

# Senses SV series industrial monitor user manual



**Industrial Monitors**

**Senses SV series**

**Senses SV19 / SV17**

**User manual  
(Issue A)**

Part No: 85090084

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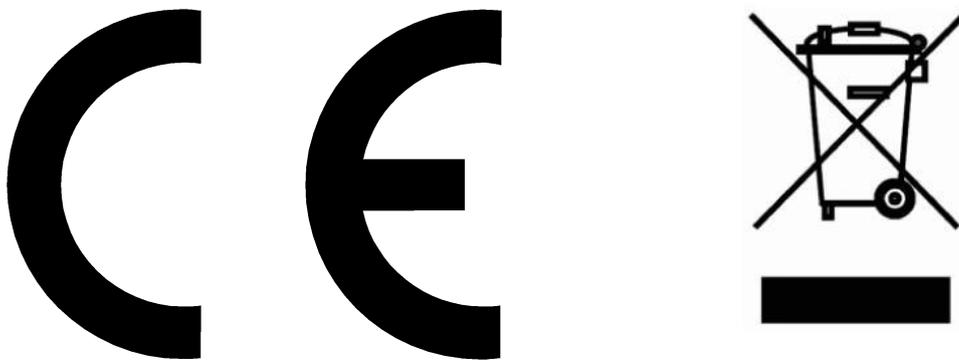
## Acknowledgements

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## Disclaimer

This instruction manual is supplied to provide the user with sufficient information to utilise the purchased product in a proper and efficient manner. The information contained has been reviewed and is believed to be accurate and reliable. However, Amplicon Liveline Ltd accepts no responsibility for any problems caused by errors and omissions. Specifications and instructions are subject to change without notice.

The Senses SV series industrial monitors are RoHS compliant.



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## Safety Precautions

Before getting started, please read the following safety information:

1. Be sure to ground yourself to prevent static charge when installing the internal components. Use a grounding wrist strap and place all electronic components in any static-shielded devices. Most electronic components are sensitive to static electrical charge.
2. Disconnect the power cord from the Senses SV19 / SV17 monitors before installation. Be sure both the system and the external devices are turned OFF. Sudden power surges could damage sensitive components. Make sure the monitor is properly grounded.
3. Turn OFF the monitor power supply before cleaning. Clean the system using a cloth only. Do not spray any liquid cleaner directly onto the screen. It is recommended that you spray the liquid cleaner on a cloth first before wiping the screen.
4. Avoid using sharp objects to operate the touchscreen. Scratches on the touchscreen may cause malfunction or internal failure to the touchscreen.
5. These flat panel displays can be susceptible to shock or vibration. When assembling the Senses SV19 / SV17, make sure they are securely installed.
6. Do not open the system's back cover. If opening the cover for maintenance is a must, only a trained technician is allowed to do so. Integrated circuits on computer boards are sensitive to static electricity. To avoid damaging chips from electrostatic discharge, observe the following precautions:
  - ✓ Before handling a board or integrated circuit, touch an unpainted portion of the system unit chassis for a few seconds. This will help to discharge any static electricity on your body.
  - ✓ When handling boards and components, wear a wrist-grounding strap, available from most electronic component stores.

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## Chapter 1

### Introduction

This chapter contains general information and detailed specifications of the Senses SV series (SV19 / SV17) industrial monitors.

**Senses SV19** – 19" LCD industrial monitor and touchscreen (optional)

**Senses SV17** – 17" LCD industrial monitor and touchscreen (optional)

Chapter 1 includes the following sections:

- **General Description**
- **Features**
- **System Specification**
- **Dimensions**
- **I/O Inputs**

#### 1.1 General Description

The Senses SV19 / SV17 are industrial 19.0" and 17.0" LCD monitors respectively. They come with slim, light and reliable features to replace traditional bulky CRT for industrial application.

Their unique front panel design is suited to open frame mounting (Senses SV19F / SV17F), or rack and panel mounting (Senses SV19P / SV17P). The monitors have VGA-in, DVI and S-Video standard interfaces for different input sources from computer systems or multimedia systems that let you upgrade the display without changing anything from your system. For HMI applications, you can choose a resistive touchscreen, capacitive touchscreen or glass interface to meet your application requirements.

These LCD monitors comprise colour active matrix thin-film-transistor (TFT) liquid crystal display to provide superior display performance and a maximum resolution of 1280x1024, which is ideal for displaying complex graphics and high definition images. Other outstanding features that enhance this LCD monitors' performance are Plug & Play compatibility, and OSD (On Screen

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Display) controls. OSD enables user adjustments of on screen display settings.

