Rad-9®

signal extraction pulse oximeter™

Masimo SET® performance in a traditional configuration.

- Crisp, clear LCD graphic display
- Easy-to-use control menu
- Serial (RS-232), analog and nurse call interfaces
- 3.5 hours of battery operation
- Compatible with all Masimo LNCS® and LNOP® sensors
- Up to 5 days of trending

Masimo®

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Specifications

Rad-9 Features

- Masimo SET® technology, clinically proven to provide the highest sensitivity, specificity, fidelity and reliability of any pulse oximeter technology available[1]
- Signal IQ® waveform for signal identification and quality indication during motion and low signal to noise situations
- FastSat® tracks rapid changes in arterial O_2 with high fidelity unlike any other pulse oximeter
- FastStart™ allows for rapid measurement from the time the instrument is first turned on
- APOD™ Adaptive Probe Off Detection provides unmatched probe off detection performance
- SmartTone™ beeps in sync with pulse, even under most challenging patient motion conditions
- SpO_2, pulse rate, alarm, trend, perfusion index, Signal IQ and plethysmographic waveform display
- Compatible with RadLink™ supplemental alarm paging system
- RS-232, analog output, and nurse call interfaces
- Designed for transport and home use

performance

measurement range

SpO_2:	0 - 100%
Pulse Rate:	25 - 240 bpm
Perfusion Index:	0.02% - 20%

saturation accuracy

Saturation:	70% to 100%
No Motion	
Adults, Pediatrics:	±2 digits
Neonates:	±3 digits
Motion[1]	
Adults, Pediatrics:	±3 digits
Neonates:	±3 digits
Low Perfusion[2]	
Adults, Pediatrics:	±2 digits
Neonates:	±3 digits

pulse rate accuracy

Pulse Rate:	25 - 240 bpm
No Motion	
Adults, Pediatrics, Neonates:	±3 digits
Motion	
Adults, Pediatrics, Neonates:	±5 digits
Low Perfusion	
Adults, Pediatrics, Neonates:	±3 digits

resolution

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

electrical

AC Power requirements	100 - 240 VAC / 50 - 60 Hz
Power consumption:	33 VA Max.
	Automatic AC Voltage and Line Frequency Selection
	12 Volt, Sealed Lead Acid Battery
	Minimum 3.5 Hour Battery Operation
	80% Recharge in 4.5 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:	1060 mbar to 500 mbar pressure, -1000 ft to 18,000 ft (-304 m to 5,486 m)

physical characteristics

dimensions	9.5cm (3.7") x 24.7 cm (9.75") x 22.2 cm (8.75")
weight	3.4 kg / 7.5lb.

trending

Up to 120 Hours Total Data Stored

SpO_2, Pulse Rate, Date and Time

modes

Averaging mode:	2, 4, 8,10,12,14 or 16 seconds[2]
Sensitivity:	Normal, APOD, and Maximum[3]

alarms

Audible and visual alarms for high and low saturation (20% to 100%) and pulse rate (25 - 240 bpm)

Sensor condition, system failure and low battery alarms

display/Indicators

Data display:	%SpO_2, pulse rate, pleth waveform, perfusion index, alarm status, trends, sensitivity, Signal IQ
Type:	Backlit LCD
Pixels:	240 x 64 dots
Dot Pitch:	0.5 mm

output interface

RS-232 Serial Interface (4800, 9600 or 19200 Baud)

Analog output for SpO_2 data, Pulse Rate data or plethysmographic waveform, and Nurse Call alarm status output

Philips / Agilent / HP Technologies VueLink™ Communications Interface

Compatible with PROFOX Oximetry Analysis Software

software languages

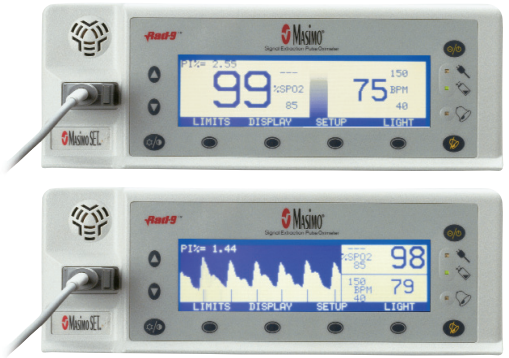
English, French, German, Italian, Portuguese, Spanish

regulatory clearances

U.S. FDA 510(k)

CE-Mark

UL/CSA Classification



High visibility number display with inverse video setting shows critical data at a glance during difficult lighting conditions. Shown above in "large numbers" or "waveform" mode.

References:

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. With FastSat the averaging time is dependent on the input signal.
3. Maximum sensitivity mode compromises APOD, but maximizes measuring ability.

Masimo America
tel +1 949 297 7000
fax +1 949 297 7001
info-america@masimo.com

Masimo Europe
tel +33 (0) 4 72 17 93 70
fax +33 (0) 4 78 35 78 08
info-europe@masimo.com

Masimo Asia Pacific
tel +65-9889-9389
info-asia@masimo.com

7187-3137H-1206