

# AMM-3218

Advance anesthesia multipara Monitor

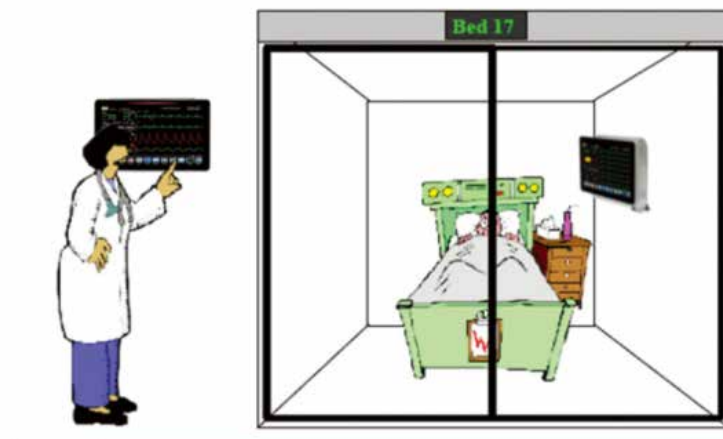


## ►► Features

- 15.6"/17"/19" switchable TFT LCD Touch screen
- Aluminum material shell
- Fanless design allows for quite care environment
- 10 waveform display, up to 12-lead ECG analysis
- Powerful calculation (Hemodynamic, Dose, Oxygenation, Ventilation)
- SpO2 support PVI and PI, low perfusion 0.2%
- BIS module, NMT module optional
- Wired/Wireless CMS, support HL7 protocol to HIS
- SpO2 pulse-tone modulation (Pitch Tone)
- Support VGA/HDMI external display
- Graphical & tabular trend review (120 hours)
- 48H full disclosure wave review for each patient



Multiple-parameter options & Flexible screen size options



►► **Configuration**

5-lead ECG, SpO2, NIBP, TEMP, Resp, PR. Li-ion battery

►► **Optional**

12-Lead ECG, Masimo/Nellcor SpO2, Dual IBP, C.O., EtCO2, Multi-gas, BIS, NMT; HDMI, Thermal Recorder, Wired/Wireless CMS



Measure-through Motion and Low Perfusion pulse oximetry delivers accurate and reliable oxygenation



IRMA Mainstream & ISA Sidestream Analyzers  
Allows selection of the modality best suited to the application



IBP  
2-4 Channel, support IBP waveform overlapping display



Monitor the level of consciousness of the patient under general anesthesia or sedation. provides BIS, SQI, EMG, SR, SEF, TP, PC value and EEG wave.



Intergrade Organo



Cardiac Output



12-Lead ECG



4 Channel IBP



OxyCRG Screen



Dynamic Trends

## ►► Technical Specifications

### Display :

15.6" TFT Touch screen Resolution : 1366 x 768 Number of traces : 12 waveforms

#### Dimension

15.6": 403×320×185mm(L×W×T)

19" : 470×327×185mm(L×W×T)

Weight: < 10kg under standard configuration

LAN: 1 standard RJ45 port

WLAN:IEEE 802.11b/g/n

USB: 2 USB connectors

HDMI: 1 HDMI monitor connector

Output:1 connector for Nurse call,Defib Sync Analog Output

### ECG:

Lead type :3-lead,5-lead,12-lead(Optional)

ECG waveform:2 channels,7 channels, 12 channels

Display sensitivity:

2.5mm/mV (×0.25), 5mm/mV (×0.5),

10mm/mV (×1.0), 20mm/mV (×2.0)

Wave sweep speed:

3.125mm/s, 6.25mm/s, 12.5 mm/s, 25 mm/s, 50 mm/s

Bandwidth

Diagnostic mode: 0.05Hz~100Hz

Monitor mode: 0.5Hz~40Hz

Surgery mode: 1Hz~20Hz

Strong filter mode: 5Hz~20Hz

CMRR>100dB

Notch: 50/60Hz notch filter can be set to on or off

Differential input impedance>5MΩ

Electrode polarization voltage range: ±400mV

Baseline recovery time<3s after defibrillation (in monitor and surgery mode)

