



## OmniView

**User's Guide** (Version 1.0)  
1060-0068

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## 2. Introduction

Kontron would like to point out that the information contained in this manual may be subject to technical alteration, particularly as a result of the constant upgrading of Kontron products. The attached documentation does not entail any guarantee on the part of Kontron with respect to technical processes described in the manual or any product characteristics set out in the manual. Kontron does not accept any liability for any printing errors or other inaccuracies in the manual unless it can be proven that Kontron is aware of such errors or inaccuracies or that Kontron is unaware of these as a result of gross negligence and Kontron has failed to eliminate these errors or inaccuracies for this reason. Kontron expressly informs the user that this manual only contains a general description of technical processes and instructions which may not be applicable in every individual case. In cases of doubt, please contact Kontron.

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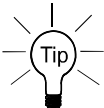
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Lise-Meitner-Str. 3-586156 Augsburg

Germany

## 2.1. Symbols used in this Manual

Symbol	Meaning
	This symbol indicates the danger of injury to the user or the risk of damage to the product if the corresponding warning notices are not observed.
	This symbol indicates that the product or parts thereof may be damaged if the corresponding warning notices are not observed.
	This symbol indicates general information about the product and the user manual.
	This symbol indicates detail information about the specific product configuration.
	This symbol precedes helpful hints and tips for daily use.

## 3. Important Instructions

Before performing any installation or working with the device, this manual must be read carefully to become familiar with the device. The general safety instructions and information in this manual must be observed.

The manufacturer's instructions provide useful information on your OmniView.

### 3.1. Warranty Note

Due to their limited service life, parts which by their nature are subject to a particularly high degree of wear (wearing parts) are excluded from the warranty beyond that provided by law. This applies, for example, to the display backlight.

### 3.2. Exclusion of Accident Liability Obligation

Kontron shall be exempted from the statutory accident liability obligation if the user fails to observe the included document: "General Safety Instructions for IT Equipment" the hints in this manual or eventually the warning signs label on the device.

### 3.3. Liability Limitation / Exemption from the Warranty Obligation

In the event of damage to the device caused by failure to observe the "General Safety Instructions for IT Equipment" in this manual or eventually the warning signs label on the device, Kontron shall not be required to honor the warranty even during the warranty period and shall be exempted from the statutory accident liability obligation.



## 4. General Safety Instructions for IT Equipment



Please read this chapter carefully and take careful note of the instructions, which have been compiled for your safety and to ensure to apply in accordance with intended regulations. If the following general safety instructions are not observed, it could lead to injuries to the operator and/or damage of the product; in cases of nonobservance of the instructions Kontron is exempt from accident liability, this also applies during the warranty period.

The product has been built and tested according to the basic safety requirements for low voltage (LVD) applications and has left the manufacturer in safety-related, flawless condition. To maintain this condition and to also ensure safe operation, the operator must not only observe the correct operating conditions for the product but also the following general safety instructions:

- The product must be used as specified in the product documentation, in which the instructions for safety for the product and for the operator are described. These contain guidelines for setting up, installation and assembly, maintenance, transport or storage.
- The on-site electrical installation must meet the requirements of the country's specific local regulations.
- If a power cable comes with the product, only this cable should be used. Do not use an extension cable to connect the product.
- To guarantee that sufficient air circulation is available to cool the product, please ensure that the ventilation openings are not covered or blocked. If an air filter is provided, this should be cleaned regularly. Do not place the system close to heat sources or damp places. Make sure the system is well ventilated.
- Only devices or parts which fulfill the requirements of SELV circuits (Safety Extra Low Voltage) as stipulated by IEC 60950-1 may be connected to the available interfaces.
- Before opening the device, make sure that the device is disconnected from the mains.
- Switching off the device by its power button does not disconnect it from the mains. Complete disconnection is only possible if the power cable is removed from the wall plug or from the device. Ensure that there is free and easy access to enable disconnection.
- The device may only be opened for the insertion or removal of add-on cards (depending on the configuration of the system). This may only be carried out by qualified operators.
- If extensions are being carried out, the following must be observed:
  - all effective legal regulations and all technical data are adhered to
  - the power consumption of any add-on card does not exceed the specified limitations
  - the current consumption of the system does not exceed the value stated on the product label.
- Only original accessories that have been approved by Kontron can be used.
- Please note: safe operation is no longer possible when any of the following applies:
  - the device has visible damages or
  - the device is no longer functioningIn this case the device must be switched off and it must be ensured that the device can no longer be operated.

**Additional safety instructions for DC power supply circuits**

- ❑ To guarantee safe operation of devices with DC power supply voltages larger than 60 volts DC or a power consumption larger than 240 VA, please observe that:
  - the device is set up, installed and operated in a room or enclosure marked with "RESTRICTED ACCESS", if there are no safety messages on product as safety signs and labels on the device itself.
  - no cables or parts without insulation in electrical circuits with dangerous voltage or power should be touched directly or indirectly
  - a reliable protective earthing connection is provided
  - a suitable, easily accessible disconnecting device is used in the application (e.g. overcurrent protective device), if the device itself is not disconnectable
  - a disconnect device, if provided in or as part of the equipment, shall disconnect both poles simultaneously
  - interconnecting power circuits of different devices cause no electrical hazards
- ❑ A sufficient dimensioning of the power cable wires must be selected – according to the maximum electrical specifications on the product label – as stipulated by EN60950-1 or VDE0100 or EN60204 or UL508 regulations.
- ❑ The devices do not generally fulfill the requirements for "centralized DC power systems" (UL 60950-1, Annex NAB; D2) and therefore may not be connected to such devices!



## 4.1. Electrostatic Discharge (ESD)

A sudden discharge of electrostatic electricity can destroy static-sensitive devices or micro-circuitry. Therefore proper packaging and grounding techniques are necessary precautions to prevent damage. Always take the following precautions:

A sudden discharge of electrostatic electricity can destroy static-sensitive devices or micro-circuitry. Therefore proper packaging and grounding techniques are necessary precautions to prevent damage. Always take the following precautions:

1. Transport boards in ESD-safe containers such as boxes or bags.
2. Keep electrostatic sensitive parts in their containers until they arrive at the ESD-safe workplace.
3. Always be properly grounded when touching a sensitive board, component, or assembly.
4. Store electrostatic-sensitive boards in protective packaging or on antistatic mats.

### 4.1.1. Grounding Methods

By adhering to the guidelines below, electrostatic damage to the device can be avoided:

1. Cover workstations with approved antistatic material. Always wear a wrist strap connected to workplace. Always use properly grounded tools and equipment.
2. Use antistatic mats, heel straps, or air ionizers for more protection.
3. Always handle electrostatically sensitive components by their edge or by their casing.
4. Avoid contact with pins, leads, or circuitry.
5. Turn off power and input signals before inserting and removing connectors or connecting test equipment.
6. Keep work area free of non-conductive materials such as ordinary plastic assembly aids and Styrofoam.
7. Use only field service tools which are conductive, such as cutters, screwdrivers, and vacuum cleaners.
8. Always place drives and boards PCB-assembly-side down on the foam.

## 5. Electromagnetic Compatibility (Class A Device)

For detailed information refer to section 11.4 "CE Directives, Standards and Approvals".

### 5.1. Electromagnetic Compatibility (EU)

This product is in conformity with the protection requirements of EU Council Directive 2004/108/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility. If the user modifies and/or adds to the equipment (e.g., installation of add-on cards) the prerequisites for the CE conformity declaration (safety requirements) may no longer apply.

### 5.2. FCC Statement (USA)

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

### 5.3. EMC Compliance (Canada)

The method of compliance is self-declaration to Canadian standard ICES-003:

(English): This Class A digital apparatus complies with the Canadian ICES-003.

(French): Cet appareil numérique de la class A est conforme à la norme NMB-003 du Canada.

## 6. Scope of Delivery

Please check that your package is complete, and contains the items below (according to the ordered unit configuration). If you discover damaged or missing items, please contact your dealer.








	<p>OmniView in the configuration ordered:</p> <ul style="list-style-type: none"> <li>• HMI-OV156 (with 15.6" display)</li> <li>• HMI-OV185 (with 18.5" display)</li> <li>• HMI-OV215 (with 21.5" display)</li> </ul>
	<p>6x Mounting Clamp with Screws</p>
	<p>General Safety Instruction for IT Equipment</p>
	<p>Power Supply (external AC/DC adapter with Molex DC connector)</p>
 <p>AC (US)</p>	<p>AC Power cable to be used in conjunction with the supplied Power Supply unit.</p>
 <p>AC (EU)</p>	
	<p>USB Cable (type B to A)</p>

Table 1: OmniView - Scope of delivery

### 6.1. Type Label and Product Identification

The type label with the corresponding Kontron product part and serial number is located on the rear side of the touch-monitor. Fig. 1, Fig. 2 and Fig. 3 depict the type of labels for OmniView. There are three primary model numbers of the OmniView based on the screen size. The “-xxxx” suffix in the model number identifies the ordered configuration.

