Propaq[®] MD

All the Advantages of a Propaq Monitor with a Defibrillator



The Propaq® MD was specifically designed to meet the needs of the military and air medical operations when treating critical patients in the field. It combines the well-accepted and proven monitoring capabilities of the Propaq monitor with the clinically superior therapeutic capabilities of ZOLL defibrillation and non-invasive pacing technologies—at half the size of other monitor/defibrillators.





Propaq MD Smallest, Lightest, Most Advanced Monitor/ Defibrillator Available

- Robust communications options: integrated WiFi, Bluetooth[®] with USB cellular modem, and Ethernet capabilities.
- 60% smaller and 40% lighter than other similar monitor/ defibrillators.
- First critical care monitor/ defibrillator to receive the IP55 ingress protection rating because of its ability to resist jets of water and dust.
- Meets an unprecedented number of military and airworthiness standards.
- Only airworthy monitor/ defibrillator to offer three invasive pressure channels, necessary to monitor critical patients during long transports.
- Utilizes ZOLL's SurePower[™] II battery technology. A single battery provides 6 hours of monitoring of all physiological parameters: 12-lead ECG, NIBP, EtCO₂, SpO₂, three invasive pressures, two temperature channels, and 10 200-joule shocks.
- First transport monitor/ defibrillator to offer multiple display modes to operate in bright sunlight or during night missions (NVG-friendly display).

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Propaq MD Specifications

Defibrillator

Waveform: Rectilinear Biphasic™ Energy Selections: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 20, 30, 50, 70, 85, 100, 120, 150, 200 joules Energy Display: Monitor display indicates both selected and delivered energy Charge Time: <7 seconds to 200 J, typical Charge Controls: Control on apex paddle and on device front panel. Paddles: External anterior/anterior adult and pediatric. Adult paddles slide off to expose pediatric paddles. Compatible with ZOLL external paddles (8000-1010-01), ZOLL internal paddles, and the Propag MD multi-function therapy cable. Synchronized Mode: Synchronizes defibrillator pulse to patient's R-wave. "SYNC" message displayed on monitor. Marker on display and on recorder paper identifies R-wave discharge point. Built-In Defibrillator Tester: Tests defibrillator energy output and continuity of universal cable and paddles Modes: AED function with manual override,

CPR Feedback Technology

See-Thru CPR®: Artifact filtering Real CPR Help®: Real-time depth and rate feedback CPR Dashboard[™]: Numeric readout of depth and rate, release indicator, perfusion performance indicator (PPI)

External Pacer

manual defibrillation

Type: External transcutaneous pacing Pulse Types: Rectilinear, constant current Pulse Width: 40 ms ± 2 ms Pacer Rate: 30 – 180 BPM ± 1.5% Output Current: 0 – 140 mA ± 5% or 5 mA Modes: Demand and Fixed

Display

Type: Bright, Color, LCD TFT Brightness: User adjustable Resolution: 640 x 480 pixels Waveform Traces: Up to 4 waveforms Display Modes: Standard, High Contrast, NVG (night vision goggle) Friendly Waveform Display Width: 11.5 cm

ECG:

Cable Detection: Automatic 3-, 5-, 12-lead Input: 3-lead cable, 5-lead cable, 12-lead cable, paddles, therapy cable Cable Compatibility: Propag Encore, Propag CS Leads: I, II, III, AVR, AVL, AVF, V1 - V6 Bandwidth: (User Selectable) 0.67 – 20 Hz Limited mode 0.67 – 40 Hz Monitor mode 0.25 – 40 Hz Filtered Diagnostic mode 0.05 to 150 Hz Diagnostic mode Heart Rate Range: 30 - 300 BPM Heart Rate Accuracy: ± 3 BPM or 3% Pacer detection and display Electrosurgery interference suppression FSU and defibrillation protected ECG Sizes: 0.125, 0.25, 0.5, 1, 2, 4 cm/mv, and auto-ranging Sweep Speed: 25 mm/sec. 50 mm/sec Common Mode Rejection: Complies with AAMI EC13-2002 section 4.2.9.10. **Patient Modes:**

User Selectable: Adult, Pediatric, Neonate. Sets defaults for alarms, defibrillation energy, and NIBP settings.

Trends (on screen)

Tabular numeric format All parameters trended/viewable *Trend Intervals*: 1, 5, 10, 15, 30, 60 minutes

Specifications subject to change without notice.

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Printed in the U.S.A. 061310 9656-0223

Duration: 24 hours at 1-minute intervals Snapshots: Minimum of 32 display data captures (12 seconds of pre- and post-button press) Quick Access Trend Display via Display Button

Printer

Waveforms Printed: 1, 2, or 3 Print Speeds: 25 mm/sec or 50 mm/sec Print Modes: Manual or automatic (user configurable) On/Off Control: Front panel or paddle Paper Delay: 6 seconds Frequency Response: Same as the monitor's settings Paper Width: 80 mm

