

Infinity® M300 Telemetry

The Infinity® M300 provides continuous surveillance of telemetry patients using the hospital's existing WiFi network. The compact size supports patient mobility while the integrated color screen continuously displays patient vital signs and waveforms. In addition, the M300 produces visible and audible alarms to alert you to changes in your patient's condition.

Compact and lightweight design

Intended to encourage patient mobility while fully monitored both within and outside the care unit

Multi-function key pad

Designed for ease of use

Rechargeable battery

Can be charged with a bedside charger while the patient wears the device, or with a multi-unit charger at the central monitoring station

D-19731-2009



High resolution color display

Enables easy-to-see patient vital signs and ECG waveform

Expanded Network Functionality

Offers expanded network options and supports wireless encryption for enhanced security

Benefits

Ease of use

The M300 is designed for ease of use, featuring an easy-to-see color display, a multi-function key pad and a “find device” option that locates a device from the Infinity® CentralStation.

Advanced ECG algorithms

Built-in ACE® (Arrhythmia Classification Expert) and pacemaker detection algorithms enhance ECG processing and reduce false alarms.

Designed for patient comfort

The compact, lightweight device was designed to be worn comfortably while enabling increased mobility.

Expanded network functionality

The M300 offers expanded network options, including IEEE 802.11b/g/n (2.4 GHz) or 802.11 a/n (5GHz). It supports wireless encryption, including WPA2 – Enterprise Mode (EAP-TLS and PEAP methods) for enhanced security. And it has an embedded FIPS-validated Wi-Fi module for data encryption to help maintain confidentiality and wireless data integrity.

System Components



Infinity® CentralStation Wide

Viewing comprehensive real-time and retrospective clinical data supports you in making the most effective care decisions for your patients. Infinity® CentralStation Wide brings hemodynamic vital signs together with values from interfaced patient monitors, ventilators, and anesthesia devices. The Infinity® CentralStation Wide can also be used as a remote alarm annunciator for external devices such as ventilators.

System Components



MT-1146-2007

Infinity® M300 Bedside Charger

- Charges the monitor's built-in battery at the bedside while the patient wears the Infinity® M300.



MT-1135-2007

Infinity® M300 Central Charger

- Charges and stores up to 10 Infinity® M300 devices at the central nursing station.

Technical Data

SUPPORTED PARAMETERS

ECG

Available leads Adult/Pediatric	3-wire lead set: I, II, III 5-wire lead set: I, II, III, aVL, aVR, aVF, V 6-wire lead set: I, II, III, aVL, aVR, aVF, V, V+ 6-wire lead set with Infinity TruST: I, II, III, aVL, aVR, aVF, dV1, V2, dV3, dV4, V5, dV6
Leads analyzed	Any one or two user-selected ECG leads (simultaneously)
Detected arrhythmia events/rhythms	Asystole, Ventricular Fibrillation, Ventricular Tachycardia, Ventricular Run, Accelerated Idioventricular Rhythm, Supraventricular Tachycardia, Ventricular Couplet, Bigeminy, Tachycardia, Sinus Pause, ARR Artifact PVC/min
Heart rate measurement range	15 to 300 bpm
Accuracy	±2 bpm or ±1%, whichever is greater
Heart rate alarm setting range	20 to 300 bpm
Degree of protection against electrical shock	Type CF
Defibrillation protection	In accordance per IEC 60601-2-27
Monitoring frequency response	0.5 to 40 Hz: ±3 dB
Sweep speed	25 mm/sec ± 10%
QRS detection	Amplitude: 0.5 – 5.0 mV Duration Adult: 70 – 120 ms Duration Pediatric: 40 – 120 ms
Electrosurgery and cautery	Not intended for use during ESU procedures
Pacer detection	Leads I and (II or III)
Amplitude	±2 to ±700 mV
Width (dp)	0.2 to 2.0 ms
Precautions	Contains a tiny magnet which generates an extremely low static magnetic field of approximately 2 gauss at 12.7 mm (0.5 in) distance. Please refer to the manufacturer's Instructions for Use of any third party medical devices in the patient vicinity for compatibility.