System Type	Model No.	Product Identification
OmniView 156	HMI-OV156-xxxx	OmniView with 15.6” display
OmniView 185	HMI-OV185-xxxx	OmniView with 18.5” display
OmniView 215	HMI-OV215-xxxx	OmniView with 21.5” display

Table 2: Primary model numbers of the OmniView units



Fig. 1: Type label for HMI-OV215



Fig. 2: Type label for HMI-OV1855



Fig. 3: Type label for HMI-OV156

## 7. Product Description

Before working with your OmniView, you should take a few minutes to learn about the various connectors that are part of your OmniView.

The OmniView is a touch-monitor configurable during ordering with a 15.6", 18.5" or 21.5" display size. Each touch-monitor is equipped with a color TFT-LCD screen and multi-point projected capacitive (PCAP) touch screen.

The OmniView is designed for demanding industrial applications. The rugged design offers excellent mechanical stability suitable for operation in harsh industrial environments. It is designed to be mounted in the user's application by either of the following methods:

- Installation in an instrument panel or other cabinets (preferred mounting method) using the corresponding supplied mounting clamps.
- Installation by a heavy duty VESA 100 compliant mounting system.



All versions of the OmniView are suitable for installation in an instrument panel or other cabinet.

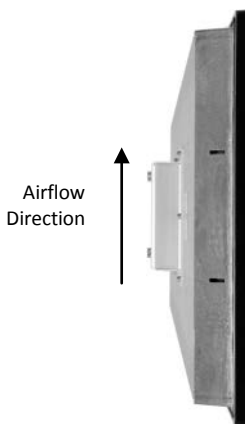
OmniView must be mounted in an instrument panel or other cabinets using the corresponding supplied mounting clamps.



Installation using the VESA 100 mounting system must be properly designed to support the heavy load of the OmniView unit.

The OmniView is passively cooled. The air openings, located on the rear of the device, provide air circulation for the monitor cooling, in order to prevent overheating.

The air openings, located on the sides of the device, provide air circulation for the system interior cooling, in order to prevent overheating.



When powering the OmniView, make sure that the air intake and exhaust openings are not obstructed.

In order to prevent the devices overheating and to ensure the access to the I/Os for cable connections, leave at least 5 cm (approx. 2") of free space on the top and bottom side of the OmniView unit.

Fig. 4: Airflow direction

The mounting and operation of the OmniView is allowed only in the vertical position with the interfaces downwards.

The OmniView is designed to be connected to an AC mains power source via an external 100-240 V AC/24 V DC AC/DC power adapter. This AC/DC power adapter can be connected to the mains power by either option of the US power cord or the EU power cord.

The OmniView complies with IP65 protection class at the front side (when installed to a wall only).

The following sections detail each of these components and their function in the OmniView.

### 7.1. Product Images OmniView 21.5" (other units similar)



Fig. 5: Bottom view



Fig. 6: Right view



Fig. 7: Front view



Fig. 8: Left view



Fig. 9: Top view

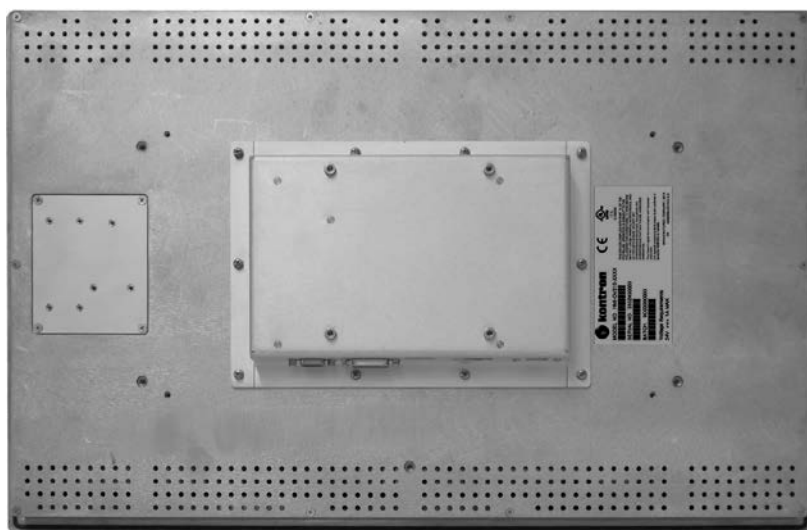


Fig. 10: Rear view



## 7.2. Front View



Fig. 11: Front view of the OmniView

- 1 TFT display with touch screen
- 2 Front bezel (border)

### 7.2.1. Front Bezel

The front side of the OmniView consists of an appropriate aluminum front bezel, the display with the integrated projected capacitive touch screen and the anti-glare glass plate.

For the outline dimensions refer to 11.2 “Mechanical Specifications”.

### 7.2.2. Display with Touch Screen

Depending on the OmniView monitor ordered, the built-in display is a 15.6"/18.5"/21.5" size TFT display with corresponding Projected **C**apacitive (PCAP) touch screen. The touch screen is USB connected. The surface of each display size is also mechanically protected through an appropriate anti-glare glass plate.

The touch screen registers contacts of fingers and allows the user to operate the system without a keyboard or a pointing device. The implemented touch technology allows 6-touch operations with fingers or thin gloves. For information about the required touch screen driver refer to our web site [www.kontron.com](http://www.kontron.com).

For technical specification of the built-in display and touch screen refer to chapter 11 “Technical Data”.



Do not use a hard or a pointed object (like screw driver) to operate the touch screen, since it can damage the touch screen surface and can disturb the touch screen functionality. If any stylus is used make sure it is proper for PCAP sensitive surface.

The touch screen is covered with an anti-glare glass panel and care should be taken when cleaning it (see section 10.1 “Touch Screen Care and Cleaning”).

### 7.2.2.1. Projected Capacitive Touch Screen

Advantages of the PCAP:

- offers superior optical clarity,
- provides much higher positional accuracy and
- may detect multiple touches simultaneously.



The capacitive touch screen is factory-calibrated.

### 7.3. Bottom Side

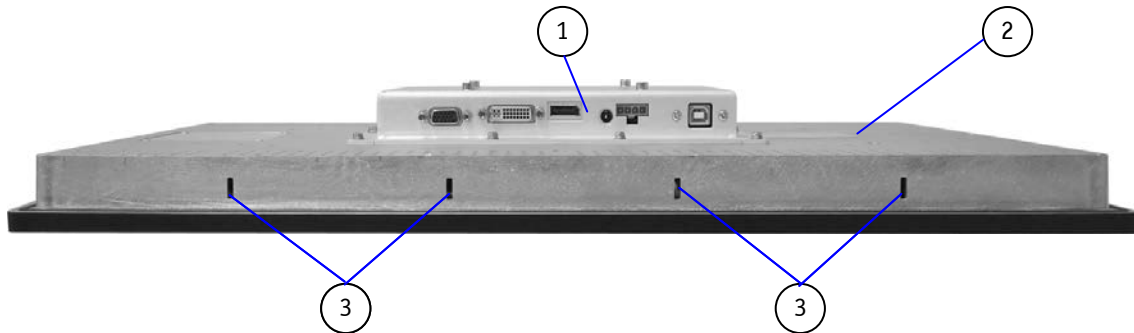


Fig. 12: Bottom side of the OmniView (shown as a system with a 21.5" display)

- |   |                                |   |  |
|---|--------------------------------|---|--|
| 1 | Interface side                 | 3 | Two pairs of mounting slots (without installed mounting clamps and screws) |
| 2 | Rear side of the touch monitor |   |  |

#### 7.3.1. Interfaces

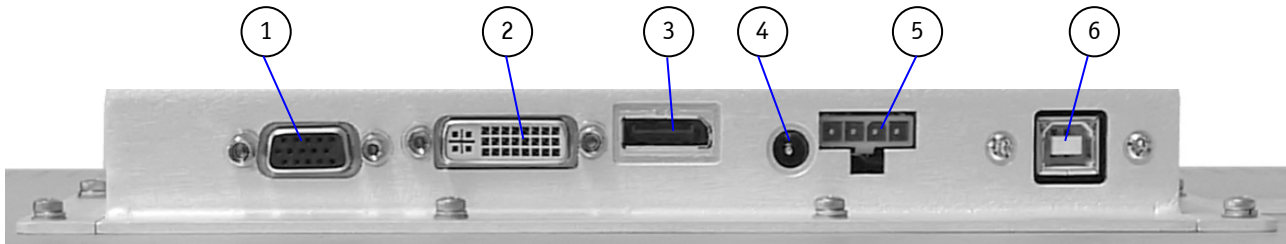


Fig. 13: Interfaces on the bottom (common for all OmniView configuration)

- |   |                                      |   |   |
|---|--------------------------------------|---|---|
| 4 | VGA interface                        | 7 | 2.5 jack power connector (for manufacturer purposes only) |
| 5 | DVI-D interface (as DVI-I connector) | 8 | 24 VDC power input Molex connector                        |
| 6 | DisplayPort                          | 9 | USB 1.1 (type B connector)                                |

##### 7.3.1.1. VGA input

The VGA input is obtained by connecting to a standard 15-pin D-sub female connector (Fig. 13, pos. 1) via a standard VGA style cable (not supplied). For pin assignments refer to section 12.2.

