

Measuring Range	
SpO ₂	0 - 100%
Pulse Rate	20 - 300 bpm
Accuracy	
SpO ₂ (70 - 100%)	<3.0% Accuracy A _{RMS} *, ± 1 S.D = 2.0%
Pulse Rate	± 1 digit (≤100 bpm) ± 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
Date displayed	Oxygen saturation, pulse rate, plethysmogram, bar graph, short and long term trends
Indicators	Signal quality, pulse amplitude, battery status, alarm silenced, sensor detection, sensor disconnection
Trend Information	
Short term trend	15 / 30 / 240 minutes
Long term trend	> 480 hours
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 Class IIb in accordance with MDD 93/42/EEC 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
VM-2160*	
EAN-13 (GTIN-13) Barcode: 5051826000007	0012160
NATO Stock Number: 6515-99-915-8170	
* Language package: Central European, includes: English, Afrikaans, Dutch, French, German, Hungarian, Italian, Polish, Portuguese and Spanish.	
VM-2160 - Scandinavian languages (English, Danish, Finnish, Swedish)	0012161
VM-2160 - Special EU characters languages (English, Greek, Russian, Turkish)	0012162
VM-2160 - Asia I languages (English, Chinese and Traditional Chinese)	0012163
VM-2160 - Asia II languages (English, Japanese and Korean)	0012164
Additional Accessories Available	
Silicone Protective Cover	0022160
Carrying Case	0022178
Carrying Pouch	0022179
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 span)	0121181
'V' mount pole clamp (Large: 16 - 40mm span)	0121182
'V' mount rail clamp	0121184
'V' mount pole clamp, multi-position	0121197
Universal Mounting Clamp, with vertical and horizontal adjustments	0121200
Sensors and Cables	
Reusable Adult Finger Sensor - 1.2m cable length	0014650
Reusable Silicone Wrap Sensor - 1.2 cable length	0014835
Reusable Autoclavable Silicone Wrap Sensor - 1.2m cable length	0014592
Reusable Adult Silicone Soft Sensor - 0.3m cable length	0014755
Reusable Adult Silicone Soft Sensor - 1.2m cable length	0014750
Reusable Adult Autoclavable Silicone Soft Sensor - 0.3m cable length	0014795
Reusable Adult Autoclavable Silicone Soft Sensor - 1.2m cable length	0014790
Reusable Paediatric Silicone Soft Sensor - 0.3m cable length	0014756
Reusable Paediatric Silicone Soft Sensor - 1.2m cable length	0014751
Reusable Paediatric Autoclavable Silicone Soft Sensor - 0.3m cable length	0014796
Reusable Paediatric Autoclavable Silicone Soft Sensor - 1.2m cable length	0014791
Reusable Ear Sensor - 1.2m cable length	0014825
Pulse Oximetry Extension Cable, 1.2m cable length (XT6500)	0014895
Pulse Oximetry Extension Cable, 2.4m cable length (XT6501)	0014896
Disposable Micro Foam Tape - Box of 24 - Adult	0014985
Disposable Micro Foam Tape - Box of 24 - Paediatric	0014986
Disposable Micro Foam Tape - Box of 24 - Infant	0014987
Disposable Micro Foam Tape - Box of 24 - Neonatal	0014988
Disposalbe Transpore Tape - Box of 24 - Adult	0014989
Disposalbe Transpore Tape - Box of 24 - Paediatric	0014990
Disposable Plaster Tape - Box of 24 - Adult	0014993
Disposable Plaster Tape - Box of 24 - Paediatric	0014994
Disposable Plaster Tape - Box of 24 - Infant	0014995
Disposable Plaster Tape - Box of 24 - Neonatal	0014996

CE 0086

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Part Number: 0092171
Date: 08/13



BS EN ISO 9001:2008
ISO 13485:2003

FS 28344 MD 78787



VM-2160

Hand Held Pulse Oximeter

Designed with the most difficult conditions in mind

- For spot checking or constant monitoring of SpO₂ and pulse rate
- Clear and bright, colour OLED display
- Robust, ergonomic design with durable silicone protective cover
- Includes a 3rd generation soft silicone sensor*
- 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 SpO₂, 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 SpO₂ 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 at the bedside for continual patient monitoring.

