NS Series Lineup

This powerful lineup showcases OMRON's unique value.

Choose from 3 types to match your application and requirements.

NS Series

Standard Models

Plentiful screen variations and diverse functions allow use in a wide variety of applications.

15 inches `Color TFT`

NS15-TX
- 32,768 colors
- XGA 1024 x 768 pixels
- Screen memory size: 60 MB

USB Slave	Controller Link
Ethernet	Video (RGB input only)
USB Master	RGB output
RS-232C x 2	Ladder Monitor
RS-422A/485	Memory Card

12.1 inches `Color TFT`

NS12-TS
- 32,768 colors
- SVGA 800 x 600 pixels
- Screen memory size: 60 MB

USB Slave	Controller Link
Ethernet	Video
USB Master	Ladder Monitor
RS-232C x 2	Memory Card

10.4 inches `Color TFT`

NS10-TV
- 32,768 colors
- VGA 640 x 480 pixels
- Screen memory size: 60 MB

USB Slave	Controller Link
Ethernet	Video
USB Master	Ladder Monitor
RS-232C x 2	Memory Card

8.4 inches `Color TFT`

NS8-TV
- 32,768 colors
- VGA 640 x 480 pixels
- Screen memory size: 60 MB

USB Slave	Video
Ethernet	Ladder Monitor
USB Master	Memory Card
RS-232C x 2	

5.7 inches `Color High-luminance TFT`

NS5-TQ
- 32,768 colors
- QVGA 320 x 240 pixels
- Screen memory size: 60 MB

| USB Slave |
| Ethernet |
| RS-232C x 2 |
| Memory Card |

5.7 inches `Color TFT`

NS5-SQ
- 32,768 colors
- QVGA 320 x 240 pixels
- Screen memory size: 60 MB

| USB Slave |
| Ethernet |
| RS-232C x 2 |
| Memory Card |

NSH Series

Hand-held Models

A hand-held version of the NS5 is now available to perform operations at the production site.

5.7 inches `Color TFT`

NSH5-SQR
- 32,768 colors
- QVGA 320 x 240 pixels

| USB Slave |
| RS-232C/422A |
| Memory Card |

- Equipped with a red switch for an emergency stop input.
- Emergency stop (3 inputs)

5.7 inches `Color TFT`

NSH5-SQG
- 32,768 colors
- QVGA 320 x 240 pixels

| USB Slave |
| RS-232C/422A |
| Memory Card |

- Equipped with a gray switch for a stop input.
- Emergency stop (3 inputs)

Hand-held PT Cable

| RS-232C | RS-422A |

NSJ Series

Integrated Controller Models
PT is unified with the Controller into one package to greatly help standardize equipment and reduce size.

12.1 inches [Color TFT]

NSJ12-TS□□-G5D
- 32,768 colors
- SVGA 800 x 600 pixels
- Screen memory size: 60 MB

USB Slave	Controller Link
Ethernet	Ladder Monitor
USB Master	Memory Card
RS-232C x 3	DeviceNet

(Controller Section)
- I/O points: 1,280
- Program capacity: 60K steps
- Data Memory: 128K words

10.4 inches [Color TFT]

NSJ10-TV□□-G5D
- 32,768 colors
- VGA 640 x 480 pixels
- Screen memory size: 60 MB

USB Slave	Controller Link
Ethernet	Ladder Monitor
USB Master	Memory Card
RS-232C x 3	DeviceNet

(Controller Section)
- I/O points: 1,280
- Program capacity: 60K steps
- Data Memory: 128K words

8.4 inches [Color TFT]

NSJ8-TV□□-M3D
- 32,768 colors
- VGA 640 x 480 pixels
- Screen memory size: 60 MB

USB Slave	Controller Link
Ethernet	Ladder Monitor
USB Master	Memory Card
RS-232C x 3	DeviceNet

(Controller Section)
- I/O points: 640
- Program capacity: 20K steps
- Data Memory: 32K words

8.4 inches [Color TFT]

NSJ8-TV□□-G5D
- 32,768 colors
- VGA 640 x 480 pixels
- Screen memory size: 60 MB

USB Slave	Controller Link
Ethernet	Ladder Monitor
USB Master	Memory Card
RS-232C x 3	DeviceNet

(Controller Section)
- I/O points: 1,280
- Program capacity: 60K steps
- Data Memory: 128K words

5.7 inches [Color TFT]

NSJ5-SQ□□-M3D/-G5D
- 32,768 colors
- QVGA 320 x 240 pixels
- Screen memory size: 60 MB

USB Slave	Controller Link
Ethernet	Memory Card
RS-232C x 3	DeviceNet

(Controller Section)

M3D	G5D
I/O points: 640	I/O points: 1280
Program capacity: 20K steps	Program capacity: 60K steps
Data Memory: 32K words	Data Memory: 128K words

5.7 inches [Color High-luminance TFT]

NSJ5-TQ□□-M3D/-G5D
- 32,768 colors
- QVGA 320 x 240 pixels
- Screen memory size: 60 MB

USB Slave	Controller Link
Ethernet	Memory Card
RS-232C x 3	DeviceNet

(Controller Section)

M3D	G5D
I/O points: 640	I/O points: 1280
Program capacity: 20K steps	Program capacity: 60K steps
Data Memory: 32K words	Data Memory: 128K words

Software

CX-Designer

Without screen creation and ladder programming, the CX-Designer Screen Design Software is so easy-to-use that anyone can master it.

