OMRON

Sysmac Library

SYSMAC-XR□□□

Sysmac Library

Omron's control expertise changes programming

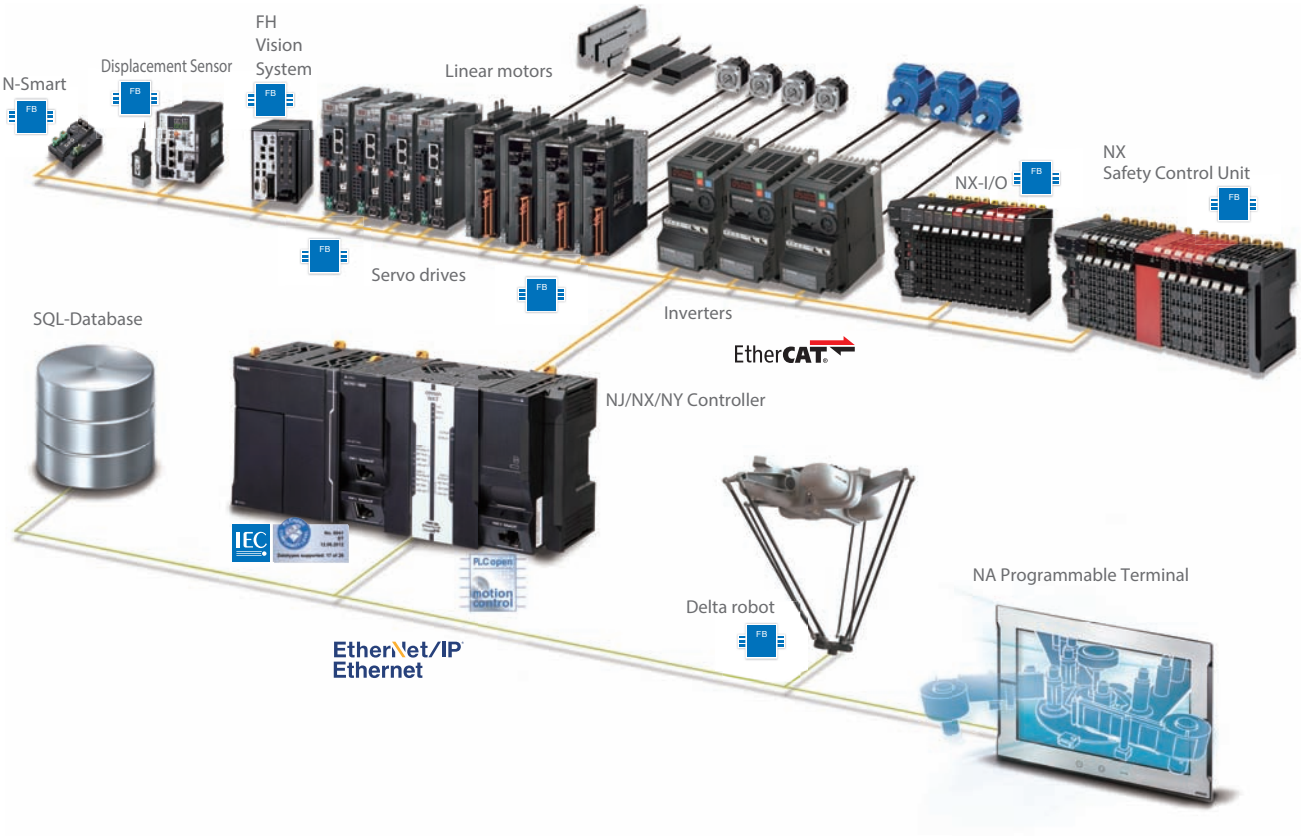
sysmac
always in control

Various software components help reduce programming time

The Sysmac Library is a collection of software functional components that can be used in programs for the NJ/NX Machine Automation Controllers or Industrial PC Platform NY IPC Machine Controller. Packed with Omron's rich technical know-how on control programs, the Sysmac Library makes advanced control easy. Install the Sysmac Library to use it in the Sysmac Studio.

Components for various devices

Omron offers Function Blocks for a wide range of applications: advanced control such as vibration suppression and temperature control, motion control such as PID feedforward, and connection to servo drives or sensors.



Note. For controllers and versions that can be used for the Sysmac Library, refer to *the Version Information*.

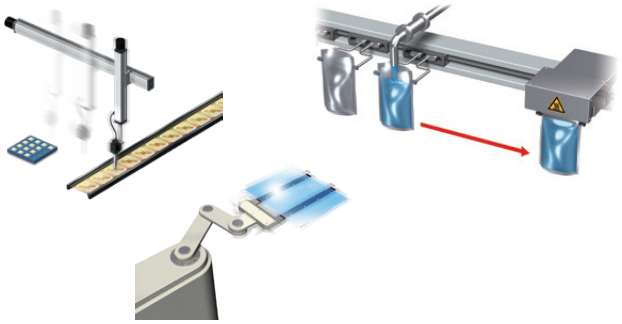
Reducing Work

To production engineers

Advanced control

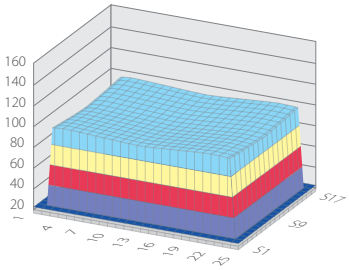
Vibration suppression

Vibration suppression during and after high-speed material handling prevents vibration, slides, and spilling, significantly reducing machine cycle time.

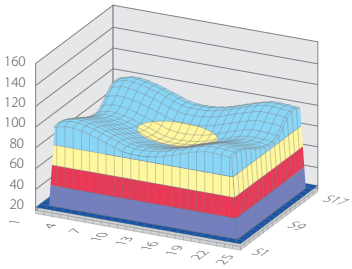


Temperature control

In-furnace temperature variations can be reduced (temperature uniformity control), and the temperature can be distributed unevenly (temperature gradient control). A rapid increase in the temperature (rapid temperature increase) without overshooting stabilizes quality and reduces cycle time.



Temperature uniformity control



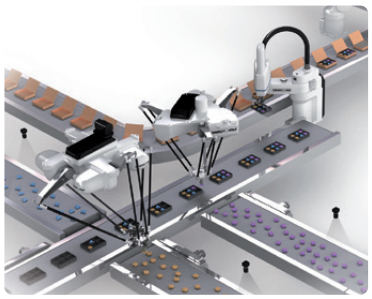
Temperature gradient control

Reducing Work

To production engineers

Various motion control

Integration of the controller, EtherCAT, and Sysmac Library makes various motion control possible.



