Machine Interface
NA Series (-V2)

OMRON

Bringing technology to life

sysmac
always in control

Fast, efficient development with the Sysmac automation platform

One machine control through one connection and one software is how we define the Sysmac automation platform. With this concept, the Sysmac automation platform provides a seamless link between the devices in the machine control network and the field communication network.
The NA Series has been developed based on this concept as well. With Sysmac Studio that manages everything, the NA Series boosts development productivity in programming environment.

One Software

One Integrated Development Environment Software - Sysmac Studio

Your programming environment will be endowed with higher development productivity with Sysmac Studio, which is the centerpiece of the Sysmac Platform to bring together all areas of automation including: logic, motion, vision, safety and visualization.
Controlling everything of the machine through one integrated project, Sysmac Studio speeds up interface development by using each device's design data seamlessly in all devices.
Integrated testing through simulation of programs on controller and the NA Series at the same time makes debugging quicker, reducing the time it takes to launch your machine.

1S AC Servo System

NJ/NX/NY Controller

One Connection

Seamless between communication and machine control networks

EtherCAT®, which links servo drivers, I/O and other field network devices into one, is used as the machine control network to enable fast, precise control.
The machine automation controller comes standard with built-in EtherCAT and EtherNet/IP.
The two networks with one connection purpose and integrated safety are the perfect match between fast real time machine control and data plant management.
Equipped with an EtherNet/IP™ port as standard, the NA Series connects to the system easily.

One Machine Control

Powerful, yet easy to configure

One integrated controller is designed to meet extreme requirements in terms of logic sequence and motion control speed and accuracy.
Standard programming and open networks make it easy to build your automation system.
NA-series transforms machine data into information, shows information and controls devices based on requirements at FA manufacturing sites.

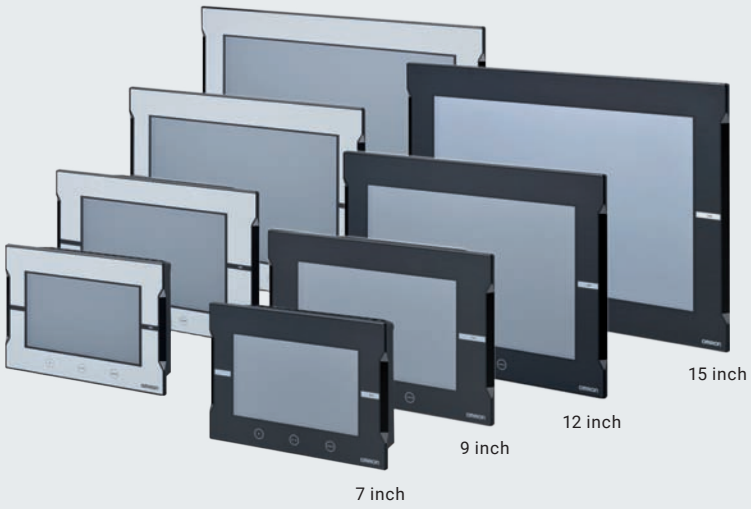
Flexible operation environment with no location/device constraint

The NA Series expands the lineup, functionality and controller compatibility to enable status monitoring and operation not limited by devices or locations.

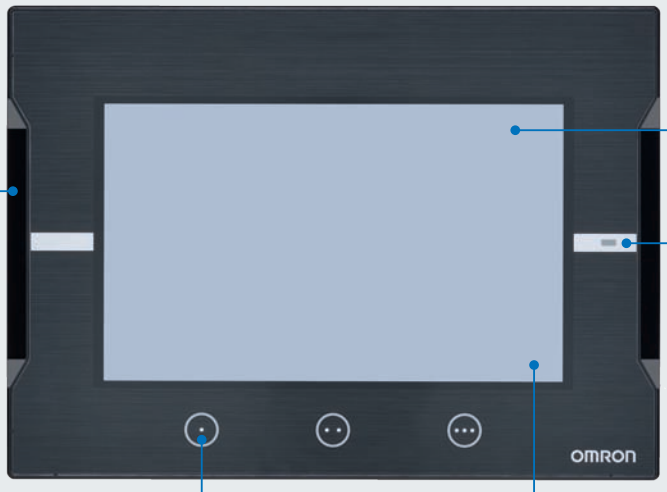
NA5

A range of options, functionality and refined design

Widescreen variations of 7, 9, 12 and 15 inches are available.
Designed for field operability, the NA5-V2 is lighter than the predecessor *1 and has a 16,770k-color high-resolution display and a resistive touch panel working with gloves.
Additionally, design is coordinated to unify the Sysmac products.



About up to **80%** lighter than the predecessor *1



Sysmac cut-out design

High-resolution display
16,770,000 display colors
(24 bit full colors)

RUN LED

Function keys
Programmable to execute specific actions

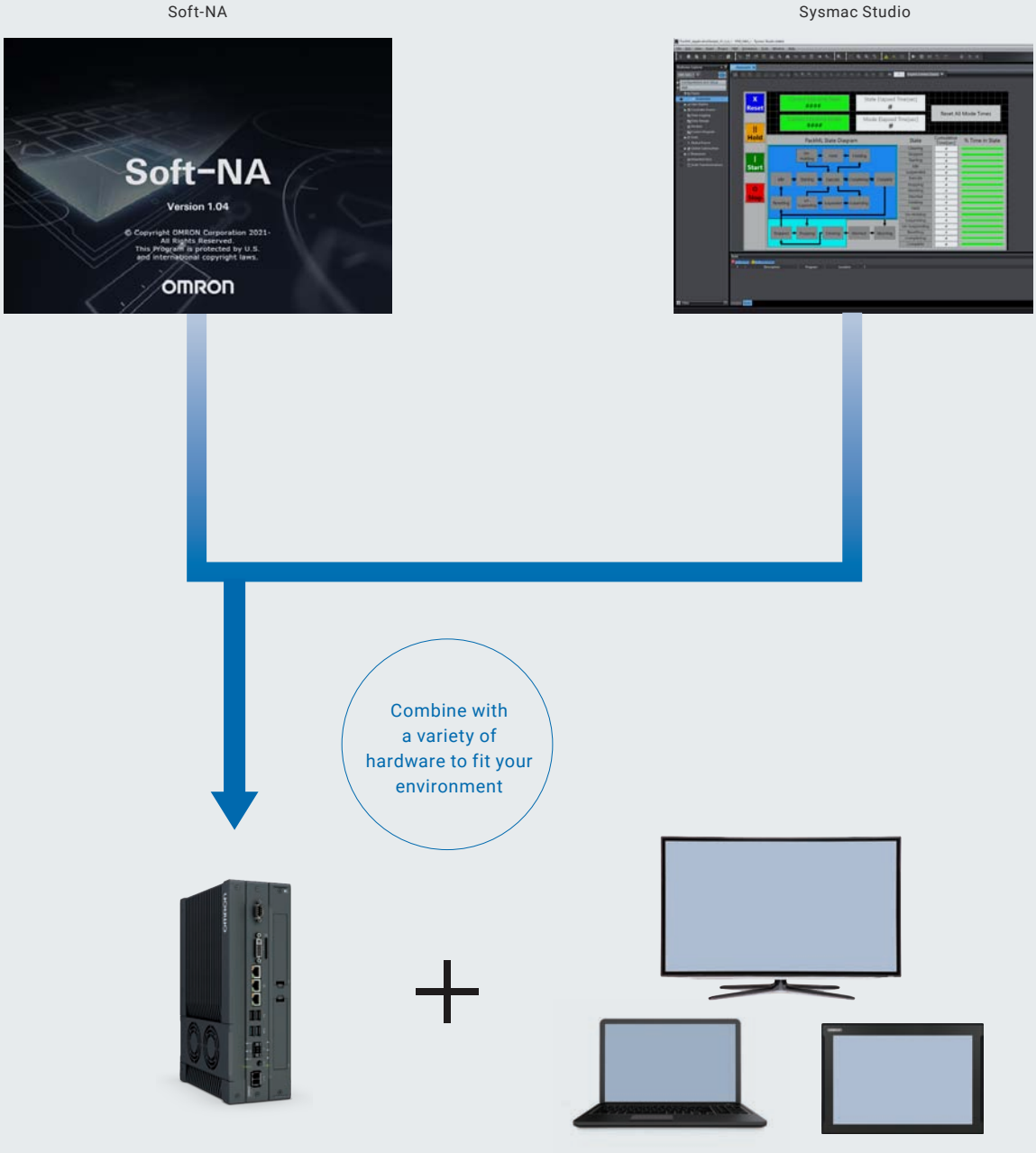
Resistive touch panel, single touch ...ideal for environments where operators wear gloves and water proof is needed

*1. The predecessor refers to the NA5-V1.

Soft-NA

The NA5 works on Windows

Soft-NA provides equivalent functionality to NA5. This Windows application can be used with a wide variety of hardware including a large monitor and environment-resistant monitor.
It is possible to run both your own data collection program and Soft-NA. This allows for visualization of machine data helps reduce downtime, allowing for rapid response to changing user needs.



Powerful support
for your machine design and operation

Inheriting previous features, the NA5-V2 enhances development efficiency and productivity with your machine.
The NA Series keeps advancing to be more useful and easier to use in each phase of machine design and operation.

Machine design

Program advanced functions with a general-purpose language, customize keypads, and create flexible screens with localized settings from a global perspective. Also, debugging is possible together with the controller by Integrated Simulator and this speeds up machine development.

