

# Series 1000, 2000, and 3000 Industrial Terminals and Workstations

Whether you need an industrial terminal or a full computer, Nematron's Series 1000, 2000, and 3000 Workstations with OptiSCREEN™, OptiBASIC™, or touchscreens can meet your needs.

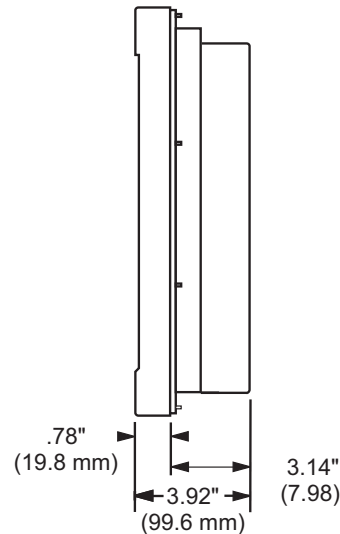
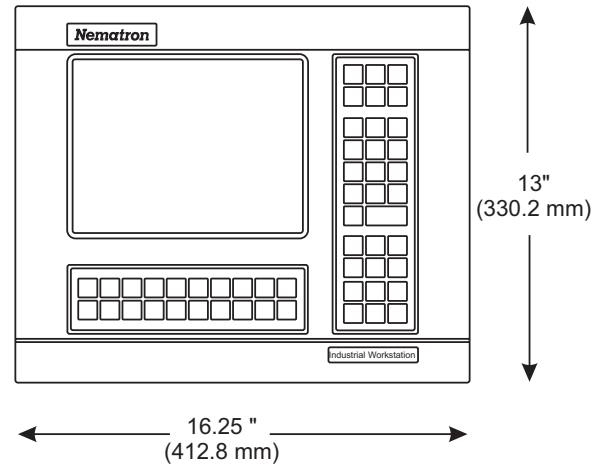
Use the Series 1000 or Model 3015 Terminal

Workstations to provide display output and accept operator input from PLC ASCII or BASIC modules, motion control systems, or industrial computers. These Workstations feature built-in message memory, local message editor, character graphics, and programmable character sets. Choose a flat-panel model of the Series 1000 and conserve space with a

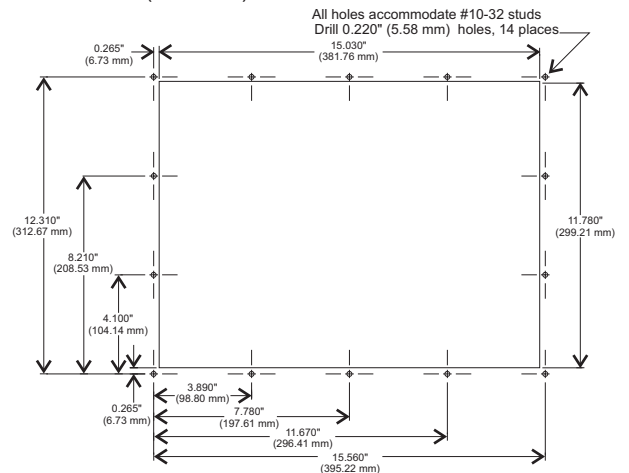
complete package that is less than four inches deep. Series 2000 and Model 3025 Computer Workstations offer terminal functions plus OptieBASIC, Nematron's real-time multitasking BASIC, which includes

## Features

- **NEMA 4 systems for operation under extremes of temperature and humidity**
- **OptiSCREEN™ editor—quickly develop text and graphic screens with Nematron's proprietary full-screen editor**
- **OptiBASIC™ programming—on computer workstations, improve efficiency by processing data, updating screens, and responding to user output, simultaneously**
- **Over 20 PLC Drivers—simplifies connections to many of the industry's most popular PLCs. Included with OptiBASIC**



*The compact flat-panel Industrial Workstations IWS-1834 and IWS-2834 are perfect for panelmount applications in harsh environments with limited floor space. These units include optional models that meet Class I, Division 2 specs for hazardous locations. Front, side, and cutout dimensions of these models shown here. Dimensions of other models are shown inside.*



over 20 PLC communications drivers. These Workstations provide operator interface, data processing, and report generation.