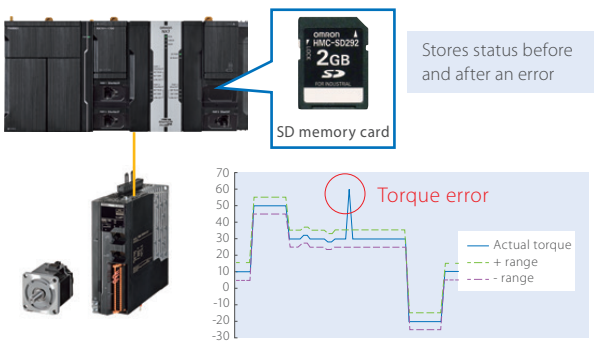
Shortest Recovery

To maintenance engineers

Productivity improvement

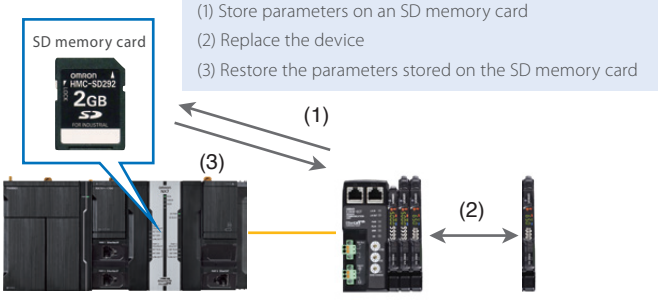
Device operation monitoring

You can easily monitor devices such as air cylinders, sensors, and servo systems that often cause intermittent stoppages. Detecting deterioration over time or errors of devices prevents machines from stopping suddenly in advance, improving operating efficiency. The status of devices before and after the occurrence of an error can be stored on an SD memory card. This allows you to identify the cause of the error.



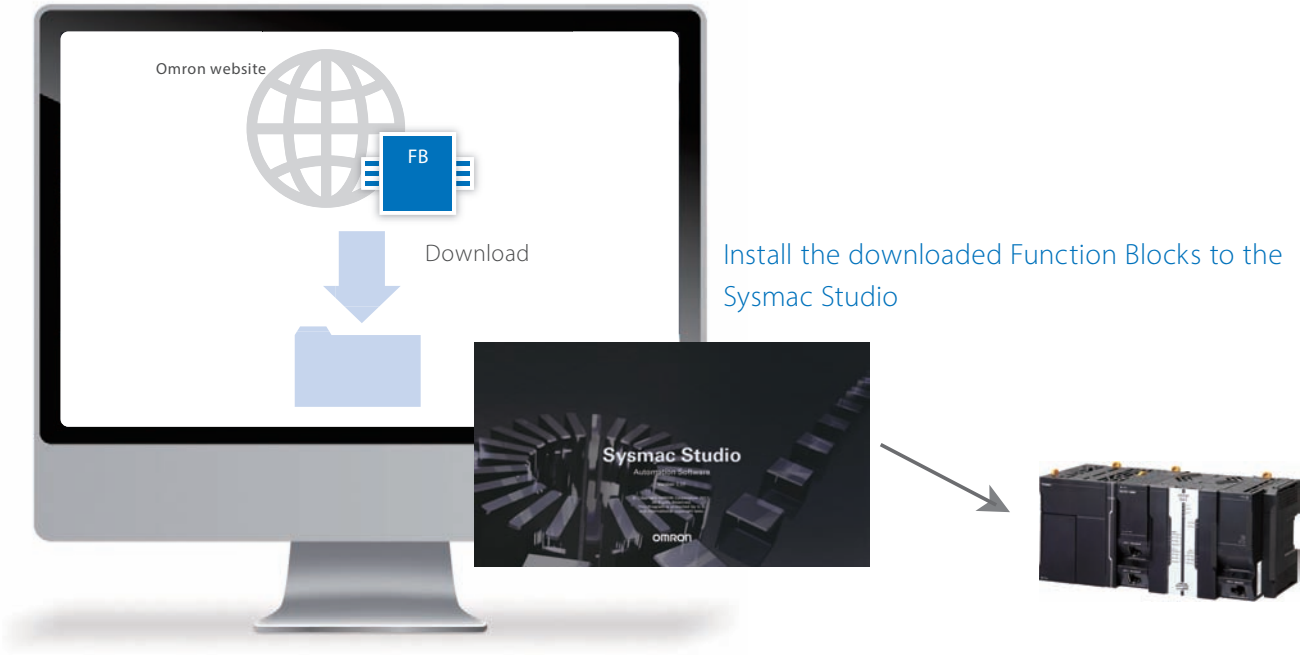
Reduction of setup, changeover, and maintenance times

Function Blocks facilitate the connection of devices to the controller and provide Backup and Restoration functions for quick setting change and recovery.



Easy-to-obtain Library

The Sysmac Library is freely available to download from Omron website.
These software components can be used for the NJ/NX/NY Controller without debugging.



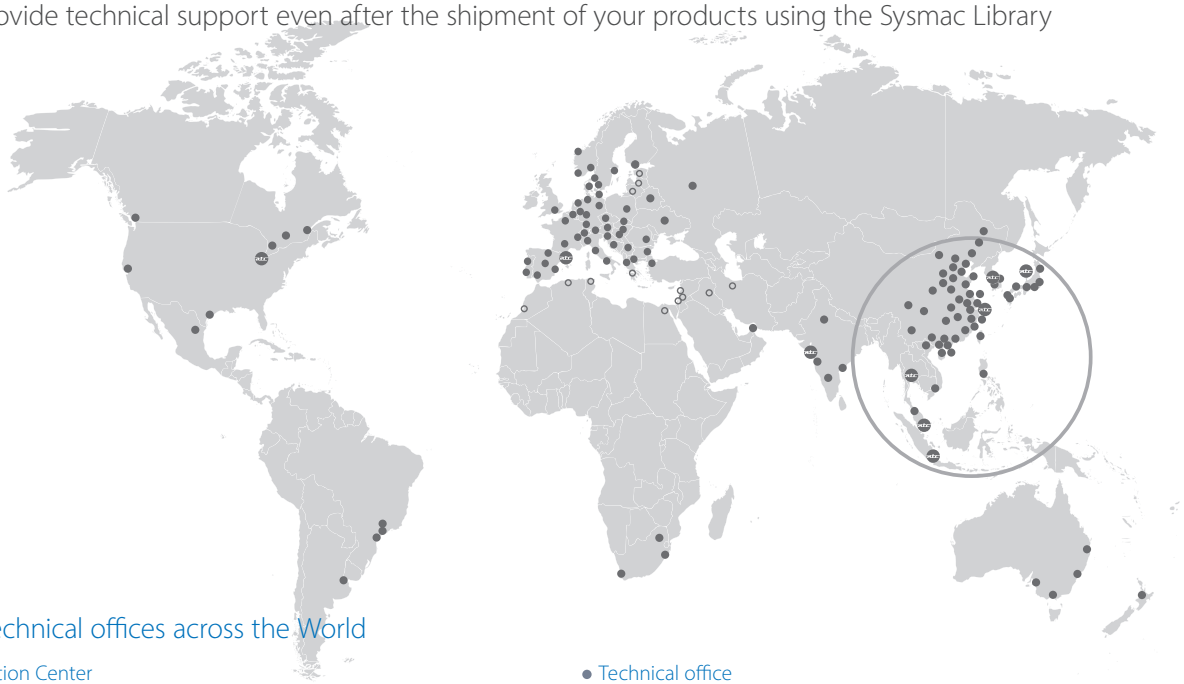
Install the downloaded Function Blocks to the Sysmac Studio

