Offline Settings

6-1 Performing Settings Offline

The personal computer tools set enables the user to perform settings offline without connecting an actual sensor.
Parameters set offline can be saved as project data just like parameters set online, and conditions set offline can be transferred to the sensor as desired.

The following functions are disabled during offline setting.

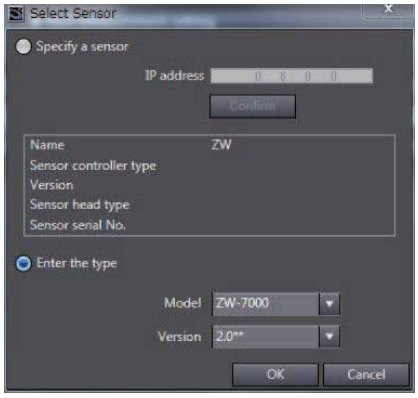
Item				Reference (Pages)
Main screen	Online		Internal logging	p.106
			Trend monitor	p.95
	Tool		Sensor setup	p.169 p.176 p.283
Sensing monitor pane	Monitor		Measurement value monitor	p.83
			Line bright monitor	
			LED light	
			I/O input	
Bank data edit pane	Task	Filer	Scaling (automatic setting)	p.132
	I/O	Analog output	Analog output correction	*

*: Refer to “2-1 Parallel I/O connection” described in Displacement Sensor ZW-7000 series Confocal Fiber Type Displacement Sensor User’s Manual for Communications Settings (Z363).

6-2 Starting a Project in Offline Mode

To start a project in Offline Mode, select [Enter the type] on the Select Sensor Dialog Box after you create a project, then select the sensor type and version.

You cannot change the sensor type and version after you select them.



6-3 Changing between Online and Offline

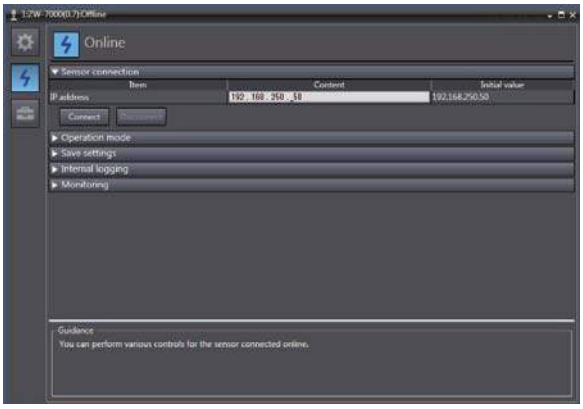
Before you go offline, save all settings and parameter changes to the Sensor's internal memory. Saving your project does not save the data in the Sensor.

You can use the following two methods to change between offline and online.

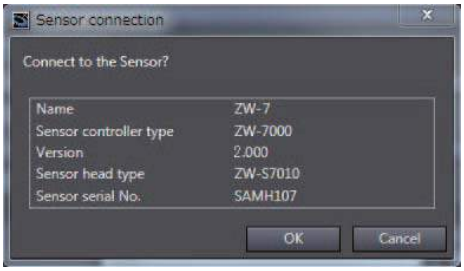
▶ Multi View Explore : [(Sensor Name)] (right click)| [Online]/[Offline]]

▶ Multi View Explore : [Device group] | [(Sensor model)] (Double-click)
→ Edit pane : [Online] Icon | [Sensor connection] | [Connect] or [Disconnect]

1 **To go offline, click [Disconnect]. To go online, click [Connect].**



2 **When you click [Connect], the Sensor Controller with the specified IP address is connected. When the connection is successful, Sensor Controller information is displayed.**



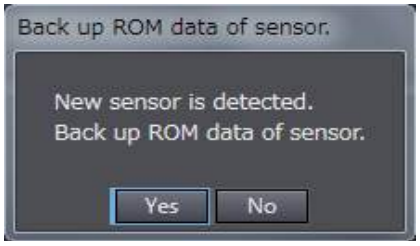
3 **When you click [Connect], you must synchronize the data between the Sensor and the project.**
When a project setting data is synchronized with Sensor Controller, select [Transfer to Sensor]. When synchronize a Sensor Controller's setting data with project, select [Sensor to Transfer].

Note

Saving the Bank/System Settings p.167, p.240
Saving a project p.86

Note

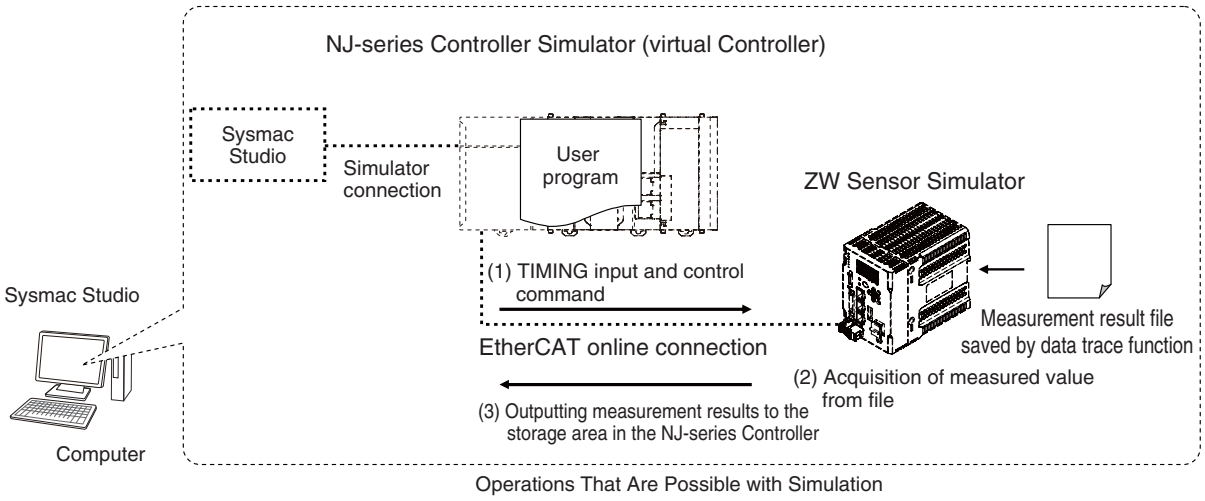
- When connecting to a Sensor Controller online for the first time, the calibration ROM data backup window appears.
  If the Calibration ROM is lost, or it fails, the backed-up data can be recovered to the Sensor Controller.
  Please keep the backed-up Calibration ROM data.
  5-3 Recovering calibration ROM data p.176.