The 3015 and 3025 offer 5" x 9" monochrome CRT and an optional 40-position touchscreen.

The Series 1000 and 2000 units offer 12" mono-  
**Nematron**®  
 Open minds. Open systems. Real solutions.

2000 models have various integral keyboards and an optional 60-position touchscreen.

All these rugged NEMA 4 systems will operate safely under extreme temperatures, humidity, shock, and vibration. Some models also meet Class I, Division 2 specifications for hazardous locations.

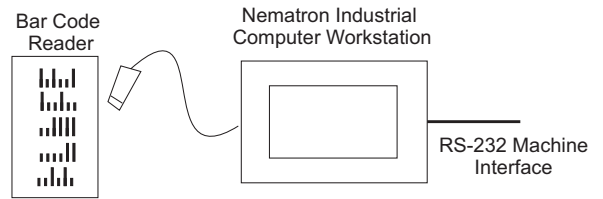
### Computer Workstation Applications

The Series 2000 or Model 3025 Industrial Computer Workstations can perform complex applications that PLCs and other industrial devices can't handle, such as calculations, combining data from multiple sources, and compiling reports.

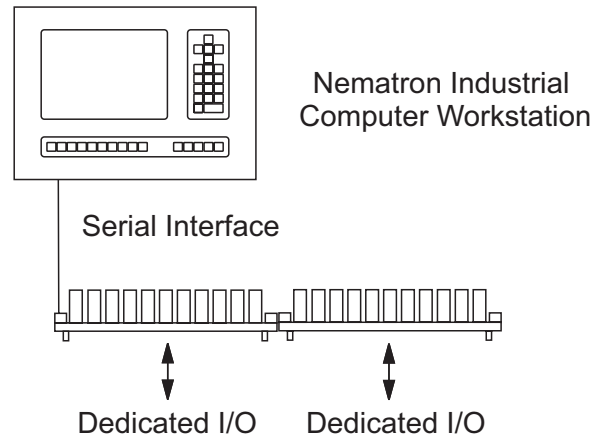
Because of their communication and storage capabilities, these units can track and manipulate historical data for trend displays, simple analyses, and production reports.

The Computer Workstations feature OptiSCREEN screen editor and OptiBASIC, Nematron's industrialized BASIC with built-in PLC protocols. OptiBASIC is a powerful programming tool with built-in features that allow line trending, PID control, alarm monitoring, and report generation.

OptiBASIC's multitasking capabilities allow several different operations to execute at the same time. For example, an application may require the system to continually monitor a remote serial input and also update process parameters used to generate a report.



*A Series 2000 or Model 3025 Industrial Computer Workstation can interface to bar code readers or controllers or archive data from those devices.*

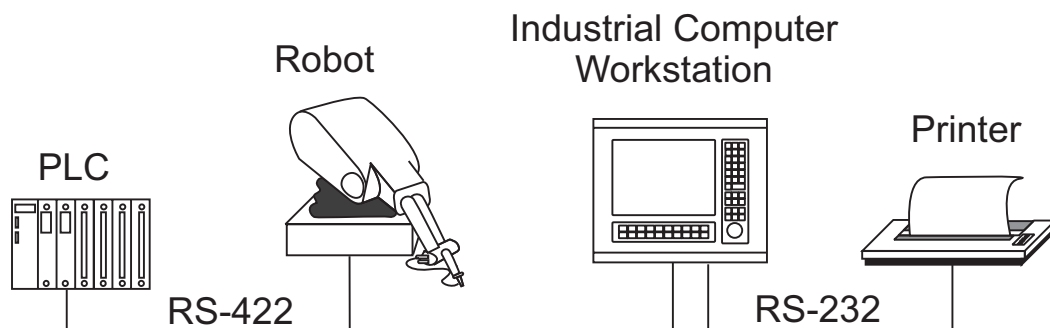


*Nematron's Industrial Computer Workstations can control I/O devices.*

These units also support direct connections to an I/O system, which allows you to use them in data acquisition systems and control applications that do not require a PLC.

