



VersaView Industrial Non-display Computers

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About This Publication

This publication provides procedures on how to install the VersaView industrial non-display computers. It also describes how to make peripheral, power, and network connections. For information on operating and troubleshooting the non-display computers, refer to the user manual listed under Additional Resources.

Important User Information

Solid state equipment has operational characteristics differing from those of electromechanical equipment. Safety Guidelines for the Application, Installation and Maintenance of Solid State Controls (publication SGI-1.1 available from your local Rockwell Automation sales office or online at <http://literature.rockwellautomation.com>) describes some important differences between solid state equipment and hard-wired electromechanical devices. Because of this difference, and also because of the wide variety of uses for solid state equipment, all persons responsible for applying this equipment must satisfy themselves that each intended application of this equipment is acceptable.





In no event will Rockwell Automation, Inc. be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The examples and diagrams in this manual are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular installation, Rockwell Automation, Inc. cannot assume responsibility or liability for actual use based on the examples and diagrams.

No patent liability is assumed by Rockwell Automation, Inc. with respect to use of information, circuits, equipment, or software described in this manual.

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Throughout this manual, when necessary, we use notes to make you aware of safety considerations.

<div>WARNING</div> <div></div>	Identifies information about practices or circumstances that can cause an explosion in a hazardous environment, which may lead to personal injury or death, property damage, or economic loss.
<div>IMPORTANT</div>	Identifies information that is critical for successful application and understanding of the product.
<div>ATTENTION</div> <div></div>	Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss. Attentions help you to identify a hazard, avoid a hazard, and recognize the consequences.
<div>SHOCK HAZARD</div> <div></div>	Labels may be on or inside the equipment, for example, a drive or motor, to alert people that dangerous voltage may be present.
<div>BURN HAZARD</div> <div></div>	Labels may be on or inside the equipment, for example, a drive or motor, to alert people that surfaces may reach dangerous temperatures.

Environment and Enclosure Information

Review the information on enclosures and environments before installing the product.

ATTENTION



Environment and Enclosure

This equipment is intended for use in a Pollution Degree 2 industrial environment, in overvoltage Category II applications (as defined in IEC publication 60664-1), at altitudes up to 2000 m (6561 ft) without derating.

This equipment is considered Group 1, Class A industrial equipment according to IEC/CISPR Publication 11. Without appropriate precautions, there may be potential difficulties ensuring electromagnetic compatibility in other environments due to conducted as well as radiated disturbance.

This equipment is supplied as open type equipment. UL recognized equipment must be mounted within an enclosure that is suitably designed for those specific environmental conditions that will be present and appropriately designed to prevent personal injury resulting from accessibility to live parts. The interior of the enclosure must be accessible only by the use of a tool. UL listed equipment need not be mounted inside another enclosure. Subsequent sections of this publication may contain additional information regarding specific enclosure type ratings that are required to comply with certain product safety certifications.

In addition to this publication, see:

- Industrial Automation Wiring and Grounding Guidelines, for additional installation requirements, Allen-Bradley publication 1770-4.1.
 - NEMA Standards publication 250 and IEC publication 60529, as applicable, for explanations of the degrees of protection provided by different types of enclosure.
-

European Union Directive Compliance

This product meets the European Union Directive requirements when installed within the European Union or EEA regions and have the CE mark. A copy of the Declaration of Conformity is available at the Rockwell Automation website <http://ab.com> under Product Certification.

ATTENTION



This product is intended to operate in an industrial or control room environment, which utilizes some form of power isolation from the public low-voltage mains. Some computer configurations may not comply with the EN 61000-3-2 Harmonic Emissions standard as specified by the EMC Directive of the European Union. Obtain permission from the local power authority before connecting any computer configuration that draws more than 75 Watts of ac power directly from the public mains.

ATTENTION



To comply with EN 55024 and EN 61000-6-2, the Ethernet port LAN cable must be less than 30 m (98.42 ft) and used only indoors, not exit the building at any point. All other I/O cables must be less than 3 m (9.84 ft) and used only indoors.

