

EOMED S5 Defibrillator



Defibrillator/ Monitor EOMED S5



Standard Configuration:

Manual defibrillation, AED, Pacer, 3/5-lead ECG, RESP, Thermal Recorder

Optional:

NIBP, PR, SpO₂, EtCO₂(Specific parameters refer to CO₂ module parameter table)

Physical Characteristics

Size: 295mm×252mm×316mm

Weight 5.6kg (Including 1 battery);5.384(Main unit)

Screen Size: 7" TFT screen

Resolution 800 × 480

Waveforms: Max 4 waveforms

Operation Environment

Temperature: 0~45°C

Humidity: 10%~95%, non-condensation

Atmosphere Pressure: 700hPa~1060hPa

Ingress Protection: IP44

Power requirement: 100-240V~, 50/60Hz±3Hz

Battery type: Rechargeable Lithium-ion battery

Battery capacity: 7500mAh, d.c.14.8V

5000mAh, d.c.14.8V

Battery number: 1

Battery recharging Time: 7500mAh Battery: Less than 2 hours to 80% and less than 3 hours to 100% with equipment power off

5000mAh Battery: Less than 1.5 hours to 80% and less than 2.5 hours to 100% with equipment power off

Battery backup: 7500mAh Battery: Monitoring Mode: no less than 6 hours
Defib Mode: 210 times (360J charge at intervals of 1minute without recording);

Brightness:

Indicator

Pacing Mode: 4.5 hours (Load:50 Ω , frequency: 80bpm, current: 60mA, without recording)

5000mAh Battery:

Monitoring Mode: no less than 4 hours

Defib Mode: 120times (360J charge at intervals of 1minute without recording);

Pacing Mode: 3hours (Load:50 Ω , frequency: 80bpm, current: 60mA, without recording)

Manual from X to 100, X refers to the darkest brightness (X is 10 by default)

Two alarm indicators

Power indicator

Battery indicator

Maintain indicator

QRS beep and alarm sound

Operating key sound

Interfacing

USB interface

RJ45 interface

AC power input

Multi-functional connector

Date storage

Alarm Event: 200 groups

Patient profiles: 100 groups

Patient Events: 1000 groups

Wave Review: 16.6 hours

NIBP Review: 2000 groups

Trend Graph: 160 hours

Trend Table: 160 hours

Voice recording: Max 240 min in total;

	(Up to 60 min for each patient)
Marked events	Available
Power-off storage:	Yes
Alarm:	User-adjustable High and Low 3-level Limits; Prioritized audible and visual alarm
Network:	Connected to Central Monitoring System by hardwire/wireless

Recorder

Type:	Built-in; Thermal array
Channel:	Max 3 channel waveforms
Real-time recording:	3s, 5s, 8s, 16s, 32s, Continual
Speed:	6.25mm/s, 12.5mm/s, 25mm/s, 50mm/s
Record width:	50mm
Resolution:	8dot/mm (Horizontal and vertical)
Background grid:	Configurable
External printer:	Yes

Defibrillation

Operating mode:	Manual Mode, AED Mode, , Synchronous Defibrillation
Waveform:	Biphasic truncated exponential waveform, with impedance compensation
Defibrillation pathway:	External defibrillation
Electrode type:	External defibrillation paddles, multifunctional electrode
External defibrillation electrode paddles:	Supports charging, discharging and energy selection; Charging completion indicator
Charge Time: (Battery power)	Less than 3 seconds to 200 Joules with a new, fully charged battery Less than 7 seconds to 360 Joules with a new, fully charged battery
Charge Time: (AC power)	Less than 4 seconds to 200 Joules; Less than 8 seconds to 360 Joules
Energy accuracy:	±1.5J or ±10% of setting, whichever is greater, while 50 Ω impedance ±2J or 15% of setting, whichever is greater, while 25 Ω, 75 Ω, 100 Ω, 125 Ω, 150 Ω, 175 Ω impedance
Patient Impedance Range:	20~300 Ω (External defibrillation);

Defibrillation proof:	Type CF: ECG, RESP, SpO ₂ , NIBP, PR; Type BF: EtCO ₂
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Manual Mode

External defibrillators:	1J~360J, 25 types (1/2/3/4/5/6/7/8/9/10/15/20/30/50/70/100/120/150/170/200/220/250/270/300/360J)
Synchronous Cardioversion:	Energy transfer begins within 60ms of the R wave from internal Sync signal Energy transfer begins within 25ms of the External Sync signal

AED

Output Energy:	Adujustable:100-360J
Number of electric shocks	Adjustable: once, twice, 3 times
Types can be AED:	VF & VT
AED maximum time required for cardiac rhythm analysis to be ready for discharge:	Battery power supply: 18s AC power supply: 21s

Noninvasive Pacing

Waveform:	Monophasic square wave pulse
Pulse Width:	20ms or 40ms
Accuracy:	±5%
Pacing Mode:	On-demand or fixed
Pacing frequency:	30 ppm to 210 ppm
Accuracy:	±1ppm or ±1.5% (whichever is greater)
Pacing output:	0 mA to 200 mA
Accuracy:	±5% or ±5mA, whichever is greater
Speed-down pacing:	Pacing pulse frequency reduced to 25% of original value.

