## OMRON

CSM\_NYE\_DS\_E\_1\_1

# Industrial PC Platform **NYE Series**

## Unlock reliability with NYE Basic Panel PC built to last

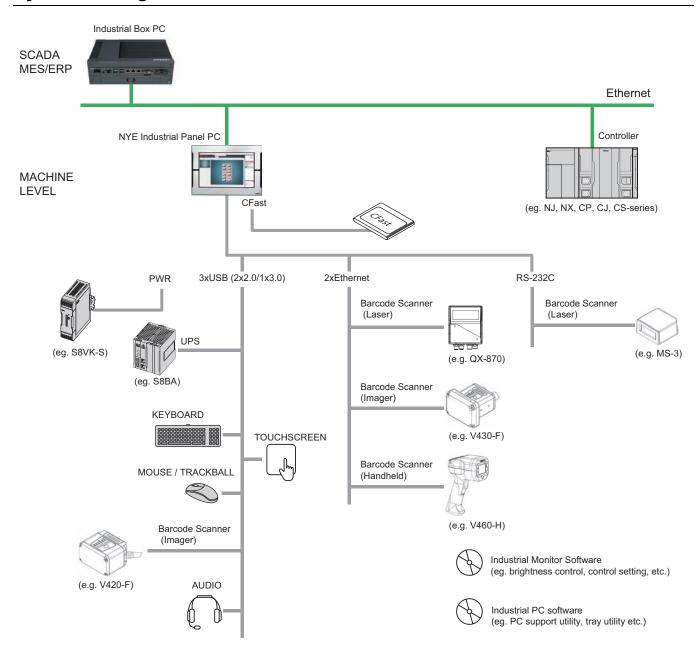
NYE industrial Panel PC offers the customer the flexibility to choose the application solution that best suits their needs. From the Windows-only version with the customer's freedom to install preferred applications to versions that add OMRON software packages for vision systems, QR code reading or HMI functionality. NYE is designed with durable hardware and software components for long-term use, applying high-quality components and innovative mechanical design, in addition to OMRON's highest production standards.



## Features

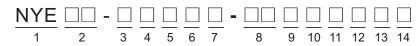
- Industrial grade Intel Atom® Processor
- Windows 10 IoT 2021 Enterprise LTSC
- Compact design without fan
- Gigabit Ethernet ports to segregate access to your IT and OT systems
- 3 USB ports. (2 x USB 2.0 + 1 x USB 3.0)
- RS-232 Port
- CFast Card Slot
- Wide screen in all models: 7, 9, 12, and 15 inches
- More than 16 million color display for all models and 1280 x 800 high resolution display for the 12 and 15-inch models
- Resistive Touchscreen
- Housing with robust front, IP65 oil-proof type, UL Type 4X, rear side IP 20

## NYE series System Configuration



## **Model Number Structure**

The purpose of this model number legend is to provide understanding of the meaning of specifications from the model number. Models are not available for all combinations of code numbers.



Item	Description	Option/Description
1	Series name	NYE: NYE-series NYE IPC
2	CPU	2A: Intel Atom x5-E3940 CPU
3	Memory	2: DDR3L 4 GB no ECC
4	Expansion	0: No expansion
5	Operating System / Software	5: Windows 10 IoT Enterprise 2021 LTSC - 64 bit F: Windows 10 IoT Enterprise 2021 LTSC - 64 bit with FHV7 operation tool N: Windows 10 IoT Enterprise 2021 LTSC - 64 bit with Soft-NA
6	Storage	1: 128 GB, CFast 3DTLC
7	Interfaces	1: RS-232C
8	Display size (diagonal)	07: 7.0 inch model 09: 9.0 inch model 12: 12.1 inch model 15: 15.4 inch model
9	Aspect ratio	W: Wide
10	Touchscreen	R: Resistive
11	Frame-type	1: Panel mount
12	Front material & Color	2: Body Aluminium Black + Frontsheet Black 3: Body Aluminium Black + Frontsheet Silver
13	Build-in options	0: None
14	Customization	0: None

## **Ordering Information**

#### **NYE-series Industrial PC Platform**

#### **Recommended models**

The industrial Panel PC has extended configuration possibilities to meet your requirements, below an overview of the most used and recommended models. Selecting one of the models below will bring the benefit of faster delivery times.