Operating Systems

The computers are shipped with one of these operating systems:

- Windows 2000 Professional, Service Pack 4 with Update Rollup 1
- Windows XP Professional, Service Pack 2b

No operating system updates have been applied to the factory image beyond the service packs.

For your convenience, the I386 source directory for Microsoft Windows is on the system drive of your computer off the root directory, C:\I386. This allows for easy removal and addition of Windows components.

Computers with rotating-media hard drives include a recovery partition on the system drive containing the original factory image. You can use the supplied System Accessories/Cloning CD to restore the operating system from the recovery partition, create a new recovery image, and create bootable external recovery media.

Refer to the Cloning Utility documentation, publication 6000-TD001, for instructions. You can view or download publications at <http://literature.rockwellautomation.com>.

Computers with solid state drives have been customized to accommodate the unique properties of the solid state drive. Some of the pre-installed customizations include:

- No paging file
- System restore set to zero and disabled
- DLLCACHE directory emptied

Computers with solid state hard drives do not contain a recovery partition. If additional drive space is required, copy the I386 directory to external media; then delete the I386 directory from C:\I386, which is approximately 400 MB.

To obtain the original factory image on bootable external recovery media, which also includes the I386 source directory, contact your local technical support center.

Multilingual User Interface CD Pack

The Microsoft Multilingual User Interface (MUI) CD Pack contains a collection of different language sets that can be installed into the operating system. MUI packs are available for all Windows XP operating systems and provide a localized start menu and system icons support.

The instructions for installing MUI languages on your computer are supplied with the MUI CD Pack.

Before You Begin

Before unpacking the product, inspect the shipping carton for damage. If damage is visible, immediately contact the shipper and request assistance. Otherwise, proceed with unpacking.

Keep the original packing material in case you need to return the product for repair or transport it to another location. Use both the inner and outer packing cartons to provide adequate protection for a unit returned for service.

Parts List

The computers are shipped with these items:

- VersaView System Accessories/Cloning CD
- VersaView System Support CD
- Microsoft Multilingual User Interface (MUI) CD Pack
This CD pack is not included with VersaView computers containing the Windows 2000 operating system.
- Installation instructions
- Power cord, ac, where applicable
- PS/2 adapter cable to connect both a keyboard and a mouse
- Mounting hardware

Description	Quantity	Use To	This Computer
Wall or machine mounting brackets	2	Wall or machine mount	VersaView 200R VersaView 700R
VESA mounting bracket	1	VESA mount	VersaView 200R
DIN rail bracket	1	DIN rail mount	VersaView 200R
Mounting screws and nuts	8	Wall, machine, DIN rail, rack slide, or VESA mount	VersaView 700R
	12		VersaView 1400R
	24		VersaView 200R
Rack handles	2	Rack mount	VersaView 1400R

Required Tools

These tools are required to rack- or machine-mount your computer:

- #2 Phillips screwdriver
- Drill motor and drill bit

Mounting Clearances

Review the product dimensions to make sure you allow adequate clearance on the sides and rear of the computer for ventilation and cable connections. You must also be able to remove the covers to install or remove peripheral components.

When mounted in an enclosure or high temperature area, the ambient temperature around the computer must not exceed the operating temperature range.

Install the Computer

The computers support various mounting options.

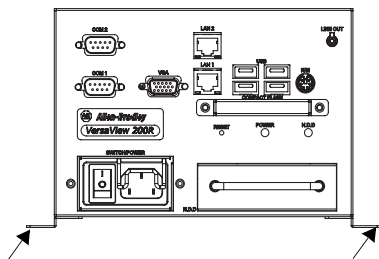
- Machine mount (200R and 700R)
- Wall mount (200R)
- DIN rail mount (200R)
- Rack mount (1400R)
- VESA mount (200R)

Mount the Computer on a Machine

You can mount the VersaView 200R and 700R computers on a shelf inside a machine by using mounting brackets. The brackets secure the computer to the shelf.

