

PM-9000Express

Patient Monitor

Technical specifications

Safety IEC60601-1 approved, CE marking according to MDD93/42/EEC	
Dimension and Weight	318(W) x 270(H) x 137(D)mm 12.5(W) x 10.6(H) x 5.4(D)inch Standard Configuration: 4.7kg / 10.4lb. Maximum weight :7.5kg / 16.5lb.
Weight:	
Operation Environment	
Power Requirements:	AC 100-240V, 50/60 Hz, 140VA
Temperature:	0-40°C/32-104°F
Humidity:	15-95% non-condensing
Patient Range	Neonate, pediatric, and adult patients
Performance Specifications	
Display:	12.1" color TFT (diagonal) Rolling and refreshing waveform display Resolution: 800x600 Multi displays selectable, including: Standard display Large font display Trend coexist display Bed-to-bed view display OxyCRG dynamic view display 8 waveforms Sweep Speed: 6.25mm/s, 12.5mm/s, 25mm/s, 50mm/s
Trace:	8 waveforms
Indicator:	Sweep Speed: 6.25mm/s, 12.5mm/s, 25mm/s, 50mm/s Alarm indicator light Power indicator light Battery indicator light QRS beep and alarm sound Parameter cable interface AC Power input socket
Interface:	Network interface External VGA interface for connection of an Alternate Display Aux Output interface (Analog/Defib-Synch/Nurse Call)
Battery:	Rechargeable Li-Ion Battery: (for 2 pieces) Maximum 6.5 hours for charging; 5 hours for continuous working Rechargeable Lead-Acid Battery: (for 2 pieces) Maximum 12 hours for charging; 2 hours for continuous working 1-96 hours User-adjustable High and Low limits 3-level audible and visual alarm
Trend time:	1-96 hours
Alarm:	User-adjustable High and Low limits 3-level audible and visual alarm
Networking:	Connected to central monitoring system
Recorder:	Built-in, thermal array Waveform: 3 channels Record mode: manual, on alarm, time-defined Paper width: 50mm Print speed: 25mm/s, 50mm/s
ECG	
Lead type:	5-lead and 3-lead selectable, 12-lead (including 3/5-lead) optional
Input:	10 leadwire cable: RA, LA, RL, LL, V1-V6 or R, L, N, F, C1-C6 5 leadwire cable: RA, LA, RL, LL, V or R, L, N, F, C 3 leadwire cable: RA, LA, LL or R, L, F
Lead selection:	12-lead: I, II, III, aVR, aVL, aVF, V1-V6 5-lead: I, II, III, aVR, aVL, aVF, V 3-lead: I, II, III
ECG waveform:	2 channels
Gain selection:	x0.125; x0.25; x0.5; x1; x2; auto
Sweep speed:	12.5mm/s, 25mm/s, 50mm/s
Heart Rate range:	Adult: 15-300bpm; neonate/ Pediatric: 15-350bpm
Accuracy:	± 1bpm or ± 1%, whichever is greater
Resolution:	± 1bpm
Filter:	Diagnostic mode: 0.05-100Hz or 0.05-150Hz (optional) 12-lead Monitoring mode: 0.5-40 Hz Surgical mode: 1-20Hz
Protection:	Withstand 4000VAC/50Hz voltage in isolation Against electro-surgical interference and defibrillation
Scaling signal:	1mV ± 5%
Alarm range:	15-350 bpm
S-T segment detection:	Measurement range: -2.0 mV ~ ± 2.0 mV Alarm range: -2.0 mV ~ ± 2.0 mV
Arrhythmia analysis:	YES
Alarm:	YES, audible and visual alarm, alarm events recallable
12 lead ECG analysis:	YES
Pace detection:	YES
ECG Configuration:	Mortara ECG(M08A) - 3/5/12 Lead; (Options Mortara S-T segment detection & Mortara Arrhythmia analysis)
Respiration	
Method:	Thoracic impedance
Operation modes:	Auto/ Manual
Measurement range:	Adult: 0-120 BrPM; Neonate/Pediatric: 0-150 BrPM
Apnea alarm:	YES
Alarm:	YES, audible and visual alarm, alarm events recallable
NIBP	
Method:	Automatic oscillometric
Operation modes:	Manual/Automatic/Continuous
Auto measure time:	Adjustable
Measurement unit:	mmHg/kPa selectable
Measurement types:	Systolic, Diastolic, Mean
Range of systolic pressure:	Adult Mode: 40-270 mmHg Pediatric Mode: 40-200 mmHg