## 1.2 Features

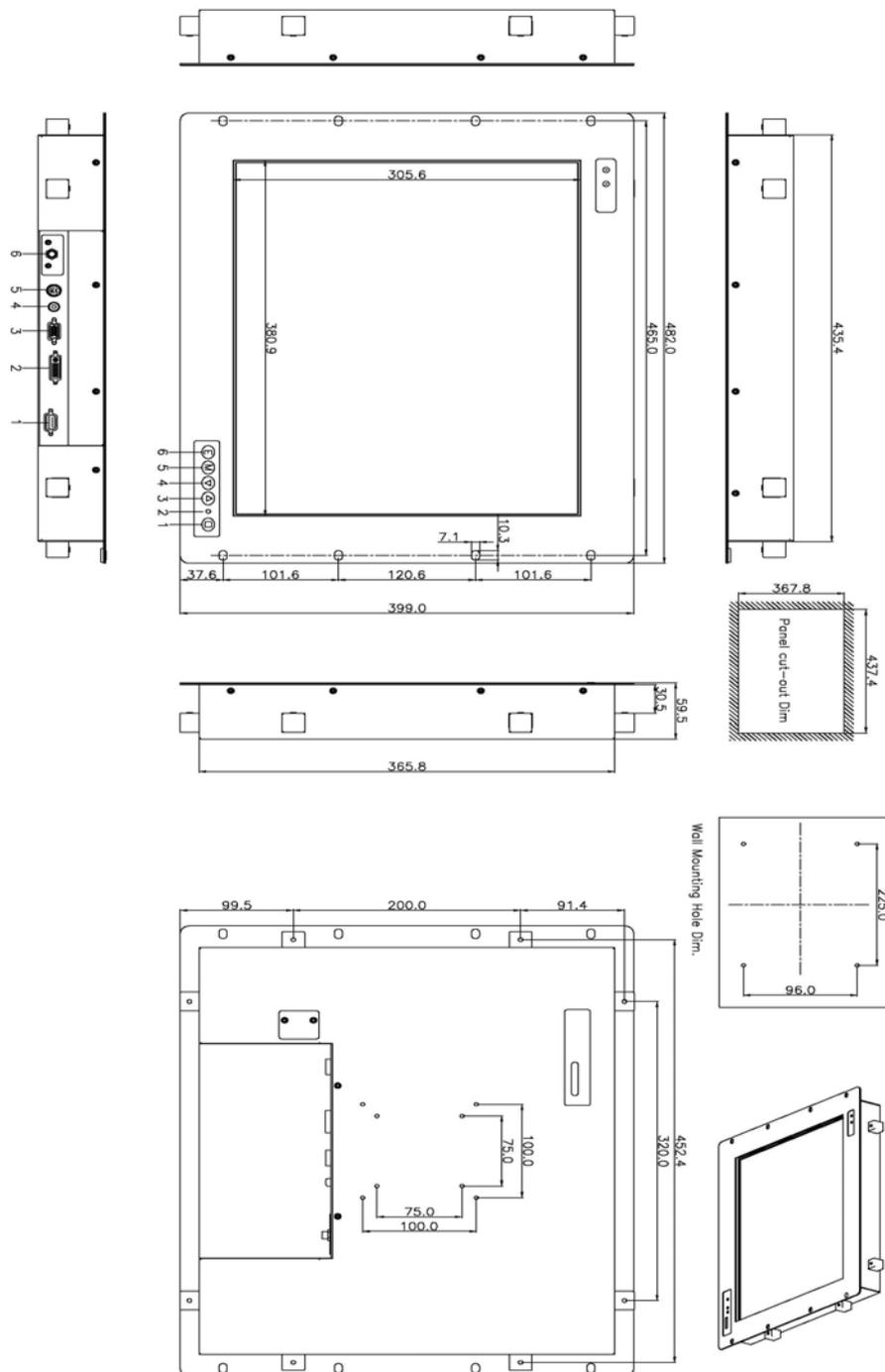
- High contrast color 19.0" / 17.0" SXGA TFT LCD display support resolution up to 1280x1024
- Heavy-duty steel chassis with NEMA4 / IP65-compliance
- Resistive touchscreen, capacitive touchscreen or tempered anti-reflection glass options
- Multi-scan function supports SXGA, XGA, SVGA, VGA, VGA-Text, PC-9801, MAC.
- High Brightness and Ultra-wide viewing angle with anti-glare features
- Power management system conforms to VESA DPMS standard
- Advanced OSD control for picture quality adjustment
- Supports VESA ARMS, Desktop Stand
- Rear, Panel, Wall or Rack mounting

## 1.3 Specifications

- **Construction:** Heavy-duty steel chassis
- **Control:** OSD (On Screen Display) control pad on front side
- **Mounting:** Support Panelmount, VESA arm mounting, Rackmount, and Wallmount (optional)
- **Net weight:** 9.46 Kgs for Senses SV19P
- **Net weight:** 8.32 Kgs for Senses SV17P
- **Dimension (main body size):**
  - SV19P = 482.0(W) X 399.0(H) X 59.5(D) mm
  - SV19F = 482.0(W) X 399.0(H) X 59.5(D) mm
  - SV17P = 482.0(W) X 360.0(H) X 60.0(D) mm
  - SV17F = 482.0(W) X 360.0(H) X 60.0(D) mm
- **Operating Temperature Range:** 0°C ~ 50°C
- **Relative Humidity:** 20% ~ 90%; non-condensing

