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.

15.4 inch wide

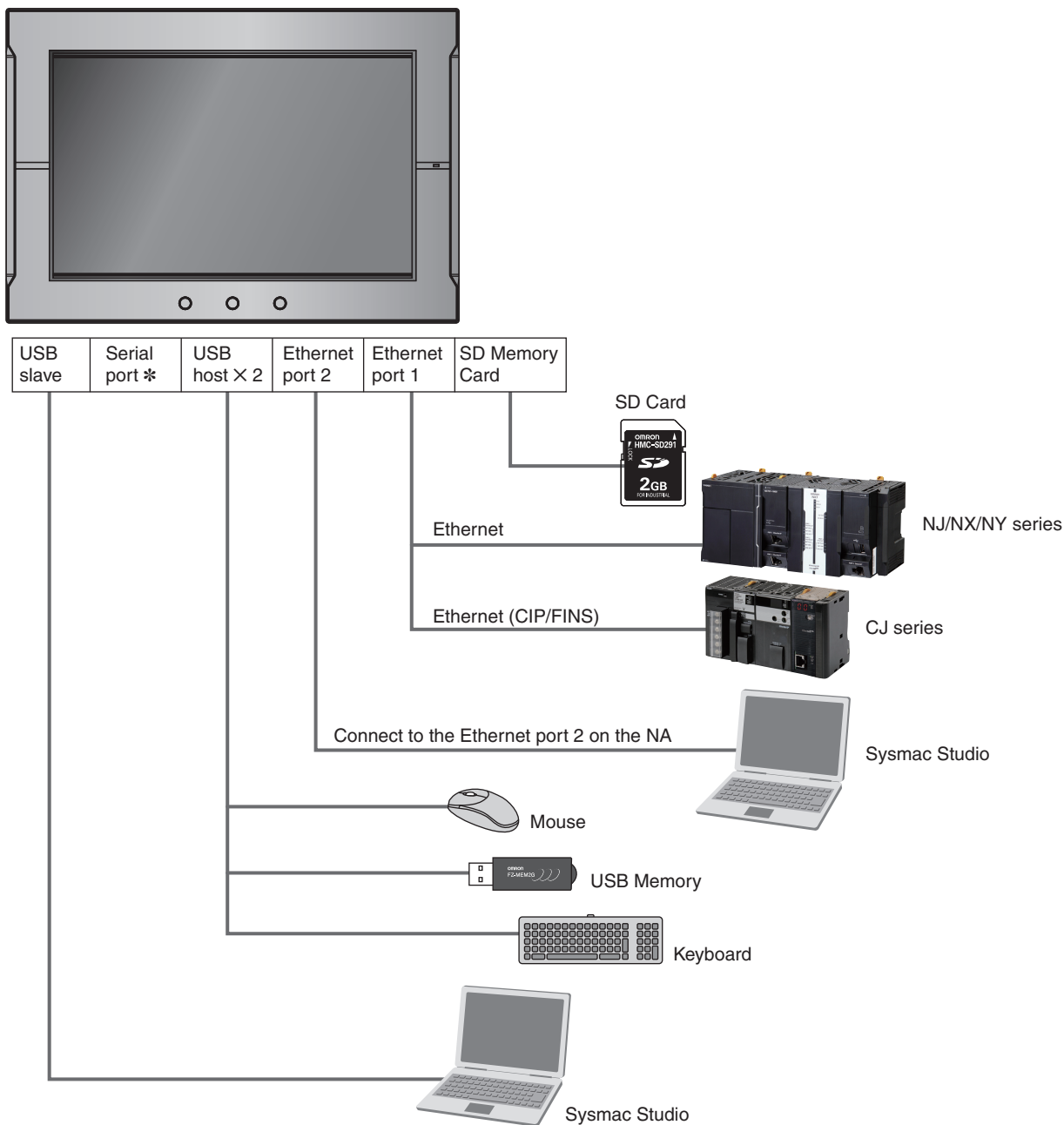9 inch wide

12.1 inch wide

7 inch wide

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

System configuration

USB slave	Serial port ∗	USB host ✕ 2	Ethernet port 2	Ethernet port 1	SD Memory Card

SD Card

Ethernet — NJ/NX/NY series

Ethernet (CIP/FINS) — CJ series

Connect to the Ethernet port 2 on the NA — Sysmac Studio

Mouse

USB Memory

Keyboard

Sysmac Studio

∗ The serial port is for future expansion.

