

Masimo LiDCO[®]

Plug-and-Play Haemodynamic Monitoring



Masimo LiDCO provides the PulseCO[®] algorithm for beat-to-beat advanced haemodynamic monitoring to support informed decision-making in high-acuity care areas such as the Operating Theater.

- > Uses existing arterial line and blood pressure transducer to monitor haemodynamic parameters
- > The LiDCO algorithm converts beat-to-beat blood pressure into its constituent parts, flow and resistance, scaled to each patient's age, height, and weight.
- > Reliable on patients on vasoactive drugs¹

¹Hadian M, et al. *Critical Care*. 2010 Dec;14(6):1-0.

Parameters and Indicators

The beat-to-beat parameters offer immediate feedback about a patient's fluid and haemodynamic status.

The PulseCO algorithm in Masimo LiDCO calculates a variety of parameters including:

- > **Stroke Volume (SV):** The amount of blood pumped by the left ventricle of the heart in one contraction
- > **Cardiac Output (CO):** The amount of blood the heart pumps through the circulatory system in a minute, calculated by multiplying the stroke volume by the patient's heart rate
- > **Systemic Vascular Resistance (SVR):** The resistance to flow, calculated as the quotient of pressure and cardiac output
- > **Oxygen Delivery (DO₂):** The amount of oxygen delivered to the tissues, calculated as the product of cardiac output and oxygen concentration
- > **Stroke Volume Variation (SVV):** The variation in stroke volume across at least one respiratory cycle; a dynamic variable that can predict fluid responsiveness in mechanically ventilated patients
- > **Pulse Pressure Variation (PPV):** The variation in arterial pulse pressure across at least one respiratory cycle; like SVV, a dynamic variable that can predict fluid responsiveness in mechanically ventilated patients



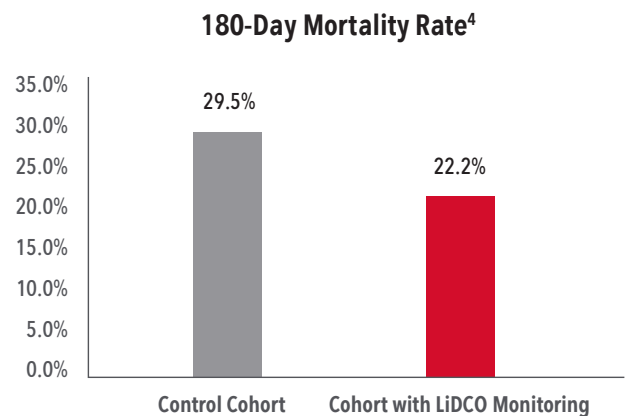
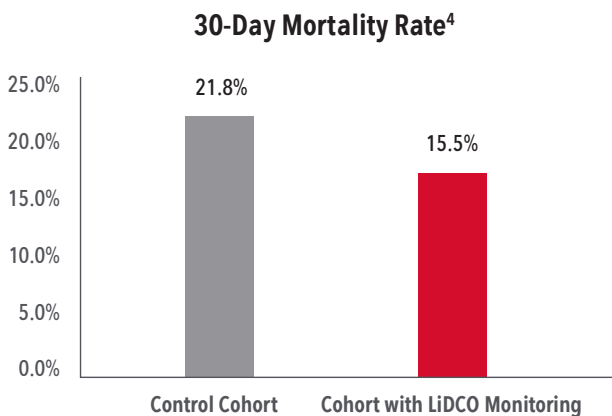
Clinical Evidence

Reductions in Postoperative Complications and Costs

- > In a randomised, controlled trial of 743 patients undergoing major abdominal surgery, researchers found haemodynamic optimisation with LiDCO led to a 15.7% reduction in postoperative complication rates² and, as a result, patients monitored with LiDCO were on average \$530 less expensive to treat than control patients who were not monitored.³

Reductions in 30-Day and 180-Day Mortality

- > In a study comparing the outcomes of 600 emergency laparotomy patients, researchers found that, following the implementation of a program including LiDCO technology, there was a significant decrease in mortality at 30 days (from 21.8% to 15.5%) and 180 days (from 29.5% to 22.2%).⁴



