Installation Instructions

Original Instructions

Allen-Bradley
by ROCKWELL AUTOMATION

VersaView 6300M AC-powered Panel Monitors

Bulletin Number 6300M

Summary of Changes

This publication contains the following new or updated information. This list includes substantive updates only and is not intended to reflect all changes.

Topic	Page
Added Topic table.	1
Added Product Overview section.	1
Added first two sentences in the UL/cUL Mark Compliance section.	2
Revised table content in the Panel Mounting Requirements section.	3
Added the Enclosure Requirements subsection.	3
Added panel cutout dimensions for 8.4, 10.1, and 10.4 inch-sized monitors to the table.	3
Added illustration to step 5 in the Panel Mounting the Monitor subsection.	4
Replaced mounting clips photograph with illustration to step 8 in the Panel Mounting the Monitor subsection.	4
Expanded Figure 1 to include all available display sizes and sequences for stainless steel bezels.	4
Changed item 1 description and added to footnote 1 in Table 2.	5
Added about IP65 protection to both footnotes 1 in Tables 1 and 2.	5
Added values for 8.4, 10.1, and 10.4 inch-sized monitors to the Power Consumption table.	5
Replaced nut with screw in the instructions, photo, and table in the Install the Ground Wire subsection.	6
Replaced Video Signal LED with Status LED in Table 3.	6
Added Table 4.	6
Added publication IC-TD003 to Additional Resources table.	7

Product Overview

The Allen-Bradley® VersaView® 6300M AC-powered panel monitor family is available in various display sizes and resolutions, and either standard or low profile bezel units. IP65 (model dependent) environmental protection makes the VersaView 6300M panel monitor an excellent match for wash-down applications such as food processing and life sciences. Some VersaView 6300M panel monitors have long-distance capabilities, which means they can be connected to a personal computer where both are up to 100 m (328 ft) apart.

IMPORTANT Use VersaView 6300M AC-powered panel monitors in only non-hazardous locations.

Rockwell Automation

Environment and Enclosure Information

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

This equipment is considered Group 1, Class A industrial equipment according to EN 61326-1. Without appropriate precautions, there can be potential difficulties with electromagnetic compatibility in other environments due to conducted and radiated disturbance.

This equipment is considered open equipment.

- The equipment must be mounted in an enclosure where it can be operated from the front panel. The enclosure in which this equipment is installed must be accessed only with a key or tool, and only by trained and authorized personnel.

In addition to this publication, see the following:

- Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1, for more installation requirements
- UL 50, UL 50E, CSA C22.2, No 94.1, and CSA C22.2, No. 94.2, as applicable, for explanations of the degrees of protection provided by enclosures

UL/cUL Mark Compliance

This equipment is not suitable for use in locations where children are likely to be present.

Cet équipement ne convient pas à une utilisation dans des lieux pouvant accueillir des enfants.

Equipment with the UL/cUL mark complies with the requirements of UL 61010-1, UL 61010-2-201, CSA C22.2 No. 61010-1, and CSA C22.2 No. 61010-2-201. Copies of the certificate of compliance are available at rok.auto/certifications.

European Union Directive Compliance

VersaView 6300M panel monitors meet the European Union Directive requirements when installed within the European Union or EEA regions and have the CE marking. A copy of the declaration of the conformity is available at rok.auto/certifications.

ATTENTION: This monitor is intended to operate in an industrial or control room environment, which uses some form of power isolation from the public low-voltage mains. Some monitor configurations cannot 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 you connect any monitor configuration that draws more than 75 W of AC power directly from the public mains.

All I/O cables must be used only indoors.

Installation Guidelines

Follow these guidelines to make sure that your VersaView 6300M panel monitor provides service with excellent reliability.

- When choosing the installation site, consider the following:
  - The site must have sufficient power.
  - The site must be indoors and non-hazardous.
  - The site must not expose the monitor to direct sunlight.
- The monitors can operate in a surrounding air temperature range of 0…50 °C (32…122 °F).

