FOXBORO®

PSS 21H-4D3 B4

I/A Series® Hardware
Modular Industrial Workstations

Modular Industrial Workstations provide flexible mounting arrangements for I/A Series workstation components. They allow you to configure centralized or distributed control centers tailored to the functional requirements of each interaction point in the plant. The modular workstation furniture described herein can incorporate a mixture of equipment—workstation displays, input devices, processors, mounting structures, and data storage devices. Alternately, only display-specific equipment can be incorporated.

Modular Industrial Workstations (MIWs) are ideal for supporting powerful multi-screen, real-time display software interactions. This combination allows workstation resources to be optimally allocated to meet changing day-to-day needs.

Multi-screen MIWs enable comprehensive handling of more plant information in a co-ordinated fashion.

Modular Industrial Workstation Arrangements

The I/A Series System Configurator allows a highly flexible, graphical packaging configuration of MIW equipment. Individual sections are joined on site to provide a customized configuration using standard components.

This modular approach to MIWs offers combinations of single-screen and multi-screen real-time display software interactions as required at a given workstation. Refer to Product Specification Sheet PSS 21S-2B1 B3, Human Interface Software, for additional information.

Individual workstation display options (touchscreen, mouse, and keyboards) apply as described in PSS 21H-4D1 B3, Workstation Components. There are, however, specific allocations for mounting equipment within configurations. The valid allocations have been segmented into the following sections of the individual MIW bays.

Top Section

The top section of a bay accommodates a 21-inch workstation display for a 30 Series, 50 Series, or 70 Series processor. Alternately, the top section can be empty or contain a platform suitable for the addition of other displays.

The use of a touchscreen on the top section as a primary means of interaction is not recommended for ergonomic reasons. The touchscreen option for this position is suitable for backup purposes only.

Middle Front Section

The middle front section can accommodate the 21-inch display. This location is ideal for the touchscreen as a primary means of interaction.

Alternately, the middle front section can be specified to accommodate one or two annunciator or annunciator/numeric keyboards for convenient access (refer to PSS 21H-4E1 B4). You can also specify a blank middle front section. This enables you to have cutouts in this structural foam panel for switches, telephone, and so on.

Spacer Section

Multiple bay configurations can be combinations of straight bays and/or bays joined using 30° spacer sections between bays. This spacer section is also functional in that it can accommodate data storage devices for removable media access. This spacer section can house definable combinations of diskette drives, streaming tape drives, CD-ROMs, or hard disk drives. The permitted devices are determined by the host application processor. If data storage devices are to be mounted in a spacer section, the associated processor must be located within one of the adjacent MIW bays.

A blank spacer section can also be used wherever panel-mounted data storage is not desired. This structural foam panel can be used for mounting other devices.

The top section of the spacer can be configured with a peripheral mounting platform. The platform permits the stacking of up to three additional 50 Series data storage devices.

This arrangement provides for additional peripheral storage capability and permits convenient operator access to removable media devices in addition to those in the spacer - optimizing the use of available space. Intermediate stacking platforms are positioned between individual storage devices to provide for a stable stacking configuration.

Tabletop Section

This worksurface is an ergonomically designed writing surface. The individual surfaces of each workstation bay join to form a continuous tabletop. Each tabletop section provides room for up to two free-standing keyboards, or one keyboard and one mouse (or trackball). Free-standing keyboards include alphanumeric, annunciator, or annunciator/numeric types. Connectors are provided on each workstation bay. WP30 based configurations have one connector for the mouse or trackball and one for free-standing keyboards; 50 Series and 70 Series configurations have connectors for the keyboard and/or trackball/mouse. These tabletop devices can be attached or removed as required, on-line. Multiple free-standing annunciator or annunciator/numeric keyboards can be daisy-chained together.

Bottom Front Section

The bottom front section comprises the area below the tabletop. A removable cover conceals an ac junction box provided to power workstation displays. There is also a primary wireway for routing cabling between workstation bays.

