

# Empowering on-site operations with existing NS Series assets



# Leverage your existing NS Series screen assets without modification

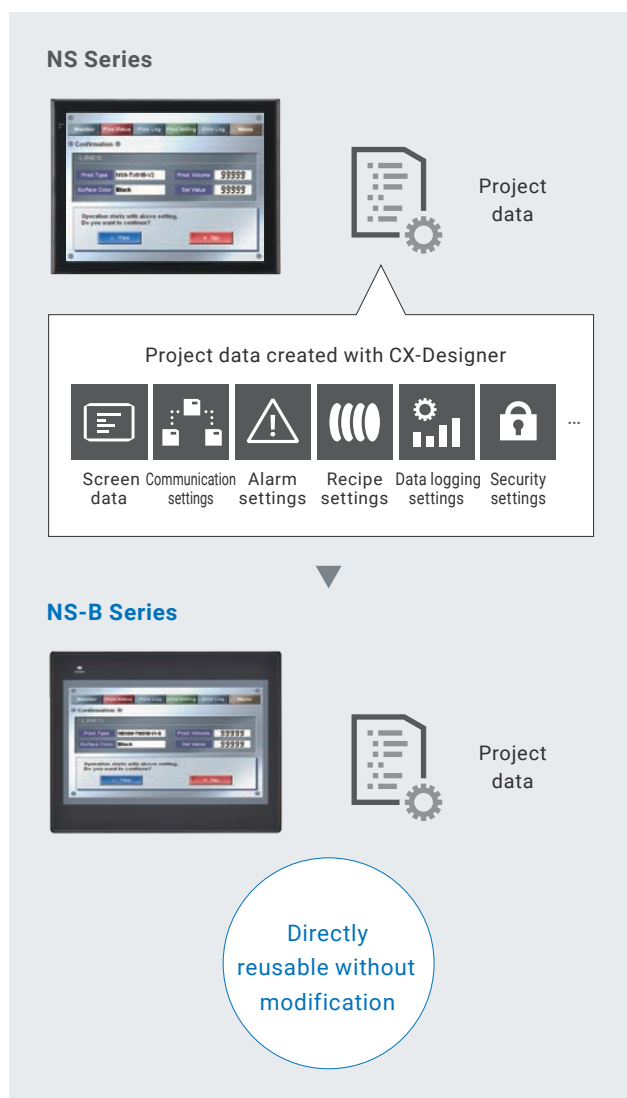
Production equipment is expected to operate over long periods, yet manufacturers face growing challenges, including shortages of skilled engineers and increasing maintenance workloads.

At the same time, many users wish to preserve the screen data and operational know-how accumulated over years when upgrading their equipment. The NS-B Series is a programmable terminal that inherits the screen assets and development environment built through the widely adopted NS Series.

By leveraging these existing assets, it minimizes the effort required for equipment upgrades and supports reliable, long-term operation of production equipment.

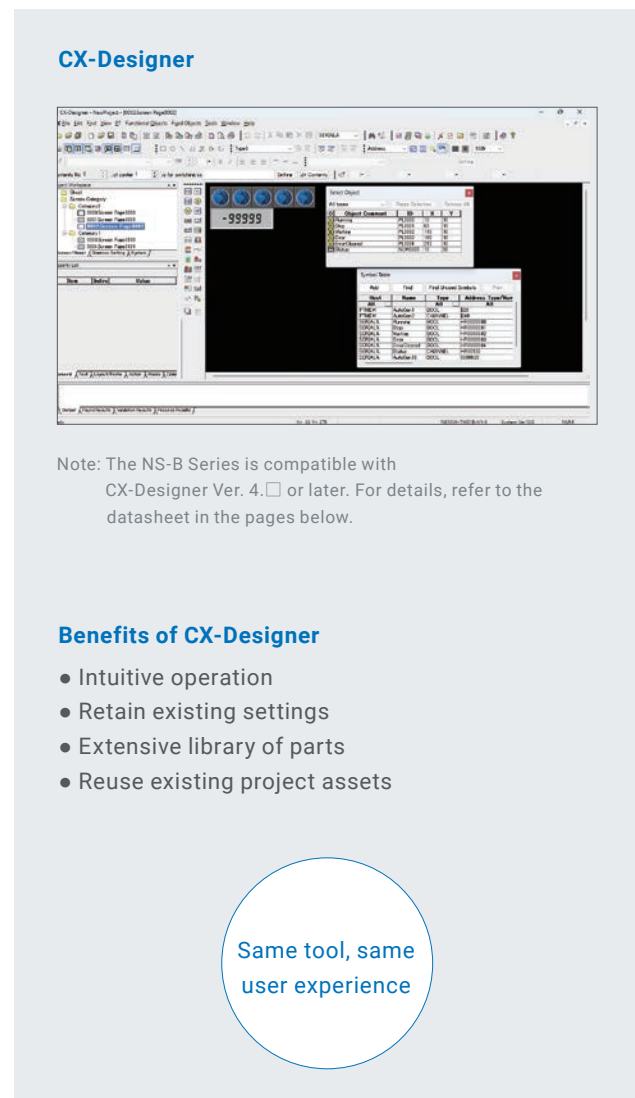
## Leverage your screen assets without modification

By simply leveraging NS Series project data, existing screen assets can be reused, reducing the effort required to redesign screens during equipment upgrades.



## Continue using your existing design tool

The NS-B Series can be used with your familiar CX-Designer software. There is no need to learn a new design tool or redesign existing screens, significantly reducing design effort during equipment upgrades.



# NS-B Series



## Install directly into existing equipment

Replacement panel cutout attachments are available for upgrades from the NS Series, eliminating the need for additional panel modifications. Upgrades can be completed quickly and easily, reducing the effort required for equipment replacement.

### Attachments compatible with existing panel cutouts



### Benefits of using the attachments

- Reuse existing panel cutouts
- Continue using existing wiring and communication settings
- Smooth and fast upgrades

Reduced installation workloads

## Continue using your existing PLC system

Programs for the CJ/CS Series PLCs can be used with the CJ3M. The NS-B Series supports connectivity with both legacy and current PLC platforms, providing flexibility for full system replacements or phased upgrades.

### Existing equipment



NS Series



Existing PLC (CJ/CS, etc.)

### Upgrade options

#### ① HMI upgrade only



NS-B Series



Existing PLC (CJ/CS, etc.)\*1

#### ② HMI and PLC upgrade



NS-B Series



CJ3M\*2

Communication RS-232C: NT link / Host link  
environment Ethernet: FINS / EtherNet/IP

\*1. For supported PLC models, communication methods, and functions, refer to the latest manuals.

\*2. For details on the CJ3M, refer to the Programmable Controller CJ3M Brochure (Cat. No. P179).

# Simple screen development and intuitive operability

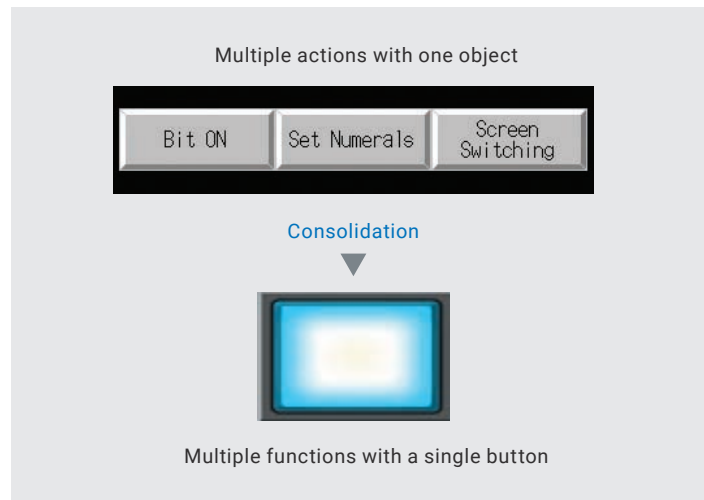
With the simple screen development environment and intuitive operability inherited from the NS Series, users can be productive from day one. In addition to efficient screen development with CX-Designer, the NS-B Series provides a wide range of practical features for manufacturing environments, including graph visualization and multilingual support.

## Simplified operation Multiple functions in a single object. Fewer buttons help reduce operational errors

### Multifunction

Consolidate multiple buttons into a single button operation.