In case your preferred model is not listed below, please contact your OMRON representative to discuss the possibilities.

Product		Specifications		
name	Display size	Display size Operating system		Model
		Windows 10 IoT Enterprise 2021 LTSC - 64 bit	Black	NYE2A-20511-15WR1200
		Windows 10 IoT Enterprise 2021 LTSC - 64 bit	Silver	NYE2A-20511-15WR1300
	15.4 Inch	Windows 10 IoT Enterprise 2021 LTSC - 64 bit with FHV7 O.T	Black	NYE2A-20F11-15WR1200
	15.4 Inch	Windows 10 IoT Enterprise 2021 LTSC - 64 bit with FHV7 O.T	Silver	NYE2A-20F11-15WR1300
		Windows 10 IoT Enterprise 2021 LTSC - 64 bit with Soft-NA	Black	NYE2A-20N11-15WR1200
		Windows 10 IoT Enterprise 2021 LTSC - 64 bit with Soft-NA	Silver	NYE2A-20N11-15WR1300
	12.1 Inch	Windows 10 IoT Enterprise 2021 LTSC - 64 bit	Black	NYE2A-20511-12WR1200
Industrial		Windows 10 IoT Enterprise 2021 LTSC - 64 bit	Silver	NYE2A-20511-12WR1300
Panel PC		Windows 10 IoT Enterprise 2021 LTSC - 64 bit with FHV7 O.T	Black	NYE2A-20F11-12WR1200
		Windows 10 IoT Enterprise 2021 LTSC - 64 bit with FHV7 O.T	Silver	NYE2A-20F11-12WR1300
		Windows 10 IoT Enterprise 2021 LTSC - 64 bit with Soft-NA	Black	NYE2A-20N11-12WR1200
		Windows 10 IoT Enterprise 2021 LTSC - 64 bit with Soft-NA	Silver	NYE2A-20N11-12WR1300
	0.0 lpak	Windows 10 IoT Enterprise 2021 LTSC - 64 bit with Soft-NA	Black	NYE2A-20N11-09WR1200
	9.0 Inch	Windows 10 IoT Enterprise 2021 LTSC - 64 bit with Soft-NA	Silver	NYE2A-20N11-09WR1300
	7.0 Inch	Windows 10 IoT Enterprise 2021 LTSC - 64 bit with Soft-NA	Black	NYE2A-20N11-07WR1200
	7.0 Inch	Windows 10 IoT Enterprise 2021 LTSC - 64 bit with Soft-NA	Silver	NYE2A-20N11-07WR1300

## Options

Product name	Specifications	Model
CFast card	128 GB, Innodisk DECFA-A28DK1GWADL	NY000-AT04
USB Memory	2 GB	FZ-MEM2G
Battery life: 5 years (at 25°C).           This Battery is provided as an accessory.		CJ1W-BAT01
USB Type-A to	2 m, USB2.0, Minimum bend radius: 25 mm	FH-VUAB 2M
JSB Type-B Cables	5 m, USB2.0, Minimum bend radius: 25 mm	FH-VUAB 5M
	Output voltage: 24 VDC     Push-In Plus terminal blocks	S8VK-G□□□24
Power Supply	Output voltage: 24 VDC     EtherNet/IP <sup>™</sup> , Modbus TCP-Compatible	S8VK-X□□□24A-EIP
Fower Supply	Output voltage: 24 VDC     Compact	S8VK-S□□□24
	Output voltage: 24 VDC     Three-phase 200-V Power Supplies	S8VK-WADD24
JPS Output voltage during backup operation: 24 VDC±5% Revision number 09 or higher *1		S8BA
	For 15" LCD models. Install it to conform to UL Type 4X standards.	NA-15WATW01
High-Pressure Waterproof	For 12" LCD models. Install it to conform to UL Type 4X standards.	NA-12WATW01
Attachment (PWA)	For 9" LCD models. Install it to conform to UL Type 4X standards.	NA-9WATW01
	For 7" LCD models. Install it to conform to UL Type 4X standards.	NA-7WATW01
	For 15" LCD models. 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
Anti-reflection Sheets	For 12" LCD models. 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
Anti-reflection Sheets	For 9" LCD models. 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 7" LCD models. 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

**\*1.** The revision number of the UPS can be retrieved from the serial number label on the product and the product packaging.

