

BM5

Enhanced & expendable
multi-parameter patient monitor



SUPERIOR ADVANTAGES

- ▶ ECG, SpO₂, NIBP, Respiration, 2IBP, 2Temperature, EtCO₂
- ▶ 10.4" color TFT LCD with 6 waveforms
- ▶ Individual sweep speed setting for each parameter
- ▶ 128 full hours trend data are stored
- ▶ SpO₂ measurement with very low perfusion detection and pulse beep
- ▶ Screen freeze ON/OFF
- ▶ External VGA output for large screen (Option)
- ▶ Connected to BM Central monitoring system using LAN or W-LAN
- ▶ Li-ion Battery with longer life time (1 hour for continuous operation)
- ▶ Enhanced & extendible multi-parameter
 - Mainstream/Sidestream EtCO₂ (Option)
 - 12Ch ECG Measurement Module (BM5 CS, BM5 CX)
 - High-performance Suntech NIBP (BM5 XP, BM5 CX)
- ▶ High-performance ECG detection and analysis
 - Enhanced Input impedance for dry skin or electrode patch
 - ST level, PVC count real-time display
 - 13 kinds of Arrhythmia analysis
 - Pacemaker detection function
 - 120 kinds of resting ECG analysis (BM5 CS, BM5 CX)
- ▶ Enhanced data management
 - Graphical and Tabular trends
 - 20cases * 10 sec alarm waveform are stored, reviewed and printed

SPECIFICATIONS

General

Display, Resolution	10.4" color TFT LCD, 800 x 600 pixels
Dimension, Weight	270(W) x 250(H) x 184.5(D) mm, Approx. 4.0kg
Trace	6 waveforms : 2*ECG, SpO ₂ , RR or EtCO ₂ , 2*IBP Sweep speed : 6.25, 12.5, 25, 50 mm/sec
Indicators	Categorized alarms (3 priority levels) Visual alarm lamp handle QRS beep & SpO ₂ Pulse beep Percent(%) SpO ₂ pitch tone Battery status, External Power LED Rotary knob
Interfaces	Power supply : AC 100-240V(50/60Hz) DC input connector : 18VDC, 2.5A Defibrillator Sync. Output : - Signal Level : 0 to 5V pulse - Pulse width : 100 ± 10ms LAN digital output for transferring data Nurse Call System connection : - 0.3A at 125 VAC - 1A at 24 VDC External VGA monitor connection DC output : 5VDC, 1A Max
Battery	Rechargeable Li-ion battery, 1 hour for continuous operation
Thermal Printer(Optional)	Speed : 25,50mm/sec, Paper width : 58mm
Data Storage	128hours trends 20cases of 10sec alarm waveform
Language	English, French, Spanish, Italian, German, Chinese, Russian, Czech, Polish, Turkish, Romanian, Portuguese Bulgarian, Hungarian, Korean

Accessories

Standard	5-lead patient cable	1ea
	Electrodes	10ea
	NIBP extension hose(3m)	1ea
	Reusable adult cuff(25-35cm)	1ea
	SpO ₂ extension cable(2m)	1ea
	Reusable adult SpO ₂ probe	1ea
	DC adapter(18VDC, 2.5A) with power cord	1ea
Optional	Paper roll(2 rolls are included in printer type) Reusable temperature probe (Surface/Rectal) IBP transducer set (Disposable/Reusable) Sidestream EtCO ₂ module (Respironics) Mainstream EtCO ₂ module (Respironics) Sidestream EtCO ₂ airway adapter kit Mainstream EtCO ₂ airway adapter kit 3-Lead patient cable 10-Lead patient cable NIBP cuff(Reusable/Disposable)	

Order Specification

Ordering Name	Function description
BM5	7Ch, ECG, SpO ₂ , Bionet NIBP, 2TEMP, 2IBP, EtCO ₂
BM5 XP	7Ch, ECG, SpO ₂ , Suntech NIBP, 2TEMP, 2IBP, EtCO ₂
BM5 CS	12Ch ECG, SpO ₂ , Bionet NIBP, 2TEMP, 2IBP, EtCO ₂
BM5 CX	12Ch ECG, SpO ₂ , Suntech NIBP, 2TEMP, 2IBP, EtCO ₂

Optional Module

Mainstream EtCO₂ module(Respironics)
Sidestream EtCO₂ module(Respironics)



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Performance

ECG

Leads Type	3-lead, 5-lead
Lead Selection	3-lead : I, II, III 5-lead : I, II, III, aVR, aVL, aVF, V
ECG waveforms	3-lead : 1 channel 5-lead : 2/7 channels
Heart Rate Range	Adult : 30 to 300 bpm, Neonate/Pediatric : 30 - 350 bpm
Heart Rate Accuracy	± 1bpm or ± 1%, whichever is greater
Sweep speed	6.25, 12.5, 25, 50 mm/sec
Filter	- Diagnosis : 0.05 to 150 Hz - Moderate : 0.5 to 25 Hz - Monitoring : 0.5 to 40 Hz - Maximum : 5 to 25 Hz
S-T segment detection range	-2.0 to 2.0 mV
Arrhythmia analysis	ASYSTOLE, VTACH, VFIB, BIGEMINY, ACCVENT, COUPLET, IRREGULAR, PAUSE, PVC, RONT, TRIGMINY, VBRADY, SHORTRUN
Pacemaker Detection Mode	Indicator on waveform display (user selectable)
Protection	Against electrosurgical interference and defibrillation