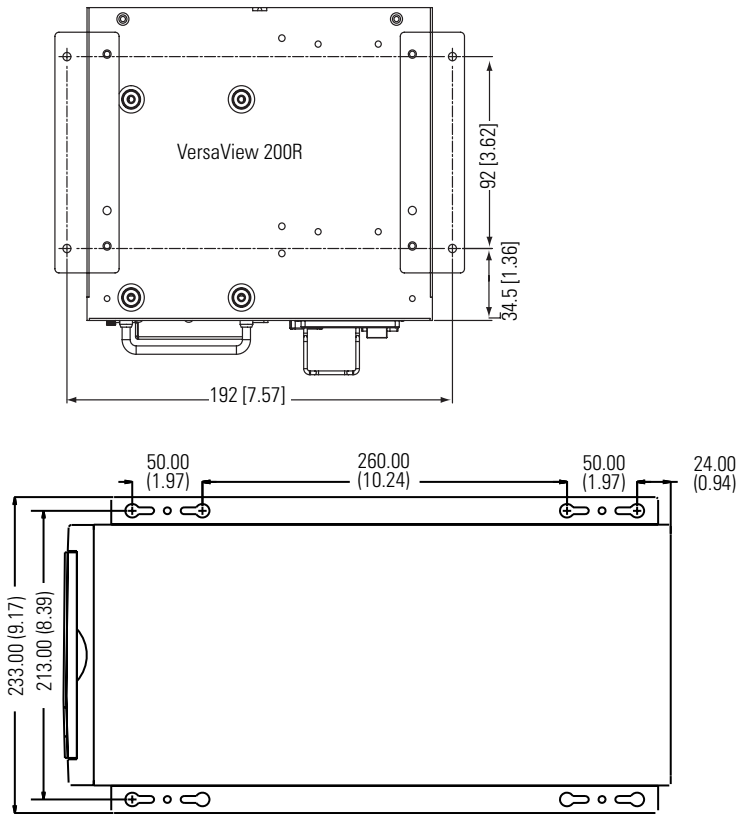
1. Attach the two mounting brackets to the bottom of the computer by using four of the provided screws.

For the 200R computer, use four of the M3 x 5 mm panhead screws, and torque to 0.678 Nm (6 lb-in).



2. Drill holes in the shelf that correspond to holes in the mounting brackets.
 - The 200R requires four holes.
 - The 700R requires eight holes.

Dimensions are in mm (in.).



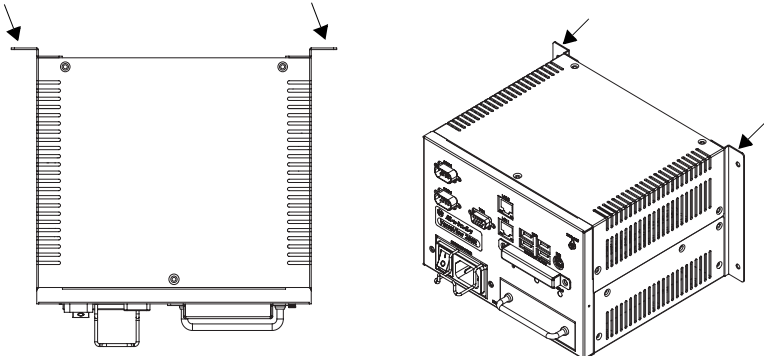
3. Place the computer on the shelf and align the holes in the mounting brackets with the holes in the shelf.
4. Insert the remaining screws through the mounting bracket into the shelf and tighten.

For the VersaView 200R computer, use four of the provided, M3 x 5 mm, panhead screws.

Mount the Computer on a Wall

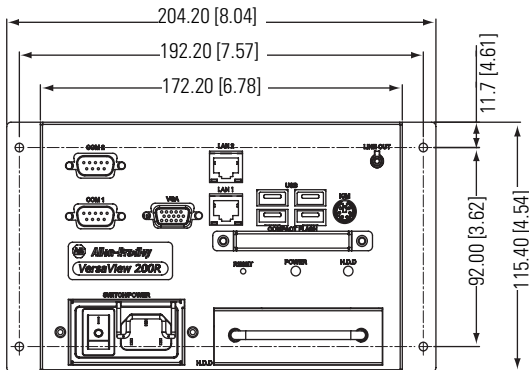
You can mount the VersaView 200R computer on a wall inside a machine by using mounting brackets. The brackets secure the computer to the wall.