Download from

https://www.ia.omron.com/sysmac_library/

High quality products with reliable global support

With our worldwide network for support, Omron will support you to meet your control requirements and solve your problems by using the Sysmac Library.
We will provide technical support even after the shipment of your products using the Sysmac Library



OMRON technical offices across the World

atc Automation Center

Kusatsu(JPN),Kariya(JPN),Shanghai(CHN),Barcelona(ESP),Hoffman Estates IL(USA), Mumbai(IND),Jakarta(IDN),Bangkok(THA),Singapore(SGP),Seoul(KOR)

● Technical office

For the most recent information, refer to your OMRON website.

Sysmac Library

SYSMAC-XR□□□

Sysmac Library for advanced control

The Sysmac Library for the NJ/NX Machine Automation Controller or Industrial PC Platform NY IPC Machine Controller provides Function Blocks packed with know-how that makes advanced control easy.

Features

- For a wide range of applications: advanced control such as vibration suppression and temperature control, motion control such as PID feedforward, and connecting to servo drives or sensors.
- Available to download from OMRON's website. Install the library to use in the Sysmac Studio.
  Library specially designed for the NJ/NX Machine Automation Controller or Industrial PC Platform NY IPC Machine Controller reduces programming and debugging time.
- High quality product with reliable global support.

Sysmac Library

Ordering Information

Sysmac Library

Sysmac Library is POU Libraries (Function Block and Function) provided for NJ/NX/NY-series Controller.
Please download it from following URL and install to Sysmac Studio.
https://www.ia.omron.com/sysmac_library/

Product	Features	Model
MC Test Run Library	The MC Test Run Library is used to perform a test run that the MC Function Module is used. In this library, a processing to operate axes that an MPG (i.e. a manual pulse generator) was used is provided. You can use this library to reduce manpower of programming when creating a test run program that an MPG was used.	**SYSMAC-XR001**
MC Command Table Library	The MC Command Table Library is used to continuously perform positioning that the MC Function Module is used. You can use this library together with motion control instructions of the NJ/NX/NY-series Controller. The program that multiple motion control instructions are used will be unnecessary by using this library.	**SYSMAC-XR002**
MC Tool Box Library	The MC Tool Box Library is used to implement a program to perform motor control in the user program. The processings such as PID processing and filter processing are provided in this library. You can use this library to reduce manpower of programming when creating a program to perform motor control.	**SYSMAC-XR003**
EtherCAT G5 Series Library	The EtherCAT G5 Series Library is used to initialize the absolute encoder, back up and restore the parameters for an OMRON G5-series Servo Drive with built-in EtherCAT communications. You can use this library to reduce manpower of programming when implementing the processing for a Servo Drive.	**SYSMAC-XR004**
EtherCAT N-Smart Series Library	The EtherCAT N-Smart Series Library is used to back up and restore the parameters for an OMRON E3NW Sensor Communications Unit (an EtherCAT type). You can use this library to reduce manpower of programming when implementing the processing for a Sensor Communications Unit.	**SYSMAC-XR005**
Vibration Suppression Library	The Vibration Suppression Library is used to suppress residual vibration caused by the operation of machines. You can use this library together with motion control instructions of the NJ/NX/NY-series Controller.	**SYSMAC-XR006**
Temperature Control Library	The Temperature Control Library is used to perform a high-level temperature control. You can use this library together with analog control instructions of the NJ/NX/NY-series Controller.	**SYSMAC-XR007**
Device Operation Monitor Library	The Device Operation Monitor Library is used to monitor the operation of devices such as air cylinders, sensors, motors, and other devices.	**SYSMAC-XR008**
Adept Robot Control Library	The Adept Robot Control Library is used to directly control Adept Robots from NJ/NX-series CPU Unit or NY-series Industrial PC. You can use this library to control any types of robots like parallel, SCARA and articulated from PLC with common instructions and a common programming method.	**SYSMAC-XR009**
Weighing Control Library	The Weighing Control Library is used to perform weighing control of raw materials for industrial products with NX-series Load Cell Input Unit NX-RS1201. Also, functions that are used to display and correct measurement values are included. You can use this Weighing Control Library to reduce programming work when you implement processing for weighing in each device.	**SYSMAC-XR010**
EtherCAT 1S Series Library	The EtherCAT 1S Series Library is used to back up and restore parameters, initialize the absolute encoder, clear the Motor Replacement Detected error, and execute the Unit Restart when an OMRON 1S-series Servo Drive with built-in EtherCAT communications is configured and replaced. This library also includes the function block that adjusts gains, helping configure and replace servo drives without using software.	**SYSMAC-XR011**
Packaging Machine Library	The Packaging Machine Library is used to control various packaging machines with NJ/NX-series CPU Unit or NY-series Industrial PC. The Packaging Machine Library enables accurate and high-speed packaging processing, and reduction of programming man-hour as well as man-hour to start up packaging system. The use of PackML-compliant PackML Support Function Blocks facilitates compliance with the PackML standard.	**SYSMAC-XR012**
Servo Press Library	The Servo Press Library is used to generate the operation commands and monitor the operations of actuator for servo presses with NJ/NX-series CPU Unit or NY-series Industrial PC. You can use the Servo Press Library to realize the high-speed and high precision servo press control and reduce programming work.	**SYSMAC-XR013**
Dimension Measurement Library	Dimension Measurement Library is the system which connects the NJ/NX-series CPU Unit or NY-series Industrial PC, ZW-8000/7000/5000 Confocal Fiber Displacement Sensor Controller, and E9NC-TA0 Contact-Type Smart Sensor through EtherCAT communications. It is used when you perform various dimension measurements. When you use the Dimension Measurement Library, you can improve measurement accuracy, enlarge measurement range, and reduce programming work.	**SYSMAC-XR014**
Safety System Monitor Library	The Safety System Monitor Library is used to monitor the safety system information. You can use this library to manage the information of the running safety system.	**SYSMAC-XR015**
High-Speed Analog Inspection Library	The High-speed Analog Inspection Library records analog input values acquired by the NX-series High-speed Analog Input Units in time. This library provides functions required for product inspections during production processes, including calculation of feature values (e.g., maximum, minimum, and mean), comparison with master data, and data file storage.	**SYSMAC-XR016**
SLMP Communications Library	The SLMP Communications Library is a collection of functional objects that uses the SLMP communications protocol for the Sequencer made by Mitsubishi Electric to carry out communications control. Various FB types (Device Read, Device Write) are provided for easy incorporation of the OMRON Machine Automation Controller in networks configured by the Sequencer.	**SYSMAC-XR017**
Visual Feedback Alignment Library	The Visual Feedback Alignment Library is a set of software function components for alignment applications employing visual feedback.	**SYSMAC-XR018**
RFID Communications Library	The RFID Communications Library is used to perform traceability management with NX-series V680 RFID unit. You can use this library to reduce programming work when implement processing for large data communication with RF tags, communication multiple RF tags.	**SYSMAC-XR019**
MQTT Communications Library	The MQTT Communication library is a collection of software functional objects for exchanging Pub / Sub type messages through the MQTT server (MQTT broker).	**SYSMAC-XR020**
OPC UA PackML Library	The OPC UA PackML Library is a collection of software functional objects for using the OPC UA as the communications protocol for PackML in accordance with the OPC UA PackML specifications.	**SYSMAC-XR101**