Flexible to your needs

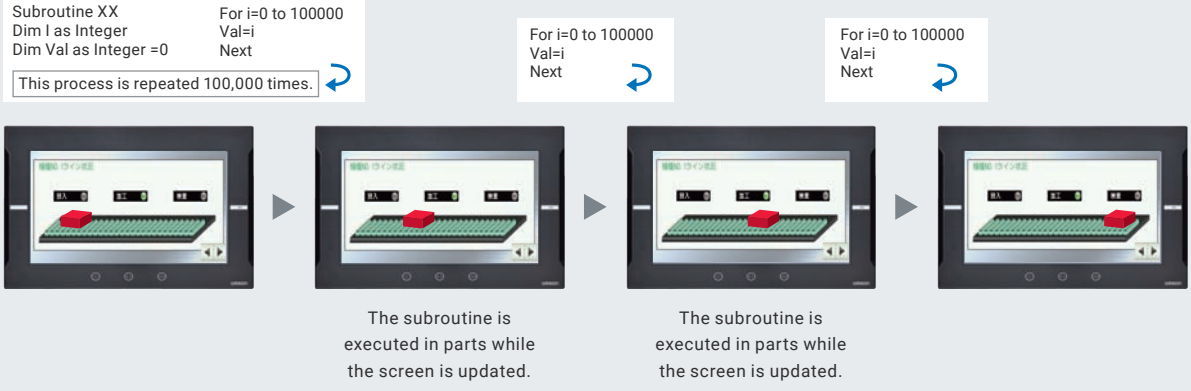
Visual Basic

Visual Basic, which is a popular, easy-to-learn scripting language, is used. With its help that lets you easily program complex process, program advanced functions and tasks that you cannot achieve with standard objects.
Special device communication and information processing built to customer requirements increase customer satisfaction.

```
'IAG Code behind - Add local subroutines for the IAG.

Public Function RunMotor(bStatus As Boolean) As Double
    'start motor at default speed
    mySpeed = 50
    'return current speed
    RunMotor = 50

End Function

Public Function IncreaseSpeed(nIncrement As Integer) As Double
    ' Increase speed by increment if < 1000
    If mySpeed + nIncrement  < 1000 Then
        mySpeed = mySpeed + nIncrement
    Else
        'Otherwise set to top speed
        mySpeed = 1000
    End If
    'Return new speed
    IncreaseSpeed = mySpeed
End Function
```

Executing a subroutine with multiple threads

Some subroutines require time due to repeated processing or waiting time.
Even such a subroutine can be executed during screen update, without affecting operability and visibility.

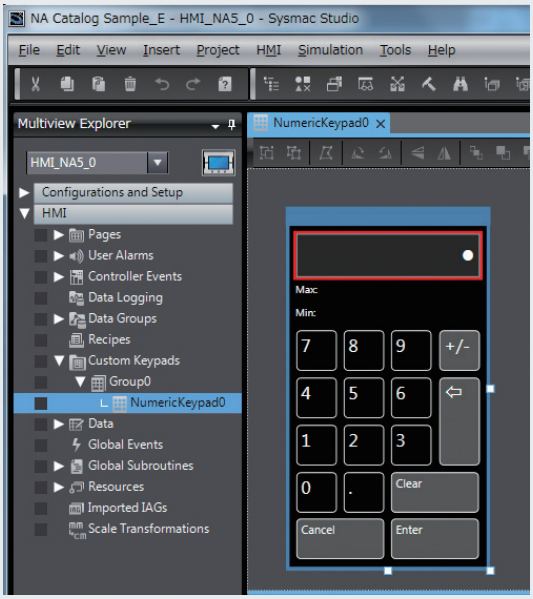


Keypad customization

Create your own keypad suitable for your applications; change the keypad size, choose only the keys you need, and customize the keys to execute specified actions.
Create your own keypad suitable for your applications.

Changing the keypad size
The size can be changed to suit the user's needs.

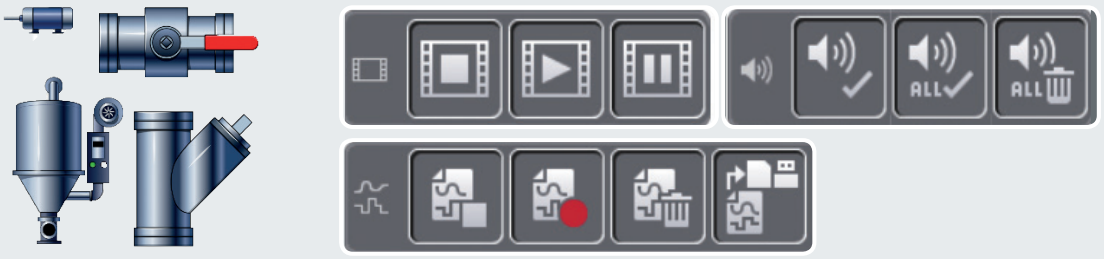
Creating user's own keypad
Only the keys the user needs can be chosen, and the keys to execute specified actions can be customized.



Design Standardization

IAG (Intelligent Application Gadgets)

IAGs structure projects and enhance the efficiency of their reuse. From simple graphics to complex objects, you can make your own collections and share them between projects, like a Function Block. Once created and evaluated, IAGs can be reused in projects, making development faster and easier in securing design quality with less design errors. As with many graphic objects, embed code within an IAG for easier and speedier screen development process.
To extend the functionality of the NA Series, download IAG collections from Omron's website.



Importing and exporting pages

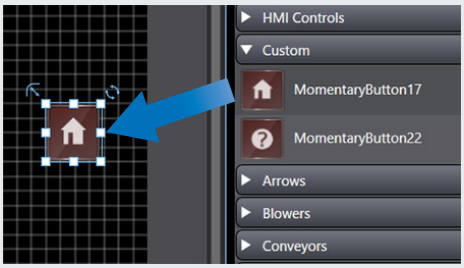
Pages can be saved as library files and reused individually in other projects.

Save and manage as library file

Import to reuse

Custom object registration

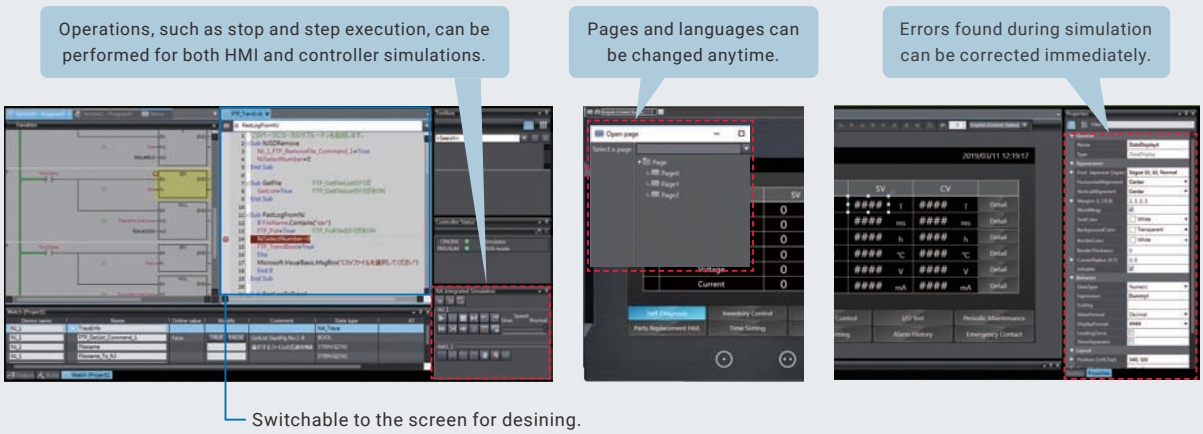
Once specified, objects can be saved in Toolbox.
You don't need to bother opening the page from which to copy objects, but just insert them directly from Toolbox.



Quicker and Easier Debugging

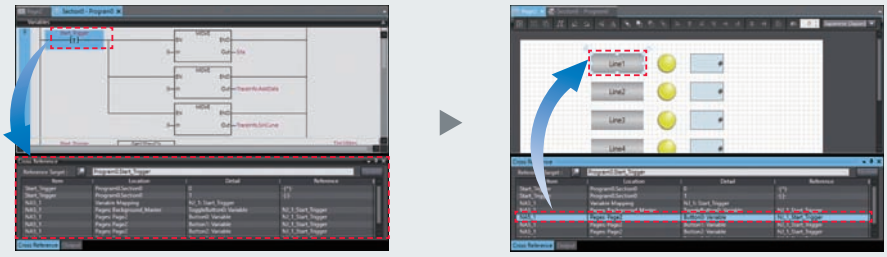
Integrated Simulator

Machine Automation Controller Simulator and NA HMI Simulator can be displayed on one screen.
You can quickly debug the controller program and the HMI application at the same time. And immediate debugging during simulation before building will prevent you from forgetting to correct errors and reduce the frequency of building.



Cross references

The same GUI for the cross reference function as Machine Automation Controller can be used.
When a variable is clicked in the global variable table, a list of the locations where the variable is used is displayed in the Cross Reference Tab Page. By clicking the location, you can access the object, subroutine, or ladder program where the variable is used across the entire project. This makes screen design and debugging quicker and easier.

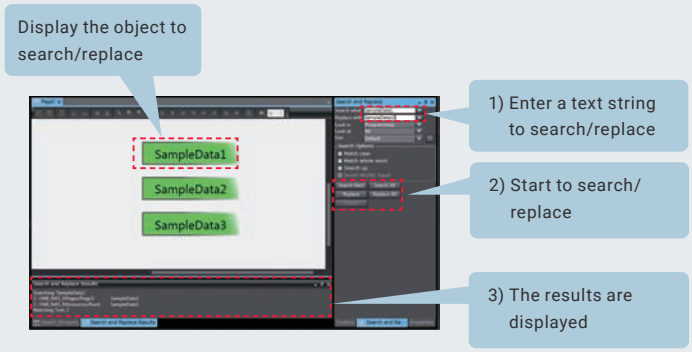


Click the variable in the global variable table to show a list of the locations where the variable is used in the Cross Reference Tab Page.

Click the location to access the object where the variables is used.