Rear Section

The rear bay of the MIW is accessible via a removable access panel installed on the rear of the unit, and contains standard 483 mm (19 in) rack mounting rails divided into upper and lower sections. In units without a display mounted in the bay, I/A Series 1x8 mounting structures (for X- and Z-Modules) and/or a 19-inch Modular Mounting Structure(1) (for 50 Series Model 50/51, Style A processors and 50 Series data storage devices) can be accommodated in both upper and lower sections.

When the empty rear bay contains a standard tower option tray, it can house processors with minitower forms, such as 50 Series Model 51, Style E processors or 70 Series processors, and associated peripherals.

(1) Refer to PSS 21H-5B4 B4 19-Inch Modular Mounting Structure Assemblies for the complete list of processors and associated peripherals that can be placed in the Modular Mounting Structure.

Alternately, sliding shelves can be mounted in the upper rear section to accommodate one of the following configurations:

- Two Model 51, Style B processors
- One Model 51, Style B processor with either one Model 50/51, Style A processor, or two data storage devices
- One Model 51, Style D processor.

A fan assembly, which is mounted in the center of the rear section, is required when these options are used. The lower section can be used to mount a 1x8 Mounting Structure, an MMS, or an additional Model 51, Style D processor with up to four data storage devices.

Bays with a 21-inch workstation display mounted in the front, sloped bay can optionally contain a mounting tray in the base of the MIW for a single 50 Series Model 50/51, Style A processor. In place of a tray, a mounting platform at the base of the MIW bay can accommodate one of the following configurations:

- Two Model 50/51, Style A data storage devices
- One 50 Series Model 51, Style B processor
- One Model 51, Style D processor.

The Model 51, Style B and D processors require fans to be located in the back of the MIW.

To accommodate the platforms and trays which host 50 Series or 70 Series processors, it may be necessary to mount a spacing collar on the back of the MIW.

The rear bay can also be used to accommodate user-supplied, rack-mounted equipment.

Each 1x8 Mounting Structure has its own junction box and power supplies. Circuit breakers and transient protection are also included within each junction box. When housed within a Modular Industrial Workstation, mounting structures can contain power modules, X- and Z-Modules such as workstation processors, applications processors, control processors, and communications processors, as well as data storage devices.

The 19-inch Modular Mounting Structure (MMS) has a dedicated power strip to which power cords from each of the 50 Series and 70 Series devices in the structure are connected. The power strip receives its main power from a junction box, or for backup ac power, from an optional ac transfer switch (refer to PSS 21H-5F1 B3). Each 50 Series device also has an individual circuit breaker located at the rear of the unit. The mounting structure can contain 50 Series devices including Model 50/51, Style A and Style B application processors and workstation processors, and their associated data storage devices. This highly flexible approach allows system and workstation electronics to be either centralized within these modular enclosures, or remotely distributed among other I/A Series enclosures to suit your preferences.

Empty Modular Industrial Workstation Bay

The workstation is available with an empty bay configuration. You can mount ancillary equipment in the middle front section and in the rear section.

The top section platform optionally permits the installation of a standard display, other custom displays, or printers.

ENVIRONMENTAL SPECIFICATIONS(a)

Operating Temperature
0 to 40°C (32 to 104°F)[a]
0 to 30°C (32 to 86°F)[b]

Storage Temperature
–40 to +70°C (–40 to +158°F)

Relative Humidity
5 to 95% (noncondensing)[c]

Contamination Class
Empty 21-inch workstation display bay - Class G3 (Harsh) as defined in ISA Standard S71.04
Workstation bays with peripherals - Class G1 (Mild) as defined in ISA Standard S71.04.

(a) For Modular Industrial Workstation only. Refer to appropriate Product Specification Sheets (PSSs) for incorporated equipment.
(b) For Modular Industrial Workstation with 50 Series or 70 Series processors.
(c) For Modular Industrial Workstation without 50 Series or 70 Series processors.

