



KONICA MINOLTA

PULSE OXIMETER

# PULSOX<sup>®</sup>-1

The miniature, general-purpose PULSOX-1 is the latest addition to Konica Minolta's PULSOX series of pulse oximeters, which are used in a variety of medical applications, including hospitals, nursing homes, home care, etc.



## Reliable quality

For high performance and long life  
in a small but tough body

### Reliability through quality

Worry-free 3-year guarantee

### Small but tough

Impact shock is alleviated in 3 ways.

### High quality for high performance

Measures even weak pulses or outdoors.

### Even easier to use

New "Display Hold" function

The essentials of imaging

# Reliable quality ensures long service life.

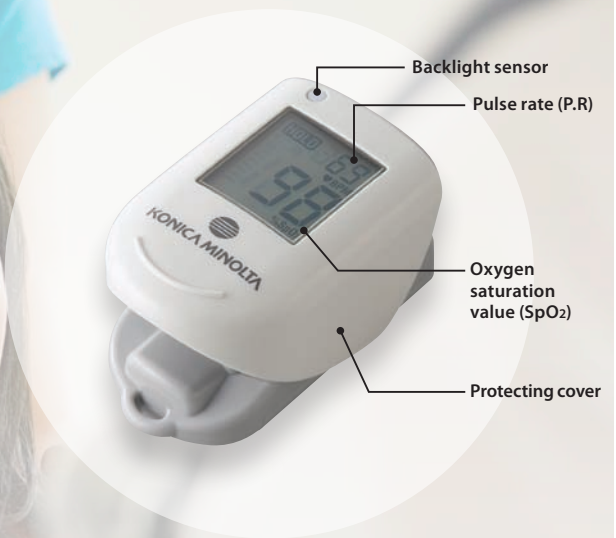
Introducing the new finger pulse oximeter PULSOX-1 from Konica Minolta.

## Feature 1

### Reliability through quality

Since introducing the world's first fingertip-measurement pulse oximeter in 1977, Konica Minolta has continually provided high-quality products to the medical field for over 30 years.

PULSOX-1 is Japanese in design and manufacture, with all work from development through manufacturing to quality assurance performed in Japan.



Impact shock is alleviated in 3 ways.

## Feature 2

### Small but tough

The image of "Small = Easily broken" does not apply to the PULSOX-1. The PULSOX-1 is strongly shock-resistant, as proven through shock-testing by dropping 100 times from a height of 1m. Konica Minolta's 3 original structural features protect the instrument from damage and breakage.

#### Structural feature 1

Internal breakdown from drop shock



#### Structural feature 2

Separation of joint when body is twisted



#### Structural feature 3

Part breakage due to impact shock



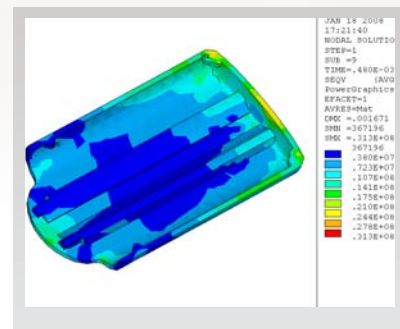
#### Polycarbonate protective cover

The 2mm-thick protective cover **1** is made of shock-resistant polycarbonate to securely protect the inside of the instrument and prevent internal breakdowns.



#### Stainless-steel links and side guards for increased rigidity

4 rigid stainless-steel links **2** and side guards **3** thoroughly absorb twisting and separation forces at the time of impact to prevent breakage from shock due to dropping, etc.



#### Design based on 3D structural analysis

Utilizing the 3D design and analysis technology cultivated for the PULSOX series and data from actual use, outer housings and internal component placement to provide high shock resistance was achieved.

Measures even weak pulses or outdoors

Feature 3

# High quality for high performance

The ability to take high-accuracy measurements under a variety of conditions is the primary feature of the PULSOX-1. This is due to high performance which enables accurate display even under less-than-ideal measurement conditions, such as outdoors or when pulse is weak.

## High performance 1

### High-density circuit design technology

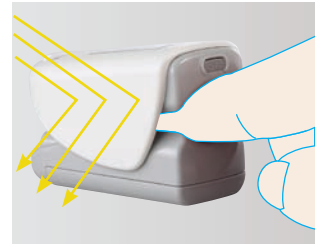
With high-density circuitry, Konica Minolta's high-performance signal-processing technology can be used even in a body as small as the PULSOX-1.



## High performance 2

### Protective cover blocks external light

The 2mm-thick protective cover completely blocks out external light, enabling high-accuracy measurements under not only normal room lighting but even under direct sunlight outdoors.



## High performance 3

### Comprehensive accuracy evaluation at UCSF

Comprehensive product accuracy evaluation of Konica Minolta PULSOX series instruments was conducted at the clinical research laboratories of UCSF (University of California - San Francisco), which are globally recognized for oximeter accuracy evaluation, under the guidance of Dr. Severinghaus, a leader in blood gas analysis.



New "1-Minute Display Hold" function helps users.

Feature 4

# Even easier to use - In hospitals or at home

The PULSOX-1 was designed to be both easy to use and economical, aiming for even easier use and even greater economy. The resulting operability precisely supports use in actual working environments.

## Ease of use 1

### Display Hold function. **NEW** (patent pending)

A new function to hold the final measurement in the display for approximately 1 minute after the PULSOX-1 has been removed from the finger has been added. Since checking and recording of data can be performed with time to spare, it doesn't interfere with diagnosis and treatment. This "1-Minute Display Hold" function supports improving work efficiency.