Automation Software

The Sysmac Studio is the software that provides an integrated environment for setting, programming, debugging and maintenance of machine automation controllers including the NJ/NX-series CPU Units, NY-series Industrial PC, EtherCAT Slave, and the HMI.

For details, refer to your local OMRON website and *Sysmac Studio Catalog* (Cat. No. P138).

Sysmac Library

Version Information

Sysmac Library				Applicable Models									
				NJ/NX-series CPU Unit						NY-series Industrial PC			
Product Name	Model	Version	Bundled library File	NX701-1□□□	NX502-□□□□	NX102-□□□□	NJ501-□□□□ NJ301-□□□□	NJ101-□□□□	NX1P2-□□□□ □□(1)	NY5□□-1	NY5□□-5	Sysmac Studio	Related Products
MC Test Run Library	SYSMAC-XR001	Ver.1.1	OmronLib_MC_TestRun_V1_1.slr	Ver.1.10 or later	Ver.1.60 or later	Ver.1.30 or later	Ver.1.10 or later	Ver.1.10 or later ✻1	Ver.1.13 or later ✻3	Ver.1.12 or later	Ver.1.18 or later	Ver.1.14 or higher	• Incremental Encoder Input Unit (NX-EC□□□□, GX-EC0211/EC0241) Ver.1.1 or later • G5-series Servo Drive (R88D-KN□□□-ECT) Ver.2.10 or later • 1S-series Servo Drive (R88D-1S(A)N□□□-ECT) Ver.1.0 or later (R88D-1SN□□□-ECT-51) Ver.2.0 or later • NX-series Pulse Output Unit (NX-PG0□□□) Ver.1.1 or later
MC Command Table Library	SYSMAC-XR002	Ver.1.1	OmronLib_MC_CmdTbl_V1_1.slr	Ver.1.10 or later	Ver.1.60 or later	Ver.1.30 or later	Ver.1.10 or later	Ver.1.10 or later ✻1 ✻2	Ver.1.13 or later ✻3 ✻4	Ver.1.12 or later	Ver.1.18 or later	Ver.1.14 or higher	• G5-series Servo Drive (R88D-KN□□□-ECT) Ver.2.10 or later • 1S-series Servo Drive (R88D-1S(A)N□□□-ECT) Ver.1.0 or later (R88D-1SN□□□-ECT-51) Ver.2.0 or later
MC Tool Box Library	SYSMAC-XR003	Ver.1.1	OmronLib_MC_Toolbox_V1_1.slr	Ver.1.10 or later	Ver.1.60 or later	Ver.1.30 or later	Ver.1.08 or later	Ver.1.10 or later	Ver.1.13 or later	Ver.1.12 or later	Ver.1.18 or later	Ver.1.14 or higher	---
EtherCAT G5 Series Library	SYSMAC-XR004	Ver.1.1	OmronLib_EC_G5_V1_1.slr	Ver.1.10 or later	Ver.1.60 or later	Ver.1.30 or later	Ver.1.01 or later	Ver.1.10 or later	Ver.1.13 or later	Ver.1.12 or later	Ver.1.18 or later	Ver.1.14 or higher	• G5-series Servo Drive (R88D-KN□□□-ECT) Ver.2.10 or later • SD Memory Card (HMC-SD□□□)
EtherCAT N-Smart Series Library	SYSMAC-XR005	Ver.1.2	OmronLib_EC_E3NW_V1_2.slr	Ver.1.10 or later	Ver.1.60 or later	Ver.1.30 or later	Ver.1.01 or later	Ver.1.10 or later	Ver.1.13 or later	Ver.1.12 or later	Ver.1.18 or later	Ver.1.14 or higher	• N-Smart Sensor Communications Unit (E3NW-ECT) Ver.1.03 or later (The E3NX-CA0 is supported for Ver.1.06 or later.) Distributed Sensor Unit (E3NW-DS) Smart Fiber Amplifier Unit (E3NX-FA0) Color Fiber Amplifier Unit (E3NX-CA0) Smart Laser Amplifier Unit (E3NC-LA0) Smart Laser Amplifier Unit (CMOS type)(E3NC-SA0) Contact-Type Smart Amplifier Unit (E9NC-TA0) • SD Memory Card (HMC-
Vibration Suppression Library	SYSMAC-XR006	Ver.1.0	OmronLib_VS_Toolbox_V1_0.slr	Ver.1.10 or later	Ver.1.60 or later	Ver.1.30 or later	Ver.1.10 or later	Ver.1.10 or later ✻1	Ver.1.13 or later	Ver.1.12 or later	Ver.1.18 or later	Ver.1.14 or higher	• G5-series Servo Drive (R88D-KN□□□-ECT) Ver.2.10 or later • 1S-series Servo Drive (R88D-1S(A)N□□□-ECT) Ver.1.0 or later (R88D-1SN□□□-ECT-51) Ver.2.0 or later
Temperature Control Library	SYSMAC-XR007	Ver.1.0	OmronLib_TC_Toolbox_V1_0.slr	Ver.1.10 or later	Ver.1.60 or later	Ver.1.30 or later	Ver.1.02 or later	Ver.1.10 or later	Ver.1.13 or later	Ver.1.12 or later	Ver.1.18 or later	Ver.1.14 or higher	---