NA series

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 : Silver	NA5-15W101S
	15.4 inch wide screen, TFT LCD, 16,770,000 colors (24 bit full color), 1280 × 800 dots, Frame color : Black	NA5-15W101B
NA5-12W	12.1 inch wide screen, TFT LCD, 16,770,000 colors (24 bit full color), 1280 × 800 dots, Frame color : Silver	NA5-12W101S
	12.1 inch wide screen, TFT LCD, 16,770,000 colors (24 bit full color), 1280 × 800 dots, Frame color : Black	NA5-12W101B
NA5-9W	9 inch wide screen, TFT LCD, 16,770,000 colors (24 bit full color), 800 × 480 dots, Frame color : Silver	NA5-9W001S
	9 inch wide screen, TFT LCD, 16,770,000 colors (24 bit full color), 800 × 480 dots, Frame color : Black	NA5-9W001B
NA5-7W	7 inch wide screen, TFT LCD, 16,770,000 colors (24 bit full color), 800 × 480 dots, Frame color : Silver	NA5-7W001S
	7 inch wide screen, TFT LCD, 16,770,000 colors (24 bit full color), 800 × 480 dots, Frame color : Black	NA5-7W001B
High-pressure Waterproof Attachment for NA5-□W	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. This attachment can be used for the NA5-□W, but not for the NA5-□U.	NA-15WATW01
		NA-12WATW01
		NA-9WATW01
		NA-7WATW01

Note: The NA5-□U is also available. Contact your OMRON representative for details.

Options

Product name	Specifications	Model
SD memory card	2 GB	HMC-SD291
	4 GB	HMC-SD491
USB Memory	2 GB	FZ-MEM2G
	8 GB	FZ-MEM8G
Replacement Battery	Battery life: 5 years (at 25°C). This Battery is provided as an accessory.	CJ1W-BAT01
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
	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
	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
	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

Automation Software

Product name	Specifications	Number of licenses	Media	Model
Sysmac Studio Standard Edition Ver.1.□□	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, EtherCAT Slave, and the HMI. 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)	– (Media only)	DVD	SYSMAC-SE200D
		1 license	–	SYSMAC-SE201L
		3 licenses		SYSMAC-SE203L
		10 licenses		SYSMAC-SE210L
		30 licenses		SYSMAC-SE230L
		50 licenses		SYSMAC-SE250L

Note: Site licenses are available for users who will run Sysmac Studio on multiple computers. Ask your OMRON sales representative for details.

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	Specifications					Model
	Functions	**No. of ports**	**Failure detection**	**Accessories**	**Current consumption (A)**	
Industrial Switching Hubs	Quality of Service (QoS): EtherNet/IP control data priority Failure detection: Broadcast storm and LSI error detection 10/100BASE-TX, Auto-Negotiation	3	No	Power supply connector	0.22	W4S1-03B
		5	No	• Power supply connector • Connector for informing error	0.22	W4S1-05B
		5	Yes		0.22	W4S1-05C

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	Hitachi Metals, Ltd	NETSTAR-C5E SAB 0.5 × 4P
		Kuramo Electric Co.	KETH-SB
		SWCC Showa Cable Systems Co.	FAE-5004
	RJ45 Connectors	Panduit Corporation	MPS588
Wire Gauge and Number of Pairs: 0.5 mm, 4-pair Cable	Cables	Fujikura Ltd.	F-LINK-E 0.5mm × 4P
	RJ45 Connectors	Panduit Corporation	MPS588

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

NA series

Performance Specifications

NA5-□W and NA5-□U have the same specifications and performance characteristics of hardware and software.

Display

Item		Specification			
		NA5-15W	NA5-12W	NA5-9W	NA5-7W
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			
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□□□□ NA5-12W□□□□ NA5-9W□□□□ NA5-7W□□□□	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	NA5-12W	NA5-9W	NA5-7W
Touch panel	Method: Analog resistance membrane (pressure sensitive)			
	Resolution: 16,384 × 16,384			
	Life: 1,000,000 operations			
Function keys *	3 inputs (capacitance inputs)			

* 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	NA5-12W	NA5-9W	NA5-7W
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 host ports	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 slave port	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
Expansion Unit connector *	Applications	Expansion Unit
	Quantity	1

* The serial port and Expansion Unit connector are for future expansion.