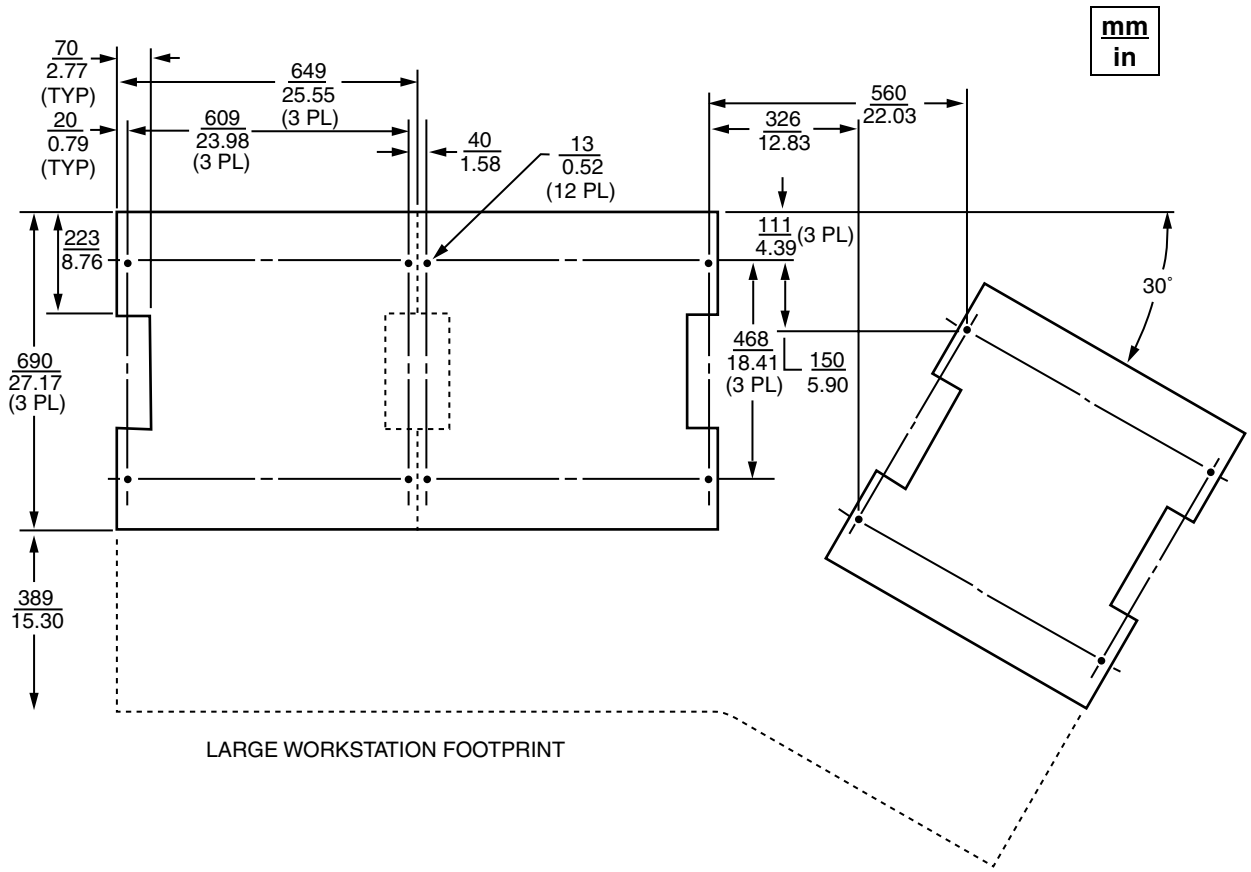
PHYSICAL SPECIFICATIONS

Mounting
Floor

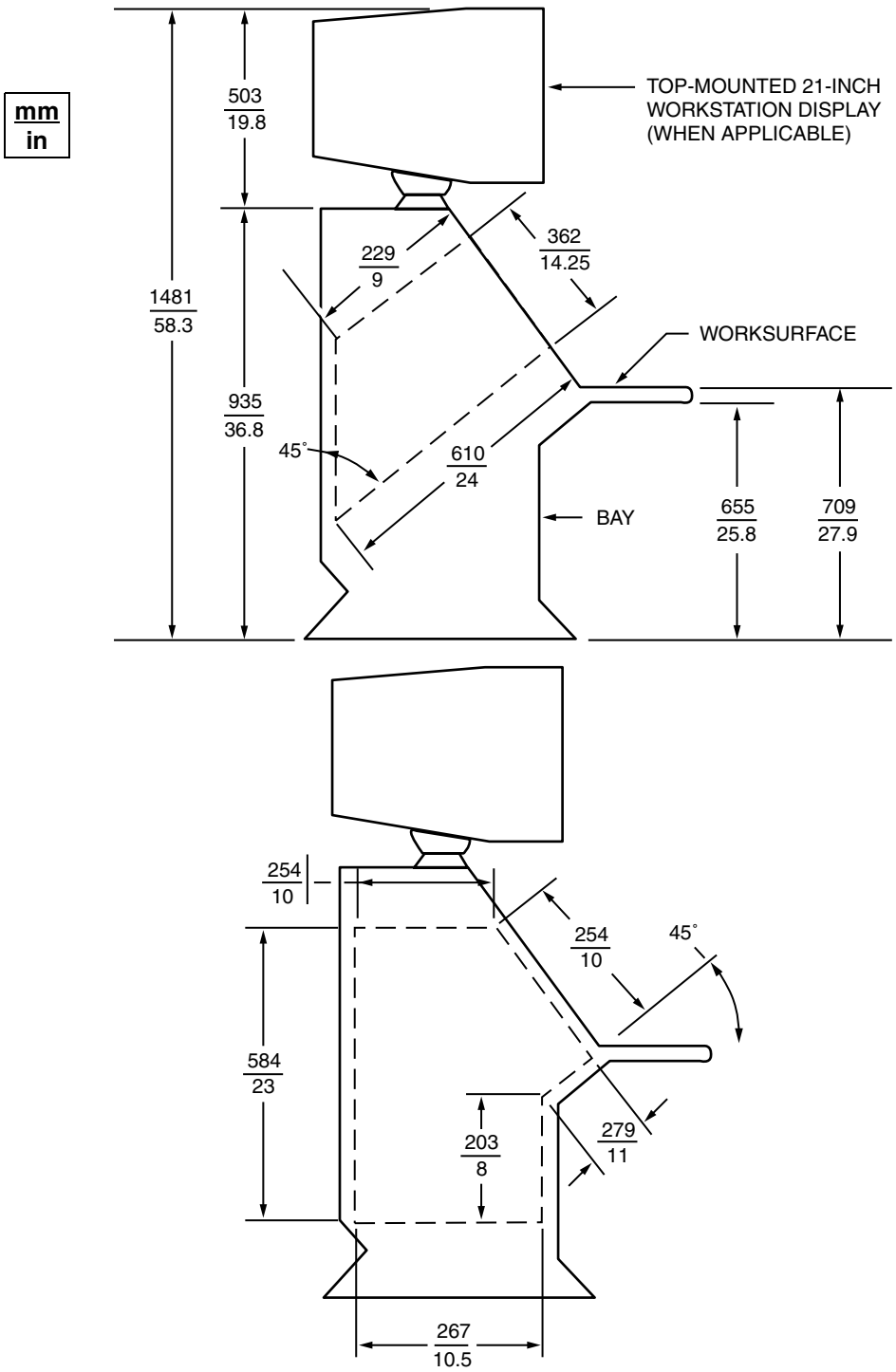
Case Construction
Molded structural foam (polycarbonate, General Electric FL400), {heat deflection temperature, 100°C (212°F) at 66 psi; 95°C (203°F) at 264 psi}

Approximate Mass
SINGLE BAY
45 kg (100 lb) maximum (empty)
SPACER SECTION
7 kg (15 lb) maximum (empty). 16 kg (35 lb) maximum (with panel-mounted data storage devices).

