



SM-PM03 Vital Signs Monitor (7 inches)

Technical Data Sheet - Release V2.1

The F3 vital signs monitor is engineered for the mobile, precise and fast recording of vital signs data at clinics, hospitals and outpatient treatments. Ergonomical design and highly developed technology resulting in reliable measurement results and time efficiency.

12V DC power supply for ambulance use

An optional **HDMI output** eases observation from a long distance.

Features

Core

- Newly advanced A8 main board with Linux OS, calculating speed is 4 times faster than traditional products
- Support **storage** of 2160 hours trend table and graph review, 2 hours waveform review, 2000 groups NIBP review and 2000 alarm events review

Body

- **7 inch** high-brightness TFT LED
- Standard **touch screen** configuration
- Optional **HDMI** output



Printer

- USB External high-speed 50mm thermal printer (Brand: SEIKO, Japan)

Central System

- Optional **Build-in wireless network module**, supporting wired or wireless connection to the central monitoring station.
- Optional Support HL7 (Health Level Seven)

Alarm

- Three-level acousto-optic alarm
- Sensor-off alarm
- Paper out alarm
- Support alarm review

Interface

- Support alarm pause

Linux OS

- **Multi-display mode** to meet different clinical requirement
- **NIBP self-test mode**: including overpressure test, static pressure test and air leakage test.
- **Generate ID** automatically when register a new patient
- Support **medical history search** by patient ID, name and mobile number
- Optional **infrared thermometry** allows clinicians to obtain patient's temperature using non-invasive infrared technology that detects heat from the skin's surface
- 18 types of **Arrhythmia analysis** and real-time **S-T** segment analysis and **pacemaker detection**
- **Drug calculation** and **titration table**
- Support **multi-language** display
- Support **online software upgrading** by net/USB
- Suitable for monitoring adult, pediatric and neonatal patient.

Transducer socket

- SPO2

- NIBP
- TEMP I
- Mainstream EtCO₂

LAN / Central monitor system interface

- The LAN port is for connecting the monitor to a central monitor system network.

Input device interface

- This optional interface provides an USB ports to enable the monitor to be connected to off-the-shelf input devices:

- Mouse: any specified trackball or USB mouse may be used for navigation and data entry.
- Computer keyboard: an USB computer keyboard can be used for data entry instead of the on-screen pop-up keyboard.

[Remark: user has to restart the machine after plug and unplug the mouse / computer keyboard.]

- Touch screen (Standard)

[Remark: Touch screen can not be used simultaneously with mouse / computer keyboard.]

Service Features

- The Support Tool helps technical personnel to
 - carry out configuration, upgrades and troubleshooting on an individual monitor.
 - back up the monitor settings.
- The Service Mode is password-protected and ensures that only trained staff can access service tests and tasks. It includes Skin Type, Brightness Setting, Clear Data, NIBP Calibration and Touch Screen Calibration.
- The Support Tool uses the USB interface of the monitor for software upgrading.

Related Product



- Infrared thermometry



- Suntech NIBP module



- Nellcor SpO₂ module



- Masimo SpO₂ module

Dimension and Weight

- Dimension: 210mm*130mm*75mm
- Weight: 1kg (excluding accessories)

Power Supply

- Voltage: AC100 ~ 240V, 50/60HZ
- Adapter: Output 9VDC, 5A

Display

- 7" color TFT LED
- Resolution: 800*480 pixels

Battery

- Type: Rechargeable lithium battery 7.4V/2200mAh
- Charge Cycle: ≥500 times
- Working time: 2-3 hours (optional larger battery for 4-5 hours)

Recorder (Option)

- Method: USB External Thermal printer
- Paper width: 50 mm (1.97 in)
- Printing speed: 12.5/ 25/ 50 mm/s
- Trace: Max. 3 tracks
- Recording way: Real-time Recording, Review Printing, Periodic Recording, Alarm Recording

Alarm

- Level: Low, medium and high
- Indication: Auditory and visual
- Alarm volume adjustable
- Alarm pause time: 1min, 2min
- Parameter alarm type: Latch/ Unlatch

Input Device

- Touch screen (standard)
- Touch pen (standard)