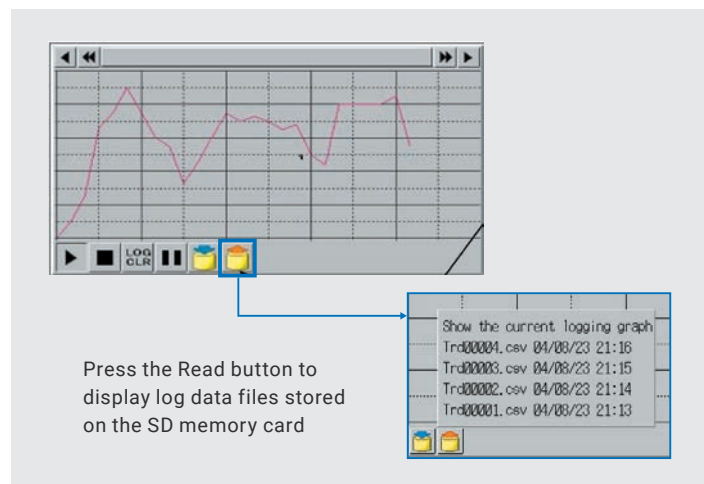
The multifunction feature allows multiple actions to be executed with a single touch, supporting up to 32 operations from one object.



## Enhanced visualization Visualize equipment status with versatile graphing capabilities

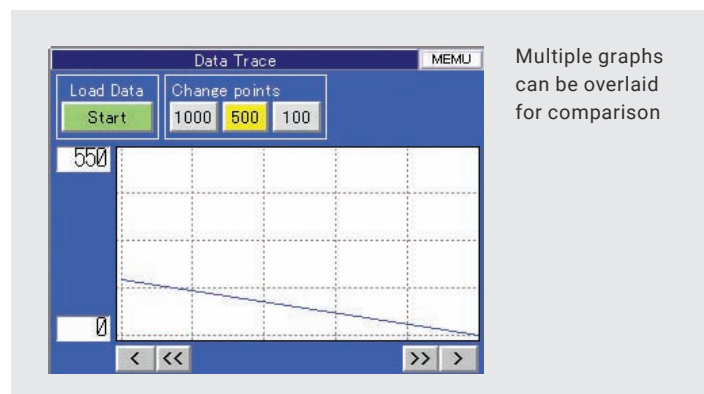
### Data Log Graph

Collect up to 128 data points at 500 ms intervals. Logged data can be saved as CSV files to external memory devices.



### Line Graph

Display current values from multiple consecutive communication addresses in graph form. Zoom in on areas of interest and view historical data.



## Multi-language support

Supports 42 languages. Up to 16 selectable languages

### Unicode compliant

Supporting Unicode enables the display of up to 42 Asian and European languages on a single screen, including mixed-language text.

This allows users at overseas locations to work easily in their local language.



### Easy creation of multilingual screens

Easily create multilingual screens by importing translated text from Excel back into CX-Designer.

**Export**  
Labels and alarm messages from screen data

**Import**  
Translated text back into CX-Designer

**Translate in Excel**

|   | A          | B         | C        | D         | E          | F        | G        | H       |
|---|------------|-----------|----------|-----------|------------|----------|----------|---------|
| 1 | PRJ        |           |          |           |            |          |          |         |
| 2 | Project/Sc | Title     | Parts ID | Parts Com | Property   | Japanese | English  | Chinese |
| 3 | Screen-0   | Screen Pa | LBL0000  |           | Caption    | ようこそ     | Hello    | 欢迎      |
| 4 | Screen-0   | Screen Pa | PB0001   |           | Caption-OI | 開始       | Start    | 开始      |
| 5 | Screen-0   | Screen Pa | PB0001   |           | Caption-OI | 運転中      | Working  | 运行中     |
| 6 | Screen-0   | Screen Pa | PB0002   |           | Caption-OI | 停止       | Stop     | 停止      |
| 7 | Screen-0   | Screen Pa | PB0002   |           | Caption-OI | 停止中      | Stopping | 已停止     |
| 8 | Screen-0   | Screen Pa | PL0003   |           | Caption    | アラーム     | Alarm    | 警报      |

## Minimize equipment downtime

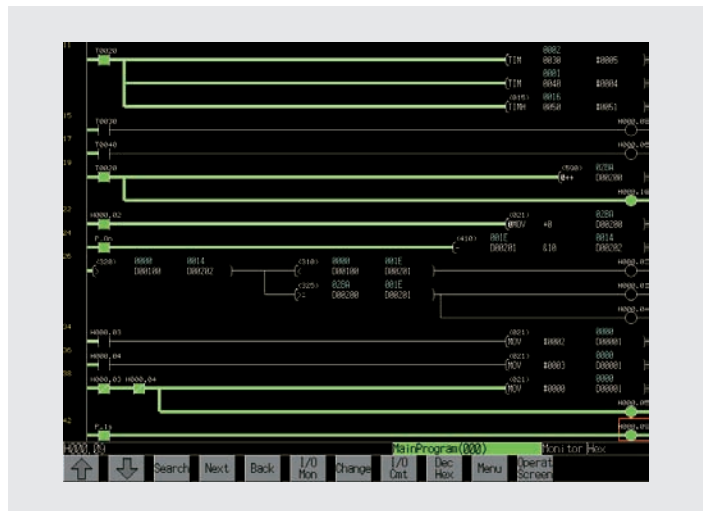
Access critical information on-site to accelerate troubleshooting when issues occur. On-site ladder monitoring, history analysis, screen data protection, and data comparison capabilities help streamline the entire troubleshooting process, from cause identification to recovery, minimizing equipment downtime.

## Status monitoring

Ladder Monitor Available through a future update<sup>\*1</sup>

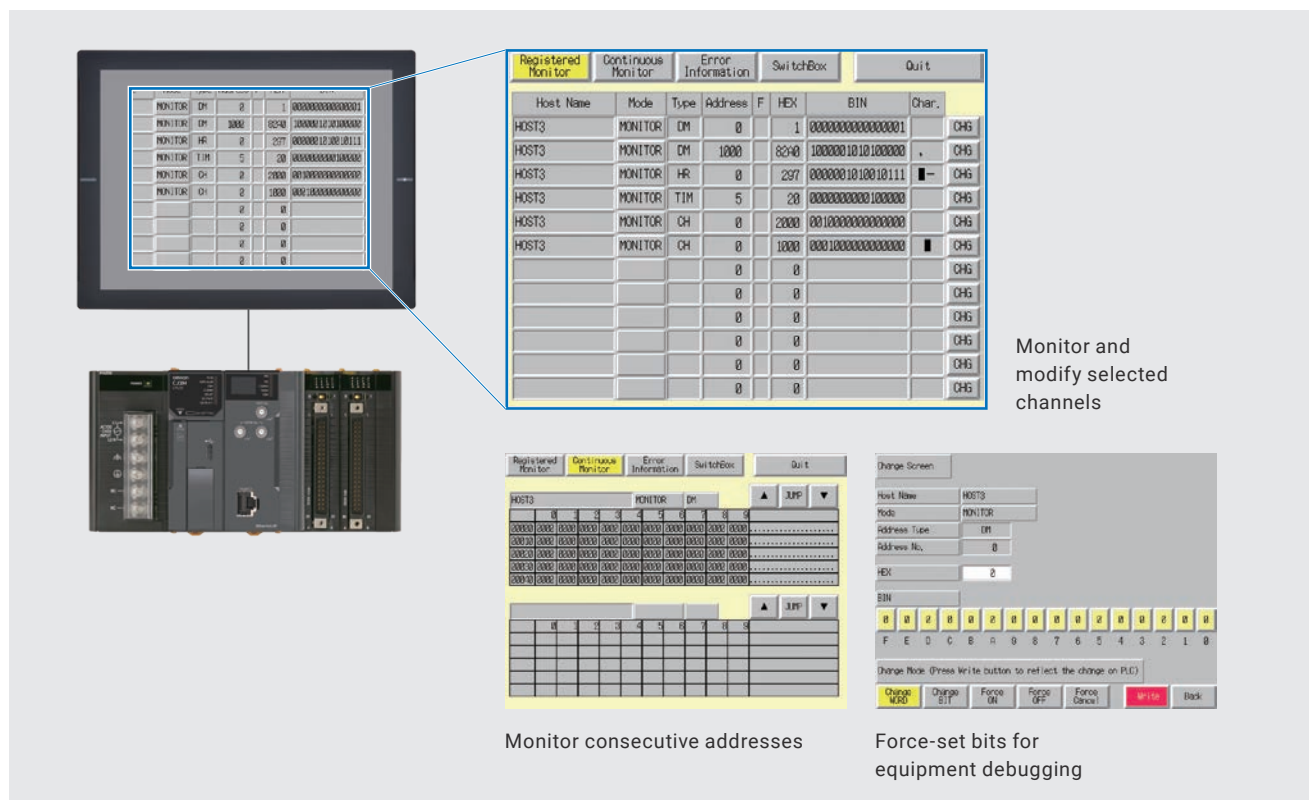
Monitor ladder programs directly on the NS-B Series screen without the need for a PC.