NS-Runtime

This software enables PLC communications from a personal computer by manipulating PT screens created using the CX-Designer.

Programmable Terminals
NS Series

Even Simpler Equipment Operation with Outstanding Synergy.

5.7 inches
Color TFT

STN monochrome

10.4 inches
Color TFT

15 inches
Color TFT

12.1 inches
Color TFT

8.4 inches
Color TFT

Features

- 5.7 to 12.1 inch sizes are available.
- A hand-held version of the NS5 is now available to perform operations at the production site. The NS-series PT's have a complete set of functions that can be used at the production site.
- The Smart Active Parts(SAP Library) makes it easy to connect to OMRON PLCs and components, OMRON provides a development environment that requires with no programming and no screen designing.
- When an error occurs in a Unit in the OMRON PLCs, the Troubleshooter SAP Library provides an easy-to-understand explanation of the cause of the error as well as the countermeasures.
- 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.
- 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 eight. System messages can be displayed in eight languages.
- Single Port Multi Access (SPMA) come as a Standard Feature. The ladder program and screen data can be transferred from a single port!
- Connectable PLCs and devices appear one after another.
  Has become connectable with the PLCs of Mitsubishi Electric Corporation and the Inverters of OMRON Corporation.

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International Standards

- The standards are availabled as follows: U: UL, U1: UL (Class I Division 2 Products for Hazardous Locations), C: CSA, UC: cULus, UC1: cULus (Class I Division 2 Products for Hazardous Locations), CU: cUL, N: NK, L: Lloyd, and CE: EC Directives.
- Contact your OMRON representative for further details and applicable conditions for these standards.

Programmable Terminals

Product name	Specifications				Model	Standards
	Effective display area	Number of dots	Ethernet	Case color		
NS5-V2 *1	5.7-inch *2 TFT color LED backlight	320 × 240 dots	No	Ivory	NS5-SQ10-V2	UC1, CE, N, L, UL Type4
				Black	NS5-SQ10B-V2	
			Yes	Ivory	NS5-SQ11-V2	
				Black	NS5-SQ11B-V2	
	5.7-inch *2 High-luminance TFT color LED backlight		No	Ivory	NS5-TQ10-V2	
				Black	NS5-TQ10B-V2	
			Yes	Ivory	NS5-TQ11-V2	
				Black	NS5-TQ11B-V2	
NS8-V2	8.4-inch *2 TFT LED backlight	640 × 480 dots	No	Ivory	NS8-TV00-V2	UC1, CE, N, L
				Black	NS8-TV00B-V2	
			Yes	Ivory	NS8-TV01-V2	
				Black	NS8-TV01B-V2	
NS10-V2	10.4-inch *2 TFT LED backlight	640 × 480 dots	No	Ivory	NS10-TV00-V2	UC1, CE, N, L, UL Type4
				Black	NS10-TV00B-V2	
			Yes	Ivory	NS10-TV01-V2	
				Black	NS10-TV01B-V2	
NS12-V2	12.1-inch *2 TFT LED backlight	800 × 600 dots	No	Ivory	NS12-TS00-V2	
				Black	NS12-TS00B-V2	
			Yes	Ivory	NS12-TS01-V2	
				Black	NS12-TS01B-V2	
NS15-V2	15-inch TFT	1,024 × 768 dots	Yes	Silver	NS15-TX01S-V2	
				Black	NS15-TX01B-V2	
NSH5-V2 *1 Hand-held	5.7-inch TFT	320 × 240 dots	No	Black (Emergency stop button: Red)	NSH5-SQR10B-V2	UC, CE
				Black (Stop button: Gray)	NSH5-SQG10B-V2	

✱1. As of July 2008, the image memory has been increased to 60 MB.
✱2. Lot No. 15Z0 or later of NS5 color-type models, Lot No. 28X1 or later of NS8 models, Lot No. 11Y1 or later of NS10 models, Lot No. 14Z1 or later of NS12 models, LotNo.31114K or later of NS15 models.