Easy Setup and Operation

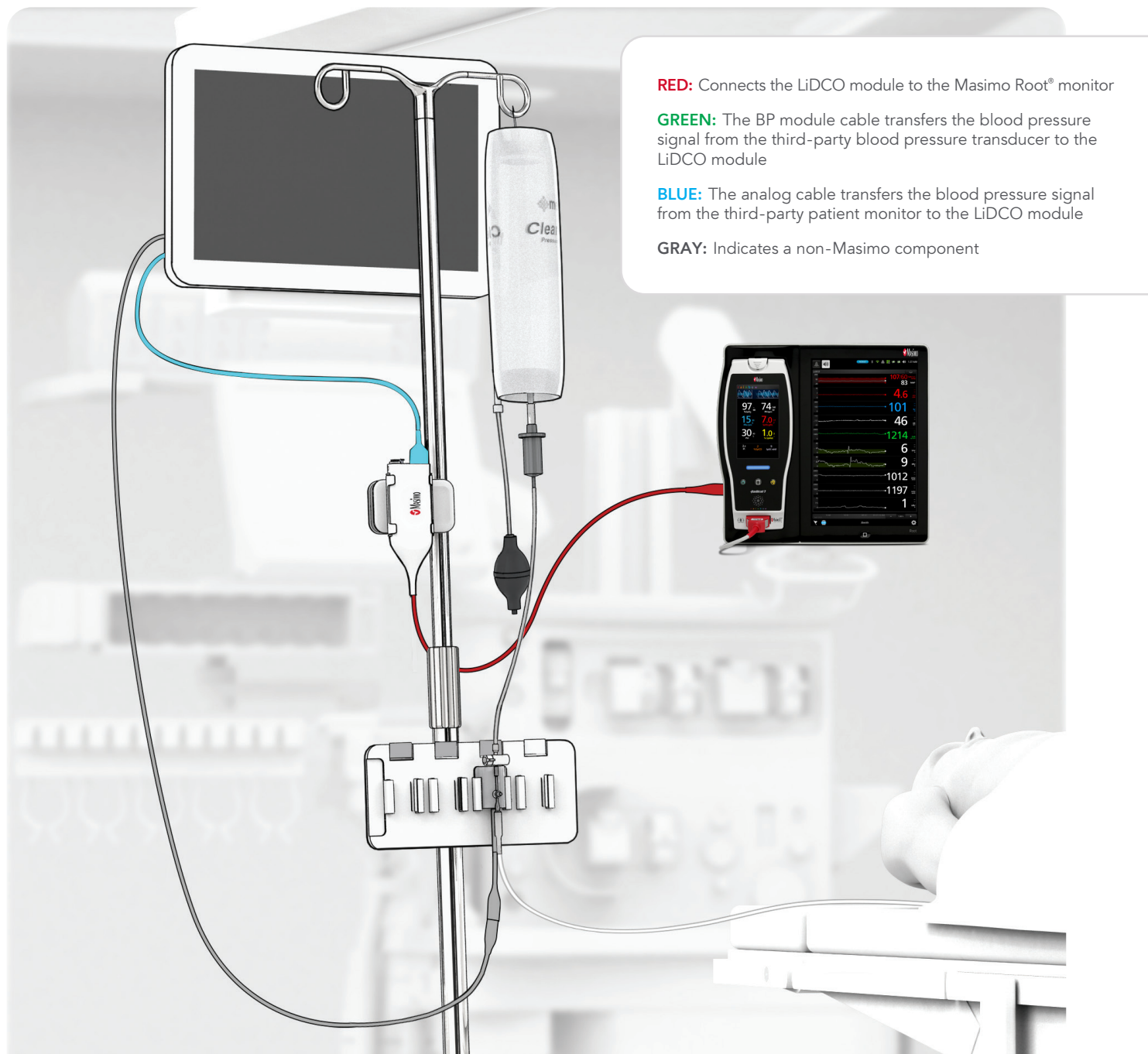
Masimo LiDCO is designed for efficient setup and simple operation, with an intuitive, easy-to-interpret display:

- > Plug-and-play operation using the invasive blood pressure output port on the third-party patient monitor
- > Monitor using the existing blood pressure transducer, eliminating the need for an additional disposable

Two Setup Options:

OPTION 1: Analog Cable Setup

This cable receives blood pressure signals from the third-party patient monitor and sends the information to the LiDCO module.

