



# VM-2160

## Hand Held Pulse Oximeter

Designed with the most difficult conditions in mind

- For spot checking or constant monitoring of SpO<sub>2</sub> and pulse rate
- Clear and bright, colour OLED display
- Robust, ergonomic design with durable silicone protective cover
- Stores and restores up to 480 hours of trend data
- Adjustable high and low alarms
- Antibacterial keypad



The ergonomic VM-2160 hand held pulse oximeter has the durability of a compact and lightweight hand held unit for spot checking of SpO<sub>2</sub>, but also has the power and functionality of a stand alone pulse oximeter.

The VM-2160 incorporates adjustable high and low alarms for both the SpO<sub>2</sub> and pulse rate with audible pulse tones, and is able to store and restore up to 480 hours of patient trend data, enabling the unit to also be used for continual patient monitoring.

Utilizing the latest Organic LED display technology, the clear and bright colour screen offers superb visibility in all lighting conditions, including direct sunlight.

# The ergonomic design of the VM-2160 Hand Held Pulse Oximeter combines outstanding performance and reliability in pulse oximetry

## Standard Package

- VM-2160 Pulse Oximeter Monitor
- Reusable SpO<sub>2</sub> sensor\*
- USB data cable
- Silicone protective cover
- PC software
- Instruction manual on CD

\* Please select either Lingual Sensor or Multi-site Y Sensor, and indicate at the time of ordering



## Key features of the VM-2160 Hand Held Pulse Oximeter

- Self-explanatory and ergonomic functions enable intuitive operation
- The colour information display, as well as the simple information structure, support quick decisions and a rapid user reaction in critical situations
- Intelligent linking of visual and acoustic information and signals
- The pulse tone indicates the level of oxygen saturation
- Automatic suppression of ambient light influences
- Signal quality indications
- Simple handling and clear error messages effectively prevent incorrect operation of the VM-2160
- 20 language options available - for operational control
- Rapid data transfer using a standard USB interface
- Silicone protective cover included in the package
- Powered by standard AA alkaline batteries
- The most modern technologies and energy-saving elements enable continued use of the device over several days



VM-2160 OLED Display



VM-2160 in Protective Cover

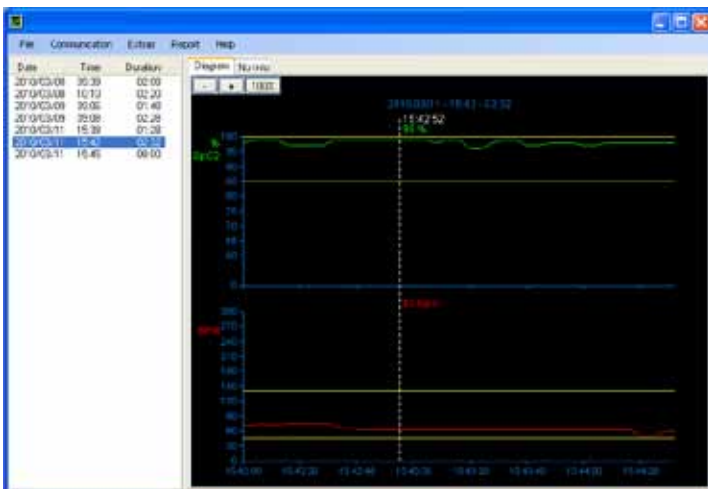






Actual Size

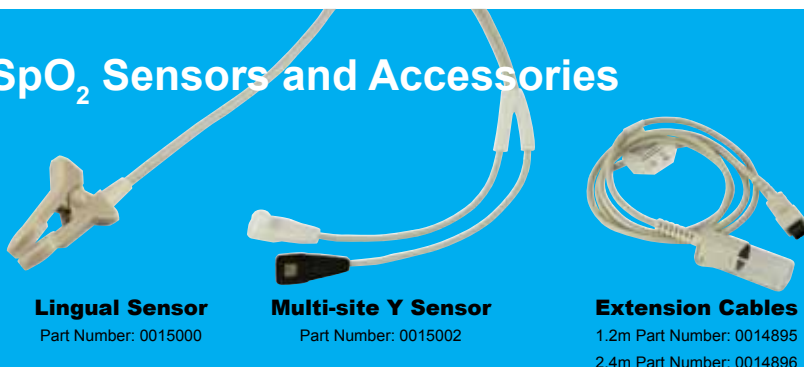
## Powerful Pulse Oximetry PC Software



With the convenient Pulse Oximetry PC Software all measured values, selected alarm limits and alarm messages can be transferred to the computer via the USB interface. The data can be viewed on the computer and patient information added. The PC software enables basic statistical evaluation of the stored data.

The software can also be used to display and store the measurement values and alarm messages on the computer in parallel to ongoing measurements. This function is activated by setting the real-time mode of the VM-2160. When this mode is activated, the device transfers the actual measurement values for Pulse Rate measurement values every 4 seconds to the computer via the USB interface.