NS-Runtime

Product name	Specifications		Media	Model	Standards
NS-Runtime	NS-Runtime Installer, PDF manual, hardware key (See note.)	1license	CD	NS-NSRCL1	–
		3 licenses		NS-NSRCL3	
		10 licenses		NS-NSRCL10	

Note: A hardware key (USB dongle) is required for NS-Runtime operation.

●System Requirements

Item	Specifications
OS	Windows XP (Service Pack 3 or higher), Vista, 7 or 8 (Support 64-bit version for Windows 7 and Windows 8.)
CPU	Celeron, 1.3 GHz or higher (Recommended)
Memory size	HDD: 50 MB min., RAM: 512 MB min. (Windows 7: 1 GB min.). 50 MB is required for the Runtime alone. (An additional 280 MB is required if CX-Server is not already installed.)

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	CS, CJ, CP, and other series	NJ-series and NX-series
Programmable Terminals	NS-series	NS-series with an Ethernet port
Software	FA Integrated Tool Package CX-One	Automation Software Sysmac Studio

●FA Integrated Tool Package CX-One

Product name	Specifications	Number of licenses	Media	Model	Standards
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. CX-One runs on the following OS. Windows XP (Service Pack 3 or higher, 32-bit version) / Windows Vista (32-bit/64-bit version) / Windows 7 (32-bit/64-bit version) / Windows 8 (32-bit/64-bit version) / Windows 8.1 (32-bit/64-bit version) / Windows 10 (32-bit/64-bit version) CX-One Version 4.□ includes CX-Designer Ver.3.□. For details, refer to the CX-One catalog (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

Please purchase a DVD and required number of licenses the first time you purchase the Sysmac Studio. DVDs and licenses are available individually. Each model of licenses does not include any DVD.

Product name	Specifications			Model	Standards
		Number of licenses	Media		
Sysmac Studio Standard Edition Ver.1.□	The Sysmac Studio provides an integrated development environment to set up, program, debug, and maintain NJ/NX Series Controllers and other Machine Automation Controllers, as well as EtherCAT slaves.	- (Media only)	DVD	SYSMAC-SE200D	—
	Sysmac Studio runs on the following OS. Windows XP (Service Pack 3 or higher, 32-bit version) / Windows Vista (32-bit version) / Windows 7 (32-bit/64-bit version) / Windows 8 (32-bit/64-bit version) / Windows 8.1 (32-bit/64-bit version) / Windows 10 (32-bit/64-bit version) 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). For details, refer to the Sysmac Integrated Catalogue (P072).	1 license *	—	SYSMAC-SE201L	—

Note: To connect the NJ5 Controller, NS system version 8.5 or higher is required. CX-Designer version 3.3 or higher is also required.
To connect the NJ1/NJ3 Controller, NS system version 8.61 or higher is required. CX-Designer version 3.4 or higher is also required.
To connect the NX7 Controller, NS system version 8.9 or higher is required. CX-Designer version 3.64 or higher is also required.
✱ Multi licenses are available for the Sysmac Studio (3, 10, 30, or 50 licenses).
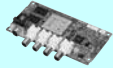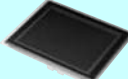
Cable

Product name	Specifications		Model	Standards
Cable *1	Screen transfer cable for DOS/V (CX-Designer ↔ PT)	Length: 2 m	**XW2Z-S002**	–
	USB-Serial Conversion Cable	Length: 0.5 m	**CS1W-CIF31**	N
	USB relay cable	Length: 1 m	**NS-USBEXT-1M**	
NSH5 Cables	RS-422A cable (loose wires + D-Sub 9-pin)	Length: 10 m	**NSH5-422CW-10M**	–
	RS-232C cable (loose wires + D-Sub 9-pin)	Length: 3 m	**NSH5-232CW-3M**	
	RS-232C cable (loose wires + D-Sub 9-pin)	Length: 10 m	**NSH5-232CW-10M**	
UL-compliant NSH5 Cable	RS-422A cable (loose wires)	Length: 10 m	**NSH5-422UL-10M**	CU
	RS-232C cable (loose wires + relay cable)	Length: 3 m	**NSH5-232UL-3M**	
	RS-232C cable (loose wires + relay cable)	Length: 10 m	**NSH5-232UL-10M**	
PT-to-PLC Connecting Cable *2	PT connection: 9 pins PLC connection: 9 pins	Length: 2 m	**XW2Z-200T**	–
		Length: 5 m	**XW2Z-500T**	
	PT connection: 9 pins PLC peripheral port	Length: 2 m	**XW2Z-200T-2**	
		Length: 5 m	**XW2Z-500T-2**	
NSH5 Removable Box Cable	RS-232C Cable (connectors)	Length: 3 m	**NSH5-232CN-3M**	
		Length: 10 m	**NSH5-232CN-10M**	
NSH5 Removable Box	–		**NSH5-AL001**	
NSH5 Wall-mounting Bracket	–		**NSH5-ATT02**	
NSH5 Visor	–		**NSH5-ATT01**	

∗**1.** Use a standard USB Type A male to Type B type male Cable to connect the NS series PT to a personal computer (CX-Designer).
Use a standard USB cable to connect the NS series PT to a PictBridge-compatible printer. USB cable type depends on the printer.
∗**2.** To connect the NS series PT to NJ series Controller, using a commercially available 10/100-BASE-TX twisted-pair cable.
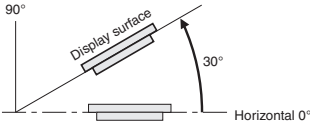For detail, refer to the NS series SETUP MANUAL (Cat. No.V083).