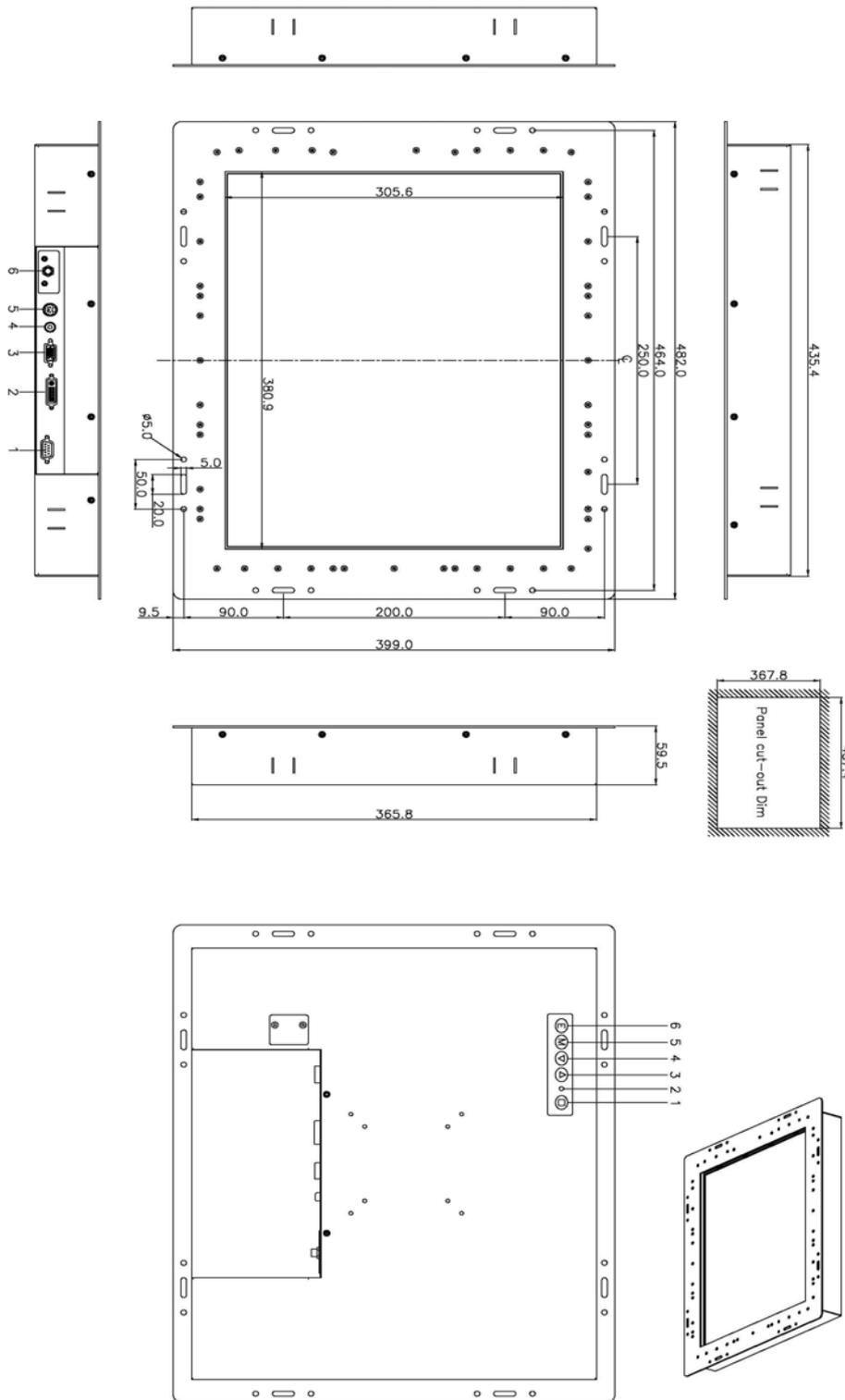
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## 1.4 Dimensions



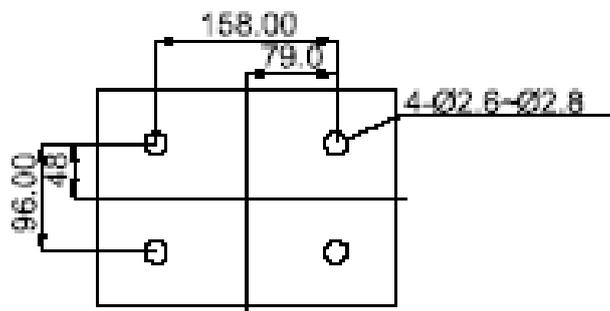
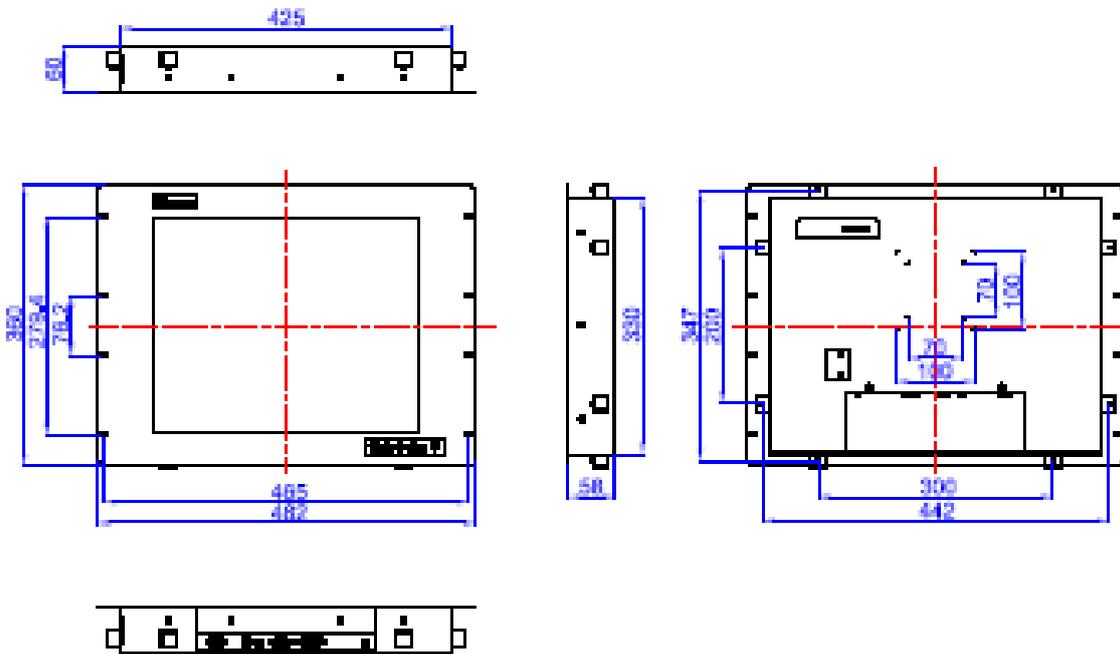
(For Senses SV19P – Rack or panel mount)

