

# Surveyor S19 & S12

PATIENT MONITORING SYSTEMS



Surveyor S19 wall mounted



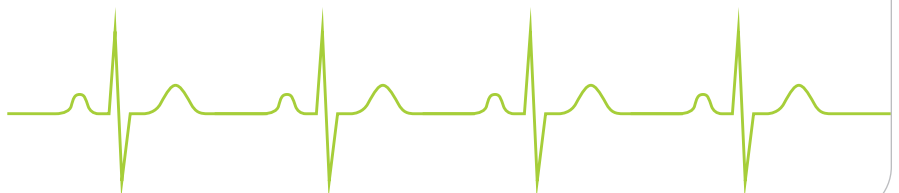
Surveyor S12 wall mounted

## PRODUCT FEATURES

- **Modern and Flexible Patient Monitoring System**  
Modern bedside monitoring platform offering a simple and intuitive touch-screen user interface, plus exceptional visibility.
- **Slim Design**  
Slender and streamlined monitor design provides convenience and ease in crowded patient rooms.
- **Portable Solution**  
Surveyor™ S12 with high-resolution 12" touch-screen display, extensive battery runtime, and integrated handle is an ideal portable monitoring solution.
- **High Acuity Solution**  
Surveyor S19 with high-resolution 19" touch-screen display offers a comprehensive solution for advanced monitoring needs.
- **Impressive Flexibility**  
Configurable display layouts, supporting up to 8 waveforms of data plus a 12-lead display format, enable users to customize their system.
- **Innovative ECG Acquisition Module**  
Utilizes Mortara's unique AM12™ acquisition module with replaceable lead wires, remote acquisition and printing capabilities, and lead fail indicator for added convenience and efficiency.
- **Multiple Printing Options**  
Surveyor S12 includes an integral thermal recorder. Surveyor S19 offers an external, thermal printing solution for added flexibility.
- **Comprehensive Central Monitoring Capabilities**  
Communicate with the Surveyor Central using wired technology for a complete patient monitoring solution.
- **Streamlined Connectivity**  
Allows for easy integration to an existing hospital infrastructure using HL7 or DICOM® 12-lead ECG output through Surveyor Central.

PATIENT monitoring

 Mortara



## SURVEYOR S19 and S12 PATIENT MONITORING SYSTEMS

FEATURE	SPECIFICATIONS*
<b>INSTRUMENT TYPE</b>	Patient Monitor
<b>DIMENSIONS</b>	<b>S12:</b> 315 W x 203 H x 125mm D (12.4 W x 8 H x 4.9" D) <b>S19:</b> 468 W x 289 H x 97mm D (18.4 W x 11.4 H x 3.8" D)
<b>WEIGHT</b>	<b>S12:</b> 3 kg (6.6 lbs) standard configuration; includes battery and built-in recorder <b>S19:</b> 5 kg (11.2 lbs) standard configuration; includes battery, excludes recorder
<b>DISPLAY TYPE</b>	High-definition, antiglare 16:9 color TFT LCD with LED backlight and resistive touch panel controls
<b>DISPLAY SIZE</b>	<b>S12:</b> 11.6" diagonal; 256mm x 144mm active area <b>S19:</b> 18.5" diagonal; 410mm x 230mm active area
<b>DISPLAY RESOLUTION</b>	<b>S12:</b> 1366 x 768 pixels <b>S19:</b> 1366 x 768 pixels
<b>RECORDER TYPE</b>	<b>S12:</b> Thermal; 2-trace; built-in <b>S19:</b> Thermal; 2-trace; external
<b>RECORDER SPEED/RESOLUTION</b>	25mm/s, 200 (v) x 400 (h) dpi
<b>PRINT WIDTH/PAPER WIDTH</b>	48mm/50mm
<b>PRINT FORMATS</b>	Strip chart printing of 2 user-selectable waveforms (ECG, IBP, SpO2, CO2)
<b>ECG</b>	
<b>ECG MODES</b>	Adult/pediatric
<b>SIMULTANEOUS LEADS AVAILABLE</b>	3-lead patient cable: I, II, III 5-lead patient cable: I, II, III, aVR, aVL, aVF, and V AM12: I, II, III, aVR, aVL, aVF, V1, V2, V3, V4, V5, V6
<b>INTERPRETATION</b>	Available with AM12 acquisition module only
<b>ECG GAIN</b>	0.5, 1, 2, and 4 mV/cm
<b>BEAT RECOGNITION</b>	Normal, ventricular, paced
<b>HR MEASUREMENT RANGE</b>	15 -300 bpm
<b>PACER DISPLAY/ANALYSIS</b>	User selectable
<b>ARRHYTHMIA DETECTION</b>	VFib, Asystole, VTach, PVC Run, VRhythm, Couplet, Bigeminy, Trigeminy, Sustained Tachycardia, Sustained Bradycardia, Irregular, PVC/m too high, Pause, Pacer Non-Capture
<b>ST SEGMENT ANALYSIS</b>	Sensing leads: any ECG lead available based on lead set used
<b>RESPIRATION</b>	
<b>METHOD 1</b>	Capnography Range: 0 to 150 bpm
<b>METHOD 2</b>	Impedance Pneumography Via 3 - or 5-lead patient cable Sensing lead 2 Range: 2 to 120bpm

