



Heartstart®FR2

Battery operated Semi-Automatic External Defibrillator

Category	Nominal Specifications
Sealing	With data card tray and battery installed, meets IEC 6529 class IP34, in addition, dust protected to IP5X
ESD	Meets EN 61000-4-2: 1998 Severity Level 4
EMI (Radiated)	Meets EN 60601-1-2 limits (1993), method EN 55011: 1998 Group 1 Level B
EMI (Immunity)	Meets EN 60601-1-2 limits (1993), method EN 61000-4-3: 1998 Level 2
Aircraft Method	Meets RTCA/DO-160D: 1997 Section 21 (Category M - Charging)
Operating Temperature and Humidity	0° to 50°C 0% to 95% relative humidity (non-condensing)
Standby Temperature and Humidity	0° to 43°C 0% to 5% relative humidity (non-condensing) Applies to HEARTSTART FR2 with battery installed and stored with defibrillation pads
Altitude	Meets MIL-810E 500.3, Procedure II (-500 feet to 15,000 feet)
Shock/Drop Abuse Tolerance	Meets MIL-STD-810E 516.4, Procedure IV (after a 1 meter drop to any edge, corner or surface, in standby mode)
Vibration	Meets MIL-STD-810E 514.4-17



The product is in compliance with essential requirements of council directive 93/42/EEC: Medical Device Directive

AED MODELS	
MODEL M3840A	ECG display, manual override capability
MODEL M3841A	Standard (no ECG display on screen)
DEFIBRILLATOR	
HOW SUPPLIED	Defibrillator, User's Guide, Battery Pack, Electrodes (two pairs).
WAVEFORM	Truncated Exponential Biphasic Waveform Parameters adjusted as a function of patient impedance.
ENERGY/ENERGY SELECTION	Single energy output Normal: 150 Joules, Minimum: 130 Joules (to a 50W load).
CHARGE TIME FROM SHOCK ADVISED	Typically less than 10 seconds
SHOCK-TO-SHOCK CYCLE TIME	Typically less than 20 seconds (including analysis time) in semi-automatic mode.
VOICE AND TEXT PROMPTS	Extensive text prompts and audible messages guide user through protocol.
PROTOCOL	Follows pre-configured settings. Can be modified with the optional Training and Administration Pack
SHOCK DELIVERY	Via defibrillation pads placed in anterior-anterior (lead II) position
CONTROLS (Standard on all models)	On/off, shock, and two options buttons (Resume analysis is programmable)
CONTROLS (Model M3840A)	Manual over-ride, manual charge, disarm
INDICATORS	LCD screen, beeper, audio speaker, status indicators, shock button, connector socket LED
PHYSICAL	
SIZE	HEIGHT 6.6 cm WIDTH 21.8 cm DEPTH 21.8 cm WEIGHT 1.8 kg without battery, 2.1 kg including battery
PATIENT ANALYSIS SYSTEM	
PATIENT ANALYSIS	Per protocol, evaluates patient ECG and signal quality to determine if a shock is appropriate, and evaluates connection impedance for proper Defibrillation pad contact
SENSITIVITY AND SPECIFICITY	Meets AAMI guidelines
BATTERY PACK	
TYPE	12 VDC 4.2 Ahr lithium manganese. Disposable, recyclable, long-life, primary cells.
CAPACITY	Minimum 300 shocks or 12 hours operating time
INSTALL BY DATE	Battery is labelled with an install by date at least 5 years from date of manufacture
STANDBY LIFE	Defines how long the battery will power the AED in Standby operation within the standby temperature Range (1 battery insertion test and no uses). 4 years. Minimum when battery is installed by the Install-By-Date 5 years typical.
ECG DISPLAY (MODELS M3840A)	
SCREEN	High resolution LCD with backlight
SCREEN DIMENSIONS	7.0 cm wide x 5.8 cm high
DISPLAY RANGE	Differential: + 2mV full scale (nominal)
SWEEP SPEED	23 mm/second (nominal)
FREQUENCY RESPONSE	1 Hz to 20 Hz (-3dB) (nominal)
SENSITIVITY	1.16 cm/mV (nominal)
HEART RATE	30 to 300 beats per minute updated each analysis period during monitoring
MONITORED LEAD	Anterior-anterior (lead II) placement with Defibrillation pads (M3840A)

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