*Power is automatically switched off after approximately 1 minute has passed.  
The power can also be switched off even during display hold by pressing the OFF button.*



Hold display

## Ease of use 2

### Convenient functions and accessory strap

Power is automatically switched on when a finger is inserted, and the display backlight automatically switches on in dark environments. Safe, ecological design also switches off after 30 minutes of continuous measurements. A convertible neck/hand strap is also included as a standard accessory.



Display OFF button

## Ease of use 3

### Economical, energy-conserving design

The energy-conserving design enables a single AAA-size alkaline battery to provide 55 hours of continuous measurements, making it highly economical as well as highly environmentally friendly. Since it uses only a single AAA-size battery, the weight is only 49g even with the battery installed.

# Specifications

**Model name:** PULSE OXIMETER PULSOX-1  
**Functions:** Dual-wavelength pulse type  
**Measuring range:** SpO<sub>2</sub>: 0 to 100% SpO<sub>2</sub>  
(Readout less than 70 will flash)  
Pulse rate: 30 to 230 bpm  
**Accuracy:** SpO<sub>2</sub>: ±2% SpO<sub>2</sub> (70 to 100% range, 1S.D.)  
Pulse rate: ±2 bpm (30 to 100 bpm)  
±2 % of value (101 to 230 bpm)

**Display**  
**Display type:** Liquid crystal display (with backlight function)  
**Items displayed:** Oxygen saturation (SpO<sub>2</sub>)  
Pulse rate  
Pulse level meter (8 levels)  
Hold indicator  
Battery indication (When the battery runs out, the battery level alarm flashes for 2 seconds and the power turns off)  
Error messages

## Operating conditions

**Operating temperature/humidity range**  
: 0 to 40°C (32 to 104°F); 30 to 85% relative humidity with no condensation  
**Storage temperature/humidity range**  
: -10 to 60°C (14 to 140°F); 30 to 95% relative humidity with no condensation  
**Atmospheric pressure/altitude range**  
: 700 to 1060hPa (altitude: -400 to 3000m)

**Degree of protection against harmful ingress of water**  
Splash-proof equipment (IPX2)

## Rated power consumption

1 AAA-size battery: 1.5V  $\overline{\text{---}}$ , 50mW (Service life under continual usage: Approx. 55 hours with alkaline battery)

**Dimensions (W × H × D)**  
35 × 33 × 56 mm

## Weight

49 g (including battery/excluding neck strap)

## Usable life

6 years [Verified by KONICA MINOLTA SENSING, INC. (based on own data)]

## Warranty period

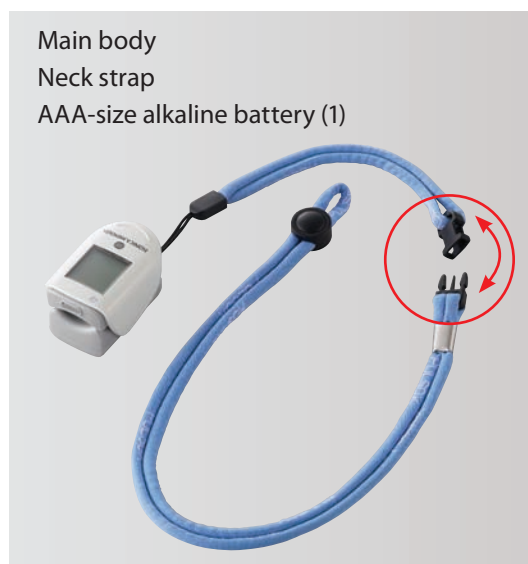
3 years

## Compliant with

ISO 9919:2005 (Medical electrical equipment - Particular requirements for the basic safety and essential performance of pulse oximeter equipment for medical use)  
Directive 2002/95/EC (Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment : RoHS)

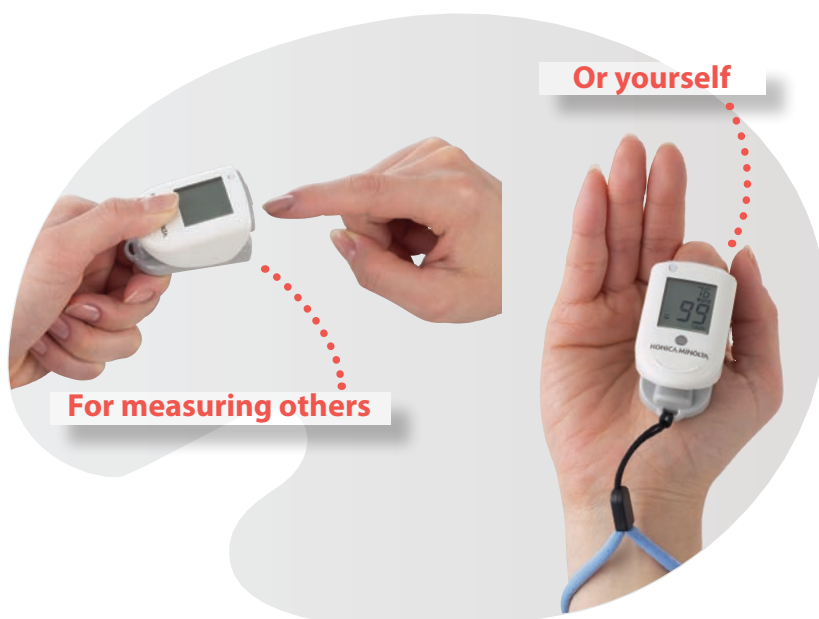
\* Specifications are subject to change without notice.

# Package contents



Note: The strap can be detached at the circled part to be used as a hand strap.

# Measurement example



Your local representative

## SAFETY PRECAUTIONS



For correct use and for your safety, be sure to read the instruction manual before using the instrument.  
• Be sure to use the specified battery. Using improper battery may cause a fire or electric shock.