Ladder programs with I/O comments can be monitored and edited directly on the screen.



Device Monitor Available through a future update<sup>\*1</sup>

This maintenance feature allows monitoring and editing the PLC device data, including CIO, WR, HR, DM, and EM areas, directly from the NS-B Series screen without a PC. View and modify current PLC channel values directly from the NS-B Series.

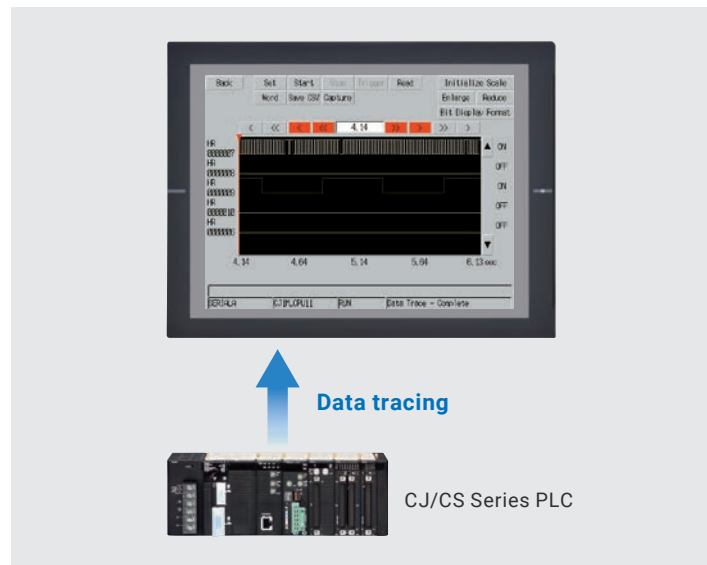


\*1. This function will be supported through a future software update.

## History analysis Analyze events chronologically without a PC

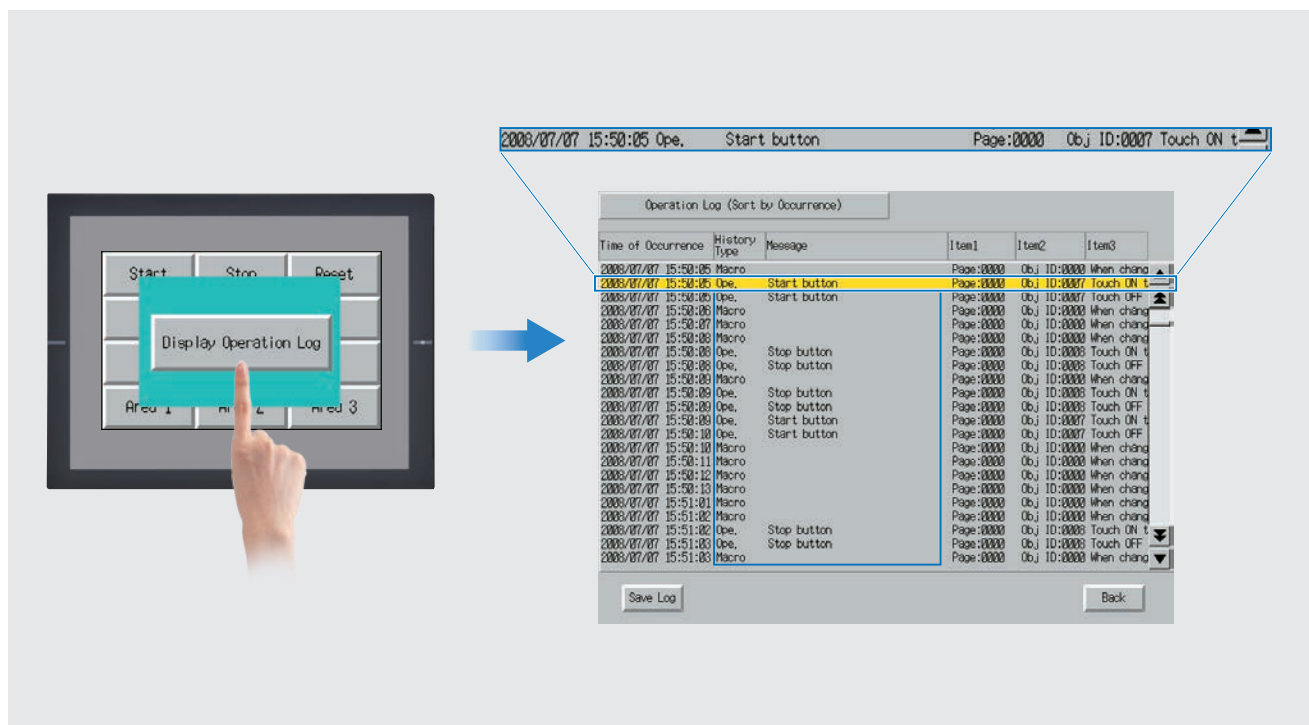
### PLC Data Trace Available through a future update<sup>\*1</sup>

Perform data tracing (monitoring PLC operation over time) directly on the NS-B Series without a PC. View PLC bit behavior in a time-chart format and save trace data as CSV or BMP files.



### Operation Log

Record operation history to identify what was done and when. In addition to touch panel operations, control panel button operations can also be logged and displayed.



\*1. This function will be supported through a future software update.

# Safe and secure equipment operation

Protect screen data with password authentication and role-based access control. Create a secure operating environment that safeguards critical data while enabling reliable equipment operation for all users.

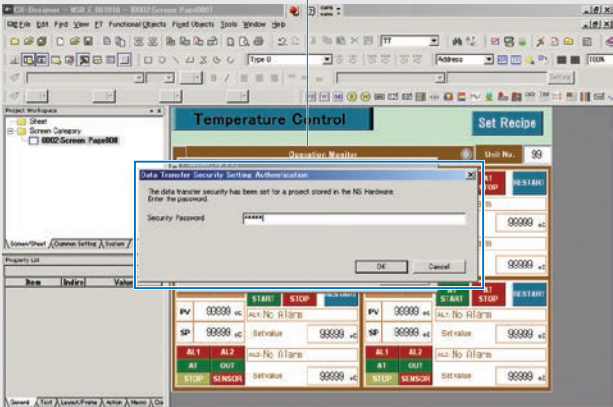
## Secure operation Protect critical data with password authentication, access control, and data protection features

### Screen Data Security

Protect data and control user access.

By setting a password during screen development, password authentication is required for screen data uploads and downloads, helping keep data secure.

Security password

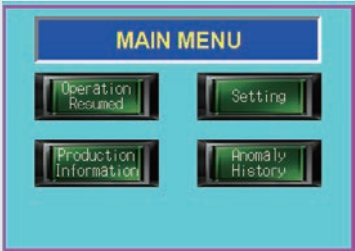


Prevent unauthorized data extraction and operational errors through password authentication. Uploads and downloads can begin only after authentication

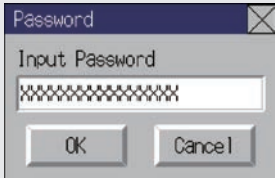
### Password Authorization

User operations can be restricted based on individual authorization levels.

