

PHILIPS

Remote Diagnostic
Technologies

Tempus LS-Manual



Professional defibrillator

Manual only

Tempus LS-Manual specifications

Introduction

Tempus LS-Manual is a small, fully-featured biphasic defibrillator, designed to enable prehospital caregivers to deliver care more efficiently¹

Overview

Full range of features with manual, synchronized cardioversion and pacing in a small, highly robust package

Utilizes the widely used, low energy 200 J biphasic BTE waveform

Small enough to enable new choices in transport and deployment

Long battery life: 300 shocks at 200 J

Dust and water protection with rating of IP65

Plug-in sensor allows real-time CPR measurement and feedback

Fully integrated communications capability enables the transmission of defibrillator events to the Tempus Pro in real time⁴

Large color display with multiple configurations and large numeric view

Control Interface

Defibrillator interface is via clearly labelled buttons

Display

Color 145 mm (5.7"), 640x480 pixels

Multiple user-selectable display formats

NVG compatible

Medical Features

Manual Defibrillation

Biphasic Truncated Exponential (BTE) waveform for defibrillation and synchronized cardioversion

1 - 200 J user configurable energy levels (1 - 10, 15, 20, 30, 50, 70, 90, 100, 120, 150, 170 & 200 J)

Adult and pediatric modes available

Charge time: 9 seconds to 200 J from first charge

Time to shock from cold start-up: <15 seconds to 200 J

Disposable adult and child pads

ECG Monitoring

ECG monitoring using pads or 3-Lead via Tempus Pro-compatible ECG cable

Speed: 12.5 mm/sec, 25 mm/sec, 50 mm/sec

Heart rate range: 15 - 300 beats per minute (bpm) ± 5 , Accuracy: $\pm 10\%$

50/60 Hz mains filter

Pacer

Fixed and demand modes provided

0-200 mA $\pm 10\%$ or $\pm 5\%$ (higher value applies)

40-180 ppm $\pm 1.5\%$ range

20 ms pulse duration $\pm 5\%$

Synchronised Cardioversion

Synchronizes to R wave markers displayed on-screen

<60 ms from R wave peak

Automatically reverts to asynchronous delivery after shock has been provided

CPR Feedback⁴

Optional plug-in-sensor provides on-screen feedback of compressions, rate, depth and quality

Audible feedback and on-screen messaging provided to ensure compliance to AHA/ERC guidelines

AHA/ERC guideline settings can be updated through USB with a manufacturer-provided software update

Physical Dimensions

Standalone size: 7.9" wide x 6.5" high x 2.8" deep, cube 142". With rear clip depth is 3.8"

Standalone weight: 4.3 lbs. with battery (without accessories)

Environmental and Storage

Environment

Operating temperature range: For transient operation -20 °C ... 50 °C (-4 °F to 122 °F) according to IEC 60601-1-12

Relative humidity: 15% - 95% (non-condensing) operating and storage

Altitude: -200 m to +5486 m (-656' to +18000')

Storage temperature range: 40 °C ... 75 °C (-40 °F to 176 °F) relative humidity at 0 - 95% (noncondensing) Atmospheric pressure 500...1200hPa

Dust and water protection with rating of IP65 according IEC60529 Standards

Medical Electrical Equipment: IEC 60601-1-12·Airborne equipment: RTCA DO-160G, 2010 section 21 cat. M

Exceeds requirements of MIL-STD 810G 1.22 m (4') 26 drops all corners, edges and faces

Crash Safety: 20 g per DO160E Sec 7.2 Type F

Vibration: MIL-STD 810G rotary wing (UH-60 & CH-47), fixed wing (jet profile), fixed wing (turboprop profile), composite wheeled vehicle; Ground Vehicle per EN1789

Operational shock: 40 g per MIL-STD 810G, 6 g per RTCA DO-160E

Mount

Electromechanical mount compliant with ground and air (fixed and rotary wing) vehicles available⁴

Communications

Integral Bluetooth

Version: V2 EDR class 2

Automatic data flow of code data from defibrillator to monitor

Integral USB

1 USB-A socket and 1 USB-B socket

For use with CPR sensor



1. Tempus LS-Manual is 510(k) cleared and available for sale in the US.

2. Subject to conditions of storage and use, times are approximate.

3. Tempus switched off while charging, charging takes longer when the device is active.

4. Optional, additional feature.



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