DPM | Series

DPM™ 4

TECHNICAL SPECIFICATIONS

Display

Type:	8.4" color TFT
Resolution:	800 x 600 pixels
Waveforms:	8 selectable

ECG (3 and 5-Lead)

Leads:	I, II, III, aVR, aVL, aVF, V
Gain Selection:	x0.125, x0.25, x0.5, x1, x2, auto
Sweep Speed:	12.5mm/sec, 25mm/sec, 50mm/sec
Bandwidth:	Diagnostic Mode: 0.05-100Hz, Monitor Mode: 0.5-40Hz, Surgical Mode: 1-20Hz
Defibrillator Overload Protection:	Withstand 4000 VAC/50Hz voltage in isolation against electrosurgical interference and defibrillation
Recovery Time:	<5sec
CMRR:	Diagnostic Mode: ≥90dB, Monitor Mode: ≥105dB, Surgical Mode: ≥105dB

Heart Rate Meter

Measurement Range:	Adult: 15-300bpm, Pediatric: 15-350bpm, Neonate: 15-350bpm
Accuracy:	±1bpm or ±1%, whichever is greater
Resolution:	1bpm

Pacer Rejection:

When tested in accordance with ANSI/AAMI EC13-1992 Section 4.1.4, the 3/5 Lead ECG derived heart rate meter shall reject all pacer pulses ± 2.0mV to ± 700mV and duration 0.1ms to 2ms with no tail

Tall T-Wave Rejection:

When tested in accordance with ANSI/AAMI EC13-1992 Section 4.1.2.1 c, the heart rate meter shall reject all T-waves with amplitudes less than 120% of a 1mV, 100ms QRS, and a T wave duration of 180ms and a Q-T interval of 350ms

Scaling Signal:	1mV ±5%

Respiration

Range:	Adult: 0-120bpm, Pediatric/Neonate: 0-150bpm
Resolution:	1bpm
Accuracy:	7-150bpm: ±2bpm or ±2%, whichever is greater 0-6bpm: undefined
Lead:	I or II (default: lead II)
Sweep Speed:	6.25mm/sec, 12.5mm/sec, 25mm/sec

Pace Pulse

Pulse Indicator:

Pace pulses meeting the following conditions are marked by the PACE indicator

Amplitude: ±4 to ±700mV (3/5-lead)
Width: 0.1 to 2ms
Rise time: 10 to 100µs

Pulse Rejection:

When tested in accordance with the ANSI/AAMI EC13-2002: Sections 4.1.4.1 and 4.1.4.3, the heart rate meter rejects all pulses meeting the following conditions

Amplitude: ±2 to ±700mV
Width: 0.1 to 2ms
Rise time: 10 to 100µs
Minimum input slew rate: 20V/s RTI

Non-Invasive Blood Pressure

Measurement Method:	Oscillometric
Measurement Modes:	Manual, interval, continuous
Connector Type:	Rectus
Units of Measure:	mmHg, kPa (user-selectable)
Resolution:	1mmHg
Systolic Range:	Adult: 40-270mmHg, Pediatric: 40-200mmHg, Neonate: 40-135mmHg
Diastolic Range:	Adult: 10-210mmHg, Pediatric: 10-150mmHg, Neonate: 10-100mmHg
Mean Range:	Adult: 20-230mmHg, Pediatric: 20-165mmHg, Neonate: 20-110mmHg
Accuracy:	Mean error: < ±5mmHg, Standard deviation: < 8mmHg
Cuff Deflation Technique:	Step bleed
Cuff Inflation:	Volume of 500cc to 300mmHg in <20sec
Over Pressure Protection:	Double safety protection (hardware and software)
Pulse Rate Range:	40-240bpm
Pulse Rate Accuracy:	±3bpm or ±3%, whichever is greater

Invasive Blood Pressure

Measurement Range:	-50 to 300mmHg
Resolution:	1mmHg
Accuracy:	1mmHg or ±2%, whichever is greater
Zero Offset Range:	±200mmHg
Excitation:	5VDC, ±2% Minimum load resistance will be 300Ω per transducer
Frequency Response:	DC to 12.5Hz ±1Hz, -3db
Waveform Scales:	ART: 0 to 300mmHg PA: -6 to 120mmHg CVP: -10 to 40mmHg RAP: -10 to 40mmHg LAP: -10 to 40mmHg ICP: -10 to 40mmHg IBP1/IBP2: -50 to 300mmHg