ST Segment Analysis

Leads analyzed	3-wire lead set: I, II, or III 5-wire lead set: I, II, III, aVL, aVR, aVF, V 6-wire lead set: I, II, III, aVL, aVR, aVF, V, V+ 6-wire lead set with Infinity TruST: I, II, III, aVL, aVR, aVF, dV1, V2, dV3, dV4, V5, dV6
Isoelectric point	Default: -28 msec (before J-point)
ST measurement point	Default: +80 msec (after J-point)
ST complex	Length: 900 msec (250 samples) Frequency response: 0.05 to 40 Hz
Update interval	15 seconds
ST measurement and alarm limit ranges	-15.0 to 15.0 mm, -1.5 to 1.5 mV
ST measurement accuracy	±0.5 mm (0.05 mV) or 15% RTI (with respect to input) whichever is greater for all leads, excluding STVM and STCVM
ST measurement resolution	0.1 mm, 0.01 mV

Pulse Oximetry (optional)

Parameter display	Pulse oximetry oxygen saturation percentage (SpO ₂), pulse rate
Measuring method	Absorption-spectrophotometry

Technical Data

Measurement and display range	SpO ₂ : 1 – 100% Pulse rate: 30 – 250 bpm
Calibration range	70 – 100%
Display update period	2 seconds nominal
Maximum hold from previous update	30 seconds (in the event of artifact or other error)
SpO ₂ Alarm Range	20 to 100%
Pulse Rate Alarm Range	30 to 240 bpm
Accuracy	
SpO ₂	0 to 69% not specified 70 to 100% sensor-specific as follows
Masimo® LNCS® Sensors – SpO ₂ accuracy ^{1,2,3,4}	
LNCS DCI®, LNCS DCIP, LNCS Adtx, LNCS Pdtx	not specified
Pulse rate accuracy	±3 bpm or ±3%, whichever is greater
Low perfusion accuracy, SpO ₂	±2%
Low perfusion accuracy, pulse rate	±3 bpm or ±3%, whichever is greater
Masimo® RD SET® Sensors – SpO ₂ accuracy ^{1,2,3,4}	
RD SET Adt, RD SET Pdt	±2%
Pulse rate accuracy	±3 bpm or ±3%, whichever is greater
Low perfusion accuracy, SpO ₂	±2%
Low perfusion accuracy, pulse rate:	±3 bpm or ±3%, whichever is greater
Nellcor™ Sensors – SpO ₂ accuracy ^{1,2,3,4}	
OxiMAX™ MAX-A, OxiMAX MAX-AL, OxiMAX MAX-P, DS100A	±3%
Dräger Sensors – SpO ₂ accuracy ^{1,2,3,4}	
MS16444 Disposable foam pedi	±2%
MS16445 Disposable foam adt	
MS16448 Disposable vinyl pedi	
MS16449 Disposable vinyl adt	
MS13235 Reusable sensor	
Notes:	
1 Since SpO ₂ measurements are statistically distributed, only about two-thirds of those measurements can be expected to fall within ±1 Arms of the value measured by a CO-oximeter.	
2 These accuracies have been validated using blood samples obtained from healthy adult volunteers during induced hypoxia studies in the range of 70 to 100% SpO ₂ against a laboratory CO-oximeter and ECG monitor.	
3 SpO ₂ accuracies are expressed as ±“X”% between indicated saturation levels. This variation of the SpO ₂ measurement equals ±1 Arms of the value measured by a CO-oximeter.	
4 The pulse rate accuracy has been validated on healthy adult volunteers during induced hypoxia studies in the range of 70 to 100 % SpO ₂ against a laboratory CO-oximeter and ECG monitor. This variation equals ±1 Arms of the pulse rate value measured by the ECG monitor.	
User Interface	
Controls	6 function keys: alarm pause, view screen, staff alert, record/mark event, up/down scroll
Alarms	Audible and visible alarm indication (user controlled) 3 severity levels: Life threatening, Serious, Advisory
Display	
Size/viewing area	5.5 cm (2.17 in) diagonal LCD
Resolution	220 x 176 pixels