1. Attach the two mounting brackets to the rear of the computer by using four of the provided, M3 x 12 mm panhead screws; torque to 0.678 Nm (6 lb-in).



2. Drill four holes in the wall that correspond to the holes in the mounting bracket.

Dimensions are in mm (in.).



3. Position the computer against the wall, aligning the holes in the mounting brackets with the holes in the wall.

TIP

Support the computer with a shelf or other means, to make installation at the appropriate height easier.

4. Insert the remaining screws through the mounting bracket into the wall and tighten.

For the VersaView 200R computer, use four M3 x 5 mm, panhead screws.

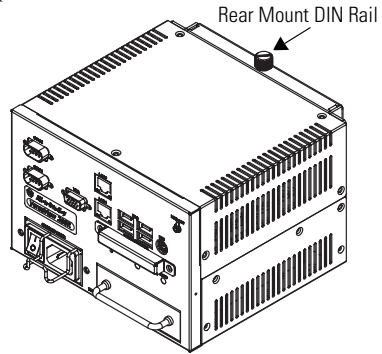
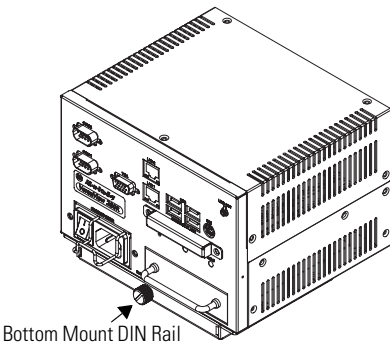
Mount the Computer on a DIN Rail

You can mount the VersaView 200R computer on a DIN rail. The DIN rail bracket mounts to the bottom or back of the computer.

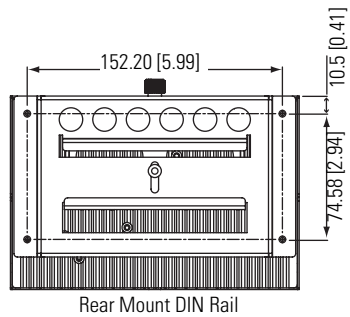
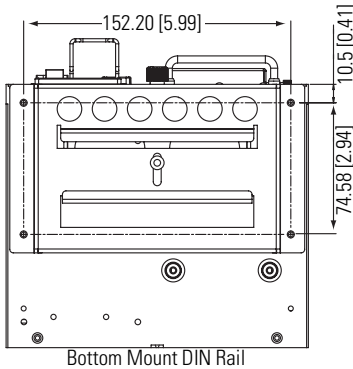
IMPORTANT

Do not mount the computer on a DIN rail in high shock and vibration environments.

1. Fasten the DIN rail bracket on the bottom or back of the computer by using four, M3 x 5 mm panhead screws; torque to 0.678 Nm (6 lb-in).



Dimensions are in mm (in.).



2. Mount the computer on a DIN rail and secure it by hand-tightening the fastener, being careful not to strip the screw.

Mount the Computer on a Rack

You can install the VersaView 1400R computer in a rack cabinet that conforms to EIA standards for equipment with 483 mm (19 in.) wide panels. The cabinet must accommodate the computer's 4U height and depth, and also provide rear clearance for cables and air flow. A cabinet with a depth of 610 mm (24 in.) is sufficient.

The computer must be supported by rack slides or fastened to a shelf. The four flanges of the computer are intended only to horizontally secure the unit to the front mounting rails of the rack cabinet.

To locate the catalog number for the VersaView approved rack slide, go to the website:

<http://www.ab.com/industrialcomputers>

1. Review the product dimensions to confirm that there is adequate space behind the cabinet for cables and air flow.
2. Install the rack slides inside the rack cabinet.
3. Attach the rack slides to the computer, aligning the rack slides to the corresponding slides inside the cabinet.
4. Insert the computer in the rack cabinet from the front of the cabinet.

