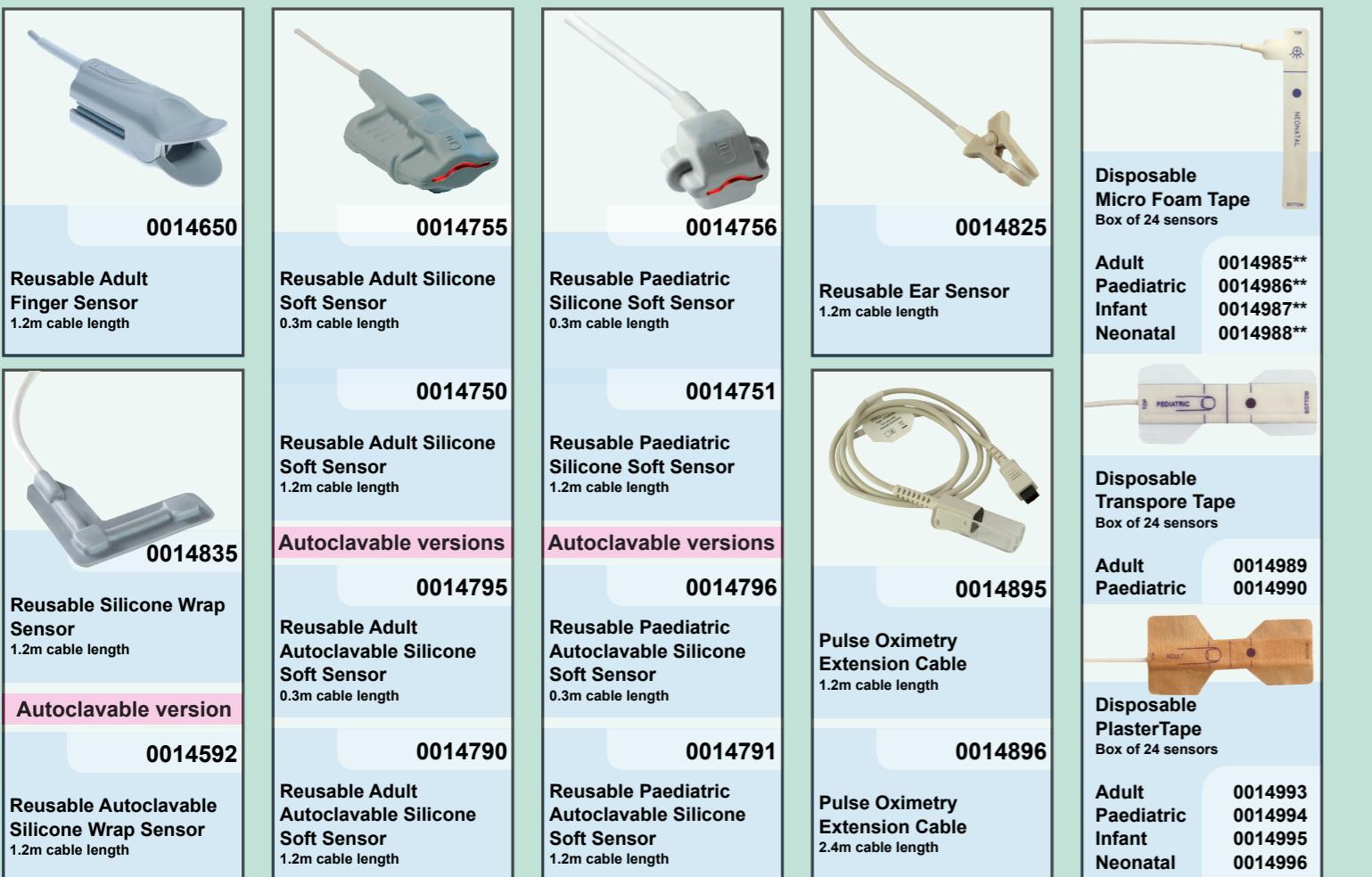


# Sensors and Cables



# Technical Specifications

Measuring Range	0 - 100%
SpO <sub>2</sub>	20 - 300 bpm
Pulse Rate	
Accuracy	1<3.0% Accuracy A <sub>RMS</sub> *, ± 1 S.D. = 2.0% ± 1 digit (≤100bpm) ± 1% (>100 bpm)
SpO <sub>2</sub> (70 - 100%)	
Pulse Rate	
Optical Specifications	660nm, typ 3.5mW 905nm, typ 3.5mW
Red emitter	
Infrared emitter	
Display	Colour OLED, 26,000 colours, 128 x 160 pixels
Features	Oxygen saturation, pulse rate, plethysmogram, bar graph, short and long term trends
Date displayed	Signal quality, pulse amplitude, battery status, alarm silenced, sensor detection, sensor disconnection
Indicators	
Trend Information	Short term trend 15 / 30 / 240 minutes Long term trend > 480 hours
Environmental Conditions	-20 - 50°C, 15 - 95% RH, 600 - 1300 hPa -30 - 70°C, 10 - 95% RH, 600 - 1500 hPa
Operating temperature	
Storage temperature	
Regulatory Approvals	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 Class II, Type BF
Standards	
Safety	IPX2 with silicone cover, splash-proof version of IPX4 available on request. 118 mm (L) x 60 mm (W) x 25 mm (H) Approx. 160 g (including batteries, without sensor) 3 x AA alkaline batteries.
Assembly	> 2 days continuous operation or approx 5 days in economy power mode
Construction	USB 2.0
Dimensions	
Weight	
Power Supply	
Battery Life	
PC interface	