12 Channel ECG (Option)

Lead type	3-lead, 5-lead, 10-lead
Lead Selection	3-lead : I, II, III 5-lead : I, II, III, aVR, aVL, aVF, V 10-lead : I, II, III, aVR, aVL, aVF, V1, V2, V3, V4, V5, V6
ECG waveforms	3-lead : 1 channel 5-lead : 2/7 channels 10-lead : 12 channels
Heart Rate Range	Adult : 30 to 300bpm, Neonate/Pediatric : 30 to 350 bpm
Heart Rate Accuracy	± 1 bpm or ± 1%, whichever is greater
Sweep speed	6.25, 12.5, 25, 50 mm/sec
Filter	- Diagnosis : 0.05 to 150 Hz - Moderate : 0.5 to 25 Hz - Monitoring : 0.5 to 40 Hz - Maximum : 5 to 25 Hz
S-T segment detection range	-2.0 to 2.0 mV
Arrhythmia analysis	ASYSTOLE, VTACH, VFIB, BIGEMINY, ACCVENT, COUPLET, IRREGULAR, PAUSE, PVC, RONT, TRIGMINY, VBRADY, SHORTRUN
Diagnostic analysis	120 kinds
Pacemaker Detection Mode	Indicator on waveform display (user selectable)
Protection	Against electrosurgical interference and defibrillation

Respirations

Method	Thoracic impedance
Channel Selection	RA-LA or RA-LL
Measurement range	5 to 120 Breath per minute
Accuracy	± 1 breath per minute
Apnea alarm	Yes

SpO₂

Saturation range	0 to 100%
Saturation accuracy	70 to 100% ±2 digits, 0 to 69% unspecified
Pulse rate range	30 to 254 bpm
Pulse rate accuracy	± 2 bpm

Bionet NIBP

Method	Oscillometry
Operation mode	Manual/Automatic/Continuous
Pressure range	0 to 300mmHg (Accuracy ±3mmHg)
Measurement range	Adult Pressure : 20 to 260 mmHg Pediatric Pressure : 20 to 230 mmHg Neonate Pressure : 20 to 120 mmHg Mean error : less than ±5 mmHg Standard deviation : less than 8mmHg
Accuracy	

Suntech NIBP (Option)

Method	Oscillometry
Operation mode	Manual/Automatic/Continuous
Pressure range	0 to 300mmHg (Accuracy ±3mmHg)
Safety pressure	Adult : 300 mmHg Neonate : 150 mmHg
Measurement Range	Adult Pressure : 20 to 260 mmHg Pulse Rate : 30 to 220 BPM Pediatric Pressure : 20 to 160 mmHg Pulse Rate : 30 to 220 BPM Neonate Pressure : 20 to 130 mmHg Pulse Rate : 30 to 220 BPM
Accuracy	Meets accuracy requirements of ANSI/AAMI SP10 : 1992 AND 2002

Temperature

Channels	2
Measurement range	0 to 50°C (32 to 122°F)
Accuracy	25°C to 50°C : ±0.1°C 0°C to 24°C : ±0.2°C
Compatibility	YSI Series 400 temperature probes

IBP (Option)

Channels	2
Measurement range	-50 to 300mmHg
Accuracy	<100mmHg : ±1mmHg >=100mmHg : ±1% of reading
Pulse rate range	0 to 300bpm
Zero balancing	Range : ±200mmHg Accuracy : ±1mmHg Drift : ±1mmHg over 24hours
Transducer sensitivity	5µV/mmHg

Sidestream EtCO₂ - Respironics (Option)

Measurement range	0 to 150 mmHg, 0 to 19%
Accuracy	0 to 40mmHg ±2 mmHg, 41 to 70mmHg ±5% of reading, 71 to 100mmHg ±8% of reading, 101 to 150mmHg ±10% of reading
Respiration rate	2 to 150 breath per minute
Respiration accuracy	±1 breath per minute

Mainstream EtCO₂ - Respironics (Option)

Measurement range	0 to 150 mmHg, 0 to 19%
Accuracy	0 to 40mmHg ±2 mmHg, 41 to 70mmHg ±5% of reading, 71 to 100mmHg ±8% of reading, 101 to 150mmHg ±10% of reading
Respiration rate	0 to 150 breath per minute
Respiration accuracy	±1 breath per minute

* Specifications can be changed without prior notification.

* You may have distortion or signal noise when you use nonstandard or other brand's accessories.
We strongly recommend you use only the authorized accessories which we supply.