##### 7.3.1.2. DisplayPort Video Connector

One Display Port (DP) connector (Fig. 13, pos. 3) complies with Display Port 1.1a specification. An HD style cable is not supplied. For pin assignments refer to section 12.4.

##### 7.3.1.3. DVI-I (DVI-D supported only) Video Connector (Single Link)

This connector (Fig. 13, pos. 2) supports digital connections only. Digital devices can be connected directly to this interface of the OmniView. A corresponding DVI cable is not supplied. For pin assignments refer to section 12.5.

#### 7.3.1.4. USB 1.1 Connector (Type B)

The touch monitor is equipped with one USB 1.1, type B interface connector (Fig. 13, pos. 6). This connector provides connection of the touch screen to the host computer. For pin assignments refer to section 12.3.

#### 7.3.1.5. 2.5 Jack Power Input Connector

The 2.5 jack power connector (Fig. 13, pos. 4) is designed for manufacturer purposes only.

#### 7.3.1.6. DC Power Input (Molex Connector)

The power input connector (Fig. 13, pos. 5) provides the power connection of the OmniView to the mains power source via the AC/DC adapter (included). For pin assignments refer to section 12.1. The OmniView is supplied with an external AC/DC power adapter (100-240 V AC/24V DC) (refer to section 7.6). The AC/DC adapter can be connected to the mains power by either option of the US power cord or the EU power cord. For electrical installation refer to chapter 8 “Starting Up” and section 8.2 “Connecting to Power”.



The system is only completely disconnected from the mains power by disconnecting the power from the unit or from the wall supply.



When powering on the OmniView make sure that the air intake and exhaust openings are not obstructed.

## 7.4. Top, Left and Right Side View

### 7.4.1. Mounting Slots on the top, left and right Side of the OmniView

The mounting slots (Fig. 14, Fig. 15 and Fig. 16, pos. 2) are available on the left and right side of the device.

Fig. 14: OmniView (top side)  
shown as HMI-OV215

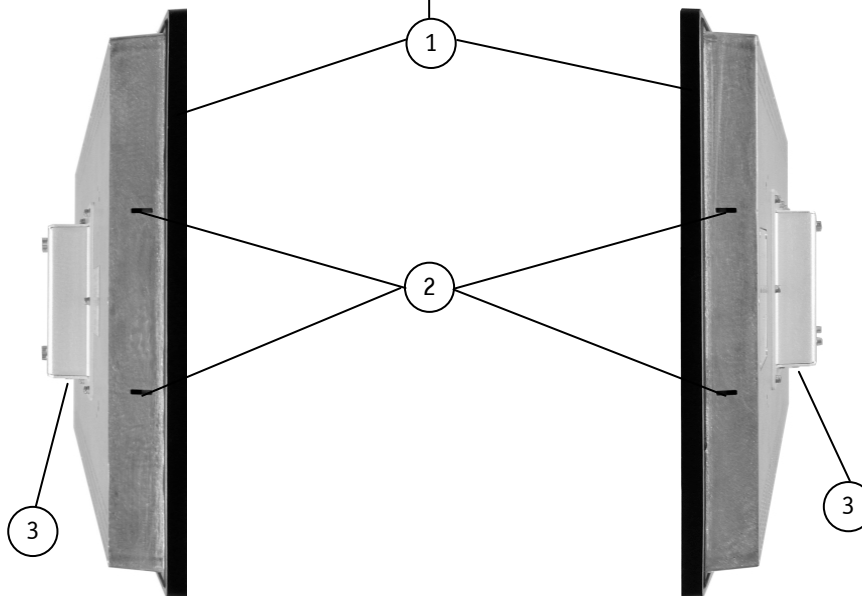
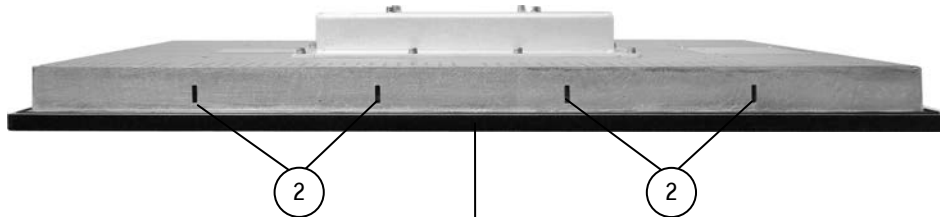


Fig. 15: OmniView (left side)  
shown as HMI-OV215

Fig. 16: OmniView (right side)  
shown as HMI-OV215

**Legend for Fig. 14, Fig. 15 and Fig. 16:**

- 1 Touch-monitor unit
- 2 One pair mounting slots for installing the mounting clamp and screws
- 3 Interface side (bottom)

## 7.5. Rear Side

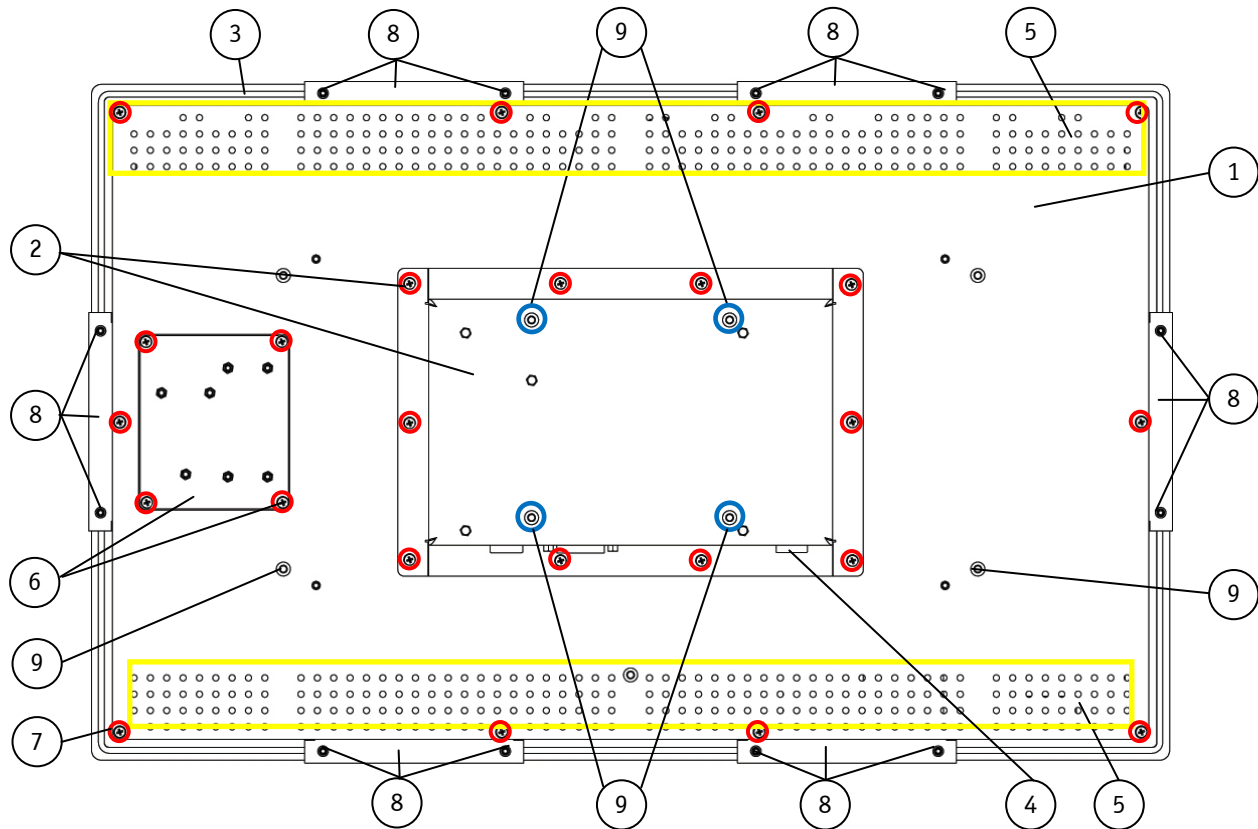


Fig. 17: Rear side of OmniView (shown as HMI-OV215)

- |   |   |   |   |
|---|---|---|---|
| 1 | Rear side of the touch-monitor                              | 6 | Access cover with screws (do not remove)  |
| 2 | Cover of the interfaces with screws (do not remove)         | 7 | 14 x screws (red marked in the picture; do not remove )                                   |
| 3 | Gasket location (around the rear side of the touch-monitor) | 8 | 6x mounting clamps with screws  |
| 4 | Interface side of the touch monitor                         | 9 | 4x M4 threaded blind holes compatible with VESA 100 standard (marked blue in the picture) |
| 5 | Air openings on the rear side of the touch-monitor          |   |   |



Please do not remove the screws marked red in the picture (Fig. 17, pos. 2, 6 and 7).



When powering on the OmniView make sure that the air intake and exhaust openings are not obstructed.



### Note for mounting clamps:

The OmniView 15.6"/18.5"/21.5" will be secured into an instrument panel or cabinet by use of the mounting clamps and screws as shown in Fig. 17, pos. 8.

