

Industrial PC Platform

NYE series

CSM_NYE_DS_E_2_1

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

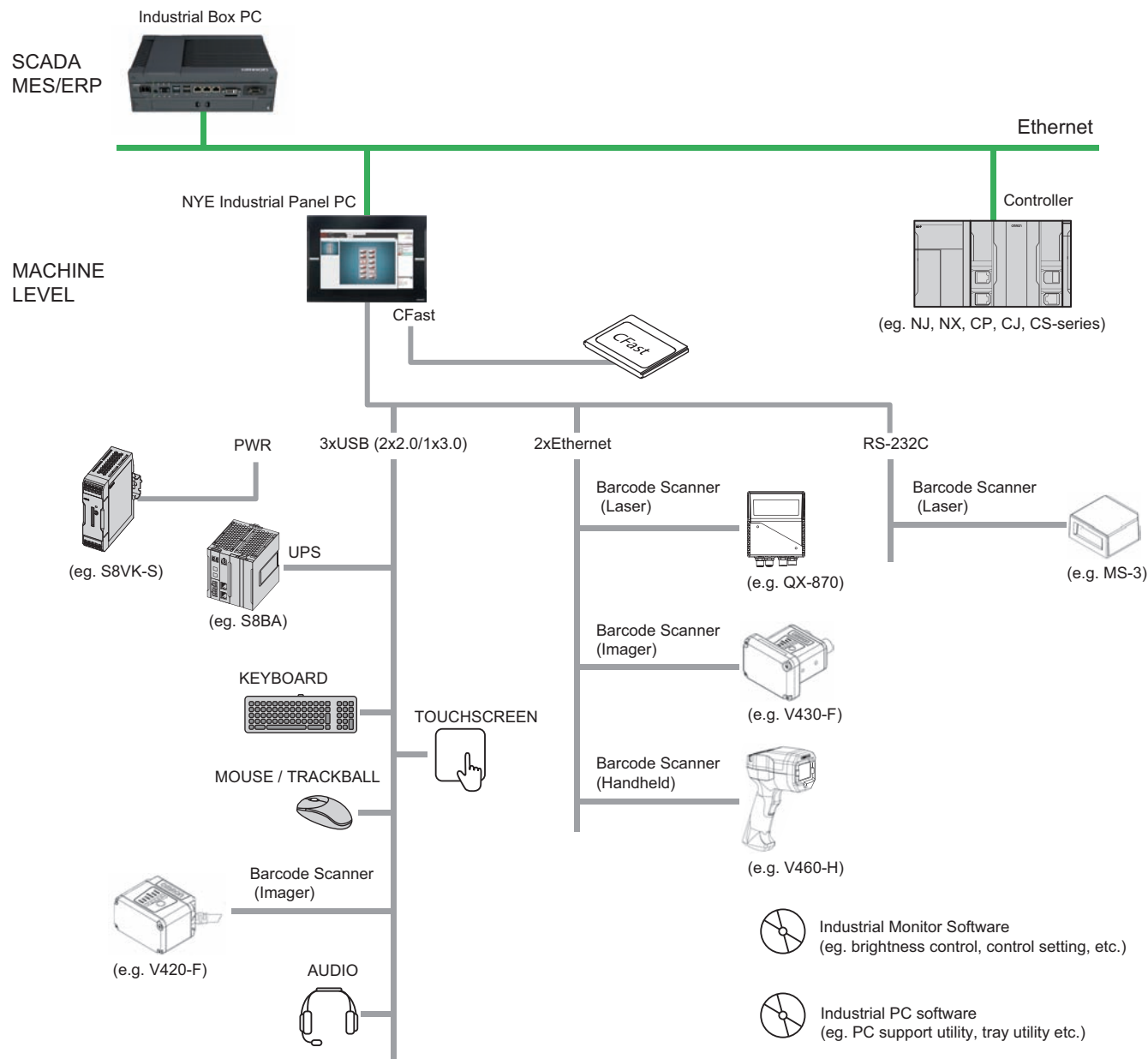
NYE industrial Panel PC offers the customer the flexibility to choose the application solution that best suits their needs. From the Windows-only version with the customer's freedom to install preferred applications to versions that add OMRON software packages for vision systems, QR code reading or HMI 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

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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.

NYE - -

1 2 3 4 5 6 7 8 9 10 11 12 13 14

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
13	Build-in options	0: None
14	Customization	0: None