Sysmac Library				Applicable Models									
				NJ/NX-series CPU Unit						NY-series Industrial PC			
Product Name	Model	Version	Bundled library File	NX701-1□□□	NX502-□□□□	NX102-□□□□	NJ501-□□□□ NJ301-□□□□	NJ101-□□□□	NX1P2-□□□□ □□(1)	NY5□□-1	NY5□□-5	Sysmac Studio	Related Products
Device Operation Monitor Library	SYSMAC-XR008	Ver.1.0	OmronLib_BC_DeviceMonitor_V1_0.slr	Ver.1.10 or later	Ver.1.60 or later	Ver.1.30 or later	Ver.1.01 or later	Ver.1.10 or later	Ver.1.13 or later	Ver.1.12 or later	Ver.1.18 or later	Ver.1.14 or higher	• G5-series Servo Drive (R88D-KN□□□-ECT) Ver.2.10 or later • 1S-series Servo Drive (R88D-1S(A)N□□□-ECT) Ver.1.0 or later (R88D-1SN□□□-ECT-51) Ver.2.0 or later • N-Smart Sensor Communications Unit (E3NW-ECT) Ver.1.03 or later Distributed Sensor Unit (E3NW-DS) Smart Fiber Amplifier Unit (E3NX-FA0) Smart Laser Amplifier Unit (E3NC-LA0) Smart Laser Amplifier Unit (CMOS type)(E3NC-SA0) Contact-Type Smart Amplifier Unit (E9NC-TA0) • SD Memory Card (HMC-SD□□□)
Adept Robot Control Library	SYSMAC-XR009	Ver.2.0	OmronLib_EIP_Adept_V2_0.slr	Ver.1.10 or later	Ver.1.60 or later	Ver.1.30 or later	Ver.1.01 or later	Ver.1.10 or later	Ver.1.13 or later	Ver.1.12 or later	Ver.1.18 or later	Ver.1.15 or higher	• SCARA Robot Cobra 450/500/650 eCobra 600/800 Ver.2.3.C or later • Parallel Robot Hornet 565 Ver.2.3.C or later Quattro 650H/HS Ver.2.3.C or later, 800H Ver.2.3.C or later • Articulated Robot Viper 650/850 Ver.2.3.C or later • SmartController EX Ver.2.3.C or later • T20 Pendant Ver.2.2.2.1 or later
Weighing Control Library	SYSMAC-XR010	Ver.1.0	OmronLib_WC_Toolbox_V1_0.slr	Ver.1.10 or later	Ver.1.60 or later	Ver.1.30 or later	Ver.1.05 or later	Ver.1.10 or later	Ver.1.13 or later	Ver.1.12 or later	Ver.1.18 or later	Ver.1.16 or higher	• NX-series LoadCell I/F Unit (NX-RS0□□□□) Ver.1.0 or later
EtherCAT 1S Series Library	SYSMAC-XR011	Ver.2.0	OmronLib_EC_1S_V2_0.slr	Ver.1.10 or later	Ver.1.60 or later	Ver.1.30 or later	Ver.1.01 or later	Ver.1.10 or later	Ver.1.13 or later	Ver.1.12 or later	Ver.1.18 or later	Ver.1.16 or higher	• 1S-series Servo Drive (R88D-1S(A)N□□□-ECT) Ver.1.0 or later (R88D-1SN□□□-ECT-51) Ver.2.0 or later • SD Memory Card (HMC-SD□□□)
			OmronLib_EC_1S_EasyTuning_V1_0.slr	Ver.1.10 or later	Ver.1.60 or later	Ver.1.30 or later	Ver.1.01 or later	Ver.1.10 or later ✻1	Ver.1.13 or later	Ver.1.12 or later	Ver.1.18 or later	Ver.1.16 or higher	
Packaging Machine Library	SYSMAC-XR012	Ver.2.0	OmronLib_PKG_RK_V1_0.slr	Ver.1.10 or later	Ver.1.60 or later	Ver.1.30 or later	Ver.1.10 or later	Ver.1.10 or later ✻1	Ver.1.13 or later ✻3	Ver.1.12 or later	Ver.1.18 or later	Ver.1.14 or higher	• G5-series Servo Drive (R88D-KN□□□-ECT) Ver.2.10 or later • 1S-series Servo Drive (R88D-1S(A)N□□□-ECT) Ver.1.0 or later (R88D-1SN□□□-ECT-51) Ver.2.0 or later
			OmronLib_PKG_WU_V1_0.slr	Ver.1.10 or later	Ver.1.60 or later	Ver.1.30 or later	Ver.1.10 or later	Ver.1.10 or later ✻1	Ver.1.13 or later ✻3	Ver.1.12 or later	Ver.1.18 or later	Ver.1.14 or higher	
			OmronLib_PackML30_V1_0.slr	Ver.1.10 or later	Ver.1.60 or later	Ver.1.30 or later	Ver.1.10 or later	Ver.1.10 or later	Ver.1.13 or later	Ver.1.12 or later	Ver.1.18 or later	Ver.1.14 or higher	
			OmronLib_PackML30_V2_0.slr	Ver.1.18 or later	Ver.1.60 or later	Ver.1.30 or later	Ver.1.18 or later	Ver.1.18 or later	Ver.1.18 or later	Ver.1.18 or later	Ver.1.18 or later	Ver.1.23 or higher	
Servo Press Library	SYSMAC-XR013	Ver.2.0	OmronLib_ServoPress_V1_0.slr	Ver.1.10 or later	Ver.1.60 or later	Ver.1.30 or later	Ver.1.08 or later	Ver.1.10 or later ✻1	---	Ver.1.12 or later	Ver.1.18 or later	Ver.1.16 or higher	• G5-series Servo Drive (R88D-KN□□□-ECT) Ver.2.10 or later • 1S-series Servo Drive (R88D-1S(A)N□□□-ECT) Ver.1.0 or later (R88D-1SN□□□-ECT-51) Ver.2.0 or later • NX-series LoadCell I/F Unit (NX-RS0□□□□) Ver.1.0 or later
			OmronLib_ServoPress_V2_0.slr	Ver.1.18 or later	Ver.1.60 or later	Ver.1.30 or later	Ver.1.18 or later	Ver.1.18 or later ✻1	Ver.1.18 or later ✻3	Ver.1.18 or later	Ver.1.18 or later	Ver.1.23 or higher	

