VM-3160
Portable SpO$_2$ Alarm Monitor

High performance SpO$_2$ without compromises

NEW

» PRODUCTS that care
for you «

SMARTsat®

European Research Funding

Europäische Fonds EFRE, ESF und ELER
in Mecklenburg-Vorpommern 2014-2020

Made in Germany

VM-3160 – Now with SMARTsat® technology! «

»

The new **VM-3160** with integrated SMARTsat® technology has been developed over the last few years in close cooperation with well-established research institutions and university hospitals. The very latest and innovative signal processing technologies and algorithms enable precise measurements, even under very difficult physiological conditions during patient transport, shiver and the monitoring of infants.

- Ergonomic handheld alarm monitor for continuous and spot check pulse oximetry monitoring
- Colour TFT-display, with excellent contrast
- Mobile and stationary operation through an innovative energy management system supported by standard Alkaline batteries, rechargeable battery or external power supply
- Self-explanatory functions enable intuitive operation
- 400 hours of data storage capability
- SMARTsat® has been validated within the range of 60 – 100 % SpO_2

SMARTsat® ARMS in the SaO_2 ranges

Sensor type	60 – 100 %	70 – 100 %	90 – 100 %	80 – 90 %	70 – 80 %	60 – 70 %
10-AP	2.1	2.1	2.2	1.9	2.0	2.2
EP7500	2.2	2.1	1.0	1.7	2.8	3.5
SC7500	1.6	1.6	1.1	1.7	1.8	1.9
SF7500	1.6	1.5	1.4	1.3	1.7	2.3
W7500	1.6	1.4	1.0	1.2	1.8	2.8

Flexible robust and hygienic

Viamed provides advanced sensors latest technology which features high quality and patient comfort.

SoftCap® SC/SCM/SCP

SoftWrap® W

SoftCap® and SoftWrap® sensors are ideally suited for the harsh everyday use in rescue services, in emergency medicine and in clinical functional areas. Reliable elimination of problematic pathogens using high-level disinfectants is possible due to the use of high-quality materials. This significantly reduces the risk of nosocomial infections. State-of-the-art manufacturing technologies, materials and design elements are used in these sensors.
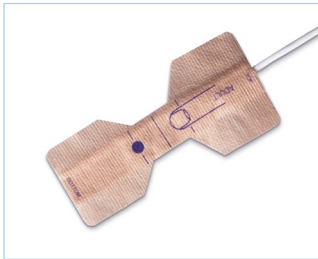
Additional sensors

SoftFlap® SF

Ear Sensor EP

Disposables

SoftFlap® sensors are the ideal solution for ambulatory use, or for short-term monitoring.

High-quality ear sensor with very pleasant wearing comfort and utility. The ear sensor has an additional sensor holder which fixes the sensor during measurement reliable.

Disposable sensors with Plaster Tape – high flexibility and adaptability distinguishes this particularly soft material. Avaliable versions for adults, pediatrics, infants and neonates.

SoftCap® and SoftWrap® sensors can be reliably disinfected and cleaned by dipping into high-level disinfectants solutions.

Technical data

Display	
Characteristics	TFT colour graphic display, 262,000 colours, 240 x 320 dots, 2.83"
Features	Numeric display of oxygen saturation (SpO_2), pulse rate (PR) and perfusion index, plethysmogram waveform, bar graph, short and long-term trends, pulse beep, audible and visible limit alarms
Indicators	Signal quality, battery status, time, alarm mute, pulse tone mute, neonatal mode, SpO_2 and pulse rate alarm limits

Specification		
Measurement Range	SpO_2	1 – 100 %
	Pulse Rate	20 – 300 bpm
	Perfusion Index	0.02 – 20 % (no motion)
Accuracy	SpO_2	60 – 100 % +/- 2 Arms (no motion)[1] 70 – 100 % +/- 3 Arms (motion condition)[2] 60 – 100 % +/- 2 Arms (low perfusion, no motion)[3]
	Pulse Rate	20 – 300 bpm +/- 2 Arms[2]

Alarms	
Categories	Patient status and system status
Priorities	Low, medium and high
Notification	Audible and visual

Trend information	
Long term trends	More than 400 hours
Short term trends	15 min / 30 min

Language versions	
Please indicate language version when ordering	Europe: EN, DE, FR, (additional language versions on request) Asia: EN, JP, (additional language versions on request)

Environmental conditions	
Operation	–20 to 50 °C, 15 to 95 % RH (non-condensing), 616 to 1,200 hPa (excl. AC power supply and Li-Poly battery)
Storage	–40 to 70 °C, 10 to 95 % RH (non-condensing), 616 to 1,200 hPa (excl. AC power supply and Li-Poly battery)

Classification	
Type of prot. against electric shock	Class II
Degree of prot. against electric shock	Type BF – applied part
Electromagnetic compatibility	IEC 60601-1-2
Ingress protection	IPX34: Protected against foreign objects and splash water
Mode of operation	Continuous

Miscellaneous	
Dimensions (L x W x D)	150 mm x 75 mm x 35 mm
Weight	< 400 g (complete device with batteries)
Power supply	Power supply 100 – 240 V AC/6 V DC, 50 – 60 Hz, 4 AA batteries, 2.5 Ah Li-Poly battery
Battery capacity	Full functionality typically 20 hours of monitoring with fully charged Li-Poly battery (at 25 °C with no audible alarm sound). In power save mode with Display switched off typically 40 hours of monitoring with fully charged Li-Poly battery (at 25 °C with no audible alarm sound).
Communication interface	USB 2.0

Order information	Item order no.	
VM-3160, complete	0012800	**Delivery package standard:** VM-3160 monitor, SC 7500 SMARTsat® soft sensor, PC evaluation software, USB data cable, 4 batteries (Mignon AA), Silicon Protective Cover, Li-Poly battery, AC power supply
Other sensors and accessories on request		

[1] A_{rms}: +/– Arms represents approx 68 % of measurements
[2] Tested with all motion patterns Index II
[3] Tested with Prosim 8 simulator

Specification subject to change

VIAMED

All **VM-3160 SpO₂ Monitors** including **SoftCap® Sensor** are classified and certified as class IIb products.

For further information, please visit **www.viamed.co.uk**