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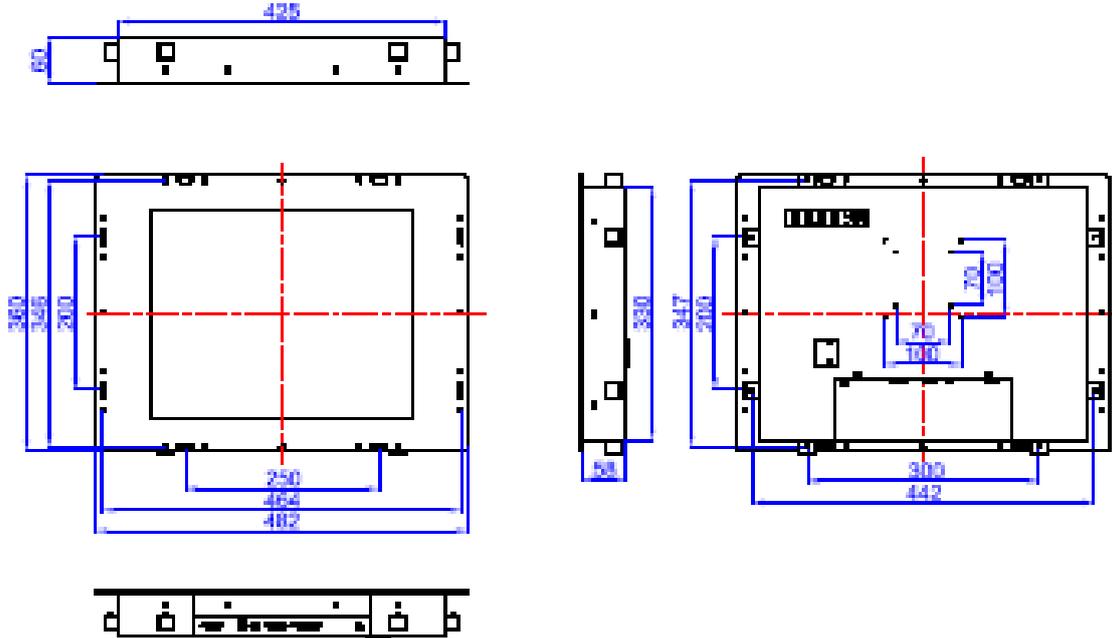
(For Senses SV19F – Open frame)

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(For Senses SV17P – Rack or panel mount)

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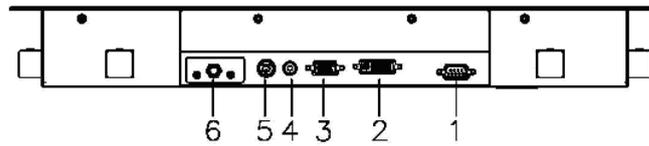


(For Senses SV17F – Open frame)

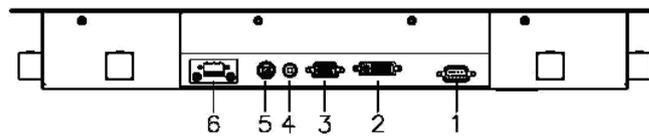
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## 1.5 I/O Inputs

- For Senses SV19 monitors



**SV19-AC Inputs**



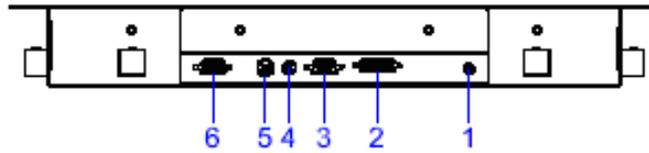
**SV19-DC Inputs**

1. **T/S Port (D-sub optional):** This connector will be present only if a touchscreen is installed. It must be connected to the RS-232 port of the computer. The touchscreen cable is included with all orders, which include the touchscreen option.
2. **DVI Port:** This connector can be connected to the system via the external DVI connector located on the bottom side of the system unit.
3. **VGA Port (D-sub):** This D-Sub15 connector can be connected to the system via the external D-Sub15 connector located on the bottom side of the system unit.
4. **AV Port:** This connector can be connected to the system via the external connector located on the bottom side of the system unit.
5. **S-Video Port:** This connector can be connected to the system via the external connector located on the bottom side of the system unit.
6. **DC +12V:** This connector will be connected to the DC 12V Switching Power Supply.

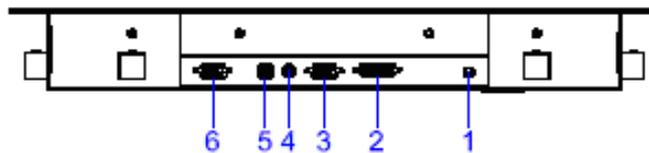
**Remark:** SV19 only supports one display input. Please do not plug-in multiple displays at the same time.

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- For Senses SV17 monitors



**SV17P Inputs**



**SV17F Inputs**

1. **DC +12V:** This connector will be connected to the DC 12V Power Supply.
2. **DVI Port:** This connector can be connected to the system via the external DVI connector located on the bottom side of the system unit.
3. **VGA Port (D-sub):** This D-Sub15 connector can be connected to the system via the external D-Sub15 connector located on the bottom side of the system unit.
4. **AV Port:** This connector can be connected to the system via the external connector located on the bottom side of the system unit.
5. **S-Video Port:** This connector can be connected to the system via the external connector located on the bottom side of the system unit.
6. **T/S Port (D-sub optional):** This connector will be present only if a touchscreen is installed. It must be connected to the RS-232 port of the PC. The touchscreen cable is included with all orders, which include the touchscreen option.