  The surrounding air temperature must not exceed the maximum temperature for your monitor, especially when the monitor is mounted in an enclosure.

  IMPORTANT The monitor can operate at a range of extremes. However, the life span of any electronic device is shortened if you continuously operate the monitor at its highest rated temperature, which includes the touch screen and LCD panel.
- The monitors can be stored in a surrounding air temperature range of -5…+60 °C (23…140 °F).
- The relative humidity of the ambient air must be 20…90% noncondensing at 0…40 °C (32…104 °F), and 20…80% noncondensing at 41…50 °C (105…122 °F).

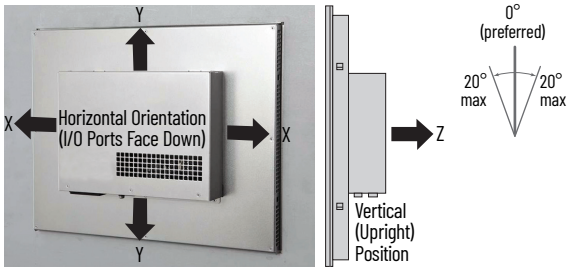
Panel Monitor Mounting

To mount a VersaView 6300M monitor into a panel, perform the following steps.

Panel Mounting Requirements

Follow these requirements to mount the VersaView 6300M panel monitor.

- Choose a suitable mounting height
- To help prevent overheating and to provide access to the I/O ports for cable connections, mount the monitor so there are the following minimum clearances:
  - X and Z directions: 7 cm (2.75 in.)
  - Y direction: 10 cm (3.94 in.)
- For optimal performance, mount the monitors in the horizontal orientation and vertical (upright) position, so the I/O ports face down.



IMPORTANT The vertical position can be tilted up to 20° forward or 20° backward from the upright position. However, this acceptable tilt angle range decreases the maximum operating air temperature to 45 °C (113 °F).

Enclosure Requirements

Follow these requirements to mount a panel monitor in an enclosure.

- The enclosure must provide sufficient space around air inlets and outlets to provide the circulation necessary for cooling. For further information, see Panel Mounting Requirements on this page. Never allow air passages to become obstructed.
- Hot air rises. The temperature at the top of the enclosure is often higher than the temperature in other parts of the enclosure, especially if air is not circulating.

  Consider a user-supplied fan, heat exchanger, or air conditioner for heat generated by other devices in the enclosure. See Installation Guidelines on page 2 for the acceptable temperature ranges for these monitors.

Prepare the Panel Cutout

Observe these guidelines to install the VersaView 6300M panel monitor in a panel.

ATTENTION: Failure to follow these guidelines can result in personal injury or damage to the panel components.

Take precautions so any metal fragments during the panel cutout do not enter components that are installed already in the panel.

- Plan the panel cutout area that is needed for your monitor.

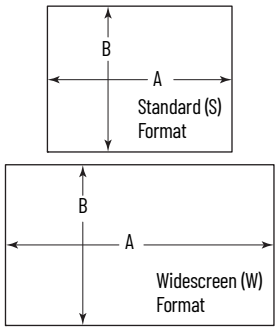
All dimensions are in mm (in.)

Display Size, in.	Format[1]	Panel Cutout Dimensions[2]	
		A	B
8.4	S	230 (9.06)	190 (7.48)
10.1	W	255 (10.06)	174 (6.85)
10.4	S	280 (11.02)	225 (8.86)
12.1	S	315 (12.4)	250 (9.84)
12.1	W	301 (11.8)	203 (7.99)
15	S	370 (14.57)	295 (11.61)

Display Size, in.	Format	Panel Cutout Dimensions	
		A	B
15.6	W	388 (15.28)	238 (9.37)
17	S	435 (17.13)	335 (13.19)
18.5	W	453 (17.83)	274 (10.79)
19	S	470 (18.5)	368 (14.49)
21.5	W	520 (20.47)	312 (12.28)
24		577 (22.71)	344 (13.54)

(1) Standard (S) format is offered with an analog resistive touch screen.
Widescreen (W) format is offered with analog resistive and projective capacitive (PCAP) touch screens.
(2) All dimensions are +/-1 mm (0.04 in.).