### 7.5.1. Gasket on the Rear Side

The gasket (Fig. 17, pos. 3) at the rear of the OmniView has to be present and in proper condition.

## 7.6. External AC/DC Power Adapter

The OmniView can be connected to an AC power source via the external AC/DC adapter. The AC /DC adapter can be connected to the mains power source by either option of the US power cord or the EU power cord [refer to (Fig. 18)].

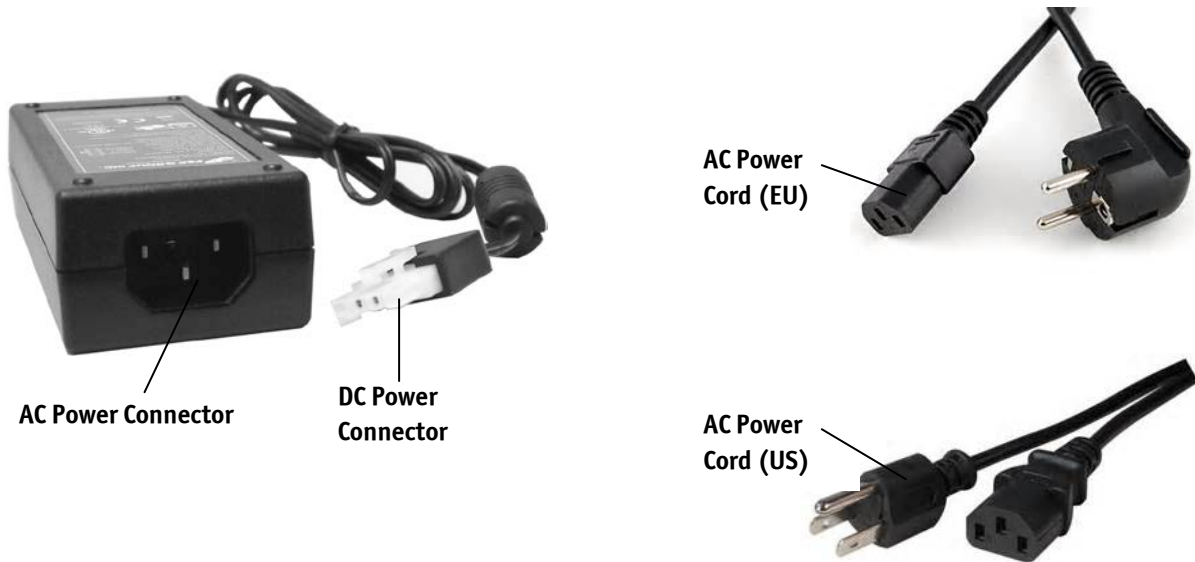


Fig. 18: External AC/DC adapter with AC power cord (complying to the EU / US requirements)

AC/DC Adapter	
AC Input	DC Output
100-240 V AC 1.3 A 50-60 Hz	24 VDC 1.25 A MAX

## 8. Starting Up

The OmniView touch-monitor is designed to be powered via the supplied AC/DC adapter.

### 8.1. Behavior of the OmniView when connecting to Power



As soon as external power is applied to the main input power connector (Fig. 13, pos. 5), the OmniView starts immediately.

**Prerequisite:**

The OmniView has to be connected via corresponding cable connections to a host PC system with the required touch-driver installed.

### 8.2. Connecting to Power

The OmniView is designed to be connected to an AC mains power source via an external 100-240 V AC/24V DC AC/DC power adapter, as described in this section (step 1 to 3). Please observe the electrical specification of the external AC/DC adapter in the section 7.6 “External AC/DC Power Adapter”. Please observe all hints contained in this section and the safety instruction included in chapter 4 “General Safety Instructions for IT Equipment”.



- Before using your system, you should first become familiar with the system components and check that everything is connected properly. Following a proper cabling procedure will prevent a false power-on condition, which could result in unit operational failure.
- Also, it is recommended that the last cable attached to the system should be the power cable!

**Electrical power disconnect:** The unit can be disconnected from the electrical supply by either unplugging the 4 pin power connector on the OmniView I/O panel, or by disconnecting the power supply from the wall supply. The power cord is considered the mains disconnect for the unit and must be readily accessible (either at the wall or on the unit) when installed.

**Grounding the system:** To avoid an electrical shock hazard, you must ensure the system has proper grounding. The OmniView power cord includes the safety ground conductor and provides proper grounding only for the OmniView. You must ensure proper grounding is provided for the entire system into which the OmniView is embedded. You must provide additional, proper grounding for the OmniView and the host equipment.

**Overcurrent protection:** There is no Over Current protection built into the OmniView. The external power supply is designed to handle input 100-240 V AC 1.3 A, 50-60 Hz, and output 24 V DC 1.67A max. If overcurrent protection is required beyond the limits of the supplied power supply, you must provide supplemental protection for the OmniView.



**WARNING:** Do not attempt to modify the supplied power supply or use an unapproved power cord set that is not the exact type required. You must use a power cord set that meets the following criteria:

- Rating:** In the U.S. and Canada, cords must be UL (Underwriters Laboratories, Inc.) Listed/CSA (Canadian Standards Organization) Certified type SJT, 18-3 AWG (American Wire Gauge). Outside of the U.S. and Canada, cords must be flexible harmonized (<HAR>) or VDE (Verband Deutscher Elektrotechniker, German Institute of Electrical Engineers) certified cord with 3x 0.75 mm conductors rated 250 VAC.
- Connector, wall outlet end:** Cords must be terminated in grounding-type male plug designed for use in your region. The connector must have certification marks showing certification by an agency acceptable in your region and for U.S. must be listed and rated for 125% of the overall current rating of the server.
- Connector, OmniView end:** The connector that plugs into the DC power receptacle on the I/O panel of the OmniView must be an approved power connector approved by Kontron, America, Molex, power series 5539.
- Cord length and flexibility:** Cords must be less than 4.5 meters (14.8 feet) long.





The system is only completely disconnected from the mains power by disconnecting the power from the unit or from the wall mains supply.



When powering on the OmniView make sure that the air intake and exhaust openings are not obstructed.

Follow these steps in order to connect the OmniView to an AC power source via the optional AC/DC adapter:



Attach the supplied AC power cable (for EU or US) that corresponds to the requirements of the country where the system is used.

The AC/DC adapter must stand freely and may not be covered. Do not place the AC/DC adapter onto a heat-sensitive surface.

There must be at least 100 mm (approximately 4") free space around the OmniView and around the AC/DC adapter.



As soon as external power is applied to the main input power connector (Fig. 13, pos. 5 or pos. 4), the OmniView starts immediately.

**Prerequisite:**

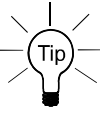

The OmniView has to be connected via corresponding cable connections to a host PC system with the required touch-driver installed.

1. Connect the 4-pin DC power connector of the AC/DC adapter (Fig. 18) to the appropriate DC power connector (Fig. 13, pos.5) of the OmniView. Make sure the connector is securely locked in place.
2. Connect the AC power cord to the AC/DC adapter.
3. Plug the AC connector of the adapter into an AC wall outlet of the AC mains power source.

## 9. Installation Instructions

The OmniView is designed to be mounted in the user’s application by either of the following methods:

- Installation in an instrument panel or other cabinets by use of mounting clamps (preferred mounting method)
- Installation by a heavy duty VESA 100 compliant mounting system

	The expansion card installation should be performed before installing the OmniView to a wall/panel or into an industrial cabinet.
	<p>The OmniView has to be installed and operated only by trained and qualified personnel.</p> <p>We recommend that the mounting procure is to be carried-out by two persons.</p> <p>The mounting and operation of the OmniView is allowed only in the vertical position with the interfaces downwards.</p> <p>The unit must be placed such that there is sufficient space for connecting the cables to the I/O interface connectors.</p> <p>Leave at least 5 cm (approx. 2") of free space around the unit to prevent the device from possibly overheating! Do not obstruct the air intake and exhaust openings.</p> <p>The voltage feeds must not be overloaded. Adjust the cabling and the external overload protection to correspond with the rated voltage range indicated on the type label.</p> <p>The type label is located on the rear left side of the system.</p>

### 9.1. Installation by use of the Mounting Clamps

The mounting clamps with screws (supplied), allow the easy and fast mounting of the OmniView HMI-0V156/0V185/0V215. Refer to the appropriate outline and mounting drawing for the correct dimensions of cut-outs and air gap clearances required for mounting the unit into a wall or panel. The outline and mounting drawing can be found on our web site [www.kontron.com](http://www.kontron.com).

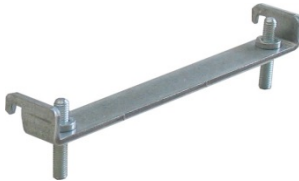
Dimension for:	HMI-0V156	HMI-0V185	HMI-0V215
Cut-out for mounting to a wall/panel (W x H) [mm]	394 x 245	462 x 283	527 x 325
<b>Requirements for Mounting</b>			
Metal mounting panel thickness for proper mounting [mm]	1.5 – 6.35	1.5 – 6.35	1.5 – 6.35
Used clamp with screws for mounting the OmniView to a wall/panel	6x		
			
Proper Torque	Tighten the screws with a torque of 0.5 Nm		
Mounting position	Ensure the vertical and horizontal alignment of the system/display unit.		

