



MM17

Multi-Parameter Patient Monitor



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Features:

- The plug-and-play modular design of the elite V8 brings flexibilities to critical cares. Meantime, it offers an easy click-and-switch function to switch between modules with its intuitive MeasureSet Management interface.
- XM Module
- Standard: 3/5-lead ECG, NIBP, SpO2, PR, RR, TEMP
- Optional: 12-lead ECG, 2-IBP
- V-SpO2 Module (Nellcor OxiMax SpO2)
- V-NIBP Module (OMRON NIBP)
- V-IBP Module (Maximum 8-IBP)
- V-C.O. Module (Thermal Dilution Cardiac Output)
- V-CO2 Module (Respironics Mainstream/Sidestream)
- V-AG Module (PHASEIN Mainstream/Sidestream/O2)

Power-off Storage:

- USB Flash Disk
- SD Card

External Communications:

- Ethernet
- Bed-to-bed View
- Nurse Call
- VGA/DVI Video Output

Night Mode:

- Night mode with dimmer screen, backlit buttons, lower alarm volume and no HR beeps.

Configurable Interfaces:



Large Font



OxyCRG



Standard



Trend Screen

Technical Specifications

Physical Specification

Size: 425 mm (L) x 245 mm (W) x 382 mm (H)
Weight: Standard Configuration 14.5 kg

Display

17" Full Touch-screen Color TFT
Resolution: 1280x1024 dpi
Traces Displayed: up to 8
Waveforms Displayed: up to 13
Various Working Interface Selectable:

Standard Monitoring Display
Large Font Intensive Care Display
Trend Graph/ Monitoring Co-Display
Bed to Bed view Display (Optional)
OxyCRG Dynamic View Display
Drug Dose Calculation Interface

Sweep Speed: 6.25mm/s, 12.5mm/s, 25mm/s, 50mm/s

Environment Requirement

Ambient Temperature: -20°C - 55°C (-4 - 131°F)
Humidity: 15%-95% non-condensing

Power Supply

External Power Supply: 100-240V AC, 50/60HZ
Internal Battery Power Supply: Rechargeable Li-ion 4200 mAh 14.8 V DC 2100 mAh (optional)

RESP

Method: Trans-thoracic impedance
Operation mode: Auto/ Manual
RR Measurement range: Adult: 0~120 rPM
Neonate/Pediatric: 0~150 rPM

Resolution: 1rPM
Apnea alarm threshold: 10s, 15s, 20s (default), 25s, 30s, 35s, 40s
Alarm: 3 levels of audible and visual alarm, alarm events recallable
Band width: 0.2-2.5Hz (-3dB)
Sweep speed: 6.25mm/s, 12.5mm/s, 25mm/s, 50mm/s

ECG

Lead type: 5-lead and 3-lead selectable, 12-lead optional
3 leadwire cable: RA; LA; LL or R; L; F
5 leadwire cable: RA; LA; RL; LL; V or R; L; N; F; C (including 3/5-lead) optional
12-lead: 10 leadwire cable: RA; LA; RL; LL; V1-V6 or R; L; N; F; C1-C6

Lead selection:
5-lead: I; II; III; aVR; aVL; aVF; V
12-lead: I; II; III; aVR; aVL; aVF; V1-V6
Gain selection: x0.125; x0.25; x0.5; x1; x2; x4; auto
Sweep speed: 6.25mm/s, 12.5mm/s, 25mm/s, 50mm/s
ECG HR Range: Adult: 15-300bpm
Pediatric / Neonate: 15-350bpm

Resolution & accuracy: ±1bpm or ±1%, whichever is greater
Filter Diagnostic mode: 0.05-100Hz or 0.05-150Hz (optional 12-lead)
Filter Monitoring mode: 0.5-40 Hz
Surgical mode: 1-20Hz
Protection: Withstand 5000VAC/50Hz voltage in isolation against Defibrillation and electrosurgical interference

ST-Segment Detection:
Measurement range: -2.0 mV~2.0mV
Alarm range: -2.0 mV~2.0mV

ST-Segment Arrhythmia analysis and categorization: Yes
Alarm: 3 levels of audible and visual alarm, alarm events recallable

12 lead ECG analysis: 208 Reference Diagnostic Results
Pace maker detection: Yes, and 5 types abnormal status detectable
Arrhythmia verification compliant with AHA and MIT-BIH databases

IEC 60601-2-25 / EN 60601-2-25 / AAMI EC 11 / EC 13
IEC 60601-2-27 / EN 60601-2-27

NIBP

Method: Automatic Oscillometric
Operation modes: Manual/Automatic/Continuous
Auto measurement time interval: Adjustable 1/2/3/4/5/10/15/30/60/90/120/240/480 Minutes

Measurement unit: mmHg/kPa selectable
Measurement types: Systolic, Diastolic, Mean
Pressure range for Adults: Systolic: 40 - 270 mmHg
Diastolic: 10 - 215 mmHg
Mean: 20 - 235 mmHg

Pressure range for Pediatrics: Systolic: 40 - 200 mmHg
Diastolic: 10 - 150 mmHg
Mean: 20 - 165 mmHg
Pressure range for Neonates: Systolic: 40 - 135 mmHg
Diastolic: 10 - 100 mmHg
Mean: 20 - 110 mmHg

