

nCompass™ Series Patient Monitors

Technical Specifications

ECG

Number of Leads: 3- or 5-Lead
Lead View: User-selectable; I, II, III, aVR, aVL, aVF, V (5-Lead); I, II, or III (3-Lead)

Gain Selection: x0.5, x1, x2, and x4
Frequency Response: Diagnostic: 0.05 to 100 Hz (-3dB);
Monitor: 0.5 to 40 Hz (-3dB);
ST: 0.05 to 40 Hz (-3dB)

Electrosurgery Protection: Yes
Defibrillator Protection: Yes
Pacer Detection/Rejection: Yes
ST Accuracy: ± 0.2 mm or $\pm 5\%$ of reading, whichever is greater, over heart range of 30 to 120 bpm
ST Range: -6.0 to 6.0 mm

NIBP (Non-Invasive Blood Pressure)

Technique: Oscillometric upon inflation
Measurement Cycle: < 40 sec. typical
Auto. Measurement Cycles: 2, 3, 5, 10, 15, 30 min; 1, 2, 4 hr
Max. Allowable Cuff Pressure: Adult/Pediatric: 300 mmHg; Neonate: 150 mmHg
Range: Adult/Pediatric: 30 to 300 mmHg;
Neonate: 20 to 150 mmHg
Resolution: 1 mmHg
Transducer Accuracy: ± 2 mmHg or $\pm 2\%$ of reading, whichever is greater, over full range
STAT Mode: 5 min of consecutive readings
Clinical Accuracy: Complies with AAMI SP-10:2002

Pulse Oximetry

Range: 1% to 99%
Resolution: 1%
Accuracy: 70% to 99% range: $\pm 2\%$; 50% to 69% range: $\pm 3\%$; < 50%: unspecified
Method: Dual wavelength LED

Heart (Pulse) Rate

Source: User selectable: Smart, ECG, Pleth, NIBP, IBP
Range: 20 to 300 bpm (ECG, Pleth);
30 to 240 bpm (NIBP); 30-300 bpm (IBP)
Accuracy: ± 1 bpm or $\pm 1\%$ (ECG) whichever is greater

Temperature

Channels: 2
Probe: YSI-700 Series
Range, Accuracy: 68° to 113°F (20° to 45°C): $\pm 0.1^\circ\text{C}$
Probe: YSI-400 Series
Range, Accuracy: 59° to 113°F (15° to 45°C): $\pm 0.1^\circ\text{C}$
Display Resolution: $\pm 0.1^\circ$

Respiration

Rate: 6 to 150 bpm (ECG); 2 to 120 bpm (CO2)
Resolution: 1 bpm
Accuracy: ± 2 bpm or $\pm 2\%$, whichever is greater
Source: User selectable: Smart, CO2, ECG

CO2

Units: mmHg; %; kPa; Torr
Method: Non-dispersive infrared; autocalibrating
N2O Compensation: Manual (On/Off)
Range: 0 to 99 mmHg; 0 to 12.5%; 0 to 12.5 kPa; 0 to 99 Torr
Resolution: 1 mmHg; 0.1%; 0.1 kPa; 1 Torr
Flow, Sample Rate: 200 ml/min
Accuracy: ± 2 mmHg; ± 0.3 vol. %; ± 0.3 kPa; ± 2 Torr or $\pm 4\%$ of reading, whichever is greater, at 200 ml/min & respiratory rate of ≤ 120 Br/min
Rise Time: 170 ms (10 to 90%) at 200 ml/min

IBP (Invasive Blood Pressure)

Channels: 1 or 3
Transducer Sites: Selectable: ART, PA, LV, RV, LA, RA, CVP, ICP
Pressure Range: -10 mmHg to 300 mmHg
Transducer Freq. Response: 0 to 20 Hz; Impedance >300 ohms;
Transducer Sensitivity: 5 $\mu\text{V/V/mmHg}$
Accuracy: ± 1 mmHg or $\pm 1\%$, whichever is greater

Alarms

Indication: Audible; Visual (EN 60601-1-8)
Silence: Yes; 2 minutes or permanent

Trends

Memory: 24 hours at 30 second intervals
Display: Tabular, Graphical

Display

Screen: 12.1" active color touch screen
Resolution: Internal: 800 X 600 pixels
External: 800 x 600 pixels
Waveform: 6, maximum
Waveform Types: ECG leads I, II, III, aVR, aVL, aVF, V; CO2; Respiration; Pleth; IBP; breath-by-breath CO2; ST histograms; Mini-Trends; OXY-CRG;
Sweep Speed: 6.25, 12.5, 25 or 50 mm/sec

Controls

Keys: 10; membrane-activated
Rotary Knob: Push and rotate; 24 steps/turn

System Outputs

COM ports: Two RS 232 compatible DB9 ports;
USB (for software downloads only)
Contact switch; 3.5 mm stereo phone jack, 14 mm BNC connector
Video Port: Serial VGA compatible
DC Out: 5 VDC output for optional wireless accessory
External Module Port: 8-PIN circular connector

Printer (optional)

Type: Internal thermal line
Paper Speed: 12.5, 25 or 50 mm/sec

Physical Properties

Weight: 12 lbs; 5.4 kg
Size: 12" (H) x 14.5" (W) x 11.5" (D);
30.5 cm (H) x 36.8 cm (W) x 29.2 cm (D)

Power Requirements

Voltage: 100 to 240 VAC; 50/60 Hz
Power Consumption: 35 W, typical
Battery: 1 sealed lead acid
Battery Life: 2 hours, typical (3 hours, typical for base unit)
Recharge Time: 4 to 6 hours, typical

Environmental

Operating Temperature: 32° to 104°F (0° to 40°C)
Storage Temperature: 23° to 122°F (-5° to 50°C)
Operating Humidity: 15% to 90%, noncondensing
Operating Altitude: -300 to 3,000 meters

Classification

Medical Device: Class II Equipment (IIb EU)
Electrical Protection: Class I Equipment
Degree of Protection: Type CF, Defibrillator-proof
Protection Against Ingress: IPX1
Safety: EN 60601-1



Quality systems registered to ISO 13485 and CE marking per Annex II, Clause 3 of Council Directive No. 93/42/EEC concerning medical devices.

Configurations Available

- 81H000X Standard
- 81H000P Standard, printer
- 81H001X Standard with CO2
- 81H001P Standard with CO2, printer
- 81H010X Standard, 1 channel IBP
- 81H010P Standard, 1 channel IBP, printer
- 81H011X Standard with CO2, 1 channel IBP
- 81H011P Standard with CO2, 1 channel IBP, printer
- 81H030X Standard, 3 channel IBP
- 81H030P Standard, 3 channel IBP, printer
- 81H031X Standard with CO2, 3 channel IBP
- 81H031P Standard with CO2, 3 channel IBP, printer



nCompass™ with Poet™ IQ 8500H agent gas analyzer