### Logic III vs. Logic IV Boards

The Series 1000, 2000, and 3000 Industrial Terminals and Workstations are equipped with Nematron's proprietary logic boards Logic III or Logic IV. The Logic III board supports a 256KB memory cartridge,



*A Nematron Industrial Computer Workstation with OptiBASIC performs several different operations simultaneously and uses remote serial inputs to update several process parameters.*

which allows users to extend internal memory. The Logic IV board supports pixel based graphics and flat-panel displays.

Models that use the Logic III board include: IWS-1020, 1021, 1021T, 1023, 1023T, 1123, 1623, 1624, 2020, 2021, 2021T, 2023, 2023T, 2123, 2623, 2624, 3015 3015T, 3025, and 3025T.

Models that use the Logic IV board include: IWS-1103, 1133, 1603, 1633, 1834, and 2834; and HWS-1834 and HWS-2834.

#### **Compatible with Most Popular PLC Drivers**

- Allen-Bradley: PLC-2, PLC-3, PLC-5 (DF1); SLC-500 (DH-485)
- GEC: GEM80
- GE Fanuc: Series 1, 3, 5, 6 (CCM-2); Series 90 (SNP)
- Hitachi: H Series
- Honeywell: 620 (CIM)
- Mitsubishi: A Series
- Modicon: 184, 384, 484, 584; 884, 984 (DB-25); 984 (DB-9); Micro 984; Compact 984
- Omron: C Series (Host Link)
- Opto 22: Optomux
- Reliance: Automate 15, 20, 30, and 40
- Siemens: S5 and CP525
- Square D: 300, 400, 500, 600, 700 (Sylink)
- Simatic/TI: 305 (same as GE Fanuc Series One); 335, 435, 500/525; TI PM550
- Westinghouse: PC-500, PC-700, PC-900, PC-1100, PC-1200, and PC-1250

Cables are available to connect the Nematron Industrial Terminals and PLC Workstations to most popular PLCs. Contact your local distributor or the factory.

#### **Terminal Workstation Applications**

Logic IV-based units allow users to download PCX and BMP graphics to display custom characters.

Connect a Series 1000 or a Model 3015 Industrial Terminal Workstation to an intelligent host device such as a PLC ASCII module, PLC BASIC module,

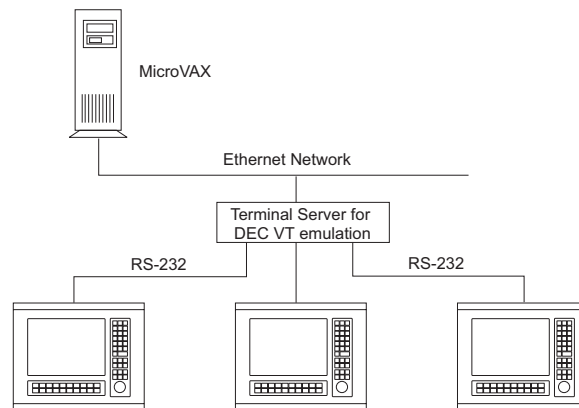
industrial controller, minicomputer, or mainframe host.

The Terminal Workstations provide operator input and display output to the host using RS-232, RS-422, or RS-485 serial communications. Use RS-422 or RS-485 to connect the host to multiple terminals via a single cable.

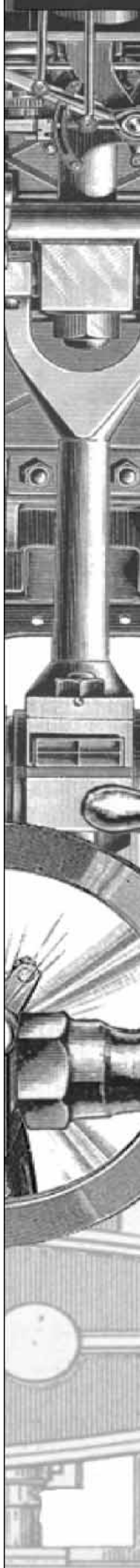
With OptiSCREEN, a Nematron Terminal Workstation can accept a simple code from the host device to display a screen stored in the Workstation's memory. Storing the screen in the terminal saves the host from sending a description of the entire screen, which allows for faster screen updates, and allows the host to perform other tasks.

