

# OMNI

## PATIENT MONITOR

ECG • Respiration • SpO2 • NIBP • Temperature



- Up to 8 waveforms displayed
- Simultaneous Multi-Lead ECG monitoring
- Large Font Settings
- OxyCRG
- Wireless Network Capability
- Upgradeable monitor with ECG, Respiration, ST and Arrhythmia monitoring, Non-Invasive Blood Pressure, SpO2, and dual temperature.
- Optional End-tidal CO2 or Dual Invasive Blood Pressures.
- Standard 3 Channel Printer
- 4 Hour Battery Backup
- Rigid High-Quality construction
- 48 hour Graphic and Tabular trending
- Compatible with 32 bed Central Station
- FDA 510K



Advanced, Affordable Medical Technology For The World

# OMNI TECHNICAL SPECIFICATIONS

## Safety Approval & Quality System

Designed to meet IEC60601-1-1988, EN60601-1-1, EN60601-2  
 Class II Equipment, double insulated  
 Type BF applied parts  
 ISO9001 & EN46001 Certified

## Power Requirements

Power Supply AC 90-264V/47-63Hz  
 Input Power  $\leq 55VA$   
 Fuses Two fuse sockets in the rear panel indicated by "FUSE",  
 $\Phi 5 \times 20, 2A/250V$   
 Battery 12V/4.0AH sealed lead-acid  
 Charge time  $\geq 8$  hours  
 Operating time  $\geq 4$  hours (full recharge)  
 Battery Charging Method Automatic charging after monitor is connected to AC power supply (with charge protection function)  
 Discharge Protection When powered by battery, the monitor will be automatically turned off when battery power is almost used up.

## Performance Specifications

### ECG

Patient Safety Standard IEC60601-1-1988  
 CMRR  $\geq 60dB$  (Common Mode Rejection Ratio)  
 Heart Rate Range 20 ~ 254bpm  $\pm 1$ bpm  
 Heart Rate Averaging 8 second average  
 ST Segment Range -0.8 ~ + 0.8mV  
 Interface AAMI 6-pin  
 Lead Selection I, II, III (3 lead mode)  
 I, II, III, aVR, aVL, aVF, V (5 lead mode) (ST and Arrhythmia analysis)  
 Audible, Visual  
 Lead Fault Alarm Audible, Visual  
 Input 5-lead ECG patient cable  
 QRS Indicator Audible and Visual Alert  
 Waveform Storage 6 minutes  
 Sweep Speed 12.5/25/50 mm/sec  
 Gain Selection 4mV, 2mV, 1mV, 0.5mV, 0.25mV, Auto  
 Trends 2 hours  $\rightarrow$  4 hours  $\rightarrow$  8 hours  $\rightarrow$  24 hours  $\rightarrow$  48 hours  
 Patient Isolation Breakdown voltage: 4000VAC 50Hz 60 seconds  
 Leakage current:  $< 10\mu A$   
 Frequency width Monitoring mode: 0.5 ~ 40Hz (+0.4dB, -3.0dB)  
 Surgery mode: 0.5 ~ 20Hz (+0.4dB, -3.0dB) (not calibration significant)  
 Patient Drive Current  $< 10\mu A$   
 Enclosure Leakage Current  $< 0.1mA$   
 Maximum T wave Rejection Capability 1.2mV  
 Heart Rate Alarm Response Time  $< 7$  seconds  
 Aspect Ratio 0.24 ~ 0.6 sec/mV  
 Alarm Frequency Low alarm 2-2.4kHz  
 High alarm 3-3.4kHz  
 Defibrillator Protected & ESIS Protected Tested with 5kV  
 Recovery Time Following Defibrillation  $< 5$  seconds

### Respiration

Measurement Method Thoracic Impedance  
 Respiration Rate Range 0 ~ 100 $\pm$ 1rpm  
 Accuracy  $\pm 2$  rpm