Leak test and pressure auto calibration: Yes
Over-pressure protection: Dual Safety protection
Resolution: 1mmHg
Accuracy: Max mean error ±5mmHg
Max standard deviation: ±8 mmHg
Alarm: Systolic, Diastolic, Mean
PR from NIBP: Measurement 40~240 bpm
Resolution: 1 bpm
Accuracy: 3bpm or 3% whichever is greater

Leak test and pressure auto calibration: Yes
IEC 60601-2-30 / EN 60601-2-30 / EN 1060-1 / EN 1060-3 / EN 1060-4 SP10:2002

NIBP (By Omron M3600)

Measurement Ranges
Adult/Pediatric: Pulse Rate: 40 - 200bpm
Systolic Pressure: 60 - 250mmHg
Diastolic Pressure: 40 - 200mmHg
Mean Arterial Pressure: 45 - 235mmHg
Neonate: Pulse Rate: 40 - 240bpm
Systolic Pressure: 40 - 120mmHg
Diastolic Pressure: 20 - 90mmHg
Mean Arterial Pressure: 30 - 100mmHg
Measurement Accuracy: Pulse Rate: ±2bpm or 2% of reading whichever is greater
Blood Pressure: Complies with ANSI/AAMI SP10:2002
Modes of Measurement: Manual, Long-term automatic, Short-term automatic, Smart Inflation, Smart measurement, High speed
Pressure Transducers: Two independent solid-state
Deflation Methods: Dynamic Linear Deflation rate specific to pulse rate

Technical Specifications (Cont.)

SpO₂

Measurement & Alarm Range: 0 - 100%
Resolution: 1%;
Accuracy: ±2% (70-100%, Adult/Pediatric);
±3% (70-100%, Neonate)
PR Measurement and Alarm Range: 30 - 300bpm
Resolution: 1bpm
Accuracy: 3bpm Refresh 1s
ISO 9919

SpO₂ (By Nellcor OxiMax™)

Measurement & Alarm Range: 0 - 100%
Resolution: 1%;
Accuracy: ±2-3% (70-100%, Adult/Pediatric);
±3-3.5% (70-100%, Neonate)
PR Measurement and Alarm Range: 20 - 300bpm
Resolution: 1bpm
Accuracy: 3bpm (depends on probe)

Temperature (2 Channels, 1 probe by default)

Measurement range: 0~50°C (32-122°F)
Resolution: 0.1°C
Accuracy: ±0.1°C (without probe)
Channel: Dual-channel. Provide T1; T2; ΔT
IEC 12470-4

IBP (Multi-channel extendable)

Measured Pressure: ART, PA, CVP, RAP, LAP, ICP, P1, P2
Measurement range: -50 - 300 mmHg;
Resolution: 1 mmHg
Accuracy: ±2% or ±1mmHg, whichever is greater
(without probe)
Sensitivity: 5μV/V/mmHg;
Impedance range: 300-3000Ω
IEC 60601-2-34

CO₂ (Mainstream / Sidestream)

By Philips Respronic CAPNOSTAT 5 & LoFlo Technology
Range: 0~ 150mmHg
Accuracy: ±2% 0 ~ 40mmHg,
±5% 41~70mmHg
±8% 71~100mmHg
±10% 101~150 mmHg
AwRR Accuracy: ±1rpm

Convenient design for intubated and non-intubated applications
Possible to work at low sample flow rate: 50ml / minute
Detailed specification refer to the user manual of Respronic
ISO 21647

Mediblu

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We provide integrated solutions for all your medical needs.

Cardiac Output

Method: Thermodilution Technology
Measuring range: CO: 0.1 ~ 20L/min
TB: 23°C ~ 43°C
TI: - 1°C ~ 27°C
Alarm range 23°C ~ 43°C

Anesthetic GAS/O₂

Technology Infra-red absorption characteristic
Paramagnetic Oxygen: Optional
Gas CO₂, O₂, N₂O, Des, Iso, Enf, Hal, Sev (IRMA AX+) Iso accuracy mode: 45s
Warm-up time: 60s
Full accuracy mode: (ISA OR+ / AX+) <20s
Sample flow rate (for ISA OR+ / AX+) 50 ±10 ml/min
Measuring range: CO₂: 0 ~ 15%
N₂O: 0 ~ 100%
Hal/Iso/Enf: 0 ~ 8% Sev: 0~10%
Des: 0 ~ 22%
O₂: 0 ~ 100%(ISA OR+/AX+)
Respiratory Rate: 0-150bpm ±1bpm
MAC Value displayed
ISO 21647

Thermal Recorder

Built-in, direct thermal pixel array recorder
2 channels printing and 1,2 channels selectable
Up to 3 channels printing and 1,2,3 channels selectable (to be released)
Print speed: 25mm/s, 50mm/s (to be released)
Paper width: 50 mm

I/O Interface

8-USB Ports
SD Card Socket
RS-232 Serial Port
RJ-45 Ethernet Port. IEEE 802.3 DVI output
VGA output
Analog and Nurse Call output Defibrillation Synchronization Output
WLAN Access Point 802.11g 54Mbps (optional)

Optional Modules:



MM³ Module



MM+ Module



Parameter Amplifier Mainframe