**Remark:** SV17 only supports one display input. Please do not plug-in multiple displays at the same time.

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## Chapter 2

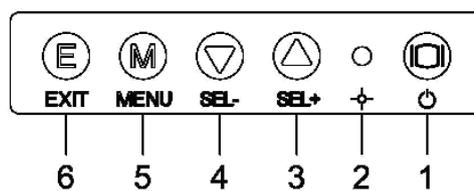
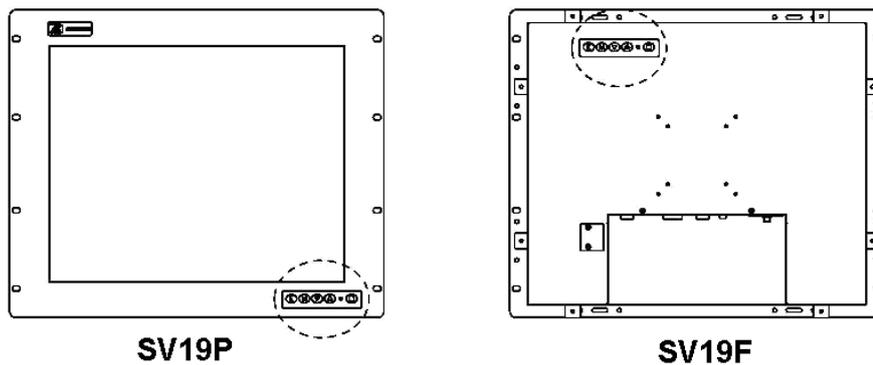
### System Setup

This chapter details the system parts and components with figures. Sections include

- **System Configuration**
- **Panel Mounting**
- **Wall Mounting**
- **Rack Mounting**
- **Desktop Stand**

### 2.1 System Configuration

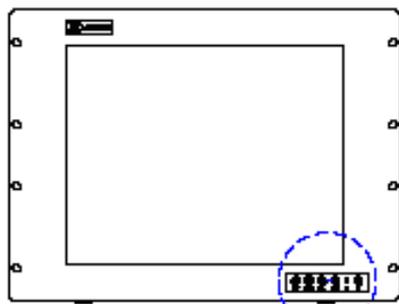
The figure below shows the front and rear views of Senses SV19 / SV17 monitors.



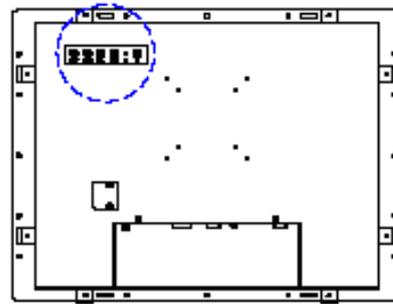
Control Keypad

(For Senses SV19)

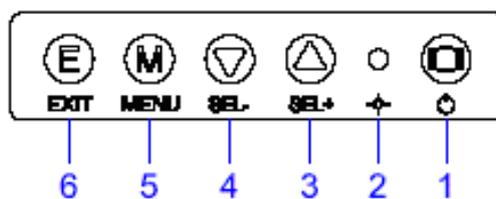
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SV17P



SV17F



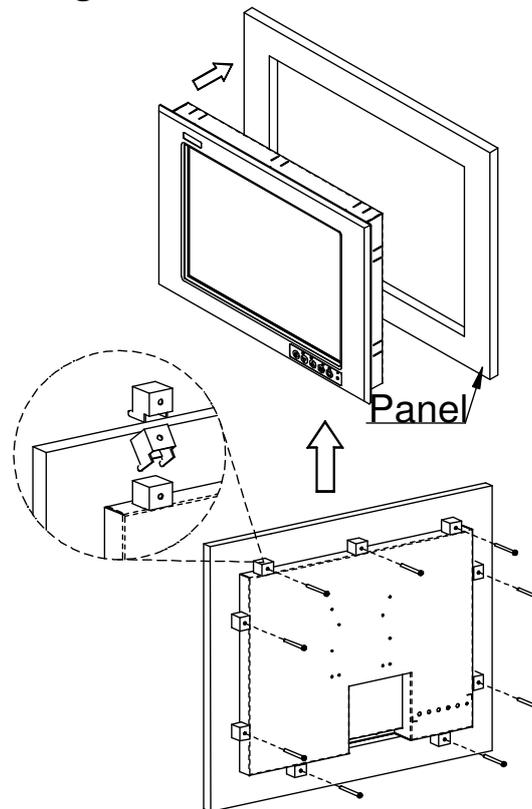
Control Keypad

(For Senses SV17)

1. **Power switch:** Press this button to turn the monitor on / off.
2. **Power LED:** When the light is green, the power is on with an input signal. When the light is flashing, power is active, with no input signal.
3. **SEL+:**  
To scroll up the menu.  
To increase the value of selected item.
4. **SEL-:**  
To scroll down the menu.  
To decrease the value of selected item.
5. **Menu:**  
Press this button to turn on/off the OSD (On Screen Display) main menu.  
Press this button to activate selected items.
6. **Exit:** Press this button to exit/leave the selection menu.

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## 2.2 Panel Mounting



Two accessory items are needed for this application.

- Mounting bracket x 8 pcs
- Pan head screws (M4x0.7PxL45.0mm) x 8 pcs

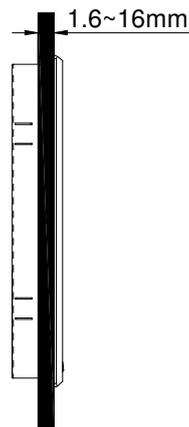
### Installation instruction

1. Find a plate and cut off a window, refer to **1.4 Dimensions** for the dimension details.
2. Screw the mounting bracket to the unit.
3. Combine flange nuts with box head screws and then screw to the mounting bracket to tighten the unit.