Search and Replace

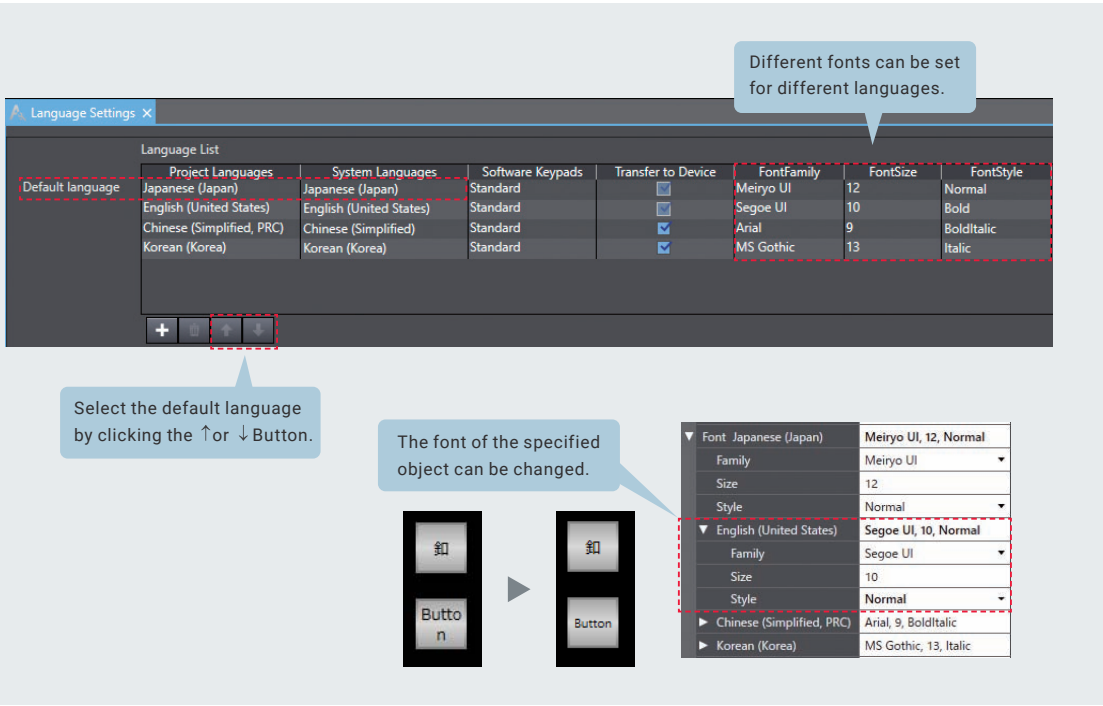
You can search and replace text strings in all subroutines (Visual Basic), objects, and variables within a project. It is quick and easy to edit and debug variable names and switch labels.



Overseas Delivery Support

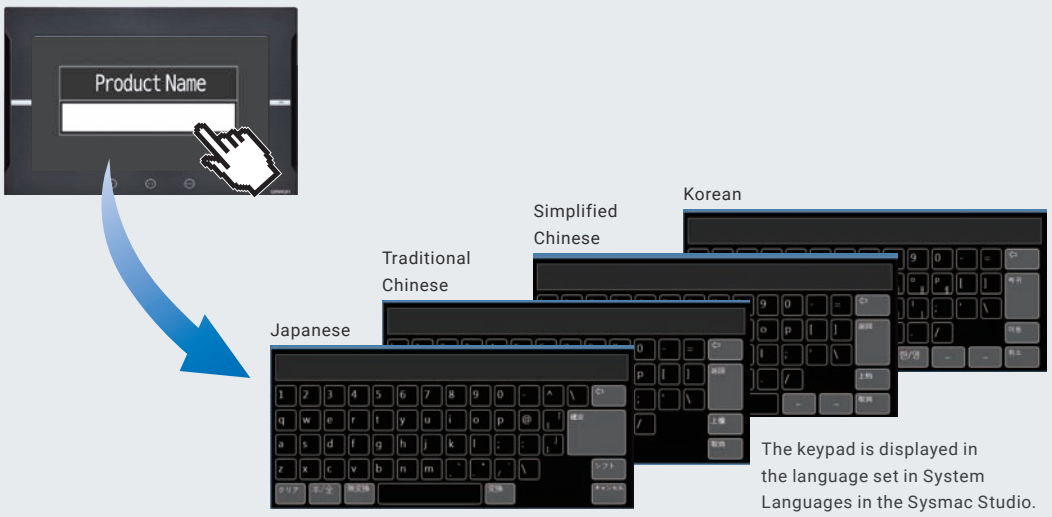
Multilingual text fonts supported

As the system language for the keypad, nine languages including Japanese, simplified Chinese and Korean are supported. More project languages are supported for labels and buttons. You can set font formats, sizes and styles for each language. Select a font suitable for the language that you select.
Also the font of a specified object can be changed according to language.



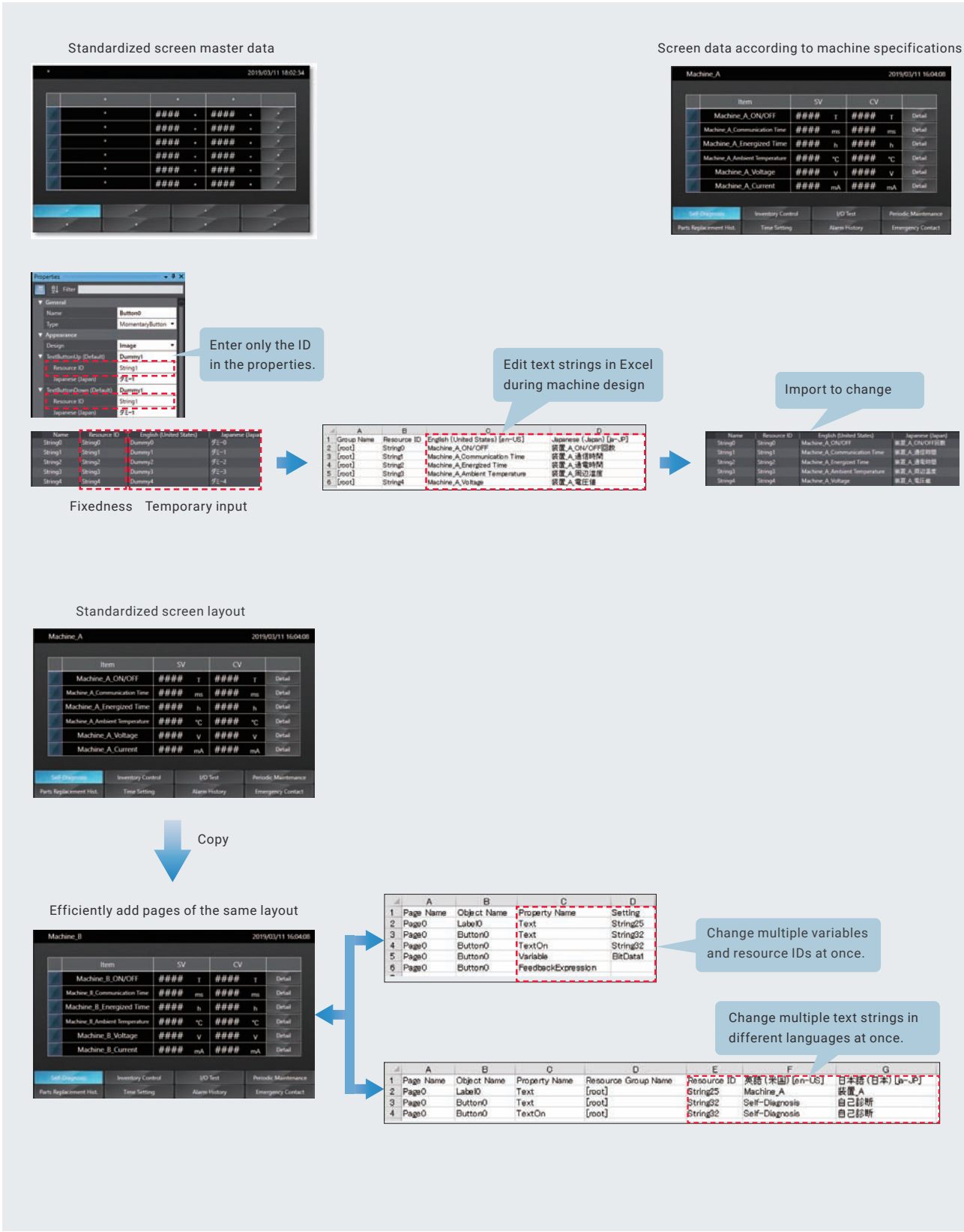
Supporting Asian languages

An Asian language - Japanese, simplified Chinese, traditional Chinese, or Korean - can be selected to use in the keypad of the NA Series.
The keypad language changes automatically when the language is changed in the language settings.
Local languages can be used to input the names of products when new recipes of the food packaging machine are added.



Resource management

In addition to entering a text string directly in properties, you can assign an ID first and enter a text string later. This resource ID-based management enables you to standardize screens first and then enter all text strings edited in Excel to suit machine specifications. Multiple properties can be edited at once in Excel, making resource editing easier, faster, and more precise.



Machine Operation

The NA5-V2 monitors machine status in case of possible trouble so your customers can use your machine with no worry.

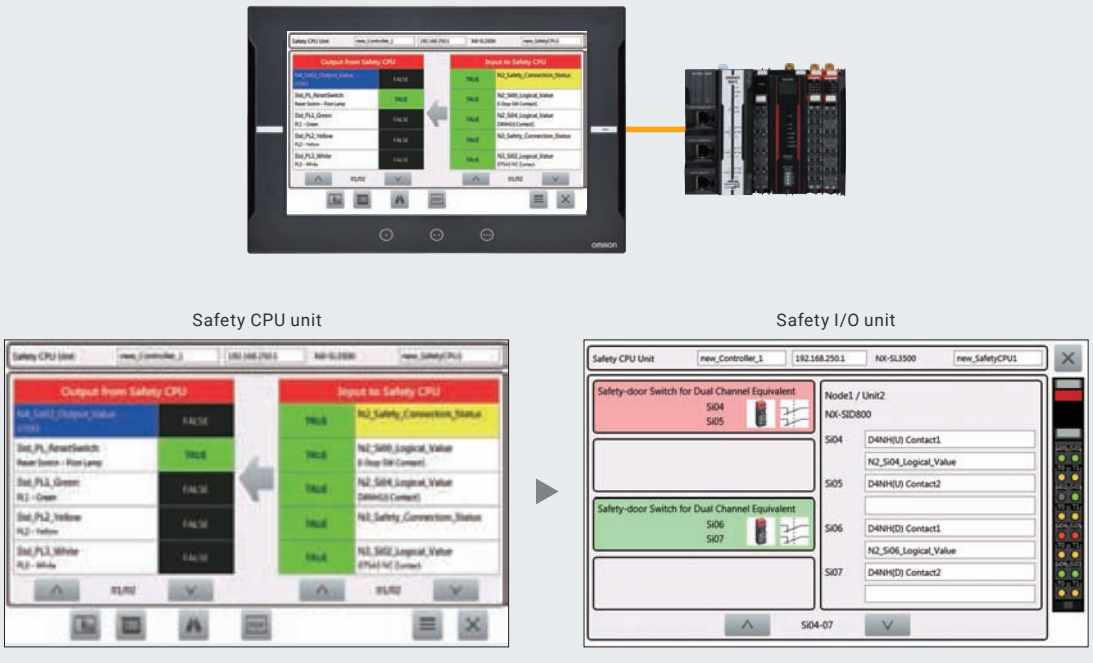
Quick Troubleshooting + No Need of Maintenance

Troubleshooter

The Troubleshooter on the NA Series allows you to directly monitor and release Machine Automation Controller errors and events as well as the user-defined errors and events.