Normal operation



After successful authentication



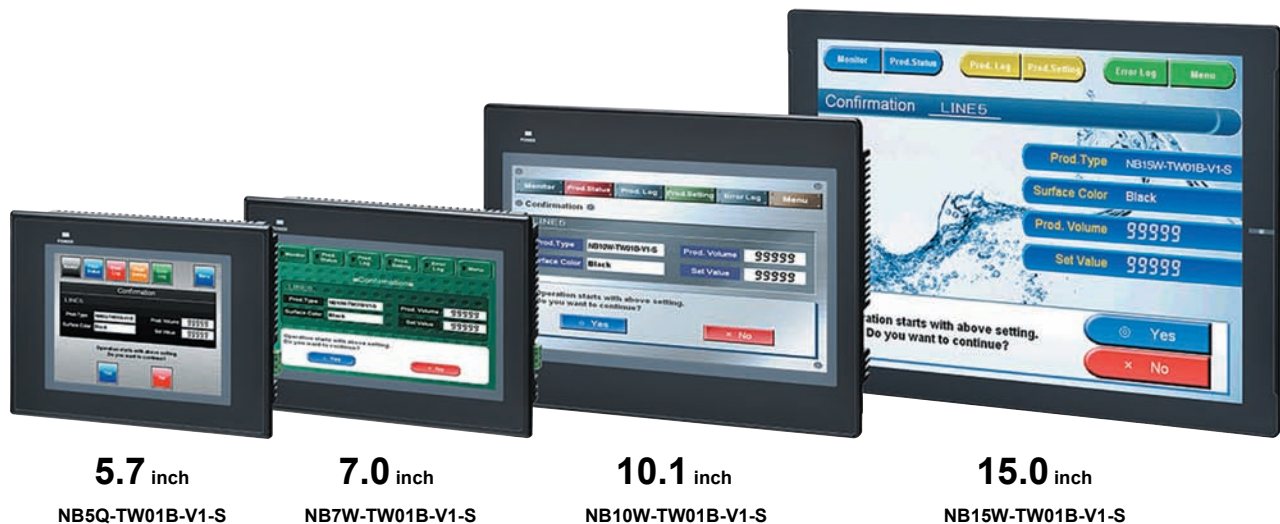
Maintenance mode



Role-based access control helps prevent unintended operations

# Programmable Terminals NS-B Series

Empowering on-site operations  
with existing NS Series assets



## Features

- 5.7 to 15 inch sizes are available.
- Ladder Monitor come as a Standard Feature. The ladder program can be monitored onsite without a laptop! Ladder monitor lets you monitor PLC program status, search for addresses or instructions, monitor multiple I/O points, and much more. \*1
- Provides the FA integrated tool package "CX-One" for a Screen Design Software Integrated Simulation come as a Standard Feature. The integrated simulation function simulates ladder programs and screen data simultaneously even without the actual hardware.
- Screens support 42 languages and the Support Software supports ten. System messages can also be displayed in multiple languages.

\*1. Available through a future update

# NS-B Series

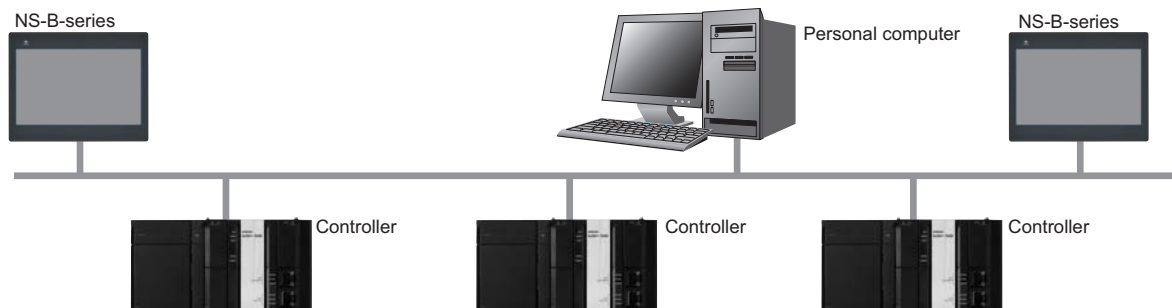
## Network

Provides serial NT Link communications supporting both 1:1 and 1:N connections. The NT Link has more efficient communications than Host Link and its capabilities are especially apparent in applications with multiple NS-B-series connect to the PLC. The NS-B-series can also support communications with multiple PLCs and multiple through Ethernet connections, so the network can be configured freely to match the requirements and scale of the application.

### Configuration of CJ3 series and CJ2 series, NJ series and NX series

#### 1 EtherNet/IP™ Connection (Tag accesses)

If NS-B-series is used, the NS-B-series can connect to a Controller with built-in EtherNet/IP and an Option Unit is not needed to connect at the NS-B-series.



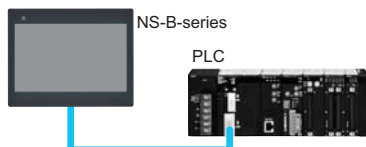
### Configuration of CJ series, CS series, and CP series

#### 2 Serial connection

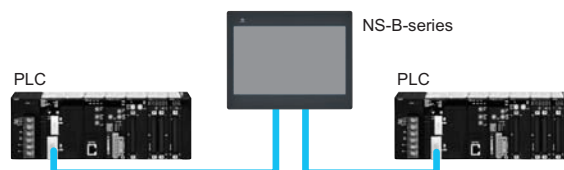
##### 1:1 NT Link or Host Link

###### ●NS-B-series:PLC = 1:1

Connecting with the PLC through port A or port B



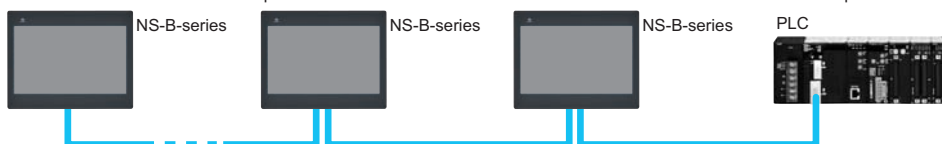
###### ●NS-B-series:PLC = 1:2



##### 1:N NT Link

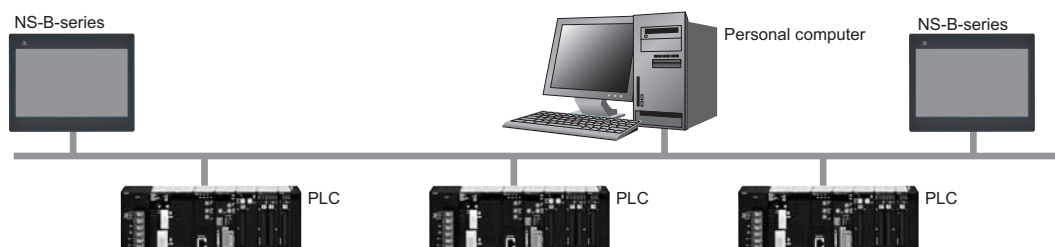
###### ●NS-B-series:PLC ratio = 8:1 max.

Up to 8 NS-B-series can be connected to each of the PLC's RS-232C/RS-422A ports.



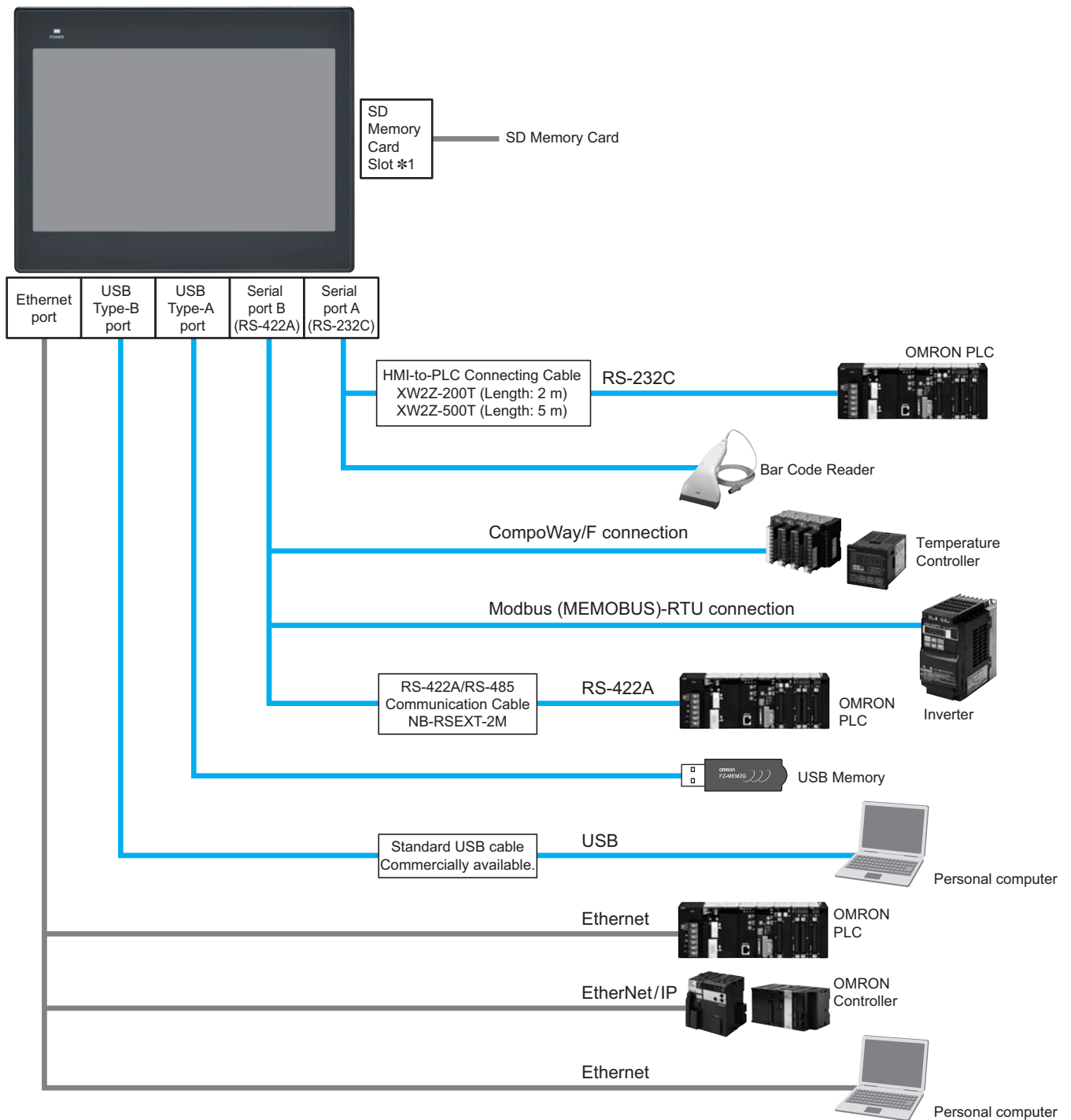
#### 3 EtherNet/IP or Ethernet Connection

The NS-B-series can connect to a PLC with an Ethernet Unit and an Option Unit is not needed to connect at the NS-B-series.