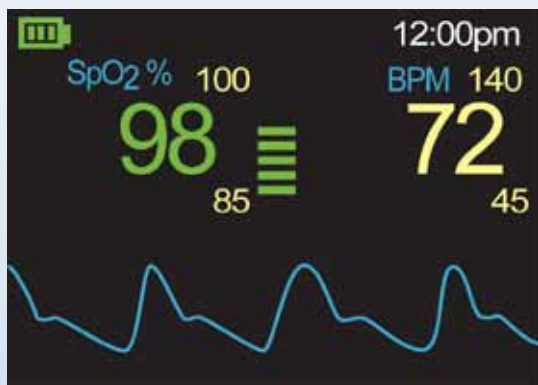
## SpO<sub>2</sub> Sensors and Accessories



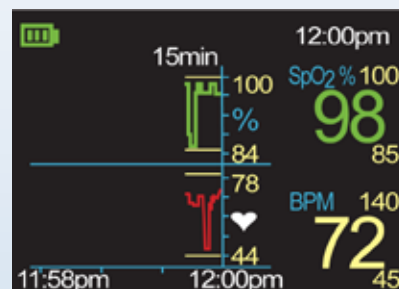
### For use with Multi-site Y Sensor



# Display Formats



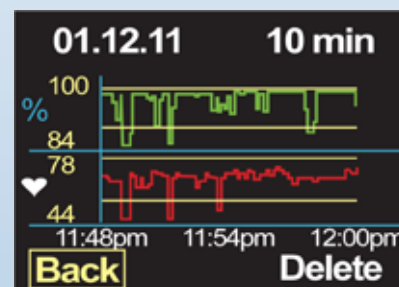
Default Display



Short Term Trending Display



Large Digit Display



Long Term Trending Display

## Mounting Options and Accessories

For use with VM-2160



**0022170**

- Fluid repellent
- Non rot
- U.V. stable
- Washable at 60°C
- Self healing and waterproof zips
- micrAgard silver-lining inners
- Abrasion and tear resistance
- High visibility and reflective properties

**Carrying Case**




**0022160**

**Silicone Protective Cover**



**0022171**

**Universal Mounting Plate**




**0121180**

**'V' Wall Mount**




**0121200**

**Universal Mounting Clamp**




**0121181**

**'V' Mount Pole Clamp**  
Small: 14 - 25mm clamping width



**0121182**

**'V' Mount Pole Clamp**  
Large: 16 - 40mm clamping width



**0121184**

**'V' Mount Rail Clamp**  
Attaches to most types of medirail.  
30mm (H) x 10mm (D) medirail

# VM-2160 Hand Held Pulse Oximeter

## Measuring Range

SpO <sub>2</sub>	0 - 100%
Pulse Rate	20 - 300 bpm

## Accuracy

SpO <sub>2</sub> (70 - 100%)	< 3.0% Accuracy A <sub>RMS</sub> *, ± 1 S.D = 2.0%
Pulse Rate	± 1 digit (≤100bpm) ± 1% (>100 bpm)

## Optical Specifications

Red emitter	660nm, typ 3.5mW
Infra-red emitter	905nm, typ 3.5mW

## Display

Features	Colour OLED, 26,000 colours, 128 x 160 pixels
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Date displayed	Oxygen saturation, pulse rate, plethysmogram, bar graph, short and long term trends
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Indicators	Signal quality, pulse amplitude, battery status, alarm silenced, volume silenced, sensor detection, sensor disconnection
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## Trend Information

Short term trend	15 / 30 / 240 minutes
Long term trend	> 480 hours, maximum ± 50 datasets

## Environmental Conditions

Operating temperature	-20 - 50°C , 15 - 95% RH, 600 - 1300 hPa
Storage temperature	-30 - 70°C, 10 - 95% RH, 600 - 1500 hPa

## Regulatory Approvals

Standards	CE BS EN 60601-1:2006, BS EN 60601-1-1:2001 BS EN 60601-1-2:2007, BS EN ISO 9919:2005
Safety	Class II, Type BF

## Assembly

Construction	IPX2 with silicone cover
Dimensions	118 mm (L) x 60 mm (W) x 25 mm (H)
Weight	Approximately 160g (including batteries, without sensor)
Power Supply	3 x AA alkaline batteries.
Battery Life	> 2 days continuous operation or approximately 5 days in economy power mode
PC interface	USB 2.0

## Part Numbers

VM-2160*	0012175
* Language package: Central European, including: English, Afrikaans, Dutch, French, German, Hungarian, Italian, Polish, Portuguese and Spanish.	

## Additional Accessories Available

Multi-site Y Sensor	0015002
Lingual Sensor	0015000
Lingual Clip (Small)	0025010
Lingual Clip (Medium)	0025011
Lingual Clip (Large)	0025012
Pulse Oximetry Extension Cable, 1.2m cable length (XT6500)	0014895
Pulse Oximetry Extension Cable, 2.4m cable length (XT6501)	0014896
Silicone Protective Cover	0022160
Carrying Case	0022178
Universal Mounting Plate, V-adapter with female pole-mount thread (1/4 - 20)	0022171
'V' mount wall plate	0121180
'V' mount pole clamp (Small: 14 - 25mm clamping width)	0121181
'V' mount pole clamp (Large: 16 - 40mm clamping width)	0121182
'V' mount rail clamp	0121184
'V' mount pole clamp, multi-position	0121197
Universal Mounting Clamp, with vertical and horizontal adjustments	0121200

\* in accordance with ISO 9919:2005 Standards.

NB. The Universal Mounting Kit is required when using any of the above mounting options.

Specifications subject to change.

CE

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BS EN ISO 9001:2008  
ISO 13485:2003

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