# Part Numbers

VM-2160-L*	0012155
EAN-13 (GTIN-13) Barcode: 5051826002582	
NHS Stock Code: FBC205	
* Language package: Central European, including: English, Afrikaans, Dutch, French, German, Hungarian, Italian, Polish, Portuguese and Spanish.	
VM-2160-L - Scandinavian languages (English, Danish, Finnish, Swedish)	0012156
VM-2160-L - Special EU characters languages (English, Greek, Russian, Turkish)	0012157
VM-2160-L - Asia I languages (English, Chinese and Traditional Chinese)	0012158
VM-2160-L - Asia II languages (English, Japanese and Korean)	0012159
VM-2160*	0012160
EAN-13 (GTIN-13) Barcode: 5051826000007	
NATO Stock Number: 6515-99-915-8170	
NHS Stock Code: FBC204	
* 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

# Mounting Options and Accessories



\* in accordance with ISO 9919:2005 Standards.

CE 0086



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Email: info@viamed.co.uk Website: www.viamed.co.uk



BS EN ISO 9001:2008  
ISO 13485:2003

FS 28344

MD 78787

# pulse oximetry



## 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
- 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 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 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-L offers a robust, ergonomic design unit for spot monitoring of  $\text{SpO}_2$  and Pulse rate

- For spot checking of  $\text{SpO}_2$  and Pulse Rate
- Clear and bright, colour OLED display
- Robust, ergonomic design with durable silicone protective cover

#### VM-2160-L Light Version

- VM-2160-L
- Reusable adult finger sensor\*
- Silicone protective cover
- 3 x AA batteries

N.B. 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.



For spot checking applications

The VM-2160 offers a efficient and cost effective solution for spot monitoring or constant monitoring of  $\text{SpO}_2$  and Pulse rate

- For spot checking or constant monitoring of  $\text{SpO}_2$  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

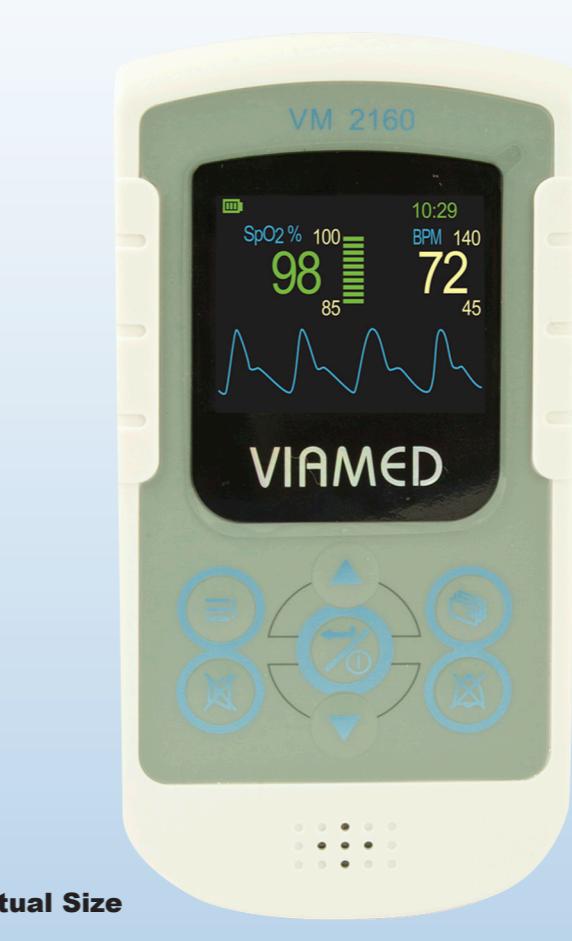
#### VM-2160 Standard Package

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

N.B. 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.

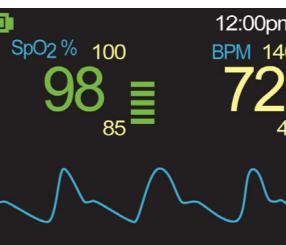


Long term monitoring and trending



Actual Size

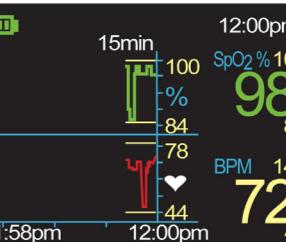
#### Display Formats



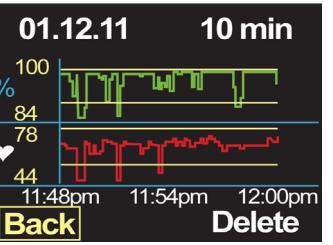
Default Display



Large Digit Display



Short Term Trending Display



Long Term Trending Display\*

\* Not available on VM-2160-L

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

The VM-2160-L from the proven and well established VM-2160 device family is a reliable and accurate spot check oximeter for continuous short term monitoring and spotcheck analysis.

The VM-2160-L ist well suited for all standard applications where alarms or data storage are not required or necessary. The application area regarding patient groups ranges from adults to neonates.



VM-2160 OLED Display



VM-2160 in Protective Cover



Standard Finger Sensor for the VM-2160-L

#### 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 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



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



#### Other Available Sensors



#### 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