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CE 0653

# BioMon Patient Monitor

## promoting the quality of healthcare

Biomon™ Patient Monitor

*Promoting the Quality of Healthcare*

Biomon™ Patient Monitor

## • ECG

**Standards:**
IEC60601-2-25 and IEC60601-2-27
**Leads available:**
- 3-lead: I, II, III .....Standard
- 7-lead: I, II, III, aVL, aVR, aVF, V .....Standard
- 12-lead:I,II,III, aVL, aVR, aVF, V1 to V6 .....Full 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:** ≥5 MΩ
**Input signal range:** ± 10mV
**Electrode offset potential tolerance:**±500 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 uA
**Calibration signal:** 1 mV
**ESU Protection:** Yes
**Sampling rate:** 1000 samples/s (A/D)
**Accuracy:** 14μV/LSB
**Pace Pulse rejection:**
Amplitude: ±2 to ±700 mV
Width: 0.2 to 2 ms
**Software Variant:**
- Basic arrhythmia detection .....Standard
- ST segment analysis monitoring .....Optional
- Advanced arrhythmia detection .....Optional
- Multi-lead arrhythmia detection .....Optional

**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 (±10%)
**Respiration impedance:** 0.3 to 5Ω
**Baseline impedance range:** 200 to 2500Ω (using an ECG cable with 1kΩ 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 ±2%)
**Apnea alarm time:** 10 s Auto

## • Nellcor OxiMax Spo2

**Standard:** ISO 9919
**Measurement range:**
- Pulse oximetry: 1 to 100%
- Pulse rate: 20 to 250 bpm

**Resolution:** 1%
**Accuracy:**
- Saturation:
  Adult: 70 to 100% (±2%)
  Neonate: 70 to 100% (±3%)
  Low perfusion: 70 to 100% (±2%)
- Pulse rate:±3 bpm

**Alarm management system:** Sat-Seconds
**Perfusion Range:** 0.03% to 20%
**Refreshing date:** ≤ 2 s

## • Biobusiness 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% (±2%)
  Neonate: 60 to 100% (±3%)
  Low perfusion: 60 to 100% (±2%)
- Pulse rate:±2 bpm

**Alarm management system:** -
**Perfusion Range:** 0.5% to 20%
**Refreshing date:** ≤ 2 s

## • Temperature

**Standard:** ISO 80601-2-56 standard
**Technique:** Thermal resistance
**Measurement range:** 0 to 50 °C
**Resolution:** 0.1 °C
**Accuracy:** ±0.1 °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: ±3mmHg
- 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 μv/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.% ±5%
- 8 vol.% - 16 vol.%: ±0.43 vol.% ±8%

**Pump rate:** 80ml/min ±20ml/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)

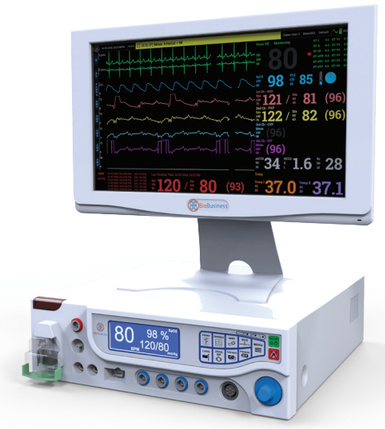
**Measurement method:** Thermodilution
**CO Measurement Range:** 0.3 to 20.0 l/min
**Measurement Start:** Automatic, manual
**CO Averaging:** up to 4
**Blood Temperature measurement range:**
0.0 – 40.0°C
**Hemodynamic Calculations:** CO,CI,SV,SI,SVR,SVRI

## • General Specifications

**Display:**
- 19 Inch external medical grade LCD display
- Embedded graphical LCD for urgent information display
- 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)

## • Physical Characteristics

**Dimensions:** W 370 x H 110 x D 400
**Weight:** Approx.9.5 to 11kg