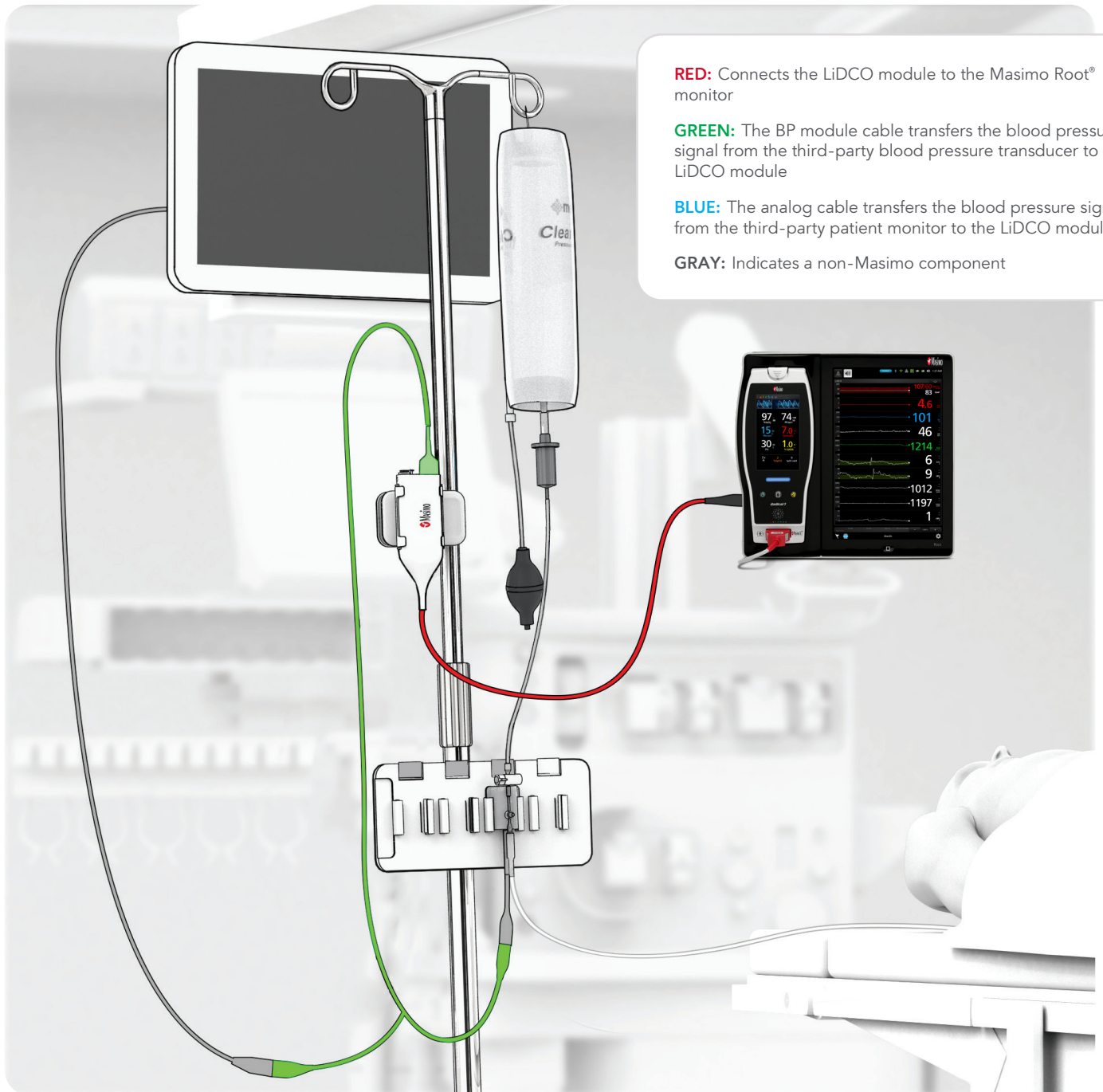


Easy Setup and Operation (cont.)