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Options

Product name	Specifications		Model	Standards
Video Input Unit	Inputs: 4 channels Signal type: NTSC/PAL		**NS-CA001**	UC1, CE
	Input channels: 2 video channels and 1 RGB channel *1 Signal type: NTSC/PAL		**NS-CA002**	
Controller Link Interface Unit	For Controller Link Communications		**NS-CLK21**	UC1, CE
RS-422A Adapter	Transmission distance: 500 m total length **Note:** Use this model when connecting PT models without a V☐ suffix. **Note:** PT models with the V☐ suffix can also be connected.		**NS-AL002**	–
	Transmission distance: 50 m total length **Note:** Only PT models with a suffix of V☐ are connectable. Use the NS-AL002 to connect models without a V☐ suffix.		**CJ1W-CIF11**	UC1, N, L, CE
Sheet/Cover *2	Anti-reflection Sheets (5 surface sheets)	NS15	**NS15-KBA04**	–
		NS12/10	**NS12-KBA04**	
		NS8	**NS7-KBA04**	
		NS5	**NT30-KBA04**	
	Protective Covers (5 pack) (anti-reflection coating)	NS12/10	**NS12-KBA05**	
		NS8	**NS7-KBA05**	
		NS5	**NT31C-KBA05**	
	Protective Covers (1 cover included) (Transparent)	NS15	**NS15-KBA05N**	
	Protective Covers (5 covers included) (Transparent)	NS12/10	**NS12-KBA05N**	
		NS8	**NS7-KBA05N**	
		NS5	**NT31C-KBA05N**	
Attachment	NT625C/631/631C Series to NS12/10 Series		**NS12-ATT01**	
	NT625C/631/631C Series to NS12/NS10 Series (Black)		**NS12-ATT01B**	
	NT610C Series to NS12/10 Series		**NS12-ATT02**	
	NT620S/620C/600S Series to NS8 Series		**NS8-ATT01**	
	NT600M/600G/610G/612G Series to NS8 Series		**NS8-ATT02**	
Memory Card	128 MB		**HMC-EF183**	
	256 MB		**HMC-EF283**	
	512 MB		**HMC-EF583**	
Memory Card Adapter	---		**HMC-AP001**	CE
Replacement Battery	Battery life: 5 years (at 25°C)		**CJ1W-BAT01**	–
Bar Code Reader	CCD handheld bar code reader (RS-232C interface)		**V520-RH21-6**	

∗**1.** One screen cannot display two video inputs simultaneously.
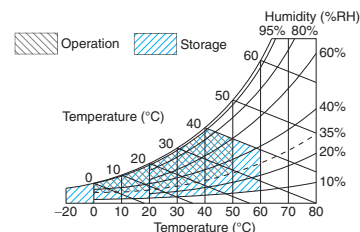∗**2.** A Chemical-resistant Cover (NT30-KBA01) is available only for the NS5.

NS Series

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General Specifications

NS5/NS8/NS10/NS12/NS15

Series	NS5-V2	NS8-V2	NS10-V2	NS12-V2	NS15-V2
Rated power supply voltage	24 VDC				
Allowable voltage range	20.4 to 27.6 VDC (24 VDC ±15%)				
Power consumption	15 W max.	25 W max.			45 W max.
Ambient operating temperature	0 to 50 °C (See note on the next page.) **Note:** The ambient operating temperature is subject to the following restrictions according to the mounting angle. Mounting angle of 0 to 30° to the horizontal: • When no Expansion Units are mounted, the operating temperature range is 0 to 45°C. • When a Video Input Unit or a Controller Link Interface Unit is mounted, the ambient operating temperature is 0 to 35°C. Mounting angle of 30 to 90° to the horizontal: Operating temperature range of 0 to 50°C			90° Display surface 30° Horizontal 0°	
Storage temperature	−20 to 60 °C *1				
Ambient operating humidity	35 to 85% (0 to 40 °C), 35 to 60% (40 to 50 °C) (with no condensation)				
Operating environment	No corrosive gases.				
Noise immunity	Conforms to IEC61000-4-4, 2 kV (power lines).				
Vibration resistance (during operation)	10 to 57 Hz, 0.075 mm amplitude, 57 to 150 Hz, 9.8 m/s^2 30 min each in X, Y, and Z directions				5 to 8.4 Hz, 3.5 mm single amplitude, 8.4 to 150 Hz, 9.8 m/s^2 10 min times each in X, Y, and Z directions
Shock resistance (during operation)	147 m/s^2 3 times each in direction of X, Y, and Z				
Weight	1.0 kg max.	2.0 kg max.	2.3 kg max.	2.5 kg max.	4.2 kg max.
Degree of protection	Front operating panel: IP65 oil-proof type and NEMA4 UL type 4. *2 **Note:** May not be applicable in locations with long-term exposure to oil.				
Ground	Ground to 100 Ω or less.				
Battery life	5 years (at 25 °C): Replace battery within 5 days after the battery runs low (indicator lights orange).				
Applicable standards	Certified for conformance to UL 508, UL 1604, EMC Directive, NK, and LR Standards.				