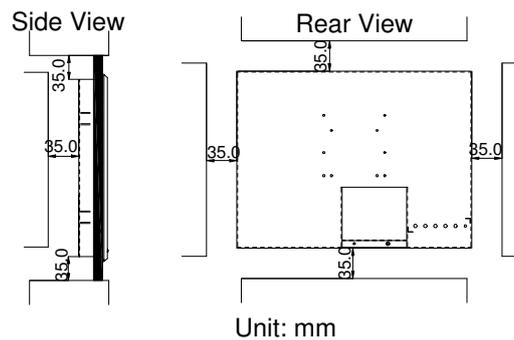
**Note:** To obtain the maximum degree of moisture resistance, be sure to mount the Senses industrial monitor on a smooth, flat surface.

The panel itself can be from 1.6 to 16.0mm thick. Strengthening may be required for the panel. Be sure to consider the weight of the monitor when designing the panel.

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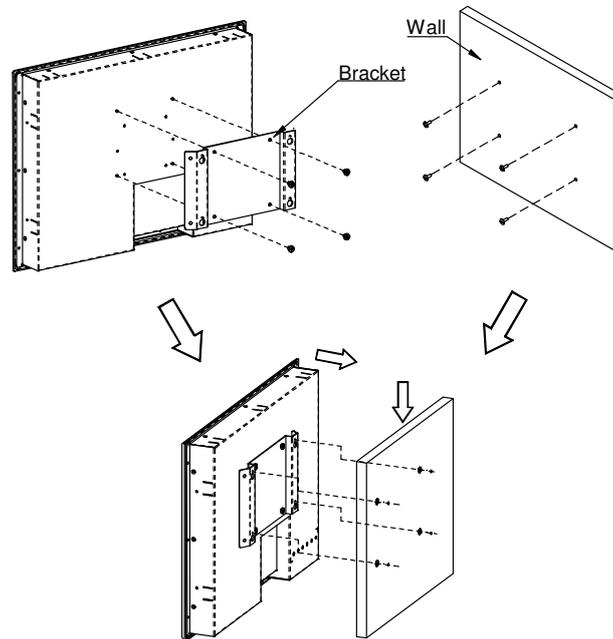


**Note:** To enhance the Senses SV19 / SV17 monitor's maintainability, operability and ventilation, allow at least 35mm clearance between the monitor and any other objects. (The clearance must be large enough to allow you to insert or remove expansion boards and to attach connectors.)



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## 2.3 Wall Mounting (Optional)



These monitors are designed to support wall mounting applications.

There are three accessory items to support this feature:

- Wall mounting bracket x 1 pc
- Binding head & washer screws (M4x0.7PxL6.0mm) x 4 pcs
- Truss head screws (TTS-4, 3.5x10mm-black) x 4 pcs

### Installation instructions

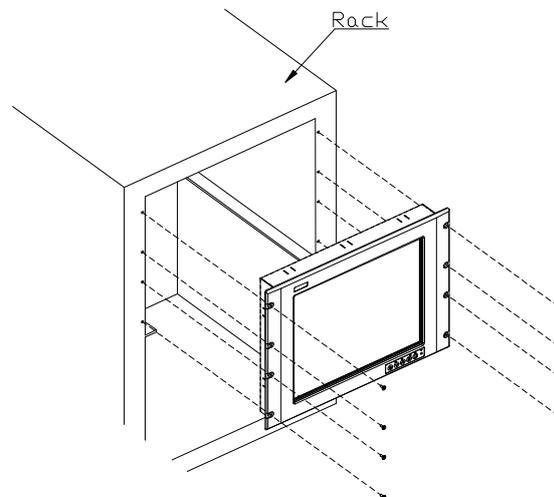
1. Refer to hole location in section **1.4 Dimensions**. Screw the truss head screws to the hole location on the wall.

**Note:** Do not tighten the screw when mounting the monitor. The minimum space between the wall and the top of screw should be 1.6mm.

2. Mount the wall mounting bracket to the back cover of the unit.
3. Mount the unit to the wall.

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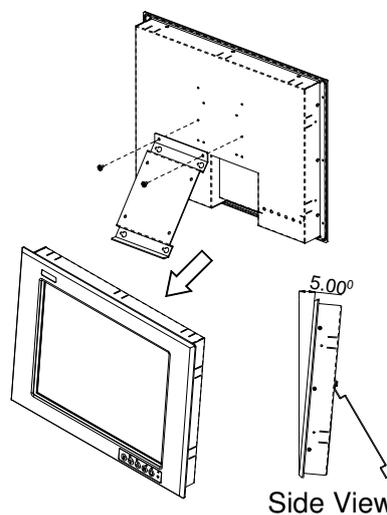
## 2.4 Rack Mounting



### Installation instruction

1. Remove 8 seal pads in front panel.
2. Senses SV19 / SV17 can be mounted directly to standard 19" industrial rack cabinets. There are four screw holes on each side of front panel.

## 2.5 Desktop Stand (Optional)



These monitors are designed to support desktop stand applications. Two accessory items are needed for this application.

- Wall mounting bracket x 1 pc
- Binding head & washer screws (M4x0.7PxL6.0mm) x 2 pcs

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## Installation instruction

1. Mount the wall mounting bracket with the binding header & washer screws to the back over of the monitor.
2. The monitor can now stand on a desktop.

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## Appendix

### Appendix A

#### Supported Input Timing Modes

##### Supported Input Timing Modes

The following timings are already programmed into the unit. The input synchronous signals are automatically recognized.