# System Configuration

## NS-B Series



\*1. SD Memory Card Slot is available only on the NB15W-TW01B-V1-S. (Available through a future update)

# NS-B Series

## Ordering Information

### Programmable Terminals

| Product name | Size/ Display Type | Resolution (Number of dots) | Color | Communication                                | Ethernet     | USB              | SD Removable Media *1 | Model            |
|--------------|--------------------|-----------------------------|-------|----------------------------------------------|--------------|------------------|-----------------------|------------------|
| NB15W        | 15.0-inch TFT      | XGA 1,024 × 768             | Black | Serial port A,<br>Serial port B,<br>Ethernet | 10/100Base-T | Type-A<br>Type-B | SD/SDHC               | NB15W-TW01B-V1-S |
| NB10W        | 10.1-inch TFT      | WSVGA 1,024 × 600           |       |                                              |              |                  | ---                   | NB10W-TW01B-V1-S |
| NB7W         | 7.0-inch TFT       | WVGA 800 × 480              |       |                                              |              |                  |                       | NB7W-TW01B-V1-S  |
| NB5Q         | 5.7-inch TFT       | QVGA 320 × 240              |       |                                              |              |                  |                       | NB5Q-TW01B-V1-S  |

\*1. Available through a future update

## Software

### How to Select Required Support Software for Your Controller

The required Support Software depends on the Controller to connect. Please check the following table when purchasing the Support Software.

| Item                   | Omron PLC System                  | Omron Machine Automation Controller System      |
|------------------------|-----------------------------------|-------------------------------------------------|
| Controller             | CJ, CS, CP, and other series      | NJ-series and NX-series                         |
| Programmable Terminals | NS-B-series and NS-series         | NS-B-series and NS-series with an Ethernet port |
| Software               | FA Integrated Tool Package CX-One | Automation Software Sysmac Studio               |

### Supported CX-Designer Versions

The CX-Designer versions supported by the NS-B Series and NS Series are shown below.

| CX-Designer        | NS-B Series   | NS Series     |
|--------------------|---------------|---------------|
| Ver.4.□ or later   | Supported     | Not Supported |
| Ver.3.□ or earlier | Not Supported | Supported     |

**Note: 1.** The NS-B Series supports CX-Designer Ver.4.□ or later.

The conventional NS Series supports CX-Designer Ver.3.□ or earlier.

The supported CX-Designer version differs between the NS-B Series and NS Series.

**Note: 2.** CX-Designer Ver.4.□ is supported only on Windows 11.

### FA Integrated Tool Package CX-One

| Product name                              | Specifications                                                                                                                                                                                                                                                                                                                                                                        | Media              |     | Model          | Standards |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----|----------------|-----------|
|                                           |                                                                                                                                                                                                                                                                                                                                                                                       | Number of licenses |     |                |           |
| FA Integrated Tool Package CX-One Ver.4.□ | The CX-One is a comprehensive software package that integrates Support Software for OMRON PLCs and components.<br><br>CX-One runs on the following OS.<br>Windows 8.1 (32-bit/64-bit version) /<br>Windows 10 (32-bit/64-bit version) / Windows 11<br>CX-One Version 4.□ includes CX-Designer Ver.3.□ and Ver.4.□.<br>For details, refer to the <i>CX-One catalog</i> (Cat. No. R134) | 1 license *        | DVD | CXONE-AL01D-V4 | ---       |

\* Multi licenses (3, 10, 30, or 50 licenses) and DVD media without licenses are also available for the CX-One.

### 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.

The following standalone license editions can be used with this product.

- Sysmac Studio Standard Edition Ver.1□□

The Sysmac Studio Standard Edition DVD includes Support Software to set up EtherNet/IP Units, DeviceNet slaves, Serial Communications Units, and Support Software for creating screens on HMIs (CX-Designer Ver.3.□ and Ver.4.□).

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

## Related connecting objects

### Cable with connectors (PT Unit <--> PLC)

| Product name                       | Object Unit                                          | Communications methods       | Specifications    | Cable Length | Model              |
|------------------------------------|------------------------------------------------------|------------------------------|-------------------|--------------|--------------------|
| RS-232C Communication Cable        | Units with 9-pin connectors by OMRON                 | Host Link, NT Link (RS-232C) | 9-pin <--> 9-pin  | 2 m          | <b>XW2Z-200T</b>   |
|                                    |                                                      |                              |                   | 5 m          | <b>XW2Z-500T</b>   |
| RS-422A/RS-485 Communication Cable | RS-422A/485 Communication Units by PLC manufacturers | Host Link, NT Link (RS-422A) | 9-pin <--> 5-wire | 2 m          | <b>NB-RSEXT-2M</b> |

## Options

### Protective Sheet

| Product name     | Descriptions                                                                                                                                                        | Product name     | Model                 |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------------|
| Protective Sheet | It adheres to the display preventing reflection and also dirt from sticking to the display. The sheet is colorless and transparent, with 1 set containing 5 pieces. | NB15W-TW01B-V1-S | <b>NB15W-KBA04 *1</b> |
|                  |                                                                                                                                                                     | NB10W-TW01B-V1-S | <b>NB10W-KBA04</b>    |
|                  |                                                                                                                                                                     | NB7W-TW01B-V1-S  | <b>NB7W-KBA04</b>     |
|                  |                                                                                                                                                                     | NB5Q-TW01B-V1-S  | <b>NB5Q-KBA04</b>     |

\*1. Coming soon

### Attachment

| Product name | Descriptions                                                                                                                                                                  | Replacement                                | Model              |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|--------------------|
| Attachment   | When users switch from the NS-series to NS-B-series, due to the difference of the unit size, installation fittings can be utilized to guarantee the process quick and smooth. | Replacement from NS15 Series to NB15W      | <b>NB15W-ATT01</b> |
|              |                                                                                                                                                                               | Replacement from NS12/NS10 Series to NB10W | <b>NB10W-ATT02</b> |
|              |                                                                                                                                                                               | Replacement from NS8 Series to NB7W        | <b>NB7W-ATT01</b>  |
|              |                                                                                                                                                                               | Replacement from NS5 Series to NB5Q        | <b>NB5Q-ATT01</b>  |

### USB Memory

| Product name | Descriptions                   | Specifications | Model            |
|--------------|--------------------------------|----------------|------------------|
| USB Memory   | USB disk manufactured by OMRON | 16 GB          | <b>FZ-MEM16G</b> |