- When the Sensor Controller is in Setup mode; FUNC mode, online connection is disabled. Should switch to the RUN mode.

6-4 Offline Debugging of the Sensor Control Program and Sensor Operation

If an EtherCAT system is configured, you can perform a linked simulation between the sequence control of an NX/NJ-series Controller and the operation of an ZW Sensor.
The sensor control program can be debugged offline using measurement results saved by the data trace function.



Operations That Are Possible with Simulation

Note

Sensor measurement and other operation cannot be simulated. The measurement result acquired previously by the data trace function is output.

Important

Simulation is possible only on the Standard Edition of the Sysmac Studio.

Registering the ZW as an EtherCAT Slave

You use the Sysmac Studio (Standard Edition) to add the ZW to the EtherCAT slave configuration.
Refer to the *Sysmac Studio Version 1 Operation Manual* (Cat. No. W504) for details on registering slaves.
Only simplified procedures are provided here.

- **Opening the Edit EtherCAT Configuration Tab Page**

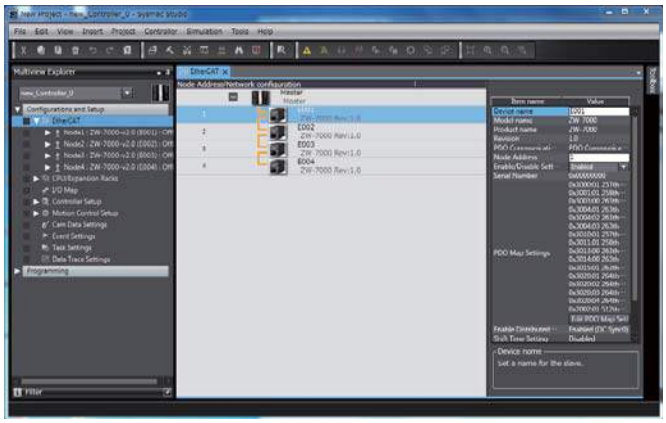
▶ Multi view Explore : [Configurations and Setup] | [EtherCAT] (Double-click)

- **Registering a Slave Offline (Building the Network Configuration)**

1 **Use either of the following methods to add an ZW slave to the master.**

- Drag [ZW-C7000□] from the [Toolbox] to the master in the Edit Network Configuration Tab Page, and then drop or double-click.

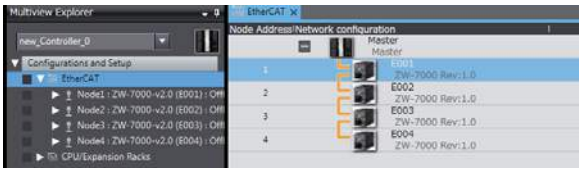
2 **Select the ZW that was added to the Edit Network Configuration Tab Page and change the node address of the ZW to the node address that is set on the ZW hardware switches.**



Setting Up the ZW

Set up the inspections in the ZW, e.g., set the inspection items.

1 **Double-click the ZW that was added to the Edit Network Configuration Tab Page.**
The ZW Setup Pane is displayed for the Edit Pane. Make all of the required settings.



Executing the Simulation

1 **Write and build the user program that will operate the machine.**
Refer to the *Sysmac Studio Version 1 Operation Manual* (Cat. No. W504) for details on programming.

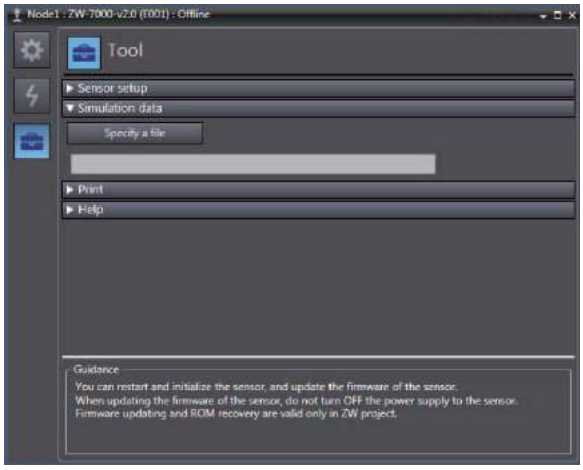
2 **Open the Edit screen.**
Right-click [(Sensor model)] in the Edit network configuration Tab page and select [Edit].

3 **Specify the measurement result file for performing offline debugging.**

Edit pane: [Tools] - [Simulation data] - [Specify a file]

Select the CSV file that is written in the following format.

You can also import files saved in the internal logging and trend graphs.



index, OUT1, OUT2, OUT3, OUT4
0,MV, MV, MV, MV
1,MV, MV, MV, MV
2,MV, MV, MV, MV
:
(MV: Measurement Value)

4 **Select [Simulation] - [Execute].**

The simulation will start.

Refer to the *Sysmac Studio Version 1 Operation Manual* (Cat. No. W504) for the operating procedures for the Simulator.