

Made
in
Egypt



BioMon™ Patient Monitor

Promoting the Quality of Healthcare

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Patient Monitor

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• ECG

Standards:

IEC60601-2-25 and IEC60601-2-27

Leads available:

- 3-lead: I, II, IIIStandard
- 7-lead: I, II, III, aVL, aVR, aVF, VStandard
- 12-lead:I,II,III, aVL, aVR, aVF, V1 to V6Full disclosure Optional

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

Gain Selection: 0.25x, 0.5x, 1x, 2x, 4x and 8x (mm/mv)

Common mode rejection ratio: >90 dB

Notch filter: 50/60 Hz

Differential input impedance: $\geq 5 \text{ M}\Omega$

Input signal range: $\pm 10 \text{ mV}$

Electrode offset potential tolerance: $\pm 500 \text{ mV}$

Lead-off alarm: Lead-off indication for each electrode

Baseline recovery time: <3 s (after defibrillation)

Different types of cables: 3, 5 and 10 electrodes (AHA, IEC) cable

Patient leakage current: <10 μA

Calibration signal: 1 mV

ESU Protection: Yes

Sampling rate: 1000 samples/s (A/D)

Accuracy: 14 $\mu\text{V/LSB}$

Pace Pulse rejection:

Amplitude: ± 2 to $\pm 700 \text{ mV}$

Width: 0.2 to 2 ms

Software Variant:

- Basic arrhythmia detectionStandard
- ST segment analysis monitoringOptional
- Advanced arrhythmia detectionOptional
- Multi-lead arrhythmia detectionOptional

Modes of operation: Surgical/Monitoring/Diagnostic

Clinical Use: Adult, pediatric, and neonate

• Respiration

Technique: Trans-thoracic impedance

Leads: lead I and II

Respiration excitation current:

<64 μA RMS, 64 kHz ($\pm 10\%$)

Respiration impedance: 0.3 to 5 Ω

Baseline impedance range: 200 to 2500 Ω (using an ECG cable with 1k Ω resistance)

Measurement range:

- Adult: 0 to 120 rpm
- Pediatric, Neonates: 0 to 150 rpm

Resolution: 1 rpm

Accuracy: 15 to 150 rpm (± 2 rpm or $\pm 2\%$)

Apnea alarm time: 10 s Auto

• Spo2

Standard: ISO 9919

Measurement range:

- Pulse oximetry: 0 to 100%
- Pulse rate: 30 to 240 bpm

Resolution: 1%

Accuracy:

- Saturation:
 - Adult: 60 to 100% ($\pm 2\%$)
 - Neonate: 60 to 100% ($\pm 3\%$)
 - Low perfusion: 60 to 100% ($\pm 2\%$)

- Pulse rate: ± 2 bpm

Perfusion Range: 0.5% to 20%

Refreshing date: ≤ 2 s

• Nellcor OxiMax Spo2

Standard: ISO 9919

Measurement range:

- Pulse oximetry: 1 to 100%
- Pulse rate: 20 to 250 bpm

Alarm management system: Sat-Seconds

Accuracy:

- Saturation:
 - Adult: 70 to 100% ($\pm 2\%$)
 - Neonate: 70 to 100% ($\pm 3\%$)
 - Low perfusion: 70 to 100% ($\pm 2\%$)
- Pulse rate: ± 3 bpm

Resolution: 1%

Perfusion Range: 0.03% to 20%

Refreshing date: ≤ 2 s

• Temperature

Standard: ISO 80601-2-56 standard

Technique: Thermal resistance

Measurement range: 0 to 50 $^{\circ}\text{C}$

Resolution: 0.1 $^{\circ}\text{C}$

Accuracy: ± 0.1 $^{\circ}\text{C}$

Probe: YSI400



• Non-Invasive Blood Pressure (NIBP)

Standards: IEC 80601-2-30 standard

Technique: Oscillometric technique

Mode of operation: Manual, continuous, cyclic

Accuracy:

- Max mean error: ± 3 mmHg

- Max standard deviation: 6 mmHg

Resolution: 1 mmHg

Measurement options:

- Deflation

- Inflation (IMT technology)

Clinical Use: Adult, pediatric, and neonate

• Invasive Blood Pressure (Optional)

Measurement range: -50~400 mmHg

Supported sensor sensitivity: 5 μ v/v/mmHg

Supported sensor impedance: 300-3000 ohm

Programmable frequency range: 0-40 Hz/ 0 – 12 Hz

Accuracy: ± 1 mmHg

Zero balance: ± 150 mmHg

No. of Channels: 1 to 4

Hemodynamic calculations: Optional

• ETCO₂ (Optional)

CO₂ measuring range: 0 vol.% - 16 vol.%

Accuracy:

- 0 vol.% - 8 vol.%: ± 0.26 vol.% $\pm 5\%$

- 8 vol.% - 16 vol.%: ± 0.43 vol.% $\pm 8\%$

Pump rate: 80ml/min ± 20 ml/min

Response time: <150ms @80ml/min

Start Up time: < 5 seconds

Breathing rate range: 3 – 120 breaths/min

Type of capnography: Side Stream

Clinical use: Adult, pediatric and neonate

• Cardiac Output (Optional)

Measurement method: Thermodilution

CO Measurement Range: 0.3 to 20.0 l/min

Measurement Start: Automatic, manual

CO Averaging: up to 4

Blood Temperature measurement range:

0.0 – 40.0°C

Hemodynamic Calculations: CO, CI, SV, SI, SVR, SVRI

• Physical Characteristics

Dimensions: W 370 x H 110 x D 400

Weight: Approx. 9.5 Typical

• General Specifications

Display:

- 19 Inch external medical grade LCD display

- Embedded graphical LCD

- Up to 8 simultaneous traces

- Intuitive user interface using standard rotary knob

- Touch Screen (optional)

Patient Data:

- Save up to 10 patients data.

- 150 event waveforms per patient

- 120 hrs graphic and tabular vital signs trends

Data backup: Optional

Printer: Thermal recorder (Optional)



• Connectivity

Protocol: Upgradable to integrated with HIS via HL7.

Ethernet: Standard

WIFI : Optional

Nurse call integration: Optional

• Environmental Characteristics

Working temperature: 0-40°C

Humidity: 15 – 85%

Power supply: 220 VAC, 50Hz

Power Consumption: 75W max

Battery life:

- 1 hour (standard)

- 2 hours (Optional)



4 El Safwa Buildings, El Lebeni St.,
Mariutia, El-Haram, Cairo, Egypt, 12111

Tel.: +20 2 3 75 2 6 895

Fax: +20 2 3 75 2 6 839

Mobile: +2 01 00 1 94 70 74



contactus@biobusiness-eg.com



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