

MightySat™

Fingertip pulse oximeter for general wellness and health applications including sports, fitness, and relaxation management.

Measurements

SpO₂

OXYGEN SATURATION

PR

PULSE RATE

PI

PERFUSION INDEX

RRp™

RESPIRATION RATE

PVI*

PLETH VARIABILITY INDEX



What is a Pulse Oximeter?

Pulse oximeters measure light absorption in the finger to noninvasively monitor oxygen saturation and pulse rate. Fingertip pulse oximeters are being increasingly used for general wellness and health applications including sports, fitness, and relaxation management.

Challenges with Available Fingertip Pulse Oximeters

Multiple companies have introduced low-priced, battery-powered “fingertip” pulse oximeters to the consumer market. In some circumstances, these products may provide inaccurate measurements or no measurements at all. This often occurs when there is low blood flow to the finger (such as when the fingers are cold) or during hand movement (even with minimal motion such as shaking). In addition, many of the products on the market are of low quality and do not interface with smart phones to store, manage, and share data.

Masimo – The Leader in Pulse Oximetry

Masimo is a publicly traded company (NASDAQ: MASI) based in Irvine, California. Masimo is the leading brand of hospital pulse oximeters¹ because they provide accurate measurements when other pulse oximeters fail by using a revolutionary, patented invention called Signal Extraction Technology® (SET®). Masimo SET® uses five parallel signal processing engines that measure through challenging conditions, including movement and low blood flow. With MightySat, the same high-performing Masimo SET® technology is now available for general wellness and health applications.

Introducing MightySat

Accurate During Challenging Conditions

- > Uses hospital-grade Masimo SET® pulse oximetry
- > Masimo SET® technology was shown in a study to be more accurate than 19 other pulse oximeters in healthy volunteers under motion and low perfusion conditions²

Unique Features

- > Provides additional parameters not available on other pulse oximeters:
 - Perfusion Index (PI)
 - Respiration Rate (RRp)
 - Pleth Variability Index (PVI)
- > Bluetooth® wireless interface to the Masimo Personal Health app and Apple Health app
- > Extremely easy to use

Durable

- > High quality materials
- > Backed by a two-year warranty

SpO₂

Oxygen Saturation (SpO₂)

SpO₂ is a measure of the oxygen saturation level in the arterial blood. Higher oxygen saturation indicates more oxygen in the arterial blood. Oxygen saturation can change due to a number of factors, including lung or heart function and altitude.

PR

Pulse Rate (PR)

PR indicates the number of pulses per minute. This parameter is useful for assessing overall fitness as well as exertion levels at a particular moment in time.

PI

Perfusion Index (PI)

PI is the ratio of the pulsatile blood flow to the nonpulsatile blood in peripheral tissue and is used to measure peripheral blood flow. A higher PI indicates higher blood flow.

RRp

Respiration Rate (RRp)

RRp is the number of breaths per minute. It is measured from the amplitude changes to the plethysmographic waveform.

PVI

Pleth Variability Index (PVI)

PVI is a measure of the dynamic changes in the perfusion index (PI) that occur during the respiratory cycle.

Designed for Performance

High Resolution Display

Rotating and adjustable color screen for clear display of all measurements

Plethysmographic Waveform

Masimo SET® provides accurate depiction of the user’s pleth

Touchpad

Allows for easy access of settings and device features

Flexible Pad

Easily conforms to finger shape for enhanced comfort

Signal I.Q.® (SIQ)

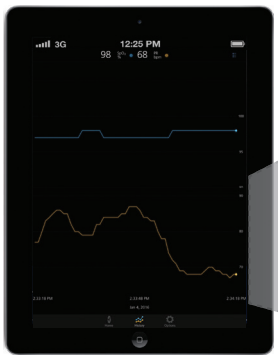
An indicator of the relative signal strength

Free Downloadable Masimo Personal Health App*

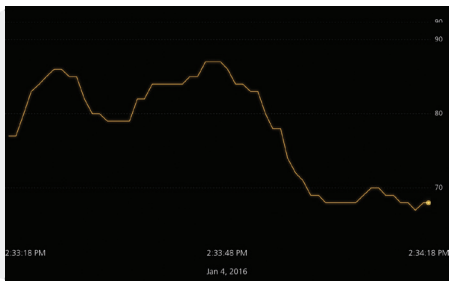
Display parameter data on a compatible smart device with Bluetooth® LE models. Measurements can also integrate into the Apple Health app**



VIEW measurements on compatible smart devices***



TREND measurements over time, view on graphical display, and share the captured data via .csv file



Example of data trend over 6 minutes

Used by Elite Athletes



Dotsie Bausch

Olympic Silver Medalist
Women’s Team Pursuit
Cycling, London 2012
Olympics

“I use Masimo pulse oximetry as part of my Olympic training and recovery regimen. By tracking my oxygenation and pulse rate – along with numerous other biophysical and behavioral metrics – I use data to measure and improve my athletic performance and gauge my recovery.”