System Output & Extensible Interface

- Ethernet Network: 1 standard RJ45 socket
- USB Port: 1
- Video Output: 1 HDMI port (option)

Operating Environment

- Temperature: 5 ~ 40 °C
- Humidity: 15% ~ 80% (non-condensing)
- Atmosphere pressure: 86 KPa ~ 110 KPa

Transportation and Storage Environment

- Temperature: -20 ~ 50 °C
- Humidity: 10% ~ 90% (non-condensing)
- Atmosphere pressure: 86 KPa ~ 110 KPa

- IEC60601-1 Approved, CE marking according to MDD93/42/EEC
- With reference to RoHS Directive 2011/65/EU recasting

Trend & Reviewing

- Trend: 2160 hours
- ARR events: 128 groups of ARR events and associated waveform
- NIBP measurement reviewing: 2000 groups
- Waveform review: 2 hours
- Alarm event: 2000 groups of parameter alarms events and associated parameter

Heart Rate

- Measure range:
 - Adult: 0bpm; 10 ~ 300 bpm
 - Neo/Ped: 0bpm; 10 ~ 350 bpm
- Resolution: 1 bpm
- Accuracy: ± 1% or ± 1bpm, whichever is greater

NIBP

- Method: Oscillometric
- Measure mode: Manual, Auto, STAT
- Measure Interval in AUTO Mode 1~480 min
- STAT mode cycle time: Keep 5 minutes, at 5 seconds interval
- Measure and Alarm Range:

Adult:	SYS: 30 ~ 270 mmHg
	DIA: 10 ~ 220 mmHg
	MEAN: 20 ~ 235 mmHg
Pediatric:	SYS: 40 ~ 235 mmHg
	DIA: 10 ~ 220 mmHg
	MEAN: 20 ~ 225 mmHg
Neonate:	SYS: 30 ~ 135 mmHg
	DIA: 10 ~ 110 mmHg
	MEAN: 20 ~ 125 mmHg

- Static pressure accuracy: ±3mmHg
- Resolution: 1mmHg
- Accuracy: Maximum Mean error ±5mmHg
Maximum Standard deviation ≤8mmHg
- Over pressure Protection: Dual protection via software & hardware

SpO2 (Digital Technic)

- Measurement Range: 0 ~ 100 %
- Resolution: 1 %
- Accuracy: ±2% (70% ~ 100%)
±3 % (35% ~ 69%)
Unspecified (0 ~ 34%)
- Support Pitch tone and multi-level volume

Pulse Rate

- Measuring and Alarm Range: 25~250bpm
- Accuracy: ±1% or ±1 bpm, whichever is greater
- Resolution: 1bpm

Nellcor-SpO2 (Option)

- Measurement Range: 0 ~ 100 %
- Resolution: 1 %
- Accuracy: 70% ~ 100%, ± 2 % (adult)
70% ~ 100%, ± 3 % (Neonate)
70% ~ 100%, ± 2 % (Low Perfusion)
0% ~ 69%, unspecified

Pulse Rate

- Measurement range: 20 ~ 300 bpm
- Resolution: 1bpm
- Accuracy: ± 3 bpm (20 ~ 250 bpm)
unspecified (251~300 bpm)

Masimo SpO2

- - Measurement Range: 0 ~ 100 %
- - Resolution: 1 %
- Accuracy: 70% ~ 100%, ± 2 % (adult/ pediatric, non-motion conditions)
70% ~ 100%, ± 3 % (neonate, non-motion conditions)
70% ~ 100%, ± 3 % (motion conditions)
0% ~ 69% unspecified

Pulse Rate

- Measurement range: 25 ~ 240 bpm
- Resolution: 1bpm
- Accuracy: ± 3 bpm (non-motion condition)

** Specifications subject to change without prior notice*

Model Configuration

Standard Config.

Config. A

Config. B

Config. C

Optional Config.

Optional Accessories:

With 7' LED, Touch Screen

SpO2, Pulse Rate

SpO2, Pulse Rate, NIBP

SpO2, Pulse Rate, NIBP, Temp

Nellcor SpO2, Masimo SpO2, Suntech NIBP, Infrared thermometry

Printer, HDMI Output, Wall-mounting, Trolley, Bed Hanger

Central Monitoring Station

Neo/Ped Accessories