Calibration signal:1mV (peak - peak), accuracy ±3%

### RESP:

Measurement method : Thoracic electrical bioimpedance

Measuring lead: Lead I, II

Wave gain: x0.25, x0.5, x1, x2

Respiratory impedance range: 0.5-5Ω

Baseline impedance: 500-4000Ω

Gain: 10 grades

Scan speed: 3.125mm/s, 6.25mm/s, 12.5 mm/s, 25mm/s

**TEMP:**

Accuracy:  $\pm 0.1$  °C or  $\pm 0.2$  °C °F (without probe)

Measurement range: 5~50°C (41~122°F)

Channel: Two channels

Resolution: 0.1°C

Parameters: T1, T2 and TD

**SpO2:**

Measurement range : 0-100%

Parameter monitoring: Perfusion Index(PI)  
Pleth Variability Index(PVI)

Resolution: 1%

Accuracy:  $\pm 2\%$  or  $\pm 2$ bpm

Refreshing Rate: 1s

Pleth wave speed: 3.125mm/s, 6.25mm/s, 12.5 mm/s, 25mm/s

**SET SpO<sup>2</sup>(Optional) :**

Measurement range : 0-100%

Resolution: 1%

Accuracy:  $\pm 2\%$  (70-100%, Adult/Pediatric, non-motion,  
low perfusion);  
 $\pm 3\%$  (70-100%, Neonate, non-motion);  
 $\pm 3\%$  (70-100%, motion);  
0-69%, unspecified

Refreshing Rate: 1s

**Pulse Rate :**

Range: 30~300 bpm

Resolution : 1 bpm

Accuracy :  $\pm 2$ bpm ( non-motion)  
 $\pm 5$ bpm ( motion)

Refreshing rate: 1s

**IBP(Optional):**

Channel: 2-channel or 4-channel

ART: 0 to 300 mmHg

PA: -6 to 120 mmHg

CVP/RP/LAP/ICP : -10 to 40 mmHg

Measurement range: P1/P2 -50 to 300 mmHg

Resolution: 1mmHg

Accuracy:

$\pm 2\%$  or  $\pm 1$ mmHg, whichever is greater (without sensor)

Sensitivity: 5uV/mmHg/V

Impedance range: 300 to 3000Ω

**NIBP :**

Measurement method : Automatic oscillometric method

Operating mode: Manual, automatic, continuous

Measurement unit: mmHg/kPa selectable

Typical measurement time: 20~40s

Measurement type : Systolic, Diastolic Mean

Measurement range (mmHg)

Range of Systolic pressure:   Adult       40-270

                                          Pediatric  40-230

                                          Neonatal  40-135

Range of Diastolic pressure:   Adult       10-210

                                          Pediatric  10-150

                                          Neonatal  10-100

Range of Mean pressure:       Adult       20-230

                                          Pediatric  20-165

                                          Neonatal  20-110

Measurement accuracy

Maximum average error :  $\pm 5$ mmHg

Maximum standard deviation:  $\pm 8$ mmHg

Resolution : 1mmHg

Interval: 1,2,3,4,5,10,15,30,60,90,120,180,240,480 minutes

Overpressure protection: Software and hardware,  
double safety protection

Cuff Pressure range: 0-280mmHg

**C.O.(Optional):**

Method: Thermodilution

Range: C.O.: 0.1 to 20 L/min

      TB : 23 to 45°C

      T1 : 0 to 27°C

Accuracy : C.O. :  $\pm 5\%$  or  $\pm 0.1$ L/min, whichever is greater

TB, T1 :  $\pm 0.5^\circ\text{C}$  ( without sensor)

**Northern Mainstream CO2(Optional):**

Measurement range: 0-19.7%, 150mmHg, or 0-20kPa

Resolution: 0.1mmHg

Measurement accuracy

      0 - 40 mmHg:  $\pm 2$  mmHg

      41 - 70 mmHg:  $\pm 5\%$  of reading

      71 - 100 mmHg:  $\pm 8\%$  of reading

      101 - 150 mmHg:  $\pm 10\%$  of reading

Respiration rate: 3-150 bpm

Respiration rate accuracy: 1%  $\pm 1$ bpm

Warm-up time: 97% within 8s, full accuracy within 20s

**Northern Sidestream CO<sub>2</sub>(Optional) :**

Measurement range: 0-20% (0—150mmHg)

