■ NSJ Series

● Specifications

Model	Controller Section	Display Section				
		Display device	Frame color	Effective display area	Resolution	
NSJ5-TQ000-G5D	I/O capacity: 1,280 points Program capacity: 60K steps Data memory capacity: 128K words (DM: 32K words, EM: 32K words x 3 banks) Function blocks supported (algorithms: ladder diagram or ST language)	High-definition TFT color LCD	Ivory	117.2 x 88.4 (W x H) mm (5.7-inch model)	320 x 240 (QVGA)	
NSJ5-TQ000B-G5D			Black			
NSJ5-TQ01-G5D			Ivory			
NSJ5-TQ01B-G5D			Black			
NSJ5-SQ00-G5D		Color STN LCD	Ivory			
NSJ5-SQ00B-G5D			Black			
NSJ5-SQ01-G5D			Ivory			
NSJ5-SQ01B-G5D			Black			
NSJ8-TV00-G5D		High-definition TFT color LCD	Ivory	162.2 x 121.7 (W x H) (8.4-inch model)	640 x 480 (VGA)	
NSJ8-TV00B-G5D			Black			
NSJ8-TV01-G5D			Ivory			
NSJ8-TV01B-G5D			Black			
NSJ10-TV00-G5D			Ivory	215.2 x 162.4 (W x H) mm (10.4-inch model)		
NSJ10-TV00B-G5D			Black			
NSJ10-TV01-G5D			Ivory			
NSJ10-TV01B-G5D			Black			
NSJ12-TS00-G5D			Ivory	246.0 x 184.5 (W x H) mm (12.1-inch model)	800 x 600 (SVGA)	
NSJ12-TS00B-G5D			Black			
NSJ12-TS01-G5D			Ivory			
NSJ12-TS01B-G5D			Black			

● Other specifications

Model	Built-in port					Display Section			
	Slave USB port	RS-232C port	DeviceNet port	Ethernet port	Printer USB port	Display color	View angle	Language	Standard screen data capacity
NSJ5-TQ000-G5D	One port	Three ports Display Section: A and B Controller Section: C	One port	None	None	256 colors (32,768 colors for BMP/JPEG images)	Left/right ±70°, Top 75°, Bottom 50°	Japanese and English	20 MB
NSJ5-TQ000B-G5D				10/100 Base-T					
NSJ5-TQ01-G5D				None					
NSJ5-TQ01B-G5D				10/100 Base-T					
NSJ5-SQ00-G5D				None			Left/right ±50°, Top 45°, Bottom 50°		
NSJ5-SQ00B-G5D				10/100 Base-T					
NSJ5-SQ01-G5D				None					
NSJ5-SQ01B-G5D				10/100 Base-T					
NSJ8-TV00-G5D				None	One port		Left/right ±65°, Top 50°, Bottom 60°		
NSJ8-TV00B-G5D				10/100 Base-T					
NSJ8-TV01-G5D				None					
NSJ8-TV01B-G5D				10/100 Base-T					
NSJ10-TV00-G5D				None			Left/right ±60°, Top 35°, Bottom 65°		60 MB
NSJ10-TV00B-G5D				10/100 Base-T					
NSJ10-TV01-G5D				None					
NSJ10-TV01B-G5D				10/100 Base-T					
NSJ12-TS00-G5D				None			Left/right ±60°, Top 45°, Bottom 75°		
NSJ12-TS00B-G5D				10/100 Base-T					
NSJ12-TS01-G5D				None					
NSJ12-TS01B-G5D				10/100 Base-T					

● Options and Expansion Units

Name		Model	Specifications
Memory Card (for the Controller Section and Display Section)		HMC-EF372	Flash Memory, 30 MB
		HMC-EF672	Flash Memory, 64 MB
		HMC-AP001	Memory Card Adaptor
Expansion Unit	NSJ Controller Link Unit	NSJW-CLK21-V1	Addition of Controller Link port. Same as the Controller Link Unit for CJ-series PLCs (CJ1W-CLK21-V1).
	NSJ Ethernet Unit	NSJW-ETN21	Addition of Ethernet port. Same as the Ethernet Unit for CJ-series PLCs (CJ1W-ETN21).
	NSJ I/O Control Unit	NSJW-IC101	Addition of CJ-series Expansion Racks. Same as CJ-series I/O Control Unit (CJ1W-IC101).

