



M9 / M9A Patient Monitor

- 12"/10" color TFT display with maximum 11 waveforms
- ECG, SpO₂, Resp, NIBP, 2-Temp, PR, 2-IBP, CO, EtCO₂, Multi-Gas/O₂(Artema)
- 96 hours graphic and tabular trends of all parameters
- 120 seconds full-disclosure waveforms review
- Nellcor Oximax / EDAN SpO₂
- SpO₂ pulse-tone modulation (Pitch Tone)
- OxyCRG for neonatal monitoring
- 7 leads ECG analysis
- Built-in rechargeable Li-ion battery
- LAN connection
- Large font display
- Pacemaker detection
- Alarm trigger printing
- Alarm and NIBP review
- Nurse call function



EtCO₂ Waveform



CO and IBP Measurement



Large font display



Maximum 11 Waveforms



Trend Screen Mode



OxyCRG for Neonatal Monitoring

M9 / M9A Patient Monitor

Technical Specifications

Safety

IEC60601-1 approved, CE marking according to MDD93/42/EEC

Dimension and Weight

Dimension: 318mm(W)x152mm(D)x264mm(H)
Weight: 5kg

Operation Environment

Temperature: 5 ~ 40 °C
Humidity: 25% ~ 95 % (non-condensing)
Power: AC 100 ~ 240 V , 50/60 Hz

Performance Specifications

Display: 12" /10" color TFT (M9 12" , M9A 10")
Resolution: 800x600
Waveforms: 11 waveforms maximum
Indicator: Alarm indicator
Power indicator
Charging indicator
QRS beep and alarm sound
Interface: Network port
Battery: Rechargeable Li-ion battery
Maximum 4.5 hours with full capacity
Recall: 1-96 hours trend recall
Alarm: 3-level audible and visual alarm
Recorder: Built-in, thermal array
2 traces
Paper width: 48mm
Record speed: 25mm/s, 50mm/s

ECG

Lead Mode: 3 Leads (R, L, F or RA, LA, LL),
5 Leads (R, L, F, N, C or RA, LA, LL, RL, V)

4 selectable plus: x0.25, x0.5, x1, x2 cm/mV
PACE detection
Detection leads 7 selectable leads: I, II, III, aVR, aVL, aVF, V
Input voltage range ±8mV, polarized voltage: ±500mV
CMRR

Diagnosis >100 dB (no 50Hz/60Hz software wave trap)
Monitor >110 dB (has 50Hz/60Hz software wave trap)
Surgery >100dB (50Hz/60Hz software wave trap)

HR Measuring and Alarm Range
Adult/Ped 15 bpm ~ 300bpm
Neo 15 bpm ~ 350bpm
Accuracy ±1% or ±1bpm, which great
Resolution 1 bpm
Sensitivity > 200 µV P-P
Differential Input Impedance ≥ 5 MΩ
Electrode offset potential ±300mVd.c. ± 600mVd.c.
Leakage Current < 10 µA
ECG Signal Range ±6 mV (Vp-p)
ST Segment Monitoring Range
Measure and Alarm -2.0 ~ +2.0 mV

RESPIRATION
Method Impedance between R-F (RA-LL)
Resp. Rate Measuring and Alarm Range:
Adult 0 rpm ~120rpm
Neo/Ped 0 rpm ~150rpm
Resolution 1 rpm
Accuracy ±2 rpm
Gain Selection x0.5, x1, x2, x4, Auto

NIBP
Method Oscillometric
Mode Manual, Auto, Continuous
Measuring Interval in AUTO Mode
1/2/3/4/5/10/15/30/60/90/120/240/480Min
Cuff Pressure measuring Range 0~280mmHg
Pressure Resolution 1mmHg
Pressure Accuracy
Mean error ±5mmHg
Maximum Standard deviation ±8mmHg
Overvoltage protection Dual Overvoltage protection
Adult 297±3mmHg
Pediatric 240±3mmHg
Neonatal 150±3mmHg
SpO₂
Measuring Range 0 ~ 100 %
Alarm Range 0 ~ 100 %
Resolution 1 %
Accuracy
Adult (including Pediatric) ±2digits (70%~100% SpO₂)
Undefined (0~70% SpO₂)
Neonate ±3digits (70%~100% SpO₂)
Undefined (0~70% SpO₂)
Pulse Rate
Measuring and Alarm Range 15~254bpm
Resolution 1bpm
Accuracy ±3bpm
Under Motion Condition ±5bpm