TIP

Support the computer with a shelf or other means to make installation at the appropriate height easier.

5. Fasten the two rack handles to the front of the unit by using the included screws.
6. Horizontally secure the computer to the front mounting rails of the rack cabinet with the included screws.

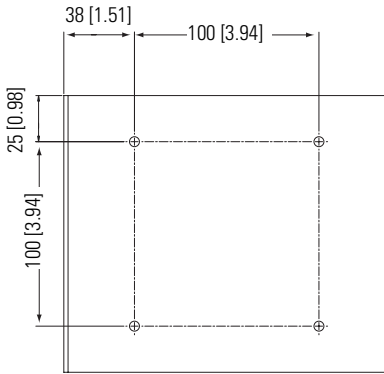
VESA Mount the Computer

You can VESA mount the VersaView 200R computer to any of the VersaView industrial monitors or other surface by using the VESA mounting bracket provided.

1. Orient and attach the VESA mounting bracket to the four, 100 mm VESA holes that will be used to mount the computer.

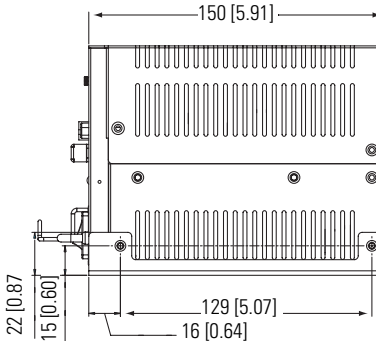
Use four, M4 x 8 mm flathead screws with four, M4 x 3 mm nuts. If attaching the bracket to the back of a VersaView monitor, the nuts are not needed.

Dimensions are in mm (in.).

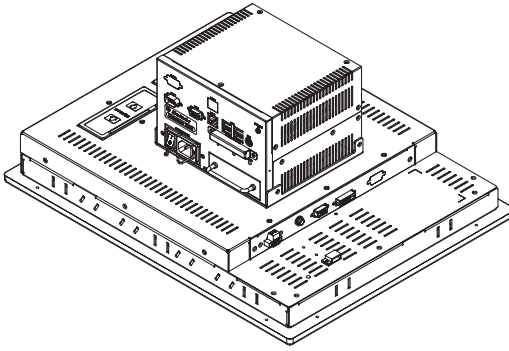


2. Attach the computer to the VESA mounting bracket by using four, M3 x 6 mm screws.

Dimensions are in mm (in.).



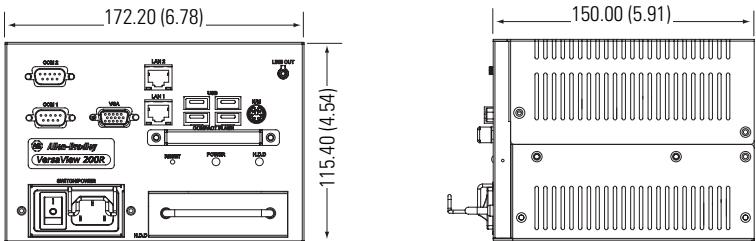
The illustration shows the VersaView 200R computer VESA mounted to the back of a VersaView 1700M monitor.



