

## Transitioning to the sophisticated appearance of NA5 series while preserving the software assets of NS series

By running NS software on NS-Runtime along with sophisticated appearance of NA5 series,  
The software assets of NS are inherited, and migration to NA5 can be performed smoothly



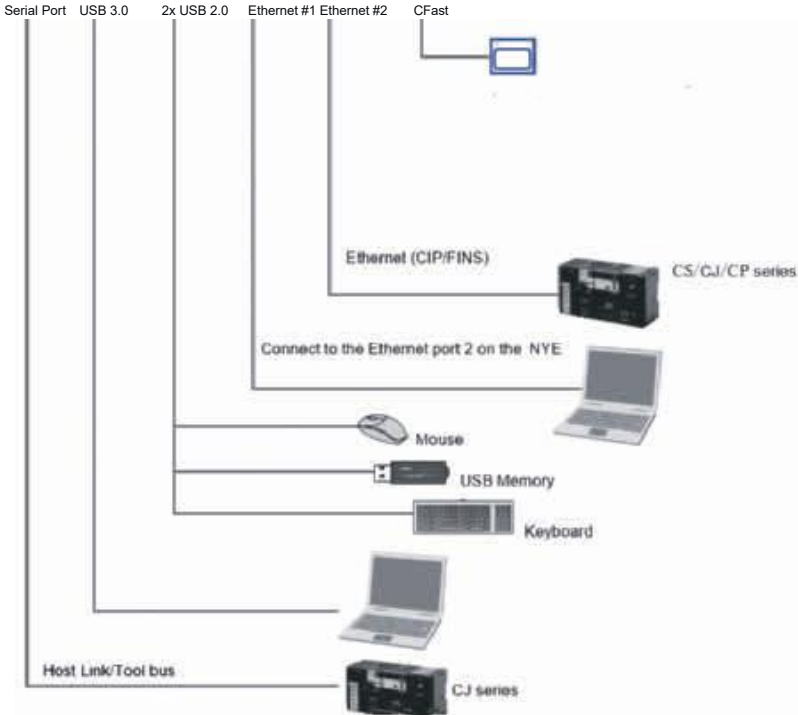
## Features

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- 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 mod

# System Configuration

## NYE with NS-Runtime





## System Requirements

| Item               | Requirement               |                                      |
|--------------------|---------------------------|--------------------------------------|
| OS                 | Windows 10                |                                      |
| Processor          | Intel Atom Quadcore E3940 |                                      |
| RAM                | 4 GB DDR3L                |                                      |
| Fast storage       | 1 slot                    |                                      |
| Communication port | USB                       | USB2.0 Type-A x 2, USB3.0 Type-A x 1 |
|                    | LAN                       | Ethernet x 2                         |

## USB Cable

| Product name | Specifications   |
|--------------|--|
| USB Cable    | Use commercially available USB cable.<br>Specifications: USB 2.0 cable (A connector - B connector), 5.0 m max. |

## Recommended Network Devices

### Industrial Switching Hubs

| Product name              | Functions   | No. of ports | Accessories            | Current consumption (A) | Model    |
|---------------------------|---|--------------|------------------------|-------------------------|----------|
| Industrial Switching Hubs | Quality of Service (QoS):<br>EtherNet/IP control data priority<br>10/100BASE-TX, Auto-Negotiation | 5            | Power supply connector | 0.07                    | W4S1-05D |

## 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 x 4P CP |
|   |                 | Kuramo Electric Co.      | KETH-SB                     |
|   | RJ45 Connectors | Panduit Corporation      | MPS588                      |

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

## Performance Specifications

### Display

| Item                                 | Specification          |   |                                      |  |                                     |
|--------------------------------------|------------------------|---|--------------------------------------|--|-------------------------------------|
|                                      | NYE□-□-15WR□           | NYE□-□-12WR□                                  | NYE□-□-09WR□                         | NYE□-□-07WR□                           |                                     |
| Display panel <sup>*1</sup>          | 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 <sup>*2</sup>              | Life                   | 50,000 hours min. <sup>*3</sup>               |                                      |  |                                     |
|                                      | Brightness adjustment  | 200 levels                                    |                                      |  |                                     |
|                                      | Type                   | LED   |                                      |  |                                     |
| Front panel indicators <sup>*4</sup> | 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  |
|-------------|---|
| NYE□-□-15W□ | Number of light and dark pixels:<br>10 or less. (There must not be<br>3 consecutive light/dark pixels.) |
| NYE□-□-12W□ |   |
| NYE□-□-09W□ |   |
| NYE□-□-07W□ |   |