Range of diastolic pressure:	Neonatal Mode: 40-135 mmHg Adult Mode: 10-210 mmHg Pediatric Mode: 10-150 mmHg
Range of mean pressure:	Neonatal Mode: 10-100 mmHg Adult Mode: 20-230 mmHg Pediatric Mode: 20-165 mmHg Neonatal Mode: 20-110 mmHg
Accuracy of blood pressure measurement:	The mean error shall be less than ± 5 mmHg The standard deviation shall be less than 8 mmHg double safety protection
Over-pressure protection:	Resolution: 1mmHg
Alarm:	Systolic, Diastolic, Mean
PR from NIBP:	Measurement: 40-240 bpm Resolution: 1 bpm Accuracy: ± 3bpm or ± 3% whichever is greater
SpO2	
MINDRAY SpO2:	
Measurement range:	0-100%
Resolution:	1%
Accuracy:	± 2% (70-100%, Adult/Pediatric, non-motion); ± 3% (70-100%, Neonate, non-motion); ± 3% (70-100%, Adult/Pediatric/Neonate, motion); 0-69% unspecified
Alarm range:	1-100%
Pulse rate:	Range: 20-254 bpm Resolution: 1 bpm Accuracy: ± 3bpm (non-motion) ± 5bpm (motion) Alarm range: 20-254 bpm
NELCOR SpO2:	
Measurement range:	0-100%
Resolution:	1%
Accuracy:	± 2% (70-100%, MAX-A, MAX-AL, MAX-N, MAX-P, MAX-I and MAX-FAST sensors); ± 2.5% (70-100%, OxiClq A, OxiClq N, OxiClq P and OxiClq I sensors); ± 3% (70-100%, D, YS, DS-100A, OXI-A/N and OXI-P/I sensors); 3.5% (70-100%, MAX-R, D-YSE and D-YSPD sensors); 0-69% unspecified
Alarm range:	0-100%
Pulse rate:	Range: 20-300 bpm Resolution: 1 bpm Accuracy: ± 3bpm (20-250 bpm); 251-300 bpm unspecified Alarm range: 20-300 bpm
Unspecified:	
Temperature	
Measurement range:	0-50°C (32-122°F)
Resolution:	0.1°C
Accuracy:	± 0.1°C (excluding the sensor)
Channel:	Dual-channel, Provide T1; T2; Δ T
IBP	
Measurement range:	50-300 mmHg
Channel:	2 channels
Pressure transducer:	Sensitivity: 5 uV/V/mmHg Impedance range: 300-3000 Ω ART, PA, CVP, RAP, LAP, ICP, P1, P2 1 mmHg
Pressure names:	± 2% or ± 1 mmHg, whichever is greater
Resolution:	-10-300 mmHg
Accuracy:	Range & Accuracy: 25-200 bpm ± 1 BPM or ± 1% whichever is greater 201-350 bpm ± 2% Resolution: 1 bpm
Alarm range:	
PR from IBP:	
Cardiac Output	
Method:	Thermodilution
Measurement range:	CO: 0.1-20 l/min. TB: 23-43°C TI: 0-27°C CO: 0.1 l/min. TI: 0.1°C TB: 0.1°C
Accuracy:	CO: ± 5% or 0.1 l/min TB: ± 0.1°C TI: ± 0.1°C
Parameter output:	Cardiac output Hemodynamics calculation
EtCO2	
Microstream CO2:	
Measurement range:	0-99 mmHg
Accuracy:	0-38 mmHg ± 2 mmHg 39-99 mmHg ± 5% of reading + 0.08% for every 1 mmHg (above 38 mmHg)
Resolution:	Waveform: 0.1 mmHg Value: 1 mmHg
Sampling rate:	50ml/min - 7.5 + 15ml/min
Initialization time:	30 seconds (typical), reaches ± 5% steady-state

