home switch (positive direction, positive edge) and index pulse
11	Homing on home switch (negative direction, positive edge) and index pulse
14	Homing on home switch (negative direction, negative edge) and index pulse
17	Homing on negative limit switch
18	Homing on positive limit switch
24	Homing on home switch (positive direction, negative edge)
25	Homing on home switch (positive direction, positive edge)
28	Homing on home switch (negative direction, positive edge)
29	Homing on home switch (negative direction, negative edge)
33	Homing index pulse (negative direction)
34	Homing index pulse (positive direction)
35	Set the current position origin
37	Set the current position origin and reset current position
-3	Homing on negative mechanical limit
-4	Homing on positive mechanical limit
-5	Homing on negative mechanical limit and index pulse
-6	Homing on positive mechanical limit and index pulse

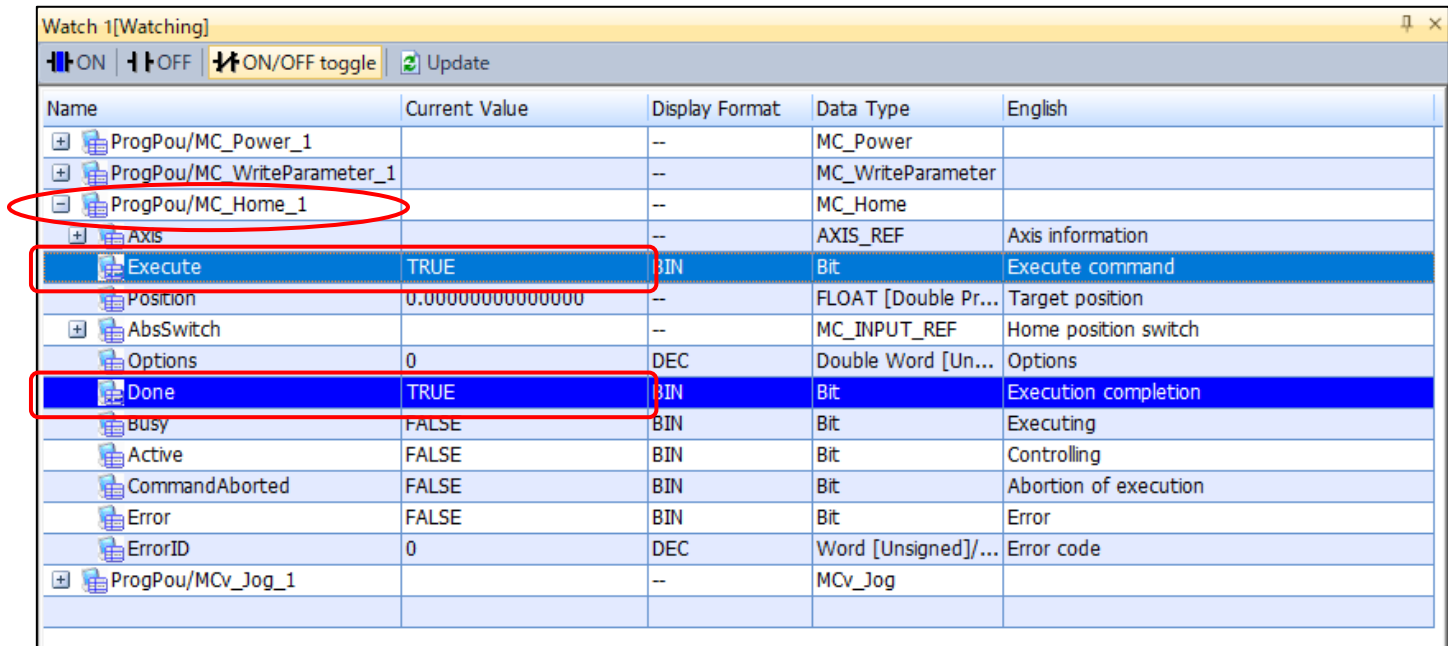
Watch 1[Watching]				
ON OFF ON/OFF toggle Update				
Name	Current Value	Display Format	Data Type	English
ProgPou/MC_Power_1		--	MC_Power	
ProgPou/MC_WriteParameter_1		--	MC_WriteParameter	
Axis		--	AXIS_REF	Axis information
Execute	TRUE	BIN	Bit	Execute command
ParameterNumber	H60980008	HEX	Word [Unsigned]	Setting value
Value	37.00000000000000	BIN	Double Word [Unsigned]	Setting value
ExecutionMode	0	DEC	Word [Signed]	Execution mode
Options	0	DEC	Double Word [Unsigned]	Options
Done	TRUE	BIN	Bit	Execution completion
Busy	FALSE	BIN	Bit	Executing
Error	FALSE	BIN	Bit	Error
ErrorID	H0000	HEX	Word [Unsigned]/...	Error code
SDOErrorID	H00000000	HEX	Double Word [Unsigned]	Transient error code
SDOStatus	1	DEC	Word [Unsigned]/...	SDO transfer status
ProgPou/MC_Home_1		--	MC_Home	
ProgPou/MCv_Jog_1		--	MCv_Jog	