\*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                          |              |              |              |
|-------------|--|--------------|--------------|--------------|
|             | NYE□-□-15WR□                           | NYE□-□-12WR□ | NYE□-□-09WR□ | NYE□-□-07WR□ |
| Touch panel | Method: Analog resistive membrane type |              |              |              |
|             | Resolution: 16,384 × 16,384            |              |              |              |
|             | Life: 1,000,000 operations             |              |              |              |

## External Interfaces

| Item                            | Specifications (Same for all models.) |  |
|---------------------------------|---------------------------------------|--|
| Ethernet ports                  | <b>Applications</b>                   | Port 1: Device connection to PC or PLC<br>Port 2: Device connection to PC or PLC |
|                                 | <b>Number of ports</b>                | 2 ports  |
|                                 | <b>Compliant standards</b>            | IEEE 802.3i (10BASE-T), IEEE 802.3u (100BASE-TX), and IEEE 802.3ab (1000Base-T)  |
|                                 | <b>Transmission media</b>             | Shielded twisted-pair (STP) cable: Category 5, 5e, or higher                     |
|                                 | <b>Transmission distance</b>          | 100 m  |
|                                 | <b>Connector</b>                      | RJ-45 8P8C modular connector   |
| USB host ports <sup>*1 *2</sup> | <b>Applications</b>                   | USB Memory Device, keyboard, or mouse  |
|                                 | <b>Number of ports</b>                | 2 ports  |
|                                 | <b>Compliant standards</b>            | USB 2.0  |
|                                 | <b>Transmission distance</b>          | 5 m max.   |
|                                 | <b>Connector</b>                      | Type-A connector   |
| USB host port <sup>*1 *2</sup>  | <b>Applications</b>                   | USB Memory Device, keyboard, or mouse  |
|                                 | <b>Number of ports</b>                | 1 port   |
|                                 | <b>Compliant standards</b>            | USB 3.0  |
|                                 | <b>Transmission distance</b>          | 5 m max.   |
|                                 | <b>Connector</b>                      | Type-A connector   |
| Serial port <sup>*3</sup>       | <b>Applications</b>                   | Device Connection  |
|                                 | <b>Number of ports</b>                | 1 port   |
|                                 | <b>Compliant standards</b>            | RS-232C  |
|                                 | <b>Transmission distance</b>          | 15 m max.  |
|                                 | <b>Connector</b>                      | D-DUB 9-pin female connector   |
| CFast Card slot                 | <b>Applications</b>                   | To storage data and install software products                                    |
|                                 | <b>Number of slots</b>                | 1 slot   |
|                                 | <b>Compliant standards</b>            | CFast  |

\*1. Connection to all USB 2.0 or 3.0-compliant devices is not guaranteed.

\*2. Use a USB memory for temporary applications such as transferring data.

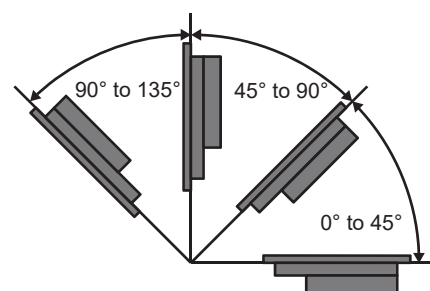
\*3. The serial port is for future expansion.

