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Nellcor™ Bedside Respiratory Patient Monitoring System PM1000N

Nellcor™ Bedside Respiratory Patient Monitoring System Features

Accuracy
Accurately assess patients' status with pulse oximetry measurements of ± 2% for 70% to 100% saturation, and low saturation accuracy of ± 3% for 60% to 80%[1,2,3]

Speed
Quickly react to changing patient status with technology that has been shown to respond and display changes in patient oxygenation and pulse rate more quickly than other technologies.[1,2]

Motion Tolerance
Accurately assess patients' status during periods of movement or noise, avoiding dropouts or delays. Covidien is the first and only company to receive FDA clearance for a motion-tolerant pulse oximetry and compliance with ISO 80601-2-61.[4]

Alarm Management
Distinguish between clinically significant desaturations and transient events with SatSeconds alarm management,[3] and identify indications of repetitive reductions in airflow (RRiA) through an adult patient's upper airway and into the lungs with OxiMax™ Saturation Pattern Detection alert (SPD).[3]

Proven Technology. State-of-the-Art Design.

The Nellcor™ bedside respiratory patient monitoring system incorporates the latest Nellcor™ digital signal processing technology for accurate, reliable readings even during low perfusion[5] and motion.[6] Its intuitive, easy-to-read, graphical user interface and color touchscreen provide you with easy access to the critical information you need.

The system provides continuous SpO2, pulse rate and respiration rate monitoring, Nellcor™ SatSeconds alarm management, and OxiMax™ SPD alert, so you can confidently detect respiratory complications early and intervene quickly. The system's highly modular software and hardware can be upgraded on-site with new features and parameters, offering long-term functionality and flexibility.

The system memory stores up to 48 hours worth of trend data at one second intervals, for review of real time and historical trend data. With this information, clinicians get a complete picture of patient status and are better informed to make treatment decisions.

Examples of PM1000N screen layouts

Features and Specifications

Performance

Measurement Range

SpO_2: 1% to 100%
Pulse rate: 20 to 250 beats per minute (bpm)
Pulse amplitude: 0.03% to 20%

Accuracy

Saturation

Adult: 70% to 100% ±2 digits

Adult and neonate low sat: 60 to 80% ±3 digits

Neonate: 70 to 100% ±2 digits

Low perfusion: 70 to 100% ±2 digits

Adult and neonate with motion: 70 to 100% ±3 digits

Pulse rate

Adult and neonate: 20 to 250 bpm ±3 digits

Low perfusion: 20 to 250 bpm ±3 digits

Adult and neonate with motion: 20 to 250 bpm ±5 digits

Electrical

Instrument

Power requirements: 80-263 VAC, 47/63 Hz, 30 VA power

Fuse rating: Slow blow 1.5A 250V

Battery

Type: Li-Ion

Battery capacity: 6 hours under nominal load conditions

Environmental

Operating Temperature

Instrument: 5°C to 40°C (41°F to 104°F)
Transport/Storage Temperature (in shipping carton): -40°C to 70°C (-40°F to 160°F)

Operating Humidity

15% to 95% noncondensing

Operating Altitude

-304.8 m to 4572 m (-1000 ft to 15,000 ft)

Physical Characteristics

Weight

3.4kg (7.5 lbs)

Size

254 x 165x 127 (mm)
10 x 6.5 x 5 (in)

Equipment Compliance

Standards Compliance

EN ISO 80601-2-61:2011
EN IEC 60601-1:2005
EN IEC 60601-1-2: 2007.03.01 3rd edition
EN IEC 60601-1-2: 2nd edition
IEC 60601-1-8: 2006 and EN 60601-1-8: 2007
EN IEC 60601-1-9: 2007
ISO 10993-1:2003
CAN/CSA C22.2 No. 60601-1:08
WEEE 2002/96/EC
RoHS directive 2011/65/EU

Equipment Classifications

Type of protection against electric shock: Class 1 (internally powered)

Degree of protection against electric shock: Type BF - Applied part

Mode of operation: Continuous

Electromagnetic compatibility: IEC 60601-1-2:2007 3rd edition

Liquid ingress: IPX1

Degree of safety: Not suitable for use in the presence of flammable anesthetics

Output

Stores up to 48 hours of trend data readings that can be downloaded for analysis and archive

Capability to connect to both wired and wireless LAN networks

Capability to connect to Philips Vuelink Module and Nurse Call via wired serial port

Capability to download trend data to PC

Display/Indicators

Pulse Amplitude Indicator (16 segments)
Plethysmographic waveform
Real time numbers
Real time trend data
Multiple alarm conditions
Up to 3 alarm conditions simultaneously
SatSeconds Alarm Management
OxiMax SPD Alert
Battery Charging
Clock
Event Marker
Histogram Display
Clinical Log
Neonatal Default Mode

Alarms

Audible and visual alarms for high/low saturation and pulse rate

SatSeconds Alarm Management settings: 10,25,50 and 100, or OFF

Saturation Pattern Detection sensitivity setting: 1,2,3 or OFF

Pulse Rate Delay settings: 5, 10 or OFF

Audible and visual warning indicators for low battery and sensor off

Audible and visual sensor disconnect alarms

Communication failure visual alarm

Backup audible alarm

Variable pitch beep tone for point-by-point changes in SpO_2

User configurable sensor alarm prioritization

Optional Accessories

GCX mounting adapter
Interface cable

1. Saraswat A, Simionato L, Dawson J, et al. Determining the best method of Nellcor pulse oximeter sensor application in neonates. *Acta Paediatr.* December 19, 2011.
2. O'Donnell CPF, Kamlin COF, Davis PG, Morley CJ. Obtaining pulse oximetry data in neonates: a randomized crossover study of sensor application techniques. *Arch Dis Child Fetal Neonatal Ed.* 2005;90:F84-F85.
3. Operator Manual 10104146 Rev E (2014-03) Pages 4-11
4. 510(k) #: K123581 510(k) Submission Date 11/19/2012
5. For accurate and reliable in low perfusion: 510(k): K012891 510(k) Submission Date 3/07/2002 clinical publications at NCT01720355 at Clinical Trials.gov
6. For accurate and reliable in motion: 510(k) #: K123581 510(k) Submission Date 11/19/2012 clinical publications at NCT01720355 at Clinical Trials.gov

Nellcor™ Bedside Respiratory Patient Monitoring System is CE marked and commercially available in European Union countries. Nellcor™ Bedside Respiratory Patient Monitoring System is not available in all markets. Please refer to local product labeling.

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