∗**1.** Operate the PT within the temperature and humidity ranges shown in the right diagram.
∗**2.** Support for NS5, NS10, NS12 and NS15.

Humidity (%RH)
95% 80%

⬚⬚ Operation ▨▨ Storage

Temperature (°C)

NSH5 Hand-held PT

Series	NSH5-V2	
Type	5.7-inch Color TFT (Hand-held Version)	
Case color	Black	
Built-in Ethernet port	No	
Model	NSH5-SQR10B-V2 (Emergency stop button: Red)	NSH5-SQG10B-V2 (Stop button: Gray)
Rated power supply voltage	24 VDC	
Allowable voltage range	20.4 to 27.6 VDC (24 VDC ±15%)	
Power consumption	10 W max.	
Ambient operating temperature	0 to 40°C	
Storage temperature	−20 to 60°C	
Ambient operating humidity	35% to 85% (0 to 40°C) with no condensation	
Operating environment	No corrosive gases.	
Noise immunity	Common mode: 1,000 Vp-p (between power supply terminals and panel) Normal mode: 300 Vp-p Pulse width: 100 ns to 1 μs, Rise time: 1-ns pulse	
Vibration resistance (during operation)	10 to 57 Hz, 0.075 mm amplitude, 57 to 150 Hz, 9.8 m/s^2 30 min each in X, Y, and Z directions	
Shock resistance (during operation)	147 m/s^2 3 times each in direction of X, Y, and Z	
Weight	1 kg max.	
Degree of protection	Equivalent to IP65.	
Ground	Ground to 100 Ω or less.	
Battery life	5 years (at 25°C): Replace battery within 5 days after the battery runs low (indicator lights orange).	
Applicable standards	Certified for conformance to UL 508, EMC Directive, and EN 60204-1.	

Performance/Specifications

NS5

Series		NS5-V2							
Model		NS5-SQ10-V2	NS5-SQ11-V2	NS5-SQ10B-V2	NS5-SQ11B-V2	NS5-TQ10-V2	NS5-TQ11-V2	NS5-TQ10B-V2	NS5-TQ11B-V2
Built-in Ethernet port		No	Yes	No	Yes	No	Yes	No	Yes
Case color		Ivory		Black		Ivory		Black	
Display device		TFT color LCD				Color High-luminance TFT *1			
Effective display area		Width 117.2 × height 88.4 mm (5.7 inches)							
Display colors		256 colors							
Number of dots		320 dot horizontal × 240 dot vertical							
View angle		Left/right: 80°, Top: 80°, Bottom: 60° *5							
Screen data capacity		60 Mbytes							
Image data (BMP or JPG images)		32,768 colors							
Memory Card		Supported							
Ladder Monitor function		Not supported							
Video Input Unit support		Not supported							
Controller Link Interface Unit (Wired) support		Not supported							
Backlight *2	Service life * 3	75,000 hours min.							
	Brightness adjustment	Three-level or 32-level brightness adjustment from the touch panel screen. * 4							
	Backlight error detection *5	Error is detected automatically, and the RUN indicator flashes green as notification.							
Touch panel (matrix type)	Method	Matrix resistive membrane							
	Number of switches/ resolution	300 (20 horizontal × 15 vertical) 16 × 16 dots for each switch							
	Input	Pressure-sensitive							
	Service life	1,000,000 touch operations.							
Display text	Labels	Can be specified in CX-Designer. Font, style, and size can be specified.							
	Numerals, alarms, and character strings	Scalable Gothic: Magnification: 6 to 255 points Rough: Magnification: 1×1, 1×2, 2×1, 2×2, 3×3, 4×4, 8×8 Standard: Magnification: 1×1, 1×2, 2×1, 2×2, 3×3, 4×4, 8×8 Fine: Magnification: 1×1, 1×2, 2×1, 2×2, 3×3, 4×4, 8×8 7-segment display: Can display only numerals, dates, and times.							
	Supported languages (42 languages)	Scalable Gothic, rough, standard, and fine can be used for 42 languages. Japanese, simplified Chinese, traditional Chinese, Korean, English, French, German, Italian, Portuguese, Spain, Swedish, Dutch, Finnish, Norwegian, Basque, Catalan, Danish, Albanian, Croatian, Czech, Hungarian, Polish, Romanian, Slovak, Slovenian, Bulgarian, Belarusian, Russian, Serbian, Macedonian, Ukrainian, Georgian, Icelandic, Afrikaans, Faroese, Indonesian, Greek, Turkish, Estonian, Latvian, Lithuanian, Thai (supported only with scalable Gothic font)							
Text attributes	Color	256 colors							
	Font style (only when vector font is specified)	Bold or italic							
	Vertical alignment	Top, center, or bottom							
	Horizontal alignment	Left-justified, centered, or right-justified							
Flicker	Objects supporting flicker	Functional objects: Select from up to 10 types of registered flicker settings. The flicker speed and flicker range can be set. Fixed objects: Select from three flicker types.							
Numeral units and scale settings		1.000 max.							
Alarm/event settings		5,000 max.							
Expansion interface		For Expansion Interface Units							