ECG (leads)

Lead Type:	3 leads ECG, 5 leads ECG, AUTO
Lead selection:	5-lead: I; II; III; aVR; aVL; aVF; V 3-lead: I; II; III
Multi-lead synchronization analysis:	Available
ECG wave gain:	Auto, 1.25 mm/mV (×0.125), 2.5 mm/mV (×0.25), 5 mm/mV (×0.5), 10 mm/mV (×1), 20 mm/mV (×2), 40 mm/mV (×4),
Accuracy:	Less than ±5%

Sweep speed:	6.25 mm/s, 12.5 mm/s, 25 mm/s, 50 mm/s	ST analysis review	20 groups
Accuracy:	Less than $\pm 10\%$	System noise:	Less than $25\mu\text{V}$
Heart Rate:	Adult: 15~300bpm Pediatric: 15~350bpm Accuracy: $\pm 1\text{bpm}$ or $\pm 1\%$ (whichever is greater)	Calibration voltage	1 mV; Accuracy: $\pm 5\%$
Alarm limit range	Adult: High limit: (low limit+2bpm) ~ 300bpm Low limit: 15bpm~ (high limit-2bpm) Pediatric: High limit: (low limit+2bpm) ~ 350bpm Low limit: 15bpm~ (high limit-2bpm)	Arrhythmia Analysis:	26 Types
Resolution:	1 bpm	Pacemaker detection:	Detectable
Accuracy:	$\pm 1\text{bpm}$	ECG (paddle)	
Bandwidth:	Monitoring: 0.5~40Hz (-3.0dB~+0.4dB) Diagnosis: 0.05~150Hz (-3.0dB~+0.4dB) Surgery: 1~20Hz (-3.0dB~+0.4dB) ST: 0.05~40Hz (-3.0dB~+0.4dB)	Lead Type:	Single lead ECG
CMRR:	Monitoring: $> 105\text{dB}$ Diagnosis: $> 90\text{dB}$ Surgery: $> 105\text{dB}$ ST: $> 105\text{dB}$	Heart Rate measurement & alarm range:	Adult: 15~300bpm Pediatric: 15~350bpm
Input Impedance:	$\geq 5\text{M}\Omega$	Resolution:	1 bpm
Input signal range:	$\pm 8\text{mV}$	Accuracy:	$\pm 1\%$ or $\pm 1\text{bpm}$ (whichever is greater)
HR trigger threshold	$200\mu\text{V}$	Bandwidth:	Defib: 1~20Hz (-3dB~+0.4dB)
Lead off detection current:	Measuring electrode: $< 0.1\mu\text{V}$ Driving electrode: $< 1\mu\text{V}$	CMRR:	Defib: $> 105\text{dB}$
Pacemaker pulse suppression switch:	Manual selection when the pacemaker is turned on	Input Impedance:	$\geq 5\text{M}\Omega$
Analog output:	Magnification: 1:1000; Accuracy: $\pm 5\%$ Bandwidth: 0.5Hz~40Hz Delay: $\leq 35\text{ms}$	Input signal range:	$\pm 8\text{mV}$
ST Detection:	-2.0mV~+2.0mV (-20.0mm~+20.0mm)	HR trigger value	$200\mu\text{V}$
Resolution:	0.01mV	Arrhythmia Analysis:	5 Types, ASY, VF, VT, PNC, and PNP
Accuracy:	-0.8mV ~ +0.8mV: $\pm 0.02\text{mV}$ or $\pm 10\%$; Others: Unspecified	Respiration	
		Method:	Thoracic Impedance Method
		RR measurement range:	Adult: 0~120bpm Pediatric: 0~150bpm
		Accuracy:	7~150bpm: $\pm 2\text{bpm}$ or $\pm 2\%$ (whichever is greater) 0~6bpm: unspecified
		Apnea Alarm:	Adult: 10s~60s Ped: 10s~40s
		Accuracy:	$\pm 5\text{s}$
		Alarm:	Audible and visual alarm; alarm events reviewable
		NIBP	
		Method	Automatic oscillometric
		Work mode:	Manual / Automatic/Continuous
		Interval Time:	Adjustable 1/2/2.5/3/4/5/10/15/30/60/90/120/180/240/480/720 min Continuous: 5min Adu/Ped: 120s
		Maximum measurement cycle	
		Measurement Unit:	mmHg / kPa selectable
		Pressure types:	Systolic, Diastolic, Mean
		Range of systolic pressure:	Adult Mode: 5.3~36kPa (40~270mmHg) Pediatric Mode: 5.3~26.7kPa (40~200mmHg)

Range of diastolic pressure: Adult Mode: 1.3~28.7kPa (10~215mmHg)
Pediatric Mode: 1.3~20kPa (10~150mmHg)