Nellcor module (optional)
Measuring Range 1 ~ 100 %
Alarm Range 1 ~ 100 %
Resolution 1 %
Accuracy
Adult and Low-perfusion ±2digits (70%~100% SpO₂)
Undefined (0~70% SpO₂)
Neonate ±3digits (70%~100% SpO₂)
Undefined (0~70% SpO₂)
Pulse Rate
Measuring and Alarm Range 20~250bpm
Resolution 1bpm
Accuracy ±3bpm
Low Perfusion 0.03 % ~ 20 %

TEMPERATURE
Channel 2
Measuring Range 0 ~ 50 °C
Sensor type YSI (B series) and CF-FI
Resolution 0.1 °C
Accuracy ±0.1 °C (20 ~ 45 °C)
±0.2 °C (0 ~ 25 °C, 45 ~ 50 °C)

IBP
Channel 2
Label ART, PA, CVP, RAP, LAP, ICP, P1, P2
Static Pressure Measuring Range
-50~+300 mmHg (up to 350 mmHg)
Static Pressure Accuracy
±1% or 1mmHg which great (excluding probe)
±4% or 4mmHg which great (including probe)
Dynamical Pressure Measuring Range -50~+300 mmHg
Dynamical Pressure Accuracy
±4% or 4mmHg which great (including probe)
Measuring and Alarm Range



ART 0 ~ 300 (mmHg) PA -10 ~ 120 (mmHg)
CVP/RAP/LAP/ICP -10 ~ 40 (mmHg)
P1/P2 -10 ~ 300 (mmHg) Resolution 1 (mmHg)
CO₂
Method Infra-red Absorption Technique
Measuring mode Sidestream
Measuring range
CO₂ 0 ~ 99 mmHg INSCO₂ 0 ~ 99mmHg
AwRR 0 ~ 150 rpm
Resolution
CO₂ 1 mmHg INSCO₂ 1mmHg
AwRR 1 rpm
Accuracy
CO₂ ±2 mmHg, 0 ~ 40 mmHg
Reading ±8%, 41 ~ 76 mmHg
Reading ±10%, 77 ~ 99 mmHg
AwRR ±2 rpm
Alarm range
CO₂ ADU 15 ~ 50 mmHg
PED 20 ~ 50 mmHg
NEO 30 ~ 45 mmHg
InsCO₂ ALM HI 4 mmHg
AwRR ADU 8 ~ 30 rpm
PED 8 ~ 30 rpm
NEO 30 ~ 100 rpm
Suffocation Alarm Delay
AwRR 10-40 seconds
CO
Method Thermodilution Technique
Measuring range
CO 0.1 ~ 20L/min TB 23 ~ 43 °C
TI 0 ~ 27 °C
Resolution
CO 0.1L/min TB, TI 0.1 °C
Accuracy
CO ±5% or ± 0.1L/min TB ±0.1 °C
TI ±0.1 °C
Alarm range 23 ~ 43 °C
Multi-gas
Technology Infra-red absorption characteristic
Gas Sorts CO₂, N₂O, Des, Iso, Enf, Sev, Hal, O₂
(Galvanic oxygen sensor)
Measuring range
CO₂ 0~10% O₂ 0~100%
N₂O 0~100%
AwRR 2 ~100mpm Halothane 0~5%
Isoflurane 0~5% Enflurane 0~5%
Sevoflurane 0~8% Desflurane 0~18%
Respiration rate 4~ 60 ±1 bpm
Other Up to 3 waveforms displayed
Agent mixture detection
MAC value displayed

Standard configurations: ECG, NIBP, RESP, EDAN SpO₂, 2-TEMP, Li-ion Battery

Optional configurations: Nellcor SpO₂, 2-IBP, CO, EtCO₂, Multi-Gas/O₂, Thermal Recorder

Specification subject to change without prior notice



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