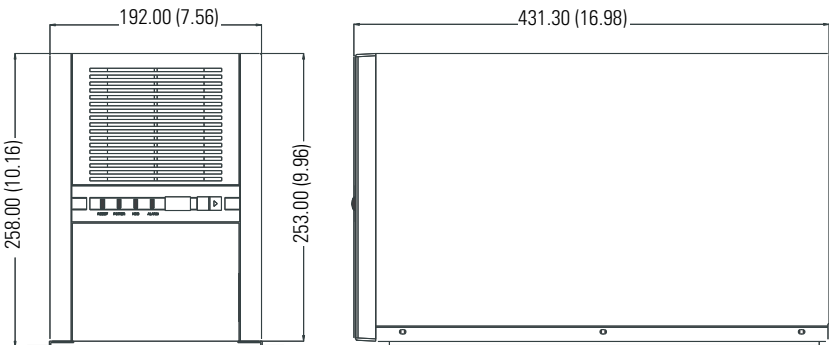
Product Dimensions

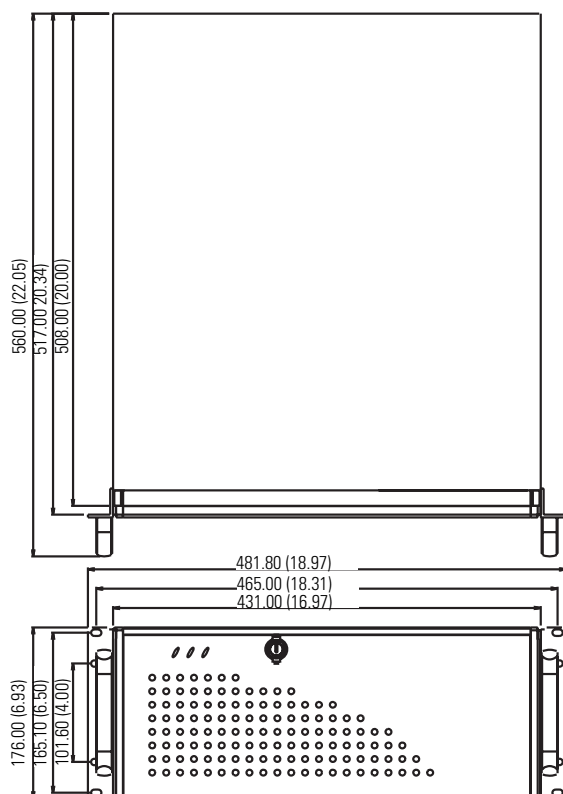
Product dimensions for each model of the computer are given in mm (in).

VersaView 200R Computer



VersaView 700R Computer

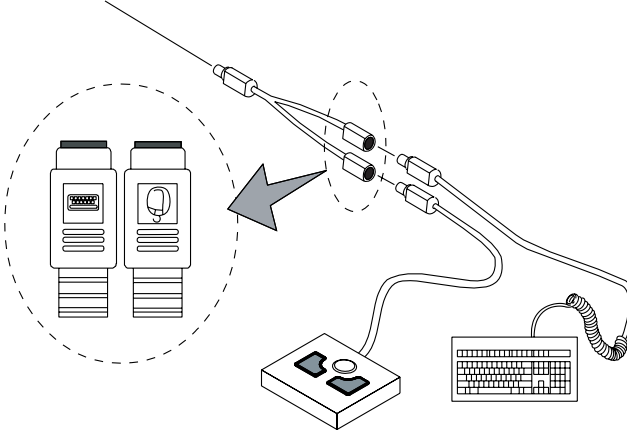


VersaView 1400R Computer

Connect the Keyboard and Mouse

You can plug either a keyboard or mouse into the PS/2 port on the computer. You can connect both devices by using the PS/2 adapter cable that is shipped with the computer.

PS/2 Port on the Computers



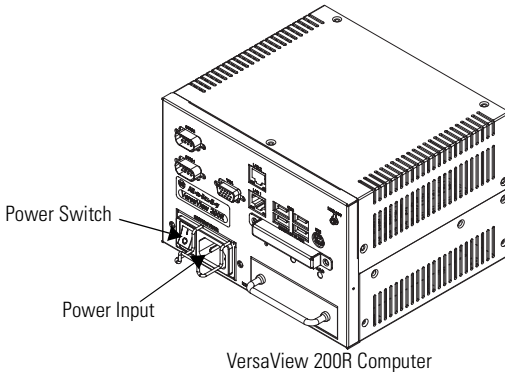
Connect Power

The power connection for the computers varies by model.

- The VersaView 200R computer connects to either a 120/240V ac or 9...36V dc power source, depending on the model.
- The VersaView 700R and 1400R computers connect to a 120/240V ac power source.