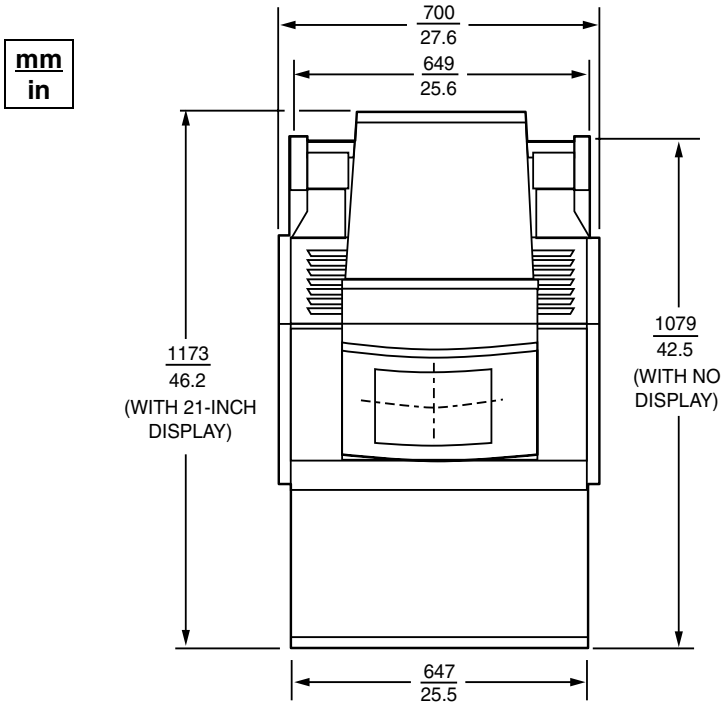
DIMENSIONS—NOMINAL
(FOOTPRINT WITH BOLT DOWN PATTERN)