Preset No.	Display Size	Vsync (Hz)
1	640x350	70
2	640x400	70
3	640x480	60
4	640x480	72
5	640x480	75
6	720x400	70
7	800x600	60
8	800x600	72
9	800x600	75
10	1024x768	60
11	1024x768	70
12	1024x768	75
13	1152x864	75
14	1280x960	60
15	1280x1024	75

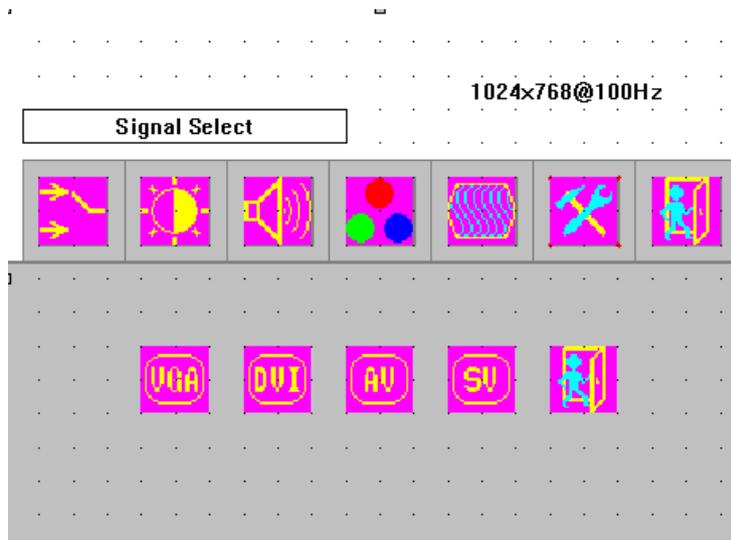
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## Appendix B

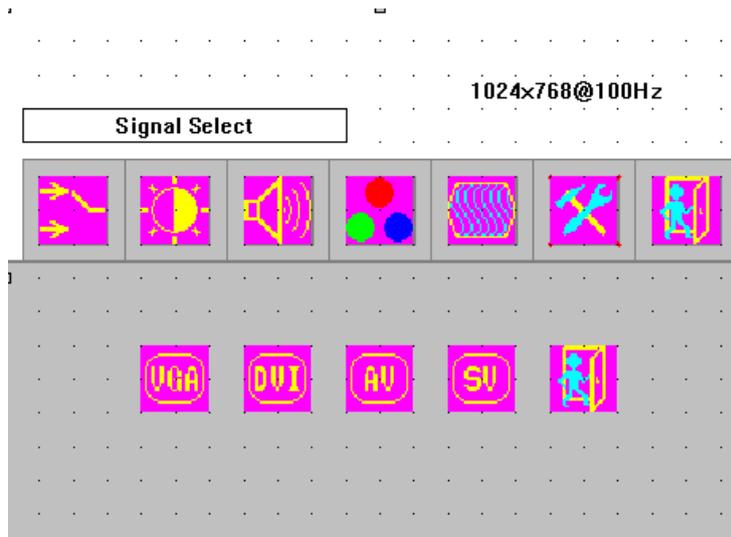
### OSD Operation

#### Function Description of OSD Menu

##### Main Screen



##### Signal Select

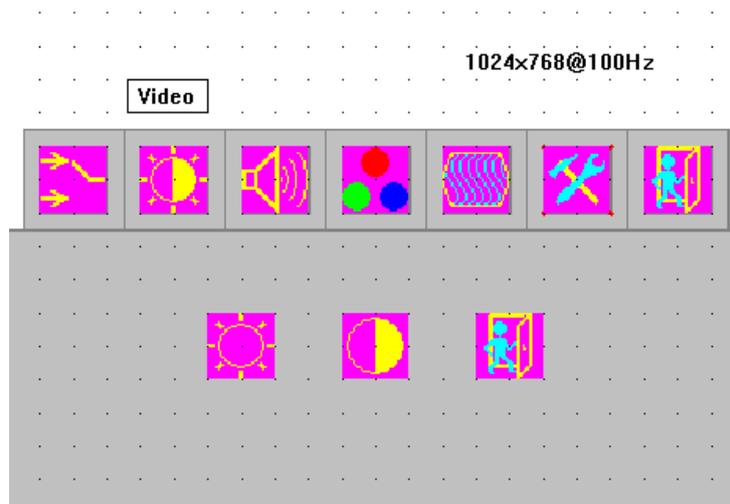


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- VGA Input**  
Setting Monitor's Input to VGA
- DVI Input**  
Setting Monitor's Input to DVI
- AV Input**  
Setting Monitor's Input to AV
- S-Video Input**  
Setting Monitor's Input to S-Video
- Exit**  
Exit the LCD Setting

## Video Adjust



- Brightness Adjust**  
Adjust Monitor's Brightness  
Use ▲ or ▼ button to increase or decrease the setting.



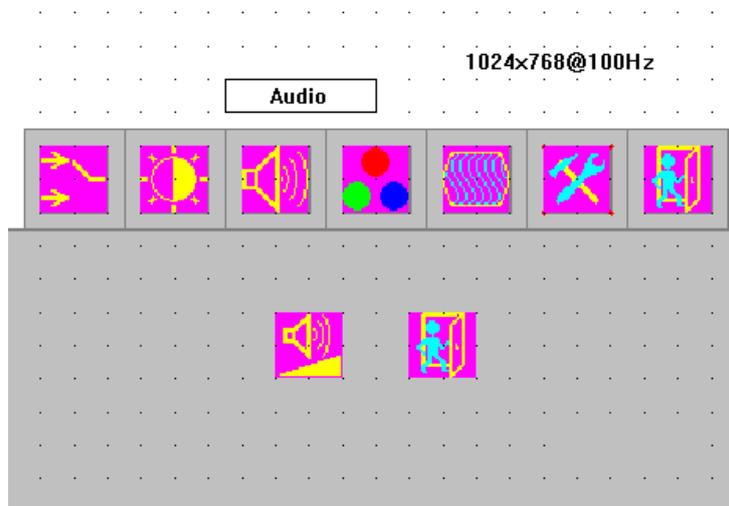
- Contrast Adjust**  
Adjust Monitor's Contrast  
Use ▲ or ▼ button to increase or decrease the setting.