Two Setup Options:

OPTION 2: BP Module Cable Setup

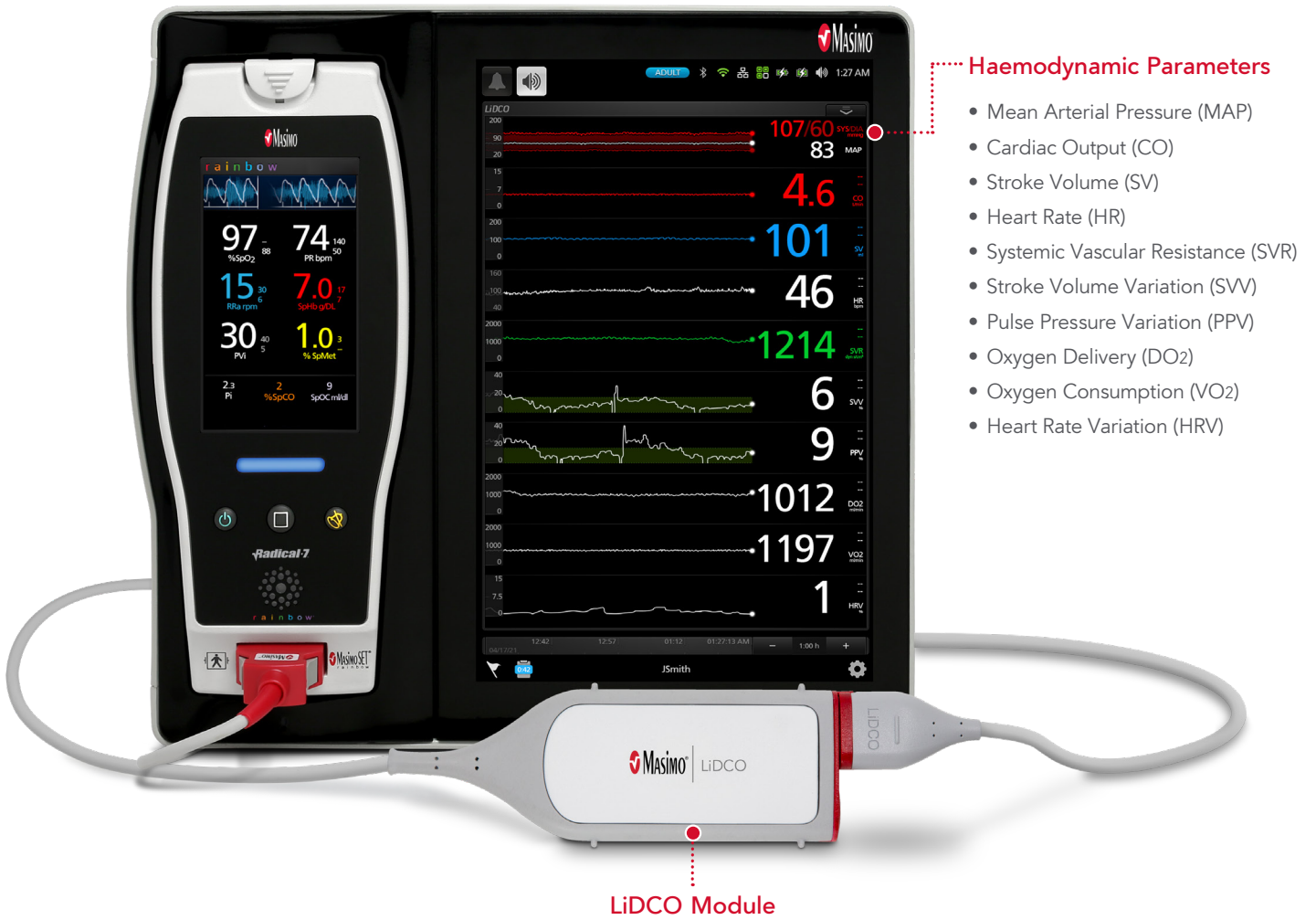
This cable receives blood pressure signals from the third-party blood pressure transducer and sends the information to the LiDCO module without interrupting the blood pressure signal sent to the third-party patient monitor.