Table 3: Requirements for OmniView mounting into a wall/panel



In order to ensure IP65 front sealing against dust and water, **mount the system on a non-textured surface**. Before you install the OmniView into a panel or a wall for industrial cabinet, verify the perfect condition of the gasket at the rear of the front bezel. The gasket has to be in place without surface imperfections/defects and dirt.

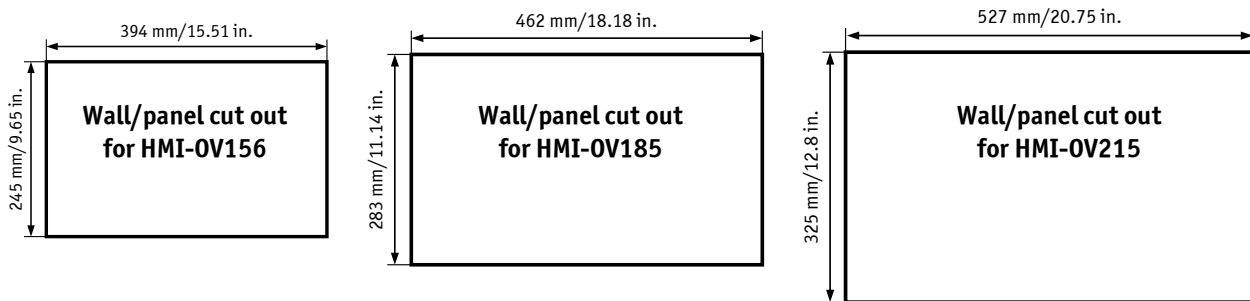


Fig. 19: Wall/panel cutout dimensions for OmniViews

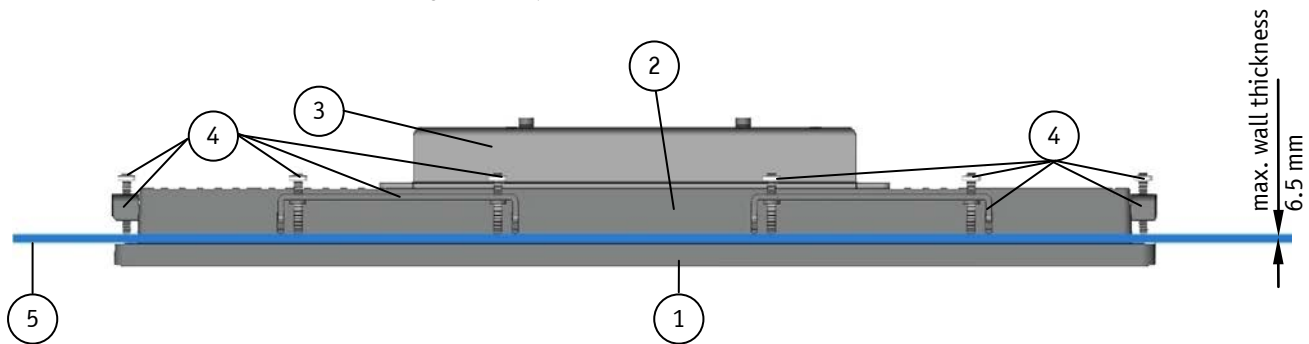


Fig. 20: Wall/panel mounting of the OmniView by use of the mounting clamps

- |   |  |
|---|--|
| 1 Front panel of the OmniView with gasket | 4 Mounting clamps with screws for system installation into a wall/panel        |
| 2 Touch display unit                      |  |
| 3 Top side of the unit                    | 5 Example of wall for system installation (with specified max. wall thickness) |

To mount the system to a wall or to a panel, follow these steps:

- Depending on the dimension of the display enclosure of your OmniView, prepare a cutout in the wall/panel. Refer to Table 3 and Fig. 19 for the wall/panel cutout dimensions or to the corresponding mechanical drawings for your OmniView on our web site [www.kontron.com](http://www.kontron.com).
- The system must be properly powered down and disconnected from the power source and peripherals.
- The wall/panel where you intend to install the system must be accessible from both sides (front as well as rear).
- Insert the system into the wall/panel cutout from the front.
- In order to ensure the protection class IP65 on the front side in the installed condition, the contact surface with the gasket must be clean and flush.
- Hook the mounting clamps with screws (Table 3) from the rear side of the panel into the corresponding pairs of slots (Fig. 14, Fig. 15 and Fig. 16, pos. 2) of the touch display unit enclosure.
- The system must be attached firmly by tighten the screws (refer to Fig. 17, pos. 8 and Fig. 20, pos. 4). Refer also to the mounting requirements included in Table 3.

## 9.2. Installation to a VESA® 100 compliant Mounting System

All configuration of the OmniView can be mounted to a VESA® 100 compliant mounting system.



The OmniView has to be installed only by trained and qualified personnel.

Use four M4 metric screws to attach the system to a VESA® mounting system. Depending on the VESA® mounting system used, choose the length of the screws so that the screw-in depth of the screws should be between 4 mm (0.16") up to 5 mm (0.197").

In order to ensure the intended use of the unit make sure that it must be installed in vertical position with the interfaces facing down. Ensure there is adequate air ventilation (circulation) around the device. Do not cover the unit with objects.

4x threaded holes (marked blue in the picture) for installation to a VESA® 100 compliant mounting system.

Use 4x M4 screws 5 mm depth max. for VESA® installation.

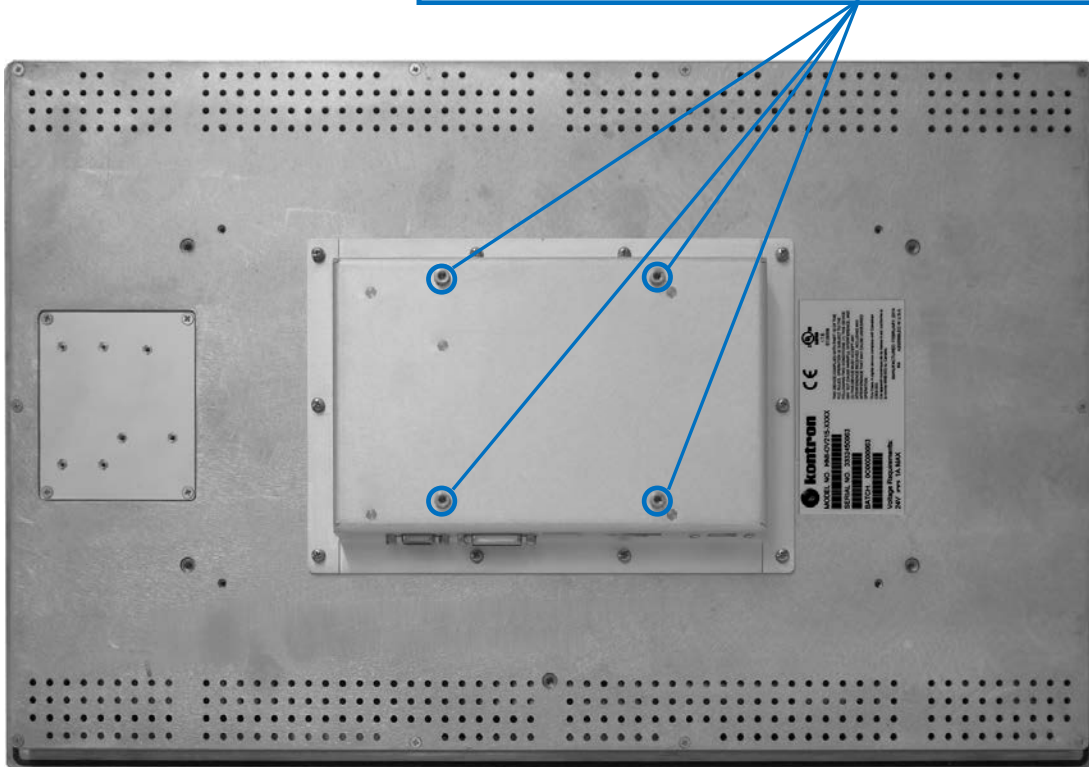


Fig. 21: Rear side of the OmniView devices with VESA® 100 compliant threaded holes

## 10. Maintenance and Cleaning

Kontron systems require minimal maintenance and care to keep them operating correctly.

- Occasionally wipe the OmniView with a soft dry microfiber cloth.
- You should only remove persistent dirt by use of a soft, slightly damp cloth and mild detergent.

### 10.1. Touch Screen Care and Cleaning



The touch screen is covered by an anti-glare glass plate and care should be taken when cleaning it. The front side of the touch display unit is sealed against dust and liquids.

The touch screen is protected by an anti-glare glass surface. Care should be taken to avoid using sharp objects such as knife, pen or pencil tips. Sharp objects may permanently damage the surface of the anti-glare glass plate.