■ CX-One

● Standard Models

Name	Specifications		Model
CX-One FA Integrated Tool Package Ver. 1.1	The CX-One is an integrated tool pack that provides programming and monitoring software for OMRON PLCs and components. The CX-One runs on any of the following operating systems: Windows 98 SE, Me, NT 4.0 (Service Pack 6a), 2000 (Service Pack 3 or higher), or XP. CX-Designer version 1.□ is included in the CX-One. Refer to the CX-One catalog (R134) for details.	1 license	CXONE-AL01C-E
		3 licenses	CXONE-AL03C-E
		10 licenses	CXONE-AL10C-E
		30 licenses	CXONE-AL30C-E
		50 licenses	CXONE-AL50C-E

Site licenses are also available for users that need to use the CX-One on many computers. Ask your OMRON representative for details.

● CX-One Operating Environment

Compatible OS	Windows 98 SE, Me, NT 4.0 (Service Pack 6a), 2000 (Service Pack 3 or higher), or XP (See note 1.)
Recommended CPU	Pentium II 333 MHz or faster processor (Pentium III 1 GHz or faster recommended.)
Recommended memory	256 Mbytes min. (See note 2.)
Hard disk free space	Approx. 1.8 GB or more available space is required to install the complete CX-One package.
CD-ROM drive	Required for installation
Display	SVGA (800 x 600) or better high-resolution display with 256 colors min.

Note 1: CX-One OS precaution
The CX-One will not run on Microsoft Windows 95 or any other OS not listed above. If such an OS is being used on the client computer, the OS must be upgraded before installing the CX-One. System requirements and hard disk space may vary with the system environment.
2: The amount of memory required varies the Support Software applications used in CX-One. Refer to use documentation for Individual Support Software for details.

This catalog mainly provides information that is necessary for selecting suitable models, and does not contain precautions for correct use. Always read the precautions and other required information provided in product operation manuals before using the product.

- The application examples provided in this catalog are for reference only. Check functions and safety of the equipment before use.
- Never use the products for any application requiring special safety requirements, such as nuclear energy control systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, or other application involving serious risk to life or property, without ensuring that the system as a whole has been designed to address the risks, and that the OMRON products are properly rated and installed for the intended use within the overall equipment or system.

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

New!

OMRON

Programmable Controller
SYSMAC One
NSJ Series

HMI Integrated into a Controller.
The New SYSMAC One One-package Controller for **High-precision Control**

Full Lineup of Models in the 5.7" to 12" Class and Expansion Units
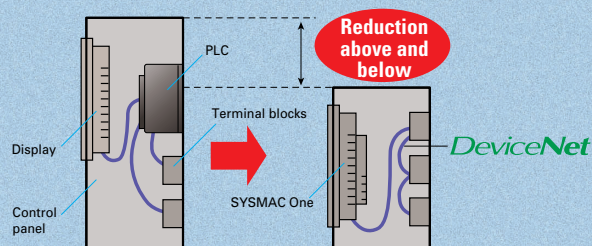
realizing

Controller Shapes and Functions Designed to Respond to Customer Requirements for More Compact Machines
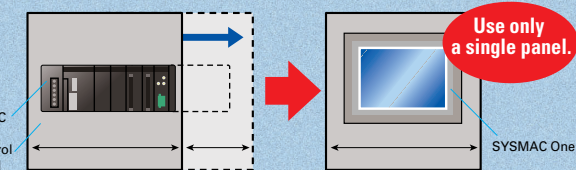## The New SYSMAC One One-package Controller NSJ Series

One-package Construction Saves Space and Makes Life Easy

1 Save Space

Numerous customers have requested even smaller control panels. We recognized, however, that there are limits when combining separate HMI and controllers. Therefore, we redesigned the shape of the Controller. With it's all-in-one design, the SYSMAC One NSJ Series saves space as well as provides a variety of advantages.