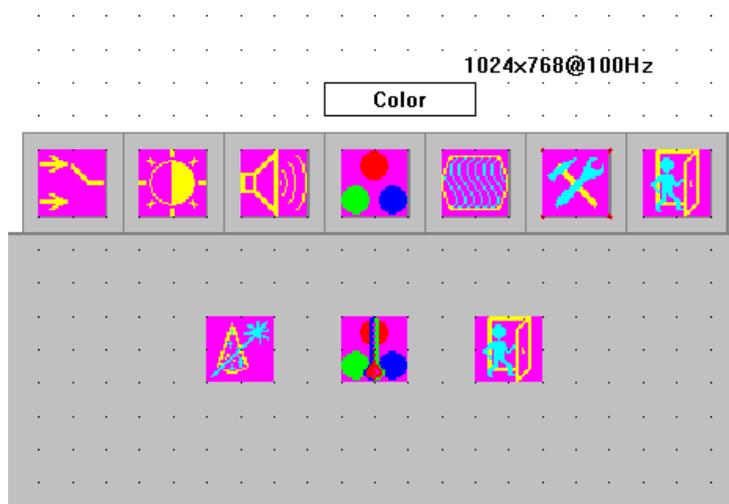
- Exit**  
Exit the LCD Setting

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**Audio Adjust: The Senses SV19 / SV17 do not support Audio.**



## Colour Adjust



### Automatic Colour Tuning

Monitor will automatically tune the colour setting.



### Manually Colour Tuning

Adjust colour setting  
Use ▲ or ▼ button to increase or decrease the setting.

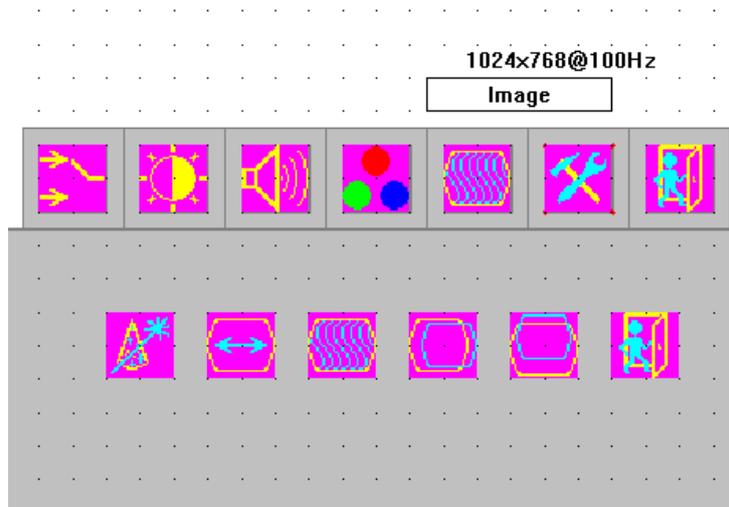


### Exit

Exit the LCD Setting

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## Image Adjust



### Automatic Image Tuning

Monitor will automatically tune the image setting.



### Horizontal Width Adjust

Adjust Monitor's horizontal width setting.  
Use ▲ or ▼ button to increase or decrease the setting.



### Horizontal Phase Adjust

Adjust Monitor's horizontal phase setting.  
Use ▲ or ▼ button to increase or decrease the setting.



### Horizontal Position Adjust

Adjust horizontal position setting.  
Use ▲ or ▼ button to increase or decrease the setting.



### Vertical Position Adjust

Adjust vertical position setting.  
Use ▲ or ▼ button to increase or decrease the setting.

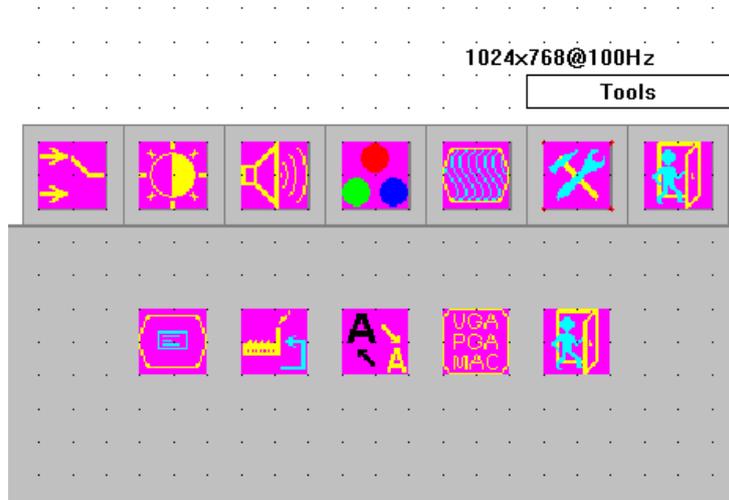


### Exit

Exit the LCD Setting

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## Image Adjust



### OSD Setting

Adjust OSD setting.



### Recall Previous Setting

Monitor will recall the previous setting.



### Sharpness Adjust

Adjust Monitor's sharpness setting.

Use ▲ or ▼ button to increase or decrease the setting.