Panel Cutout Areas



- The mounting panel material must be 2…6 mm (0.08…0.24 in.) thick.
- For a uniform gasket seal, the roughness of the panel surface must not exceed 120 microns (Rz 120).
- Verify that the area around the panel is clear of obstructions.

Required Tools for Panel Installation

These tools are required for panel monitor installation:

- Panel cutout tools (for panel mounting)
- Torque limiting screwdriver with a 1.5 mm hex key bit
- Supplied mounting clips; for the needed quantity, see Figure 1 on page 4
- Safety glasses

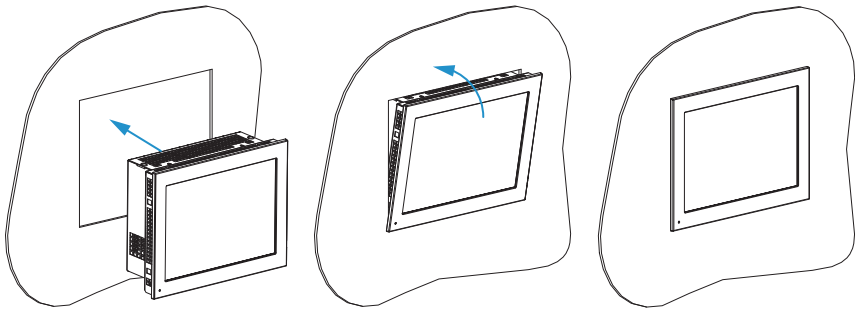
Panel Mounting the Monitor

IMPORTANT You need two people to install the monitor; one person to hold the monitor in place while another person installs the mounting clips.

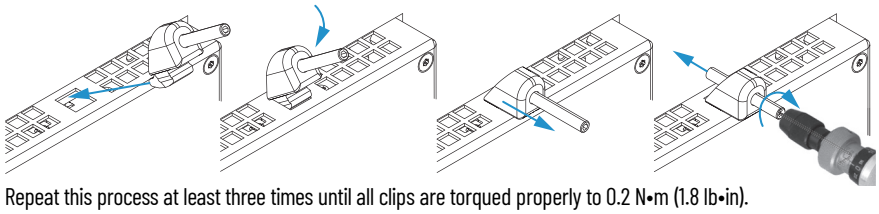
1. Remove all electrical power from the panel before you make the cutout.
2. Cut an opening in the panel area to the dimensions needed for your monitor.
3. After the cutout is completed, clean the panel area of all debris and metal fragments.
4. Make sure that the sealing gasket is positioned properly on the monitor.

IMPORTANT All monitors have a gasket that forms a compression-type seal. Therefore, do not use sealing compounds.

5. From the front of the panel, insert the monitor into the cutout.



6. Slide the mounting clips into the holes on all four sides of the monitor as shown at right.
7. Hand-tighten the mounting clips according to the tighten sequence in Figure 1.
8. With the torque limiting screwdriver and 1.5 mm hex key bit, tighten the mounting clips to a torque of 0.2 N•m (1.8 lb•in) by the tighten sequence in Figure 1.

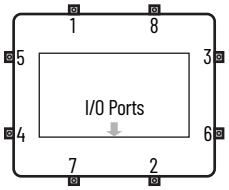


9. Repeat this process at least three times until all clips are torqued properly to 0.2 N•m (1.8 lb•in).
   Verify that the gasket is compressed uniformly against the panel.

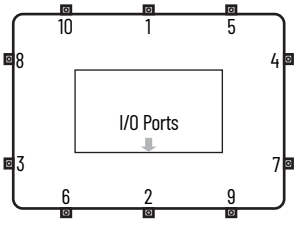
ATTENTION: Tighten the mounting clips to the specified torque to provide a proper seal and to help prevent product damage. Rockwell Automation assumes no responsibility for water or chemical damage to the monitor or other equipment within the enclosure because of improper installation.