Response time:	accuracy within 3 minutes. Typical value: 2.9s, including the rising time and the delay time (adopting the Filter Line of standard length)
Rising time:	< 190ms (rising from 10% to 90%)
Delay time:	2.7s (typical value)
Respiration rate:	0-150 breaths/min
Respiration rate accuracy:	0-70 BrPM ± 1 BrPM 71-120 BrPM ± 2 BrPM 121-150 BrPM ± 3 BrPM Adult, neonate
Mode:	
Sidestream CO2	
Measurement range:	0-99 mmHg
Accuracy:	± 2 mmHg (0-40 mmHg) ± 5% of reading (41-76 mmHg) ± 10% of reading (77-99 mmHg)
Sampling rate:	70 ml/min, 100 ml/min
Start-up time:	0.15 or 1.5 ml/min 30 Sec. The module enters the warming up status after the startup. 1 minutes later, it enters the ready-to-measure status. 10 minutes after start-up, the module reaches full accuracy mode
Mode:	
Respiration rate:	0-120 rpm
Respiration rate accuracy:	± 2 BrPM (0-70 BrPM) ± 5 BrPM (> 70 BrPM)
Response time:	When measured with a neonatal watertrap and a 2.5 m-long neonatal sampling line: < 4 s @ 100 ml/min < 4 s @ 70 ml/min When measured with an adult watertrap and a 2.5 m-long adult sampling line: < 5 s @ 100 ml/min < 5 s @ 70 ml/min
Delay time:	When measured with a neonatal watertrap and a 2.5 m-long neonatal sampling line: < 3 s @ 100 ml/min < 3.5 s @ 70 ml/min When measured with an adult watertrap and a 2.5 m-long adult sampling line: < 5 s @ 100 ml/min < 5 s @ 70 ml/min
Mainstream CO2	
Method:	Infrared Absorption
Measuring Mode:	Mainstream
Measurement range:	EtCO2: 0-99 mmHg InsCO2: 0-99 mmHg AwRR: 0-150 BrPM EtCO2: 1 mmHg InsCO2: 1 mmHg AwRR: 1 BrPM
Accuracy:	CO2 concentration: ± 2 mmHg (0-40 mmHg) ± 5% of reading (41-76 mmHg) ± 10% of reading (77-99 mmHg)
Alarm range:	AwRR: ± 2 BrPM Same as Measurement range
Multi-Gas/O2	
Method:	Infrared Absorption
Gas sorts:	CO2, N2O, Des, Iso, Ent, Sev, Hal, O2 (Optional paramagnetic sensor)
Measurement range:	CO2: 0-30% N2O: 0-105% O2: 0-105% Ent, Iso, Hal: 0-30% Des: 0-30% Sev: 0-30% Fi and ET values ± 1 BrPM (2-60 BrPM)
Data output:	61-100 BrPM (unspecified) Up to 4 waveforms displayed Agent mixture detection MAC value displayed
Other:	
Standard Configuration:	ECG (Mindray 3/5 Lead); NIBP; RESP; Mindray-SpO2; Dual-Temp; Lead Acid Battery
Options:	ECG (Mortara 3/5 lead with Extended ARR); ECG (Mortara 12 lead with Extended ARR); ECG (Mortara 3/5 lead with Extended ARR & 3/5 Lead ST); ECG (Mortara 12 lead with Extended ARR & 12 lead ST); Clinical proven SpO2; Dual-IBP; CO; EtCO2; Multi-gas/O2; Thermal Recorder; Li-Ion Battery, CP Cardpower off storage)

PM-9000Express

Patient Monitor



★ 3-Year Manufacturer Warranty on Main Unit!