Display Format: HEX
selected

[Operation Verification] Homing

- Execute homing using motion control FB

- ① Execute → TRUE (Write)
- ② Done → Becomes TRUE



Name	Current Value	Display Format	Data Type	English
ProgPou/MC_Power_1		--	MC_Power	
ProgPou/MC_WriteParameter_1		--	MC_WriteParameter	
ProgPou/MC_Home_1		--	MC_Home	
Axis		--	AXIS_REF	Axis information
Execute	TRUE	BIN	Bit	Execute command
Position	0.0000000000000000	--	FLOAT [Double Pr...	Target position
AbsSwitch		--	MC_INPUT_REF	Home position switch
Options	0	DEC	Double Word [Un...	Options
Done	TRUE	BIN	Bit	Execution completion
Busy	FALSE	BIN	Bit	Executing
Active	FALSE	BIN	Bit	Controlling
CommandAborted	FALSE	BIN	Bit	Abortion of execution
Error	FALSE	BIN	Bit	Error
ErrorID	0	DEC	Word [Unsigned]/...	Error code
ProgPou/MCv_Jog_1		--	MCv_Jog	

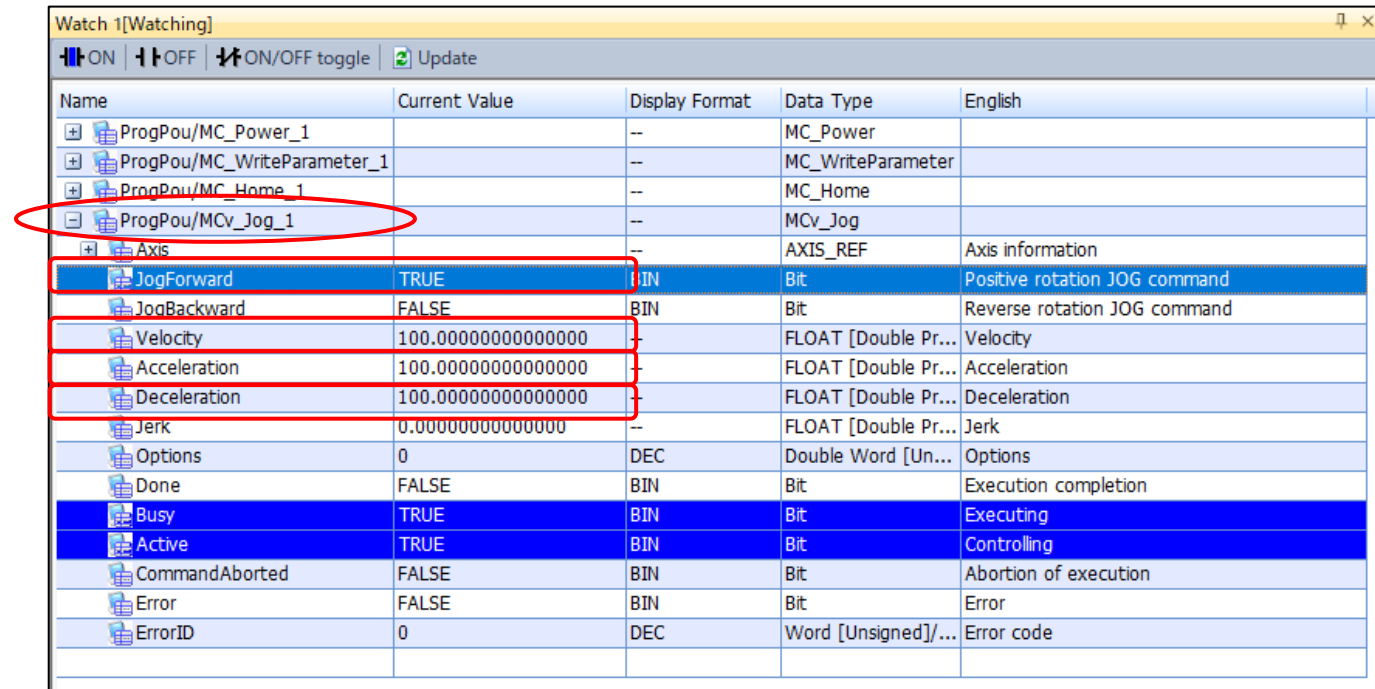
- When using the LIMIT+ / LIMIT- signals of Ezi-SERVO CC-Link IE TSN ALL as hardware stroke limits, set the following axis control data before startup (start).