Connect ac Power

Computers with an ac power input use a standard IEC 320 power cord. The power supply input accepts 120/240V ac and is autoranging.



Operate the computer in an industrial or control room environment, which uses some form of power isolation from the public low-voltage mains.

ATTENTION



Connect the ac power cord to a power source with an earth ground to prevent electrical shock. Failure to follow this warning could result in electrical shock.

The computer circuit should have its own disconnect. Use an uninterruptible power source (UPS) to protect against unexpected power failure or power surges.

Always shut down the operating system before removing power to minimize performance degradation and operating system failures.

Connect dc Power

The power supply on the VersaView 200R computer has a dc input terminal block for connecting to a 9...36V dc power source.

ATTENTION



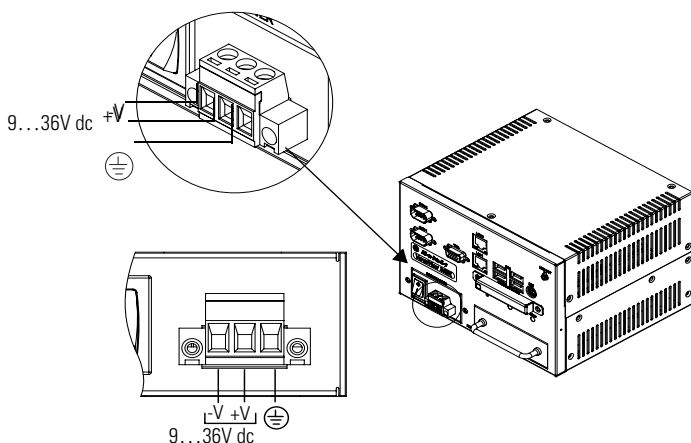
Connect the dc ground connection to a power source with an earth ground to prevent electrical shock. Failure to follow this warning could result in electrical shock.

The computer circuit should have its own disconnect. Use an uninterruptible power source (UPS) to protect against unexpected power failure or power surges.

Always shut down the operating system before removing power to minimize performance degradation and operating system failures.

Follow these steps to connect the VersaView 200R computer to a 9...36V dc power source.

1. Turn off the main power switch or breaker.
2. Route the power wires from your dc power supply and connect the leads to the dc input terminal block.



3. Tighten the screw terminals to provide a good connection.
4. Secure the terminal block connector to the computer by using the two side screws.
5. Restore power.

Connect to the Network

The computer connects to the Ethernet network by using CAT5 or CAT5E twisted-pair Ethernet cabling with RJ45 connectors.

IMPORTANT

To prevent performance degradation of Ethernet communication, do not subject the computer or cables to extreme radiated or conducted high-frequency noise.

Proper cable routing and power conditioning is required for reliable Ethernet communication in industrial environments. Rockwell Automation recommends that you route all Ethernet cabling through dedicated metal conduits. Installing ferrite bead filters at the cable ends may also improve reliability.

Replace the Battery

The computers use nonvolatile memory that requires a battery to retain system information when power is removed. The lithium battery is in a battery holder on the computer's CPU board.

- For the VersaView 700R and 1400R computer, replace this battery as needed with a Panasonic battery, part number CR2032, or equivalent.
- For the VersaView 200R computer, replace the battery as needed with a specially-packaged replacement part from Allen-Bradley.

WARNING

To avoid the danger of explosion, replace the battery with only the recommended equivalent or Allen-Bradley replacement part. Dispose of used batteries according to the manufacturer's instructions.

Ship or Transport the Product

If you need to ship the product via common carrier or otherwise transport it to another location, you must first uninstall the product and place it in its original packing material.

ATTENTION

Do not ship or transport the product when it is installed in a machine, panel, or rack. Doing so may cause damage to the product. You must uninstall the product and place it in its original packing material before shipping. Rockwell Automation is not responsible for damage incurred to a product that is shipped or transported while installed in a machine, panel, or rack.