General Specifications

| Item	Specification			
	NA5-15W	NA5-12W	NA5-9W	NA5-7W
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	47 W max.	45 W max.	40 W max.	35 W max.
Ambient operating temperature	0 to 50°C *1 *2			
Ambient storage temperature	−20 to +60°C *3			
Ambient operating humidity	10 to 90% *2 Must be no condensation.			
Atmosphere	Must be free from corrosive gases.			
Pollution degree	2 or less: JIS B 3502, IEC 61131-2			
Noise immunity	2 kV on power supply line (Conforms to IEC 61000-4-4.)			
Vibration resistance (during operation)	Conforms to IEC 60068-2-6. 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	420 × 291 × 69 mm (W × H × D)	340 × 244 × 69 mm (W × H × D)	290 × 190 × 69 mm (W × H × D)	236 × 165 × 69 mm (W × H × D)
Panel cutout dimensions	392_0^{+1} × 268_0^{+1} mm (horizontal × vertical) Panel thickness: 1.6 to 6.0 mm *4	310_0^{+1} × 221_0^{+1} mm (horizontal × vertical) Panel thickness: 1.6 to 6.0 mm *4	261_0^{+1} × 166_0^{+1} mm (horizontal × vertical) Panel thickness: 1.6 to 6.0 mm *4	$197_0^{+0.5}$ × $141_0^{+0.5}$ mm (horizontal × vertical) Panel thickness: 1.6 to 6.0 mm *4
Weight	3.2 kg max.	2.3 kg max.	1.7 kg max.	1.3 kg max.
Degree of protection	Front-panel controls: IP65 oil-proof type, UL Type 4X (at initial state) To reinstall the NA Unit in a panel, contact your OMRON representative for replacement of the rubber packing.			
Battery life	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.)			
International standards *5	UL 508/CSA standard C22.2 No.142 *6 EMC Directive (2004/108/EC) EN 61131-2: 2007 Shipbuilding standards LR, DNV, and NK IP65 oil-proof, UL Type 4X *7 (front panel only) ANSI 12.12.01 Class 1 Division 2/CSA standard C22.2 No. 213-M1987 (R2013) RoHS Directive (2002/95/EC) KC Standards KN 61000-6-2: 2012-06 for EMS and KN 61000-6-4: 2012-06 for EMI RCM			

*1. 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.
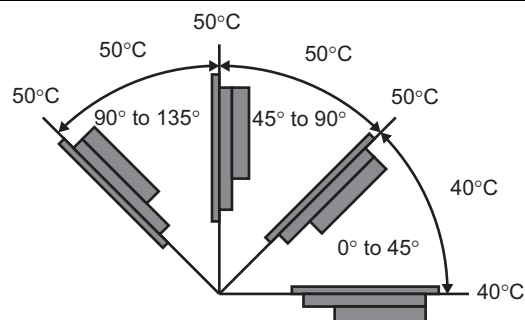
*2. Use the Programmable Terminal within the following temperature and humidity ranges.
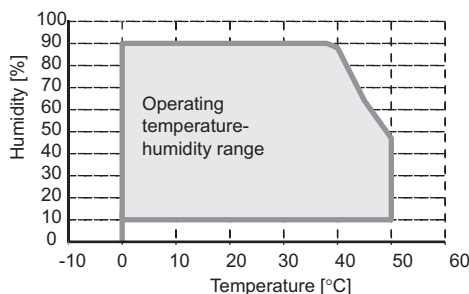
*3. Store the Programmable Terminal within the following temperature and humidity ranges.
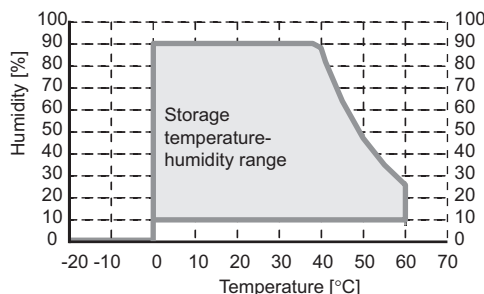
*4. When the NA-☐WATW01 High-pressure Waterproof Attachment is used, the panel thickness is between 1.6 to 4.5 mm.
*5. Check with your OMRON representative or refer to the following OMRON website for the latest information on the applicable standards for each model: www.ia.omron.com.
*6. Use power supply Class 2 to conform to UL Standards.
*7. Use the NA-☐WATW01 High-pressure Waterproof Attachment (sold separately) to conform to UL Type 4X.
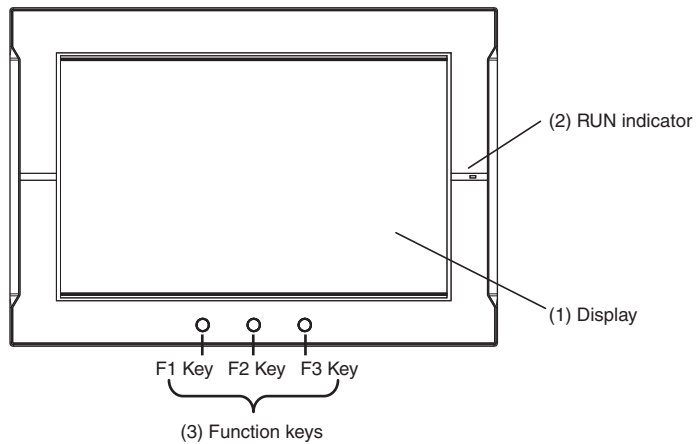
NA series