## General Specifications

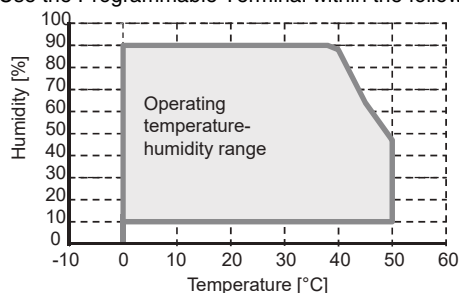
| Item  | Specification  |   |   |   |
|---|--|---|---|---|
|   | NYE□-□-15WR□   | NYE□-□-12WR□  | NYE□-□-09WR□  | NYE□-□-07WR□  |
| Rated supply voltage                        | 24 VDC   |   |   |   |
| Allowable power supply voltage range        | 19.2 to 28.8 VDC (24 VDC ±20%)   |   |   |   |
| Allowable momentary power interruption time | Operation for momentary power interruption is not specified.   |   |   |   |
| Power consumption                           | 60 W max.  | 60 W max.   | 30 W max.   | 30 W max.   |
| Ambient operating temperature               | 0 to 50°C <sup>1,2</sup>   |   |   |   |
| Ambient storage temperature                 | • 20 to +60°C <sup>3</sup>   |   |   |   |
| Ambient operating humidity                  | 10 to 90% <sup>2</sup><br>Must be no condensation.   |   |   |   |
| Atmosphere                                  | Must be free from corrosive gases.   |   |   |   |
| Pollution degree                            | 2 or less: Meets IEC 61010-2-201.  |   |   |   |
| Noise immunity                              | 2 kV on power supply line (Conforms to IEC 61000-4-4.)   |   |   |   |
| Vibration resistance (during operation)     | Conforms to IEC 60068-2-6.<br>5 to 8.4 Hz with 3.5 mm half 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<br>(Time coefficient of 10 minutes × coefficient factor of 10 = total time of 100 min.)  |   |   |   |
| Shock resistance (during operation)         | Conforms to IEC 60028-2-27.<br>147 m/s <sup>2</sup> 3 times each in X, Y, and Z directions   |   |   |   |
| Dimensions                                  | 420 × 291 × 69 mm<br>(W × H × D)   | 340 × 244 × 69 mm<br>(W × H × D)  | 290 × 190 × 69 mm<br>(W × H × D)  | 236 × 165 × 69 mm<br>(W × H × D)  |
| Panel cutout dimensions                     | 392 <sup>0+1</sup> × 268 <sup>0+1</sup> mm<br>(horizontal × vertical)<br>Panel thickness:<br>1.6 to 6.0 mm <sup>4</sup>  | 310 <sup>0+1</sup> × 221 <sup>0+1</sup> mm<br>(horizontal × vertical)<br>Panel thickness:<br>1.6 to 6.0 mm <sup>4</sup> | 261 <sup>0+1</sup> × 166 <sup>0+1</sup> mm<br>(horizontal × vertical)<br>Panel thickness:<br>1.6 to 6.0 mm <sup>4</sup> | 197 <sup>0+0.5</sup> × 141 <sup>0+0.5</sup> mm<br>(horizontal × vertical)<br>Panel thickness:<br>1.6 to 6.0 mm <sup>4</sup> |
| Weight                                      | 3.2 kg max.  | 2.4 kg max.   | 1.8 kg max.   | 1.4 kg max.   |
| Degree of protection                        | Front-panel controls: IP65 oil-proof type, UL Type 4X (at initial state)<br>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<br>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.<br>(This assumes that the power is first turned ON for at least 5 minutes and then turned OFF.) |   |   |   |
| International standards <sup>5</sup>        | UL61010-2-201/CSA C22.2 NO.61010-2-201:14 <sup>6</sup><br>EMC Directive (2004/108/EC) EN 61131-2:2007<br>IP65 oil-proof, UL Type 4X <sup>7</sup> (front panel only)  |   |   |   |

<sup>1</sup>.

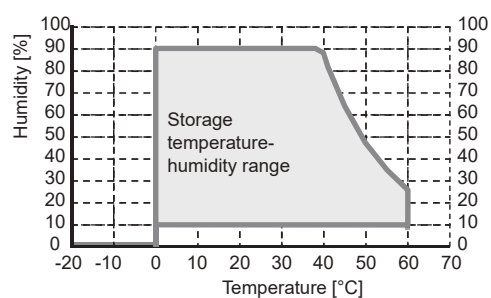
| Product Orientation | Mounting Angle | Storage device type<br>CFast Card |
|---------------------|----------------|-----------------------------------|
| Landscape           | 0° to 45°      | 0 to 40°C                         |
|                     | 45° to 90°     | 0 to 45°C                         |
|                     | 90°            | 50°C                              |
|                     | 90° to 135°    | 0 to 45°C                         |



<sup>2</sup>Use the Programmable Terminal within the following temperature and humidity ranges.