A Nematron Industrial Terminal can be used as a dumb terminal to display all of the screen information and dynamic data sent by the host device.

User-definable character sets on Logic III models allow you to store up to 2048 individual characters that can be used in applications that require Asian and European characters or special graphic symbols.

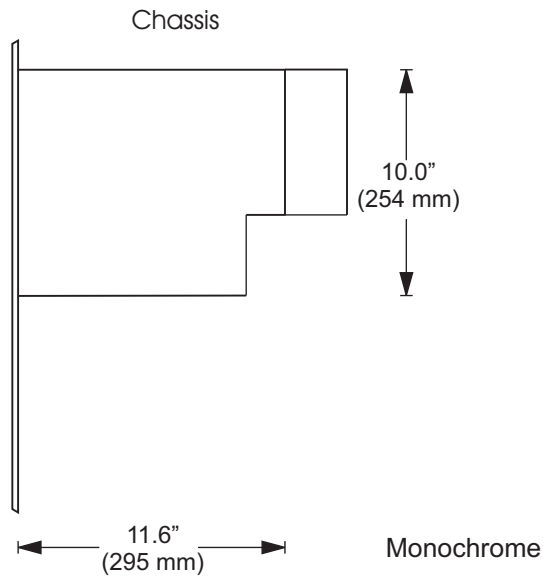
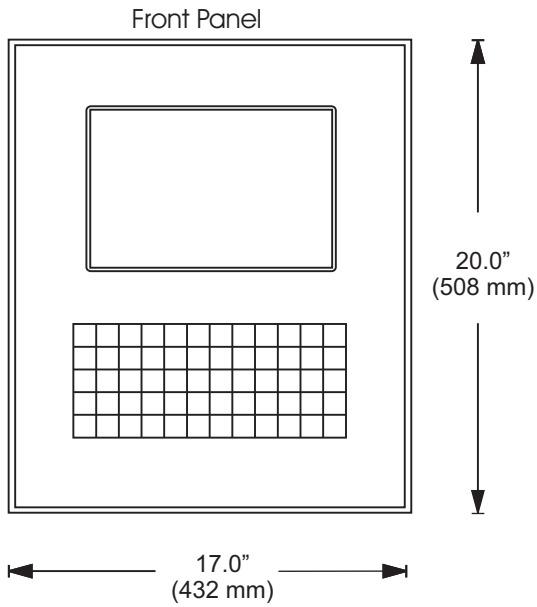


*Nematron's Industrial Terminal Workstations can be used on the plant floor with a MicroVAX and Ethernet network.*

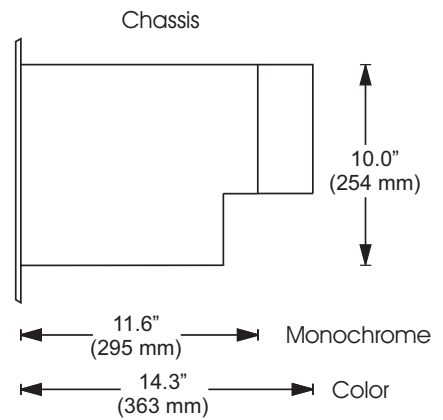
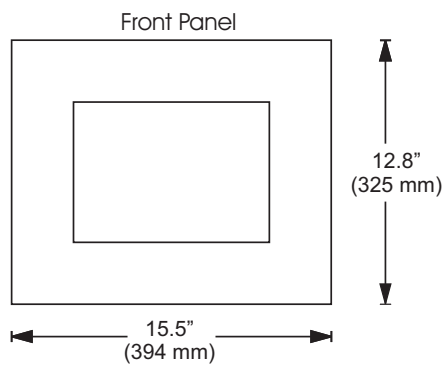