#### Installed Support Software

Item	Specifications
	The Industrial PC Support Utility is a software utility to assist in diagnosing and resolving problems of the Industrial PC. It is pre-installed on the Industrial Panel PC.
	The Industrial PC Tray Utility is a software utility that provides information about the current state of the Industrial PC, its related devices, and associated software. It is pre-installed on the Industrial Panel PC.

\*1. Included in the Industrial PC Support Utility installer.
 \*2. Together with the Industrial PC Tray Utility also Microsoft .NET Framework 4.6 is installed.

#### Automation Software Sysmac Studio

Product name	Specifications	Cat. No.
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 <sup>®</sup> Slave, and the HMI.	P138

#### **FHV7 Software**

Product name	Specifications	Cat. No.
FHV7 Software <b>*</b> 1	FHV7 Software is the software tool to setup OMRON FHV7 vision systems. Combine image processing application with data gathering. You can build sophisticated image inspection and data collection.	Q264

**\*1.** FHV7 Software is installed only on NYE versions. NYE ---- F---

#### Soft-NA

Product name	Specifications	Cat. No.		
Soft-NA <b>*</b> 1	Soft NA will allow users to run NA5 HMI applications on an IPC. The Soft-NA is software that displays information on FA manufacturing sites while providing safety, reliability, and maintainability as an industrial display on which operations can be performed as necessary.	V457		
1 Soft-NA Software is installed only on NYE versions. NYE III IIIIIIIIIIIIIIIIIIIIIIIIIIIIIII				

**\*1.** Soft-NA Software is installed only on NYE versions. NYE

## **NYE series**

## Specifications

## Performance Specifications

	Item		NYED-D-15WRD	NYE	NYED-D-09WRD	NYED-D-07WRD
		CPU type	Intel Atom <sup>®</sup> x5-E3940			
		Cores/Threads	4/4			
		CPU base frequency	1.60 GHz			
	СРИ	Maximum turbo frequency	1.80 GHz			
		Cache	2 MB			
Main system		Cooling details	Passive cooling (fanle	ss)		
system		Intel CPU category	Industrial (100% operation	ation minimal 10yr)		
		Memory size	4 GB			
	Memory	Memory type	DDR3L Non-ECC			
	wiemory	Speed grade	1866 MT/s			
		CAS latency	CL13			
	Graphics co	ntroller	Intel <sup>®</sup> HD Graphics 50	0		
Operating system	Windows OS	3	Windows 10 IoT Enterprise 2021 LTSC - 64 bit			
Storage devices	CFast		128 GB, CFast 3DTLC			
	Power connector		24 VDC			
	RS-232C		Standard SUBD9 con	nector (Isolated)		
	Number of ports		2 × RJ45 Gb Ethernet	interface connectors		
		Physical layer	10BASE-T, 100BASE	-TX, 1000BASE-T		
Connectors	Ethernet connectors	Maximum transmission distance between Ethernet switch and node	100 m			
		Number of ports	2			
	USB2.0 Type-A	Maximum current	500 mA at 5 VDC			
	1,16-1	Maximum cable length	5 m			
		Number of ports	1			
	USB3.0 Type-A	Maximum current	900 mA at 5 VDC			
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Maximum cable length	3 m			
Battery	Model		CJ1W-BAT01			
Dattory	Service life		Service life: 5 years at	25°C		
LED			PWR, ERR			

#### **NYE** series

#### Display

	ltow	Specifications				
Item		NYED-D-15WRD	NYED-D-12WRD	NYED-D-09WRD	NYED-D-07WRD	
	Display device	TFT LCD	TFT LCD			
	Screen size	15.4 inches	12.1 inches	9.0 inches	7.0 inches	
Diaplay papel #4	Resolution (horizontal × vertical)	1,280 × 800 pixels at 6	1,280 × 800 pixels at 60 Hz 800 × 480 pixels at 60		) Hz	
Display panel <b>*</b> 1	Colors	16,770,000 colors (24	bit full colors)	•		
	Effective display area		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°				
	Technology	Resistive				
Touch	Touch resolution	16,384 × 16,384				
rouch	Life	1,000,000 operations	minimum			
Single touch Yes						
	Life	50,000 hours min. <b>*</b> 2				
Backlight	Brightness adjustment *3	100 levels				
	Туре	LED				
Display layer	Status LED	Status of the Panel PC	C. Lit green: Normal ope	eration, Lit red: Error		

\*1. There may be some defective pixels in the display. This is not a fault as long as the number of defective light and dark pixels fall within the following standard range: light and dark pixels 10 or less. There must not be 3 adjacent light/dark pixels.
\*2. This is the estimated time before brightness is reduced by half at room temperature. The life expectancy is drastically shortened if used at high temperatures.

