



# SureSigns VSV

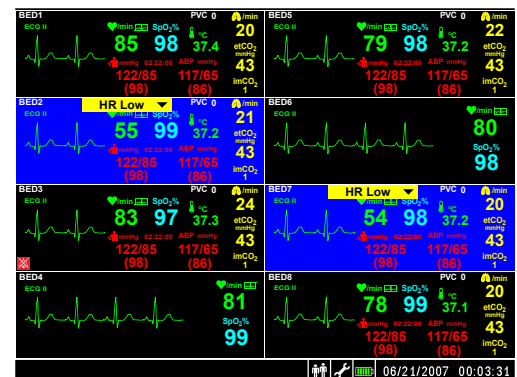
## Vital Signs Viewer Technical Data Sheet

### Description

The SureSigns VSV provides basic central viewing and alarming for SureSigns VM Series patient monitors. It allows continuous, real-time remote viewing of patient physiological information from up to 12 connected monitors.

Each patient's data is obtained from VM Series patient monitors that are connected to the VSV with a LAN (Ethernet) connection. The VSV displays vital signs, alarms, and one waveform for each connected patient.

Each patient's data is shown on the Main Screen in an individual viewing pane. The Main Screen can be configured to one of three layouts, capable of displaying up to 4, 8 or 12 patients at a time.



From the viewing pane, the user can temporarily silence active alarms, request a print, and enlarge the pane to show data in greater detail.

The VSV uses the Philips patented color coding capability to visually identify a patient in alarm and its severity on the Main Screen. Multi-level, audible

alarm tones also indicate alarms and their severity.

Patient data (name, ID, and type) can be entered at the VSV into a central Patient List. This list is then available at each monitor on the network to simplify patient admission.

The VSV has one product number for easy ordering. It is customer/distributor installable and includes the following standard components:

- Mouse, keyboard, USB hub, router
- Lithium ion battery
- Integrated recorder
- Installation and Setup Guide, Service Guide, Instructions for Use and a Quick Reference Card

## Features and Benefits

- 10.4" Color TFT display with simple, intuitive interface
- Colored waveforms and large numerics
- Back-up battery power- 4 hrs
- Flexible display formats- 4, 8 and 12 patient views
- Alarm Silence capability- temporarily silences individual alarms at the VSV and at the remote monitor
- Zoom feature to enlarge any patient's viewing pane
- Navigation wheel
- Optional External 19" SVGA display
- Nurse Call alarm output
- HL7 data output via Ethernet connection
- Password-protected administrator/ maintenance mode
- Ability to enter patient data (name, ID, type) into a central patient list which is available to networked monitors

## Main Components

### Display

The SureSigns VSV features a 10.4" SVGA TFT-AM LCD monitoring screen.

### Front Panel

The following fixed key switches are located on the front panel:

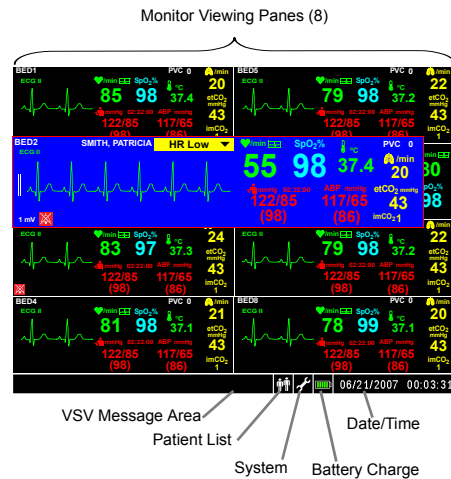
- Main Screen
- On/Standby

The following LED indicators are located on the front panel:

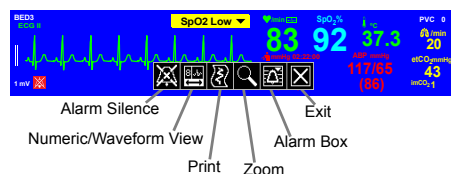
- AC power
- Battery status

### User Interface

The main screen displays parameter values, real-time waveforms and alarm messages for connected patients.



Use the keyboard, mouse, or rotary wheel to select a monitor viewing pane or open menu screens. Click a viewing pane to open a pop-up menu of common functions.