Safety Monitor

Efficiently monitor the entire system status including safety devices.
The exposed variables used in safety programs can be listed. You can easily monitor the safety system status via safety controller output (error) associated with input (cause/condition).
To efficiently show the I/O status of safety systems, the NA5-V2 displays the status of safety CPU units and the detailed information of mapped safety I/O units.



No Need of Battery Replacement

With no use of battery, the NA5-V2 facilitates export formalities. The RTC operates alone for max 10 days and this saves your customers the battery replacement man-hours and control.

NA5-□□□□□□-V1

Battery not connected:
The RTC is backed up
for 5 minutes after power-OFF

Battery connected:
The battery has a life of 5 years at 25°C.
Battery needs replacement within 5 days
after low voltage with the end of life

▶

NA5-□□□□□□-V2

Battery not connected:
The RTC is backed up
for max 10 days
after power-OFF

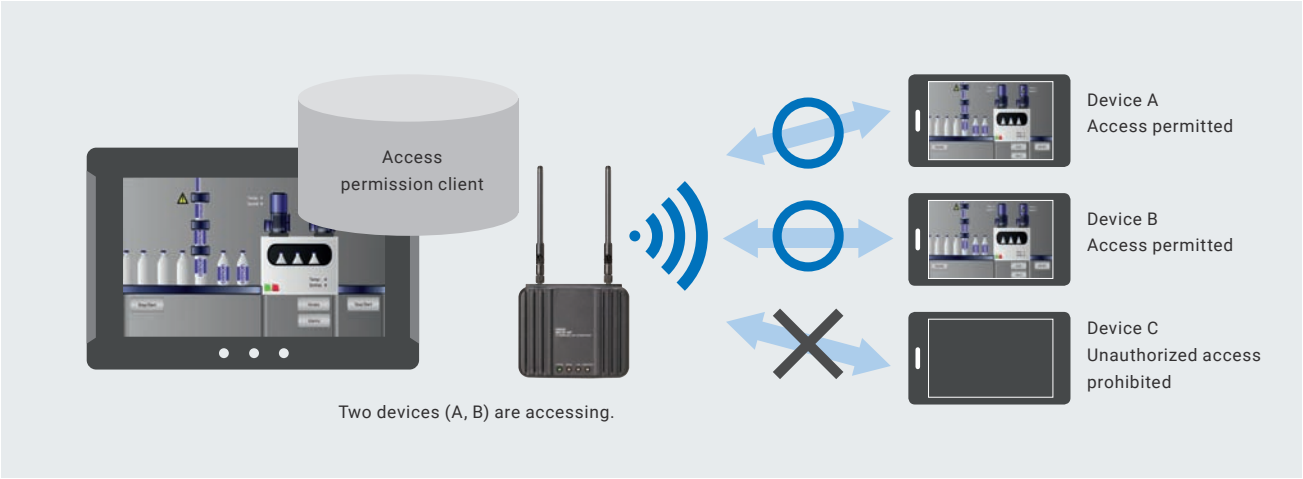
No battery needed before 10 days have passed with power-OFF

Battery connected:
The battery has a life of 5 years at 25°C.
Battery needs replacement within 5 days
after low voltage with the end of life *1

*1. A maximum of 10 days if certain conditions are met
For the conditions, refer to the NA-series Programmable Terminal Hardware (-V2) User's Manual (V128).

Remote access

You can view and operate the HMI installed at production sites from your tablet using Ethernet or WiFi.
The access of remote devices can be managed and limited with white list filtering (IP/MAC addresses) to prevent accidental operation and information leakage while securing accessibility.

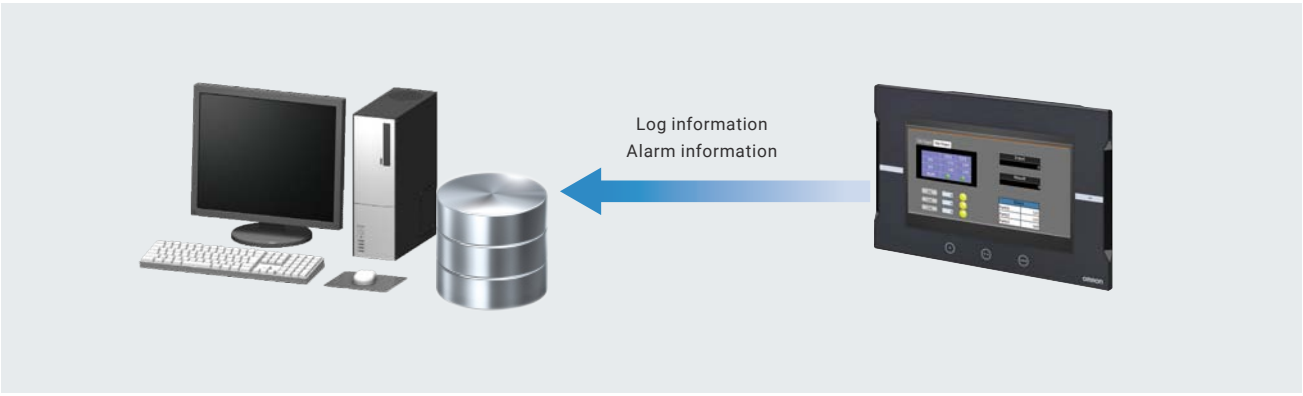


User Accounts & Access Control

The NA Series can be configured to specific staff, with multi access levels with password protection.
This ensures authorised people interact with the machine.

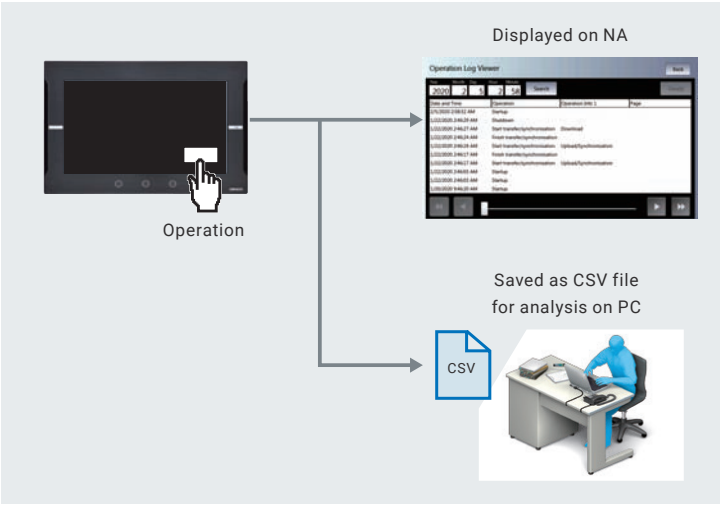
FTP

Retrieve log/alarm information stored in the NA Unit's memory card or USB memory device from an office PC. (FTP server function)
You can send log information from the NA to an external FTP server. (FTP client function)



Operation Log

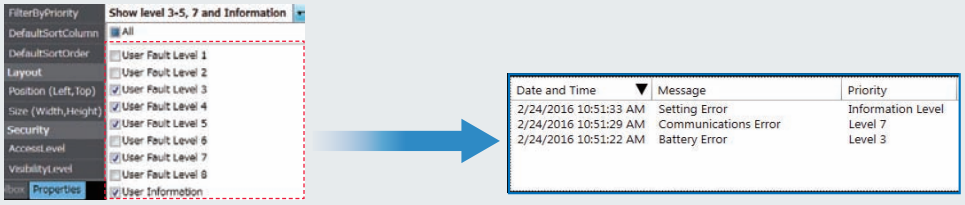
The system events that the NA Series detects and the operations that operators perform on the HMI can be logged.
The logs can be displayed on the NA Series, and can also be saved as CSV files to display them on your PC.
You can see who and when did what in a chronological order, helping you analyze errors.



Alarm

You can “sort” alarms by the preset item and “filter” by any keyword.
The error location can be quickly identified from a large number of alarms.

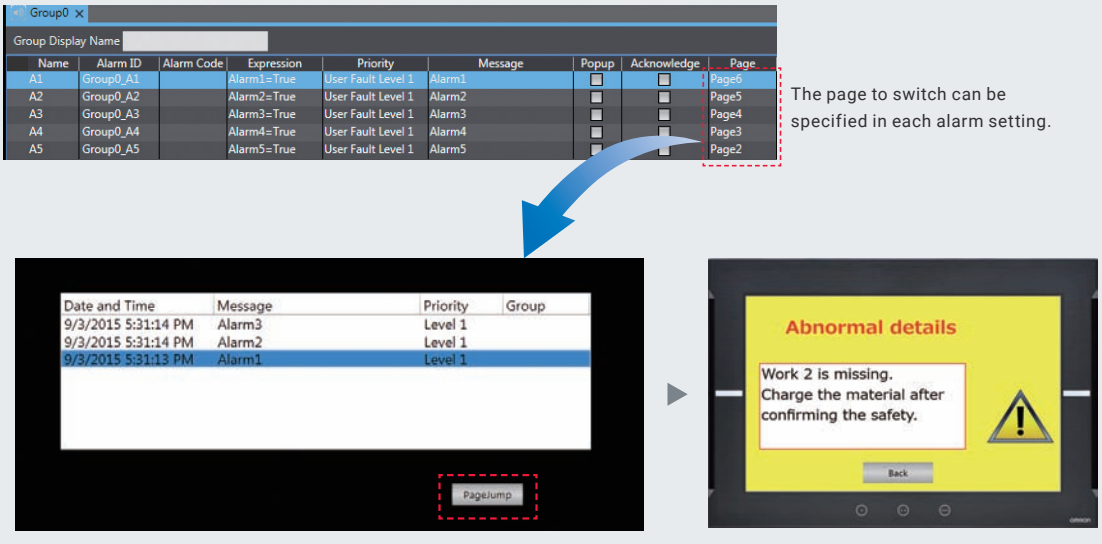
Example: Filtering



Select the fault level to display.