∗1. NS5-TQ series (high luminance TFT) luminance is better than that of NS5-SQ series by about 110 cd/m^2.

∗2. Contact your nearest OMRON representative to replace the backlight.

∗3. This is the estimated time before brightness is reduced by half at room temperature and humidity. It is not a guaranteed value.
The service life will be dramatically shortened if PT is used at low temperatures. For example, using the PT at temperatures of 0°C will reduce the service life to approximately 10,000 hours (reference value).

∗4. Lot No. 15Z0 or later of NS5 models.

∗5. This function does not indicate that the service life has been reached. It detects when the backlight is not lit due to a disconnection or other errors.
Backlight error detection indicates that all backlights (2) are OFF.

NS8/NS10/NS12/NS15

Series	NS8-V2				NS10-V2				NS12-V2				NS15-V2	
Model	NS8-TV00-V2	NS8-TV01-V2	NS8-TV00B-V2	NS8-TV01B-V2	NS10-TV00-V2	NS10-TV01-V2	NS10-TV00B-V2	NS10-TV01B-V2	NS12-TS00-V2	NS12-TS01-V2	NS12-TS00B-V2	NS12-TS01B-V2	NS15-TX01S-V2	NS15-TX01B-V2
Built-in Ethernet port	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	Yes	Yes
Case color	Ivory		Black		Ivory		Black		Ivory		Black		Silver	Black
Display device	High-definition TFT color LCD				High-definition TFT color LCD				High-definition TFT color LCD				High-definition TFT color LCD	
Effective display area	Width 170.9 × height 128.2 mm (8.4 inches)				Width 215.2 × height 162.4 mm (10.4 inches)				Width 246.0 × height 184.5 mm (12.1 inches)				Width 304.1 × height 228.1 mm (15 inches)	
Display colors	256 colors													
Number of dots	640 dot horizontal × 480 dot vertical								800 dot horizontal × 600 dot vertical				1,024 dot horizontal × 768 dot vertical	
View angle	Left/right: 80°, Top: 80°, Bottom: 60° *3				Left/right: 70°, Top: 65°, Bottom: 65° *3				Left/right: 80°, Top: 80°, Bottom: 80° *3				Left/right: 80°, Top: 70°, Bottom: 60°	
Screen data capacity	60 Mbytes													
Image data (BMP or JPG images)	32,768 colors													
Memory Card	Supported													
Ladder Monitor function	Supported													
Video Input Unit support	Supported (Image displayed via video input is 260,000 colors)												(Only RGB input is enabled.)	
Controller Link Interface Unit (Wired) support	Not supported				Supported									
Backlight *1 — Service life * 2	50,000 hours min.													
Backlight *1 — Brightness adjustment	Three-level or 32-level brightness adjustment from the touch panel screen. * 3													
Backlight *1 — Backlight error detection *4	Error is detected automatically, and the RUN indicator flashes green as notification.													
Touch panel (matrix type) — Method	Matrix resistive membrane												Analog resistive membrane *5	
Touch panel (matrix type) — Number of switches/resolution	768 (32 horizontal × 24 vertical) 20 × 20 dots for each switch				1,200 (40 horizontal × 30 vertical) 16 × 16 dots for each switch				1,900 (50 horizontal × 38 vertical) 16 × 16 dots for each switch				Resolution: 1,024 (horizontal) × 1,024 (vertical)	
Touch panel (matrix type) — Input	Pressure-sensitive													
Touch panel (matrix type) — Service life	1,000,000 touch operations.													
Display text — Labels	Can be specified in CX-Designer. Font, style, and size can be specified.													
Display text — Numerals, alarms, and character strings	Scalable Gothic: Magnification: 6 to 255 points Rough: Magnification: 1×1, 1×2, 2×1, 2×2, 3×3, 4×4, 8×8 Standard: Magnification: 1×1, 1×2, 2×1, 2×2, 3×3, 4×4, 8×8 Fine: Magnification: 1×1, 1×2, 2×1, 2×2, 3×3, 4×4, 8×8 7-segment display: Can display only numerals, dates, and times.													
Display text — Supported languages (42 languages)	Scalable Gothic, rough, standard, and fine can be used for 42 languages. Japanese, simplified Chinese, traditional Chinese, Korean, English, French, German, Italian, Portuguese, Spain, Swedish, Dutch, Finnish, Norwegian, Basque, Catalan, Danish, Albanian, Croatian, Czech, Hungarian, Polish, Romanian, Slovak, Slovenian, Bulgarian, Belarusian, Russian, Serbian, Macedonian, Ukrainian, Georgian, Icelandic, Afrikaans, Faroese, Indonesian, Greek, Turkish, Estonian, Latvian, Lithuanian, Thai (supported only with scalable Gothic font)													
Text attributes — Color	256 colors													
Text attributes — Font style (only when vector font is specified)	Bold or italic													
Text attributes — Vertical alignment	Top, center, or bottom													
Text attributes — Horizontal alignment	Left-justified, centered, or right-justified													
Flicker — Objects supporting flicker	Functional objects: Select from up to 10 types of registered flicker settings. The flicker speed and flicker range can be set. Fixed objects: Select from three flicker types.													
Numeral units and scale settings	1.000 max.													
Alarm/event settings	5,000 max.													
Expansion interface	For Expansion Interface Units													