## Specifications

### Safety Standards

- UL 60601-1, CAN/CSA C22.2 No. 601.1-M90, EN60601-1, EN60601-1-1, EN60601-1-2
- Protection class: Class I, internally powered equipment, per EN60601-1
- Mode of Operation: Continuous

### Physical Specifications

#### Size

- Width: 32 cm (12.6 in)
- Height: 27 cm (10.6 in)
- Depth: 17.5 cm (6.9 in)
- Weight: 3.4 Kg (7.5 lbs), including battery

### Display

Screen resolution: 800 active pixels/line, 600 active lines per frame

Screen active area: 211.2 x 158.4 mm (8.31 x 6.24 in)

### Recorder

- Recorder type: Thermal
- Paper width: 58 mm
- Speed: fixed at 25 mm/s

### Environmental Specifications

#### Mechanical Shock

- Peak acceleration: 150 m/s<sup>2</sup> (15.3g)
- Duration: 11 ms
- Pulse shape: Half sine
- Number of shocks: 3 shocks per direction per axis (18 total)

## Mechanical Vibration

- Frequency range: 10 Hz – 2000 Hz
- Resolution: 10 Hz
- Acceleration amplitude:
  - 10 Hz – 100 Hz 1.0 (m/s<sup>2</sup>)/Hz
  - 100 Hz – 200 Hz -3 db/octave
  - 200 Hz – 2000 Hz 0.5 (m/s<sup>2</sup>)/Hz
- Duration: 10 minutes per each perpendicular axis (3 total)

## Thermal

- Operating temperature:
  - 10 – 40°C (50 – 104° F)
- Storage temperature (VSV only):
  - 20 – 50°C (-4 – 122° F)

## Humidity

- Operating: Up to 90% RH, non-condensing
- Storage: Up to 90% RH, non-condensing

## Altitude

- Up to 10,000 ft. above sea level (708 mbar)

## Electromagnetic Compatibility

- Meets the EN60601-1-2:2001 standard
- Class B

## Electrical Specifications

- Internal battery: Lithium ion, smart battery 11.1 V, 7200 mAh
- Battery operating time (new, fully-charged battery): 4 hours
- Battery charge time: < 4 hours
- Internal power supply: 100 – 240 VAC, 50/60 Hz

# Application Features

## Viewing Pane Data

The VSV can show a patient's data in the following formats:

- Numeric Format: The default format for all viewing panes. A shortened waveform is shown along with all vital signs available from the monitor.
- Waveform Format: The waveform selected at the bedside monitor is enlarged to approximately three-quarters of the viewing pane. Heart Rate and SpO<sub>2</sub>, if monitored, are shown to the right.
- Zoom Format: Shows all numeric data and 103 mm of waveform.

## Alarms

- Three alarm severities (high, medium, low) that determine the visual and audio response of the VSV.
  - Visual alarm indicators, including blue viewing panes, flashing numeric values, alarm messages, and alarm icons
  - Audible alarms, configurable for volume, tone, and temporary silence of a monitor's active alarms

## Device Connections

- USB port: Standard USB 1.1, for connecting to USB hub, keyboard, and mouse, or for performing software upgrades
- Ethernet port: For connecting to router and exporting data in HL7 format
- Nurse call connector: Sends alarm output to a nurse call system
- VGA port: For connecting to optional 19" external SVGA display

# Ordering Information

## SureSigns VSV - 863067

Basic central viewing and alarming device.

- Displays up to 12 patients
- Displays up to 1 waveform per patient
- Accessories included:
  - Mouse, keyboard, USB hub, router
  - Lithium ion battery
  - Integrated recorder
  - 1 box (5 rolls) of recorder paper

## External SVGA Display - 865058

- 19" SVGA display
- Class B

## SureSigns VSV Accessories

### 989803144631

Lithium ion battery

### 989803136891

58 mm thermal recorder paper (5 rolls)

### 989803144011

Wall Mount

## Regulatory

United States Federal Law restricts this device to sale by or on the order of a physician.

The SureSigns VSV is a Class IIb device and complies with the requirements of the Council Directive 93/42/EEC of 14 June 1993 concerning medical devices and carries CE-marking accordingly.



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