The filtered alarms are displayed.

The page to switch can be specified in each alarm setting.
When an alarm occurs, you can check the troubleshooter screen by selecting the displayed alarm.



Select the alarm and then click the Page Jump Button.

The specified page is displayed.

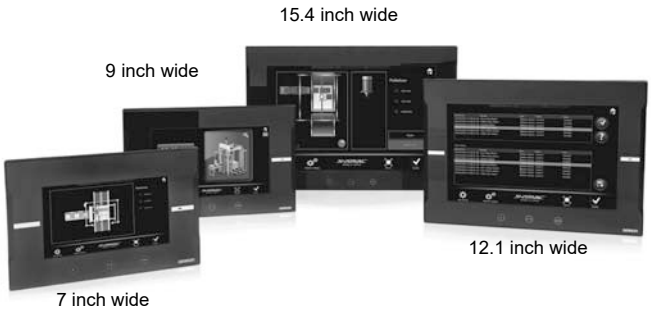
Programmable Terminal

NA series

Bringing technology to life

The NA-series Programmable Terminal transforms machine data into information, shows information and controls devices based on requirements at FA manufacturing sites.

The NA Series, together with the NJ/NX/NY-series Controller and the Automation Software Sysmac Studio, allows you to simply and flexibly create sophisticated user interfaces to suit your machines.

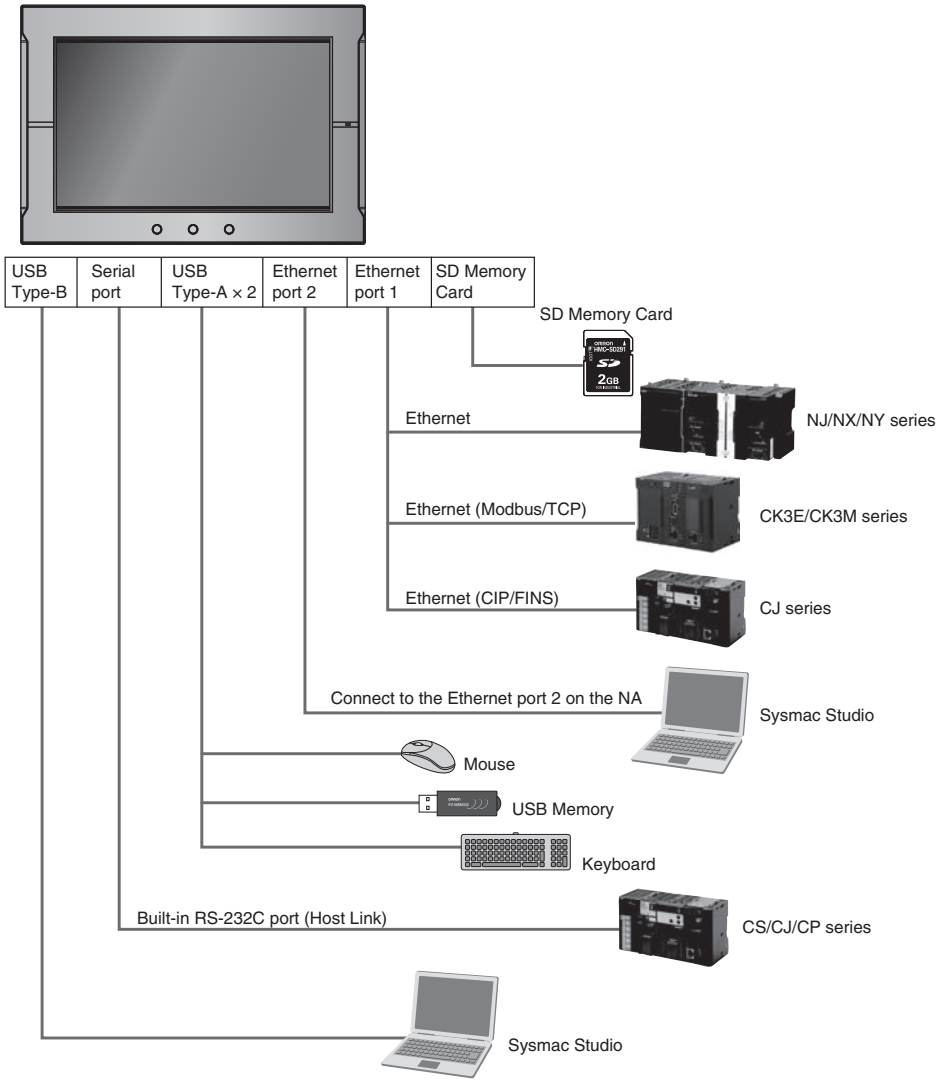


Features

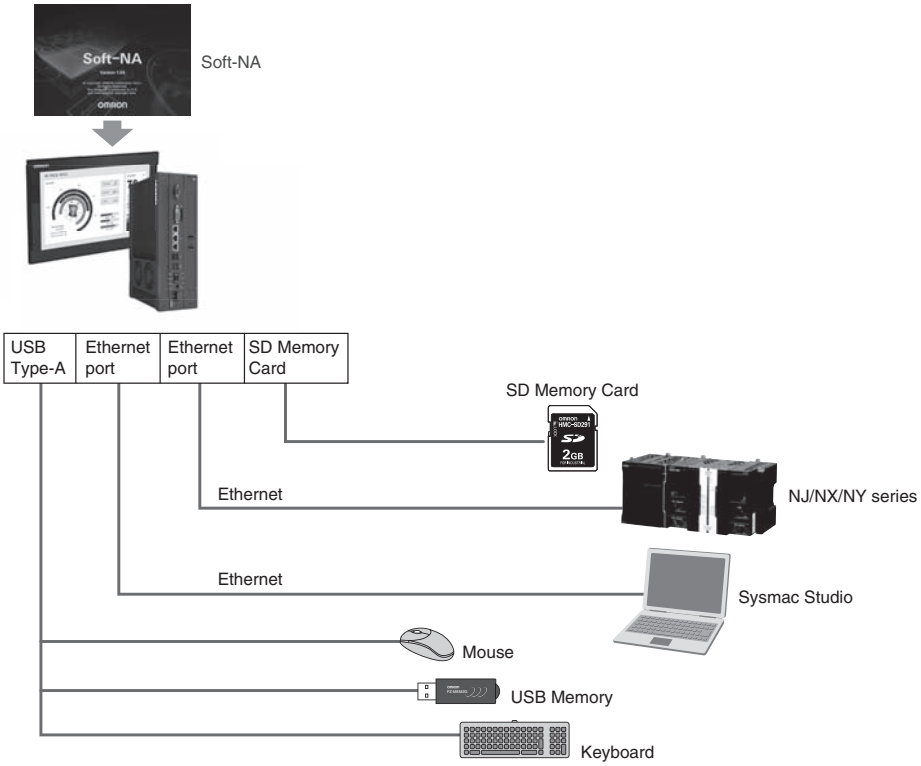
- Widescreen in all models: 7, 9, 12, and 15 inches
- More than 16 million color display for all models and 1280 x 800 high resolution display for the 12 and 15-inch models
- Multimedia including video and PDF
- 2 Ethernet ports capable of simultaneous access from both the control device and maintenance segments by separating the segments
- Sysmac Studio providing an Integrated Development Environment
  NJ/NX/NY variables sharing in the NA project and NA application testing with the NJ/NX/NY program via the Simulator to reduce development time
- Many security features including operation authority settings and execution restrictions with IDs
- Microsoft Visual Basic for versatile, flexible and advanced programming
- Software providing NA5-equivalent functionality on a PC or panel PC

System configuration

NA5



Soft-NA


Soft-NA
Soft-NA
USB Type-A
Ethernet port
Ethernet port
SD Memory Card
SD Memory Card
Ethernet
NJ/NX/NY series
Ethernet
Sysmac Studio
Mouse
USB Memory
Keyboard

Ordering Information

NA5-□W

Product name	Specifications	Model
NA5-15W	15.4 inch wide screen, TFT LCD, 16,770,000 colors (24 bit full color), 1280 × 800 dots, Frame color : Black	NA5-15W101B-V2
	15.4 inch wide screen, TFT LCD, 16,770,000 colors (24 bit full color), 1280 × 800 dots, Frame color : Silver	NA5-15W101S-V2
NA5-12W	12.1 inch wide screen, TFT LCD, 16,770,000 colors (24 bit full color), 1280 × 800 dots, Frame color : Black	NA5-12W101B-V2
	12.1 inch wide screen, TFT LCD, 16,770,000 colors (24 bit full color), 1280 × 800 dots, Frame color : Silver	NA5-12W101S-V2
NA5-9W	9 inch wide screen, TFT LCD, 16,770,000 colors (24 bit full color), 800 × 480 dots, Frame color : Black	NA5-9W001B-V2
	9 inch wide screen, TFT LCD, 16,770,000 colors (24 bit full color), 800 × 480 dots, Frame color : Silver	NA5-9W001S-V2
NA5-7W	7 inch wide screen, TFT LCD, 16,770,000 colors (24 bit full color), 800 × 480 dots, Frame color : Black	NA5-7W001B-V2
	7 inch wide screen, TFT LCD, 16,770,000 colors (24 bit full color), 800 × 480 dots, Frame color : Silver	NA5-7W001S-V2

Options

Product name	Specifications		Model
High-pressure Waterproof Attachment ✻1	This metal frame is for high-pressure waterproofing. Install it to conform to UL Type 4X standards. UL Type 4X is the rating for high-pressure wash-down applications with a flow rate of 246 liter/min.		NA-9WATW01
			NA-7WATW01
Panel Mounting Bracket ✻1	2 units provided. To comform to UL Type 4X standard, 2 sets are required for NA5-15W□□□□-V2 and 1 set is required for NA5-12W□□□□-V2.		NA-ATT01
SD memory card	2 GB		HMC-SD292
	4 GB		HMC-SD492
	16 GB		HMC-SD1A2
USB Memory	2 GB		FZ-MEM2G
	16 GB		FZ-MEM16G
Replacement Battery	Battery life: 5 years (at 25°C).		CJ1W-BAT01
RS-232C Connecting Cable	D-sub, 9-pin plug to D-sub, 9-pin plug	Length: 2m	XW2Z-200T
		Length: 5m	XW2Z-500T
	D-sub, 9-pin plug to discrete wire	Length: 2m	XW2Z-200T-3
		Length: 5m	XW2Z-500T-3
Anti-reflection Sheets	For the NA5-15W. Attach a Sheet to the screen to protect against diffused reflections and dirt. The entire Sheet is colorless and transparent. Five Sheets are provided in one set.		NA-15WKBA04-V2
	For the NA5-12W. Attach a Sheet to the screen to protect against diffused reflections and dirt. The entire Sheet is colorless and transparent. Five Sheets are provided in one set.		NA-12WKBA04-V2
	For the NA5-9W. Attach a Sheet to the screen to protect against diffused reflections and dirt. The entire Sheet is colorless and transparent. Five Sheets are provided in one set.		NA-9WKBA04-V2
	For the NA5-7W. Attach a Sheet to the screen to protect against diffused reflections and dirt. The entire Sheet is colorless and transparent. Five Sheets are provided in one set.		NA-7WKBA04-V2

✻1. Do not use high-pressure waterproof attachments with NA5-15W□□□□-V2/NA5-12W□□□□-V2. If you use a High-pressure waterproof attachment, there is a risk of water entry, which may cause severe equipment damage.
To make NA5-15W□□□□-V2/NA5-12W□□□□-V2 conform to UL Type 4X, mount with additional mounting brackets.