Accuracy: < 5.0% CO<sub>2</sub>: ± 2 mmHg  
> 5.0% CO<sub>2</sub>: < 6% of reading

Respiration rate: 2 ~ 150 BPM

Respiration rate accuracy: 1% ±1BPM

Warm-up time: 97% within 45s, full accuracy within 10 min

Rise times(t<sub>10-90%</sub>): About 100ms, when flow is 100 ml/min,  
adult water trap, 1.5m sampling tube

Delay time: <3sec when flow is 100 ml/min, adult water trap,  
1.5m sampling tube

**Recorder (Optional) :**

Built-in, Thermal dot array

Horizontal resolution :16 dots/mm (25 mm/s paper speed)

Vertical resolution:8 dots/mm

Paper speed: 12.5mm/s, 25 mm/s, 50 mm/s

Number of waveform channels: 3

**ISA Sidestream CO<sub>2</sub> (Optional) :**

Warm-up time: Full accuracy within 10 seconds

Sampling flow rate: 50ml/min(+/-10/min)

Measurement Range: 0 -25%

Accuracy: 0~15% (±0.2% of the reading)  
15~25%, unspecified

Rise time: 200ms,typical at 50ml/min flow rate

Total response time:

within 3 seconds (with 2 m Moline sampling line)

AWRR Range: 0-150bpm

AWRR Accuracy:±1 breath

**IRMA Mainstream CO<sub>2</sub> (Optional) :**

Measurement Range: 0 -25%

Accuracy: 0~15% (±0.2% of the reading)  
15~25%, unspecified

Warm-up time: Full accuracy within 10 seconds

AWRR Range: 0-150bpm

AWRR Accuracy:±1 breath

**Operation Environment :**

Power: AC 100-250V, 50/60Hz

Temperature: 5-40 °C

Humidity: <80%

Patient Range: Adult, Pediatric, Neonate



**Multi-gas ISA OR+/IRMA AX+ CO2 (optional) :**

Gas:CO<sub>2</sub>,N<sub>2</sub>O,HAL,ISO,ENF,SEV,DES with automatic identification

Warm-up time: Full accuracy within 20 seconds for IRMA

AX+ CO<sub>2</sub> Accuracy: 0-10%:±(0.2%+2% of the reading)

0-15%:±(0.3%+2% of the reading)

N<sub>2</sub>O Accuracy: 0-100%:±(2%+2% of the reading)

HAL,ISO,ENF: 0-8%:±(0.15%+5% of the reading)

SEV:0-10%: ±(0.15%+5% of the reading)

DES:0-22%: ±(0.15%+5% of the reading)

Agent identification time:<20s(typical<10s)

AWRR range: 0-150bpm

AWRR accuracy: +/-1bpm

Apnea time: 20~60s

**Aspect BISx module(Optional) :**

Parameter Measurement:

BC: 0~30(Only limited to the combined use of an external sensor with a BIS module)

EMG: 30~55dB(bar chart)with intensity between 30dB and 80dB (tendency chart)

BIS: 0~100

SQI: 0%~100%

SR: 0%~100%

SEF: 0.5Hz~30Hz

TP:40~100Db

EEG Measurement:

Input impedance>5MΩ

Noise(RTI)<2μV(0.25~50Hz)

Input signal range: ±1Mv

EEG bandwidth between: 0.25Hz~110Hz

**NMT(Optional) :**

Microprocessor-controlled

Stimulation Mode: TOF, TOFS, PTC, 1Hz Twitch, 0.1Hz

Twitch ,DBS DBS3.3 and 3.2(Double Burst) , Tetanic Stimulation (Burst), 5s – 50Hz or 100Hz

Output (accuracy±5% of full scale value)

Surface electrodes:

Constant current,0-60mA(0-12/18μC) up to 5KOhm.

Monophasic, 200μs or 300μs pulse width

Needle electrodes:

Constant current,0-6mA(0-0.24μC) up to 5KOhm.

Monophasic, 40μs pulse width

Acceleration transducer: Accuracy±5% of full scale value

Temperature sensor: Range 20.0-41.5°C(accuracy±5°C)



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