Sysmac Library

Sysmac Library				Applicable Models										
				NJ/NX-series CPU Unit						NY-series Industrial PC				
Product Name	Model	Version	Bundled library File	NX701-1□□□	NX502-□□□□	NX102-□□□□	NJ501-□□□□ NJ301-□□□□	NJ101-□□□□	NX1P2-□□□□ □□(1)	NY5□□-1	NY5□□-5	Sysmac Studio	Related Products
Dimension Measurement Library	SYSMAC-XR014	Ver.2.0	OmronLib_DIM_Measurement_V1_1.slr	Ver.1.10 or later	Ver.1.60 or later	Ver.1.30 or later	Ver.1.08 or later	Ver.1.10 or later	Ver.1.13 or later	Ver.1.12 or later	Ver.1.18 or later	Ver.1.15 or higher ✻5	• N-Smart Sensor Communications Unit (E3NW-ECT) Ver.1.03 or later Contact-Type Smart Amplifier Unit (E9NC-TA0) • ZW-8000 Series Confocal Fiber Type Displacement Sensor Ver.3.00 or later • ZW-7000 Series Confocal Fiber Type Displacement Sensor Ver.2.03 or later • ZW-5000 Series Confocal Fiber Type Displacement Sensor Ver.2.10 or later
			OmronLib_DIM_PointMeasurement_V1_1.slr	Ver.1.10 or later	Ver.1.60 or later	Ver.1.30 or later	Ver.1.08 or later	Ver.1.10 or later	Ver.1.13 or later	Ver.1.12 or later	Ver.1.18 or later	Ver.1.15 or higher ✻5	
			OmronLib_DIM_LineMeasurement_V1_1.slr	Ver.1.10 or later	Ver.1.60 or later	Ver.1.30 or later	Ver.1.08 or later	Ver.1.10 or later ✻1	Ver.1.13 or later	Ver.1.12 or later	Ver.1.18 or later	Ver.1.15 or higher ✻5	
			OmronLib_DIM_LineMeasurement_V2_0.slr	Ver.1.18 or later	Ver.1.60 or later	Ver.1.30 or later	Ver.1.18 or later	Ver.1.18 or later ✻1	Ver.1.18 or later	Ver.1.18 or later	Ver.1.18 or later	Ver.1.23 or higher	
Safety System Monitor Library	SYSMAC-XR015	Ver.1.0	OmronLib_SF_Monitor_V1_0.slr	Ver.1.10 or later	Ver.1.60 or later	Ver.1.30 or later	Ver.1.07 or later	Ver.1.10 or later	---	Ver.1.12 or later	Ver.1.18 or later	Ver.1.14 or higher	• NX-series Safety Control Unit (NX-SL3□□□) Ver.1.00 or later • NX-series Communications Coupler Unit (NX-ECC201) Ver.1.2.1 or later Communications Coupler Unit (NX-ECC202) Ver.1.2.1 or later Communications Coupler Unit (NX-ECC203) Ver.1.3 or later
High-Speed Analog Inspection Library	SYSMAC-XR016	Ver.1.1	OmronLib_NX_HAD_V1_0.slr	Ver.1.18 or later	Ver.1.60 or later	Ver.1.30 or later	Ver.1.18 or later	Ver.1.18 or later	Ver.1.18 or later	Ver.1.18 or later	Ver.1.18 or later	Ver.1.23 or higher	• NX-series High-speed Analog Input Unit (NX-HAD□□□) Ver.1.0 or later
			OmronLib_DataRecorder_V1_1.slr	Ver.1.18 or later	Ver.1.60 or later	Ver.1.30 or later	Ver.1.18 or later	Ver.1.18 or later	Ver.1.18 or later	Ver.1.18 or later	Ver.1.18 or later	Ver.1.23 or higher	
SLMP Communications Library	SYSMAC-XR017	Ver.2.0	OmronLib_SLMP_Comm_V2_0.slr	Ver.1.18 or later	Ver.1.60 or later	Ver.1.30 or later	Ver.1.18 or later	Ver.1.18 or later	Ver.1.18 or later	Ver.1.18 or later	Ver.1.18 or later	Ver.1.23 or higher	---
Visual Feedback Alignment Library	SYSMAC-XR018	Ver.1.0	OmronLib_VF_Alignment_V1_0.slr	Ver.1.10 or later	Ver.1.60 or later	Ver.1.30 or later	Ver.1.08 or later	Ver.1.10 or later ✻1 ✻2	Ver.1.13 or later	Ver.1.12 or later	Ver.1.18 or later	Ver.1.18 or higher	• Vision System FH-series (FH-□□□□) Ver.5.50 or later
RFID Communications Library	SYSMAC-XR019	Ver.1.0	OmronLib_NX_V680_V1_0.slr	Ver.1.18 or later	Ver.1.60 or later	Ver.1.30 or later	Ver.1.18 or later	Ver.1.18 or later	Ver.1.18 or later	Ver.1.18 or later	Ver.1.18 or later	Ver.1.23 or higher	• NX-series RFID Unit (NX-V680C□) Ver.1.0 or later
MQTT Communications Library	SYSMAC-XR020	Ver.1.0	OmronLib_MQTT_Comm_V1_0.slr	---	Ver.1.60 or later	Ver.1.46 or later ✻6 ✻7	---	---	Ver.1.46 or later	---	---	Ver.1.46 or higher	---
OPC UA PackML Library	SYSMAC-XR101	Ver.1.1	OmronLib_PackML_OPCUA10_V1_1.slr	Ver.1.35 or later ✻7	Ver.1.64 or later ✻7	Ver.1.64 or later ✻7	Ver.1.64 or later ✻8	---	---	---	---	Ver.1.56 or higher	---

✻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 NX1P2-9□□□□□(1) CPU Units.
✻4. When you use this function block with NX1P2-10□□□□, you can use a maximum of two real servo axes.
✻5. When you use ZW-5000, Sysmac studio is supported for Ver.1.18 or higher.
When you use ZW-8000, Sysmac studio is supported for Ver.1.22 or higher.
✻6. When you use this function block with NX102-□□20, you can use CPU Unit Ver.1.37 or later.
✻7. This Library is not available for NX□□□-□□□□-DH (products equipped with time series data collection system).
✻8. When you use this function block with NJ501-1□□□.