Soft-NA

Product name	Specifications	Number of licenses	Media	Model
Soft-NA	The Soft-NA is software that displays information on FA manufacturing sites while providing safety, reliability, and maintainability as an industrial display on which operations can be performed as necessary.	- (Media only)	DVD	**NA-RTSM**
		1 license	USB dongle	**NA-RTLD01**
		3 licenses		**NA-RTLD03**
		10 licenses		**NA-RTLD10**

System Requirements

■When using a commercially-available PC

Item		Requirement	
OS		Windows 10 Pro Version 1903 or later 64 bit	Windows 11 Pro Version 24H2 or later
Processor		Intel Atom® x5-E3940 equivalent or higher processor ✻1	Intel Celeron® N4000 equivalent or higher processor ✻1
RAM		4 GB or more	
Free space in the hard drive necessary for installation		1 GB or more	
Optical disk drive		DVD-ROM drive ✻2	
Communication port	USB	USB2.0 Type-A ✻3	
	LAN	Ethernet ✻3	

✻1.ARM-based processors are not supported.
✻2. It is required when installing using NA-RTSM.
✻3. At least one port is required. The number of required ports varies depending on the method of use.

■When using the industrial PC platform NY-series

The supported models are shown below.

- NYB□□-□□3□□ ✻1
- NYB□□-□□4□□ ✻1
- NYP□□-□□3□□-□□□□□□□□ ✻1
- NYP□□-□□4□□-□□□□□□□□ ✻1
- NYP□□-□□5□□-□□□□□□□□ ✻1
- NYE□□-□□N□□-□□□□□□□□ ✻1
- NY5□□-1□00-□□□44□□□□ ✻1

✻1. Need to be supported only when used on the OS installed during factory dispatch.

Automation Software Sysmac Studio

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).

USB Cable

Product name	Specifications
USB Cable	Use commercially available USB cable. Specifications: USB 2.0 cable (A connector - B connector), 5.0 m max.

Recommended Network Devices

Industrial Switching Hubs

Product name	Functions	No. of ports	Accessories	Current consumption (A)	Model
Industrial Switching Hubs	Quality of Service (QoS): EtherNet/IP control data priority 10/100BASE-TX, Auto-Negotiation	5	Power supply connector	0.07	W4S1-05D

Recommended Ethernet Communications Cables

Use STP (shielded twisted-pair) cable of category 5 or higher

Product name		Recommended manufacturer	Model
Wire Gauge and Number of Pairs: AWG24, 4-pair Cable	Cables	Kuramo Electric Co.	KETH-SB
	RJ45 Connectors	Panduit Corporation	MPS588

Note: 1. We recommend you to use above cable and RJ45 Connectors together.

Performance Specifications

Display

Item		Specification			
		NA5-15W□□□□-V2	NA5-12W□□□□-V2	NA5-9W□□□□-V2	NA5-7W□□□□-V2
Display panel ✻1	Display device	TFT LCD			
	Screen size	15.4 inches	12.1 inches	9.0 inches	7.0 inches
	Resolution	1,280 × 800 dots (horizontal × vertical)		800 × 480 dots (horizontal × vertical)	
	Colors	16,770,000 colors (24 bit full colors)			
	Effective display area	331 × 207 mm (horizontal × vertical)	261 × 163 mm (horizontal × vertical)	197 × 118 mm (horizontal × vertical)	152 × 91 mm (horizontal × vertical)
	View angles	Left: 60°, Right: 60°, Top: 60°, Bottom: 60°			
Backlight ✻2	Life	50,000 hours min. ✻3			
	Brightness adjustment	200 levels			
	Type	LED			
Front panel indicators ✻4	RUN	Lit green: Normal operation Lit red: Error			

✻1. There may be some defective pixels in the display. This is not a fault as long as the numbers of defective light and dark pixels fall within the following standard ranges.

Model	Standard range
NA5-15W□□□□-V2 NA5-12W□□□□-V2 NA5-9W□□□□-V2 NA5-7W□□□□-V2	Number of light and dark pixels: 10 or less. (There must not be 3 consecutive light/dark pixels.)

✻2. The backlight can be replaced at an OMRON maintenance base.
✻3. This is the estimated time before brightness is reduced by half at room temperature and humidity. The life expectancy is drastically shortened if Programmable Terminal is used at high temperatures.
✻4. The brightness of the front panel indicators is also adjustable when you adjust the brightness of the backlight.

Operation

Item	Specification			
	NA5-15W□□□□-V2	NA5-12W□□□□-V2	NA5-9W□□□□-V2	NA5-7W□□□□-V2
Touch panel	Method: Analog resistive membrane type			
	Life: 1,000,000 operations			
Function keys ✻1	3 inputs (capacitance inputs)			

✻1. Each function key has blue indicator. The brightness of the function key indicators is also adjustable when you adjust the brightness of the backlight.

Data Capacity

Item	Specification			
	NA5-15W□□□□-V2	NA5-12W□□□□-V2	NA5-9W□□□□-V2	NA5-7W□□□□-V2
User data capacity	256 MB			

External Interfaces

Item		Specifications (Same for all models.)
Ethernet ports	Applications	Port 1: Connecting to anything other than the Sysmac Studio, e.g., device connections and VNC clients Port 2: Connecting to the Sysmac Studio in addition to the applications of port 1.
	Number of ports	2 ports
	Compliant standards	IEEE 802.3i (10BASE-T), IEEE 802.3u (100BASE-TX), and IEEE 802.3ab (1000Base-T)
	Transmission media	Shielded twisted-pair (STP) cable: Category 5, 5e, or higher
	Transmission distance	100 m
	Connector	RJ-45 8P8C modular connector
USB Type-A ports ✻1 ✻2	Applications	USB Memory Device, keyboard, or mouse
	Number of ports	2 ports
	Compliant standards	USB 2.0
	Transmission distance	5 m max.
	Connector	Type-A connector
USB Type-B port ✻1	Applications	Sysmac Studio connection
	Number of ports	1 port
	Compliant standards	USB 2.0
	Transmission distance	5 m max.
	Connector	Type-B connector
Serial port	Applications	Device Connection
	Number of ports	1 port
	Compliant standards	RS-232C
	Transmission distance	15 m max.
	Connector	D-DUB 9-pin female connector
SD Memory Card slot	Applications	To transfer or store the project or to store log data.
	Number of slots	1 slot
	Compliant standards	SD/SDHC

✻1. Connection to all USB 2.0-compliant devices is not guaranteed.
✻2. Use a USB memory for temporary applications such as transferring data.

General Specifications

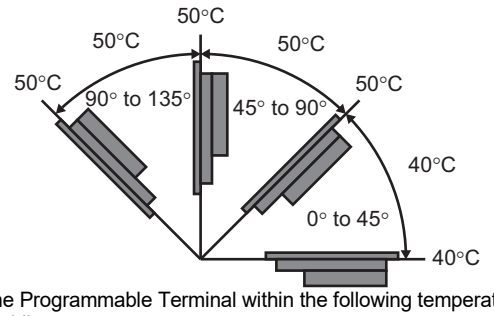
Item	Specification			
	NA5-15W□□□□-V2	NA5-12W□□□□-V2	NA5-9W□□□□-V2	NA5-7W□□□□-V2
Rated supply voltage	24 VDC			
Allowable power supply voltage range	19.2 to 28.8 VDC (24 VDC ±20%)			
Allowable momentary power interruption time	Operation for momentary power interruption is not specified.			
Power consumption	29 W max.	28 W max.	23 W max.	19 W max.
Inrush current ✻1	During a cold start at 24 VDC input and room temperature 4.0 A max. 30 μs max. ✻2			
Ambient operating temperature	0 to 50°C ✻3 ✻4			
Ambient storage temperature	–20 to +60°C ✻5			
Ambient operating humidity	10 to 90% ✻4 Must be no condensation.			
Atmosphere	Must be free from corrosive gases.			
Pollution degree	2 or less: Meets IEC 61010-2-201.			
Noise immunity	2 kV on power supply line (Conforms to IEC 61000-4-4.)			
Vibration resistance (during operation)	5 to 8.4 Hz with 3.5 mm half amplitude and 8.4 to 150 Hz with 9.8 m/s^2 for 100 minutes each in X,Y, and Z directions (Time coefficient of 10 minutes × coefficient factor of 10 = total time of 100 min.)			
Shock resistance (during operation)	Conforms to IEC 60028-2-27. 147 m/s^2 3 times each in X, Y, and Z directions			
Dimensions	414 × 287 × 69 mm (W × H × D)	333 × 240 × 69 mm (W × H × D)	283 × 185 × 69 mm (W × H × D)	220 × 160 × 69 mm (W × H × D)
Panel cutout dimensions	392^{+1}_{0} × 268^{+1}_{0} mm (horizontal × vertical) Panel thickness: 1.6 to 6.0 mm ✻6	310^{+1}_{0} × 221^{+1}_{0} mm (horizontal × vertical) Panel thickness: 1.6 to 6.0 mm ✻6	261^{+1}_{0} × 166^{+1}_{0} mm (horizontal × vertical) Panel thickness: 1.6 to 6.0 mm ✻6	$197^{+0.5}_{0}$ × $141^{+0.5}_{0}$ mm (horizontal × vertical) Panel thickness: 1.6 to 6.0 mm ✻6
Weight	2.6 kg max.	1.9 kg max.	1.3 kg max.	1.0 kg max.
Degree of protection	IP65 oil-proof type, UL Type 4X ✻6 (Front-panel controls) To reinstall the NA Unit in a panel, contact your OMRON representative for replacement of the rubber packing.			
Case	Plastic			
Battery life ✻7	Battery life: 5 years at 25°C The RTC will be backed up for 5 days after the battery runs low. The RTC will be backed up by a super capacitor for 5 minutes after removing the old battery. (This assumes that the power is first turned ON for at least 5 minutes and then turned OFF.)			
RTC	Ambient temperature 25°C: Maximum error of ±90 seconds per month			
International standards ✻8	UL61010-2-201/CSA C22.2 NO.61010-2-201: 14 ✻9 EMC Regulations (2004/108/EC) EN61131-2: 2007 Shipbuilding standards NK IP65, UL Type 4X ✻6 (Front-panel controls) UL121201, 9th Edition/CSA C22.2 NO.213-2017 UKCA KC KN61131-2 2018 RCM EN61000-6-4: 2007+A1: 2011			

