

Portable patient monitor with a user-friendly touch-screen

ECG, Respiration, SpO₂, NIBP and Temperature. Available with EtCO₂ and a printer.

Featuring cutting-edge innovations and impeccable craftsmanship, the Waveline EZ patient monitor is the perfect choice for health care professionals who demand precision, performance and affordability. It features an intuitive touchscreen that helps you quickly and accurately evaluate patient conditions, resulting in better patient care. Utilize the Waveline EZ to monitor ECG, respiration, SpO₂, NIBP and temperature; it's also available with EtCO₂ monitoring and a printer.

- Three waveforms displayed
- Simultaneous multi-lead ECG monitoring
- Advanced ST and arrhythmia detection
- Graphical and tabular trending
- Audible and visual alarms
- Quick BP readings recall
- Optional EtCO₂
- Battery backup
- Optional printer
- Bigger time stamp in upper right corner
- Standby button
- Revised SpO₂ pitch tone is audible when SpO₂ rate decreases
- Volume and Sounds are adjustable and can be turned off completely
- Option to print Numerical Data Only
- Color of the waveforms can be changed



Intuitive touch-screen provides immediate operation

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", Φ 5X20, 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 <10 μ 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 μ A

Performance Specifications

ECG continued

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±1rpm
 Accuracy ±2 rpm

Pulse Oximetry (SpO₂)

SpO₂ Range 0-100%
 Adult/Pediatric/Neonate
 SpO₂ Averaging 8 second average
 SpO₂ 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)
 - Systolic, Neonate 20 ~ 160mmHg (2.7 ~ 21.3kPa)
 - Diastolic, Adult/pediatric 10 ~ 180mmHg (1.3 ~ 24.0kPa)
 - Diastolic, Neonate 10 ~ 140mmHg (1.3 ~ 18.7kPa)

Cuff Pressure Range

- Adult/pediatric 0 ~ 300mmHg (0 ~ 40.0kPa)
 - Neonate 0 ~ 140mmHg (0 ~ 18.7kPa)

Performance Specifications continued

NIBP continued

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
 CO₂ Range 0-99mmHg
 Scale mmHg/kPa
 Accuracy +- 2mmHg (0-40mmHg)
 +- 5mmHg (41-76mmHg)
 +-10mmHg (77-99mmHg)
 Calibration Automatic
 Respiration Range 0-150rpm, +- 2rpm

TFT Color Display

Size 8 inches
 Matrix 640 (H) x 480 (V) pixels

Dimensions

Size Approx. 9" (w) x 8.2" (h) x 4.7" (d)
 Weight Approx. 6 lbs.

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