SIGNAL EXTRACTION PULSE OXIMETER™

MASIMO Rad-8®

Compact design. Unmatched clinical performance.

- Featuring Masimo SET® pulse oximetry, proven accurate during motion and low perfusion in more than 100 independent and objective studies
- The accuracy of Masimo SET pulse oximetry has been shown to reduce false alarms by 95% without missing true clinical events
- Simple, easy to use interface for quick setup and alarm management with one touch programming
- Large LED colour display is easy to read at a distance
- Compact, lightweight design is ideal for acute and alternate care settings including long term care facilities, homecare and sleep labs

Masimo®

Masimo Rad-8

FEATURES

- Sleep Mode easily configures system to perform bedside studies
- 2 second averaging in sleep mode
- Home Mode allows for safe and accurate monitoring and trending at home
- RadNet® and RadLink® interface capability for multi-patient remote monitoring
- Perfusion Index (PI) indicates arterial pulse signal strength and may be used as a diagnostic tool during low perfusion[3]
- Low Signal IQ® (SIQ) indicator highlights conditions of low signal quality
- FastSat™ tracks rapid changes in arterial O_2 with high fidelity unlike any other pulse oximeter
- APOD™ (Adaptive Probe Off Detection) offers the best probe off detection of Masimo's three sensitivity modes - APOD, Normal and MAX sensitivity
- Adjustable averaging 2 to 16 seconds
- Nurse call interface
- Up to 7 hours of internal battery life when fully charged
- 72 hours of trending memory
- Available in horizontal and vertical configurations
- Compatible with Philips Vuelink device interface module

Signal I.Q.® (SIQ) bar is a signal quality indicator, most useful during motion and low perfusion situations. The LED rises and falls with the pulse, its height indicating signal quality.

When Signal IQ is low, the display turns red, identifying suspect SpO_2 and Pulse Rate values.

The Alarm Status Indicator flashes when an alarm condition is present.

Perfusion Index (PI) indicates arterial pulse signal strength. PI may be used as a diagnostic tool during low perfusion for the accurate prediction of illness severity.[1] The PI display is green when perfusion index is greater than or equal to 0.5 (left graphic) while the PI display is red when perfusion index is less than 0.5 (right graphic).

One touch alarm limits access

Rad-8 Back Panel: Serial output to compatible devices and nurse call interface.

PERFORMANCE & ORDERING INFORMATION:

PERFORMANCE

MEASUREMENT RANGE

SpO_2 ..... 1 – 100%
Pulse Rate ..... 25 – 240 (bpm)
Perfusion Index ..... 0.02% – 20%

SATURATION ACCURACY

Saturation accuracy ..... 60% to 80%
No Motion[2] ..... ±4 digits
Saturation accuracy ..... 70% to 100%
No Motion[2]
Adults, Infants, Paediatrics ..... ±2 digits
Neonate ..... ±3 digits
Motion[4]
Adults, Paediatrics ..... ±3 digits
Neonate ..... ±3 digits
Low Perfusion[5]
Adults, Paediatrics ..... ±2 digits
Neonate ..... ±3 digits

PULSE RATE ACCURACY

Pulse Rate ..... 25 – 240 bpm
No Motion
Adults, Paediatrics, Neonate ..... ±3 digits
Motion
Adults, Paediatrics, Neonate ..... ±5 digits
Low Perfusion
Adults, Paediatrics, Neonate ..... ±3 digits

RESOLUTION

Saturation (%SpO_2) 1%
Pulse Rate (bpm) ..... 1 bpm

ELECTRICAL

AC Power requirements ..... 100-240 VAC, 47-63 Hz
Power consumption ..... 20 VA Max

BATTERIES

Handheld
Type ..... Sealed lead acid
Capacity ..... up to 7 hours[6]
Charging time ..... 8 hours

ENVIRONMENTAL

Operating Temperature ..... 41°F to 104°F (5°C to 40°C)
Storage Temperature ..... -40°F to 158°F (-40°C to 70°C)
Operating Humidity ..... 5% to 95%, non-condensing
Operating Altitude ..... 500 mbar to 1060 mbar pressure
-1000 ft to 18,000 ft (-304 m to 5,486 m)

PHYSICAL CHARACTERISTICS

DIMENSIONS .....
8.2" x 6.0" x 3.0" (20.8 cm x 15.2 cm x 7.6 cm)

WEIGHT .....
2.1 lbs=.908 kg=32oz

MODES

Averaging mode[7] ..... 2, 4, 8,10, 12, 14 or 16 seconds
Sensitivity ..... APOD, Normal and Max[8]

ALARMS

Audible and visual alarms for high and low saturation (1% to 100%), pulse rate (25 - 240 bpm), sensor condition, system failure and low battery
Alarm volume ..... High: 85dB (min) - Low: 45dB (min)

DISPLAY/INDICATORS

Data display ..... % SpO_2, alarm status, alarm silenced status, AC power, Signal IQ/pleth bar, perfusion index bar, battery status, no sensor, sensor off
Type ..... LED

COMPLIANCE

Safety Standard for Medical Equipment ..... IEC 60601-1 2nd Edition
UL 60601-1
CAN/CSA C22.2 No. 601-1
JIS 0601-1
Type of Protection . .Class 1 (AC power) Internally powered (battery power)
Degree of Protection-Patient Cable ..... Type BF, Defib Proof-Applied Part
Rad-8 Mode of Operation ..... Continuous
EMC Standard ..... EN60601-1-2, Class B

[1] Hay WW, Rodden DJ, Collins SM, Melera DL, Hale KA, Fashaw LM, Reliability of conventional and new oximetry in neonatal patients. *Journal of Perinatology*. 2002; 22:360-366. | [2] The arterial oxygen saturation accuracy during no motion only applies to LNOP® Blue SpO_2 adhesive sensors | [3] De Felice et al. The pulse oximeter perfusion index as a predictor for high illness severity in neonates. *Eu J Pediatr* 2002; 161:561-562. | [4] Continuous rubbing and tapping motions at 2 to 4 Hz at an amplitude of 1 to 2 cm and continuous random frequency motion between 1 to 4 Hz at an amplitude of 2 to 3 cm. | [5] Pulse Amplitude >0.02% and % Transmission > 5%. | [6] When using a new, fully charged battery. | [7] With FastSat the averaging time is dependent on the input signal. For the 2 and 4 second settings the averaging time may range from 2-4 and 4-6 seconds, respectively. | [8] Maximum Sensitivity mode disables APOD, but maximises measuring ability.

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