Mild detergent and water is recommended for cleaning the touch screen. Use of strong solvents must be avoided. Wet the glass plate with a microfiber cloth lightly moistened with warm water and glass cleaner.

## 11. Technical Data

System		HMI-OV156	HMI-OV185	HMI-OV215
TFT LCD Display	Size (diagonal)	15.6"	18.5"	21.5"
	Active area (H x V) [mm]	344.23 x 193.54	409.8 x 230.4	476.64 x 268.11
	Resolution (H x V) [pixel]	1366 x 768 (HD)	1366x 768 (HD)	1920 x 1080 (Full HD)
	Pixel Pitch(H x V) [μm]	252 (per one triad) ×252	300 (per one triad) × 300	248 (per one triad) ×248
	Colour Depth	16.7 M colors	16.7 M colors	16.7 M colors
	Backlight	LED	LED	LED
	Brightness [cd/m2]	300	300	300
	Control Signal	24 bit LVDS	24 bit LVDS	24bit LVDS
	Viewing Angle [°] (r / l / u / d)	CR10 85/85/80/80	85/85/80/80	89/89/89/89
	Contrast ratio	500:1	1000:1	5000:1
	Response Time [msec]	8	5	25
Touch Screen		Projected Capacitive	Projected Capacitive	Projected Capacitive
External Interfaces (bottom side accessible)		1x USB 1.1 (type B connector)		
		1x DVI-I connector (DVI-D only supported)		
		1x VGA		
		1x DisplayPort (input)		
		1x DC power IN connector (Molex connector) for 24 VDC		
		1x DC power IN connector 2.5 jack connector (for manufacturer purposes only)		
Power Supply (bottom side accessible)		24 VDC via the optional external AC/DC adapter (limited power source) 100-240 VAC/24 VDC		
Protection Class		IP20 rear IP65 front (mounted to a wall only)		
Mounting Clamps and Screws		6x mounting clamps and 12 screws		
Threaded holes for VESA® 100		On the rear		

### 11.1. Electrical Specifications

System Type	Electrical Specification
OmniView	HMI-OV215:+24 V DC, 1.0 A max HMI-OV185:+24 V DC, 0.6 A max HMI-OV156:+24 V DC, 0.5 A max
External AC/DC power adapter	Input: 100-240 VAC, 1.3 A, 50-60 Hz Output: 24 VDC, 1.25 A MAX

### 11.2. Mechanical Specifications

For detailed mechanical dimensions, please see the outline dimensions drawings on the web site [www.kontron.com](http://www.kontron.com).

OmniView	HMI-OV156	HMI-OV185	HMI-OV215
Width	411.34 mm (16.19")	479.67 mm (18.88")	544.20 mm (21.43")
Height	262.75 mm (10.34")	300.35 mm (11.83")	341.88 mm (13.46")
Depth (total)	62.865 mm (2.62")		
Depth (from rear surface of display)	56.896 mm (2.24")		
Weight	5.9 kg (13 lbs.)	6.5 kg (14.33 lbs.)	7.0 kg (15.43 lbs.)
Front bezel	Aluminum front bezel (black colored)		
Housing	Zinc-coated steel		

Dimension of the touch display unit

Dimension	HMI-OV156	HMI-OV185	HMI-OV215
Aluminum front bezel (W x H)	411.34 x 262.75 [mm] 16.19" x 10.34"	479.67 x 300.35 18.88" x 11.82"	544.20 x 341.88 [mm] 21.43" x 13.46"
Frontal cut out for display (W x H)	346.02 x 195.31 [mm] 13.62" x 7.69"	411.3 x 231.7 [mm] 16.19" x 9.12"	478.32 x 269.79 [mm] 18.83" x 10.62"
Wall/panel mounting cut out (W x H)	393.58 x 244.99 [mm] 15.5" x 9.65"	461.87 x 282.55 [mm] 18.18" x 11.12"	527.14 x 324.82 [mm] 20.76" x 12.79"