∗1. Contact your nearest OMRON representative to replace the backlight.
∗2. This is the estimated time before brightness is reduced by half at room temperature and humidity. It is not a guaranteed value.
   The service life will be dramatically shortened if PT is used at low temperatures. For example, using the PT at temperatures of 0 °C will reduce the service life to approximately 10,000 hours (reference value).
∗3. Lot No. 28X1 or later of NS8 models, Lot No. 11Y1 or later of NS10 models, Lot No. 14Z1 or later of NS12 models, Lot No. 31114K or later of NS15 models.
∗4. This function does not indicate that the service life has been reached. It detects when the backlight is not lit due to a disconnection or other errors. Backlight error detection indicates that all backlights (2) are OFF.
∗5. An analog touch panel is used with the NS15. Do not press the touch panel in two or more places simultaneously.
   If the touch panel is pressed in two or more places simultaneously, it may activate a switch between the points that are pressed.

Design
Startup/Operation
Maintenance
NS-Runtime
Hand-held PT
Features
Network
System Configuration
Ordering Information
Specifications

Communications

NS5/NS8/NS10/NS12/NS15

|			
Memory Card		**Interface**	One ATA-Compact Flash interface slot
		Functions	Used to transfer and store screen data, store logging data, and store history data. (Alarm/Event History, Operation Log, and Error Log generated during Macro execution).
Serial Communications	**Port A**	**Connector**	Conforms to EIA RS-232C. D-Sub female 9-pin connector 5-V output (250 mA max.) through pin 6. The 5-V outputs of serial ports A and B cannot be used at the same time.
		Functions	Host (PLC) access: 1:N NT Links (connections with CS/CJ/CP-series PLCs and C200HX/HG/HE(-Z) PLCs), 1:1 NT Links, or Host Link (connections with C Series or CVM1/CV-series PLCs) Direct access to Temperature Controllers using Smart Active Parts: CompoWay / F and bar code reader connections (Read directly from display.)
	Port B	**Connector**	Conforms to EIA RS-232C. D-Sub female 9-pin connector. 5-V output (250 mA max.) through pin 6. The 5-V outputs of serial ports A and B cannot be used at the same time.
		Functions	Host (PLC) access: 1:N NT Links (connections with CS/CJ/CP-series PLCs and C200HX/HG/HE(-Z) PLCs) or 1:1 NT Links (connections with C Series or CVM1/CV-series PLCs) Direct access to Temperature Controllers using Smart Active Parts: CompoWay / F and bar code reader connections (Read directly from display.)
USB SLAVE Specifications		**USB rating**	USB1.1
		Connector	TYPE-B (Slave)
		Functions	Connection with the CX-Designer (for screen data transfers) Connecting to a PictBridge-compatible Printer Recommended printers: EPSON: PM-G4500, PX-G5300, PX-5600, EP-901F Canon: PIXUS MX7600, PIXUS iP100, PIXUS iX5000
USB HOST Specifications *1		**USB rating**	USB1.1
		Connector	TYPE-A (Host)
		Functions	Connection with a printer (for hard copies) Recommended printers: EPSON: PX-G930
Built-in Ethernet Specifications *2		**Conformance standards**	Conforms to IEEE 802.3/Ethernet (10 Base-T/100 Base-TX).
		Functions	Host (PLC) access and connection with the CX-Designer (for screen data transfers)
Controller Link (Wired-type) Specifications *3		**Baud rate**	2 M/1 M/500 K bps
		Transmission path	Shielded twisted-pair cable (special cable)
		Functions	Host (PLC) access and data links
Video Input Specifications *4		**Resolution**	NS-CA001: 320×240, 640×480, 800×600 dots NS-CA002: User-defined size
		Input signal	NS-CA001: NTSC composite video or PAL NS-CA002: NTSC composite video or PAL
		Number of video inputs	NS-CA001: Number of cameras: 4 max. NS-CA002: 2 cameras + RGB