Version Information

NA series and Programming Devices

NA series		Corresponding unit versions/version		
Model	**NA system version**	**NJ/NX/NY-series Controller** NX1P2-□□□□ NJ501-□□□□ NY512-□□□□ NJ301-□□□□ NY532-□□□□ NJ101-□□□□ NX701-□□□□		**Sysmac studio**
NA5-15W NA5-12W NA5-9W NA5-7W	1.07 or later	NX1P2: 1.13 or later		1.17 or higher
	1.06 or later	NY512: 1.12 or later NY532: 1.12 or later		1.17 or higher
	1.02 or later	NX701: 1.10 or later NJ101: 1.10 or later		1.13 or higher
	1.01 or later	NJ501 : 1.01 or later NJ501 Database Connection : 1.05 or later NJ301 : 1.01 or later		1.11 or higher

Components and Functions

Front Panel

(2) RUN indicator

(1) Display

F1 Key   F2 Key   F3 Key

(3) Function keys

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

(m) ID information label

(a) Battery cover

(b) Expansion Unit connector (for future expansion)

(i) Battery connector

(j) DIP switch (for future expansion)

(k) Battery

(Appearance with the Battery Cover Open)

Bottm Panel

(d) Ethernet ports

1 2

(e) Serial port (for future expansion)