✻1. The inrush current value may vary depending on the conditions. When selecting the fuse, circuit breaker, and external power supply unit, carefully think about the operating conditions and select devices with sufficientmargins for the characteristics and capacity.

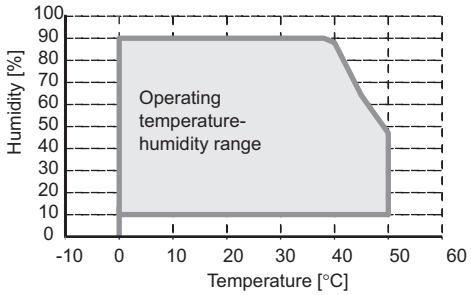
✻2. The inrush current is dependent on the input voltage. This current is approximately 5.5 A at 28.8 VDC.

✻3. The ambient operating temperature is subject to the following restrictions, depending on the mounting angle.

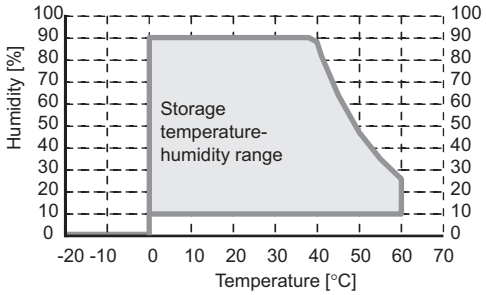
- The ambient operating temperature is 0° to 40°C when the mounting angle is 0° or more and less than 45° to the horizontal.
- The ambient operating temperature is 0° to 50°C when the mounting angle is 45° or more and 90° or less to the horizontal.
- The ambient operating temperature is 0° to 50°C when the mounting angle is 90° or more and 135° or less to the horizontal.



✻4. Use the Programmable Terminal within the following temperature and humidity ranges.



✻5. Store the Programmable Terminal within the following temperature and humidity ranges.



✻6. To conform to UL Type 4X standards, you may have to use the NA-□WATW01 High-pressure Waterproof Attachment (sold separately). When the NA-□WATW01 High-pressure Waterproof Attachment is used, the panel thickness is between 1.6 to 4.5 mm.

✻7. The battery is sold separately. Even when a battery is not installed, the RTC can be backed up by a built-in capacitor for a maximum of 10 days.

✻8. Check with your OMRON representative or refer to the following OMRON website for the latest information on the applicable standards for each model: www.ia.omron.com.

✻9. Use power supply Class 2 to conform to UL Standards.

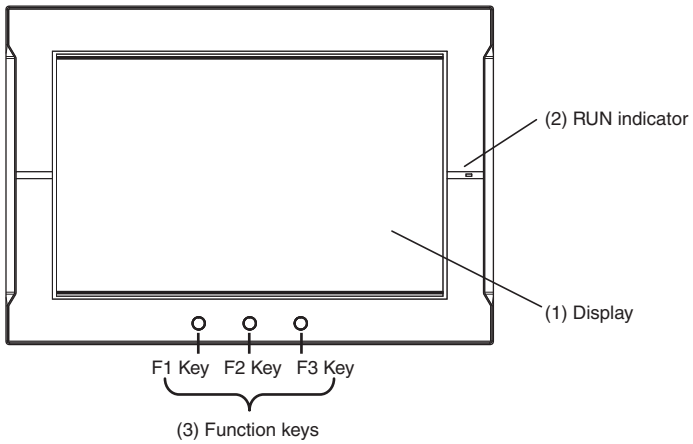
Version Information

NA series and Programming Devices

NA series		Corresponding unit versions/version	
Model	NA system version	NJ/NX/NY-series Controller NX701-□□□□ NY512-□□□□ NX502-□□□□ NY532-□□□□ NX102-□□□□ NJ501-□□□□ NX1P2-□□□□ NJ301-□□□□ NX-CSG320 NJ101-□□□□	Sysmac studio
NA5-□□□□□□-V2	1.18 or later	NX502: 1.60 or later	1.64 or higher
		NX-CSG320: 1.00 or later	
		NX102: 1.30 or later	
		NX1P2: 1.13 or later NY512: 1.12 or later NY532: 1.12 or later NX701: 1.10 or later NJ101: 1.10 or later NJ501: 1.01 or later NJ501 Database Connection: 1.05 or later NJ301: 1.01 or later	

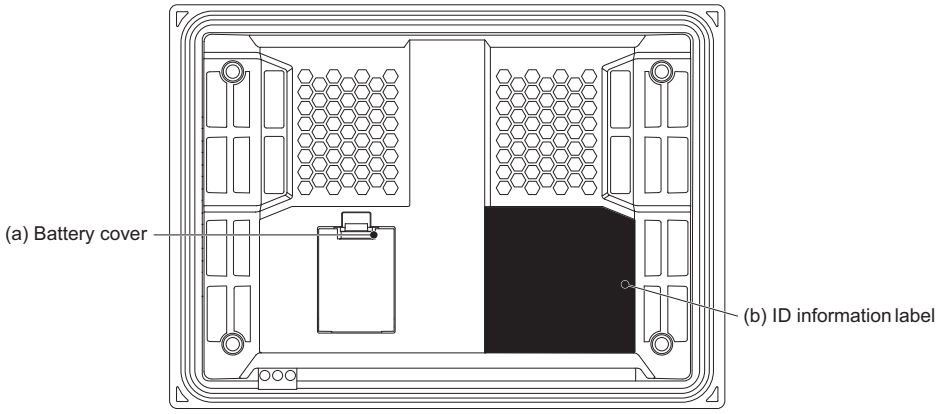
Components and Functions

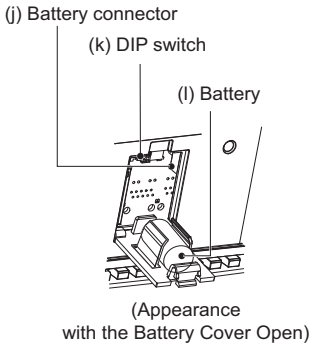
Front Panel



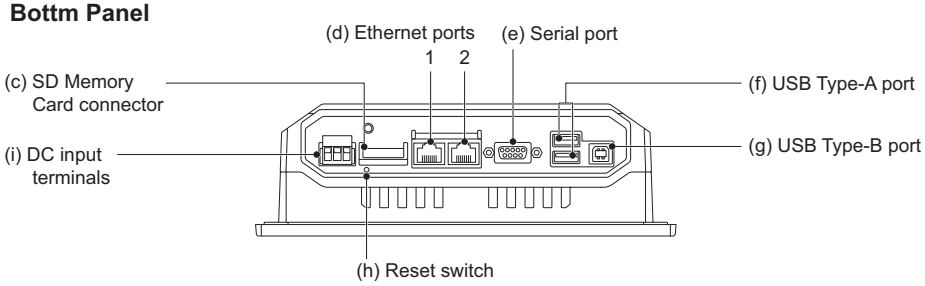
No.	Name	Description
(1)	Display	The entire display is a touch panel that also functions as an input device.
(2)	RUN indicator	The status of the indicator changes according to the status of the NA.
(3)	Function keys	There are three function keys: F1, F2, and F3. : F1 Key, : F2 Key, : F3 Key You can use the function keys as execution conditions for the actions for global or page events. You can also use the function keys for interlocks.

Back Panel





Bottm Panel



No.	Name	Description
(a)	Battery cover	Open this cover to replace the Battery.
(b)	ID information label	You can check the ID information of the NA Unit.
(c)	SD Memory Card connector	Insert an SD Memory Card here.
(d)	Ethernet port 1	Connect a device other than the Sysmac Studio.
	Ethernet port 2	Connect mainly the Sysmac Studio.
(e)	Serial port	Connect the connected device
(f)	USB Type-A port	Connect this port to a USB Memory Device.
(g)	USB Type-B port	Connect the Sysmac Studio or other devices.
(h)	Reset switch	Use this switch to reset the NA Unit.
(i)	DC input terminals	These are the power supply terminals. Connect the accessory power supply connector and supply power.
(j)	Battery connector	Connect the connector on the backup Battery here.
(k)	DIP switch	Used for system recovery. (The DIP switch is on a PCB that is accessed by opening the Battery cover.) In other cases, do not change any of the factory settings of the pins on the DIP switch.
(l)	Battery	This is the battery to backup the RTC in the NA Unit.

