

OMNI EXPRESS

PORTABLE PATIENT MONITOR



ECG, Respiration, SpO2,
NIBP, Temperature,
Recorder

- Touch Screen
- 3 waveforms displayed
- Simultaneous multi-lead ECG monitoring
- Battery backup
- Graphical and tabular trending
- Audible and visual alarms
- Advanced ST and arrhythmia detection
- Quick BP readings recall
- Optional EtCo2
- Optional printer



Advanced, Affordable Medical Technology For The World

OMNI EXPRESS 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 | ≤55VA |
| Fuses | Two fuse sockets in the rear panel indicated by "FUSE", Φ5X20, 2A/250V |
| Battery | 12V/4.0AH sealed lead-acid |
| Charge time | ≥4 hours |
| Operating time | ≥2 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 | ≥60dB (Common Mode Rejection Ratio) |
| Heart Rate Range | 20 ~ 254bpm ± 1bpm |
| 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) |
| 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 → 4 hours → 8 hours → 24 hours → 48 hours |
| Patient Isolation | Breakdown voltage: 4000VAC 50Hz 60 seconds Leakage current: <10μA |
| 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 | <10μA |
| 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
Recovery Time Following Defibrillation <5 seconds

Respiration

| | |
|------------------------|--------------------|
| Measurement Method | Thoracic Impedance |
| Respiration Rate Range | 0 ~ 100±1rpm |
| Accuracy | ±2 rpm |



OMNI Express with
backside bracket option.

Pulse Oximetry (SpO₂)

| | |
|----------------------------|------------------------------------|
| SpO ₂ Range | 0-100% Adult/Pediatric/Neonate |
| SpO ₂ Averaging | 8 second average |
| SpO ₂ Accuracy | ±2% (70 ~ 100%), ±3% (40 ~ 70%) |
| Pulse Rate Range | 30 ~ 250bpm |
| Pulse Rate Averaging | 8 beat average |
| Pulse Rate Accuracy | ±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±10mmHg (22.7±1.3kPa) |
| | Neonate | 100±10mmHg (16.0±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 | ±3mmHg | |
| BP Pulse Rate Accuracy | ±2% @ 40 ~ 240bpm. | |
| Cuff | Neonate, infant, pediatric, standard adult. | |

Temperature (Dual Channel)

| | |
|------------|--|
| Range | 0 ~ 50°C |
| Probe | YSI @ 400 Skin surface or rectal /esophageal |
| Scale | Celsius |
| Accuracy | ±0.1°C |
| Resolution | 0.1°C |

CO₂

| | |
|-----------------------|---|
| Type | Side stream, mom-dispersive IR |
| CO ₂ Range | 0-99mmHg |
| Scale | mmHg/kPa |
| Accuracy | + 2mmHg (0-40mmHg) + 5mmHg (41-76mmHg) + 10mmHg (77-99mmHg) |

Calibration
Respiration Range


TFT Color Display

| | |
|--------|--------------------------|
| Size | 8 inches |
| 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.

ISO 13485 

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