∗**1.** Except NS5.
∗**2.** NS□-□□□1-V2 only.
∗**3.** Except NS5 and NS8.
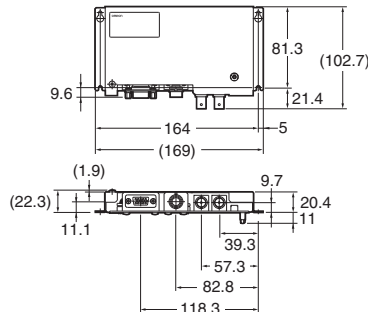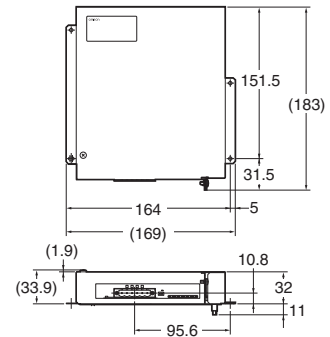∗**4.** Except NS5 and NS15. NS15 provides RGB input. (NS-CA002)

Hand-held NS5
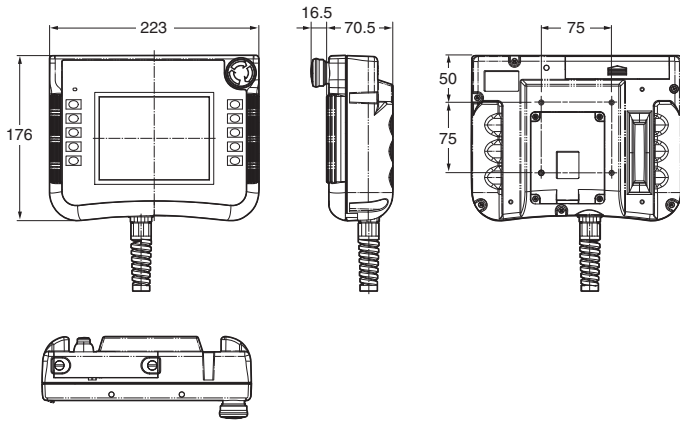
NS-CA001
Video Input Unit
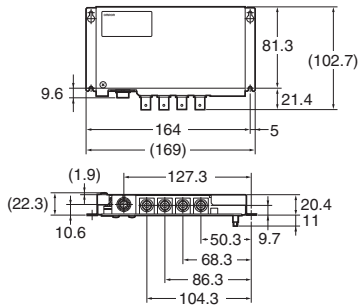
NS-CA002
Video Input Unit

NS-CLK21
Controller Link Interface Unit

Related Manuals

Cat. No.	Model	Manual
V083	NS15/NS12/NS10/NS8/NS5	NS-Series Programmable Terminals SETUP MANUAL
V073	NS15/NS12/NS10/NS8/NS5	NS-Series Programmable Terminals PROGRAMMING MANUAL
V099	NS-CXDC1-V3	CX-Designer Ver.3.□ USER'S MANUAL
V082	NS	NS-Series Ladder Monitor OPERATION MANUAL (Ladder Monitor I/O Comment Extracting Tool)
V086	NS-CA002	NS-Series RGB and Video Input Unit OPERATION MANUAL
V090	NSH5	NSH5-Series Hand-held Programmable Terminal OPERATION MANUAL
V098	NS15/NS12/NS10/NS8/NS5	NS-Series Programmable Terminals HOST CONNECTION MANUAL (Host Link) OPERATION MANUAL
V085	NS15/NS12/NS10/NS8/NS5	NS-Series Programmable Terminals HOST CONNECTION MANUAL
V092	NS15/NS12/NS10/NS8/NS5	NS-Series Programmable Terminals HOST CONNECTION MANUAL Multivendor Connection
V075	NS15/NS12/NS10/NS8/NS5	NS-Series Programmable Terminals Macro Reference
V093	NS-NSRCL□□	NS-NSRCL□□ NS-Runtime Software USERS MANUAL