\*3. Store the Programmable Terminal within the following temperature and humidity ranges.

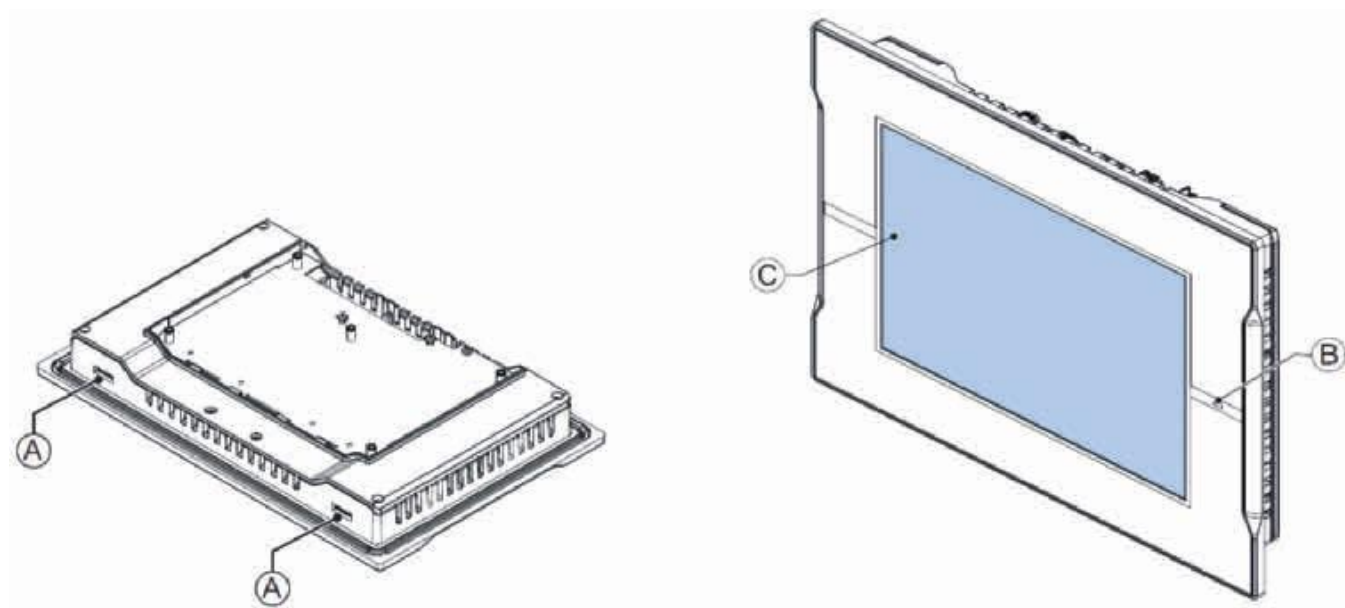


- \*4. When the NA-□WATW01 High-pressure Waterproof Attachment is used, the panel thickness is between 1.6 to 4.5 mm.
- \*5. Check with your OMRON representative or refer to the following OMRON website for the latest information on the applicable standards for each model: [www.ia.omron.com](http://www.ia.omron.com).
- \*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.