Related Catalogs

Product Name	Models	Cat. No.
MC Test Run Library	SYSMAC-XR001	P093
MC Command Table Library	SYSMAC-XR002	P092
MC Tool Box Library	SYSMAC-XR003	P098
EtherCAT G5 Series Library	SYSMAC-XR004	P095
EtherCAT N-Smart Series Library	SYSMAC-XR005	P094
Vibration Suppression Library	SYSMAC-XR006	P099
Temperature Control Library	SYSMAC-XR007	P100
Device Operation Monitor Library	SYSMAC-XR008	P101
Adept Robot Control Library	SYSMAC-XR009	P106
Weighing Control Library	SYSMAC-XR010	P109
EtherCAT 1S Series Library	SYSMAC-XR011	P110
Packaging Machine Library	SYSMAC-XR012	P111
Servo Press Library	SYSMAC-XR013	P112
Dimension Measurement Library	SYSMAC-XR014	P113
Safety System Monitor Library	SYSMAC-XR015	P119
High-Speed Analog Inspection Library	SYSMAC-XR016	P132
SLMP Communications Library	SYSMAC-XR017	P131
Visual Feedback Alignment Library	SYSMAC-XR018	P135
RFID Communications Library	SYSMAC-XR019	P136
MQTT Communications Library	SYSMAC-XR020	P153
OPC UA PackML Library	SYSMAC-XR101	P163

Related Manuals

The followings are the manuals related to this product. Use these manuals for reference.

Cat. No.	Model number	Manual	Application	Description
W546	SYSMAC-XR001	Sysmac Library User's Manual for MC Test Run Library	Learning about the specifications of the function blocks in the MC Test Run Library	Describes the information that is necessary to use the function blocks in the MC Test Run Library.
W545	SYSMAC-XR002	Sysmac Library User's Manual for MC Command Table Library	Learning about the specifications of the function blocks in the MC Command Table Library	Describes the information that is necessary to use the function blocks in the MC Command Table Library.
W547	SYSMAC-XR003	Sysmac Library User's Manual for MC Tool Box Library	Learning about the specifications of the function blocks in the MC Tool Box Library	Describes the information that is necessary to use the function blocks in the MC Tool Box Library.
W548	SYSMAC-XR004	Sysmac Library User's Manual for EtherCAT G5 Series Library	Learning about the specifications of the function blocks in the EtherCAT G5 Series Library	Describes the information that is necessary to use the function blocks in the EtherCAT G5 series Library.
W549	SYSMAC-XR005	Sysmac Library User's Manual for EtherCAT N-Smart Series Library	Learning about the specifications of the function blocks in the EtherCAT N-Smart Series Library	Describes the information that is necessary to use the function blocks in the EtherCAT N-Smart series Library.
W550	SYSMAC-XR006	Sysmac Library User's Manual for Vibration Suppression Library	Learning about the specifications of the function blocks in the Vibration Suppression Library	Describes the information that is necessary to use the function blocks in the Vibration Suppression Library.
W551	SYSMAC-XR007	Sysmac Library User's Manual for Temperature Control Library	Learning about the specifications of the function blocks in the Temperature Control Library	Describes the information that is necessary to use the function blocks in the Temperature Control Library.
W552	SYSMAC-XR008	Sysmac Library User's Manual for Device Operation Monitor Library	Learning about the specifications of the function blocks in the Device Operation Monitor Library	Describes the information that is necessary to use the function blocks in the Device Operation Monitoring Library.
W575	SYSMAC-XR009	NJ/NX-series Sysmac Library User's Manual for Adept Robot Control Library	Learning about the specifications of the function blocks in the Adept Robot Control Library	Describes the information that is necessary to use the function blocks in the Adept Robot Control Library
W569	SYSMAC-XR010	Sysmac Library User's Manual for Weighing Control Library	Learning about the specifications of the function blocks in the Weighing Control Library	Describes the information that is necessary to use the function blocks in the Weighing Control Library.
W571	SYSMAC-XR011	Sysmac Library User's Manual for EtherCAT 1S Series Library	Learning about the specifications of the function blocks in the EtherCAT 1S Series Library	Describes the information that is necessary to use the function blocks in the EtherCAT 1S series Library.
W572	SYSMAC-XR012	Sysmac Library User's Manual for Packaging Machine Library	Learning about the specifications of the function blocks in the Packaging Machine Library	Describes the information that is necessary to use the function blocks in the Packaging Machine Library.
W573	SYSMAC-XR013	Sysmac Library User's Manual for Servo Press Library	Learning about the specifications of the function blocks in the Servo Press Library	Describes the information that is necessary to use the function blocks in the Servo Press Library.