PLC

Display

Terminal blocks

Control panel

SYSMAC One

DeviceNet

Reduction above and below

Issue The PLC is located behind the HMI and the terminal blocks are placed underneath, so the layout is extended vertically.
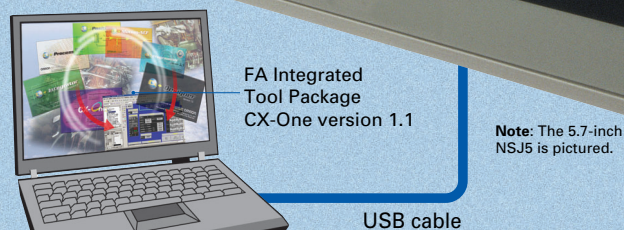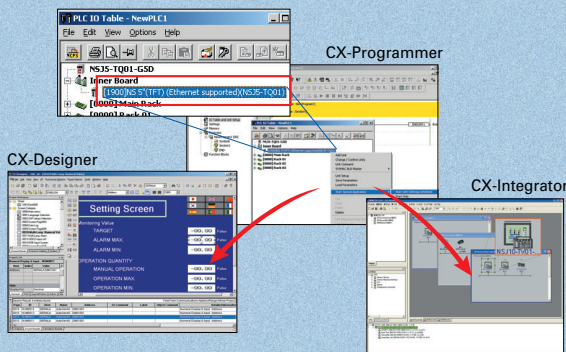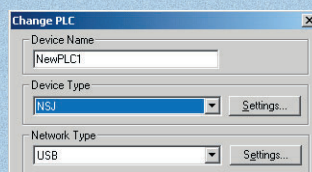
Solution Place the terminal blocks behind the HMI!

PLC

Control panel

SYSMAC One

Use only a single panel.

Issue A change in the PLC configuration extends the arrangement horizontally, requiring redesigning of the panel.

Solution No need to redesign the panel. The width left and right remains unchanged. Panel redesigning is not required!

2 Integrated Software

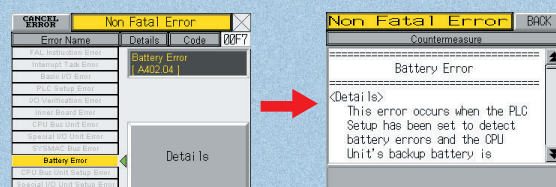**■ Best match with FA Integrated Tool Package CX-One**

By using FA Integrated Tool Package CX-One, NS/NJ-series design tool (CX-Designer) and the network setting tool (CX-Integrator) can be called up from ladder programming tool (CX-Programmer).

CX-Programmer

CX-Designer

CX-Integrator

■ Easy and Fast Data Transfer Using an Off-the-shelf USB Cable.

Ladder program from CX-Programmer and screen data from CX-Designer can be quickly transferred. And both the Controller Section and Display Section can be online at the same time. Naturally, no cable connection or difficult communications settings are required. The connection starts simply by turning ON the power supply.

CUSTOMIZED COMPONENTS

Front-end Status

Process NORMAL OPERATION

Load   Pick&Place   Unload

Back-end Status

RUN   ALARM   RESET   HISTORY

	ØCH1	ØCH2
SP	34.5	34.5
PV	27.5	33.0
MV	99.9	67.8

CMW RUN AT ALM1 ALM2 ALM3 HB

FA Integrated Tool Package CX-One version 1.1

Note: The 5.7-inch NSJ5 is pictured.

USB cable

3 Easy Diagnosis

■ Built-in Troubleshooter for the Controller CPU and DeviceNet

If there is a failure in the Controller CPU or a DeviceNet master or slave, information on the failure and the possible countermeasure is displayed. The user can quickly apply remedies for errors when they occur without referring to the manual.

■ Memory Backup Using a Memory Card

In addition to display screens, Controller Section programming can also be backed up by following on-screen instructions.
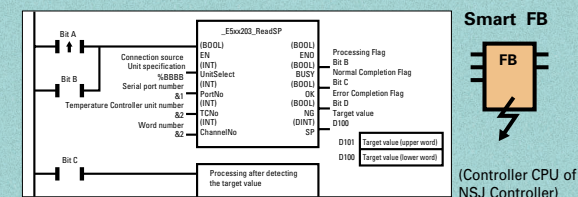
Memory Card 64M

Precise Control Even from an Integrated Product

1 Equivalent to the SYSMAC CJ-series PLCs

The SYSMAC One NSJ Series is a series of controllers that include a CPU Unit equivalent to that of the SYSMAC CJ-series CJ1G-CPU45H. The Display Section also includes a CPU for display. The control programming therefore remains completely unaffected even if there is a failure in the Display Section due to the load on it.

2 Continue Using Your Assets and Support Tool

Continue to use all the screen data for NS-series HMIs and ladder programs for CS/CJ-series PLCs. The CX-Designer for NS-series HMI and the CX-Programmer for ladder programming can be used as the Support Software (see note), so customers who have been using these software packages have no need to learn new software. Function blocks and the Smart Active Part libraries can of course also be used.