Stig Severinsen, PhD

Freediver
Guinness Book of World
Records Holder for Longest
Underwater Breath Hold at
22 Minutes

“Training for extreme records under extreme conditions is always a huge challenge. In such situations, it is of great value to be able to perform noninvasive and accurate measurements of my heart rate and oxygen saturation levels with a state-of-the-art device.”



Coco Vandeweghe

Professional Tennis
Player on the WTA Tour

“Sometimes matches are won by a few points, and I need every breath to count. MightySat helps me perform at my best.”

MightySat Models

	Masimo SET® Measure-through Motion and Low Perfusion™ technology	Compatible with Masimo Personal Health app*** (syncs with Apple Health app)	Measurements				
			SpO2 (Oxygen Saturation)	PR (Pulse Rate)	PI (Perfusion Index)	RRp (Respiration Rate)	PVI (Pleth Variability Index)
MightySat with Bluetooth® LE P/N 9800	•	•	•	•	•		
MightySat with Bluetooth® LE, RRp & PVI P/N 9900	•	•	•	•	•	•	•

MightySat Specifications

DISPLAY RANGE	PHYSICAL CHARACTERISTICS
Functional Oxygen Saturation (SpO2)..... 0-100%	Weight with Battery ⁴ 0.16 lbs (73 g)
Pulse Rate (PR)..... 25-240 bpm	Dimensions 2.9" x 1.6" x 1.2" (7.4 cm x 4.1 cm x 3.0 cm)
Perfusion Index (PI) 0.02-20%	ALARMS
Respiration Rate (RRp)..... 0-70 rpm	No alarms on this product
Pleth Variability Index (PVI) 0-100%	CLASSIFICATION PER IEC 60601-1
ACCURACY – (A_{RMS})³	EMC Classification Class B
SpO2 Accuracy Range (A _{RMS})..... 70-100%	Degree of Protection Type BF-Applied Part
No Motion..... .2%	Enclosure Degree of Ingress Protection IP23
Motion..... .3%	Mode of Operation Continuous Operation
Low Perfusion2%	COMPLIANCE
PR Accuracy Range (A _{RMS}) 25-240 bpm	Safety UL 60601-1, CSA C22.2 No. 601.1, IEC 60601-1, EN 60601-1
No Motion..... .3 bpm	EMC EN 60601-1-2, Class B
Motion..... .5 bpm	Pulse Oximeter ISO 80601-2-61
Low Perfusion3 bpm	Conformity to EU MDD 93/42/EEC..... CE Marked
USER WEIGHT	BATTERY
User Weight >66 lbs (30 kg)	Operating 1.5 Volt AAA Battery
MEASUREMENT RESOLUTION	Battery Approximately 1,800 spot checks ⁵
SpO2 1%	COMMUNICATION
PR..... 1 bpm	Radio Modes Bluetooth LE
RRp 1 rpm	Communication Compliance
Data Display %SpO2, PR, PI, RRp, PVI, Signal IQ/pleth bar, and pleth waveform	USA FCC ID: VKF-MSAT01A
ENVIRONMENTAL	FCC parts 15.247
Operating Temperature..... 41 to 104° F (5 to 40° C)	Canada IC: 7362A-MSAT01A
Storage Temperature -40 to 158° F (-40 to 70° C)	RSS-210
Operating Humidity 10 to 95%, non-condensing	Europe EN 300 328
	EN 301 489-17

¹ iData Research. U.S. Market for Patient Monitoring Equipment. 2014.

² Barker SJ. *Anesth Analg*. 2002 Oct;95(4):967-72. A total of 70 volunteers were tested with motorized hand motions. Each motion was studied during both room air breathing and hypoxemia. Pulse oximeters on the stationary hand were used to provide control measurements for comparison.

³ A_{RMS} (Accuracy Root Mean Square) values determined using the MightySat with Masimo SET® Oximetry Technology in a clinical study under motion and no-motion conditions.

⁴ Weight is dependent on batteries used.

⁵ Based upon 15 hours of operation with screen brightness set to 50% and a spot check of 30 seconds.

* The app is downloadable from the App Store™ for iOS devices or Google Play™ store for select Android devices. For an up-to-date list of compatible smart devices, see www.masimopersonalhealth.com.

** Apple is a registered trademark of Apple Inc. registered in the U.S. and other countries.

*** Note: Bluetooth LE is an optional feature available on specific versions of MightySat for use with compatible smart devices. For a full list of compatible smart devices, see www.masimopersonalhealth.com.



Call 800-397-5899 to order today!