NYE series

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

Options

Product name	Specifications	Model
CFast card	128 GB, Innodisk DECFA-A28DK1GWADL	NY000-AT04
USB Memory	2 GB	FZ-MEM2G
Replacement Battery	Battery life: 5 years (at 25°C). This Battery is provided as an accessory.	CJ1W-BAT01
USB Type-A to USB Type-B Cables	2 m, USB2.0, Minimum bend radius: 25 mm	FH-VUAB 2M
	5 m, USB2.0, Minimum bend radius: 25 mm	FH-VUAB 5M
Power Supply	<ul style="list-style-type: none"> • Output voltage: 24 VDC • Push-In Plus terminal blocks 	S8VK-G□□□24
	<ul style="list-style-type: none"> • Output voltage: 24 VDC • EtherNet/IP™, Modbus TCP-Compatible 	S8VK-X□□□24A-EIP
	<ul style="list-style-type: none"> • Output voltage: 24 VDC • Compact 	S8VK-S□□□24
	<ul style="list-style-type: none"> • Output voltage: 24 VDC • Three-phase 200-V Power Supplies 	S8VK-WA□□□24
UPS	Output voltage during backup operation: 24 VDC±5% Revision number 09 or higher *1	S8BA
High-Pressure Waterproof Attachment (PWA)	For 15" LCD models. Install it to conform to UL Type 4X standards.	NA-15WATW01
	For 12" LCD models. Install it to conform to UL Type 4X standards.	NA-12WATW01
	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
Anti-reflection Sheets	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
	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
	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.

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NYE series

Installed Support Software

Item	Specifications
Industrial PC Support Utility	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.
Industrial PC Tray Utility *1 *2	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® Slave, and the HMI.	P138

FHV7 Software

Product name	Specifications	Cat. No.
FHV7 Software *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 *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□□-□□N□□

Specifications

Performance Specifications

Item			NYE□-□-15WR□	NYE□-□-12WR□	NYE□-□-09WR□	NYE□-□-07WR□
Main system	CPU	CPU type	Intel Atom® x5-E3940			
		Cores/Threads	4/4			
		CPU base frequency	1.60 GHz			
		Maximum turbo frequency	1.80 GHz			
		Cache	2 MB			
		Cooling details	Passive cooling (fanless)			
		Intel CPU category	Industrial (100% operation minimal 10yr)			
	Memory	Memory size	4 GB			
		Memory type	DDR3L Non-ECC			
		Speed grade	1866 MT/s			
		CAS latency	CL13			
Graphics controller		Intel® HD Graphics 500				
Operating system	Windows OS		Windows 10 IoT Enterprise 2021 LTSC - 64 bit			
Storage devices	CFast		128 GB, CFast 3DTLC			
Connectors	Power connector		24 VDC			
	RS-232C		Standard SUBD9 connector (Isolated)			
	Ethernet connectors	Number of ports	2 × RJ45 Gb Ethernet interface connectors			
		Physical layer	10BASE-T, 100BASE-TX, 1000BASE-T			
		Maximum transmission distance between Ethernet switch and node	100 m			
	USB2.0 Type-A	Number of ports	2			
		Maximum current	500 mA at 5 VDC			
		Maximum cable length	5 m			
	USB3.0 Type-A	Number of ports	1			
		Maximum current	900 mA at 5 VDC			
		Maximum cable length	3 m			
Battery	Model		CJ1W-BAT01			
	Service life		Service life: 5 years at 25°C			
LED			PWR, ERR			

Display

Item		Specifications			
		NYE□-□-15WR□	NYE□-□-12WR□	NYE□-□-09WR□	NYE□-□-07WR□
Display panel *1	Display device	TFT LCD			
	Screen size	15.4 inches	12.1 inches	9.0 inches	7.0 inches
	Resolution (horizontal × vertical)	1,280 × 800 pixels at 60 Hz		800 × 480 pixels at 60 Hz	
	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°			
Touch	Technology	Resistive			
	Touch resolution	16,384 × 16,384			
	Life	1,000,000 operations minimum			
	Single touch	Yes			
Backlight	Life	50,000 hours min. *2			
	Brightness adjustment *3	100 levels			
	Type	LED			
Display layer	Status LED	Status of the Panel PC. 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 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

Item		Specifications			
		NYE□-□-15WR□	NYE□-□-12WR□	NYE□-□-09WR□	NYE□-□-07WR□
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°C: -3.5 to +0.5 min error per month At ambient temperature of 25°C: -1.5 to +1.5 min error per month At ambient temperature of 0°C: -3 to +1 min error per month			
Power button life		100,000 operations			
Power consumption		34 W	38 W	30 W	28 W

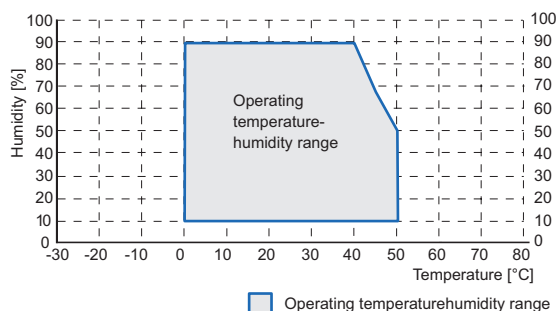
Environmental Specifications

Item		Specifications
Operation environment	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)
	Vibration resistance (During operation)	The vibration resistance depends on the storage device(s): • 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 ² for 100 minutes each in X, Y and Z directions. Conforms to IEC 60068-2-6.
	Shock resistance (During operation)	Conforms to IEC 60068-2-27 147 m/s ² , 3 times each in X, Y and Z directions
	Installation method	Mount on panel
	Material finish	NYE□□-□□□□□-□□WR1200 Housing black aluminium, Frontsheet black
	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)

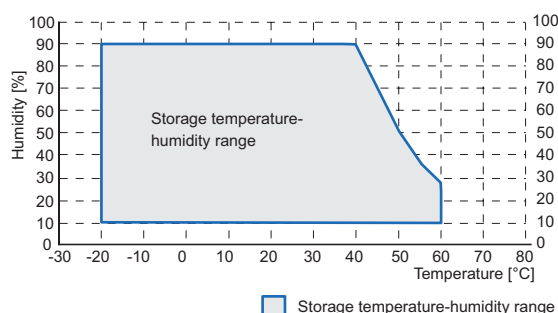
*1. The maximum ambient operating temperature and ambient humidity are specified per storage device type.