## NS-B Series

### General Specifications

#### Specifications other than power consumption and weight

| Items                                   | Specifications                                                                                                    |                      |                      |                      |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|----------------------|
|                                         | NB15W-TW01B-V1-S                                                                                                  | NB10W-TW01B-V1-S     | NB7W-TW01B-V1-S      | NB5Q-TW01B-V1-S      |
| Rated power supply voltage              | 24 VDC $\pm$ 15% (20.4 to 27.6 VDC)                                                                               |                      |                      |                      |
| Ambient operating temperature           | 0 to 50°C                                                                                                         |                      |                      |                      |
| Ambient storage temperature             | -20 to 60°C                                                                                                       |                      |                      |                      |
| Ambient operating humidity              | 10% to 90% RH (without condensation)                                                                              |                      |                      |                      |
| Ambient storage humidity                | 10% to 90% RH (without condensation)                                                                              |                      |                      |                      |
| Operating environment                   | No corrosive gases                                                                                                |                      |                      |                      |
| Noise Immunity                          | Compliant with IEC61000-4-4, 2 KV (Power cable)                                                                   |                      |                      |                      |
| Vibration resistance (During operation) | 10 to 57 Hz with a 0.075 mm amplitude, 57 to 150 Hz 9.8 m/s <sup>2</sup> for 30 min each in X, Y and Z directions |                      |                      |                      |
| Shock resistance (During operation)     | 147 m/s <sup>2</sup> for 3 times each in X, Y and Z directions, with each time lasting for 11 ms                  |                      |                      |                      |
| Dimensions W × H × D (mm)               | 356.0 × 272.0 × 45.0                                                                                              | 268.8 × 210.8 × 54.0 | 202.0 × 148.0 × 46.0 | 184.0 × 142.0 × 46.0 |
| Panel opening dimension W × H (mm)      | 345.0 × 261.0                                                                                                     | 258.0 × 200.0        | 191.0 × 137.0        | 172.4 × 131.0        |
| Panel thickness range                   | 1.6 to 4.8 mm                                                                                                     |                      |                      |                      |
| Degree of protection                    | Front operation part: IP65 (Dust proof and drip proof only from the front of the panel)                           |                      |                      |                      |
| Capacitor life                          | 5 years (at 40°C)                                                                                                 |                      |                      |                      |
| Clock and calendar                      | Ambient temperature 25°C: Maximum error of -37.2 to -28.5 seconds per month                                       |                      |                      |                      |
| Applicable standards                    | EC Directives, KC, UL61010-2-201                                                                                  |                      |                      |                      |

#### Power consumption and weight

| Model            | Power consumption | Weight  |
|------------------|-------------------|---------|
| NB15W-TW01B-V1-S | 14 W              | 2,625 g |
| NB10W-TW01B-V1-S | 8 W               | 1,465 g |
| NB7W-TW01B-V1-S  | 7 W               | 705 g   |
| NB5Q-TW01B-V1-S  | 7 W               | 660 g   |

## Performance Specifications

### Display specifications

| Items          |                                  | Specifications                                                                               |                  |                 |                 |
|----------------|----------------------------------|----------------------------------------------------------------------------------------------|------------------|-----------------|-----------------|
|                |                                  | NB15W-TW01B-V1-S                                                                             | NB10W-TW01B-V1-S | NB7W-TW01B-V1-S | NB5Q-TW01B-V1-S |
| Display panel  | Display device                   | 15.0" TFT LCD                                                                                | 10.1" TFT LCD    | 7" TFT LCD      | 5.7" TFT LCD    |
|                | Number of dots                   | 1,024 × 768                                                                                  | 1,024 × 600      | 800 × 480       | 320 × 240       |
|                | Display color                    | 16.2 M colors                                                                                | 65536 colors     |                 |                 |
|                | Valid display area<br>W × H (mm) | 304 × 228 *1                                                                                 | 221 × 133 *1     | 154 × 85 *1     | 113 × 85 *1     |
| Backlight      | Life                             | 50,000 hours (Typ) of operating time at the normal temperature (25°C) with 40% brightness *2 |                  |                 |                 |
| Front-side LED |                                  | ON: power connected<br>OFF: power disconnected                                               |                  |                 |                 |

\*1. Some models display a screen close to the frame of a front sheet. When placing texts or figures at the edges of the screen (top, bottom, left, right), please be aware that there might be slight differences in appearance between on CX-Designer and an actual PT unit.

\*2. Standard value for brightness to decrease by 60% at the normal temperature and humidity. OMRON undertakes to repair and diagnose PT Unit, including the display, within five years from the date of manufacturing. A unit requiring repair will be exchanged for a new product. OMRON performs diagnosis to identify a faulty module. (Service uncovered under warranty is not free of charge.)

### Operation part specifications

| Items       |                                                 | Specifications   |                  |                 |                 |
|-------------|-------------------------------------------------|------------------|------------------|-----------------|-----------------|
|             |                                                 | NB15W-TW01B-V1-S | NB10W-TW01B-V1-S | NB7W-TW01B-V1-S | NB5Q-TW01B-V1-S |
| Touch panel | Type: resistive type                            |                  |                  |                 |                 |
|             | Operation force: 0.5 to 0.8 N                   |                  |                  |                 |                 |
|             | Press endurance: min. 1,000,000 times (at 25°C) |                  |                  |                 |                 |

### Data capacity specifications

| Items                         |  | Specifications   |                  |                 |                 |
|-------------------------------|--|------------------|------------------|-----------------|-----------------|
|                               |  | NB15W-TW01B-V1-S | NB10W-TW01B-V1-S | NB7W-TW01B-V1-S | NB5Q-TW01B-V1-S |
| Standard screen data capacity |  | 60 MB            |                  |                 |                 |

### External I/F specifications

| Items               |  | Specifications                                                                  |                  |                 |                 |
|---------------------|--|---------------------------------------------------------------------------------|------------------|-----------------|-----------------|
|                     |  | NB15W-TW01B-V1-S                                                                | NB10W-TW01B-V1-S | NB7W-TW01B-V1-S | NB5Q-TW01B-V1-S |
| USB Type-B          |  | 1 port (for project transmission with a PC)<br>Equivalent of USB 2.0 Full speed |                  |                 |                 |
| USB Type-A          |  | 1 port Equivalent of USB 2.0 Full speed                                         |                  |                 |                 |
| SD Memory Card Slot |  | 1 slot<br>Compliant with SD/SDHC                                                | ---              | ---             | ---             |

### Software for making project

| Name/Version            |  | Specifications   |                  |                 |                 |
|-------------------------|--|------------------|------------------|-----------------|-----------------|
|                         |  | NB15W-TW01B-V1-S | NB10W-TW01B-V1-S | NB7W-TW01B-V1-S | NB5Q-TW01B-V1-S |
| CX-Designer version 3.□ |  | Not Supported    |                  |                 |                 |
| CX-Designer version 4.□ |  | Support          |                  |                 |                 |

## NS-B Series

### Communication Specifications

#### Serial port communication specifications

| Items         | Specifications                                                                                                                                                                                                                                 |                  |                 |                 |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------|-----------------|
|               | NB15W-TW01B-V1-S                                                                                                                                                                                                                               | NB10W-TW01B-V1-S | NB7W-TW01B-V1-S | NB5Q-TW01B-V1-S |
| Serial port A | Compliant with EIA RS-232C<br>D-sub, 9-pin connector socket<br>Pin 6 DC +5 V output (Max. current: 250 mA)<br>Communication cable length: Max. 15 m                                                                                            |                  |                 |                 |
| Serial port B | Compliant with EIA RS-232C/422A/485<br>D-sub, 9-pin connector socket<br>At one point, only one from RS-232C and RS-422A can be designated to perform communications<br>Communication cable length: Max. 15 m (RS-232C)<br>Max. 500 m (RS-422A) |                  |                 |                 |

#### Ethernet communication specifications

| Items                 | Specifications                                      |
|-----------------------|-----------------------------------------------------|
| Conformance standards | Conforms to IEEE 802.3/Ethernet (10/100Base-T)      |
| Transmission medium   | 2 pair Cat 3 UTP 22 to 26 AWG, Cat 5, Cat 5e, Cat 6 |
| Transmission distance | 100 m (node-to-hub and hub-to-hub)                  |
| Connector             | 8-pin modular connector                             |

## Connectable Devices

## Supported OMRON PLCs

| PLC series     | PLC model name   | RS-232C *1  |             |           | Ethernet |                |
|----------------|------------------|-------------|-------------|-----------|----------|----------------|
|                |                  | 1:1 NT Link | 1:N NT Link | Host Link | FINS *2  | EtherNet/IP *3 |
| C Series       | CQM1             | Yes         | No          | Yes       | No       | No             |
|                | CQM1H            | Yes         | Yes         | Yes       | No       | No             |
|                | CPM1             | Yes         | No          | Yes       | No       | No             |
|                | CPM1A            | Yes         | No          | No        | No       | No             |
|                | CPM2A            | Yes         | No          | Yes       | No       | No             |
|                | CPM2C            | Yes         | No          | Yes       | No       | No             |
|                | C200HS           | Yes         | No          | Yes       | No       | No             |
|                | C200HE (-Z)      | Yes         | Yes         | Yes       | No       | No             |
|                | C200HG (Z)       | Yes         | Yes         | Yes       | No       | No             |
|                | C200HX (-Z)      | Yes         | Yes         | Yes       | No       | No             |
| CVM1/CV Series | CV500/1000/2000  | Yes         | No          | Yes       | Yes      | No             |
|                | CVM1             | Yes         | No          | Yes       | Yes      | No             |
| CS Series      | CS1H             | No          | Yes         | Yes       | Yes      | Yes            |
|                | CS1G             | No          | Yes         | Yes       | Yes      | Yes            |
|                | CS1D             | No          | Yes         | Yes       | Yes      | Yes            |
| CJ Series      | CJ1H             | No          | Yes         | Yes       | Yes      | Yes            |
|                | CJ1G             | No          | Yes         | Yes       | Yes      | Yes            |
|                | CJ1M             | No          | Yes         | Yes       | Yes      | Yes            |
|                | CJ2H             | No          | Yes         | Yes       | Yes      | Yes            |
|                | CJ2M             | No          | Yes         | Yes       | Yes      | Yes            |
|                | CJ3M             | No          | Yes         | Yes       | Yes      | Yes            |
| CP Series      | CP1H             | No          | Yes         | Yes       | Yes      | Yes            |
|                | CP1L             | No          | Yes         | Yes       | Yes      | No             |
|                | CP1E             | No          | Yes         | Yes       | No       | No             |
| NJ Series      | NJ5/NJ3/NJ1      | Yes *4      | Yes *4      | Yes *4    | No       | Yes            |
| NX Series      | NX7/NX5/NX1/NX1P | No          | No          | No        | No       | Yes            |

**Note:** Including models whose production were discontinued.

\*1. Connects to a PLC via RS-422A communication.