Figure 1 - Mounting Clips Tighten and Torque Sequences

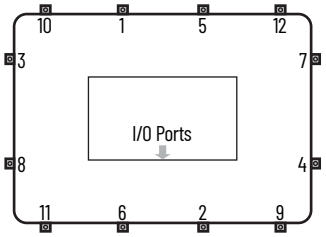
All Bezels Except Stainless Steel
8.4...15 in. and 17 in. Display Sizes



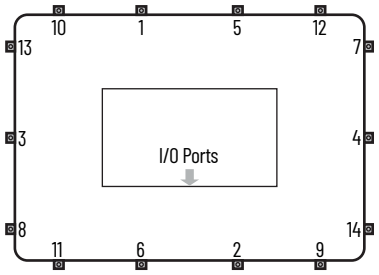
All Bezels Except Stainless Steel
15.6 in. and 19 in. Display Sizes



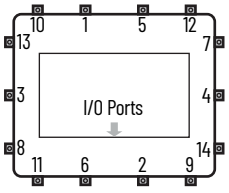
All Bezels Except Stainless Steel
18.5 in. Display Size



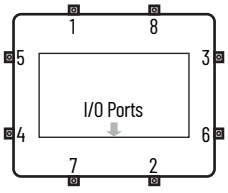
All Bezels Except Stainless Steel
21.5 in. and 24 in. Display Sizes



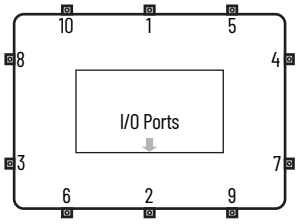
Stainless Steel Bezel
(IP69K rating)
10.1 in. Display Size



Stainless Steel Bezel
(IP66 rating)
12.1 in. Display Size



Stainless Steel Bezel
(IP66 rating)
15 in., 17 in., and 19 in. Display Sizes



Connect Peripheral Cables to the Monitor

Connect peripheral cables to the appropriate I/O ports on a VersaView 6300M monitor. To comply with EN 61326-1, use the following for cable types. All I/O cables must be used only indoors, and USB cables must be less than 3 m (9.84 ft) long.

Table 1 - Peripheral Connections for Standard Monitors

Item No.	Cable Type	Required Attribute
1	DisplayPort	Shielded
2	DVI-D	
3	USB HUB	
4	3 x USB 2.0	
5	USB 2.0[1]	Shielded
6	USB 2.0[2]	
7	AC power	Unshielded

(1) Optional feature.
(2) Only certain models offer a USB 2.0 port on the front bezel. The USB cover must be closed properly for IP65 protection.

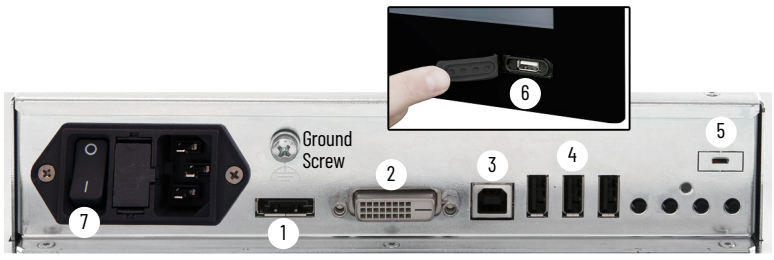


Table 2 - Peripheral Connections for Long-distance Monitors

Item No.	Cable Type	Required Attribute
1	RVL[1]	Shielded
2	3 x USB 2.0	
3	USB 2.0[2]	
4	USB 2.0[3]	
5	AC power	Unshielded

(1) Remote Video Link. Requires specific Ethernet cables; contact Rockwell Automation.
(2) Optional feature.
(3) Only certain models offer a USB 2.0 port on the front bezel. The USB cover must be closed properly for IP65 protection.