# Dimensions and Cutout Drawings

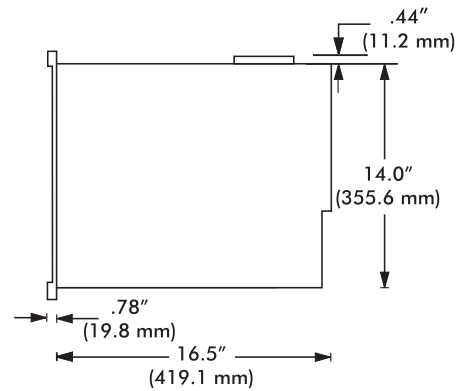
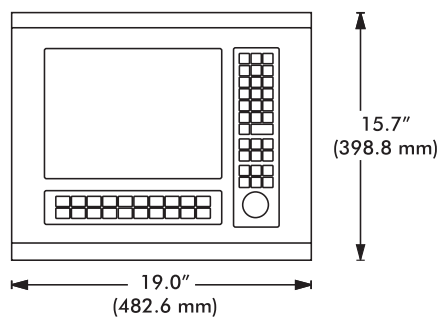
## IWS-1020 and 2020



## IWS-1021 and 2021

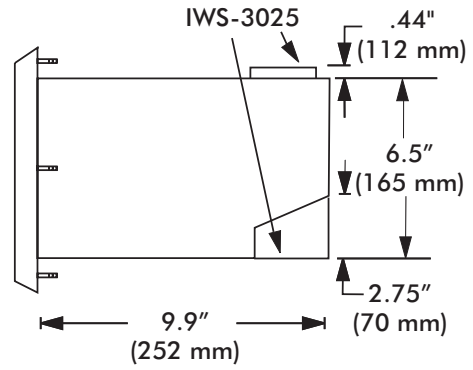
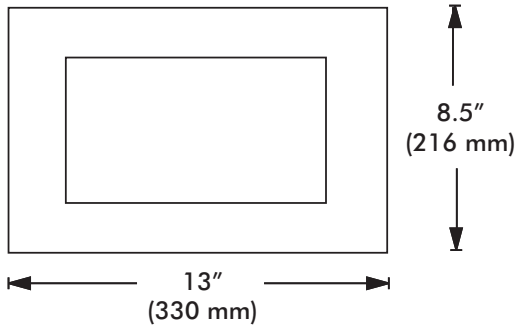