Cat. No.	Model number	Manual	Application	Description
W574	SYSMAC-XR014	Sysmac Library User's Manual for Dimension Measurement Library	Learning about the specifications of instructions for the function blocks in the Dimension Measurement Library	Describes the information that is necessary to use the function blocks in the Dimension Measurement Library.
W582	SYSMAC-XR015	Sysmac Library User's Manual for Safety System Monitor Library	Learning about the specifications of the function blocks in the Safety System Monitor Library	Describes the information that is necessary to use the function blocks in the Safety System Monitor Library.
W607	SYSMAC-XR016	Sysmac Library User's Manual for High-Speed Analog Inspection Library	Learning about the specifications of instructions for the function blocks in the High-Speed Analog Inspection Library	Describes the information that is necessary to use the function blocks in the High-Speed Analog Inspection Library.
W597	SYSMAC-XR017	Sysmac Library User's Manual for SLMP Communications Library	Learning about the specifications of instructions for the function blocks in the SLMP Communications Library	Describes the information that is necessary to use the function blocks in the SLMP Communications Library.
W608	SYSMAC-XR018	Sysmac Library User's Manual for Visual Feedback Alignment Library	Learning about the specifications of instructions for the function blocks in the Visual Feedback Alignment Library	Describes the information that is necessary to use the function blocks in the Visual Feedback Alignment Library.
W608	SYSMAC-XR019	Sysmac Library User's Manual for RFID Communications Library	Learning about the specifications of instructions for the function blocks in the RFID Communications Library	Describes the information that is necessary to use the function blocks in the RFID Communications Library.
W625	SYSMAC-XR020	Sysmac Library User's Manual for MQTT Communications Library	Learning about the specifications of instructions for the function blocks in the MQTT Communications Library	Describes the information that is necessary to use the function blocks in the MQTT Communications Library.
W638	SYSMAC-XR101	Sysmac Library User's Manual for OPC UA PackML Library	Learning about the specifications of instructions for the function blocks in the OPC UA PackML Library	Describes the information that is necessary to use the function blocks in the OPC UA PackML Library.
W501	NX701-1□□□ NX502-1□□□ NX102-1□□□ NX102-90□□ NX1P2-1□□□□□ NX1P2-9□□□□□ NJ501-□□□□ NJ301-1□□□ NJ101-10□□ NJ101-90□□	NJ/NX-series CPU Unit Software User's Manual	Learning how to program and set up an NJ/NX-series CPU Unit. Mainly software information is provided.	The following information is provided on a Controller built with an NJ/NX-series CPU Unit. • CPU Unit operation • CPU Unit features • Initial settings • Programming language specifications and programming with the IEC 61131-3 standard. Use this manual together with the *NJ-series CPU Unit Hardware User's Manual* (Cat. No. W500).
W502	NX701-1□□□ NX502-1□□□ NX102-1□□□ NX102-90□□ NX1P2-1□□□□□ NX1P2-9□□□□□ NJ501-□□□□ NJ301-1□□□ NJ101-10□□ NJ101-90□□	NJ/NX-series Instructions Reference Manual	Learning about the specifications of the instruction set that is provided by OMRON	The instructions in the instruction set (IEC 61131-3 specifications) are described. Use this manual together with the *NJ-series CPU Unit Hardware User's Manual* (Cat. No. W500) and *NJ/NX-series CPU Unit Software User's Manual* (Cat. No. W501).
W504	SYSMAC-SE2□□□□	Sysmac Studio Version 1 Operation Manual	Learning about the operating procedures and functions of the Sysmac Studio.	Describes the operating procedures of the Sysmac Studio.
W507	NX701-1□□□ NX502-1□□□ NX102-1□□□ NX102-90□□ NX1P2-1□□□□□ NX1P2-9□□□□□ NJ501-□□□□ NJ301-1□□□ NJ101-10□□	NJ/NX-series CPU Unit Motion Control User's Manual	Learning about motion control settings and programming concepts	The settings and operation of the CPU Unit and programming concepts for motion control are described. Use this manual together with the *NJ-series CPU Unit Hardware User's Manual* (Cat. No. W500) and *NJ/NX-series CPU Unit Software User's Manual* (Cat. No. W501).
W508	NX701-1□□□ NX502-1□□□ NX102-1□□□ NX102-90□□ NX1P2-1□□□□□ NX1P2-9□□□□□ NJ501-□□□□ NJ301-1□□□ NJ101-10□□	NJ/NX-series Motion Control Instructions Reference Manual	Learning about the specifications of the motion control instructions that are provided by OMRON	The motion control instructions are described. Use this manual together with the *NJ-series CPU Unit Hardware User's Manual* (Cat. No. W500), *NJ/NX-series CPU Unit Software User's Manual* (Cat. No. W501) and *NJ/NX-series CPU Unit Motion Control User's Manual* (Cat. No.W507).
W558	NY532-1500 NY532-1400 NY532-1300 NY512-1500 NY512-1400 NY512-1300	NY-series IPC Machine Controller Industrial Panel PC / Industrial Box PC Software User's Manual	Learning how to program and set up the Controller functions of an NY-series Industrial PC.	The following information is provided on NY-series Machine Automation Control Software. • Controller operation • Controller features • Controller settings • Programming based on IEC 61131-3 language specifications

Cat. No.	Model number	Manual	Application	Description
W560	NY532-1500 NY532-1400 NY532-1300 NY512-1500 NY512-1400 NY512-1300	NY-series Instructions Reference Manual	Learning detailed specifications on the basic instructions of an NY-series Industrial PC.	The instructions in the instruction set (IEC 61131-3 specifications) are described.
W559	NY532-1500 NY532-1400 NY532-1300 NY512-1500 NY512-1400 NY512-1300	NY-series IPC Machine Controller Industrial Panel PC / Industrial Box PC Motion Control User's Manual	Learning about motion control settings and programming concepts of an NY-series Industrial PC.	The settings and operation of the Controller and programming concepts for motion control are described.
W561	NY532-1500 NY532-1400 NY532-1300 NY512-1500 NY512-1400 NY512-1300	NY-series Motion Control Instructions Reference Manual	Learning about the specifications of the motion control instructions of an NY-series Industrial PC.	The motion control instructions are described.
I586	R88M-1□ R88D-1SN□-ECT	AC Servomotors/Servo Drives 1S-series with Built-in EtherCAT® Communications User's Manual	Learning how to use the Servomotors/Servo Drives with built-in EtherCAT Communications.	Describes the hardware, setup methods and functions of the Servomotors/Servo Drives with built-in EtherCAT Communications.
I576	R88M-K□ R88D-KN□-ECT	G5-series AC Servomotors/ Servo Drives (Built-in EtherCAT® Communications) User's Manual	Learning how to use the AC Servomotors/Servo Drives with built-in EtherCAT Communications.	Describes the hardware, setup methods and functions of the AC Servomotors/Servo Drives with built-in EtherCAT Communications.
E429	E3NW-ECT	E3NW-ECT EtherCAT® Digital Sensor Communication Unit Operation Manual	Learning how to use E3NW-ECT EtherCAT® Digital Sensor Communication Unit	Provides the specifications of and describes application methods for E3NW-ECT EtherCAT® Digital Sensor Communication Unit.
Z362	ZW-8000□/7000□/ 5000□	Confocal Fiber Type Displacement Sensor ZW-8000/7000/5000 series User's Manual	To learn how to set-up of Confocal Fiber Type Displacement Sensor of ZW-8000/7000/5000 series	Describes how to set-up of Confocal Fiber Type Displacement Sensor of ZW-8000/7000/5000 series.
Z930	NX-SL□□□□ NX-SI□□□□ NX-SO□□□□	NX-series Safety Control Unit User's Manual	Learning how to use the NX-series Safety Control Units.	Describes the hardware, setup methods, and functions of the NX-series Safety Control Units.
W506	NX701-1□□□ NX502-1□□□ NX102-1□□□ NX102-90□□ NX1P2-1□□□□□ NX1P2-9□□□□□ NJ501-□□□□ NJ301-1□□□ NJ101-10□□ NJ101-90□□	NJ/NX-series CPU Unit Built-in EtherNet/IP™ Port User's Manual	Using the built-in EtherNet/IP port on an NJ/NX-series CPU Unit.	Information on the built-in EtherNet/IP port is provided. Information is provided on the basic setup,tag data links, and other features.
W588	NX701-□□□□ NX502-□□□□ NX102-□□□□ NJ501-1□□□	NJ/NX-series CPU Unit OPC UA User's Manual	Using the OPC UA.	Describes the OPC UA.

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