(c) SD Memory Card connector

(l) Power supply connector

(f) USB host port

(g) USB slave port

(h) Reset switch
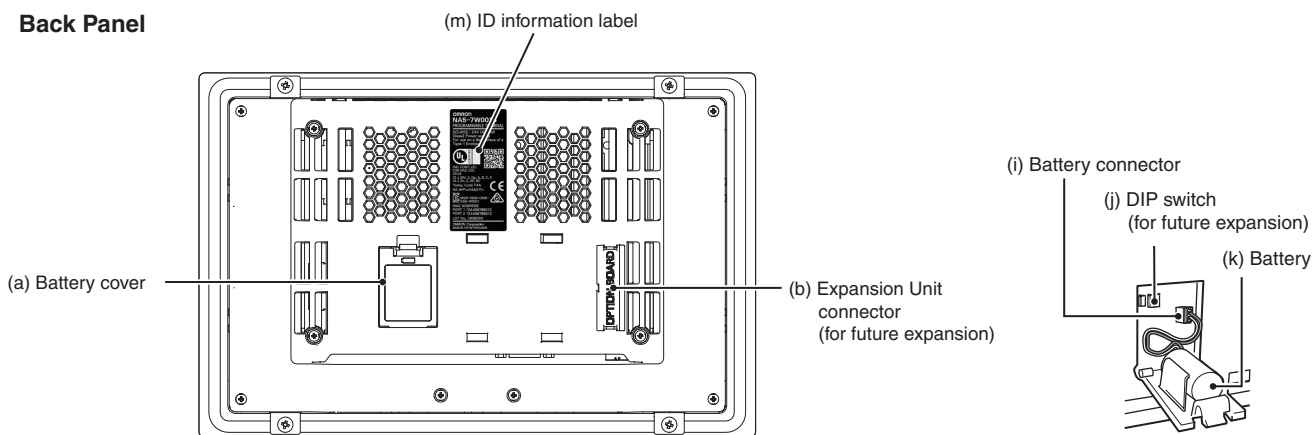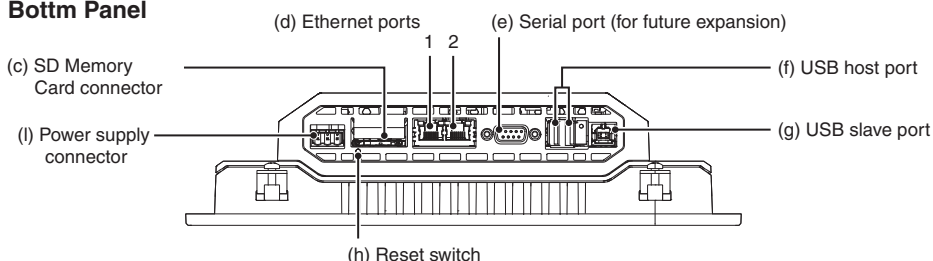
No.	Name	Description
(a)	Battery cover	Open this cover to replace the Battery.
(b)	Expansion Unit connector ∗	For future expansion.
(c)	SD Memory Card connector	Insert an SD Memory Card here.
(d)	Ethernet port 1	Connect a device other than the Sysmac Studio.
(d)	Ethernet port 2	Connect mainly the Sysmac Studio.
(e)	Serial port ∗	For future expansion.
(f)	USB host port	Connect this port to a USB Memory Device, mouse, etc.
(g)	USB slave port	Connect the Sysmac Studio or other devices.
(h)	Reset switch	Use this switch to reset the NA.
(i)	Battery connector	Connect the connector on the backup Battery here.
(j)	DIP switch ∗	For future expansion. (The DIP switch is on a PCB that is accessed by opening the Battery cover.) Do not change any of the factory settings of the pins on the DIP switch. (Default setting: OFF)
(k)	Battery	This is the battery to backup the clock information in the NA.
(l)	DC input terminals	These are the power supply terminals. Connect the accessory power supply connector and supply power.
(m)	ID information label	You can check the ID information of the NA.

∗ The DIP switch, Expansion Unit connector, and serial port are for future expansion.

Supported Devices

| Manufacturer	Models	Connection method	Communications driver
OMRON	NX1P2-□□□□ NJ501-□□□□ NY512-□□□□ NJ301-□□□□ NY532-□□□□ NJ101-□□□□ NX701-□□□□	Built-in EtherNet/IP port	Ethernet
	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-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	