## IWS-1624 and 2624

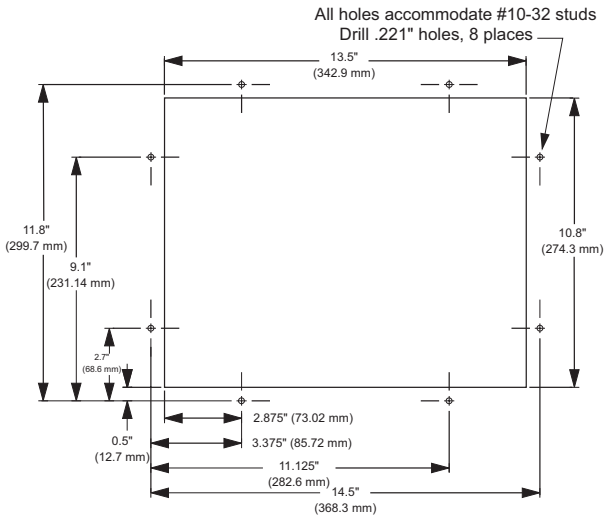


# Dimensions and Cutout Drawings

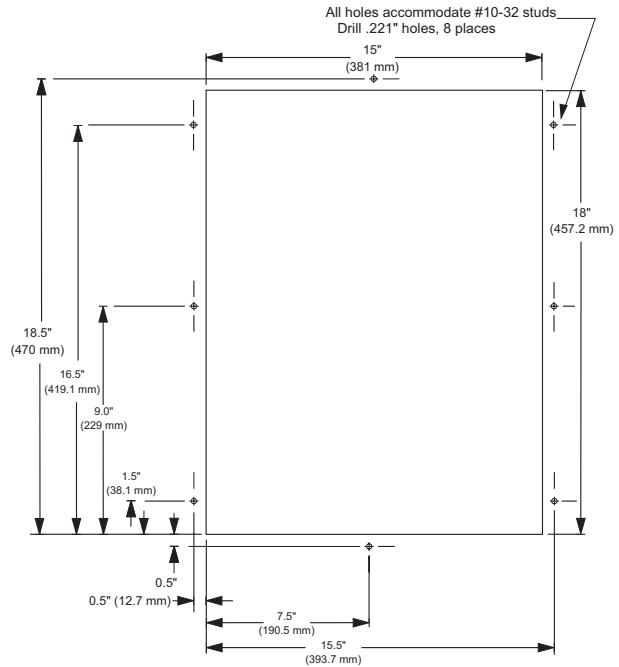
IWS-3015 and 3025



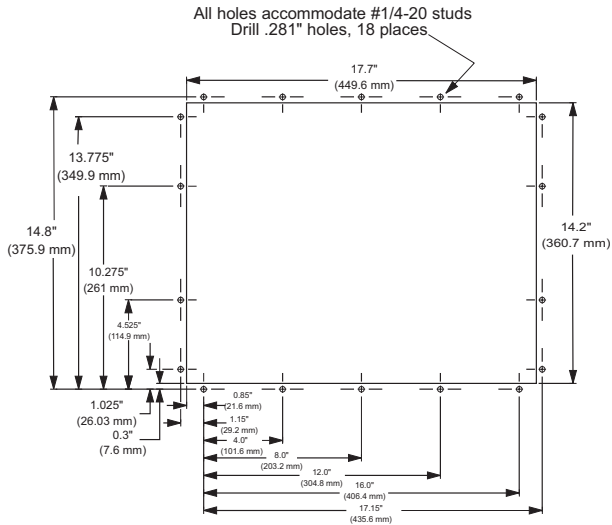
IWS-1020 and 2020 Cutout



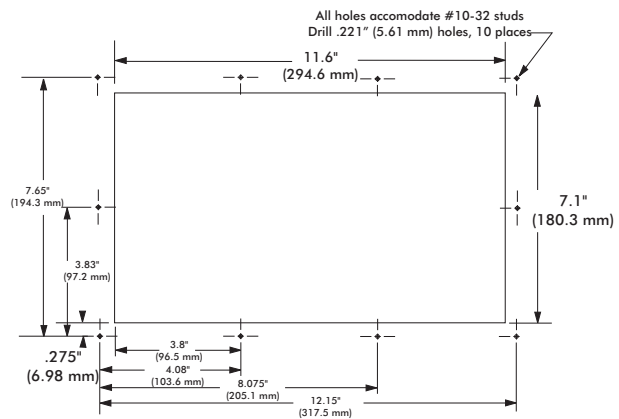
IWS-1020 and 2020 Cutout



IWS-1624 and 2624 Cutout

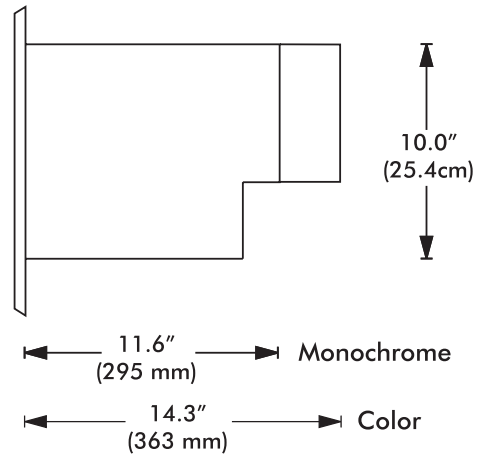
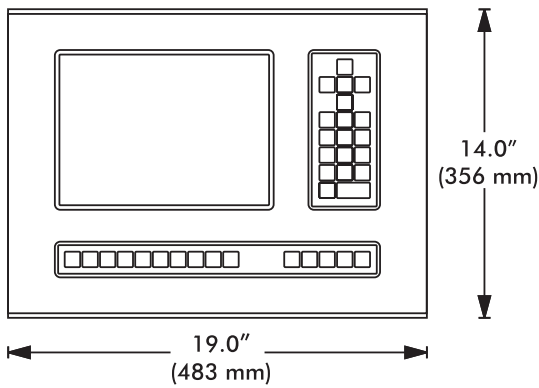