\*2. When connecting a PLC with the NS, an Ethernet port is necessary on the PLC, too. Use a PLC CPU Unit with a built-in Ethernet port, or add an Ethernet Unit.

\*3. When connecting a PLC with the NS, an EtherNet/IP port is necessary on the PLC, too. Use a PLC CPU Unit with a built-in EtherNet/IP port, or add an EtherNet/IP Unit.

\*4. Mount a Serial Communications Unit on the NJ-series Controller. A NS can access only to the Controller's memory used for CJ-series unit.

## NS-B Series

### Function Comparison

| PLC series     | PLC model name   | Ladder Monitor *1 | Device Monitor *1 | PLC Data Trace *1 | EtherNet/IP<br>Tag access<br>(Network symbols) |
|----------------|------------------|-------------------|-------------------|-------------------|------------------------------------------------|
| C series       | CQM1             | No                | No                | No                | No                                             |
|                | CQM1H            | No                | No                | No                | No                                             |
|                | CPM1             | No                | No                | No                | No                                             |
|                | CPM1A            | No                | No                | No                | No                                             |
|                | CPM2A            | No                | No                | No                | No                                             |
|                | CPM2C            | No                | No                | No                | No                                             |
|                | C200HS           | No                | No                | No                | No                                             |
|                | C200HE (-Z)      | No                | No                | No                | No                                             |
|                | C200HG (-Z)      | No                | No                | No                | No                                             |
|                | C200HX (-Z)      | No                | No                | No                | No                                             |
| CVM1/CV series | CV500/1000/2000  | No                | No                | No                | No                                             |
|                | CVM1             | No                | No                | No                | No                                             |
| CS series      | CS1H             | Yes               | Yes               | Yes               | No                                             |
|                | CS1G             | Yes               | Yes               | Yes               | No                                             |
|                | CS1D             | Yes               | Yes               | Yes               | No                                             |
| CJ series      | CJ1H             | Yes               | Yes               | Yes               | No                                             |
|                | CJ1G             | Yes               | Yes               | Yes               | No                                             |
|                | CJ1M             | Yes               | Yes               | Yes               | No                                             |
|                | CJ2H             | Yes               | Yes               | Yes               | Yes                                            |
|                | CJ2M             | Yes               | Yes               | Yes               | Yes                                            |
|                | CJ3M             | Yes               | Yes               | Yes               | Yes                                            |
| CP series      | CP1H             | Yes               | Yes               | Yes               | No                                             |
|                | CP1L             | Yes               | Yes               | Yes               | No                                             |
|                | CP1E             | No                | No                | No                | No                                             |
| NJ series      | NJ5/NJ3/NJ1      | No                | Yes *2            | No                | Yes                                            |
| NX Series      | NX7/NX5/NX1/NX1P | No                | No                | No                | Yes                                            |

**Note:** Including models whose production were discontinued.

\*1. Available through a future update

\*2. Only Device Monitor function is supported. Monitoring function that uses tags (variables) is not supported.

## Connectable Inverters

| Series    | Communication Unit                         | Connection      |     |
|-----------|--------------------------------------------|-----------------|-----|
| 3G3MX2-V2 | (Use the RS-485 terminal on the Inverter)  | RS-485 (2-wire) | 1:N |
| 3G3RX2    | (Use the RS-485 terminal on the Inverter)  |                 |     |
| 3G3MX2-V1 | (Use the RS-485 terminal on the Inverter)  |                 |     |
| 3G3JX     | (Use the RS-485 connector on the Inverter) |                 |     |
| 3G3RX-V1  | (Use the RS-485 terminal on the Inverter)  |                 |     |

## Connectable Temperature Controllers

The following Temperature Controllers can be connected directly to an NS-B-series.

| Unit name                                      | Series                                | Model                                                                     |
|------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------|
| Modular Temperature Controller                 | EJ1                                   | EJ1-EDU End Unit                                                          |
| Modular Temperature Controller                 | E5ZN                                  | E5ZN-SCT24S Terminal Unit                                                 |
| Digital Controller                             | E5AR                                  | E5AR-□□□□□□□□-FLK                                                         |
|                                                | E5ER                                  | E5ER-□□□□□□□□-FLK                                                         |
| Temperature Controller<br>(Digital Controller) | E5AN/E5EN/E5CN (Basic Model)          | E5CN-□□□□□T-FLK Multi-input<br>(Thermocouple/Resistance Thermometer) Type |
|                                                |                                       | E5CN-□□□□□L-FLK Analog Input Type                                         |
|                                                |                                       | E5EN-□□□□□T-FLK Multi-input<br>(Thermocouple/Resistance Thermometer) Type |
|                                                |                                       | E5EN-□□□□□L-FLK Analog Input Type                                         |
|                                                |                                       | E5AN-□□□□□T-FLK Multi-input<br>(Thermocouple/Resistance Thermometer) Type |
|                                                |                                       | E5AN-□□□□□L-FLK Analog Input Type                                         |
|                                                | E5AN-H/E5EN-H/E5CN-H (Advanced Model) | E5CN-H□□□□□□□-FLK Universal-input Model                                   |
|                                                |                                       | E5EN-H□□□□□□□-FLK Universal-input Model                                   |
|                                                |                                       | E5AN-H□□□□□□□-FLK Universal-input Model                                   |
|                                                | E5GN                                  | E5GN-□□□TC-FLK Thermocouple Input Type                                    |
|                                                |                                       | E5GN-□□□P-FLK Resistance Thermometer Input Type                           |

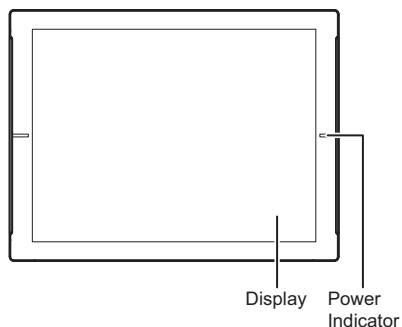
**Note:** Including models whose production were discontinued.