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Taking high cost out of quality healthcare



PM-9000Express Patient Monitor

- 12.1" color TFT display with maximum 8 waveforms
- Anesthetic agent monitor*
- Clinical proven SpO₂ technology
- Microstream™ EtCO₂ / Sidestream EtCO₂ / Mainstream EtCO₂*
- Maximum 96-hour graphic and tabular trends of all parameters
- Mindray or Mortara Arrhythmia and ST segment analysis*
- Large font display
- SpO₂ pulse-tone modulation (Pitch Tone)
- 40-second full-disclosure waveform review
- Alarm light indicator
- Compact flash memory card option*
- Li-ion battery
- Suitable for adult, pediatric and neonatal patients

Parameters: ECG, RESP, NIBP, SpO₂, 2-TEMP, 2-IBP, EtCO₂, Multi-Gas/O₂



Multi-Gas/O₂ Module

Measures concentration of anesthesia gases
(Des, Sev, Iso, Enf, Hal), N₂O, CO₂ and O₂
Automatically identifies the anesthetic agents
Short response time



Microstream™ EtCO₂

Suitable for non-intubated and intubated applications
For adult, pediatric, infant/neonate patients
Low sampling rate 50ml/min (± 7.5ml/min)



Fixed Memory Card

Provides power off storage for 96-hour graphic and trend, 800 NIBP records and 70 alarm records

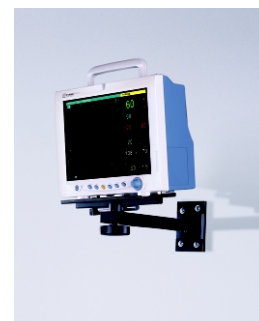


Left Side Panel

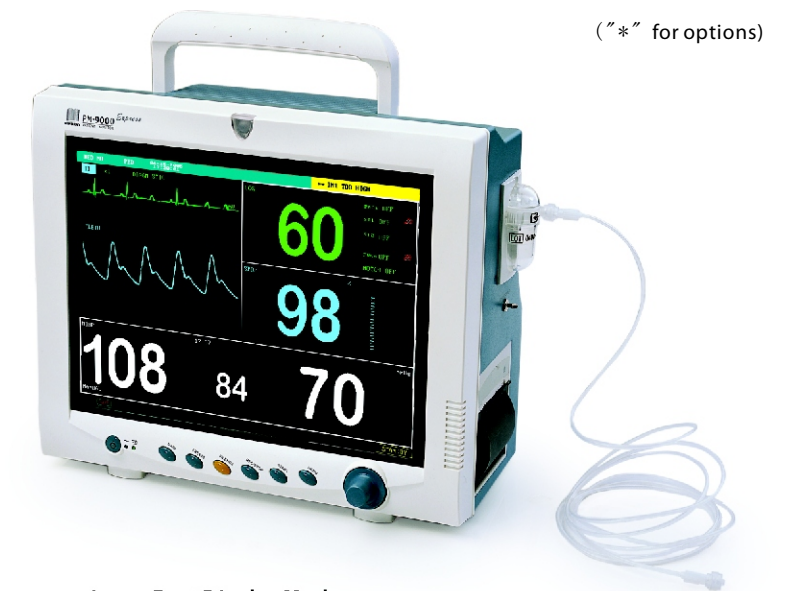
Connectors for ECG, NIBP, SpO₂, TEMP, IBP and Mainstream CO₂ cables and sensors



Rolling Stand



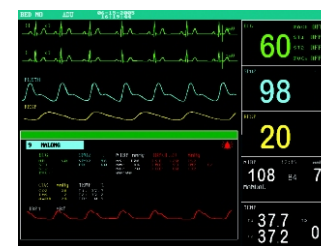
Wall Mount



(* for options)

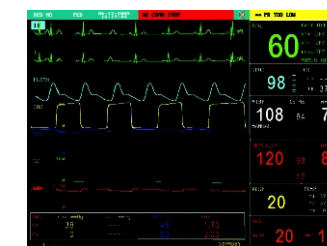
Large Font Display Mode

Basic parameters (ECG, SpO₂, NIBP) in large font for distance view



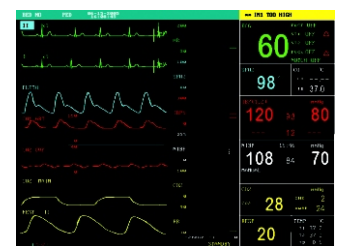
"Viewbed Screen" Mode

View patient data from another monitor with a simple LAN connection



Multi-gas/O₂ Option

Adopting infrared absorption technique to measure the concentration of EtCO₂, N₂O, O₂ and other five anesthesia gases (Des, Sev, Iso, Enf, Hal)



"Trend Screen" Mode

Dynamic 2-hour trend data viewed next to real-time waveform data