\*3. If the brightness is set to very low, it causes flickering, or the screen will be too dark to use.

#### **Electrical Specifications**

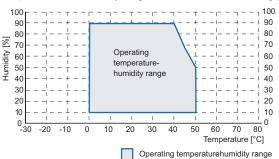
ltem	Specifications			
item	NYED-D-15WRD	NYED-D-12WRD	NYED-D-09WRD	NYED-D-07WRD
Rated power supply voltage	24 VDC			
Allowable power supply voltage range	20.4 to 28.8 VDC			
Power supply standard	SELV			
Grounding method	Ground to less than 100 Ω			
Inrush current	0.25 A/1 s max, electronically controlled			
Overvoltage category	JIS B3502 and IEC 61131-2: Category II			
EMC immunity level	IEC 61131-2: Zone B			
RTC accuracy	At ambient temperature of $55^{\circ}$ C: $-3.5$ to $+0.5$ min error per month At ambient temperature of $25^{\circ}$ C: $-1.5$ to $+1.5$ min error per month At ambient temperature of $0^{\circ}$ C: $-3$ to $+1$ min error per month			
Power button life	100,000 operations			
Power consumption	34 W	38 W	30 W	28 W

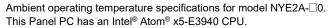
#### **Environmental Specifications**

Item		Specifications
	Ambient operating temperature	0 to 50°C *1
	Ambient storage temperature	-20 to +60°C *1
	Ambient operating humidity	10% to 90% (with no condensation) *1
	Ambient storage humidity	10% to 90% (with no condensation) *1
	Operating atmosphere	No corrosive gases
	Altitude	2,000 m max.
	Noise resistance (During operation)	Conforms to IEC 61000-4-4, 2kV (power lines)
Operation environment	Vibration resistance (During operation)	<ul> <li>The vibration resistance depends on the storage device(s):</li> <li>For a Panel PC with a CFast storage devices: 5 to 8.4Hz with 3.5 mm single amplitude and 8.4 to 150 Hz with 9.8 m/s<sup>2</sup> for 100 minutes each in X, Y and Z directions. Conforms to IEC 60068-2-6.</li> </ul>
	Shock resistance (During operation)	Conforms to IEC 60068-2-27 147 m/s², 3 times each in X, Y and Z directions
	Installation method	Mount on panel
	Material finish	NYE     Over the second s
	Degree of protection	Front of Monitor: IP65 or the equivalent. The Panel PC may not operate properly in locations subjected to oil splashes for extended periods of time.
	Pollution degree	JIS B3502 and IEC 61131-2: 2 or less and IEC 61010-2-201: 2 or less.
International standards *2		UL61010-2-201/CSA C22.2 NO.61010-2-201:14 *3 EMC Directive (2004/108/EC) EN 61131-2:2007 IP65 oil-proof, UL Type 4X *4 (front panel Only)

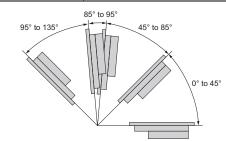
\*1. The maximum ambient operating temperature and ambient humidity are specified per storage device type. The following graphs provide ambient temperature and humidity details per storage device type and the conditions for storage.

• Operate the Panel PC with a CFast card within the ambient temperature and humidity ranges as shown in the following graph.



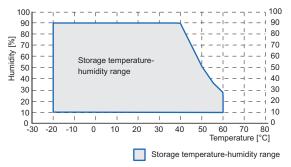


Dreduct Orientation	Mounting Angle	Storage device type	
Product Orientation	Mounting Angle	CFast Card	
	0° to 45°	0 to 40°C	
Landaaaaa	45° to 85°	0 to 45°C	
Landscape	90° ±5°	0 to 50°C	
	95° to 135°	0 to 45°C	



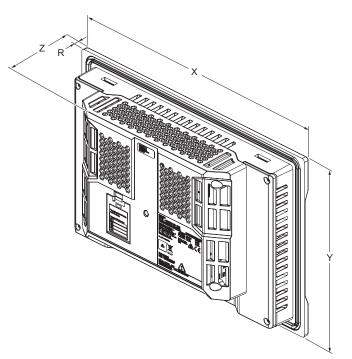
- **\*2.** Check with your OMRON representative or refer to the following OMRON website for the latest information on the applicable standards for each model: www.ia.omron.com.
- **\*3.** Use power supply Class 2 to conform to UL Standards.
- \*4. Use the NA-DWATW01 High-pressure Waterproof Attachment (sold separately) to conform to UL Type 4X.