NA series

Dimensions

NA5-15W101S/-15W101B
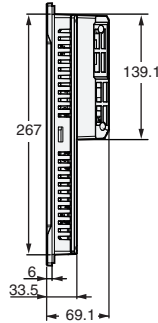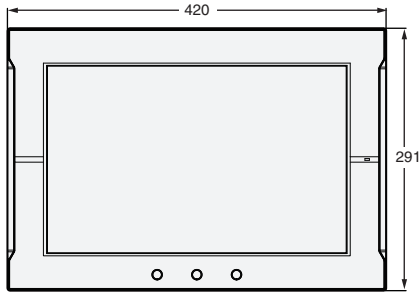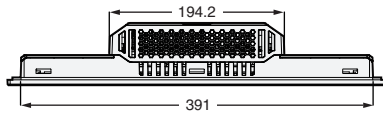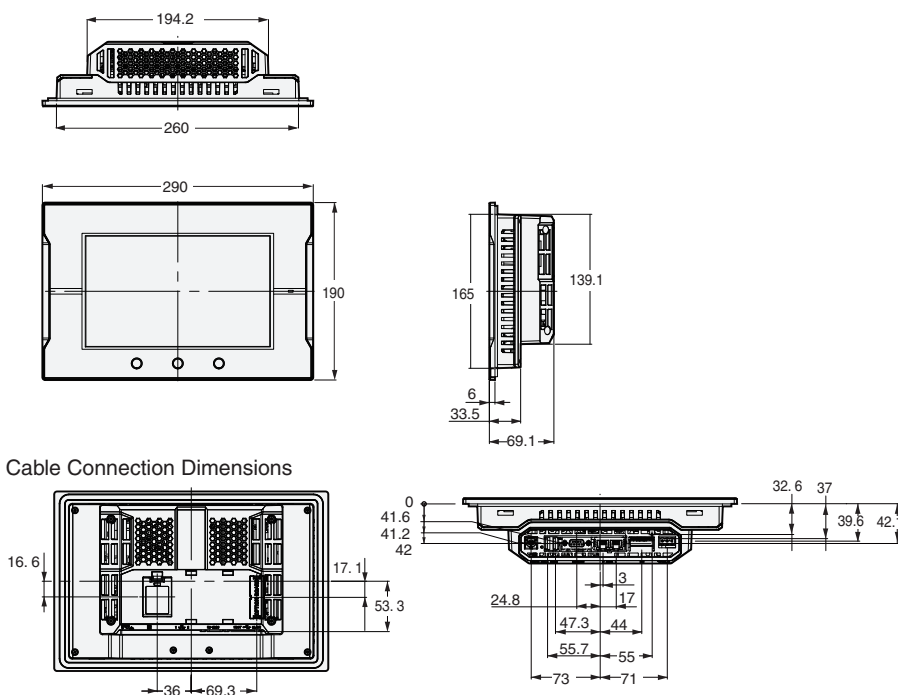

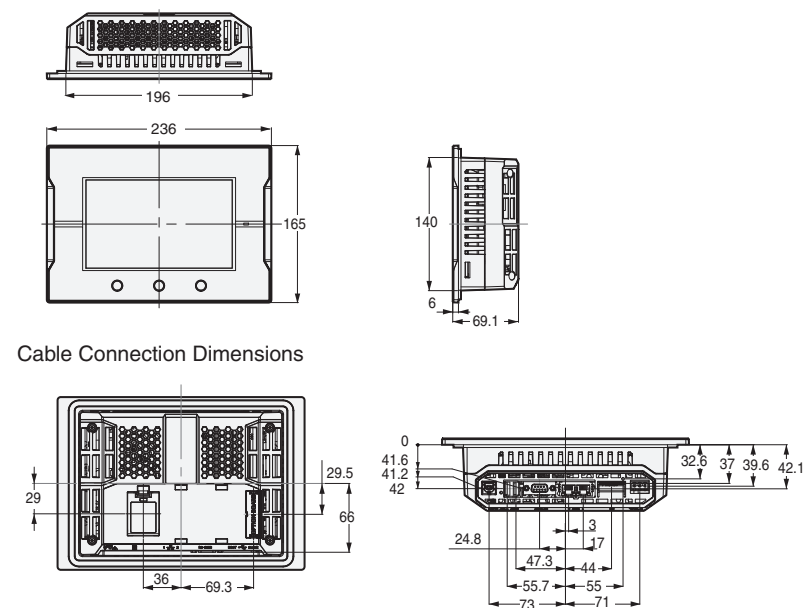
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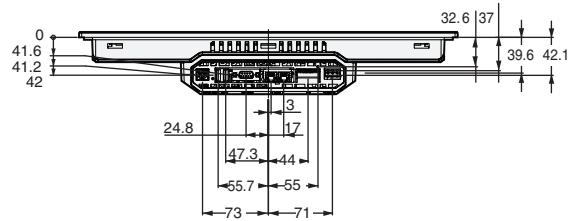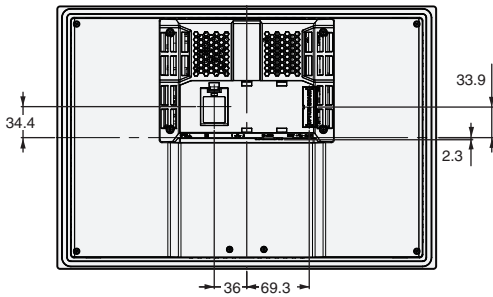
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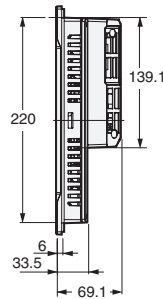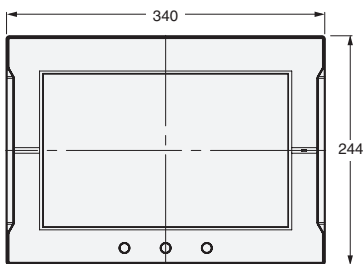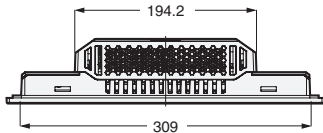
Cable Connection Dimensions