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

The VM-2160 can be used in a variety of applications, from use in hospitals, paramedic ambulances, clinics and dental surgeries - making this an extremely flexible and durable piece of equipment.

The VM-2160 offers a efficient and cost effective solution for spot monitoring or constant monitoring of SpO₂ and Pulse rate

- For spot checking or constant monitoring of SpO₂ and Pulse Rate
- Includes a 3rd generation soft silicone sensor - *other sensors can be specified
- Stores and restores up to 480 hours of trend data
- Adjustable high and low alarms

VM-2160 Standard Package

- VM-2160
- Reusable adult silicone finger sensor*
- Silicone protective cover
- PC review software
- USB data cable
- 3 x AA batteries

* Please select from Soft Sensor (Adult or Paediatric), Finger Sensor, Silicone Wrap Sensor, Ear Sensor and indicate at the time of ordering. Autoclavable sensors are available.



Long term
monitoring
and
trending

Key features of the VM-2160 Hand Held Pulse Oximeter

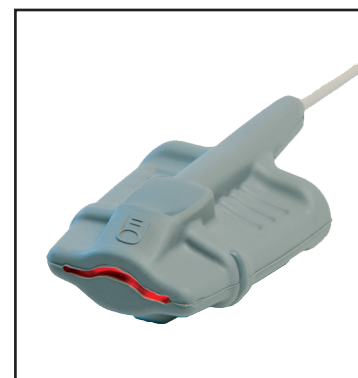
- Self-explanatory and ergonomic functions enable intuitive operation
- The colour information display, as well as the simple information structure, support quick decisions and a rapid user reaction in critical situations
- Intelligent linking of visual and acoustic information and signals
- The pulse tone rate provides information about 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
- The most modern technologies and energy-saving elements enable continued use of the device over several days
- Rapid data transfer using a standard USB interface
- Silicone protective cover included in the package
- Energy supply from standard AA alkaline batteries