Key Features of LiDCO on Root Display Monitor

Trend Screen

Root Monitor



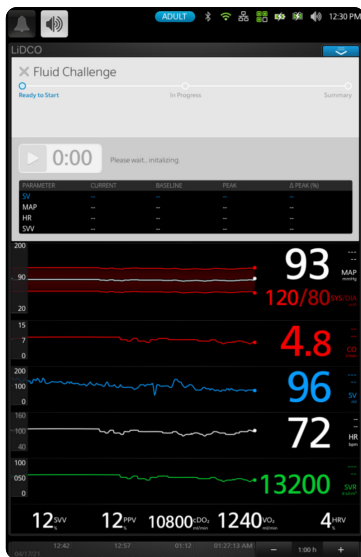
Automating Clinical Protocols

Step-by-Step Guided Protocols

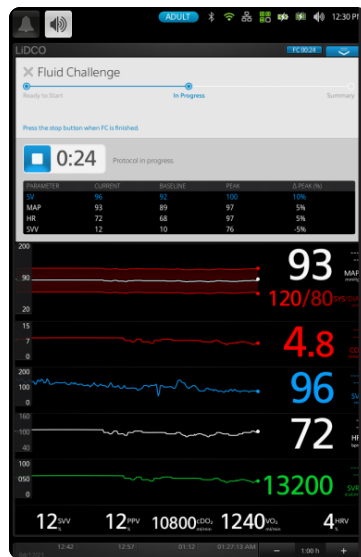


Masimo LiDCO automates established clinical protocols, such as a Fluid Challenge Guided Protocol, a Passive Leg Raise Guided Protocol and an End-Expiratory Occlusion Test Guided Protocol.

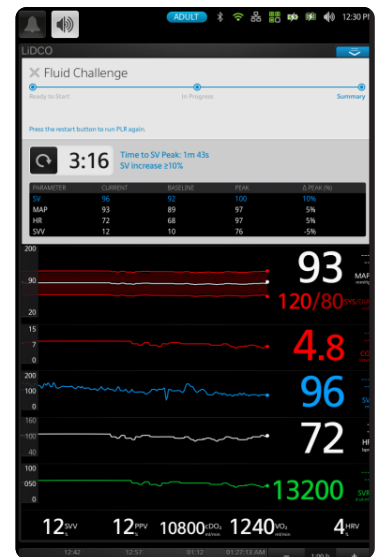
Example: Fluid Challenge Guided Protocol



Before the protocol begins, the initializing screen indicates that Masimo LiDCO is getting ready to provide data.



While the guided protocol is in progress, current and baseline data are displayed, along with a timer to measure progression of the protocol.



Upon the completion of the protocol, Masimo LiDCO calculates the change from baseline to completion, and provides a result.

Masimo LiDCO Specifications

PHYSICAL CHARACTERISTICS	PARAMETERS SUPPORTED
Weight 191g (0.4 lb.) Length 3.7m (12 ft)	Stroke Volume (SV) Stroke Volume Index (SVi) Cardiac Output (CO) Cardiac Output Index (COi) Systemic Vascular Resistance (SVR) Systemic Vascular Resistance Index (SVRI) Oxygen Delivery (DO ₂) Oxygen Delivery Index (DO ₂ i) Stroke Volume Variation (SVV) Pulse Pressure Variation (PPV) Mean Arterial Pressure (MAP) Heart Rate (HR) Oxygen Consumption (VO ₂) Heart Rate Variation (HRV) Body Surface Area (BSA)
ENVIRONMENTAL	SAFETY COMPLIANCE
Operating Temperature +0 to +40°C (+32 to +104°F) @ ambient humidity Storage Temperature -40 to +70°C (-40 to +158°F) @ ambient humidity Humidity 10 to 95% (non-condensing) @ ambient temperature Atmospheric Pressure 500 to 1060 mBar @ ambient temperature and humidity	ANSI/AAMI ES60601-1:2005/A1:2012 CAN/CSA C22.2 No. 60601-1:2014 EN 60601-1:2006/A12:2014 EN 60601-1-6:2010/A1:2015 EN 60601-2-34:2014 IEC 62304:2006/AMD1:2015
ORDERING INFORMATION	
LiDCO Module Kit PN 95060 LiDCO Module PN 95059 Root PN 9515 LiDCO License Various	
SAFETY CLASSIFICATIONS	
Type of Protection Class II Degree of Protection of Electrical Shock Defibrillation proof CF-Applied Part Protection against harm from liquid ingress IP24, Protection against vertically falling water drops Mode of Operation Continuous operation	

LiDCO is not licensed for sale in Canada.

For professional use. See instructions for use for full prescribing information, including indications, contraindications, warnings, and precautions.

Masimo U.S.
tel 1-877-4-Masimo
info-america@masimo.com

Masimo International
tel +41-32-720-1111
info-international@masimo.com