# NS-B Series

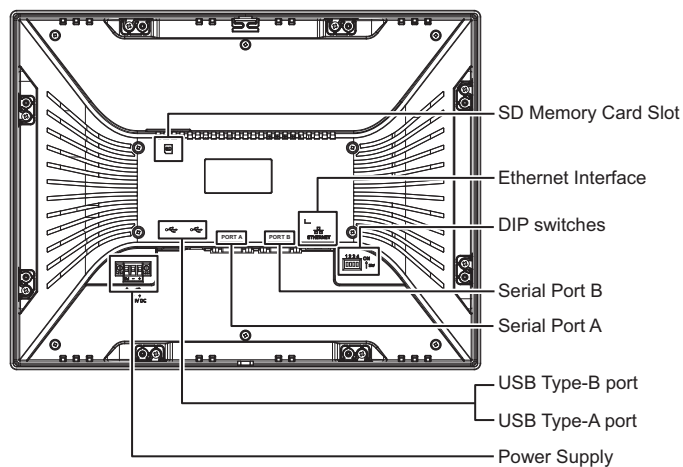
## Part Names

### NB15W-TW01B-V1-S

Front view



Back view

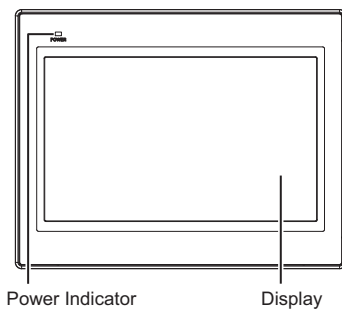


### NB10W-TW01B-V1-S (Example)

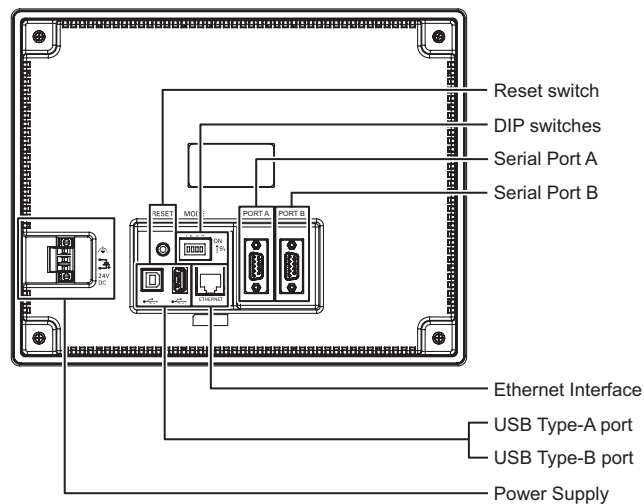
### NB7W-TW01B-V1-S

### NB5Q-TW01B-V1-S

Front view



Back view

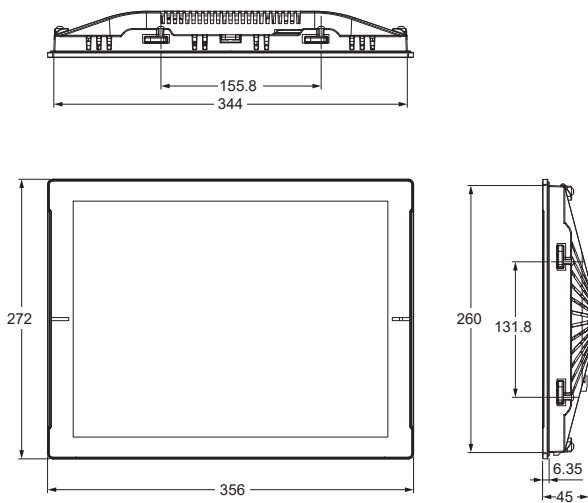


**Note:** The illustration shows the NB10W-TW01B-V1-S as a representative model. The appearance and available interfaces may vary depending on the model.

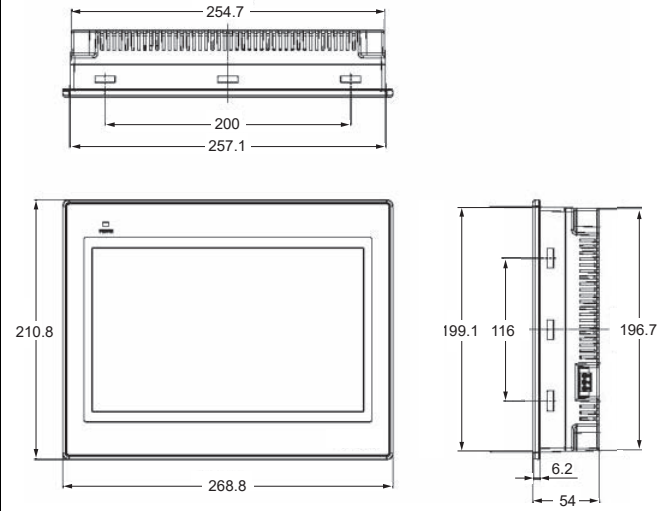
# Dimensions

(Units: mm)

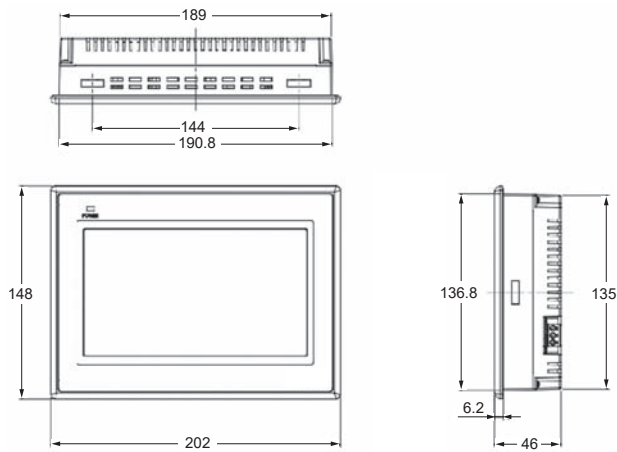
**NB15W-TW01B-V1-S**



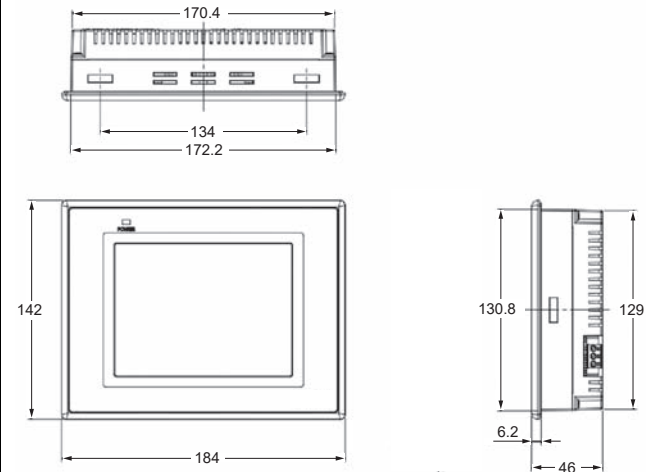
**NB10W-TW01B-V1-S**



**NB7W-TW01B-V1-S**



**NB5Q-TW01B-V1-S**



## Panel opening dimension W × H (mm)

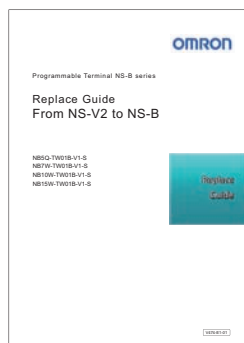
| Models           | Opening Dimension (W × H mm)      |
|------------------|-----------------------------------|
| NB15W-TW01B-V1-S | 345.0 (+0.5/-0) × 261.0 (+0.5/-0) |
| NB10W-TW01B-V1-S | 258.0 (+0.5/-0) × 200.0 (+0.5/-0) |
| NB7W-TW01B-V1-S  | 191.0 (+0.5/-0) × 137.0 (+0.5/-0) |
| NB5Q-TW01B-V1-S  | 172.4 (+0.5/-0) × 131.0 (+0.5/-0) |

# NS-B Series

## Related Manuals

| Manual name                                                     | Cat. No. | Model                            | Applications                                                                                                   | Description                                                                                                                                                                                                                                                    |
|-----------------------------------------------------------------|----------|----------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NS-B-series Programmable Terminal Hardware User's Manual        | V129     | NB□□□-TW01B-V1-S                 | Learning the specifications and settings required to install an NS-B-series PT and connect peripheral devices. | Information is provided on NS-B-series Programmable Terminal specifications, part names, installation procedures, and procedures to connect an PT Unit to peripheral devices. Information is also provided on maintenance after operation and troubleshooting. |
| NS-B-series Programmable Terminal Software User's Manual        | V130     | NB□□□-TW01B-V1-S                 | Learning about NS-B-series PT pages and object functions.                                                      | Describes the pages and object functions of the NS-B-series Programmable Terminals.                                                                                                                                                                            |
| NS-B-series Programmable Terminal Host Connection User's Manual | V131     | NB□□□-TW01B-V1-S                 | Learning the specifications required to connect devices to an NS-B-series PT.                                  | Information is provided on connection procedures and setting procedures to connect an NS-B-series PT to a Controller or other device.                                                                                                                          |
| NS-B-series Programmable Terminal Macro Reference Manual        | V132     | NB□□□-TW01B-V1-S                 | When you wish to know the language specifications of the macros used with the NS-B-series PT.                  | Describes the language specifications and functions of the macros used with the NS-B-series PT.                                                                                                                                                                |
| CX-Designer Version 4.□ Operation Manual                        | V133     | CXONE-AL□□C-V4<br>CXONE-AL□□D-V4 | When you wish to know how to create screens in CX-Designer and how to download to the PT Unit.                 | Describes how to create screens in CX-Designer and the procedure to download to the PT Unit.                                                                                                                                                                   |

## Replacement from NS Series to NS-B Series



Programmable Terminal NS-B Series  
Replace Guide  
From NS-V2 to NS-B  
(Cat. No. V474)

This guide helps users replace NS Series models with the NS-B Series. It provides an overview of key differences between the two series and important points to consider during replacement. For more information, please visit our website.

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