Grounding and Bonding

Whenever two connected pieces of equipment are far apart, it is possible that their ground connections could be at a different potential level.

To overcome possible grounding problems, the following bonding methods are recommended:

- Bonding method 1: Connect the data cable shields to the Equipotential bonding rail on both sides before connecting the cable to the interfaces.
- Bonding method 2: Use an Equipotential bonding cable (16 mm^2) to connect the grounds between the VersaView 6300M panel monitor and a VersaView 6300P panel PC.

Power Consumption

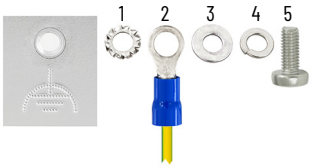
The following table shows the power consumption in watts of the available VersaView 6300M monitor sizes.

Monitor Display			Power Consumption (W), Max [1]	
Size, in.	Resolution (W x H)	Aspect Ratio	VersaView 6300M-xxxB Monitors[2]	VersaView 6300M-xxxD Monitors[2]
8.4	800 x 600, SVGA	4:3	8.3	13.7
10.1	1280 x 800, WXGA	16:10	11	15.5
10.4	800 x 600, SVGA	4:3	9.3	13.8
12.1	1024 x 768, XGA	4:3	18.1	22.7
	1280 x 800, WXGA	16:10	13.2	18.4
15	1024 x 768, XGA	4:3	15.3	20.5
15.6	1920 x 1080, FHD	16:9	25.9	30.3
17	1280 x 1024, SXGA	5:4	22.8	27.7
18.5	1920 x 1080, FHD	16:9	28.2	33.3
19	1280 x 1024, SXGA	5:4	22.3	27.3
21.5	1920 x 1080, FHD	16:9	27.4	32.4
24			21	26.2

(1) Add 2.5 W of power consumption for any USB port that is used.
(2) To determine your monitor model, see the product label on the back of the monitor.

Install the Ground Wire

1. Turn off the main power switch or breaker.
2. Remove the ground screw, eyelet terminal, and washers from the monitor chassis; for the ground screw location, see Connect Peripheral Cables to the Monitor on page 5.
3. For earth ground, install a grounding wire to the eyelet terminal.
   a. Use a 2.5 mm^2 (14 AWG) or larger external wire to the eyelet terminal.
   Use a grounding wire with an insulation color that is approved by local inspection authority.
   b. Strip 5 mm (0.2 in.) from the covering at the end of the grounding wire.
   c. Insert the stripped end of the grounding wire into the open end of the eyelet terminal, and crimp it securely to the wire.
4. Reinstall the eyelet terminal and washers to the ground screw in the sequence at right.
5. Tighten the ground screw to the monitor chassis.



Sequence No.	Description
1	Toothed washer
2	Eyelet terminal
3	Washer

Sequence No.	Description
4	Lock washer
5	Ground screw

Connect AC-powered Monitors

IMPORTANT AC-powered monitors cannot be used in hazardous locations.

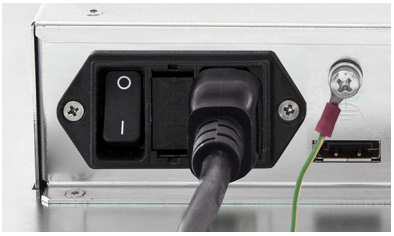
Operate VersaView 6300M AC-powered monitors in an industrial or control room environment that uses some form of power isolation from the public, low voltage mains.

To connect AC power to the monitor, perform the following steps.

1. Connect the appropriate end of a customer-supplied power cable to the power input port on the monitor.

   IMPORTANT Use a three-prong, three-slot AC power cord that is rated IEC-320-C13.

2. Connect the other end of the supplied power cable to an AC power source with an input voltage of 100...240V AC, 50/60 Hz.
3. Turn on the power switch in the power input port of the monitor.