Range of mean pressure: Adult Mode: 2.7~31.3kPa (20~235mmHg)
Pediatric Mode: 2.7~22kPa (20~165mmHg)

Over pressure protection: Adult: 39.6kPa (297mmHg)
Pediatric: 32kPa (240mmHg)
Tolerance: ± 0.4 kPa (± 3 mmHg)

Accuracy: $\pm \pm 0.667$ kPa (± 5 mmHg), if exceeds the above range, the monitor can still display normally, but the accuracy is not considered

Alarm limit: Same as the range of measurement
PR from NIBP: 40~240bpm
Resolution: 1bpm
Accuracy: $\pm 3\%$ or ± 3 bpm, whichever is greater

SunTech NIBP

Regulatory compliance: YY 0670-2008

Initial inflation range: Adult: 16~37.3kPa (120~280mmHg)
Pediatric: 10.7~22.7kPa (80~170mmHg)

Maximum measurement cycle: Adult: 130s
Pediatric: 90s

Over pressure protection: Adult/Pediatric: 40.0kPa (300mmHg)

Static pressure measurement range: 0kPa~40.0kPa (0mmHg~300mmHg)

Resolution: ± 0.4 kPa (± 3 mmHg)

Range of systolic pressure: Adult: 5.3~34.7kPa (40~260mmHg)
Pediatric: 5.3~21.3kPa (40~160mmHg)

Range of diastolic pressure: Adult: 2.7~26.7kPa (20~200mmHg)
Pediatric: 2.7~16kPa (20~120mmHg)

Range of mean pressure: Adult: 3.5~29.3kPa (26~220mmHg)
Pediatric: 3.5~17.7kPa (26~133mmHg)

PR from NIBP: 30~220bpm

Accuracy: $\pm 2\%$ or ± 3 bpm, whichever is greater

Nellcor SpO₂

Measurement range: 0~100%

Resolution: 1%

Accuracy: $\pm 2\%$ (70~100%, Adu/Ped, non-motion)
1~69% unspecified

Alarm range: 20~100%

PR Measurement

Range: 20~300bpm

Resolution: 1bpm

Accuracy: ± 3 bpm (20~250bpm)
Unspecified (251~300bpm)

Alarm range: 20~350bpm

MASIMO SpO₂

Measurement & alarm range: 1~100%

Resolution: 1%

Accuracy: $\pm 2\%$ (70~100%, Ped/Adu, non-motion)
 $\pm 3\%$ (70~100%, motion);
1~69% unspecified

Alarm range: 1~100%

PR Measurement

Range: 25~240bpm

Resolution: 1bpm

Accuracy: ± 3 bpm (non-motion)
 ± 5 bpm (motion);

Alarm range: 20~350bpm

PI value: 0.02~20%

Resolution: 0.01% (0.02~9.99%)
0.1% (10~20%)

SIQ: Available

SpO₂

Measurement & alarm range: 0~100%

Resolution: 1%

Accuracy: $\pm 2\%$ (70~100%, Ped/Adu, non-motion)
0~69% unspecified

PR Measurement

Range: 20~254bpm

Resolution: 1bpm

Accuracy: ± 2 bpm

Alarm range:	20~350bpm		± 5% of reading (41 – 70mmHg)
PI value:	0.05~20%		± 8% of reading (71 –100mmHg)
Resolution:	0.01% (0.05%~9.99%)		± 10% of reading (101~150mmHg)
	0.1% (10.0%~20.0%)		(In 25 °C, if RR > 80rpm, accuracy is
Accuracy:	unspecified		12% of reading)
SIQ:	Available		CapnoTrak:
MASIMO EtCO₂ (Sidestream)			
Measurement range:	0~190mmHg, 0~25vol% (at 760mmHg)		± 2mmHg (0~38mmHg)
			± 10% of reading (38~99mmHg)
Accuracy:	Standard environment 22 ± 5 °C, 1013 ± 40kPa:		RR influence to EtCO ₂ (0~99mmHg):
	a) 0~114mmHg: ± (1.52mmHg+reading × 2%)		-2~0.5mmHg (0-40bpm)
	b) 114~190mmHg: not defined		(-6% of reading)~0.5mmHg (41-
	All environment:		70bpm)
	a) 0~114mmHg: ± (2.25mmHg+reading × 4%)	Resolution:	1mmHg
	b) 114~190mmHg: not defined	awRR range	Loflow: 2~150rpm
Resolution:	1mmHg or 0.1% or 0.1kPa	awRR accuracy:	CapnoTrak: 0, 2~100rpm
awRR range:	0~150rpm		±1rpm
awRR accuracy:	±1rpm		
Response time:	< 3 s		

Respironics EtCO₂ (Sidestream)

Measurement range:	Loflow: 0~150mmHg, 0~19.7%, (0~20kPa) (at 760mmHg)
	CapnoTrak: 0~99mmHg, 0~13.03%, 0~13.2kPa (at 760mmHg)
Accuracy:	Loflow: ± 2mmHg (0~40mmHg)