### Pulse Oximetry ( SpO<sub>2</sub> )

SpO<sub>2</sub> Range 0-100% Adult/Pediatric/Neonate  
 SpO<sub>2</sub> Averaging 8 second average  
 SpO<sub>2</sub> Accuracy  $\pm 2\%$  (70 ~ 100%),  $\pm 3\%$  (40 ~ 70%)  
 Pulse Rate Range 30 ~ 250bpm  
 Pulse Rate Averaging 8 beat average

Pulse Rate Accuracy  $\pm 1\%$  @ 30 ~ 100bpm  
 Sensor Types Finger, Universal "Y", wrap probes  
 Pulse Rate Display Digital

### Non-Invasive Blood Pressure ( NIBP )

Method Automatic oscillometric  
 Parameters Systolic, diastolic, mean arterial pressure, pulse  
 Scale mmHg or kPa  
 Operating Modes Manual, Automatic, Continuous  
 Repeat Cycles 1 ~ 10, 15, 30, 60, 90, 120 minutes  
 Determination - Systolic Adult/pediatric 40 ~ 250mmHg (5.3 ~ 33.3kPa)  
 Neonate 20 ~ 160mmHg (2.7 ~ 21.3kPa)  
 - Diastolic Adult/pediatric 10 ~ 180mmHg (1.3 ~ 24.0kPa)  
 Neonate 10 ~ 140mmHg (1.3 ~ 18.7kPa)  
 Cuff Pressure Range Adult/pediatric 0 ~ 300mmHg (0 ~ 40.0kPa)  
 Neonate 0 ~ 140mmHg (0 ~ 18.7kPa)  
 Initial Cuff Inflation Adult/pediatric 170 $\pm$ 10mmHg (22.7 $\pm$ 1.3kPa)  
 Neonate 100 $\pm$ 10mmHg (16.0 $\pm$ 1.3kPa)  
 Deflation Pressure 30mmHg(4.0kPa) higher than the last systolic pressure.  
 Cuff Inflation Rate No greater than 50mmHg/sec  
 Measurement Time Typical 25 seconds  
 Maximum 40 seconds  
 Typical Stat 20 seconds  
 Pressure Display Accuracy  $\pm 3$ mmHg  
 BP Pulse Rate Accuracy  $\pm 2\%$  @ 40 ~ 240bpm.  
 Cuff Neonate, infant, pediatric, standard adult.

### Invasive Blood Pressure (Dual Channel) (Option)

Range -30 ~ +300 mmHg (-4.0 ~ +40.0 kPa)  
 Scale mmHg or kPa  
 Accuracy 1mmHg  
 Waveform Span Adjustable to 40,60,80,330 mmHg  
 Transducer sensitivity 5uV//mmHg  
 Alarm Audio and Visual  
 User adjustable upper and lower alarm limits

### Temperature (Dual Channel)

Range 0 ~ 50°C  
 Probe YSI @ 400 Skin surface or rectal /esophageal  
 Scale Celsius  
 Accuracy  $\pm 0.1^\circ C$   
 Resolution 0.1°C

### CO<sub>2</sub>

Type Side stream, mom-dispersive IR  
 CO<sub>2</sub> Range 0-99mmHg  
 Scale mmHg/kPa  
 Accuracy  $\pm 2$ mmHg (0-40mmHg)  
 $\pm 5$ mmHg (41-76mmHg)  
 $\pm 10$ mmHg(77-99mmHg)

### Calibration

Respiration Range 0-150rpm,  $\pm 2$ rpm

### TFT Color Display

Size 10.4\_  
 Matrix 640 (H) x 480 (V) pixels

### Recorder (Optional)

Type Built-in 2-channel thermal array recorder  
 Print mode Text or waveform  
 Waveforms Real time or alarm-triggered  
 Resolution 400dpi vertical, 800dpi horizontal  
 Annotations Time,date,vital sign readings

Specifications subject to change without notice.



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