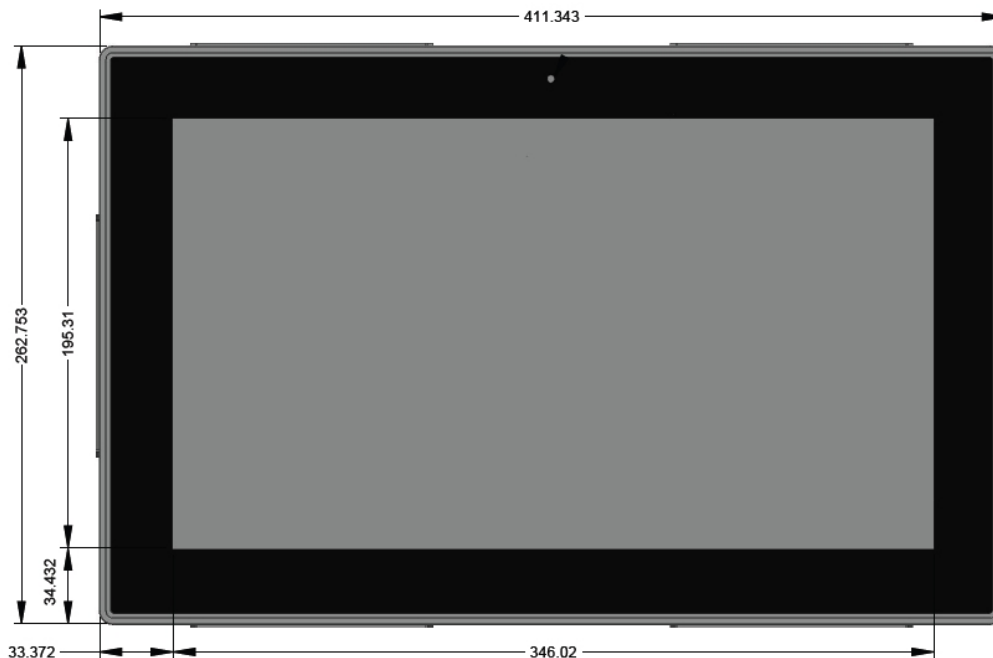


Fig. 22: Mechanical specification - Front view of an HMI-OV156

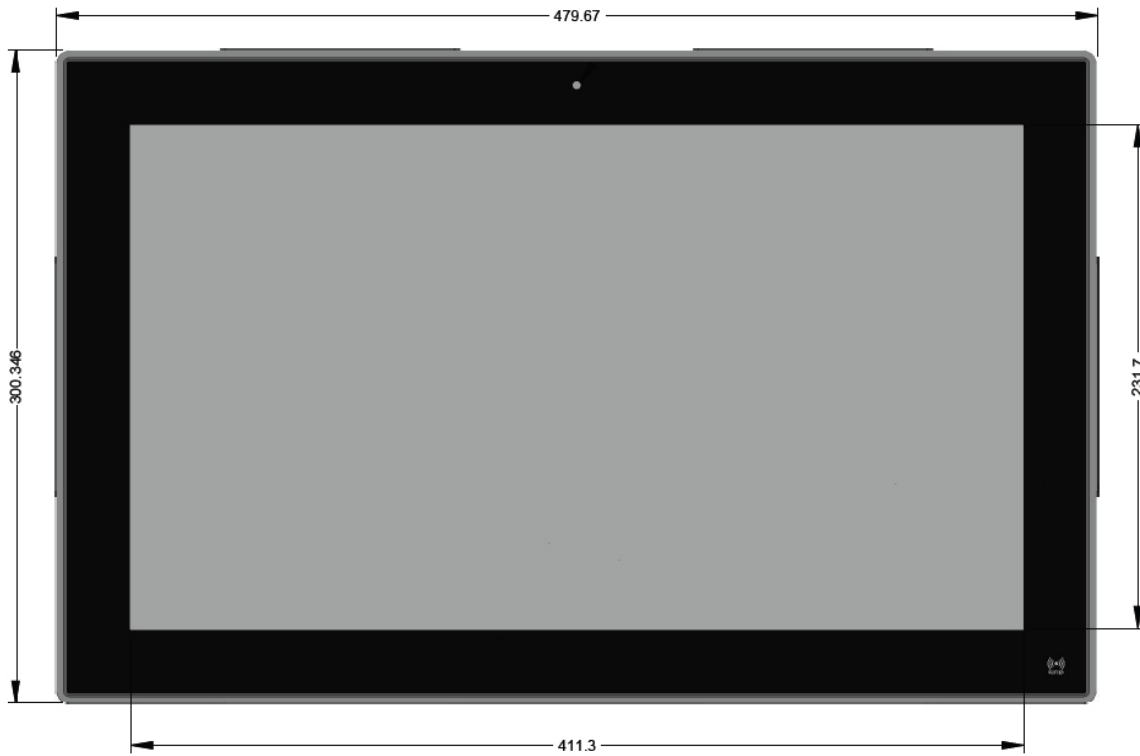
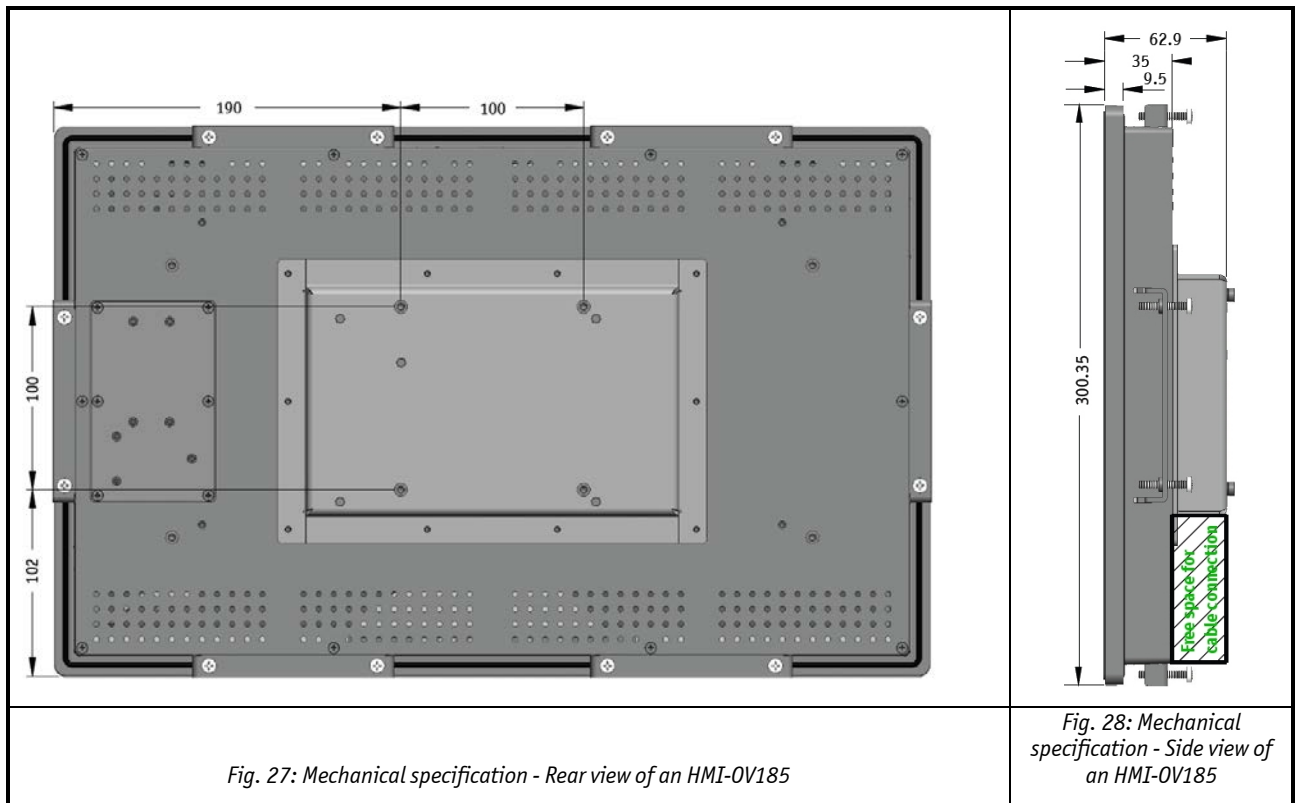
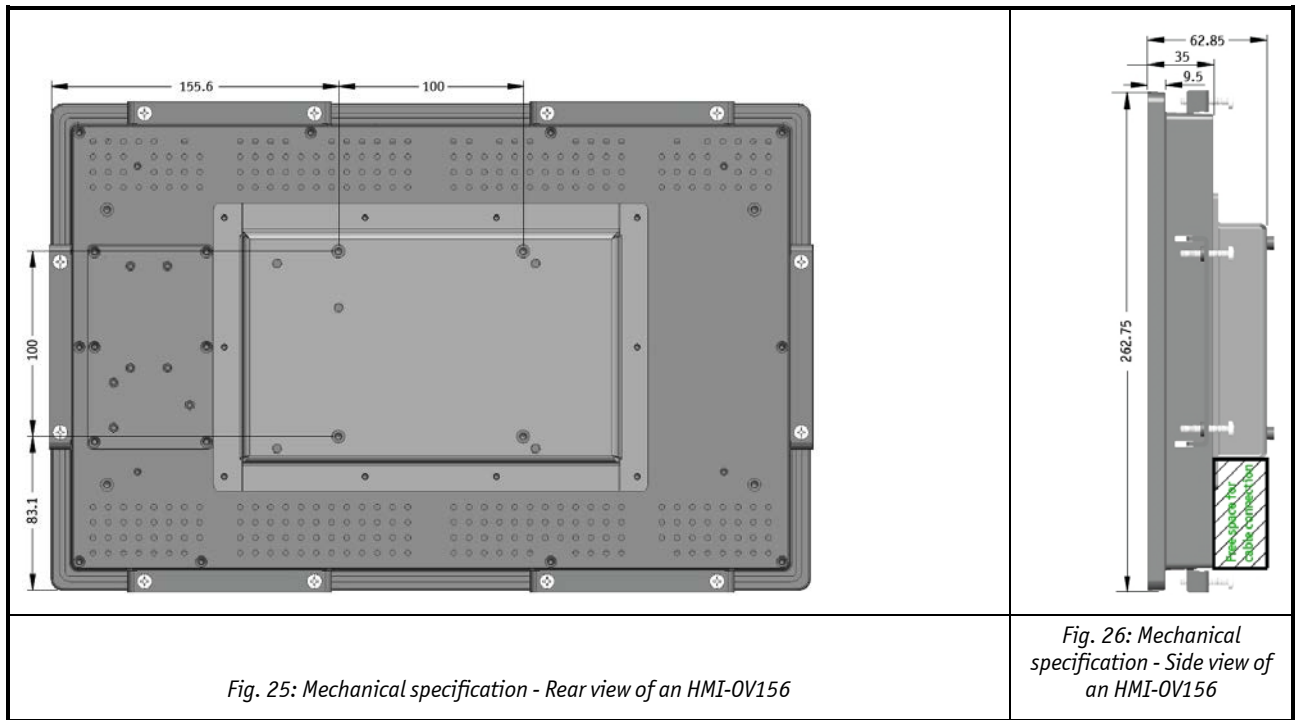