CLEARANCE DIMENSIONS—NOMINAL

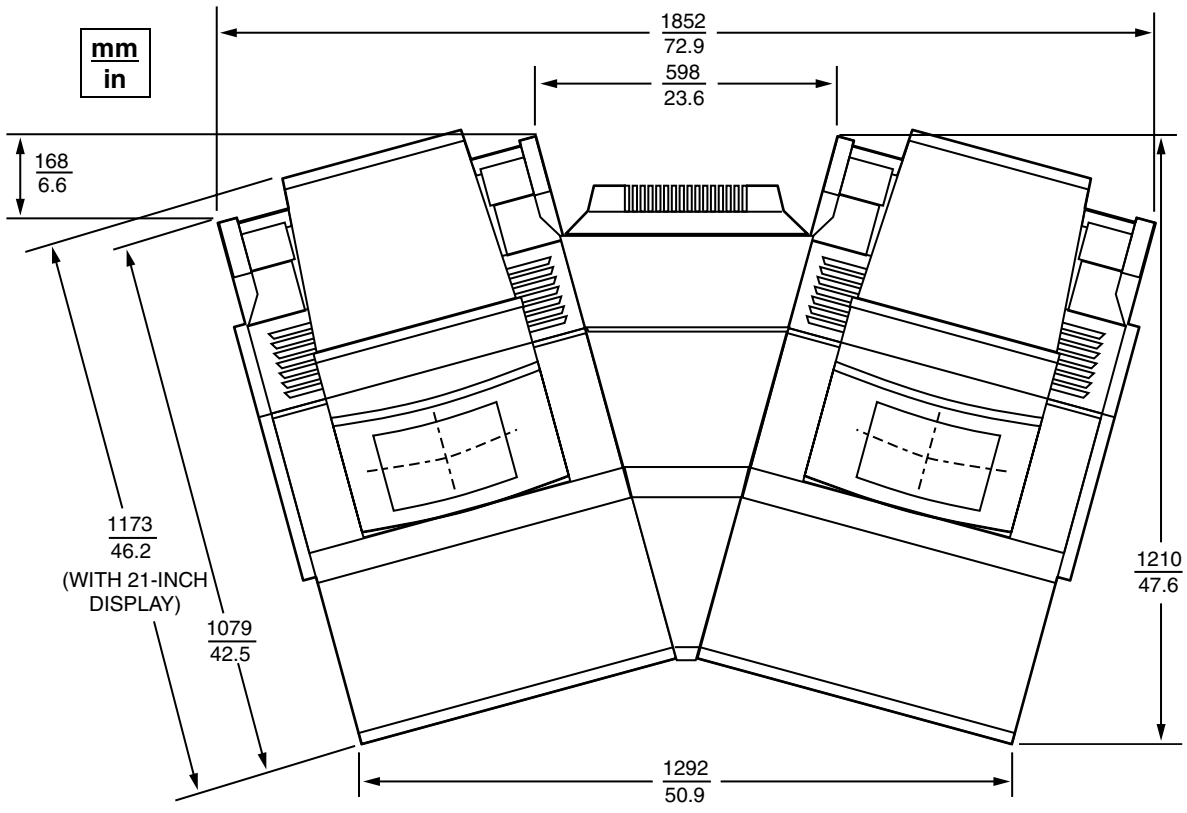


DIMENSIONS—NOMINAL (SINGLE BAY)



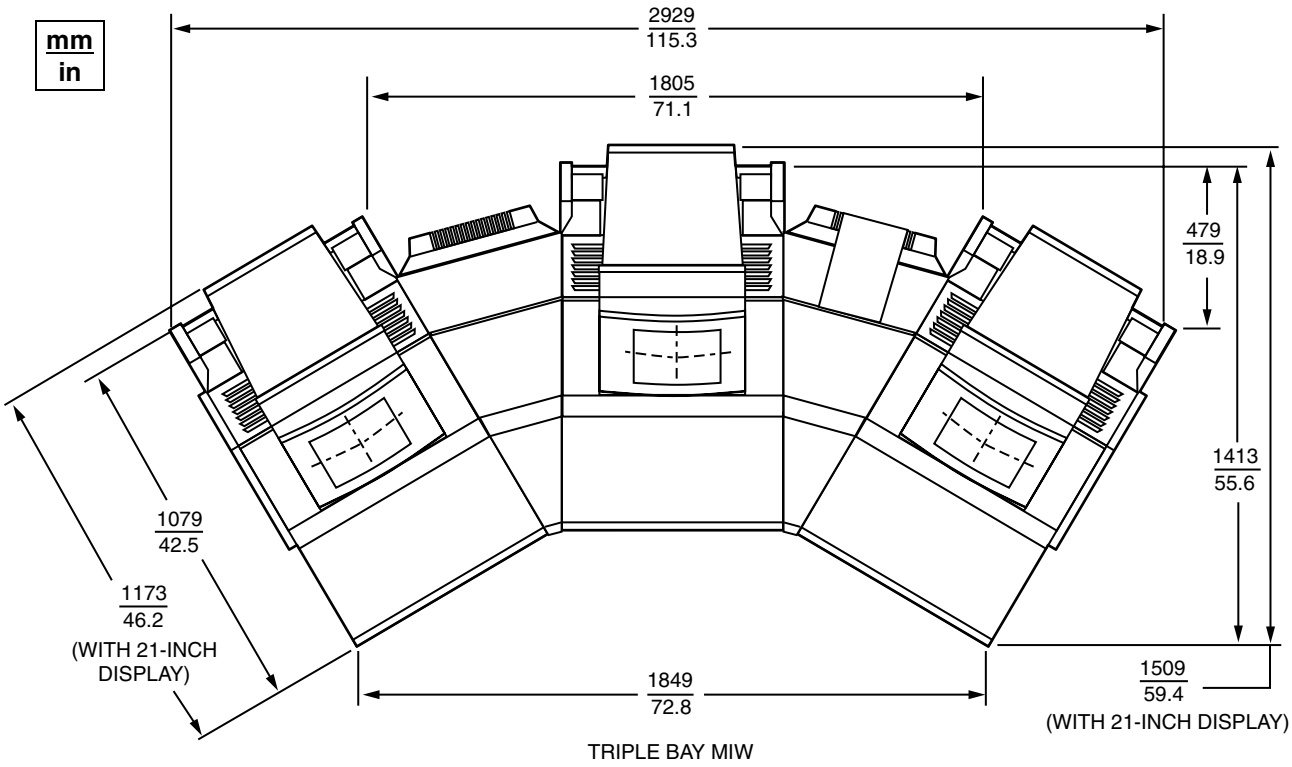
SINGLE BAY MIW

DIMENSIONS—NOMINAL (DOUBLE BAY)