• Store the Panel PC within the ambient temperature and humidity ranges as shown in the following graph.



## NYE series Dimensions

The dimensions and weights can differ depending on the configuration.



The following tables provide specification details per configuration.

#### 15" Display NYE-series

The following table provides specification details on dimensions and weights for the Panel PC with 15" display.

Model		Specifications					
Model-ID	Model Details	Width X	Height Y	Depth Z	Weight	Rim thickness R	
NYEOO-0000-1500	15" display	420 mm	291 mm	69 mm	3.2 kg	6.0 mm	
Panal cutout dimonsions		Width X1 = 392 <sup>-0</sup> <sub>+1</sub> mm Height Y1 = 268 <sup>-0</sup> <sub>+1</sub> mm					

#### 12" Display NYE-series

The following table provides specification details on dimensions and weights for the Panel PC with 12" display.

Model		Specifications					
Model-ID	Model Details	Width X	Height Y	Depth Z	Weight	Rim thickness R	
NYEDD-DDDD-12DD	12" display	340 mm	244 mm	69 mm	2.4 kg	6.0 mm	
Panel cutout dimensions		Width X1 = 310 <sup>0</sup> / <sub>+1</sub> mm Height Y1 = 221 <sup>0</sup> / <sub>+1</sub> mm					

#### 9" Display NYE-series

The following table provides specification details on dimensions and weights for the Panel PC with 9" display.

Model		Specifications					
Model-ID	Model Details	Width X	Height Y	Depth Z	Weight	Rim thickness R	
NYE00-0000-900	9" display	290 mm	190 mm	69 mm	1.8 kg	6.0 mm	
Ranal cutout dimonsions		Width X1 = 261 <sup>0</sup> <sub>+1</sub> mm Height Y1 = 166 <sup>0</sup> <sub>+1</sub> mm					

#### 7" Display NYE-series

The following table provides specification details on dimensions and weights for the Panel PC with 7" display.

Model		Specifications					
Model-ID	Model Details	Width X	Height Y	Depth Z	Weight	Rim thickness R	
NYEDD-0000-700	7" display	236 mm	165 mm	69 mm	1.4 kg	6.0 mm	
Panel cutout dimensions		Width X1 = 197 <sup>.0</sup> / <sub>+1</sub> mm Height Y1 = 141 <sup>.0</sup> / <sub>+1</sub> mm					

### **Recommended Related Products**



## Inspection systems FHV7

High-speed, high-accuracy inspection and measurement The new FHV7-series Smart Camera combined with illumination and image processing functionality for advanced vision inspections. Thanks to multi-color light and a 12-megapixel high-resolution camera, only a single FHV7-series Smart Camera is required for achieve the industry's highest level of precision in vision inspections on a high-mix production line.



## Identification systems F4x0-F

Traditional image inspections require one or more dedicated cameras to be paired with a code reader. Omron's F430-F/F420-F Series Smart Camera bundles all this functionality into a single device, dramatically simplifying application design. The single camera solution also reduces the initial investment, cuts down on wiring work and keeps maintenance costs to a minimum.



#### S8BA-series UPS

The OMRON S8BA UPS protects the Industrial PC from power failures, voltage variations and instantaneous voltage drops.



#### Barcode Readers V4x0-F Traceability Solutions

Component and product traceability are common requirements for today's busy factories and assembly plants. Omron 2D barcode readers feature industry-leading technology for decoding 2D symbols and linear barcodes based on Omron's proven image processing and decoding algorithm development, offering unrivalled performance for reliably decoding challenging codes and direct part marks (DPM).