IWS-3015 and 3025 Cutout

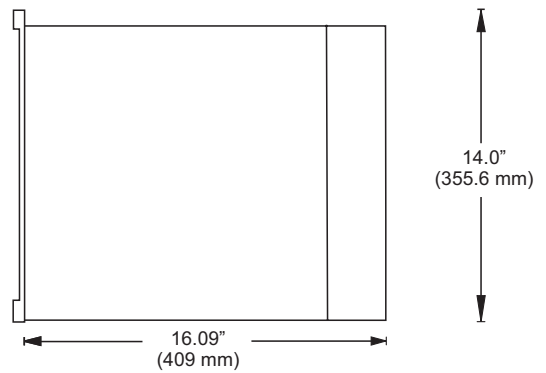
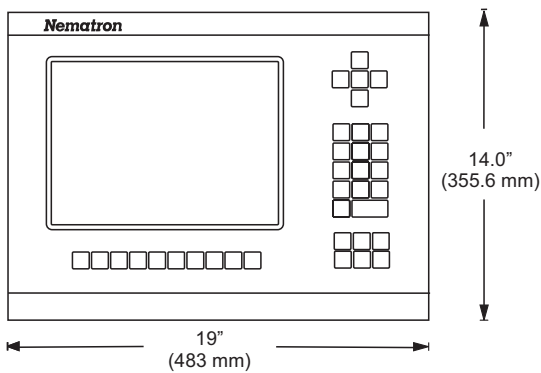


# Dimensions and Cutout Drawings

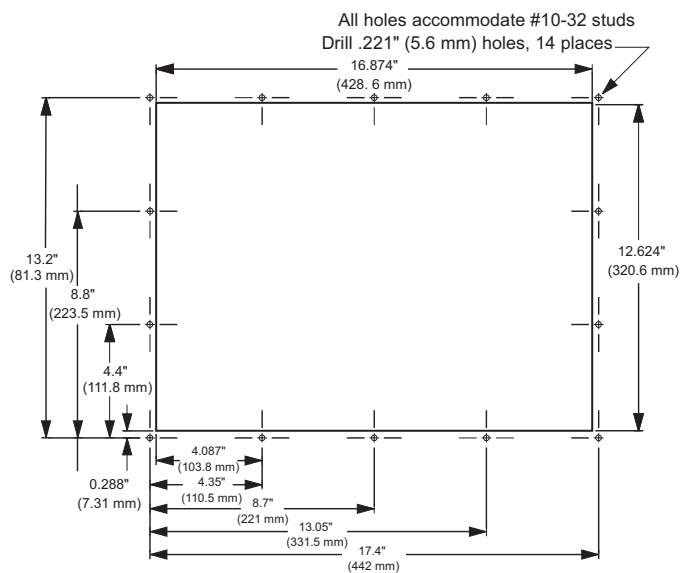
## IWS-1023 and 2023



## IWS-1103, 1133, 1603, 1633, 1123, 1623, 2123, and 2623



## Cutout for IWS-1023, 2023, 1103, 1133, 1603, 1633, 1123, 1623, 2123, 2623



Pilot holes are molded into the rear of the front panel for standard 19" rack mounting.



## How to Order

Use the following model numbers to order the Nematron industrial terminal or computer workstation you want.