DOUBLE BAY MIW

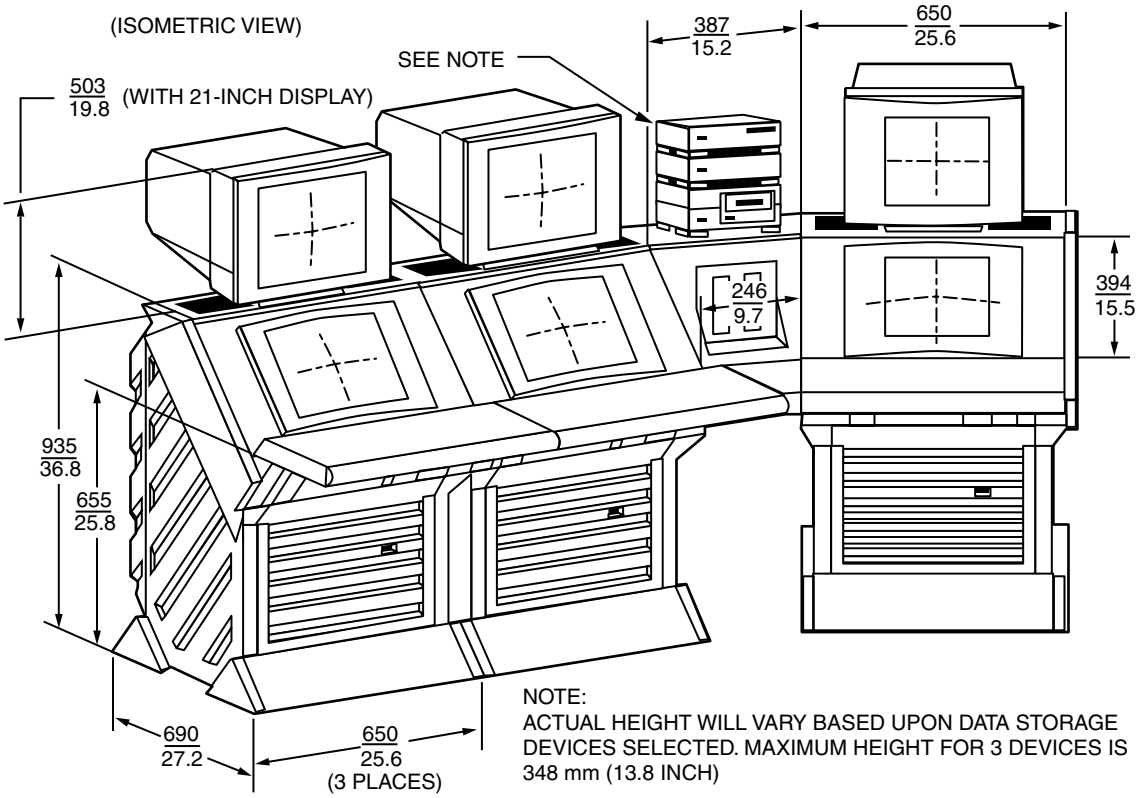
DIMENSIONS—NOMINAL
(TRIPLE BAY)



TRIPLE BAY MIW

DIMENSIONS—NOMINAL

mm
in



NOTE:
ACTUAL HEIGHT WILL VARY BASED UPON DATA STORAGE DEVICES SELECTED. MAXIMUM HEIGHT FOR 3 DEVICES IS 348 mm (13.8 INCH)

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