#### Industrial Handheld DPM Reader V460-H

In industry, having a mixture of both lowcontrast Direct Part Marks and high-contrast printed barcodes is common. With the V460, there's no need to purchase multiple units for different size barcodes, surfaces or types, as the reader automatically adjusts to decode the direct part mark or label presented. It's never been easier to improve your traceability solution.

### NYE series

## **Related Manuals**

The following manuals are related. Use these manuals for reference.

Manual name	Cat. No.	Model numbers	Application	Description	
NYE-series Industrial Panel PC Hardware User's Manual	W634	NYE	Learning all basic information about the Panel PC. This includes introductory information with features, hardware overview, specifications, mounting, wiring, connecting, operating and maintaining the Industrial Monitor.	An introduction to the Panel PC is provided along with the following information: • Overview • Hardware • Software • Specifications • Installation • Operating Procedures • Maintenance	
NYE-series Industrial PC Operating Systems and Software Utilities Manual	W635	NYE	Learning all software related information about the Panel PC. This includes introductory information, installation, operating procedures and maintenance. Mainly software information is provided.	An introduction to the Panel PC is provided along with the following information: • Overview • Software • Specifications • Installation • Operating Procedures • Maintenance	
Sysmac Studio Version 1 Operation Manual	W504	SYSMAC-SE2	Learning about the operating procedures and functions of the Sysmac Studio.	Describes the operating procedures of the Sysmac Studio.	
CX-Designer User's Manual	V099		Learning all software related information about CX-Designer.	An introduction to CX-Designer with the following information: • Overview • User Interface • Installation • Basic Operations • Application Methods	
	Z408		FHV7 Smart Camera Setup Manual		
	Z365	_	FH/FHV Series Vision System User's Manual	The FHV7 user manuals describe the complete setup for vision system solution. Smart camera setup, communication setup, software tools,	
FHV7-Series Manuals	Z342	FHV7	FH/FHV Series Vision System User's Manual (Comm. Settings)		
	Z343		FH/FHV Series Vision System Operation Manual (Sysmac Studio)	image processing, lenses, and lighting.	
	Z341		FH/FHV Series Vision System Processing Item Function Ref. Manual		
MicroHAWK V Series Barcode Reader User's Manual	Z432	V4_0-F	Learning the information that is necessary to use MicroHAWK V Series	An introduction to the MicroHAWK Barcode Readers with the following information: • Overview • Quick Start • Start, Setup and Run • Application Settings • Terminal View • Advanced Settings	
V460-H Industrial Handheld DPM Reader User's Manual	Z461	V460-H0PX	Learning the information that is necessary to use the V460-H Industrial Handheld DPM Reader	An introduction to the V460-H Industrial Handheld DPM Reader with the following information: • Product Overview • Installation and Connections • Basic Operation • WebLinkhh Configuration • Reader Parameters	
MicroHAWK F Series Smart Camera User's Manual	Z433	F4_0-F	Learning the information that is necessary to use MicroHAWK F Series	An introduction to the MicroHAWK Smart Cameras with the following information: • Overview • System Components • Getting Started with AutoVISION • Optics and Lighting	
NA-series Programmable Terminal Soft-NA User's Manual	V126	NA-RTLD	Learning the basic use of Soft-NA and the differences from NA5 PT.	Describes the basic use of Soft-NA and the differences from NA5 PT.	

Manual name	Cat. No.	Model numbers	Application	Description
UPS S8BA User's Manual	U702	S8BA	Learning the information that is necessary to use the Uninterruptible Power Supply (UPS) Unit.	An introduction to the UPS is provided along with the following information: • Overview • Preparation • Installation and Connection • Check and Start Operation • Maintenance and Inspection • Shutdown Processing • I/O Signal Functions • Troubleshooting

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NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY OR IN LARGE QUANTITIES WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT(S) IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

#### Programmable Products.

Omron Companies shall not be responsible for the user's programming of a programmable Product, or any consequence thereof.

#### Performance Data.

Data presented in Omron Company websites, catalogs and other materials is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of Omron's test conditions, and the user must correlate it to actual application requirements. Actual performance is subject to the Omron's Warranty and Limitations of Liability.

#### Change in Specifications.

Product specifications and accessories may be changed at any time based on improvements and other reasons. It is our practice to change part numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the Product may be changed without any notice. When in doubt, special part numbers may be assigned to fix or establish key specifications for your application. Please consult with your Omron's representative at any time to confirm actual specifications of purchased Product.

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