VM-2160 OLED Display

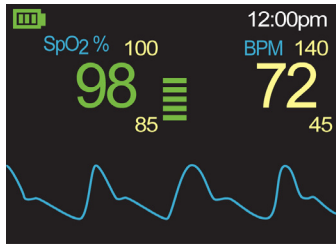


VM-2160 in Protective Cover

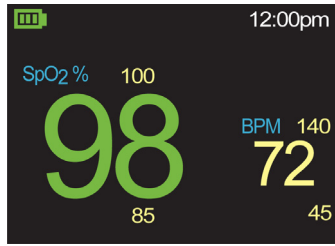


Silicone Soft Sensor for VM-2160. Other types available on request

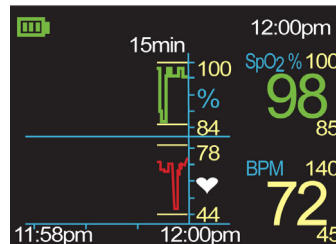
Display Formats



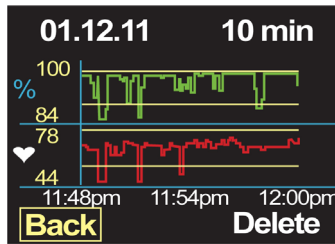
Default Display



Large Digit Display



Short Term Trending Display



Long Term Trending Display*



Actual Size

Sensors and Cables



0014650

Reusable Adult
Finger Sensor
1.2m cable length



0014755

Reusable Adult Silicone
Soft Sensor
0.3m cable length



0014756

Reusable Paediatric
Silicone Soft Sensor
0.3m cable length



0014825

Reusable Ear Sensor
1.2m cable length



0014835

Reusable Silicone Wrap
Sensor
1.2m cable length

Autoclavable version

0014592

Reusable Autoclavable
Silicone Wrap Sensor
1.2m cable length

0014750

Reusable Adult Silicone
Soft Sensor
1.2m cable length

Autoclavable versions

0014795

Reusable Adult
Autoclavable Silicone
Soft Sensor
0.3m cable length

0014790

Reusable Adult
Autoclavable Silicone
Soft Sensor
1.2m cable length

0014751

Reusable Paediatric
Silicone Soft Sensor
1.2m cable length

Autoclavable versions

0014796

Reusable Paediatric
Autoclavable Silicone
Soft Sensor
0.3m cable length

0014791

Reusable Paediatric
Autoclavable Silicone
Soft Sensor
1.2m cable length

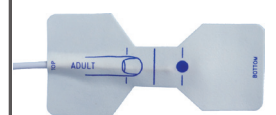


0014895

Pulse Oximetry
Extension Cable
1.2m cable length

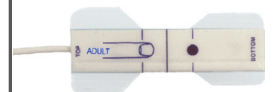
0014896

Pulse Oximetry
Extension Cable
2.4m cable length



Disposable
Micro Foam Tape
Box of 24 sensors

Adult	0014985**
Paediatric	0014986**
Infant	0014987**
Neonatal	0014988**



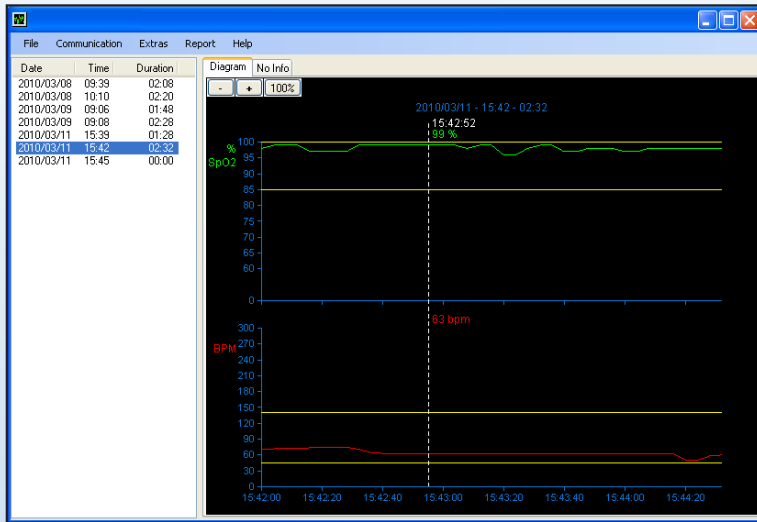
Disposable
Transpore Tape
Box of 24 sensors

Adult	0014989
Paediatric	0014990



Disposable
Plaster Tape
Box of 24 sensors

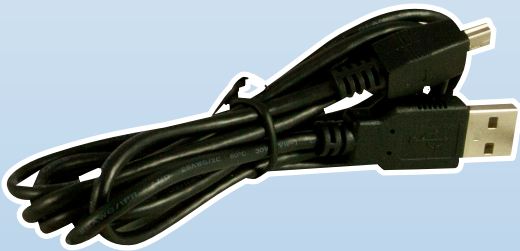
Adult	0014993
Paediatric	0014994
Infant	0014995
Neonatal	0014996



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.



Mounting Options and Accessories

For use with VM-2160

- 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

0022170



Carrying Case

0022160



Silicone Protective Cover

0022171



Universal Mounting Plate

0121180



'V' Wall Mount

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

0121200



Universal Mounting Clamp

0021013



Posey Wrap
Pack of 12

0021018



Posey Wrap Paediatric
Pack of 12

Applications

The VM-2160 with Silicone Finger Sensor is suitable for the following applications:

- Clinical Environments
- Rescue services and emergency medicine
- Sleep screening
- Home care
- Long-term monitoring
- Stress testing