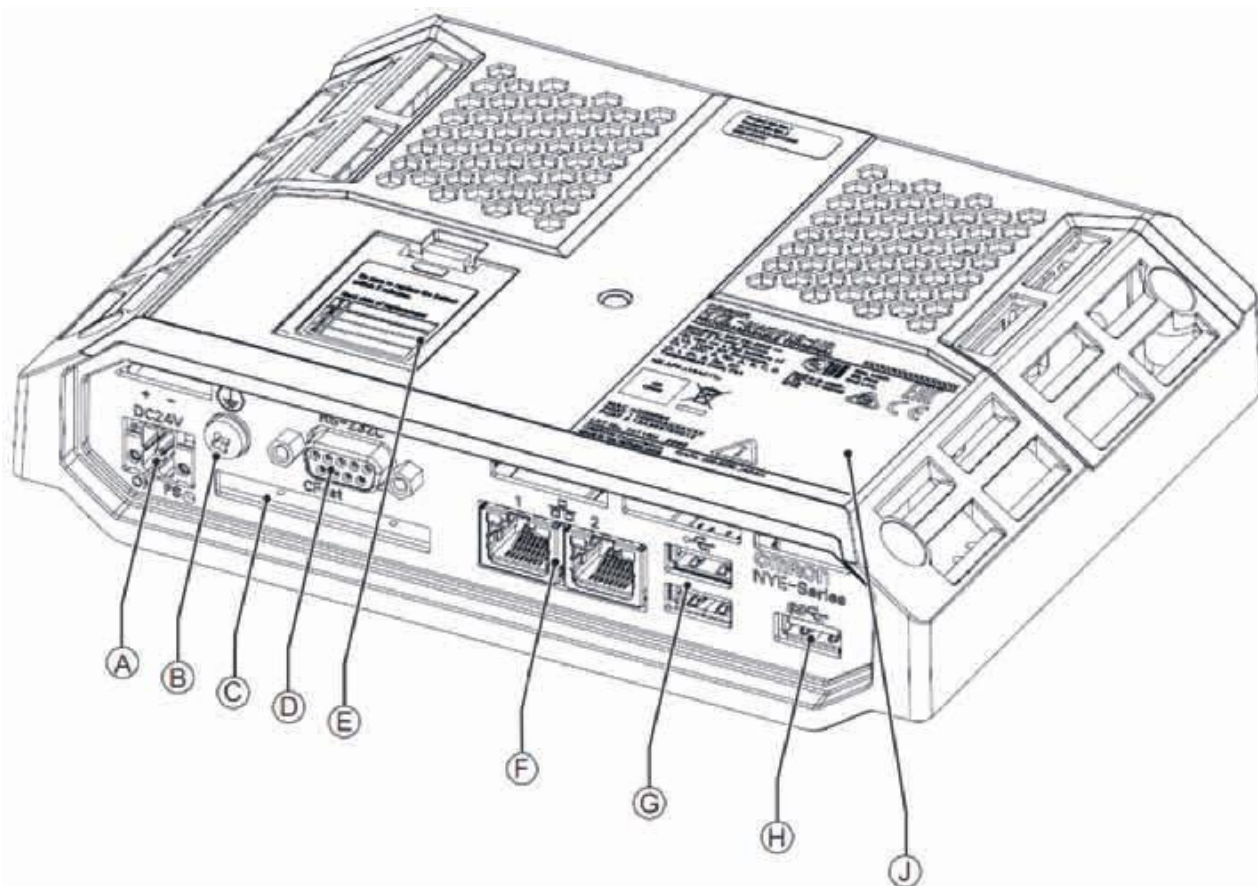
## Components and Functions

### Display Layer NYE



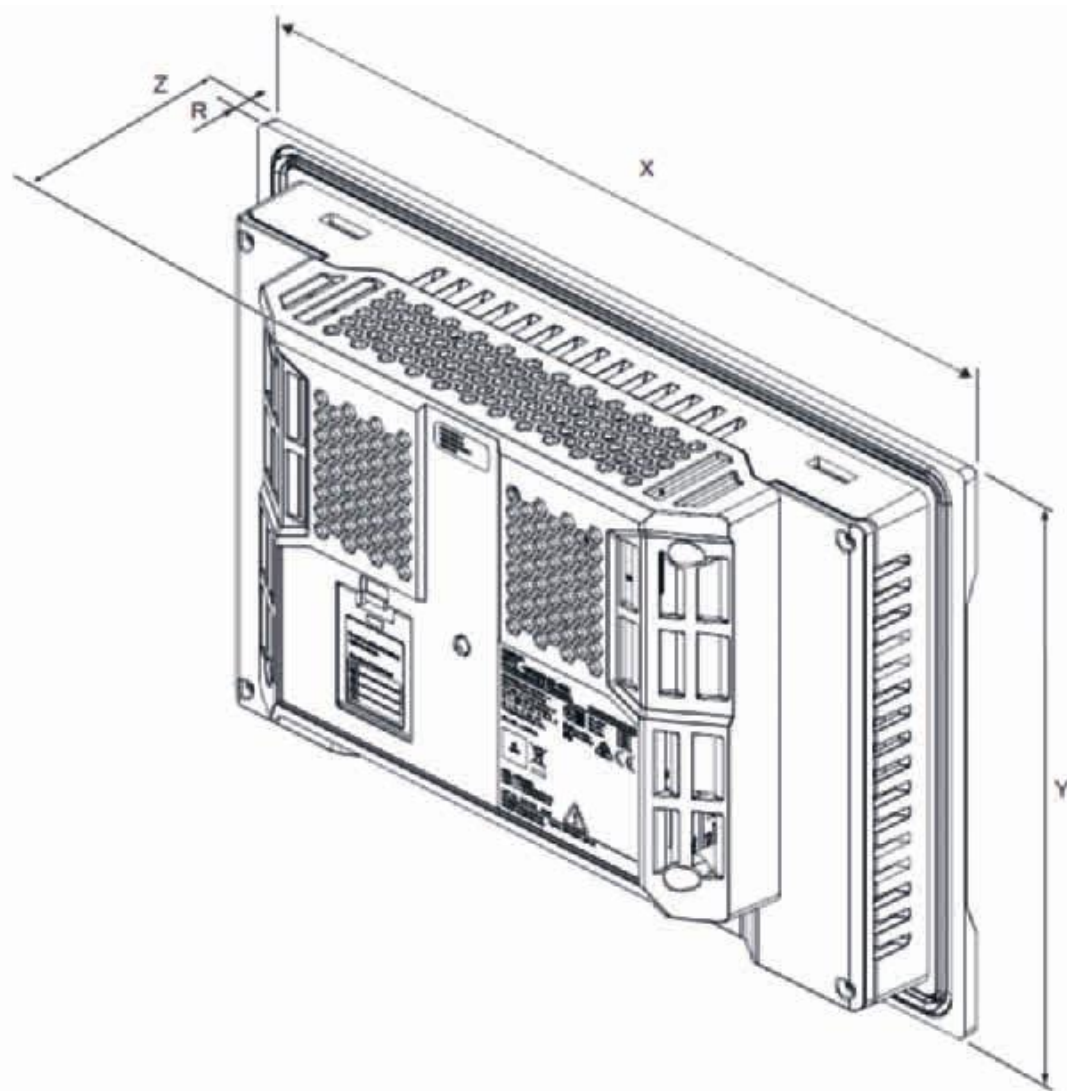
| Item | Name                 | Description  |
|------|----------------------|--|
| A    | Mounting brackets    | Opening for mounting clamps to secure the Panel PC on a mounting surface |
| B    | Status LED indicator | LED to indicate power and status   |
| C    | Touchscreen LCD      | LCD display  |

Base Layer NYE



| Item | Name   | Description   |
|------|--|---|
| A    | Power and I/O connector                              | Lockable power and I/O connector  |
| B    | Ground terminal                                      | Provides a ground terminal for the Panel PC                               |
| C    | CFast Card Slot                                      | CFast Card Slot   |
| D    | RS232C connector                                     | RS232 connector   |
| E    | Battery cover  | Cover for replaceable battery   |
| F    | 10BASE-T/100BASE-TX/ 1000BASE-T Ethernet connectors. | 2 x RJ45 Gb Ethernet interface connectors                                 |
| G    | USB 2.0 connectors                                   | 2 x USB 2.0 interface connectors  |
| H    | USB 3.0 connector                                    | USB 3.0 interface connector   |
| J    | Id information label                                 | Label containing model-ID, Lot No. and other product specific information |

## Dimensions and Weight



### 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          |

### 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          |

### 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□□-□□□□□-09□□ | 9" display     | 290 mm  | 190 mm   | 69 mm   | 1.8 kg | 6.0 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□□-□□□□□-07□□ | 7" display     | 236 mm  | 165 mm   | 69 mm   | 1.4 kg | 6.0 mm          |

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.