Pulse Rate from Invasive Blood Pressure

Measurement Range:	25-350bpm
Resolution:	1bpm
Accuracy:	25-200bpm: ±1bpm or ±1%, whichever is greater. 201-350bpm: ±2%

Pulse Oximetry

With Masimo SET® SpO_2

Measurement Range:	1-100%
Resolution:	1%
Accuracy:	±2% (70-100%, Adult/Pediatric, no motion) ±3% (70-100%, Neonate, no motion) ±3% (70-100%, Adult/Pediatric/Neonate, motion) 0-69% unspecified

Pulse Rate with Masimo SET® SpO_2

Measurement Range:	25-240bpm
Resolution:	1bpm
Accuracy:	±3bpm (no motion), ±5bpm (motion)

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TECHNICAL SPECIFICATIONS

Pulse Oximetry (continued)

With With Mindray™ SpO_2

Measurement Range:	0-100%
Resolution:	1%
Accuracy:	±2% (70-100%, Adult/Pediatric, no motion) ±3% (70-100%, Neonate, no motion) ±3% (70-100%, Adult/Pediatric/Neonate, motion) 0-69% unspecified

Pulse Rate with Mindray SpO_2

Measurement Range:	20-254bpm
Resolution:	1bpm
Accuracy:	±3bpm (no motion), ±5bpm (motion)

Temperature

Scale:	Selectable °C or °F
Channels:	2
Measurement Range:	0°C to 50°C (32°F to 122°F)
Resolution:	0.1°C
Accuracy:	±0.1°C (excluding sensor) ±0.2°C (including YSI 400 series sensor)
Measurement Time:	Body surface: <100sec (using YSI 400 series sensor) Body cavity: <80sec (using YSI 400 series sensor)

Data Storage

Trend Data:	96 hours at selectable resolutions: 1min, 5min, 10min 1 hour at selectable resolutions: 1sec, 5sec
Alarm Events:	70 alarm events and associated waveforms (selectable waveform lengths: 8sec, 16sec or 32sec)
NIBP Measurements:	800 (systolic, diastolic, mean pressure and measurement time)

Recorder

Type:	Thermal array
Speed:	25mm/sec

Battery

Type:	Rechargeable lithium ion
Run Time:	3 hours using a new, fully charged battery and monitoring ECG, SpO_2 and NIBP measurements every 15min at 25°C
Recharge Time:	6.5 hours

Interfacing

Connectors:	1 AC power connector, 1 RJ45 network connector, 100 BASE-TX, 1 VGA connector, 15-PIN D-sub, 1 BNC connector, 1 equipotential grounding connector

Physical Dimensions

Monitor Size:	24cm(H) x 26.1cm(W) x 17.1cm(D) 9.4"(H) x 10.3"(W) x 6.7"(D)
Monitor Weight:	Less than 5kg (11lbs) standard configuration (ECG, Resp, SpO_2, 2-Temperature, NIBP) with 1 lithium ion battery

Environmental

Operating Temperature:	0°C to 40°C
Storage Temperature:	-20°C to 60°C
Operating Humidity:	15% to 95%, non-condensing
Storage Humidity:	10% to 95%, non-condensing
Operating Altitude:	-500 to 4600m (-1640 to 15092ft)

Power Requirements

AC Voltage:	100–240VAC, 50/60Hz
Power:	110VA

Safety

Type of Protection:	Class I with internal electric power supply
Degree of Protection:	ECG/Resp/Temp/SpO_2/NIBP/IBP: CF
Protection Against Ingress of Fluids:	Not protected

Mindray DS USA, Inc.
800 MacArthur Blvd., Mahwah, NJ 07430
Tel: 1.800.288.2121 Tel: 201.995.8000 Fax: 1.800.926.4275
www.mindray.com

mindray™ NORTH AMERICA

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