### Industrial Terminal Workstations with OptiSCREEN (Logic III)

<b>IWS-1020</b>	12" amber monochrome CRT, 65-position keyboard, no touchscreen option
<b>IWS-1021</b>	12" amber monochrome CRT, no integral keyboard
<b>IWS1021T</b>	12" monochrome CRT, no integral keyboard, with touchscreen
<b>IWS-1023</b>	12" monochrome CRT, 34-position keyboard
<b>IWS-1023T</b>	12" amber monochrome CRT, 34-position keyboard, with touchscreen
<b>IWS-1123</b>	14" monochrome grayscale CRT, 35-position L-shaped keyboard, no touchscreen
<b>IWS-1623</b>	14" color CRT, 35-position L-shaped keyboard, no touchscreen
<b>IWS-1624</b>	14" color CRT, 52-position keyboard
<b>IWS-3015</b>	5" x 9" amber monochrome CRT, no integral keyboard
<b>IWS3015T</b>	5" x 9" amber monochrome CRT, no integral keyboard, touchscreen

### Industrial Terminal Workstations with OptiSCREEN (Logic IV)

<b>IWS-1133</b>	14" grayscale monochrome CRT, 35 keys, OptiSCREEN
<b>IWS-1633</b>	14" color CRT, 35 keys, OptiSCREEN

### Industrial Computer Workstations with OptiSCREEN and OptiBASIC (Logic III)

<b>IWS-2020</b>	12" amber monochrome CRT, 65-key keyboard, no touchscreen option
<b>IWS-2021</b>	12" monochrome CRT, no integral keyboard
<b>IWS-2021T</b>	12" monochrome CRT, no integral keyboard, with touchscreen
<b>IWS-2023</b>	12" monochrome CRT, 34-position keyboard
<b>IWS-2023T</b>	12" amber monochrome CRT, 34-position keyboard, with touchscreen
<b>IWS-2123</b>	14" monochrome grayscale CRT, 35-position L-shaped keyboard, no touchscreen option
<b>IWS-2623</b>	14" color CRT, 35-position L-shaped keyboard, no touchscreen option
<b>IWS-2624</b>	14" color CRT, 52-position keyboard
<b>IWS-3025</b>	5" x 9" amber monochrome CRT, no integral keyboard, 256KB integral memory
<b>IWS-3025T</b>	5" x 9" amber monochrome CRT, no integral keyboard, 256KB integral memory, with touchscreen

### Industrial Terminals for DEC VT emulation (no OptiSCREEN, no OptiBASIC) (Logic IV)

<b>IWS-1103</b>	14" monochrome grayscale CRT, 35-position keyboard, no touchscreen
<b>IWS-1603</b>	14" color CRT, 35-position keyboard, no touchscreen

### Industrial Terminals with Flat-Panel Displays (Logic IV)

<b>IWS-1834</b>	10.4" flat-panel STN color display, 52 keys, OptiSCREEN.
<b>HWS-1834</b>	10.4" flat-panel STN color display, 52 keys, OptiSCREEN, for Class I, Division 2 hazardous locations
<b>IWS-2834</b>	10.4" flat-panel STN color display, 52 keys, OptiSCREEN, OptiBASIC
<b>HWS-2834</b>	10.4" flat-panel STN color display, 52 keys, OptiSCREEN, OptiBASIC, for Class I, Division 2 hazardous locations

### Allen-Bradley SLC 500 Driver Kits

<b>COM-ABN-2000C</b>	From color Series 2x2x systems to AB SLC 500 network adapter
<b>COM-ABS-2000C</b>	From color Series 2x2x systems to AB SLC 500 programming port
<b>COM-ABN-2000M</b>	From mono Series 2x2x or Series 3025 to AB SLC 500 network adapter
<b>COM-ABS-2000M</b>	From mono Series 2x2x or Series 3025 to AB SLC 500 programming port

### Keyboards

<b>KBD-1022</b>	Panelmount, 65-position keyboard, NEMA 4/12 (for Logic III products only)
-----------------	---------------------------------------------------------------------------

### Accessories

<b>MEM-C256</b>	256K memory cartridge for Logic III products
-----------------	----------------------------------------------

**Nematron**<sup>®</sup>  
Open minds. Open systems. Real solutions.