Supported Devices

NA5-□□□□□□-V2

Manufacturer	Models	Connection method	Communications driver
OMRON	NX102-□□□□ NX1P2-□□□□ NX502-□□□□ NX701-□□□□ NJ501-□□□□ NJ301-□□□□ NJ101-□□□□ NY512-□□□□ NY532-□□□□ NX-CSG320	Built-in EtherNet/IP port	Ethernet
	NX502-□□□□	NX-EIP201	
	CJ2H-CPU64/65/66/67/68-EIP CJ2M-CPU31/32/33/34/35	Built-in EtherNet/IP port	CIP Ethernet
	CJ2H-CPU64/65/66/67/68 CJ2M-CPU11/12/13/14/15	CJ1W-EIP21S	
	CJ2H-CPU64/65/66/67/68-EIP CJ2M-CPU31/32/33/34/35	CJ1W-EIP21	
	CJ2H-CPU64/65/66/67/68-EIP CJ2M-CPU31/32/33/34/35	Built-in EtherNet/IP port	FINS Ethernet
	CJ1H-CPU65H/66H/67H CJ1H-CPU65H/66H/67H-R CJ1G-CPU42H/43H/44H/45H CJ1M-CPU11/12/13/21/22/23 CJ2H-CPU64/65/66/67/68(-EIP) CJ2M-CPU11/12/13/14/15 CJ2M-CPU31/32/33/34/35	CJ1W-ETN21 CJ1W-EIP21	
	CJ2H-CPU64/65/66/67/68 CJ2M-CPU11/12/13/14/15	CJ1W-EIP21S	
	CS1G-CPU42H/43H/44H/45H CS1H-CPU63H/64H/65H/66H/67H	CS1W-ETN21 CS1W-EIP21	
	CS1G-CPU43H/44H/45H CS1H-CPU63H/64H/65H/66H/67H	CS1W-EIP21S	
	CS1D-CPU65H/67H/67HA/68HA/44SA/67SA	CS1W-ETN21 CS1D-ETN21D CS1W-EIP21 CS1W-EIP21S	
	CP1L-EL□□□□-□ CP1L-EM□□□□ CP2E-N□□D□-□	Built-in Ethernet port	
	CP1H-□□□□□-□ CP1L-L□□□□-□	CP1W-CIF41	
	CK3E-1□10 CK3M-CPU1□1	Built-in Ethernet port	Modbus/TCP
	CS1G-CPU42H/43H/44H/45H CS1H-CPU63H/64H/65H/66H/67H CS1D-CPU65H/67H/67HA/68HA/44SA/57SA	Built-in RS-232C port CS1W-SCB21-V1 CS1W-SCB41-V1 CS1W-SCU21-V1 CS1W-SCU31-V1	Host Link
	CJ2H-CPU64/65/66/67/68(-EIP) CJ2M-CPU11/12/13/14/15/31/32/33/34/35	Built-in RS-232C port CJ1W-SCU22 CJ1W-SCU32 CJ1W-SCU42	
	CP1L-□□□□□-□ CP1H-□□□□□-□ CJ2M-CPU31/32/33/34/35	CP1W-CIF01 CP1W-CIF11 CP1W-CIF12-V1	
	CP2E-E□□D□-□ CP2E-S□□D□-□	Built-in RS-232C port	

Note: 1. Including models no longer available to order.

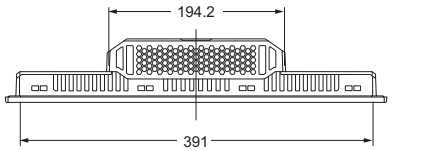
NA-RTLD□□

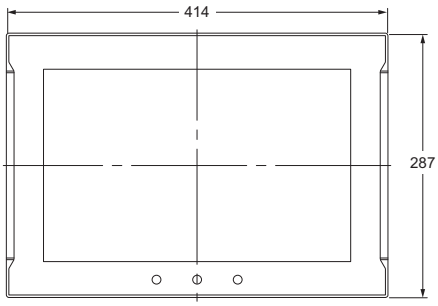
Manufacturer	Models	Connection method	Communications driver
OMRON	NX102-□□□□ NX1P2-□□□□ NX502-□□□□ NX701-□□□□ NJ501-□□□□ NJ301-□□□□ NJ101-□□□□ NY512-□□□□ NY532-□□□□ NX-CSG320	Built-in EtherNet/IP port	Ethernet
	NX502-□□□□	NX-EIP201	

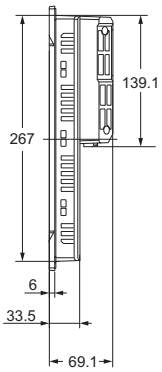
Dimensions

(Unit: mm)

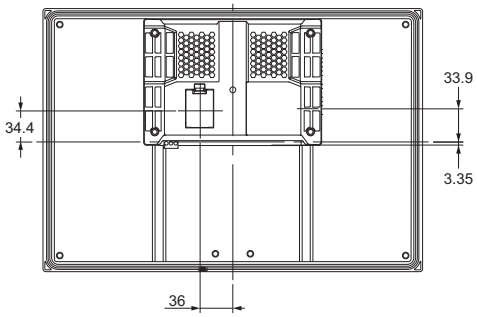
NA5-15W101S-V2/-15W101B-V2

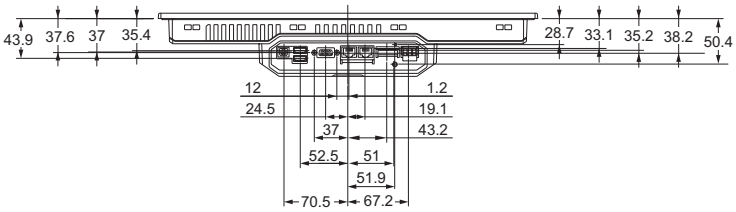




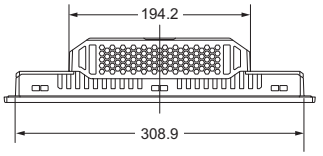


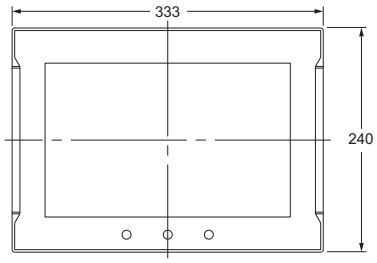
Cable Connection Dimensions

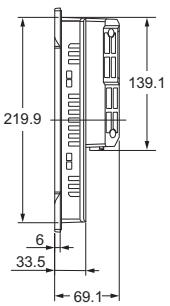




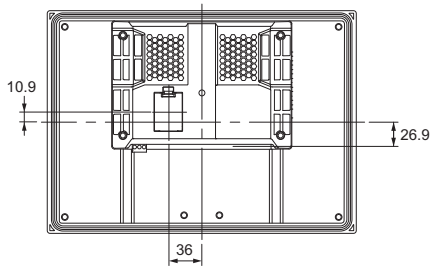
NA5-12W101S-V2/-12W101B-V2

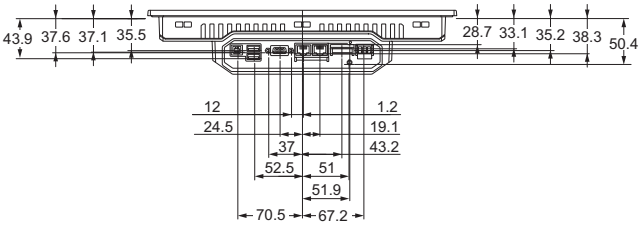




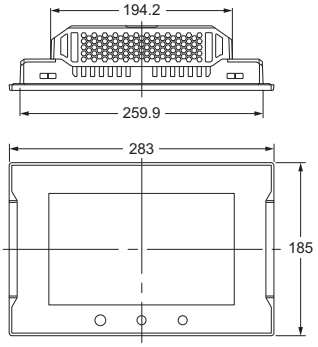


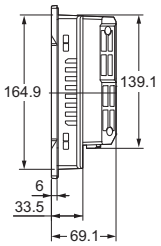
Cable Connection Dimensions



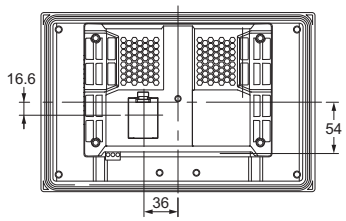


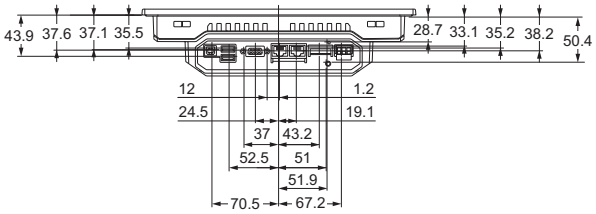
NA5-9W001S-V2/-9W001B-V2



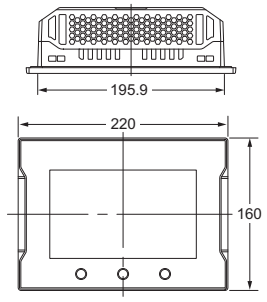


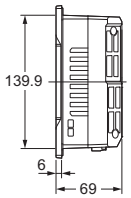
Cable Connection Dimensions



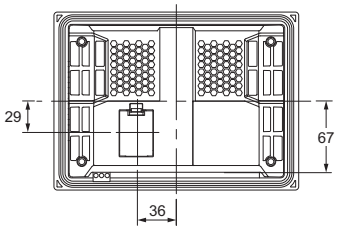


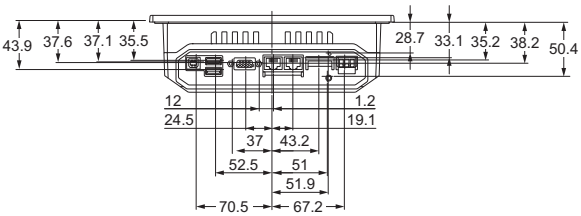
NA5-7W001S-V2/-7W001B-V2





Cable Connection Dimensions





Related Manuals

Cat. No.	Model number	Manual
V128	NA5-15□101□-V2 NA5-12□101□-V2 NA5-9□001□-V2 NA5-7□001□-V2	NA-series Programmable Terminal Hardware (-V2) User's Manual
V118	NA5-15□101□ (-V□) NA5-12□101□ (-V□) NA5-9□001□ (-V□) NA5-7□001□ (-V□) NA-RTLD□□	NA-series Programmable Terminal Software User's Manual
V119	NA5-15□101□ (-V□) NA5-12□101□ (-V□) NA5-9□001□ (-V□) NA5-7□001□ (-V□) NA-RTLD□□	NA-series Programmable Terminal Device Connection User’s Manual
V120	NA5-15W□□□□ NA5-12W□□□□ NA5-9W□□□□ NA5-7W□□□□	NA-series Programmable Terminal Startup Guide
V126	NA-RTLD□□□	NA-series Programmable Terminal Soft-NA User's Manual

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