Masimo[®] rainbow[®] SET SpO₂

Saturation Range: 1 – 100% Saturation Accuracy Oxygen saturation during no-motion conditions: Adults, Pediatrics: 70 - 100%, ± 2 digits 0-69%, unspecified Neonates: 70 - 100%, ± 3 digits 0-69%, unspecified Oxvoen saturation during motion conditions: Adults, Pediatrics: 70 - 100%, ± 3 digits 0-69%, unspecified Neonates: 70-100%, ± 3 digits 0-69%, unspecified Oxygen saturation during low-perfusion conditions: Adults, Pediatrics 70 - 100%, ± 2 digits 0 – 69%, unspecified Neonates, 70 – 100%, ± 3 digits 0-69%, unspecified Pulse Rate Range: 25 – 240 bpm Pulse rate during no-motion conditions: Adults, Pediatrics, Neonates: 25 - 240 ± 3 digits Pulse rate during motion conditions: Adults, Pediatrics, Neonates: 25 - 240 ± 5 digits SpO₂ Average Time Setting: 4, 8 (default), 16 seconds

Masimo rainbow® SET SpCO®

Range: 0 – 99% *Accuracy:* 1 – 40% ± 3 digits

Masimo rainbow® SET SpMet®

Range: 0 – 99%

Accuracy: 1-15% + 1 digits

Noninvasive Blood Pressure (NIBP)

Smartcuf® and SureBP® NIBP technology Measurement Intervals: 1-, 2-, 3-, 5-, 10-, 15-, 30-, and 60-minute, and manual Quick Action NIBP Start/Stop button TurboCuf: 5 min of repeated NIBP readings Systolic, diastolic, mean display On-screen manometer, with large numerics Cuff overpressure protection Typical Measurement Time: 30 – 45 secs (on deflation) 15 – 30 secs – SureBP (on inflation) Standard Cuff Sizes: Neonate #1 – #5, Infant, Child, Sm Adult, Adult Long, Lg Adult, Thigh Default Cuff Inflation Pressure: Adult: 160 mmHa Pediatric: 120 mmHg Neonatal: 90 mmHa Pressure Measurement Range. Systolic: 20 – 260 mmHg Diastolic: 10 - 220 mmHa 13 – 230 mmHg Mean: Maximum Cuff Inflation Pressure: Adult: 270 mmHg 170 mmHg Pediatric: Neonatal: 130 mmHa

Microstream[®] etCO₂

 Range:
 0
 −150 mmHg

 Accuracy (mmHg):
 0
 -38: ± 2 mmHg

 39
 -150: ± 5 % + .08% /mmHg >38

 Respiration Range: 0
 -149 breaths per minute

 Respiration Rate Accuracy:
 0

 0
 -70 BPM: ±1 BPM

 71
 -120 BPM: ±2 BPM

 121
 -149 BPM: ±3 BPM

 Flow Rate: 50 ml/min -7.5 + 15 ml/min

ECG Impedance Respiration

User-Selectable Leads: RA-LA, RA-LL Breath Rate Range: Adult/Pediatric modes: 2 – 150 RPM Neonate mode: 3 – 150 RPM Respiration Rate Accuracy: ± 2 breaths/ min or ± 2% Sweep Speed: 3.13, 6.25, 12.5 mm/sec

Invasive Pressure

Three channels Pressure Range: -30 – 300 mmHg Pulse Rate Measurement Range: 25 – 250 BPM Formats: S/D, S/D (M), (M) user selectable User-Selectable Labels: P1, P2, P3, ABP, AO, ART, CVP, BAP, FAP, LAP, PAP, RAP, UAP, UVP, ICP Transducer Requirements: 5 µV/V/mmHg Zero Adjustment ± 200 mmHg Numeric Pressure Accuracy: ± 2 mmHg or 2% of reading, plus transducer error Transducer Connector: Standard 6 pin AAMI

Temperature

Two YSI 400/700 compatible channels Range: 0° - 50° C, Units: °C or °F Display: T1, T2, and Delta temp Accuracy: ± 0.1° C

Power

Rechargeable, user replaceable, lithium-ion battery *Operating Time*: 6 hours (display brightness at 30%, ECG, Sp02, EtCD₂, IPx3, Temp x2 and NIBP every 15 min, and 10 200-joule shocks) *Battery*: Size: 182 mm x 95 mm x 31 mm Weight: 1.36 lbs Battery Indicators: 5 battery capacity LED indicators, fault indicator, recalibration indicator Recharge Rate: 4 hours to 100%

AC Power Adapter: 100-240 VAC 50, 60, 400 Hz (@110V)

General

Weight: 10.6 lbs. without paper and battery 11.7 lbs. with paper and battery *Dimensions*: 8.9" x 10.4" x 7.9" With soft handle: 8.9" x 8.75" x 7.9"

Environmental

Operating Temperature: 0° – 50° C Operating Relative Humidity: 15% - 95%, NC Operating Altitude: Up to 15,000 ft Transport/Storage Temperature: -30° - 70° C Shock: IEC 60068-2-27, 100g, 6ms half sine Dron[.] 1 meter per MIL STD 810G, Method 516-6, 26 drops, EN 1789 30-inch functional drop, 2 meter per IEC 60601-1 Vibration: MIL STD 810G, Method 514.6 4 4 2 Procedure II EN ISO 9919 per (IEC 60068-2.64) EN 1789 for ambulance RTCA/DO-160G (multiple helicopter frequencies) Enclosure Protection: (IEC 60529) Solid Foreign Object: IP5X Water Ingress: IPX5