Fig. 23: Mechanical specification - Front view of an HMI-OV185



Fig. 24: Mechanical specification - Front view of an HMI-OV215





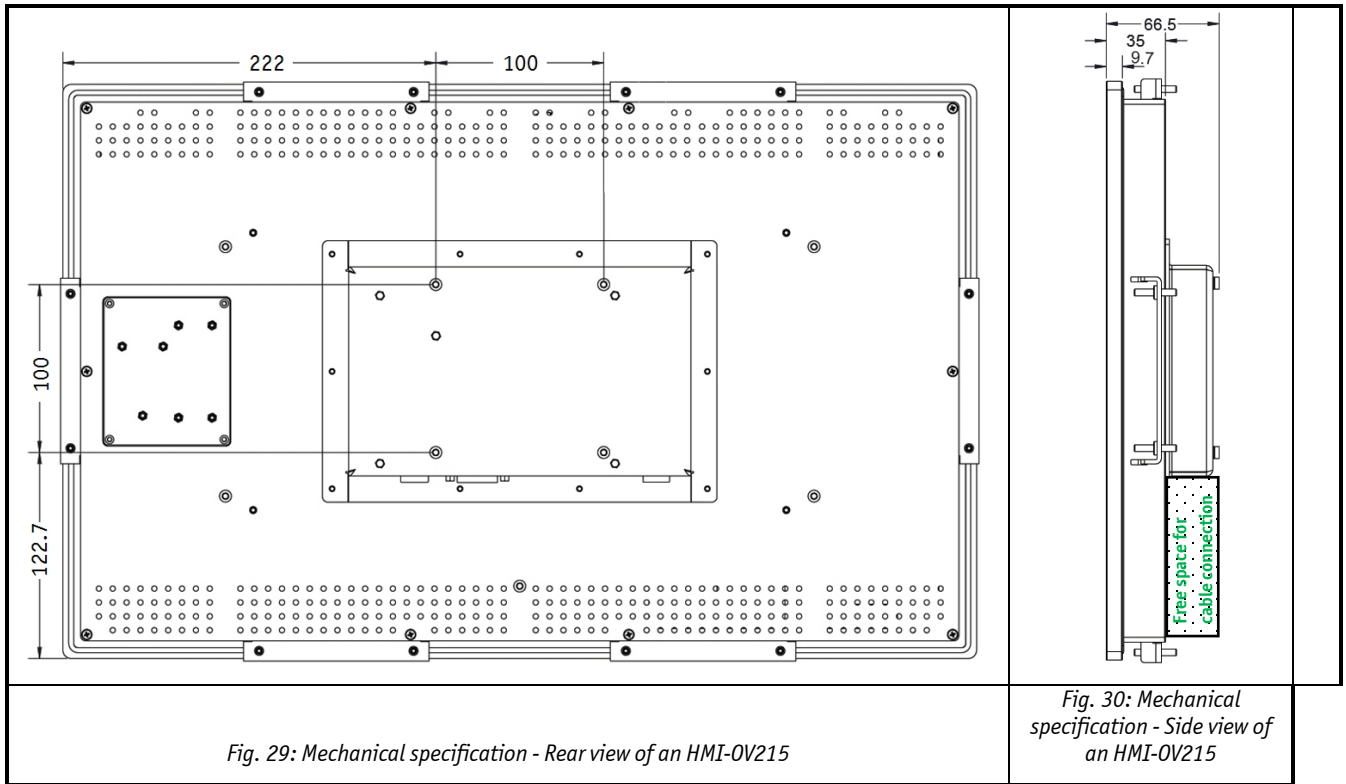


Fig. 29: Mechanical specification - Rear view of an HMI-OV215

Fig. 30: Mechanical specification - Side view of an HMI-OV215

### 11.3. Environmental Specifications

<b>Thermal Management</b>	Passive cooling
<b>Operating Temperature</b>	0 ... +50 °C 32 °F ... 122 °F
<b>Relative Humidity</b> Storage/Transit (non operating)	90 % @ 25-40 °C (non-condensing)
<b>Altitude</b> (operating)	Up to 2,000 m (6,561 ft.)
<b>Altitude</b> Storage/Transit (non operating)	Up to 3,048 m (10,000 ft.)
<b>Shock</b> Storage/Transit (non operating)	10 G, 11 ms duration, 3 shock/axes
<b>Vibration</b> Storage/Transit (non operating)	10 – 500 Hz, 2.0 G/3axis
<b>Protection class</b>	IP20 (rear section) Front: IP65 (mounted to a wall only)

### 11.4. CE Directives, Standards and Approvals

CE Directives	
Low Voltage Directive (Electrical Safety)	2006/95/EC
EMC Directive	2004/108/EC
RoHS Directive	2002/65/EC

Electrical Safety	Standards
EUROPE	EN 60950-1:2006 + A1:2010 + A12:2011 + A11:2009
USA	UL 60950-1, 2 <sup>nd</sup> Edition
Canada	CSA C22.2 No. 60950-1-07, 2 <sup>nd</sup> Edition
CB Scheme	IEC 60950-1; am1

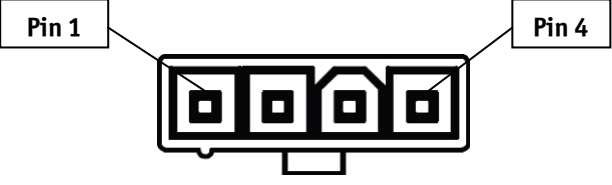
EMC	Standards
EUROPE	Limits - Limits for harmonic current emissions (equipment input current $\leq 16$ A per phase): EN 61000-3-2:2006+A1:2009+A2:2009
	Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current $\leq 16$ A per phase and not subjected to conditional connection: EN 61000-3-3:2008
	Emission of Information technology equipment Radio disturbance characteristics Limits and methods of measurement: EN 55022: 2010+AC: 2011  ITE - Immunity characteristics - Limits and methods of measurement EN 55024:2010
U.S.A.	FCC 47 CFR Part 15 Subpart B, Class A
Canada	CAN/CSA-CISPR 22-10

## 12. Technical Appendix - Interfaces

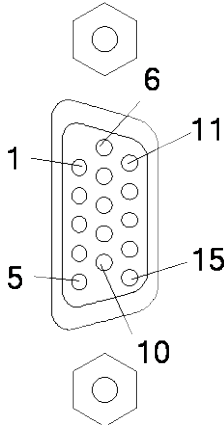
The following tables contain the plug assignments for the external connections of the OmniView.

Low-active signals are indicated by a minus sign.

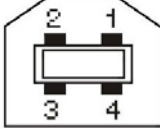
### 12.1. DC IN Power Connector

Pin No	Signal	4 pin (male) Molex 0039303045 Connector
1	GND	
2	+24V DC	
3	(-) 0 VDC	
4	GND	

### 12.2. VGA Input Connector

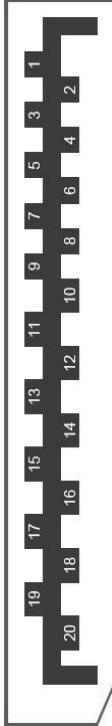
Pin	Signal Name	15-pin D-SUB Connector (female)
1	Analog red output	
2	Analog green output	
3	Analog blue output	
4	N.C.	
5-8	GND	
9	+5 V (DDC)	
10	GND	
11	N.C.	
12	SDA (DDC)	
13	TTL HSync	
14	TTL VSync	
15	SCL (DDC)	

### 12.3. USB Interface (USB IN)

Pin	Signal Name	4-pin USB socket Type B Version 1.1
1	VCC	
2	Data-	
3	Data+	
4	GND	

### 12.4. DP Connector

The DP (Display Port) are based on standard DP type Foxconn 3VD51203-H7JJ-7H or similar.

Pin	Signal Name	Description	Display Port Connector
1	Lane 0 (p)		
2	GND		
3	Lane 0 (n)		
4	Lane 1 (p)		
5	GND		
6	Lane 1 (n)		
7	Lane 2 (p)		
8	GND		
9	Lane 2 (n)		
10	Lane 3 (p)		
11	GND		
12	Lane 3 (n)		
13	Config1	Aux or DDC selection	
14	Config2	(Not used)	
15	Aux Ch (p)	Aux Channel (+) or DDC Clk	
16	GND		
17	Aux Ch (n)	Aux Channel (-) or DDC Data	
18	Hot Plug		
19	Return (GND)		
20	3.3 V		

**Note:** The +3.3 V supply is fused by a 1.5 A PTC fuse.

The Hot Plug is internally pulled down (100 Kohm).

## 12.5. DVI-D Input Connector



Please observe that the DVI-I connector of the OmniView supports digital inputs (DVI-D) only.

Pin	Signal Name	Description	DVI-I Connector (female) (supports digital signals only)
1	TMDS2-	Differential TMDS Data 2-	
2	TMDS2+	Differential TMDS Data 2+	
3	GND	TMDS Shield	
4-5	NC	NC	
6	DVI_SCL	DDC EDID data clock	
7	DVI_SDA	DDC EDID data	
8	NC	NC	
9	TMDS1-	Differential TMDS Data 1-	
10	TMDS1+	Differential TMDS Data 1+	
11	GND	TMDS Shield	
12-13	NC	NC	
14	DVI_5V	5 V	
15	GND	Ground	
16	DISPDET	Hot Plug Detection	
17	TMDS0-	Differential TMDS Data 0-	
18	TMDS0+	Differential TMDS Data 0+	
19	GND	TMDS Shield	
20-21	NC	NC	
22	GND	TMDS Shield	
23	TMDS_SCL+	Differential TMDS Clock+	
24	TMDS_SCL-	Differential TMDS Clock -	
C1	ANALOG RED	<b>Not supported</b>	
C2	ANALOG GREEN	<b>Not supported</b>	
C3	ANALOG BLUE	<b>Not supported</b>	
C4	ANALOG HSYNC	<b>Not supported</b>	
C5	ANALOG GND	<b>Not supported</b>	

**Note:** The +5 V supply is fused by a 1.1 A resettable fuse.

## 13. Technical Support

For technical assistance, please contact our Technical Support department via:

e-mail: [support@kontron.com](mailto:support@kontron.com) or

web: <http://www.kontron.com/support-and-services>.

Ensure that your request contains the following information:

- unit part number (PN),
- serial number (SN), which can be found on the type label,
- a short description of the faulty behaviour of your system.

For information about Kontron products and services, please visit [www.kontron.com](http://www.kontron.com).

### 13.1. Returning Defective Merchandise

Please follow these steps before you return any merchandise to Kontron:

1. Download the corresponding form for returning a device with an RMA No. [RMA (**R**eturn of **M**aterial **A**uthorization)] from our website <http://www.kontron.com/support-and-services/RMA> Information; contact our Customer department to obtain an RMA No.  
e-mail: [support@kontron.com](mailto:support@kontron.com)
2. Ensure that you have received an RMA number from Kontron Customer Services before returning any device. Write this number clearly on the outside of the package.
3. Describe the fault that has occurred.
4. Please provide the name and telephone number of a person we can contact to obtain more information, where necessary. Where possible, please enclose all the necessary customs documents and invoices.
5. When returning a device:
  - Pack it securely in its original packaging.
  - Enclose a copy of the RMA form with the consignment.

#### Corporate Offices

Europe, Middle East & Africa	North America	Asia Pacific
Lise-Meitner-Str. 3-5 86156 Augsburg Germany Tel.: +49 (0) 821/0 Fax: +49 (0) 821/111 <a href="mailto:info@kontron.com">info@kontron.com</a>	14118 Stowe Drive Poway, CA 92064-7147 USA Tel.: +1 888 294 4558 Fax: +1 858 677 0898 <a href="mailto:info@us.kontron.com">info@us.kontron.com</a>	17 Building,Block #1,ABP. 188 Southern West 4th Ring Beijing 100070, P.R.China Tel.: + 86 10 63751188 Fax: + 86 10 83682438 <a href="mailto:info@us.kontron.cn">info@us.kontron.cn</a>