AC Power Input Port

Video Status and On Screen Display (OSD) Buttons

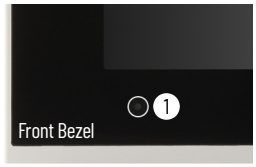
The light-emitting diodes (LEDs) on the front bezel and monitor chassis show the video status.

Use the OSD buttons on the monitor chassis to enter, navigate, and adjust various display setting menus. For more information on the various menus, see VersaView 6300M Panel Monitors User Manual, publication 6300M-UM001.

The following table details the video status colors and how to use the OSD buttons to adjust the monitor properly.

Table 3 - LEDs and Buttons On Standard Monitors

No.	Description	Color	Function
1	Status LED	Green	Correct video signal input.
		Amber	Unsupported video signal.
		Flashing yellow	No video signal.
2	+ (<–)	–	Increase the value of the selected control or selects the next menu item.
3	- (–>)		Decreases the value of the selected menu item or selects the previous menu item.
4	Menu/select		• Push to enter the main menu • Push to select a highlighted menu option, which can prompt a submenu • Push to exit from current menu (back option)
5	ESC (Exit)		Exits the menu.



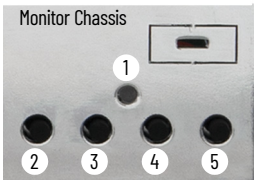
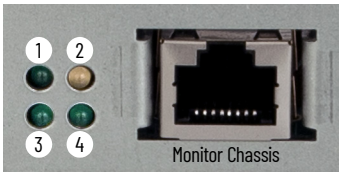


Table 4 - Remote Video Link (RVL) LEDs on Long-distance Monitors

No.	Description	Color	Function
1	Link	Green	The monitor is linked to a remote, RVL capable computer.
2	Video	Flashing yellow	The monitor is receiving streaming video from the remote computer.
3	Run	Flashing green	The remote computer is operating correctly.
4	Power	Green	The monitor RVL port is operating correctly.



Touch Screen Calibration

VersaView 6300M monitors with analog resistive touch screens use an eGalax driver and can be field calibrated. VersaView 6300M panel monitors with PCAP touch screens use the native Microsoft Windows® Human Interface Device (HID) driver and cannot be field calibrated. For more information on field calibration, see VersaView 6300M Monitors User Manual, publication 6300M-UM001.

Additional Resources

This publication provides basic installation instructions. For more information, see the following publications from Rockwell Automation. You can view or download publications at rok.auto/literature.

Resource	Description
VersaView 6300M Panel Monitors User Manual, publication 6300M-UM001	Provides details on how to install, configure, operate, and troubleshoot the VersaView 6300M panel monitors, whether for hazardous or non-hazardous locations.
VersaView 6300 Industrial PCs, Thin Clients, and Monitors Specifications Technical Data, publication IC-TD003	Provides technical specifications about the VersaView 6300M industrial panel monitors.
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines to install a Rockwell Automation industrial system.
Product Certifications website, rok.auto/certifications	Provides declarations of conformity, certificates, and other certification details.

Rockwell Automation Support

Use these resources to access support information.

Technical Support Center	Find help with how-to videos, FAQs, chat, user forums, and product notification updates.	rok.auto/support
Knowledgebase	Access Knowledgebase articles.	rok.auto/knowledgebase
Local Technical Support Phone Numbers	Locate the telephone number for your country.	rok.auto/phonesupport
Literature Library	Find installation instructions, manuals, brochures, and technical data publications.	rok.auto/literature
Product Compatibility and Download Center (PCDC)	Download firmware, associated files (such as AOP, EDS, and DTM), and access product release notes.	rok.auto/pcdc

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Waste Electrical and Electronic Equipment (WEEE)

At the end of life, this equipment should be collected separately from any unsorted municipal waste.

Rockwell Automation maintains current product environmental compliance information on its website at rok.auto/pec.

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