[AxisName.Cd.HwStrokeLimit_Override] → 'DISABLE'

[Operation Verification] Jog Operation

- Execute Jog operation using Motion Control FB

- ① Velocity → 100.0
- ② Acceleration → 100.0
- ③ Deceleration → 100.0
- ④ JogForward → TRUE (Write)



Name	Current Value	Display Format	Data Type	English
ProgPou/MC_Power_1		--	MC_Power	
ProgPou/MC_WriteParameter_1		--	MC_WriteParameter	
ProgPou/MC_Home_1		--	MC_Home	
ProgPou/MCv_Jog_1		--	MCv_Jog	
Axis		--	AXIS_REF	Axis information
JogForward	TRUE	BIN	Bit	Positive rotation JOG command
JogBackward	FALSE	BIN	Bit	Reverse rotation JOG command
Velocity	100.00000000000000		FLOAT [Double Pr...	Velocity
Acceleration	100.00000000000000		FLOAT [Double Pr...	Acceleration
Deceleration	100.00000000000000		FLOAT [Double Pr...	Deceleration
Jerk	0.0000000000000000	--	FLOAT [Double Pr...	Jerk
Options	0	DEC	Double Word [Un...	Options
Done	FALSE	BIN	Bit	Execution completion
Busy	TRUE	BIN	Bit	Executing
Active	TRUE	BIN	Bit	Controlling
CommandAborted	FALSE	BIN	Bit	Abortion of execution
Error	FALSE	BIN	Bit	Error
ErrorID	0	DEC	Word [Unsigned]/...	Error code

[Operation Verification] Troubleshooting

- When an error occurs, check the cause in the Event History (log)

① [Online] -> [Motion Monitor] -> [Event History]

The screenshot shows the 'Motion Control Setting Function (Untitled Project)' software. The 'Motion Monitor' menu is open, and 'Event History' is selected. The 'Event History: [0000RD78G64]' window is displayed, showing a table of events. A red box highlights the 'Event History' menu item, and a yellow box highlights the 'Review the event in detail' button. The 'Event History' window includes a table with columns: No., Occurrence Date, Error Type, Status, Error Code, and Description. The table lists several events, including 'Homing Request (H- to OK)', 'Current Position Extension Completion', 'Servo System Emergency Stop', and 'Servo System Emergency Start'. The 'Detailed Information' section for the selected event (No. 000001) provides a detailed description of the error.

Event History: [0000RD78G64]

No.	Occurrence Date	Error Type	Status	Error Code	Description
000001	2024/10/15 15:15:07.512	System	OK	000000	Homing Request (H- to OK)
000002	2024/10/15 15:15:07.512	System	OK	000000	Current Position Extension Completion
000003	2024/10/15 15:15:07.512	System	OK	000000	Servo System Emergency Stop
000004	2024/10/15 15:15:07.512	Operation	OK	000000	Servo System Emergency Start

Legend

- Major
- Warning
- Minor
- Information

Detailed Information

Axis Type: Dual Drive Axis
Error Occurrence: 000001 (Error Code: 000001)
Error Code: 000001

000001

Homing request was OK.
- Absolute position error in driver mode was detected. (Error code: 000001)
- An absolute position error in the driver mode was detected. (Error code: 000001)
- The axis type was changed. (Error code: 000001)
- Slave object: 'Polarity (000001)' b7 position polarity was changed. (Error code: 000001)
- Change of the drive of motion encoder was detected. (Error code: 000001)
- Machine homing was detected. (Error code: 000001)
- Driver unit connection (frictionless connection) of the axis was detected. (Error code: 000001)
- Machine homing has been detected after the system started. (Error code: 000001)

[Operation Verification] Troubleshooting

- If **"SLMP Communication Error" (1C43h)** occurs
→ Please set the object data by referring to the axis parameters.
- If the **"Warning: Connection setting error for drive unit other than MELSERVO" (0D4Ch)** occurs
→ Refer to the axis parameters and disable the Absolute position system.
- If **"Control Mode Switching Error" (1A1Dh)** occurs when **starting MC_Home**
→ In the network configuration settings (add driver),
Set Network Synchronous Communication to ****"Synchronous"****.
- When starting MC_Home using the driver's **LIMIT+ / –** signals, it detects upper/lower limit signals and stops
→ Set [AxisName.Cd.HwStrokeLimit_Override] to 'DISABLE' and configure the axis control data in the program, etc.

[Parameter] Homing Parameter Settings

- Various settings related to homing are performed on the following object
 - Use MC_WriteParameter to write the setting values.
 - For detailed information on each object, refer to the Ezi-SERVO CC-Link IE TSN ALL manual.

Object Name	Index: Subindex	Setting Details
Home Offset	Obj.607C: 00h	Difference between the zero position of the machine coordinate system and the homing position
Homing method	Obj.6098: 00h	Homing method
Homing speeds	Obj.6099: 01h	Homing speeds
Homing speeds	Obj.6099: 02h	Cliff speed during homing
Homing acceleration	Obj.609A: 00h	Acceleration during homing



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