Smart FB

(Controller CPU of NSJ Controller)
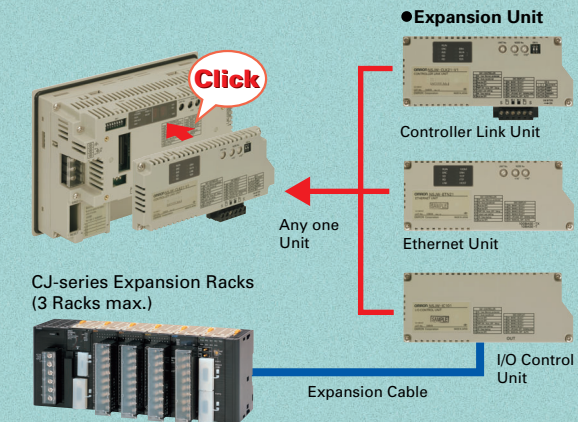
Smart Active Parts

Active window

The Smart Active Parts are accessed by selecting *Tools → Library* from the menu bar of the CX-Designer.

(Display Section of NSJ Controller)

Note: SYSMAC One NSJ-series NSJ Controllers are supported by CX-One version 1.1 or higher.
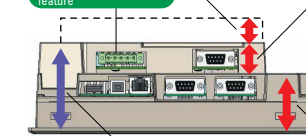
3 Expandable System

The system can be expanded with one Expansion Unit (Controller Link Unit, Ethernet Unit or I/O Control Unit). By using an I/O Control Unit, any CJ-series Unit until now can be used.

●Expansion Unit

Click

Controller Link Unit

Ethernet Unit

Any one Unit

CJ-series Expansion Racks (3 Racks max.)

I/O Control Unit

Expansion Cable

Slim NSJ-series Controller Construction

Expansion Unit (optional) One Unit can be mounted. The Unit is only 16 mm thick.
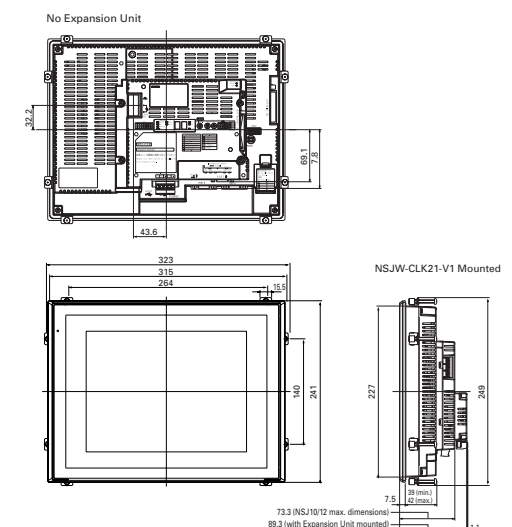
DeviceNet as a standard feature

Controller Section: Controller CPU and DeviceNet The CPU is equivalent to the CJ1G-CPU45H CPU Unit. The serial port is an RS-232C port built into the CPU. The Controller Section is equipped with DeviceNet as a standard feature for I/O.
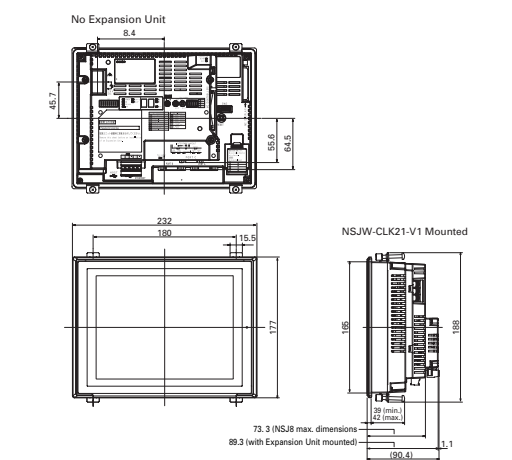
Display Section: Touch Panel NS-series PT The touch panel is based on the NS-V2 PTs. Communications with the Controller Section are performed using the Controller Section's internal bus.

Only **73.3 mm** (for the NSJ8/10/12)

■Dimensions (Unit: mm)

NSJ12-TS0□(B)-G5D/NSJ10-TV0□(B)-G5D

No Expansion Unit

NSJW-CLK21-V1 Mounted

NSJ8-TV0□(B)-G5D

No Expansion Unit

NSJW-CLK21-V1 Mounted

NSJ5-SQ00□(B)-G5D/NSJ5-TQ0□(B)-G5D

No Expansion Unit

NSJW-CLK21-V1 Mounted