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FEATURE	SPECIFICATIONS*
<b>NON-INVASIVE BLOOD PRESSURE</b>	
<b>MEASUREMENT METHOD</b>	Oscillometric
<b>INPUT CONNECTOR</b>	Single Lumen Hose (Quick-disconnect fitting)
<b>NIBP MEASUREMENT RANGE</b>	Systolic: 30 - 250 mmHg Mean: 20 - 230 mmHg Diastolic: 10 - 210 mmHg
<b>MEASUREMENT MODES</b>	Manual or interval (auto) measurement
<b>INTERVAL MEASUREMENT SETTINGS</b>	OFF, 3, 5, 10, 15, 30, 60 minutes
<b>PULSE RATE MEASUREMENT RANGE</b>	30 - 240 bpm
<b>INVASIVE PRESSURE</b>	
<b>MEASUREMENT RANGE</b>	-50 to 300 mmHg
<b>PULSE RATE MEASUREMENT RANGE</b>	30 - 250 bpm
<b>PULSE OXIMETRY</b>	
<b>MEASUREMENT METHOD</b>	Absorption - Spectrophotometric (dual wavelength)
<b>TECHNOLOGY</b>	Nellcor™ OxiMax™ or Mortara Surveyor
<b>MEASUREMENT RANGE</b>	SpO <sub>2</sub> : 30 - 100%, calibrated range 70-100%
<b>PULSE RATE MEASUREMENT RANGE</b>	PR with Surveyor SpO <sub>2</sub> : 30 - 240 bpm PR with Nellcor SpO <sub>2</sub> : 25 - 250 bpm
<b>TEMPERATURE</b>	
<b>INPUT CONNECTOR</b>	2-pin connector
<b>TEMP MEASUREMENT RANGE</b>	T1 & T2: 5.0 to 50.0°C (41.0 to 122.0°F) ΔT: 0.0 to 50.0°C (32.0 to 122.0°F)
<b>PROBE COMPATIBILITY</b>	YSI 400-series probes
<b>CARDIAC OUTPUT</b>	
<b>MEASUREMENT METHOD</b>	Thermodilution
<b>CO MEASUREMENT RANGE</b>	0.3 to 20.0 l/min
<b>MEASUREMENT START</b>	Automatic, manual
<b>CO AVERAGING</b>	Up to 4
<b>BLOOD TEMPERATURE MEASUREMENT RANGE</b>	33.0 - 40.0°C
<b>INJECTATE TEMPERATURE MEASUREMENT RANGE</b>	0.0 - 40.0°C
<b>COMPUTATION CONSTANT RANGE</b>	0.000 - 0.999
<b>HEMODYNAMIC CALCULATIONS</b>	CO, CI, BSA, SV, SVI, SVR, SVRI, PVR, PVRI, LVSW, LVSWI, RCW, RCWI, RVSW, RVSWI, PAWP



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**SURVEYOR S19 and S12 PATIENT MONITORING SYSTEMS**

FEATURE	SPECIFICATIONS*
<b>CO2</b>	
<b>MEASUREMENT METHOD</b>	Side-stream (Non-dispersive IR absorption)
<b>TECHNOLOGY</b>	Oridion Microstream®
<b>INPUT CONNECTOR</b>	FilterLine®
<b>MEASUREMENT RANGE</b>	etCO2: + FiCO2: 0 to 99 mmHg Resp: 0 to 150 bpm
<b>TRENDS</b>	
<b>TREND DATA</b>	Up to 24 hours of parameter data
<b>TREND DISPLAY INTERVALS</b>	1 min, 5 min, 15 min, 1 hr, 4 hrs
<b>POWER REQUIREMENTS</b>	
<b>POWER SOURCE</b>	AC power/battery
<b>AC POWER SOURCE</b>	External AC power adapter 100 - 240 VAC; 1.2 A max; 50 - 60 Hz
<b>BATTERY TYPE</b>	Internal lithium-ion rechargeable; 8700 mAh
<b>BATTERY RUNTIME</b>	<b>S12:</b> 3 hrs <b>S19:</b> 2 hrs
<b>BATTERY RECHARGE TIME</b>	Powered off: 5 hrs maximum Powered on: <b>S12:</b> 7 hrs maximum <b>S19:</b> 20 hrs maximum

\*Specifications subject to change without notice.

Not available in the U.S. or Canada.

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