Technical Data

Communications

Network	IEEE 802.11b/g/n (2.4 GHz); 802.11a/n (5 GHz) (DFS channels not supported)
Wireless Security	WPA2 – Personal Mode WPA2 – Enterprise Mode; EAP-PEAP WPA2 – Enterprise Mode; EAP-TLS
WPA2 – Enterprise	RSA Key 2048-bit maximum Cipher suite AES128-SHA preferred
Radio power output	30mW (2.4 GHz); 25mW (5 GHz)

Physical Specifications

Size (H x W x D)	142.2 x 78.7 x 30.5 mm (5.6 x 3.1 x 1.2 in)
Weight	295 g (10.5 oz) with battery
Cooling	Convection
Connections	ECG, communication port for SpO ₂ or programming cable, charger (bedside or central)

Electrical Specifications

Power source	Rechargeable 3.6 V lithium ion battery, available from Dräger
Battery operating time	ECG only: 17 to 19 hours ECG + continuous SpO ₂ : 14 to 16 hours Operation time varies according to use of display, alarm alerts, and wireless environment (roaming)
Battery recharging time	Using Bedside Charger to 100%, approximately: 0 to 25% = 2 hours 0 to 50% = 4 hours 0 to 75% = 6 hours 0 to 100% = 8 hours Using Central Charger to 100%, approximately: 0 to 25% = 40 minutes 0 to 50% = 1.5 hours 0 to 75% = 2 hours 0 to 100% = 4 hours

Environmental Requirements

Temperature

Operating	0° to 40° C (32° to 104° F)
Storage	-20° to 60° C (-4° to 140° F)

Humidity (non condensing)

Operating	10 to 85%
Storage	10 to 85%

Atmospheric pressure

Operating	65 to 106 kPa
Storage	50 to 106 kPa
Protection against water ingress	IPX7, temporary immersion

INFINITY® M300 CENTRAL CHARGER

Physical Specification

Size (H x W x D)	520.7 x 215.9 x 190.5 mm (20.5 x 8.5 x 7.5 in)
Weight	6.5 kg (14.4 lb)

Technical Data

Cooling	Convection
Connections	Up to ten (10) Infinity® M300 devices

Electrical Specifications

Input voltage	92 – 264 VAC
Input frequency (Hz)	50/60 Hz
Protection class	Class 1
Mode of operation	Continuous

Environmental Requirements

Temperature

Operating	0° to 35° C (32° to 95° F)
Storage	-20° to 60° C (-4° to 140° F)

Humidity (non condensing)

Operating	10 to 95%
Storage	10 to 95%

Atmospheric pressure

Operating	65 to 106 kPa
Storage	50 to 106 kPa
Protection against water ingress	IPX1, dripping water

INFINITY® M300 BEDSIDE CHARGER

Physical Specifications

Size (H x W x D)	45.7 x 162.5 x 99.1 mm (1.8 x 6.4 x 3.9 in)
Weight	224 g (7.9 oz)
Cooling	Convection
Connections	One (1) Infinity M300

Electrical Specifications

Input voltage	92 – 264 VAC
Input frequency (Hz)	50/60 Hz ± 5%
Protection class	Class 2
Mode of operation	Continuous

Environmental Requirements

Temperature

Operating	0° to 40° C (32° to 104° F)
Storage	-20° to 60° C (-4° to 140° F)

Humidity (non condensing)

Operating	10 to 85%
Storage	10 to 85%

Atmospheric pressure

Operating	647 to 1,060 hPa
Storage	500 to 1,060 hPa
Protection against water ingress (cradle only)	IPX4, splashing water

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