Specifications

VersaView Industrial Non-display Computers

Attribute	Value
Electrical	
Input voltage, ac	90...264V ac, autoranging
Line frequency	47...63 Hz
Power consumption, ac 200R 700R 1400R	30 W (0.5 A @ 100V rms, 0.28 @ 240V rms) 130V A (1.3 A @ 100V rms, 0.54 A @ 240V rms) 150V A (1.5 A @ 100V rms, 0.63 A @ 240V rms)
Input voltage, dc 200R	9...36V ac, autoranging
Power consumption, dc 200R	30 W (0.84 A @ 36V dc, 3.34 A @ 9V dc)
Mechanical	
Weight, approx. 200R 700R 1400R	2.5 kg (5.6 lb) 10.8 kg (23.7 lb) 17.4 kg (38.3 lb)
Dimensions (HxWxD), approx. 200R 700R 1400R	115 x 172 x 150 mm (4.54 x 6.78 x 5.91 in.) 258 x 192 x 431 mm (10.16 x 7.56 x 16.98 in.) 176 x 482 x 560 mm (6.93 x 18.97 x 22.05 in.)

Environmental Specifications

Attribute	Value
Temperature, operating	0...50 °C (32...122 °F)
Temperature, nonoperating	-20...60 °C (-4...140 °F)
Relative humidity	10...90% noncondensing
Shock, operating	15 g (1/2 sine, 11 ms)
Shock, nonoperating	30 g (1/2 sine, 11 ms)
Vibration, operating 200R, 6155R, rotating hard drive 200R, 6155F, solid-state drive 700R and 1400R	1 G rms random 0.012 in. p-p, 10...57 Hz; 2 g peak, 57...500 Hz 0.006 in. p-p, 10...57 Hz; 1 g peak, 57...500 Hz
Vibration, nonoperating	0.012 in. p-p, 10...57 Hz; 2 g peak, 57...500 Hz
Enclosure ratings	NEMA Type 1

Certification ⁽¹⁾	
c-UL-us	UL 60950 recognized component, c-UL 950 recognized component, or UL/c-UL listed when marked
CE	Marked for all applicable directives EMC 89/336/EEC LVD 73/23/EEC
RoHS compliant	
C-Tick	Australian Radiocommunications Act, compliant with: AS/NZS CISPR 11; Industrial Emissions

⁽¹⁾ See <http://ab.com> for declarations of conformity, certificates, and other certification details.

Additional Resources

For additional information on the VersaView Non-display Computers, refer to the following publications.

Resource	Description
VersaView Industrial Non-display Computer User Manual, publication 6155R-UM001	Gives an overview of the system and provides procedures to install the computer, set up computer connections, operate the computer, and troubleshoot the computer.
Cloning Utility Technical Data, publication 6000-TD001	Provides information on how to create and restore a backup image of your computer's hard drive.

These publications are on the VersaView System Accessories/Cloning CD, which are shipped with your computer. You can download electronic versions of these publications from the Rockwell Automation website:

<http://literature.rockwellautomation.com>

Rockwell Automation Support

Rockwell Automation provides technical information on the Web to assist you in using its products. At <http://support.rockwellautomation.com>, you can find technical manuals, a knowledge base of FAQs, technical and application notes, sample code and links to software service packs, and a MySupport feature that you can customize to make the best use of these tools.

For an additional level of technical phone support for installation, configuration, and troubleshooting, we offer TechConnect Support programs. For more information, contact your local distributor or Rockwell Automation representative, or visit <http://support.rockwellautomation.com>.

Installation Assistance

If you experience a problem with a hardware module within the first 24 hours of installation, please review the information that's contained in this manual. You can also contact a special Customer Support number for initial help in getting your module up and running.

United States	1.440.646.3223 Monday – Friday, 8am – 5pm EST
Outside United States	Please contact your local Rockwell Automation representative for any technical support issues.

New Product Satisfaction Return

Rockwell tests all of its products to ensure that they are fully operational when shipped from the manufacturing facility. However, if your product is not functioning, it may need to be returned.

United States	Contact your distributor. You must provide a Customer Support case number (see phone number above to obtain one) to your distributor in order to complete the return process.
Outside United States	Please contact your local Rockwell Automation representative for return procedure.

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