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.



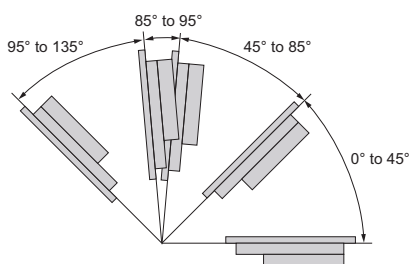
- Store the Panel PC within the ambient temperature and humidity ranges as shown in the following graph.



Ambient operating temperature specifications for model NYE2A-□□0.

This Panel PC has an Intel® Atom® x5-E3940 CPU.

Product Orientation	Mounting Angle	Storage device type
		CFast Card
Landscape	0° to 45°	0 to 40°C
	45° to 85°	0 to 45°C
	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.

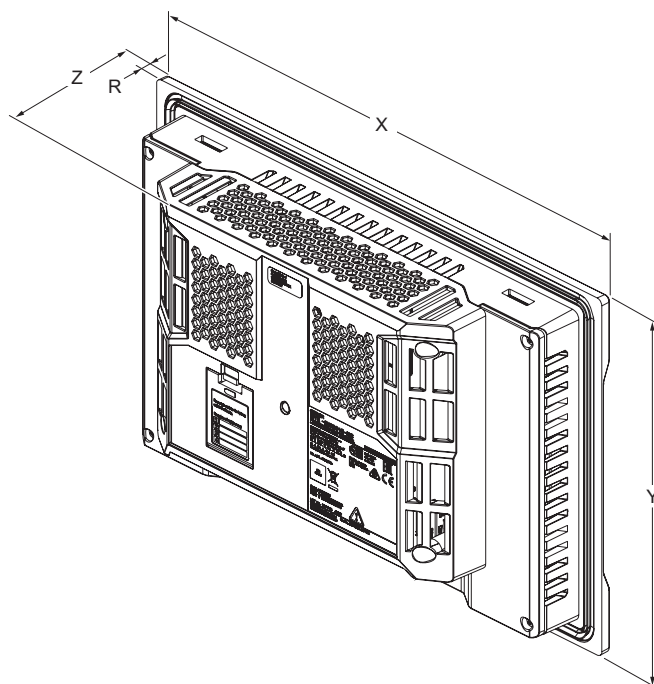
*3. Use power supply Class 2 to conform to UL Standards.

*4. Use the NA-□WATW01 High-pressure Waterproof Attachment (sold separately) to conform to UL Type 4X.

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
NYE□□-□□□□□-15□□	15" display	420 mm	291 mm	69 mm	3.2 kg	6.0 mm
Panel cutout dimensions		Width X1 = 392 ⁻⁰ ₊₁ mm Height Y1 = 268 ⁻⁰ ₊₁ 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
NYE□□-□□□□□-12□□	12" display	340 mm	244 mm	69 mm	2.4 kg	6.0 mm
Panel cutout dimensions		Width X1 = 310 ⁻⁰ ₊₁ mm Height Y1 = 221 ⁻⁰ ₊₁ 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
NYE□□-□□□□□-9□□	9" display	290 mm	190 mm	69 mm	1.8 kg	6.0 mm
Panel cutout dimensions		Width X1 = 261 ⁻⁰ ₊₁ mm Height Y1 = 166 ⁻⁰ ₊₁ 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
NYE□□-□□□□□-7□□	7" display	236 mm	165 mm	69 mm	1.4 kg	6.0 mm
Panel cutout dimensions		Width X1 = 197 ⁻⁰ ₊₁ mm Height Y1 = 141 ⁻⁰ ₊₁ 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 to 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 low-contrast 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • Overview • User Interface • Installation • Basic Operations • Application Methods
FHV7-Series Manuals	Z408	FHV7	FHV7 Smart Camera Setup Manual	The FHV7 user manuals describe the complete setup for vision system solution. Smart camera setup, communication setup, software tools, image processing, lenses, and lighting.
	Z365		FH/FHV Series Vision System User's Manual	
	Z342		FH/FHV Series Vision System User's Manual (Comm. Settings)	
	Z343		FH/FHV Series Vision System Operation Manual (Sysmac Studio)	
	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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • Product Overview • Installation and Connections • Basic Operation • WebLink^{HH} 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • Overview • Preparation • Installation and Connection • Check and Start Operation • Maintenance and Inspection • Shutdown Processing • I/O Signal Functions • Troubleshooting

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