NA5-9W001S/-9W001B

Cable Connection Dimensions

NA5-7W001S/-7W001B

Cable Connection Dimensions
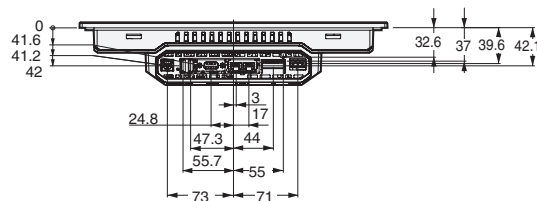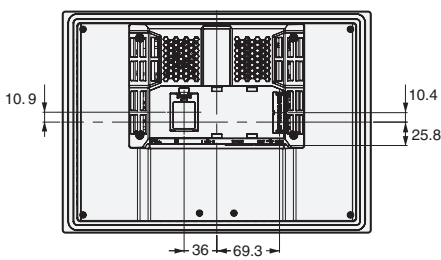
NA series

Related Manuals

Cat. No.	Model number	Manual
V117	NA5-15W☐☐☐☐ NA5-12W☐☐☐☐ NA5-9W☐☐☐☐ NA5-7W☐☐☐☐	NA-series Programmable Terminal Hardware User's Manual
V118	NA5-15W☐☐☐☐ NA5-12W☐☐☐☐ NA5-9W☐☐☐☐ NA5-7W☐☐☐☐	NA-series Programmable Terminal Software User's Manual
V119	NA5-15W☐☐☐☐ NA5-12W☐☐☐☐ NA5-9W☐☐☐☐ NA5-7W☐☐☐☐	NA-series Programmable Terminal Device Connection User's Manual
V120	NA5-15W☐☐☐☐ NA5-12W☐☐☐☐ NA5-9W☐☐☐☐ NA5-7W☐☐☐☐	NA-series Programmable Terminal Startup Guide

OMRON

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Click to view products by Omron *manufacturer:*

Other Similar products are found below :

NA57W001B HDM64GS12L-Y11S LCM-H12864GSFH-Y MGLS-240128-Z05 GLK19264A-7T-1U-TCI-LV-E DEM 128032A FGH RG12864F-FHW-M EGLK19264A-7T-WB-VPT-PL HG2G-V5FT22TF-W HG1G-4VT22TF-S HDM64GS24L-2-Y14S LTS-2301AP LTS-6760P LTS-6980HR RG12864A-GHC-V RG12864A-GHY-V RG12864A-TIG-V RG12864A-TIY-V RG12864A-YHY-X RG12864B-FHW-V RG12864B-GHW-V RG12864C-YHW-V RG12864K-BIW-VBG RG160128A-TIW-V RG240128B-YHY-M RG320240A1-BIW-V RG320240B-BIW-V RG320240B-FHW-V DEM 097032A SGH-PY DEM 122032A SYH-LY DEM 122032C SBH-PW-N-12 DEM 128064A SBH-PW-N DEM 128064B SBH-PW-N DEM 128064F FGH-P(RGB) DEM 128064G FGH-PW DEM 128064I FGH-PW DEM 128064J SBH-PW-N DEM 128064O FGH-PW DEM 128064Q SBH-PW-N DEM 128128D FGH-PW DEM 240064B FGH-PW DEM 240064B SBH-PW-N DEM 240160A SBH-PW-N DEM 320240B FGH-PW-N DEM 320240C FGH-PW EA W240-7KHLW RX12864A1-BIW RX12864D3-BIW RX240128A-FGN RX240128A-TIW